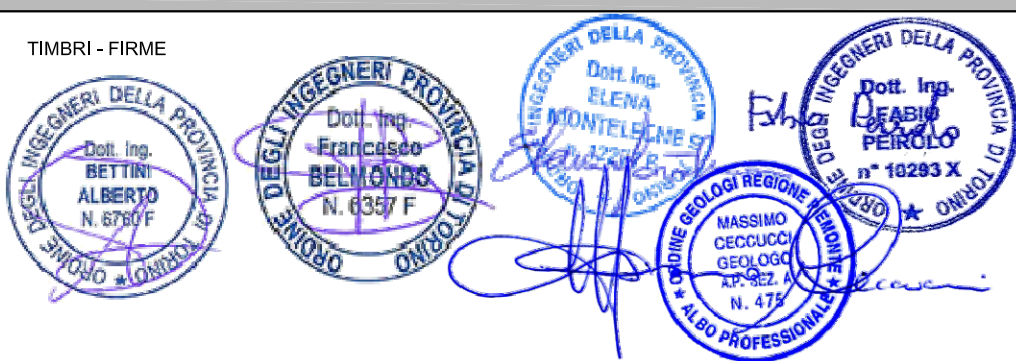


DIREZIONE PROGETTI SPECIALI

NOME DELLA PROVINCIA PROVINCIA DI TORINO		NOME DEI COMUNI/ASL PRALI	
SERVIZIO/LIVELLO PROGETTUALE L'intervento in oggetto è compreso con quanto previsto dall'art.1 della Legge 65/2012 " Disposizione per la valorizzazione e la promozione turistica delle valli e dei comuni montani sede dei Giochi Olimpici Invernali Torino 2006"			
CODICE OPERA 13L65PR1A		TITOLO INTERVENTO <i>Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali (intervento ex legge 65/2012) codice 13L65PR1A</i>	
Tavola n. 3.2		TITOLO TAVOLA Relazione di calcolo strutturale	
DATA Aprile 2016	SCALA -	AREA PROGETTUALE STRUTTURE - PROGETTO ESECUTIVO	
CODICE GENERALE ELABORATO 13L65PR1A_ST_E_3.2_0			
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ORGANISMO DI CONTROLLO Responsabile di Commessa:		S.C.R. PIEMONTE S.p.A. Responsabile del Procedimento: arch. Chiara SIAZZU	

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01. PREMESSA

Le opere strutturali in questione sono relative all'edificio adibito a locale tecnico per l'installazione della centralina idroelettrica.

02. LEGGI E NORME DI RIFERIMENTO

Si riportano le leggi e le norme di riferimento.

Si sottolinea che:

1. alcuni riferimenti indicati possono non essere applicabili al caso specifico in esame;
2. le normative sorpassate sono state utilizzate ove non in contrasto con quelle attualmente vigenti, ritenendole fonti attendibili per chiarire e definire aspetti non indicati in quelle più moderne.

02.01 AMBITO GENERALE

1. Legge 5/11/1971 n. 1086: Norme per la disciplina delle opere di conglomerato cementizio armato, normale e precompresso ed a struttura metallica.
2. Legge 02/02/1974 n. 64: Provvedimenti per le costruzioni con particolari prescrizioni per le zone sismiche.
3. C.N.R. 10024/86 del 23/07/1986: Analisi di strutture mediante elaboratore: impostazione e redazione delle relazioni di calcolo.
4. D.P.R. 06/06/2001 n. 380: Testo unico delle disposizioni legislative e regolamentari in materia edilizia.

02.02 DI CALCOLO GENERALE

1. D.M. 14/02/1992: Norme tecniche per l'esecuzione delle opere in cemento armato normale e precompresso e per le strutture metalliche.
2. Circ. LL.PP. 24/06/1993, n. 37406/STC: Legge 5 novembre 1971, n. 1086. Istruzioni relative alle norme tecniche per l'esecuzione delle opere in cemento armato normale e precompresso e per le strutture metalliche, di cui al decreto ministeriale 14 febbraio 1992.
3. D.M. 09/01/1996: Norme tecniche per il calcolo, l'esecuzione ed il collaudo delle opere in cemento armato normale e precompresso e per le strutture metalliche.
4. Circ. 15/10/1996, n. 252/AA.GG./S.T.C.: Istruzioni per l'applicazione delle «Norme tecniche per il calcolo, l'esecuzione ed il collaudo delle opere in cemento armato normale e precompresso e per le strutture metalliche» di cui al decreto ministeriale 9 gennaio 1996.
5. D.M. 14/09/2005: Testo unico – norme tecniche per le costruzioni.

6. Eurocodice 0 – Criteri generali di progettazione strutturale. UNI EN 1990:2006.
7. D.M. 14/01/2008: Norme tecniche per le costruzioni.
8. Circ. 02/02/2009, n. 617 - Istruzioni per l'applicazione delle "Nuove norme tecniche per le costruzioni" di cui al D.M. 14 gennaio 2008.

02.03 CARICHI E SOVRACCARICHI

1. D.M. 16/1/1996: Norme tecniche relative ai criteri generali per la verifica della sicurezza delle costruzioni e dei carichi e dei sovraccarichi.
2. Circ. Min. 04/07/1996, n. 156 AA.GG./STC. – Istruzioni per l'applicazione delle "Norme tecniche relative ai criteri generali per la verifica di sicurezza delle costruzioni e dei carichi e dei sovraccarichi" di cui al decreto ministeriale 16 Gennaio 1996.
3. Eurocodice 1 – Azioni sulle strutture:
 - a. UNI EN 1991-1-1:2004 Parte 1-1: Azioni in generale - Pesì per unità di volume, pesì propri e sovraccarichi per gli edifici.

02.04 SISMICA

1. D.M. 16/1/1996: Norme tecniche per le costruzioni in zona sismica.
2. Circolare n. 65/AA.GG. del 10 aprile 1997 – Istruzioni per l'applicazione delle "Norme tecniche per le costruzioni in zone sismiche" di cui al D.M. 16 gennaio 1996.

02.05 PER MATERIALE/AMBITO

02.05.01 CALCESTRUZZO ARMATO

1. Eurocodice 2 – Progettazione delle strutture in calcestruzzo:
 - a. UNI EN 1992-1-1:2005 Parte 1-1: Regole generali e regole per gli edifici.
2. UNI EN 11104:2004 - Calcestruzzo - Specificazione, prestazione, produzione e conformità - Istruzioni complementari per l'applicazione della EN 206-1.
3. UNI EN 206-1:2006 - Calcestruzzo - Parte 1: Specificazione, prestazione, produzione e conformità.

02.05.02 ACCIAIO

1. CNR-UNI 10011/97 – Costruzioni in acciaio - Istruzioni per il calcolo, l'esecuzione, il collaudo e la manutenzione.
2. UNI ENV 1090-1:2001 - Esecuzione di strutture di acciaio - Regole generali e regole per gli edifici.
3. UNI EN 10025-1:2005 - Prodotti laminati a caldo di acciai per impieghi strutturali.
4. Eurocodice 3 – Progettazione delle strutture in acciaio:
 - a. UNI EN 1993-1-1:2005 Parte 1-1: Regole generali e regole per gli edifici.

02.05.03 LEGNO

1. UNI EN 1194-2000 – “Strutture di legno - Legno lamellare incollato - Classi di resistenza e determinazione dei valori caratteristici”.
2. UNI EN 338-2004 – “Legno strutturale - Classi di resistenza”.
3. CNR-DT 206/2007 – “Istruzioni per la Progettazione, l'Esecuzione ed il Controllo delle Strutture di Legno”.
4. Eurocodice 5 – Progettazione delle strutture in legno:
 - a. UNI EN 1995-1-1:2009 Parte 1-1: Regole generali - Regole comuni e regole per gli edifici.

02.05.04 MURATURA

1. Eurocodice 6 – Progettazione delle strutture in muratura:
 - a. UNI EN 1996-1-1:2006 Parte 1-1: Regole generali per strutture di muratura armata e non armata.

02.05.05 FONDAZIONI

1. Eurocodice 7 – Progettazione geotecnica:
 - a. UNI EN 1997-1:2005 Parte 1: Regole generali.

02.05.06 SISMICA

1. Eurocodice 8 – Progettazione delle strutture per la resistenza sismica:
 - a. UNI EN 1998-1:2005 Parte 1: Regole generali, azioni sismiche e regole per gli edifici.

03. STRUTTURA N. 1 – EDIFICIO ADIBITO A LOCALE TECNICO

03.01 DOCUMENTAZIONE DI RIFERIMENTO

La documentazione di riferimento è contenuta negli elaborati grafici di dettaglio che corredano il progetto.

03.02 DESCRIZIONE

La costruzione è un modesto fabbricato costituito da:

1. Fondazioni con travi di c.a.;
2. Muri d'elevazione in muratura portante costituita da elementi in laterizio e malta e cordoli sommitali per la stabilizzazione delle teste delle murature;
3. Copertura di legname.

03.02.01 CARATTERISTICHE MACRO-GEOMETRICHE

Dimensioni geometriche di massima

1. Lato maggiore [m], $L=8.5$;
2. Lato maggiore [m], $L=6.3$;
3. Altezza max da piano campagna [m] (da tradizionale "spiccato"), $H_1=3.8$;
4. Profondità max fondazioni da piano campagna [m] (da tradizionale "spiccato"), $H_2=0.8$;

03.02.02 CARATTERISTICHE TECNICHE (GEOMETRIE E MATERIALI)

Tali indicazioni sono da ricercare negli elaborati grafici di dettaglio che corredano il progetto.

03.02.03 PARAMETRI OPERA

1. Tipo di costruzione: 2;
2. Vita nominale [anni] VN=50;
3. Classe d'uso=II;
4. Coefficiente CU=1.0;
5. Vita di riferimento [anni] VR=50;
6. Sito:
 - a. Comune: Prali;
 - b. Longitudine: 7.051997;
 - c. Latitudine: 44.872073;
 - d. Categoria di sottosuolo: E;
 - e. Categoria topografica: T1;
 - f. Coefficiente di amplificazione topografia: $S_T=1.2$;



Figura 1, localizzazione opera su mappa estratta da sw. Google Earth®.

03.02.04 TIPO DI INTERVENTO

Nuova costruzione.

03.03 MATERIALI

Tali indicazioni sono da ricercare negli elaborati grafici di dettaglio che corredano il progetto.

Nel seguito si forniscono le specifiche per quanto non riportato nei summenzionati documenti.

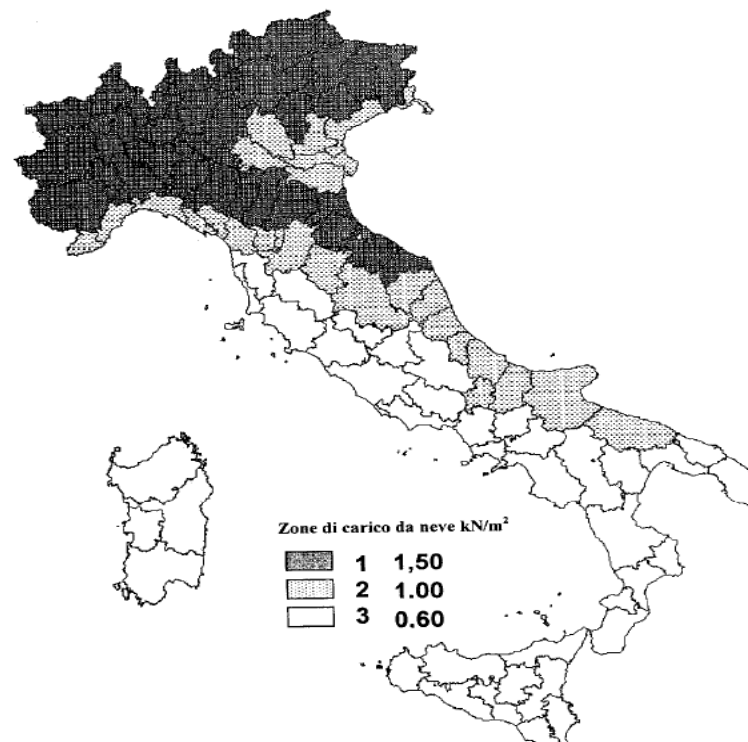
Terreno

- Fondazione
 - angolo d'attrito interno $\phi=32^\circ$;
 - angolo d'attrito terreno-cls $\phi=21.3^\circ$;
 - peso specifico $\gamma=1900 \text{ daN/m}^3$;
 - coesione interna terreno $c=0 \text{ kPa}$;
 - adesione terreno-cls $a=0 \text{ kPa}$.

03.04 CARICHI

- Pesi propri strutturali: inseriti con i loro pesi specifici, secondo le strutture analizzate (grossa orditura, come da modello FEM) in funzioni delle sezioni impiegate;
- Pesi propri portati:
 - Parte della copertura: 40 daN/m^2 (scandole, listelli, guaina, tavolato);
- Vento: azione trascurabile per le strutture in questione;
- Neve: 900 daN/m^2 . L'azione è stata considerando estendendo la formula anche per quote maggiori a 1500 m slm. A giudizio dello scrivente l'entità del carico così considerato è compatibile con le condizioni di innevamento in sito. Tale valore è stato approssimato in eccesso in funzione dello schema seguente che ricalca le richieste normative per la zona in esame.

Input			
Selezionare tipo di zona	[-]		Zona I - Alpina
Tipo di zona	[-]	-	Zona I - Alpina
Altitudine del sito	[m slm]	a_s	1915
Inclinazione falda	[°]	α	20.0
Controllo valori	[-]	-	DATI
Output			
al suolo	[kN/m ²]	q_{sk}	11.01
Coefficiente riduttivo	[-]	μ_i	0.80
Carico neve caratteristico q_s	[kN/m ²]	$q_s = \mu_i \cdot q_{sk}$	8.81



Zone di carico da neve kN/m²

Zone	Carico (kN/m ²)
1	1.50
2	1.00
3	0.60

Figura 3.4.1 – Zone di carico da neve

Zona I Alpina	Zona II	Zona III
Aosta	Arezzo	Agrigento
Belluno	Ascoli Piceno	Avellino
Bergamo	Bari	Benevento
Biella	Campobasso	Brindisi
Bolzano	Chieti	Cagliari
Brescia	Ferrara	Caltanissetta
Como	Firenze	Carbonia-Iglesias
Cuneo	Foggia	Caserta
Lecco	Genova	Catania
Pordenone	Gorizia	Catanzaro
Sondrio	Imperia	Cosenza
Torino	Isernia	Crotone
Trento	La Spezia	Enna
Udine	Lucca	Frosinone
Verbania	Macerata	Grosseto
Vercelli	Mantova	L'Aquila
Vicenza	Massa Carrara	Latina
	Padova	Lecce
Zona I	Perugia	Livorno
Alessandri	Pescara	Matera
Ancona	Pistoia	Medio Campidano
Asti	Prato	Messina
Bologna	Rovigo	Napoli
Cremona	Savona	Nuoro
Forlì	Teramo	Ogliastra
Lodi	Trieste	Olbia Tempio
Milano	Venezia	Oristano
Modena	Verona	Palermo
Novara		Pisa
Parma		Potenza
Pavia		Ragusa
Pesaro e		Reggio Calabria
Piacenza		Rieti
Ravenna		Roma
Reggio		Salerno
Rimini		Sassari
Treviso		Siena
Varese		Siracusa
		Taranto
		Terni
		Trapani
		Vibo Valentia
		Viterbo

- Sisma: calcolato in automatico dai sw di calcolo strutturale, secondo le indicazioni riportate in precedenza ed alle caratteristiche delle opere (masse, tipologia strutturale, ecc...).

03.05 METODI DI CALCOLO

03.05.01 MODELLAZIONE DELLE MURATURE E DELLE FONDAZIONI

03.05.01.01 METODO DI CALCOLO

Si utilizza l'analisi statica non lineare di tipo pushover.

03.05.01.02 STRUMENTI DI CALCOLO

Casa produttrice del sw: **Sta Data**;

Sw: **3Muri**;

Versione: **10.0.2.0**;

Files:

1. "**B655-15_v_10**" – per la trattazione del comportamento globale della struttura
 - a. Sottocartella "**B655-15_v_10**";

03.05.01.03 SCHEMATIZZAZIONE STRUTTURA

La struttura è stata modellata come telaio equivalente.

03.05.02 MODELLAZIONE DELLA COPERTURA

03.05.02.01 METODO DI CALCOLO

Si utilizza l'analisi lineare statica equivalente.

03.05.02.02 STRUMENTI DI CALCOLO

Casa produttrice del sw: **AMV Srl**;

Sw: **MasterSap**;

Versione: **2015.15A**;

Files:

1. "**B655-15_v_10.MstSap**" – per la trattazione di dettaglio della copertura;

a. Sottocartella "**B655-15_v_10**";

03.05.02.03 SCHEMATIZZAZIONE STRUTTURA

La struttura è stata modellata come telaio, apportando le dovute sconnessioni ove necessario.

03.06 COMBINAZIONI DI CARICO

Sono state calcolate le azioni e le sollecitazioni per le combinazioni critiche più significative, così da indagare a fondo il comportamento strutturale.

Tali combinazioni hanno riguardato i seguenti stati limite: SLU, SLE, SLV, SLD.

E' necessario visionare l'apposita sezione negli allegati per visionare i dettagli di riferimento.

03.07 ACCETTABILITA' DEI RISULTATI

Da alcune verifiche manuali eseguite dal sottoscritto su schemi semplificati si sono verificate le correttezze degli ordini di grandezza dei termini ingegneristici, pertanto quanto progettato risulta accettabile.

03.08 VERIFICHE

Sono state eseguite le verifiche per le combinazioni critiche più significative, così da indagare a fondo il comportamento strutturale.

Le verifiche hanno riguardato i seguenti stati limite: SLU, SLE, SLV, SLD.

E' necessario visionare l'apposita sezione negli allegati per visionare i dettagli di riferimento.

04. CONCLUSIONI

Le strutture per come concepite e dimensionate soddisfano pienamente alle esigenze richieste dalla committenza e ciascuna loro parte componente presenta caratteristiche di resistenza, stabilità e rigidezza adeguate. Tale considerazione è da intendersi nel rispetto dei limiti e delle ipotesi effettuate alla base della progettazione, pertanto l'uso delle stesse dovrà rispettare tali assunzioni.

05. ALLEGATI STRUTTURA – PARTE MURATURE E FONDAZIONI

Si inserisce l'analisi delle parti murarie e delle fondazioni.

05.01 STATICO

Si allega input ed output del problema ingegneristico in termini statici, corredando la documentazione con le immagini significative volte a riassumere i risultati principali.

Descrizione della struttura

La presente relazione ha per oggetto l'analisi delle strutture, le considerazioni di merito, i calcoli svolti per l'edificio sito in Prali (TO), c/o loc. Miandette.

Norme di riferimento

Sono stati recepiti, per le analisi di cui in seguito, i principi e le regole riportate nelle normative seguenti:

- Decreto Ministeriale 14 gennaio 2008 - "Norme tecniche per le Costruzioni"

Descrizione del modello

Materiali

Muratura

Nome	E [N/mm ²]	G [N/mm ²]	Peso specifico [kN/m ³]	f _m [N/cm ²]	T/f _{m0} [N/cm ²]
Muratura_minima	3 300.00	1 320.00	12	471.00	14.29

Calcestruzzo

Nome	E [N/mm ²]	G [N/mm ²]	Peso specifico [kN/m ³]	f _{cm} [N/mm ²]	f _{ck} [N/mm ²]
C25/30	31 476.00	13 115.00	25	33.00	25.00

Acciaio armatura

Nome	E [N/mm ²]	G [N/mm ²]	Peso specifico [kN/m ³]	f _{ym} [N/mm ²]	f _{yk} [N/mm ²]
B450	206 000.00	79 231.00	79	484.00	450.00

Legno

Nome	E [N/mm ²]	G [N/mm ²]	Peso specifico [kN/m ³]	f _{wm} [N/mm ²]	f _{wk} [N/mm ²]
ACSS1Conifere. pioppo (Abete centro sud 1)	11 000.00	690.00	3	46.00	32.00

Elementi di struttura

Livello 1

Pannello + Cordolo C.A. (1)

N.	Parete	Materiale pannello	Rinforzo	Quota pannello [cm]	Altezza [cm]	Spessore [cm]	Materiale calcestruzzo	Materiale acciaio	Quota cordolo [cm]	Base sezione [cm]	Altezza sezione [cm]
1	1	Muratura_minima	-	300	300.0	24.0	C25/30	B450	300	24.0	25.0
3	2	Muratura_minima	-	300	300.0	24.0	C25/30	B450	300	24.0	25.0
5	3	Muratura_minima	-	300	300.0	24.0	C25/30	B450	300	24.0	25.0
7	4	Muratura_minima	-	300	300.0	24.0	C25/30	B450	300	24.0	25.0

Pannello + Cordolo C.A. (2)

N.	Parete	Area [cm ²]	J [cm ⁴]	Af intrad. [cm ²]	Af estrad. [cm ²]	N. barre intrad.	N. barre Estrad.	Copriferro [cm]	Passo staffe [cm]	Area staffe [cm ²]	Porzione deformabile
1	1	600.00	31 250.00	4.00	4.00	4	4	3.0	15	1.01	0.00
3	2	600.00	31 250.00	4.00	4.00	4	4	3.0	15	1.01	0.00
5	3	600.00	31 250.00	4.00	4.00	4	4	3.0	15	1.01	0.00
7	4	600.00	31 250.00	4.00	4.00	4	4	3.0	15	1.01	0.00

Trave Acciaio / Legno

N.	Parete	Materiale	Quota I [cm]	Quota J [cm]	Area [cm ²]	J [cm ⁴]	W plastico [cm ³]
9	5	ACSS1Conifere. pioppo (Abete centro sud 1)	300	300	2 100.00	857 500.00	24 500.00

Solaio

N.	Quota [cm]	Spessore [cm]	G [N/mm ²]	Ex [N/mm ²]	Ey [N/mm ²]	Scarico masse	Tipo
1	300	4.0	10.00	6 490.38	0.00	Monodirezionale	Legno con travetti affiancati e tavolato semplice

Geometria del modello

La modellazione dell'edificio viene realizzata mediante l'inserimento di pareti che vengono discretizzate in macroelementi, rappresentativi di maschi murari e fasce di piano deformabili; i nodi rigidi sono indicati nelle porzioni di muratura che tipicamente sono meno soggette al danneggiamento sismico. Solitamente i maschi e le fasce sono contigui alle aperture, i nodi rigidi rappresentano elementi di collegamento tra maschi e fasce. La concezione matematica che si nasconde nell'impiego di tale elemento, permette di riconoscere il meccanismo di danno, a taglio nella sua parte centrale o a pressoflessione sui bordi dell'elemento in modo da percepire la dinamica del danneggiamento così come si presenta effettivamente nella realtà.

I nodi del modello, sono nodi tridimensionali a 5 gradi di libertà (le tre componenti di spostamento nel sistema di riferimento globale e le rotazioni intorno agli assi X e Y) o nodi bidimensionali a 3 gradi di libertà (due traslazioni e la rotazione nel piano della parete).

Quelli tridimensionali vengono usati per permettere il trasferimento delle azioni, da un primo muro a un secondo disposto

trasversalmente rispetto al primo. I nodi di tipo bidimensionale hanno gradi di libertà nel solo piano della parete permettendo il trasferimento degli stati di sollecitazione tra i vari punti della parete.

Gli orizzontamenti, sono modellati con elementi solaio a tre nodi connessi ai nodi tridimensionali, sono caricabili perpendicolarmente al loro piano dai carichi accidentali e permanenti; le azioni sismiche caricano il solaio lungo la direzione del piano medio. Per questo l'elemento finito solaio viene definito con una rigidità assiale, ma nessuna rigidità flessionale, in quanto il comportamento meccanico principale che si intende sondare è quello sotto carico orizzontale dovuto al sisma.

Telaio equivalente

Parete : 1

Nodi 3D

Nodo	X [cm]	Y [cm]	Z [cm]	Livello
1	-3	-316	0	0
9	-3	-64	0	0
3	-3	187	0	0
2	-3	-316	300	1
10	-3	-64	300	1
4	-3	187	300	1

Macroelementi Maschi

N.	Materiale	Rinforzo	Spessore [cm]	Base [cm]	Altezza [cm]	Baricentro X [cm]	Baricentro Z [cm]	Nodo sopra	Nodo sotto	ρ
3	Muratura_minima	-	24.0	166.5	266.2	83	133	1	2	1.00
4	Muratura_minima	-	24.0	166.5	266.2	420	133	3	4	1.00

Macroelementi Fasce

N.	Materiale	Rinforzo	Spessore [cm]	Base [cm]	Altezza [cm]	Baricentro X [cm]	Baricentro Z [cm]	Nodo sinistro	Nodo destro
1	Muratura_minima	-	24.0	85.0	80.0	209	260	2	10
2	Muratura_minima	-	24.0	85.0	80.0	294	260	10	4

Parete : 2

Nodi 3D

Nodo	X [cm]	Y [cm]	Z [cm]	Livello
3	-3	187	0	0
5	673	187	0	0
4	-3	187	300	1
6	673	187	300	1

Nodi 2D

Nodo	X locale [cm]	Z [cm]	Livello
13	338	0	0
14	338	300	1

Macroelementi Maschi

N.	Materiale	Rinforzo	Spessore [cm]	Base [cm]	Altezza [cm]	Baricentro X [cm]	Baricentro Z [cm]	Nodo sopra	Nodo sotto	ρ
5	Muratura_minima	-	24.0	676.0	300.0	338	150	13	14	1.00

Parete : 3

Nodi 3D

Nodo	X [cm]	Y [cm]	Z [cm]	Livello
7	673	-316	0	0
11	673	-64	0	0
5	673	187	0	0
8	673	-316	300	1
12	673	-64	300	1
6	673	187	300	1

Macroelementi Maschi

N.	Materiale	Rinforzo	Spessore [cm]	Base [cm]	Altezza [cm]	Baricentro X [cm]	Baricentro Z [cm]	Nodo sopra	Nodo sotto	ρ
9	Muratura_minima	-	24.0	166.5	200.0	83	155	7	8	1.00
10	Muratura_minima	-	24.0	166.5	200.0	420	155	5	6	1.00

Macroelementi Fasce

N.	Materiale	Rinforzo	Spessore [cm]	Base [cm]	Altezza [cm]	Baricentro X [cm]	Baricentro Z [cm]	Nodo sinistro	Nodo destro
6	Muratura_minima	-	24.0	170.0	120.0	252	60	7	5
7	Muratura_minima	-	24.0	85.0	80.0	209	260	8	12
8	Muratura_minima	-	24.0	85.0	80.0	294	260	12	6

Parete : 4

Nodi 3D

Nodo	X [cm]	Y [cm]	Z [cm]	Livello
1	-3	-316	0	0
7	673	-316	0	0
2	-3	-316	300	1
8	673	-316	300	1

Nodi 2D

Nodo	X locale [cm]	Z [cm]	Livello
------	---------------	--------	---------

15	338	0	0
16	338	300	1

Macroelementi Maschi

N.	Materiale	Rinforzo	Spessore [cm]	Base [cm]	Altezza [cm]	Baricentro X [cm]	Baricentro Z [cm]	Nodo sopra	Nodo sotto	ρ
11	Muratura_minima	-	24.0	676.0	300.0	338	150	15	16	1.00

Parete : 5

Nodi 3D

Nodo	X [cm]	Y [cm]	Z [cm]	Livello
9	-3	-64	0	0
11	673	-64	0	0
10	-3	-64	300	1
12	673	-64	300	1

(*) Elementi di copertura

Carichi

La verifica allo stato limite ultimo per carichi statici viene condotta secondo le prescrizioni riportate nelle norme vigenti.

Viene eseguita la seguente combinazione dei carichi:

$$gG \text{ Gk} + gG_{agg} \text{ Gk}_{agg} + gQ \text{ Y0 Qk}$$

assumendo:

gG ; gG_{agg} ; gQ : coefficienti parziali di sicurezza

Gk: carichi permanenti

Qk: carichi accidentali

y_0 : coefficiente di combinazione per i carichi variabili:

N. Solaio	Gk [daN/m ²]	Gk agg. [daN/m ²]	Qk [daN/m ²]	Copertura	ψ_0
1	30	40	900	No	0.70

Risultati

Le verifiche statiche eseguite sulla struttura in questione sono le seguenti:

Snellezza della muratura

La verifica di snellezza è eseguita in accordo con quanto riportato al punto 4.5.4. del D.M.2008.

Si definisce snellezza di una muratura il rapporto h_0/t in cui:

h_0 : lunghezza libera di inflessione del muro pari a $r \cdot h$;

t: spessore del muro.

h: l'altezza interna di piano;

r: il fattore laterale di vincolo.

La verifica di snellezza risulta soddisfatta se risulta verificata la seguente:

$$h_0/t < 20$$

Eccentricità dei carichi

La verifica di snellezza è eseguita in accordo con quanto riportato al punto 4.5.6.2. del D.M.2008.

Tale verifica risulta soddisfatta qualora risultino verificate le seguenti condizioni:

$$e_1/t \leq 0.33$$

$$e_2/t \leq 0.33$$

in cui:

t: spessore del muro

$$e_1 = |e_s| + |e_a|$$

$$e_2 = \frac{e_1}{2} + |e_v|$$

e_s : eccentricità totale dei carichi verticali

e_a : $h/200$

e_v : eccentricità dovuta al vento $e_v = M_v / N$

Verifica a carichi verticali

La verifica di snellezza è eseguita in accordo con quanto riportato al punto 4.5.6.2. del D.M.2008.

Tale verifica risulta soddisfatta qualora risulti verificata la seguente:

$$N_d \leq N_r$$

in cui:

N_d : carico verticale agente

N_r : carico verticale resistente; $N_r = F_{fd} A$

A: area della sezione orizzontale del muro al netto delle aperture;

f_d : resistenza di calcolo della muratura;

F: coefficiente di riduzione della resistenza del muro

Queste verifiche sono state eseguite in ogni maschio murario della struttura, nelle tre sezioni principali (inferiore, centrale, superiore).

I valori dello sforzo normale resistente saranno calcolabili solamente se le verifiche di snellezza ed eccentricità dei carichi risultano soddisfatte.

Riportiamo nel seguito i dettagli di verifica per le singole pareti.

Parete : 1

Maschio	ho [cm]	t [cm]	ho/t	e1/t Inferiore	e2/t Centrale	e1/t Superiore	Verificato
3	300	24	12.500	0.063	0.063	0.063	Sì
4	300	24	12.500	0.063	0.063	0.063	Sì

Superiore					Centrale				Inferiore				Verificato
Maschio	Nd	Φ	Nr	Nd/Nr	Nd	Φ	Nr	Nd/Nr	Nd	Φ	Nr	Nd/Nr	
3	6 510	0.603	26 459	0.246	7 324	0.603	26 459	0.277	8 138	0.603	26 459	0.308	Sì
4	6 510	0.603	26 459	0.246	7 324	0.603	26 459	0.277	8 138	0.603	26 459	0.308	Sì

Parete : 2

Maschio	ho [cm]	t [cm]	ho/t	e1/t Inferiore	e2/t Centrale	e1/t Superiore	Verificato
5	300	24	12.500	0.203	0.077	0.131	Sì

Superiore					Centrale				Inferiore				Verificato
Maschio	Nd	Φ	Nr	Nd/Nr	Nd	Φ	Nr	Nd/Nr	Nd	Φ	Nr	Nd/Nr	
5	7 097	0.312	55 693	0.127	10 821	0.561	100 075	0.108	14 545	0.453	80 779	0.180	Sì

Parete : 3

Maschio	ho [cm]	t [cm]	ho/t	e1/t Inferiore	e2/t Centrale	e1/t Superiore	Verificato
9	300	24	12.500	0.063	0.063	0.063	Sì
10	300	24	12.500	0.063	0.063	0.063	Sì

Superiore					Centrale				Inferiore				Verificato
Maschio	Nd	Φ	Nr	Nd/Nr	Nd	Φ	Nr	Nd/Nr	Nd	Φ	Nr	Nd/Nr	
9	7 016	0.603	26 459	0.265	7 628	0.603	26 459	0.288	8 239	0.603	26 459	0.311	Sì
10	7 016	0.603	26 459	0.265	7 628	0.603	26 459	0.288	8 239	0.603	26 459	0.311	Sì

Parete : 4

Maschio	ho [cm]	t [cm]	ho/t	e1/t Inferiore	e2/t Centrale	e1/t Superiore	Verificato
11	300	24	12.500	0.203	0.077	0.131	Sì

Superiore					Centrale				Inferiore				Verificato
Maschio	Nd	Φ	Nr	Nd/Nr	Nd	Φ	Nr	Nd/Nr	Nd	Φ	Nr	Nd/Nr	
11	7 097	0.312	55 693	0.127	10 821	0.561	100 075	0.108	14 545	0.453	80 779	0.180	Sì

(*) Elementi di copertura

B655-15_v_10_10_Schema_Struttura

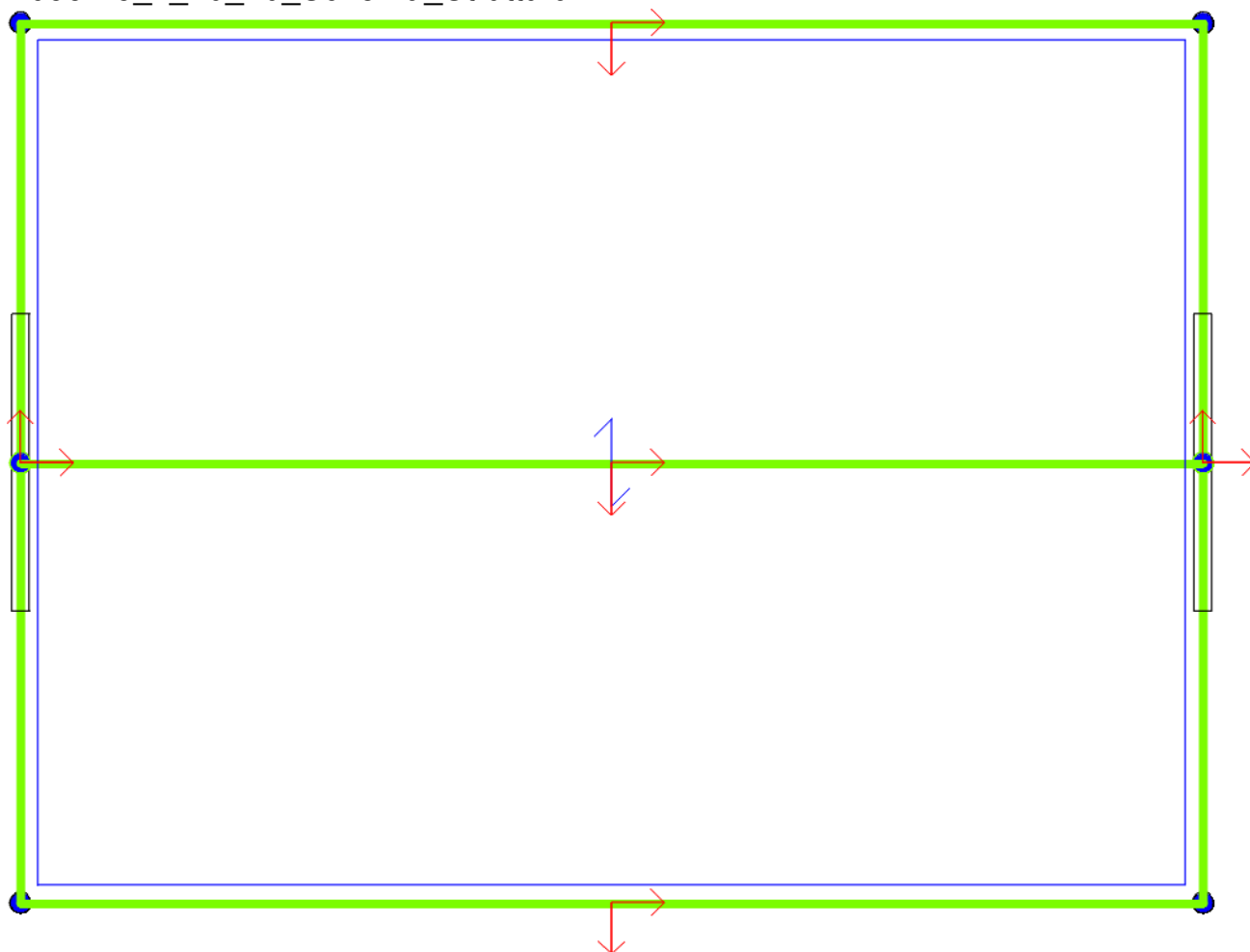


Figura 2, B655-15_v_10_10_Schema_Struttura.

B655-15_v_10_15_3D

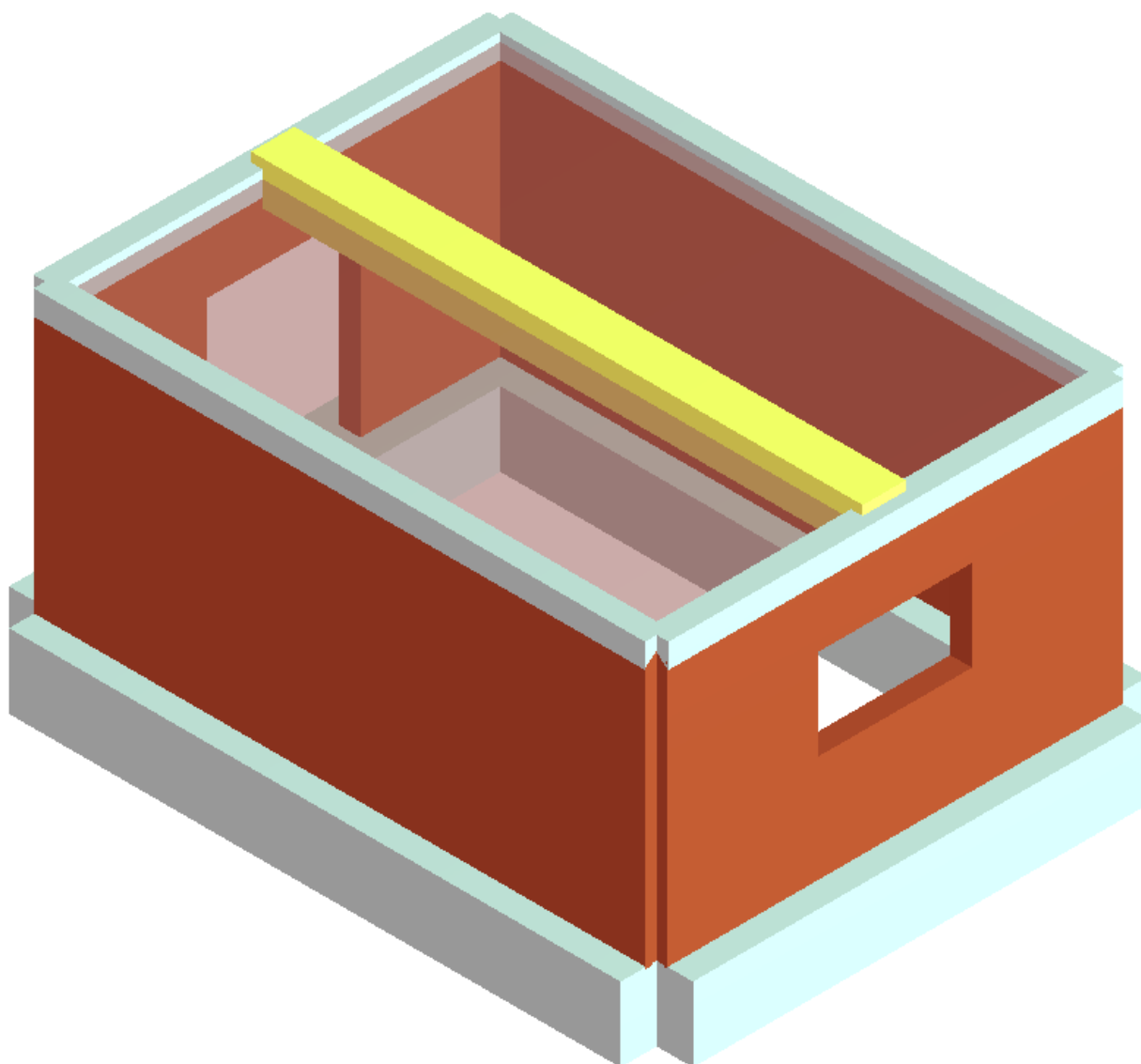


Figura 3, B655-15_v_10_15_3D.

B655-15_v_10_20_Schema_Calcolo

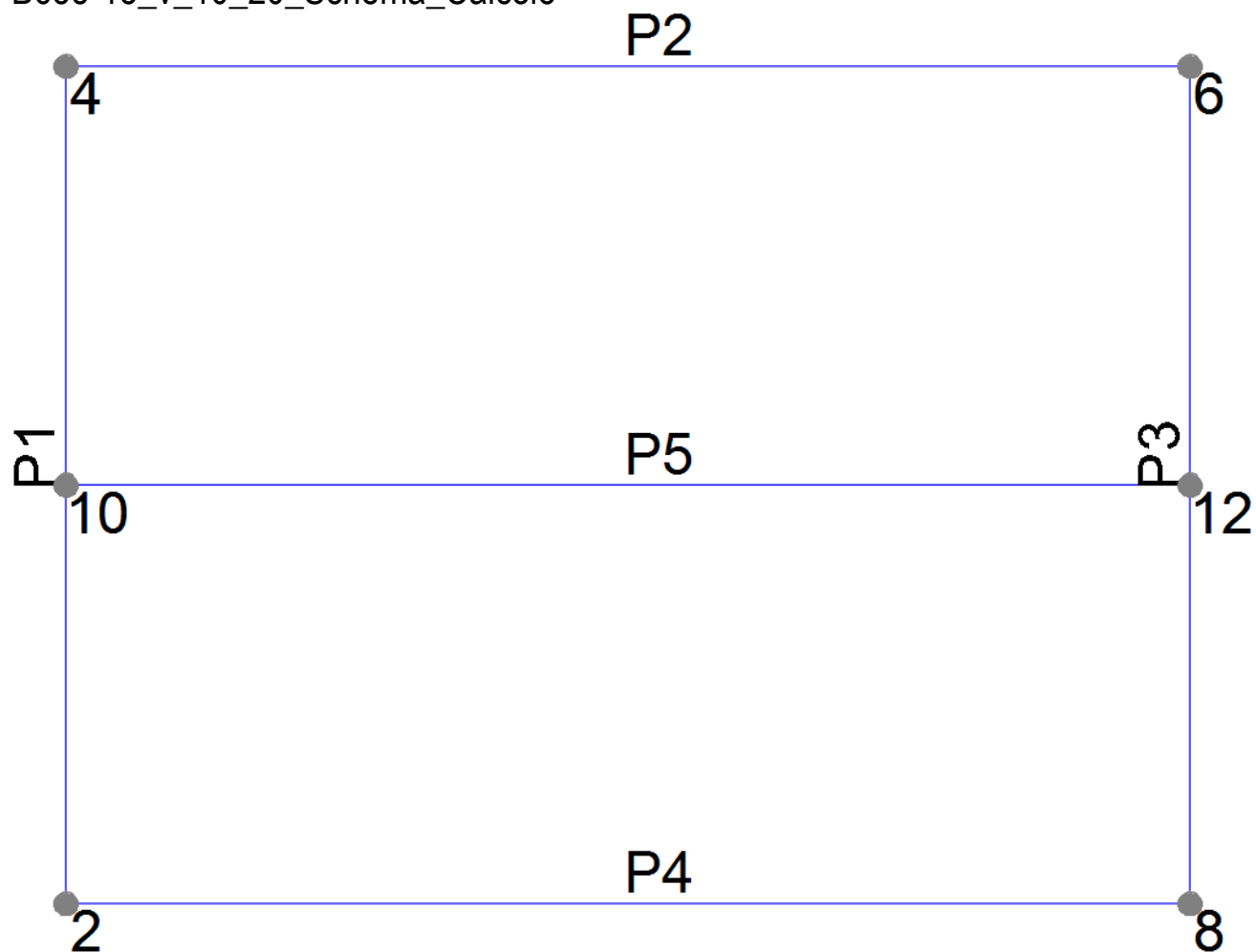


Figura 4, B655-15_v_10_20_Schema_Calcolo.

B655-15_v_10_40_Analisi_Statica_Esito

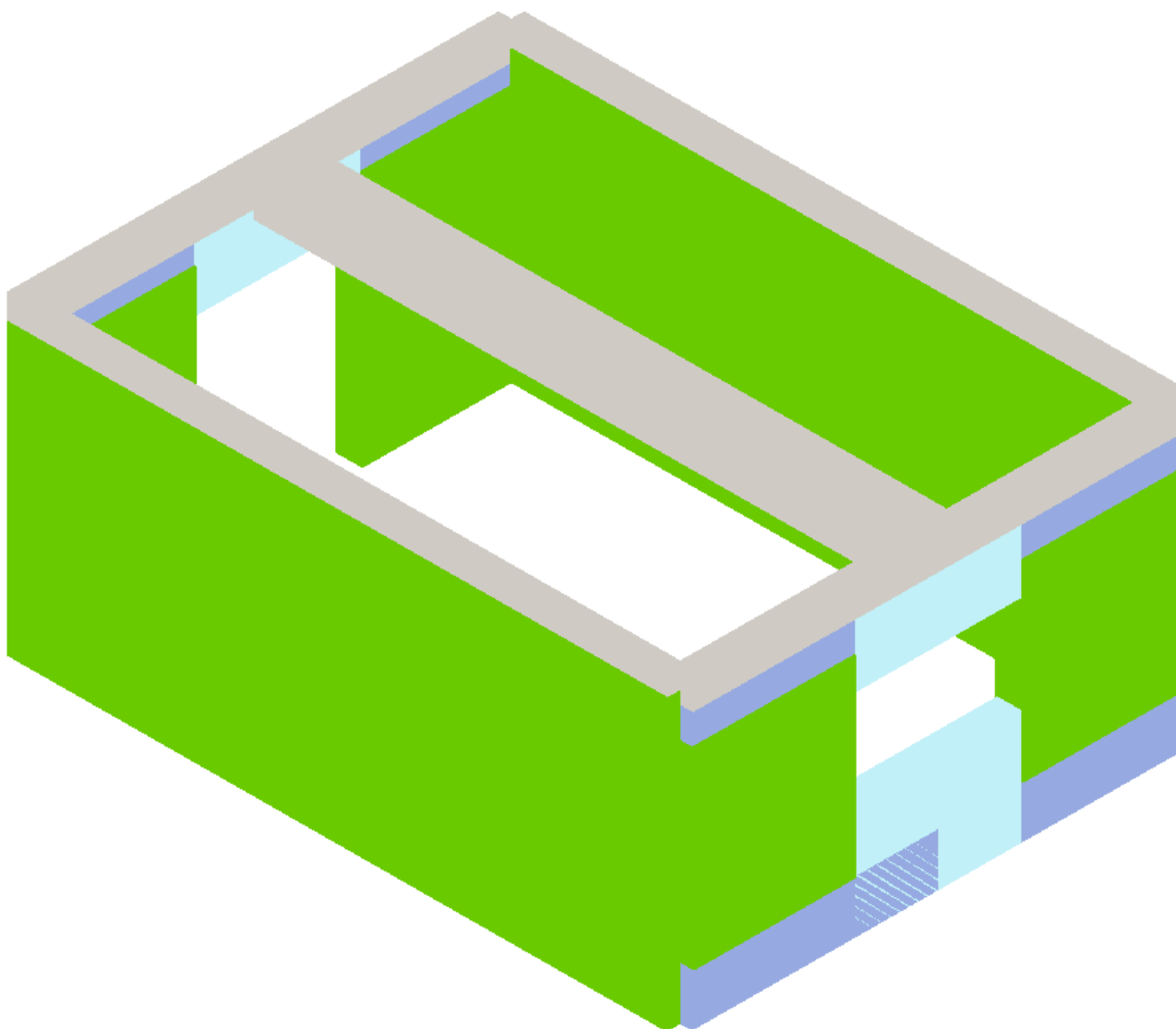


Figura 5, B655-15_v_10_40_Analisi_Statica_Esito.

B655-15_v_10_42_Fondazioni_Statico_SLU

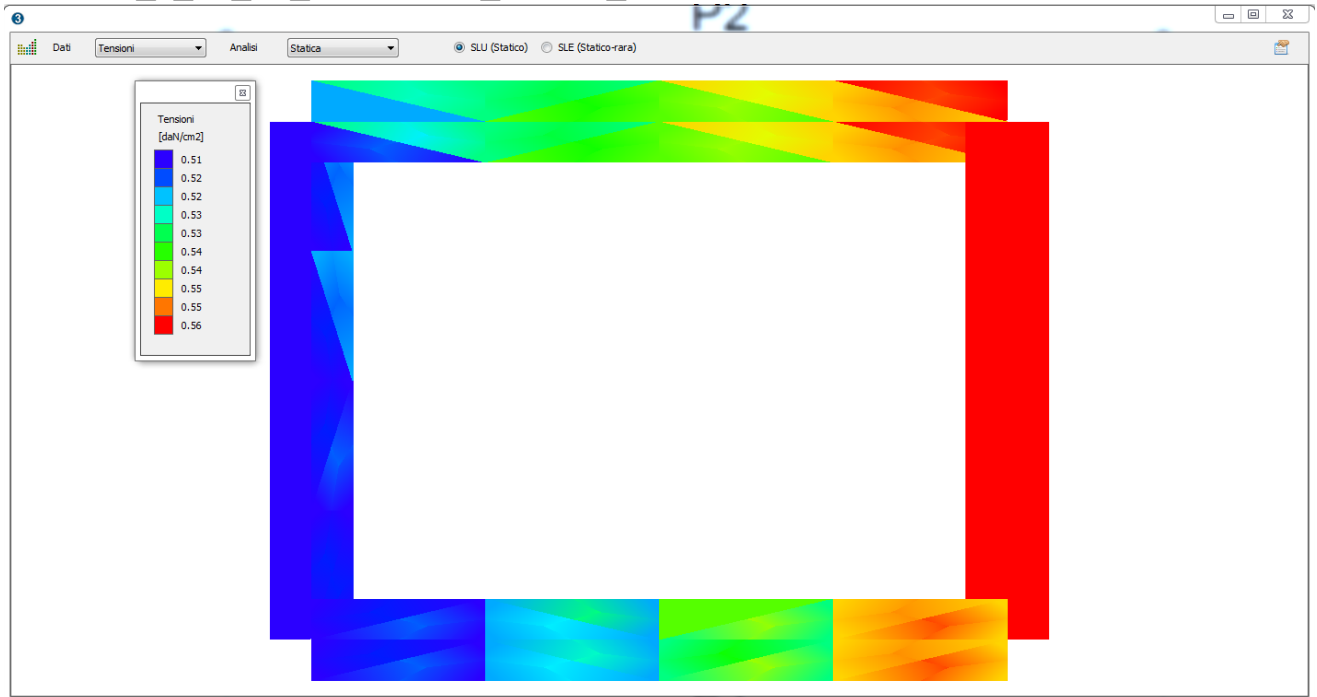


Figura 6, B655-15_v_10_42_Fondazioni_Statico_SLU.

B655-15_v_10_44_Fondazioni_Statico_SLE

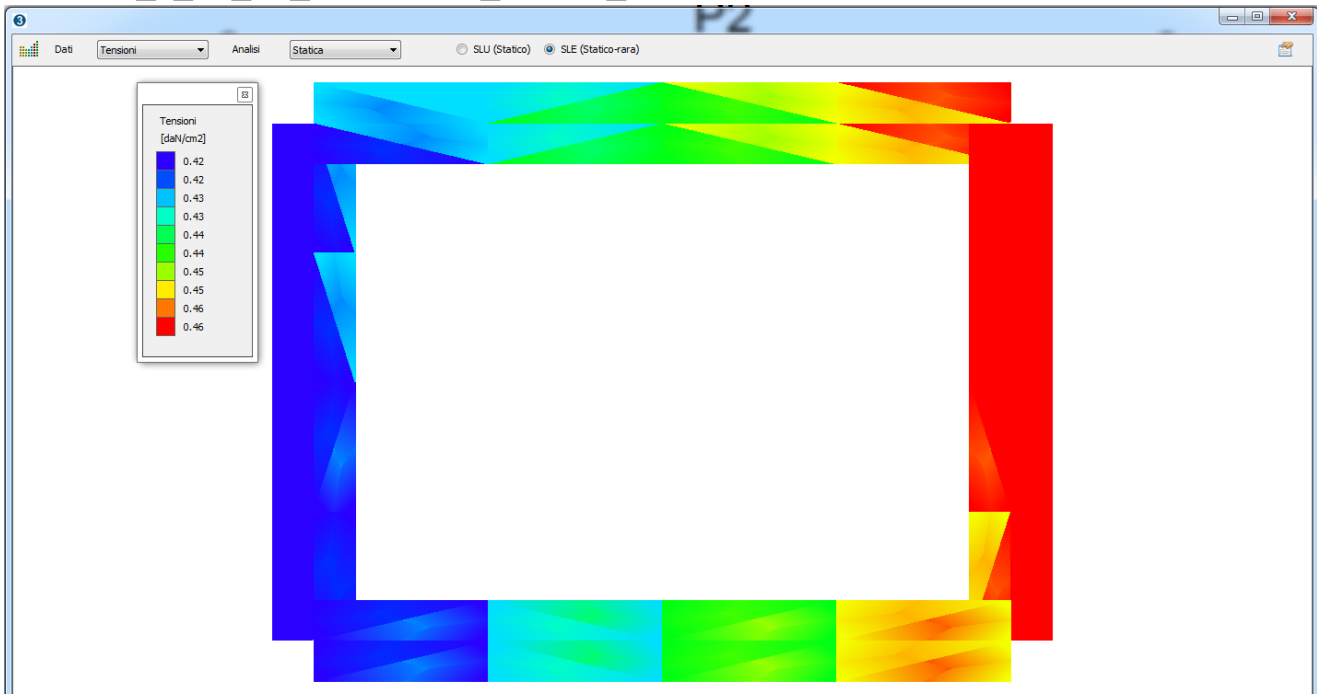


Figura 7, B655-15_v_10_44_Fondazioni_Statico_SLE.

Poiché si evidenzia che le tensioni sono estremamente limitate si omettono le verifiche di tipo geotecnico. A fronte del dimensionamento generoso delle fondazioni, si omettono verifiche relative agli aspetti strutturali delle fondazioni.

05.02 SISMICO

Si allega input ed output del problema ingegneristico in termini sismici, corredando la documentazione con le immagini significative volte a riassumere i risultati principali.

Descrizione della struttura

La presente relazione ha per oggetto l'analisi delle strutture, le considerazioni di merito, i calcoli svolti per l'edificio sito in Prali (TO), c/o loc. Miandette.

Norme di riferimento

Sono stati recepiti, per le analisi di cui in seguito, i principi e le regole riportate nelle normative seguenti:

- Decreto Ministeriale 14 gennaio 2008 - "Norme tecniche per le Costruzioni"
- Ordinanza Presidente del Consiglio dei Ministri n.3274
- Ordinanza Presidente del Consiglio dei Ministri n.3431
- Ordinanza Presidente del Consiglio dei Ministri n.3362

Descrizione del modello

Materiali

Muratura

Nome	E [N/mm ²]	G [N/mm ²]	Peso specifico [kN/m ³]	f _m [N/cm ²]	T/f _{m0} [N/cm ²]
Muratura_minima	3 300.00	1 320.00	12	471.00	14.29

Calcestruzzo

Nome	E [N/mm ²]	G [N/mm ²]	Peso specifico [kN/m ³]	f _{cm} [N/mm ²]	f _{ck} [N/mm ²]
C25/30	31 476.00	13 115.00	25	33.00	25.00

Acciaio armatura

Nome	E [N/mm ²]	G [N/mm ²]	Peso specifico [kN/m ³]	f _{ym} [N/mm ²]	f _{yk} [N/mm ²]
B450	206 000.00	79 231.00	79	484.00	450.00

Legno

Nome	E [N/mm ²]	G [N/mm ²]	Peso specifico [kN/m ³]	f _{wm} [N/mm ²]	f _{wk} [N/mm ²]
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ACSS1Conifere. pioppo (Abete centro sud 1)	11 000.00	690.00	3	46.00	32.00
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Elementi di struttura

Livello 1

Pannello + Cordolo C.A. (1)

N.	Parete	Materiale pannello	Rinforzo	Quota pannello [cm]	Altezza [cm]	Spessore [cm]	Materiale calcestruzzo	Materiale acciaio	Quota cordolo [cm]	Base sezione [cm]	Altezza sezione [cm]
1	1	Muratura_minima	-	300	300.0	24.0	C25/30	B450	300	24.0	25.0
3	2	Muratura_minima	-	300	300.0	24.0	C25/30	B450	300	24.0	25.0
5	3	Muratura_minima	-	300	300.0	24.0	C25/30	B450	300	24.0	25.0
7	4	Muratura_minima	-	300	300.0	24.0	C25/30	B450	300	24.0	25.0

Pannello + Cordolo C.A. (2)

N.	Parete	Area [cm ²]	J [cm ⁴]	Af intrad. [cm ²]	Af estrad. [cm ²]	N. barre intrad.	N. barre Estrad.	Copri ferro [cm]	Passo staffe [cm]	Area staffe [cm ²]	Porzione deformabile
1	1	600.00	31 250.00	4.00	4.00	4	4	3.0	15	1.01	0.00
3	2	600.00	31 250.00	4.00	4.00	4	4	3.0	15	1.01	0.00
5	3	600.00	31 250.00	4.00	4.00	4	4	3.0	15	1.01	0.00
7	4	600.00	31 250.00	4.00	4.00	4	4	3.0	15	1.01	0.00

Trave Acciaio / Legno

N.	Parete	Materiale	Quota I [cm]	Quota J [cm]	Area [cm ²]	J [cm ⁴]	W plastico [cm ³]
9	5	ACSS1Conifere. pioppo (Abete centro sud 1)	300	300	2 100.00	857 500.00	24 500.00

Solaio

N.	Quota [cm]	Spessore [cm]	G [N/mm ²]	Ex [N/mm ²]	Ey [N/mm ²]	Scarico masse	Tipo
1	300	4.0	10.00	6 490.38	0.00	Monodirezionale	Legno con travetti affiancati e tavolato semplice

Geometria del modello

La modellazione dell'edificio viene realizzata mediante l'inserimento di pareti che vengono discretizzate in macroelementi, rappresentativi di maschi murari e fasce di piano deformabili; i nodi rigidi sono indicati nelle porzioni di muratura che tipicamente sono meno soggette al danneggiamento sismico. Solitamente i maschi e le fasce sono contigui alle aperture, i nodi rigidi rappresentano elementi di collegamento tra maschi e fasce. La concezione matematica che si nasconde nell'impiego di tale elemento, permette di riconoscere il meccanismo di danno, a taglio nella sua parte centrale o a pressoflessione sui bordi dell'elemento in modo da percepire la dinamica del danneggiamento così come si presenta effettivamente nella realtà.

I nodi del modello, sono nodi tridimensionali a 5 gradi di libertà (le tre componenti di spostamento nel sistema di riferimento globale e le rotazioni intorno agli assi X e Y) o nodi bidimensionali a 3 gradi di libertà (due traslazioni e la rotazione nel piano della parete).

Quelli tridimensionali vengono usati per permettere il trasferimento delle azioni, da un primo muro a un secondo disposto trasversalmente rispetto al primo. I nodi di tipo bidimensionale hanno gradi di libertà nel solo piano della parete permettendo il trasferimento degli stati di sollecitazione tra i vari punti della parete.

Gli orizzontamenti, sono modellati con elementi solaio a tre nodi connessi ai nodi tridimensionali, sono caricabili perpendicolarmente al loro piano dai carichi accidentali e permanenti; le azioni sismiche caricano il solaio lungo la direzione del piano medio. Per questo l'elemento finito solaio viene definito con una rigidezza assiale, ma nessuna rigidezza flessionale, in quanto il comportamento meccanico principale che si intende sondare è quello sotto carico orizzontale dovuto al sisma.

Telaio equivalente

Parete : 1

Nodi 3D

Nodo	X [cm]	Y [cm]	Z [cm]	Livello
1	-3	-316	0	0
9	-3	-64	0	0
3	-3	187	0	0
2	-3	-316	300	1
10	-3	-64	300	1
4	-3	187	300	1

Macroelementi Maschi

N.	Materiale	Rinforzo	Spessore [cm]	Base [cm]	Altezza [cm]	Baricentro X [cm]	Baricentro Z [cm]	Nodo sopra	Nodo sotto
3	Muratura_minima	-	24.0	166.5	266.2	83	133	1	2
4	Muratura_minima	-	24.0	166.5	266.2	420	133	3	4

Macroelementi Fasce

N.	Materiale	Rinforzo	Spessore [cm]	Base [cm]	Altezza [cm]	Baricentro X [cm]	Baricentro Z [cm]	Nodo sinistro	Nodo destro
1	Muratura_minima	-	24.0	85.0	80.0	209	260	2	10
2	Muratura_minima	-	24.0	85.0	80.0	294	260	10	4

Parete : 2

Nodi 3D

Nodo	X [cm]	Y [cm]	Z [cm]	Livello
3	-3	187	0	0

5	673	187	0	0
4	-3	187	300	1
6	673	187	300	1

Nodi 2D

Nodo	X locale [cm]	Z [cm]	Livello
13	338	0	0
14	338	300	1

Macroelementi Maschi

N.	Materiale	Rinforzo	Spessore [cm]	Base [cm]	Altezza [cm]	Baricentro X [cm]	Baricentro Z [cm]	Nodo sopra	Nodo sotto
5	Muratura_minima	-	24.0	676.0	300.0	338	150	13	14

Parete : 3

Nodi 3D

Nodo	X [cm]	Y [cm]	Z [cm]	Livello
7	673	-316	0	0
11	673	-64	0	0
5	673	187	0	0
8	673	-316	300	1
12	673	-64	300	1
6	673	187	300	1

Macroelementi Maschi

N.	Materiale	Rinforzo	Spessore [cm]	Base [cm]	Altezza [cm]	Baricentro X [cm]	Baricentro Z [cm]	Nodo sopra	Nodo sotto
9	Muratura_minima	-	24.0	166.5	200.0	83	155	7	8
10	Muratura_minima	-	24.0	166.5	200.0	420	155	5	6

Macroelementi Fasce

N.	Materiale	Rinforzo	Spessore [cm]	Base [cm]	Altezza [cm]	Baricentro X [cm]	Baricentro Z [cm]	Nodo sinistro	Nodo destro
6	Muratura_minima	-	24.0	170.0	120.0	252	60	7	5
7	Muratura_minima	-	24.0	85.0	80.0	209	260	8	12
8	Muratura_minima	-	24.0	85.0	80.0	294	260	12	6

Parete : 4

Nodi 3D

Nodo	X [cm]	Y [cm]	Z [cm]	Livello
1	-3	-316	0	0
7	673	-316	0	0
2	-3	-316	300	1

8	673	-316	300	1
---	-----	------	-----	---

Nodi 2D

Nodo	X locale [cm]	Z [cm]	Livello
15	338	0	0
16	338	300	1

Macroelementi Maschi

N.	Materiale	Rinforzo	Spessore [cm]	Base [cm]	Altezza [cm]	Baricentro X [cm]	Baricentro Z [cm]	Nodo sopra	Nodo sotto
11	Muratura_minima	-	24.0	676.0	300.0	338	150	15	16

Parete : 5

Nodi 3D

Nodo	X [cm]	Y [cm]	Z [cm]	Livello
9	-3	-64	0	0
11	673	-64	0	0
10	-3	-64	300	1
12	673	-64	300	1

(*) Elementi di copertura

Carichi

Le verifiche allo stato limite ultimo (SLV) e allo stato limite di esercizio (SLD; SLO); devono essere effettuate per la seguente combinazione della azione sismica con le altre azioni [Norme Tecniche 2008 p.3.2.4].

$$E + G_1 + G_2 + \sum_i \Psi_{2i} Q_{Ki}$$

dove:

- E azione sismica per lo stato limite in esame;
- G1 peso proprio di tutti gli elementi strutturali;
- G2 peso proprio di tutti gli elementi non strutturali;
- Ψ_{2i} coefficiente di combinazione;
- Q_{Ki} valore caratteristico della azione variabile;

Gli effetti dell'azione sismica saranno valutati tenendo conto delle masse associate ai seguenti carichi gravitazionali:

$$G_1 + G_2 + \sum_i \Psi_{2i} Q_{Ki}$$

I valori dei vari coefficienti sono scelti in base alla destinazione d'uso dei vari solai secondo quanto indicato nella norma. [Norme Tecniche 2008 Tabella 2.5.1].

Si assume nella tabella seguente $G_k = G_1 + G_2$

N. Solaio	Gk [daN/m2]	Gk agg. [daN/m2]	Qk [daN/m2]	Ψ_2
1	30	40	900	0.30

Analisi incrementale a collasso (push-over)

Al fine di eseguire le dovute verifiche nei riguardi dell'edificio in questione, si è deciso di procedere con l'esecuzione di una analisi statica non lineare.

Le verifiche richieste si concretizzano nel confronto tra la curva di capacità per le diverse condizioni previste e la domanda di spostamento prevista dalla normativa.

La curva di capacità è individuata mediante un diagramma spostamento-taglio massimo alla base.

Secondo le prescrizioni da normativa [D.M. 14 gennaio 2008 p. 7.3.4.1.], le condizioni di carico che devono essere esaminate sono di due tipi:

- Distribuzione di forze proporzionale alle masse

$$F_i = \frac{m_i}{\sum_i m_i}$$

- Distribuzione di forze proporzionali al prodotto delle masse per la deformata corrispondente al primo modo di vibrare.

L'analisi, eseguita in controllo di spostamento, procede al calcolo della distribuzione di forze che genera il valore dello spostamento richiesto. L'analisi viene fatta continuare fino a che non si verifica il decadimento del taglio del 20% dal suo valore di picco. Si calcola così il valore dello spostamento massimo alla base dell'edificio generato da quella distribuzione di forze. Questo valore di spostamento costituisce il valore ultimo dell'edificio.

Lo spostamento preso in esame per il tracciamento della curva di capacità è quello di un punto dell'edificio detto nodo di controllo.

La normativa richiede il tracciamento di una curva di capacità bi-lineare di un sistema equivalente (SDOF). Il tracciamento di tale curva deve avvenire con una retta che, passando per l'origine interseca la curva del sistema reale in corrispondenza del 70% del valore di picco; la seconda retta risulterà parallela all'asse degli spostamenti tale da generare l'equivalenza delle aree tra i diagrammi del sistema reale e quello equivalente.

La determinazione della curva relativa al sistema equivalente, permette di determinare il periodo con cui ricavare lo spostamento massimo richiesto dal sisma, secondo gli spettri riportati sulla normativa.

La normativa definisce una eccentricità accidentale del centro delle masse pari al 5% della massima dimensione dell'edificio in direzione perpendicolare al sisma.

In base alla tipologia dell'edificio e alle scelte progettuali che si ritengono più idonee, si può decidere la condizione di carico sismico da prendere in esame.

Carico sismico: Individua quale delle due tipologie di distribuzioni (proporzionale alle masse o al primo modo) prendere in esame.

Direzione: Individua la direzione lungo cui viene caricata la struttura (X o Y del sistema globale) dal carico sismico.

Al fine di individuare la condizione di carico sismico più gravosa, si è deciso di eseguire le analisi distinte per tipologia di carico,

direzione del sisma e di eventuali eccentricità accidentali.

N.	Dir. sisma	Carico sismico proporzionale	Eccentricità [cm]	Livello	Nodo
1	+X	Masse	0.0	1	2
2	+X	1° modo	0.0	1	2
3	-X	Masse	0.0	1	2
4	-X	1° modo	0.0	1	2
5	+Y	Masse	0.0	1	2
6	+Y	1° modo	0.0	1	2
7	-Y	Masse	0.0	1	2
8	-Y	1° modo	0.0	1	2
9	+X	Masse	25.1	1	2
10	+X	Masse	-25.1	1	2
11	+X	1° modo	25.1	1	2
12	+X	1° modo	-25.1	1	2
13	-X	Masse	25.1	1	2
14	-X	Masse	-25.1	1	2
15	-X	1° modo	25.1	1	2
16	-X	1° modo	-25.1	1	2
17	+Y	Masse	33.8	1	2
18	+Y	Masse	-33.8	1	2
19	+Y	1° modo	33.8	1	2
20	+Y	1° modo	-33.8	1	2
21	-Y	Masse	33.8	1	2
22	-Y	Masse	-33.8	1	2
23	-Y	1° modo	33.8	1	2
24	-Y	1° modo	-33.8	1	2

Spettro da normativa

Gli spettri di risposta, sono definiti in funzione del reticolo di riferimento definito nella "Tabella 1" (parametri spettrali) in allegato alle Norme Tecniche 14 gennaio 2008.

Tale tabella fornisce, in funzione delle coordinate geografiche (latitudine, longitudine), i parametri necessari a tracciare lo spettro. I parametri forniti dal reticolo di riferimento sono:

- a_g : accelerazione orizzontale massima del terreno;
- F_0 : valore massimo del fattore di amplificazione dello spettro in accelerazione orizzontale;
- T^*C : periodo di inizio del tratto a velocità costante dello spettro in accelerazione orizzontale.

La trilogia di valori qui descritta, è definita per un periodo di ritorno assegnato(TR), definito in base alla probabilità di superamento di ciascuno degli stati limite.

Tali valori, saranno pertanto definiti per ciascuno degli stati limite esaminati (vedere tabella).

Lo spettro sismico dipende anche dalla "Classe del suolo" e dalla "categoria topografica" (vedere tabella).

SLV	SLD	SLO
-----	-----	-----

SLV	SLD	SLO
-----	-----	-----

Ag	1.30	0.52	0.39
F0	2.47	2.43	2.46
Tc*	0.27	0.23	0.21
Tr	475.00	50.00	30.00

Ss	1.60	1.60	1.60
Tb	0.17	0.16	0.15
Tc	0.52	0.48	0.45
Td	2.13	1.81	1.76

Risultati

Secondo le indicazioni da normativa si devono eseguire le seguenti verifiche:

Stato limite Ultimo (SLV):

$$D_{\max} \leq D_u$$

D_{max}: Spostamento massimo richiesto dalla normativa individuato dallo spettro elastico.

D_u: Spostamento massimo offerto dalla struttura corrispondente con il decadimento della curva Push-over di un valore pari al 20% di quello massimo.

$$q^* < 3$$

q*: rapporto tra la forza di risposta elastica e la forza di snervamento del sistema equivalente

Stato limite di Danno (SLD):

$$D_{\max}^{SLD} \leq D_d$$

D_{\max}^{SLD} : Spostamento massimo richiesto dalla normativa, calcolato in base allo spettro sismico definito per lo stato limite di danno.

D_d: Spostamento massimo corrispondente al valore che causa il superamento del valore massimo di drift di piano (0.003).

Stato limite di Operatività (SLO):

$$D_{\max}^{SLO} \leq D_o$$

D_{\max}^{SLO} : Spostamento massimo richiesto dalla normativa, calcolato in base allo spettro sismico definito per lo stato limite di operatività.

D_o: Spostamento massimo corrispondente al valore che causa il superamento del valore massimo di drift di piano (0.002).

O.P.C.M. 3362 dell' 8 luglio 2004:

Questa normativa prescrive il calcolo degli indicatori di rischio.

Il parametro $(\alpha)_u$ è considerato un indicatore del rischio di collasso, il parametro $(\alpha)_e$ un indicatore del rischio di inagibilità dell'opera.

Questi parametri vengono calcolati come indicato nel seguito:

PGADS :accelerazione stimata di danno severo

PGADL :accelerazione stimata di danno lieve

$(\alpha)_u = PGADS / PGA$

$(\alpha)_e = PGADL / PGA$

Dettaglio verifiche

N.	Dir. sisma	Car. sismico prop.	Ecc. [cm]	SLV				SLD				SLO			
				Dmax [cm]	Du [cm]	q*	Ver.	Dmax [cm]	Dd [cm]	Ver.	Dmax [cm]	Do [cm]	Ver.	α SLU	α SLD
1	+X	Masse	0.0	0.21	1.82	0.31	Si	0.08	0.46	Si	0.06	0.46	Si	5.26	5.68
2	+X	1° modo	0.0	0.21	1.82	0.31	Si	0.08	0.46	Si	0.06	0.46	Si	5.26	5.68
3	-X	Masse	0.0	0.21	1.82	0.29	Si	0.08	0.46	Si	0.06	0.46	Si	5.38	5.69
4	-X	1° modo	0.0	0.21	1.82	0.29	Si	0.08	0.46	Si	0.06	0.46	Si	5.38	5.69
5	+Y	Masse	0.0	0.08	0.54	1.05	Si	0.03	0.10	Si	0.02	0.10	Si	2.10	2.59
6	+Y	1° modo	0.0	0.08	0.54	1.05	Si	0.03	0.10	Si	0.02	0.10	Si	2.10	2.59
7	-Y	Masse	0.0	0.08	0.55	1.05	Si	0.03	0.11	Si	0.02	0.11	Si	2.09	2.65
8	-Y	1° modo	0.0	0.08	0.55	1.05	Si	0.03	0.11	Si	0.02	0.11	Si	2.09	2.65
9	+X	Masse	25.1	0.22	1.25	0.29	Si	0.08	0.52	Si	0.06	0.52	Si	4.34	6.13
10	+X	Masse	-25.1	0.21	1.23	0.32	Si	0.08	0.42	Si	0.06	0.42	Si	4.12	5.17
11	+X	1° modo	25.1	0.22	1.25	0.29	Si	0.08	0.52	Si	0.06	0.52	Si	4.34	6.13
12	+X	1° modo	-25.1	0.21	1.23	0.32	Si	0.08	0.42	Si	0.06	0.42	Si	4.12	5.17
13	-X	Masse	25.1	0.21	1.39	0.27	Si	0.08	0.52	Si	0.06	0.52	Si	4.77	6.28
14	-X	Masse	-25.1	0.21	1.25	0.31	Si	0.08	0.42	Si	0.06	0.42	Si	4.27	5.16
15	-X	1° modo	25.1	0.21	1.39	0.27	Si	0.08	0.52	Si	0.06	0.52	Si	4.77	6.28
16	-X	1° modo	-25.1	0.21	1.25	0.31	Si	0.08	0.42	Si	0.06	0.42	Si	4.27	5.16
17	+Y	Masse	33.8	0.07	0.77	0.99	Si	0.03	0.15	Si	0.02	0.15	Si	2.65	3.02
18	+Y	Masse	-33.8	0.12	0.54	1.16	Si	0.03	0.09	Si	0.02	0.09	Si	1.99	2.35
19	+Y	1° modo	33.8	0.07	0.77	0.99	Si	0.03	0.15	Si	0.02	0.15	Si	2.65	3.02
20	+Y	1° modo	-33.8	0.12	0.54	1.16	Si	0.03	0.09	Si	0.02	0.09	Si	1.99	2.35
21	-Y	Masse	33.8	0.07	0.74	0.99	Si	0.03	0.15	Si	0.02	0.15	Si	2.60	3.03
22	-Y	Masse	-33.8	0.12	0.54	1.16	Si	0.03	0.09	Si	0.02	0.09	Si	1.98	2.34
23	-Y	1° modo	33.8	0.07	0.74	0.99	Si	0.03	0.15	Si	0.02	0.15	Si	2.60	3.03
24	-Y	1° modo	-33.8	0.12	0.54	1.16	Si	0.03	0.09	Si	0.02	0.09	Si	1.98	2.34

B655-15_v_10_50_Analisi_Sismica_Caso_10_Curva_PushOver

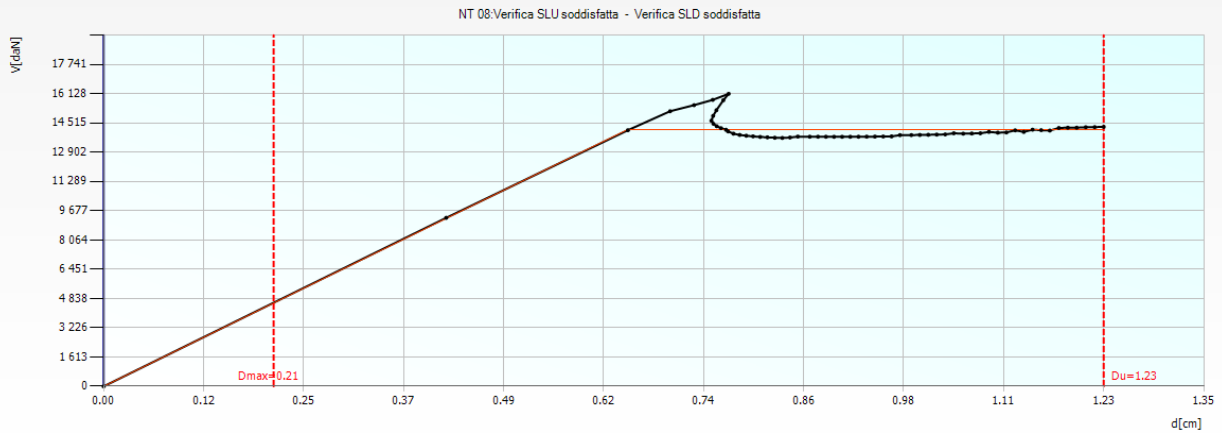


Figura 8, B655-15_v_10_50_Analisi_Sismica_Caso_10_Curva_PushOver.

B655-15_v_10_50_Analisi_Sismica_Caso_12_Curva_PushOver

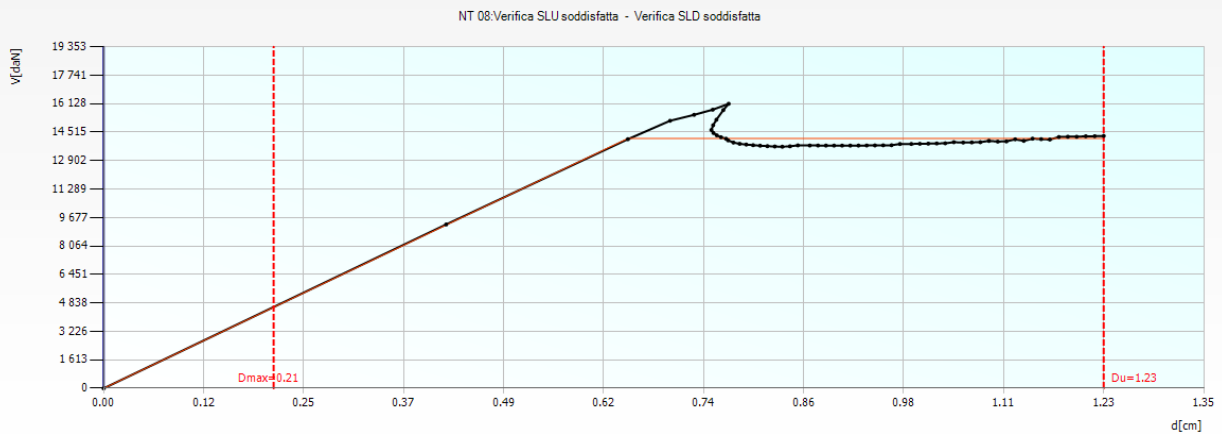


Figura 9, B655-15_v_10_50_Analisi_Sismica_Caso_12_Curva_PushOver.

B655-15_v_10_50_Analisi_Sismica_Caso_22_Curva_PushOver

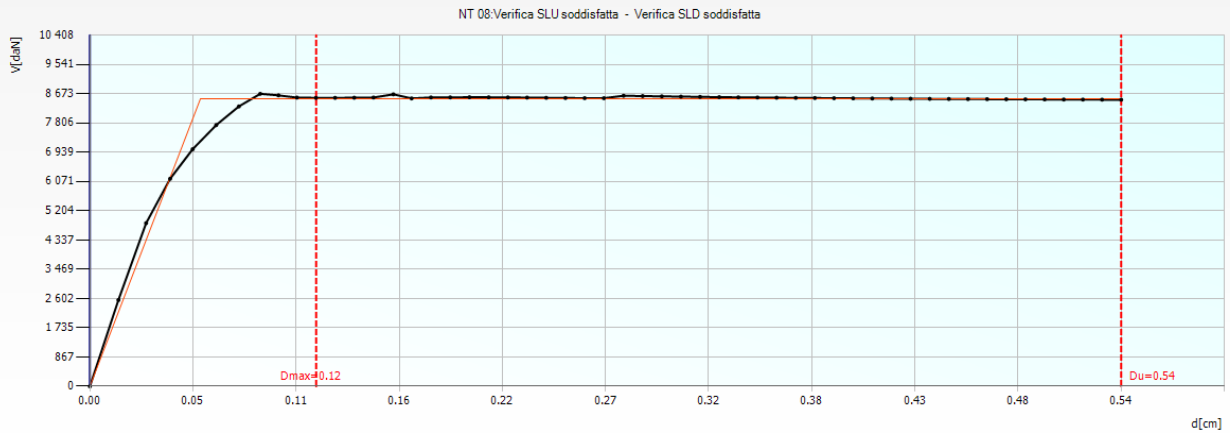


Figura 10, B655-15_v_10_50_Analisi_Sismica_Caso_22_Curva_PushOver.

B655-15_v_10_50_Analisi_Sismica_Caso_24_Curva_PushOver

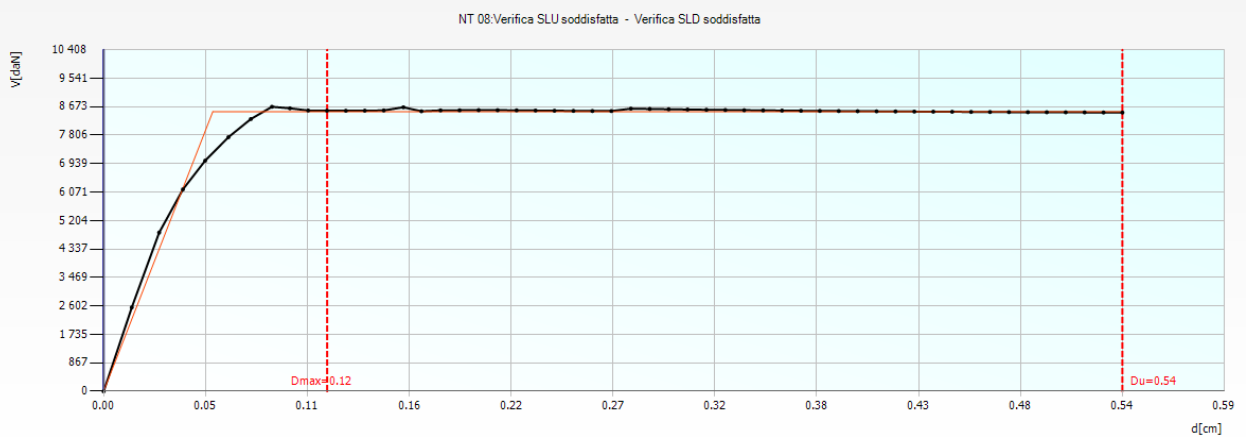


Figura 11, B655-15_v_10_50_Analisi_Sismica_Caso_24_Curva_PushOver.

B655-15_v_10_80_Fondazioni_Statico-Sismico_SLV-SLV_Inviluppo

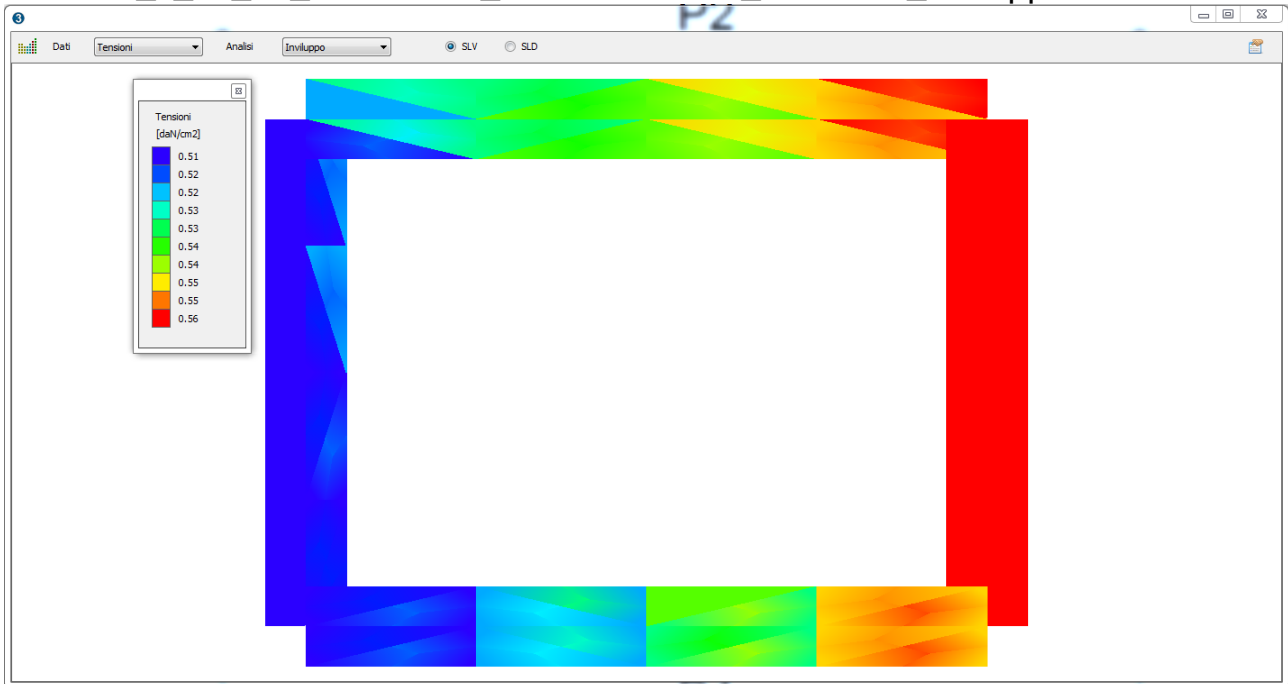


Figura 12, B655-15_v_10_80_Fondazioni_Statico-Sismico_SLV-SLV_Inviluppo.

B655-15_v_10_90_Fondazioni_Sismico_SLD_Inviluppo

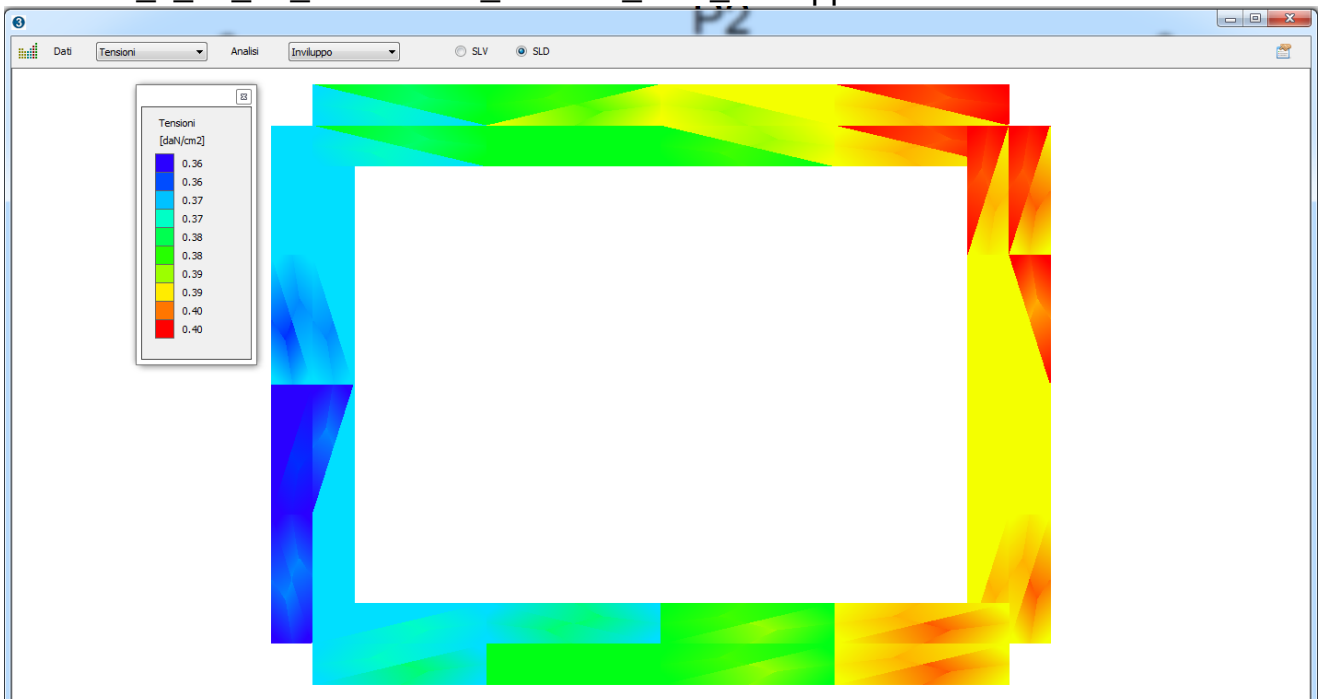


Figura 13, B655-15_v_10_90_Fondazioni_Sismico_SLD_Inviluppo.

Poiché si evidenzia che le tensioni sono estremamente limitate si omettono le verifiche di tipo geotecnico. A fronte del dimensionamento generoso delle fondazioni, si omettono verifiche relative agli aspetti strutturali delle fondazioni.

06. ALLEGATI STRUTTURA – PARTE COPERTURA

Si inserisce l'analisi della copertura.

06.01 INPUT TESTUALE

Si allega il listato di input del problema ingegneristico.

STAMPA DEI DATI DI PROGETTO

INTESTAZIONE E DATI CARATTERISTICI DELLA STRUTTURA

Nome dell'archivio di lavoro B655-15_v_10
Intestazione del lavoro B655-15_v_10_Tetto
Tipo di struttura Nello Spazio
Tipo di analisi Statica sismica equivalente
Tipo di soluzione Lineare
Unità di misura delle forze kg
Unità di misura delle lunghezze cm
Normativa NTC/2008

NORMATIVA

Vita nominale costruzione 50 anni
Classe d'uso costruzione II
Vita di riferimento 50 anni
Spettro di risposta Stato limite ultimo
Probabilità di superamento periodo di riferimento 10
Tempo di ritorno del sisma 475 anni
Località Prali - (TO)
ag/g 0.132
F0 2.47
Tc 0.27
Categoria del suolo E
Coeff.moltiplicativo sisma 1.3
Fattore topografico 1.2

DATI SPETTRO

Eccentricità accidentale 5%
Periodo proprio T1 0.0462 [C1 = 0.05 H = 90]
□ 1
Fattore q di struttura qor=1
Duttilità Bassa Duttilità
Sd (T1) 0.458 g
Coeff.globale accelerazione sismica 0.458

RIEPILOGO DELLE SEZIONI UTILIZZATE NEL MODELLO STRUTTURALE

SEZIONI RETTANGOLARI

Codice	Base	H
1	31.000	36.000
2	15.000	18.000
3	24.000	25.000
5	10.000	10.000

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

SEZIONE A T
Codice B H h b
4 14.000 14.000 1.000 1.000

CARICHI PER ELEMENTI TRAVE, TRAVE DI FONDAZIONE E RETICOLARE

Carico distribuito con riferimento globale Z

Descrizione Cod. Cond. carico Tipo
Azione/categoria Val. iniz. Dist. iniz.
nodo I Val.
finale Dist.fin.
nodo I Aliq.inerz.
Aliq.inerz.

SLD
Neve 2 Condizione 2 Variabile: Neve -9.360000 0.000 -9.360000 0.000 0.2000 0.2000

Carico distribuito con riferimento globale Z, agente sulla lunghezza reale

Descrizione Cod. Cond. carico Tipo
Azione/categoria Val. iniz. Dist.iniz.
nodo I Val.
finale Dist.fin.
nodo I Aliq.inerz.
Aliq.inerz.

SLD
Assito_guaina_copertura 1 Condizione 1 Permanente: Permanente portato -0.420000 0.000 -0.420000 0.000 1.0000
1.0000

CONDIZIONI DI CARICO AI NODI NON DEFINITE

LISTA MATERIALI UTILIZZATI

Codice	Descrizione	Mod. elast.	Coef. Poisson	Peso unit.	Dil. term.	Aliq. inerz.	Rigid. taglio	Rigid. fless.
1	Legno	+1.00e+005	0.430	0.00050	+3.00e-006	1.000	+1.00e+000	
2	Calcestruzzo C25/30 (Rck 300)	+3.21e+005	0.120	0.00250	+1.00e-005	1.000	+1.00e+000	+1.00e+000
3	Acciaio	+2.10e+006	0.300	0.00785	+1.20e-005	1.000	+1.00e+000	

GRUPPI DELLA STRUTTURA

ELEMENTO FINITO: TRAVE

Numero gruppo	Descrizione gruppo
1	FP_PUNTONI
2	FP_COLMO
3	FP_PASSAFUORI
4	FP_CORDOLI
5	FP_SOTTO-COLMO
6	FP_BIELLE

ELEMENTO FINITO: VINCOLO

Numero gruppo	Descrizione gruppo
1	Cerniere_Fisse

NODI DEL MODELLO

Nodo	Coord. X	Coord. Y	Coord. Z	Temper.	uX	uY	uZ	rX	rY	rZ
1	0.000	307.992	-20.216	0.000 0	0	0	0	0	0	0
2	-0.000	251.500	-0.000	0.000 0	0	0	0	0	0	0

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

3	0.000	0.000	90.000	0.000 0	0	0	0	0	0
4	103.125	0.000	90.000	0.000 0	0	0	0	0	0
5	206.250	0.000	90.000	0.000 0	0	0	0	0	0
6	309.375	0.000	90.000	0.000 0	0	0	0	0	0
7	412.500	-0.000	90.000	0.000 0	0	0	0	0	0
8	515.625	-0.000	90.000	0.000 0	0	0	0	0	0
9	618.750	-0.000	90.000	0.000 0	0	0	0	0	0
10	721.875	-0.000	90.000	0.000 0	0	0	0	0	0
11	825.000	-0.000	90.000	0.000 0	0	0	0	0	0
12	103.125	251.500	-0.000	0.000 0	0	0	0	0	0
13	206.250	251.500	-0.000	0.000 0	0	0	0	0	0
14	309.375	251.500	-0.000	0.000 0	0	0	0	0	0
15	412.500	251.500	0.000	0.000 0	0	0	0	0	0
16	515.625	251.500	0.000	0.000 0	0	0	0	0	0
17	618.750	251.500	0.000	0.000 0	0	0	0	0	0
18	721.875	251.500	0.000	0.000 0	0	0	0	0	0
19	825.000	251.500	0.000	0.000 0	0	0	0	0	0
20	103.125	307.992	-20.216	0.000 0	0	0	0	0	0
21	206.250	307.992	-20.216	0.000 0	0	0	0	0	0
22	309.375	307.992	-20.216	0.000 0	0	0	0	0	0
23	412.500	307.992	-20.216	0.000 0	0	0	0	0	0
24	515.625	307.992	-20.216	0.000 0	0	0	0	0	0
25	618.750	307.992	-20.216	0.000 0	0	0	0	0	0
26	721.875	307.992	-20.216	0.000 0	0	0	0	0	0
27	825.000	307.992	-20.216	0.000 0	0	0	0	0	0
28	0.000	-307.992	-20.216	0.000 0	0	0	0	0	0
29	-0.000	-251.500	-0.000	0.000 0	0	0	0	0	0
30	103.125	-251.500	-0.000	0.000 0	0	0	0	0	0
31	206.250	-251.500	-0.000	0.000 0	0	0	0	0	0
32	309.375	-251.500	-0.000	0.000 0	0	0	0	0	0
33	412.500	-251.500	0.000	0.000 0	0	0	0	0	0
34	515.625	-251.500	0.000	0.000 0	0	0	0	0	0
35	618.750	-251.500	0.000	0.000 0	0	0	0	0	0
36	721.875	-251.500	0.000	0.000 0	0	0	0	0	0
37	825.000	-251.500	0.000	0.000 0	0	0	0	0	0
38	103.125	-307.992	-20.216	0.000 0	0	0	0	0	0
39	206.250	-307.992	-20.216	0.000 0	0	0	0	0	0
40	309.375	-307.992	-20.216	0.000 0	0	0	0	0	0
41	412.500	-307.992	-20.216	0.000 0	0	0	0	0	0
42	515.625	-307.992	-20.216	0.000 0	0	0	0	0	0
43	618.750	-307.992	-20.216	0.000 0	0	0	0	0	0
44	721.875	-307.992	-20.216	0.000 0	0	0	0	0	0
45	825.000	-307.992	-20.216	0.000 0	0	0	0	0	0
46	103.125	0.000	60.000	0.000 0	0	0	0	0	0
47	206.250	0.000	60.000	0.000 0	0	0	0	0	0
48	309.375	0.000	60.000	0.000 0	0	0	0	0	0
49	412.500	-0.000	60.000	0.000 0	0	0	0	0	0
50	515.625	-0.000	60.000	0.000 0	0	0	0	0	0
51	618.750	-0.000	60.000	0.000 0	0	0	0	0	0
52	721.875	-0.000	60.000	0.000 0	0	0	0	0	0
53	825.000	-0.000	60.000	0.000 0	0	0	0	0	0

Legenda: descrizione della simbologia adottata per i gradi di liberta'

Simbolo Descrizione del Grado di Liberta'
0 libero
1 bloccato
MASTER Master di una o piu' relazioni

GRUPPI ELEMENTO FINITO TRAVE

GRUPPO NUMERO: 1 - DESCRIZIONE: FP_PUNTONI

Nodi	Connessioni	Offset strutturali/Conci rigidi
Asta I J K	Nodo I	Nodo J Mat. Sez.

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	1	2	0	Rigida	Rigida	1	2
2	2	3	0	Rigida	(1)	1	2
3	20	12	0	Rigida	Rigida	1	2
4	12	4	0	Rigida	(1)	1	2
5	21	13	0	Rigida	Rigida	1	2
6	13	5	0	Rigida	(1)	1	2
7	22	14	0	Rigida	Rigida	1	2
8	14	6	0	Rigida	(1)	1	2
9	23	15	0	Rigida	Rigida	1	2
10	15	7	0	Rigida	(1)	1	2
11	24	16	0	Rigida	Rigida	1	2
12	16	8	0	Rigida	(1)	1	2
13	25	17	0	Rigida	Rigida	1	2
14	17	9	0	Rigida	(1)	1	2
15	26	18	0	Rigida	Rigida	1	2
16	18	10	0	Rigida	(1)	1	2
17	27	19	0	Rigida	Rigida	1	2
18	19	11	0	Rigida	(1)	1	2
19	28	29	0	Rigida	Rigida	1	2
20	29	3	0	Rigida	(1)	1	2
21	38	30	0	Rigida	Rigida	1	2
22	30	4	0	Rigida	(1)	1	2
23	39	31	0	Rigida	Rigida	1	2
24	31	5	0	Rigida	(1)	1	2
25	40	32	0	Rigida	Rigida	1	2
26	32	6	0	Rigida	(1)	1	2
27	41	33	0	Rigida	Rigida	1	2
28	33	7	0	Rigida	(1)	1	2
29	42	34	0	Rigida	Rigida	1	2
30	34	8	0	Rigida	(1)	1	2
31	43	35	0	Rigida	Rigida	1	2
32	35	9	0	Rigida	(1)	1	2
33	44	36	0	Rigida	Rigida	1	2
34	36	10	0	Rigida	(1)	1	2
35	45	37	0	Rigida	Rigida	1	2
36	37	11	0	Rigida	(1)	1	2

Legenda delle connessioni

Nota Descrizione
1 Fx=Svinc. Fy=Rigida Fz=Rigida Mx=1% My=1% Mz=Svinc.

GRUPPO NUMERO: 2 - DESCRIZIONE: FP_COLMO

Nodi		Connessioni		Offset strutturali/Conci rigidi			
Asta	I	J	K	Nodo I	Nodo J	Mat.	Sez.
1	3	4	0	(1)	Rigida	1	1
2	4	5	0	(1)	Rigida	1	1
3	5	6	0	(1)	Rigida	1	1
4	6	7	0	(1)	Rigida	1	1
5	7	8	0	(1)	Rigida	1	1
6	8	9	0	(1)	Rigida	1	1
7	9	10	0	(1)	Rigida	1	1
8	10	11	0	(1)	Rigida	1	1

Legenda delle connessioni

Nota Descrizione
1 Fx=Rigida Fy=Rigida Fz=Rigida Mx=1% My=Rigida Mz=Rigida

GRUPPO NUMERO: 3 - DESCRIZIONE: FP_PASSAFUORI

Nodi		Connessioni		Offset strutturali/Conci rigidi			
Asta	I	J	K	Nodo I	Nodo J	Mat.	Sez.
1	2	12	0	(1)	Rigida	3	4
2	29	30	0	(1)	Rigida	3	4

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Legenda delle connessioni

Nota Descrizione
1 Fx=Rigida Fy=Rigida Fz=Rigida Mx=1% My=Rigida Mz=Rigida

GRUPPO NUMERO:		4 - DESCRIZIONE: FP_CORDOLI						
Nodi		Connessioni			Offset strutturali/Conci rigidi			
Asta	I	J	K	Nodo I	Nodo J	Mat.	Sez.	
1	12	13	0	(1)	Rigida	2	3	
2	13	14	0	(1)	Rigida	2	3	
3	14	15	0	(1)	Rigida	2	3	
4	15	16	0	(1)	Rigida	2	3	
5	16	17	0	(1)	Rigida	2	3	
6	17	18	0	(1)	Rigida	2	3	
7	18	19	0	(1)	Rigida	2	3	
8	30	31	0	(1)	Rigida	2	3	
9	31	32	0	(1)	Rigida	2	3	
10	32	33	0	(1)	Rigida	2	3	
11	33	34	0	(1)	Rigida	2	3	
12	34	35	0	(1)	Rigida	2	3	
13	35	36	0	(1)	Rigida	2	3	
14	36	37	0	(1)	Rigida	2	3	

Legenda delle connessioni

Nota Descrizione
1 Fx=Rigida Fy=Rigida Fz=Rigida Mx=1% My=Rigida Mz=Rigida

GRUPPO NUMERO:		5 - DESCRIZIONE: FP_SOTTO-COLMO						
Nodi		Connessioni			Offset strutturali/Conci rigidi			
Asta	I	J	K	Nodo I	Nodo J	Mat.	Sez.	
1	46	47	0	(1)	Rigida	1	1	
2	47	48	0	(1)	Rigida	1	1	
3	48	49	0	(1)	Rigida	1	1	
4	49	50	0	(1)	Rigida	1	1	
5	50	51	0	(1)	Rigida	1	1	
6	51	52	0	(1)	Rigida	1	1	
7	52	53	0	(1)	Rigida	1	1	

Legenda delle connessioni

Nota Descrizione
1 Fx=Rigida Fy=Rigida Fz=Rigida Mx=1% My=Rigida Mz=Rigida

GRUPPO NUMERO:		6 - DESCRIZIONE: FP_BIELLE						
Nodi		Connessioni			Offset strutturali/Conci rigidi			
Asta	I	J	K	Nodo I	Nodo J	Mat.	Sez.	
1	47	5	0	(1)	(1)	1	5	
2	48	6	0	(1)	(1)	1	5	
3	49	7	0	(1)	(1)	1	5	
4	50	8	0	(1)	(1)	1	5	
5	51	9	0	(1)	(1)	1	5	
6	52	10	0	(1)	(1)	1	5	

Legenda delle connessioni

Nota Descrizione
1 Fx=Rigida Fy=1% Fz=1% Mx=1% My=1% Mz=1%

GRUPPI ELEMENTO FINITO VINCOLO

GRUPPO NUMERO: 1 - DESCRIZIONE: CERNIERE_FISSE

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

VINCOLI STANDARD

Nodo	Rigid. Trasl. X	Rigid. Rotaz. X	Rigid. Trasl. Y	Rigid. Rotaz. Y	Rigid. Trasl. Z	Rigid. Rotaz. Z
4	+1.00e+009		+1.00e+009	+1.00e+009		
11	+1.00e+009		+1.00e+009	+1.00e+009		
12	+1.00e+009		+1.00e+009	+1.00e+009		
13	+1.00e+009		+1.00e+009	+1.00e+009		
14	+1.00e+009		+1.00e+009	+1.00e+009		
15	+1.00e+009		+1.00e+009	+1.00e+009		
16	+1.00e+009		+1.00e+009	+1.00e+009		
17	+1.00e+009		+1.00e+009	+1.00e+009		
18	+1.00e+009		+1.00e+009	+1.00e+009		
19	+1.00e+009		+1.00e+009	+1.00e+009		
30	+1.00e+009		+1.00e+009	+1.00e+009		
31	+1.00e+009		+1.00e+009	+1.00e+009		
32	+1.00e+009		+1.00e+009	+1.00e+009		
33	+1.00e+009		+1.00e+009	+1.00e+009		
34	+1.00e+009		+1.00e+009	+1.00e+009		
35	+1.00e+009		+1.00e+009	+1.00e+009		
36	+1.00e+009		+1.00e+009	+1.00e+009		
37	+1.00e+009		+1.00e+009	+1.00e+009		
46	+1.00e+009		+1.00e+009	+1.00e+009		
53	+1.00e+009		+1.00e+009	+1.00e+009		

GRUPPI ELEMENTO FINITO TRAVE - ELEMENTI CON CARICO APPLICATO

GRUPPO NUMERO: 1- DESCRIZIONE: FP_PUNTONI

Asta	Carichi		
1	Codice carico	1	2
Moltiplicatore	0.50	0.50	
2	Codice carico	1	2
Moltiplicatore	0.50	0.50	
3	Codice carico	1	2
Moltiplicatore	1.00	1.00	
4	Codice carico	1	2
Moltiplicatore	1.00	1.00	
5	Codice carico	1	2
Moltiplicatore	1.00	1.00	
6	Codice carico	1	2
Moltiplicatore	1.00	1.00	
7	Codice carico	1	2
Moltiplicatore	1.00	1.00	
8	Codice carico	1	2
Moltiplicatore	1.00	1.00	
9	Codice carico	1	2
Moltiplicatore	1.00	1.00	
10	Codice carico	1	2
Moltiplicatore	1.00	1.00	
11	Codice carico	1	2
Moltiplicatore	1.00	1.00	
12	Codice carico	1	2
Moltiplicatore	1.00	1.00	

13	Codice carico	1	2
Moltiplicatore	1.00	1.00	
14	Codice carico	1	2
Moltiplicatore	1.00	1.00	
15	Codice carico	1	2
Moltiplicatore	1.00	1.00	
16	Codice carico	1	2
Moltiplicatore	1.00	1.00	
17	Codice carico	1	2
Moltiplicatore	0.50	0.50	
18	Codice carico	1	2
Moltiplicatore	0.50	0.50	
19	Codice carico	1	2
Moltiplicatore	0.50	0.50	
20	Codice carico	1	2
Moltiplicatore	0.50	0.50	
21	Codice carico	1	2
Moltiplicatore	1.00	1.00	
22	Codice carico	1	2
Moltiplicatore	1.00	1.00	
23	Codice carico	1	2
Moltiplicatore	1.00	1.00	
24	Codice carico	1	2
Moltiplicatore	1.00	1.00	
25	Codice carico	1	2
Moltiplicatore	1.00	1.00	
26	Codice carico	1	2
Moltiplicatore	1.00	1.00	
27	Codice carico	1	2
Moltiplicatore	1.00	1.00	
28	Codice carico	1	2
Moltiplicatore	1.00	1.00	
29	Codice carico	1	2
Moltiplicatore	1.00	1.00	
30	Codice carico	1	2
Moltiplicatore	1.00	1.00	
31	Codice carico	1	2
Moltiplicatore	1.00	1.00	
32	Codice carico	1	2
Moltiplicatore	1.00	1.00	
33	Codice carico	1	2
Moltiplicatore	1.00	1.00	
34	Codice carico	1	2

Moltiplicatore	1.00	1.00
35 Codice carico	1	2
Moltiplicatore	0.50	0.50
36 Codice carico	1	2
Moltiplicatore	0.50	0.50

TABELLA ALIQUOTE INERZIALI

COMBINAZIONI DI CARICO

NORMATIVA: NORME TECNICHE PER LE COSTRUZIONI - D.M. 14/01/2008 (STATICO E SISMICO)

Num.	Descrizione	Parametri	Tipo azione/categoria	Condizione	Moltiplicatore
1	Statica	Azione sismica:	Sisma assente		
	Torsione:	Assente			
	Permanente:	Peso Proprio	Condizione peso proprio	1.300	
	Permanente:	Permanente portato	Condizione 1	1.300	
	Variabile:	Neve	Condizione 2	1.500	
2	Sisma 100%+X	30%+Y	Azione sismica: +EX+03EY		
	Torsione:	Antioraria			
	Permanente:	Peso Proprio	Condizione peso proprio	1.000	
	Permanente:	Permanente portato	Condizione 1	1.000	
	Variabile:	Neve	Condizione 2	0.200	
3	Sisma 100%+X	30%-Y	Azione sismica: +EX-03EY		
	Torsione:	Antioraria			
	Permanente:	Peso Proprio	Condizione peso proprio	1.000	
	Permanente:	Permanente portato	Condizione 1	1.000	
	Variabile:	Neve	Condizione 2	0.200	
4	Sisma 100%-X	30%+Y	Azione sismica: -EX+03EY		
	Torsione:	Antioraria			
	Permanente:	Peso Proprio	Condizione peso proprio	1.000	
	Permanente:	Permanente portato	Condizione 1	1.000	
	Variabile:	Neve	Condizione 2	0.200	
5	Sisma 100%-X	30%-Y	Azione sismica: -EX-03EY		
	Torsione:	Antioraria			
	Permanente:	Peso Proprio	Condizione peso proprio	1.000	
	Permanente:	Permanente portato	Condizione 1	1.000	
	Variabile:	Neve	Condizione 2	0.200	
6	Sisma 30%+X	100%+Y	Azione sismica: +03EX+EY		
	Torsione:	Antioraria			
	Permanente:	Peso Proprio	Condizione peso proprio	1.000	
	Permanente:	Permanente portato	Condizione 1	1.000	
	Variabile:	Neve	Condizione 2	0.200	
7	Sisma 30%+X	100%-Y	Azione sismica: +03EX-EY		
	Torsione:	Antioraria			
	Permanente:	Peso Proprio	Condizione peso proprio	1.000	
	Permanente:	Permanente portato	Condizione 1	1.000	
	Variabile:	Neve	Condizione 2	0.200	
8	Sisma 30%-X	100%+Y	Azione sismica: -03EX+EY		
	Torsione:	Antioraria			
	Permanente:	Peso Proprio	Condizione peso proprio	1.000	

Permanente: Permanente portato	Condizione 1	1.000	
Variabile: Neve	Condizione 2	0.200	
9	Sisma 30%-X 100%-Y Azione sismica: -03EX-EY		
Torsione: Antioraria			
Permanente: Peso Proprio	Condizione peso proprio	1.000	
Permanente: Permanente portato	Condizione 1	1.000	
Variabile: Neve	Condizione 2	0.200	
10	Sisma 100%+X 30%+Y Azione sismica: +EX+03EY		
Torsione: Oraria			
Permanente: Peso Proprio	Condizione peso proprio	1.000	
Permanente: Permanente portato	Condizione 1	1.000	
Variabile: Neve	Condizione 2	0.200	
11	Sisma 100%+X 30%-Y Azione sismica: +EX-03EY		
Torsione: Oraria			
Permanente: Peso Proprio	Condizione peso proprio	1.000	
Permanente: Permanente portato	Condizione 1	1.000	
Variabile: Neve	Condizione 2	0.200	
12	Sisma 100%-X 30%+Y Azione sismica: -EX+03EY		
Torsione: Oraria			
Permanente: Peso Proprio	Condizione peso proprio	1.000	
Permanente: Permanente portato	Condizione 1	1.000	
Variabile: Neve	Condizione 2	0.200	
13	Sisma 100%-X 30%-Y Azione sismica: -EX-03EY		
Torsione: Oraria			
Permanente: Peso Proprio	Condizione peso proprio	1.000	
Permanente: Permanente portato	Condizione 1	1.000	
Variabile: Neve	Condizione 2	0.200	
14	Sisma 30%+X 100%+Y Azione sismica: +03EX+EY		
Torsione: Oraria			
Permanente: Peso Proprio	Condizione peso proprio	1.000	
Permanente: Permanente portato	Condizione 1	1.000	
Variabile: Neve	Condizione 2	0.200	
15	Sisma 30%+X 100%-Y Azione sismica: +03EX-EY		
Torsione: Oraria			
Permanente: Peso Proprio	Condizione peso proprio	1.000	
Permanente: Permanente portato	Condizione 1	1.000	
Variabile: Neve	Condizione 2	0.200	
16	Sisma 30%-X 100%+Y Azione sismica: -03EX+EY		
Torsione: Oraria			
Permanente: Peso Proprio	Condizione peso proprio	1.000	
Permanente: Permanente portato	Condizione 1	1.000	
Variabile: Neve	Condizione 2	0.200	
17	Sisma 30%-X 100%-Y Azione sismica: -03EX-EY		
Torsione: Oraria			
Permanente: Peso Proprio	Condizione peso proprio	1.000	
Permanente: Permanente portato	Condizione 1	1.000	
Variabile: Neve	Condizione 2	0.200	

COMBINAZIONI PER LE VERIFICHE ALLO STATO LIMITE D'ESERCIZIO				
Num.	Descrizione	Parametri	Tipo azione/categoria	Condizione
18	Rara	Tipologia: Rara		Moltiplicatore
	Permanente: Peso Proprio	Condizione peso proprio		1.000
	Permanente: Permanente portato	Condizione 1		1.000

Variabile: Neve Condizione 2 1.000

19 Frequente Tipologia: Frequente

 Permanente: Peso Proprio Condizione peso proprio 1.000
 Permanente: Permanente portato Condizione 1 1.000
 Variabile: Neve Condizione 2 0.500

20 Quasi permanente Tipologia: Quasi permanente

 Permanente: Peso Proprio Condizione peso proprio 1.000
 Permanente: Permanente portato Condizione 1 1.000
 Variabile: Neve Condizione 2 0.200

COMBINAZIONI PER LE VERIFICHE ALLO STATO LIMITE DI DANNO

Num.	Descrizione	Parametri	Tipo azione/categoria	Condizione	Moltiplicatore
21	Sisma 100%+X 30%+Y		Azione sismica: +EX+03EY		
	Torsione: Antioraria	Permanente: Peso Proprio	Condizione peso proprio	1.000	
	Permanente: Permanente portato	Condizione 1	1.000		
	Variabile: Neve	Condizione 2	0.200		
22	Sisma 100%+X 30%-Y		Azione sismica: +EX-03EY		
	Torsione: Antioraria	Permanente: Peso Proprio	Condizione peso proprio	1.000	
	Permanente: Permanente portato	Condizione 1	1.000		
	Variabile: Neve	Condizione 2	0.200		
23	Sisma 100%-X 30%+Y		Azione sismica: -EX+03EY		
	Torsione: Antioraria	Permanente: Peso Proprio	Condizione peso proprio	1.000	
	Permanente: Permanente portato	Condizione 1	1.000		
	Variabile: Neve	Condizione 2	0.200		
24	Sisma 100%-X 30%-Y		Azione sismica: -EX-03EY		
	Torsione: Antioraria	Permanente: Peso Proprio	Condizione peso proprio	1.000	
	Permanente: Permanente portato	Condizione 1	1.000		
	Variabile: Neve	Condizione 2	0.200		
25	Sisma 30%+X 100%+Y		Azione sismica: +03EX+EY		
	Torsione: Antioraria	Permanente: Peso Proprio	Condizione peso proprio	1.000	
	Permanente: Permanente portato	Condizione 1	1.000		
	Variabile: Neve	Condizione 2	0.200		
26	Sisma 30%+X 100%-Y		Azione sismica: +03EX-EY		
	Torsione: Antioraria	Permanente: Peso Proprio	Condizione peso proprio	1.000	
	Permanente: Permanente portato	Condizione 1	1.000		
	Variabile: Neve	Condizione 2	0.200		
27	Sisma 30%-X 100%+Y		Azione sismica: -03EX+EY		
	Torsione: Antioraria	Permanente: Peso Proprio	Condizione peso proprio	1.000	
	Permanente: Permanente portato	Condizione 1	1.000		
	Variabile: Neve	Condizione 2	0.200		
28	Sisma 30%-X 100%-Y		Azione sismica: -03EX-EY		
	Torsione: Antioraria	Permanente: Peso Proprio	Condizione peso proprio	1.000	
	Permanente: Permanente portato	Condizione 1	1.000		
	Variabile: Neve	Condizione 2	0.200		
29	Sisma 100%+X 30%+Y		Azione sismica: +EX+03EY		
	Torsione: Oraria	Permanente: Peso Proprio	Condizione peso proprio	1.000	
	Permanente: Permanente portato	Condizione 1	1.000		
	Variabile: Neve	Condizione 2	0.200		
30	Sisma 100%+X 30%-Y		Azione sismica: +EX-03EY		
	Torsione: Oraria	Permanente: Peso Proprio	Condizione peso proprio	1.000	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

Permanente: Permanente portato	Condizione 1	1.000	
Variabile: Neve	Condizione 2	0.200	
31	Sisma 100%-X 30%+Y	Azione sismica: -EX+03EY	
Torsione: Oraria	Permanente: Peso Proprio	Condizione peso proprio	1.000
Permanente: Permanente portato	Condizione 1	1.000	
Variabile: Neve	Condizione 2	0.200	
32	Sisma 100%-X 30%-Y	Azione sismica: -EX-03EY	
Torsione: Oraria	Permanente: Peso Proprio	Condizione peso proprio	1.000
Permanente: Permanente portato	Condizione 1	1.000	
Variabile: Neve	Condizione 2	0.200	
33	Sisma 30%+X 100%+Y	Azione sismica: +03EX+EY	
Torsione: Oraria	Permanente: Peso Proprio	Condizione peso proprio	1.000
Permanente: Permanente portato	Condizione 1	1.000	
Variabile: Neve	Condizione 2	0.200	
34	Sisma 30%+X 100%-Y	Azione sismica: +03EX-EY	
Torsione: Oraria	Permanente: Peso Proprio	Condizione peso proprio	1.000
Permanente: Permanente portato	Condizione 1	1.000	
Variabile: Neve	Condizione 2	0.200	
35	Sisma 30%-X 100%+Y	Azione sismica: -03EX+EY	
Torsione: Oraria	Permanente: Peso Proprio	Condizione peso proprio	1.000
Permanente: Permanente portato	Condizione 1	1.000	
Variabile: Neve	Condizione 2	0.200	
36	Sisma 30%-X 100%-Y	Azione sismica: -03EX-EY	
Torsione: Oraria	Permanente: Peso Proprio	Condizione peso proprio	1.000
Permanente: Permanente portato	Condizione 1	1.000	
Variabile: Neve	Condizione 2	0.200	

NORMATIVA: NORME TECNICHE PER LE COSTRUZIONI - D.M. 14/01/2008 (STATICO E SISMICO)

NON CI SONO CARICHI NODALI

MASSE DINAMICHE AI NODI NON DEFINITE

COMPUTO MATERIALI E SEZIONI

ELEMENTO FINITO TRAVE

GRUPPO NUMERO: 1 - FP_PUNTONI						
Materiale	Cod.	Mater.	Sezione	Cod.	Sez.	Lughezza
Legno	1	Rp	2	+5.888e+003	Volume	Peso
					+1.590e+006	+7.949e+002
GRUPPO NUMERO: 2 - FP_COLMO						
Materiale	Cod.	Mater.	Sezione	Cod.	Sez.	Lughezza
Legno	1	Rp	1	+8.250e+002	Volume	Peso
					+9.207e+005	+4.604e+002
GRUPPO NUMERO: 3 - FP_PASSAFUORI						
Materiale	Cod.	Mater.	Sezione	Cod.	Sez.	Lughezza
Acciaio	3	T.	4	+2.063e+002	Volume	Peso
					+5.569e+003	+4.371e+001
GRUPPO NUMERO: 4 - FP_CORDOLI						
Materiale	Cod.	Mater.	Sezione	Cod.	Sez.	Lughezza
Calcestruzzo	C25/30	(Rck 300)	2	Rp	3	
					+1.444e+003	+8.663e+005
						+2.166e+003
GRUPPO NUMERO: 5 - FP_SOTTO-COLMO						
Materiale	Cod.	Mater.	Sezione	Cod.	Sez.	Lughezza
Legno	1	Rp	1	+7.219e+002	Volume	Peso
					+8.056e+005	+4.028e+002

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

GRUPPO NUMERO: 6 - FP_BIELLE
Materiale Cod. Mater. Sezione Cod. Sez. Lunghezza Volume Peso
Legno 1 Rp 5 +1.800e+002 +1.800e+004 +9.000e+000

COMPUTO TOTALE PER MATERIALE
Materiale Cod. mater. Volume Peso
Legno 1 +3.334e+006 +1.667e+003
Calcestruzzo C25/30 (Rck 300) 2 +8.663e+005 +2.166e+003
Acciaio 3 +5.569e+003 +4.371e+001

COMPUTO TOTALE PER SEZIONE
Materiale Cod. mater. Sezione Cod. sez. Lunghezza Volume Peso
Legno 1 Rp 1 +1.547e+003 +1.726e+006 +8.632e+002
Legno 1 Rp 2 +5.888e+003 +1.590e+006 +7.949e+002
Calcestruzzo C25/30 (Rck 300) 2 Rp 3 +1.444e+003 +8.663e+005 +2.166e+003
Acciaio 3 T. 4 +2.063e+002 +5.569e+003 +4.371e+001
Legno 1 Rp 5 +1.800e+002 +1.800e+004 +9.000e+000

SPOSTAMENTI/ROTAZIONI NODI NON BLOCCATI

COMBINAZIONE DI CARICO: 1 - DESCRIZIONE: STATICA

Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z
1	+1.61e-001		+1.13e-002		-7.12e-001	-2.87e-003
2	+1.00e-004		+6.80e-002		-5.53e-001	-2.54e-003
3	-1.02e-004		-3.11e-015		+1.83e+000	-3.20e-016
4	-6.38e-008		+4.32e-021		-1.08e-005	-3.20e-016
5	+4.60e-005		+3.05e-015		-1.89e+000	-3.20e-016
6	+4.80e-005		+5.59e-015		-3.41e+000	-3.35e-016
7	+2.11e-005		+7.16e-015		-4.26e+000	-3.69e-016
8	-1.67e-005		+7.35e-015		-4.28e+000	-3.82e-016
9	+4.46e-005		+6.04e-015		-3.46e+000	-3.81e-016
10	-4.37e-005		+3.42e-015		-1.94e+000	-3.75e-016
11	-5.28e-008		+8.29e-021		-6.50e-006	-3.77e-016
12	+5.68e-008		+1.03e-006		-6.42e-006	-1.94e-002
13	-3.33e-009		+3.48e-007		-9.81e-007	-4.79e-004
14	-1.43e-009		+6.06e-007		-3.72e-006	+1.12e-004
15	-6.65e-010		+5.46e-007		-3.08e-006	+1.12e-004
16	+5.72e-010		+5.59e-007		-3.23e-006	+2.62e-002
17	+1.64e-009		+5.57e-007		-3.19e-006	+6.10e-006
18	+2.43e-009		+5.53e-007		-3.24e-006	+2.62e-002
19	+2.77e-009		+2.99e-007		-1.57e-006	-1.38e-006
20	+1.25e-002		+2.30e-001		+6.43e-001	-6.78e-008
21	-2.87e-003		+3.53e-001		+9.85e-001	+1.12e-006
22	+6.79e-004		+4.59e-001		+1.28e+000	+1.12e-004
23	-1.51e-004		+5.19e-001		+1.45e+000	-2.60e-005
24	+3.17e-005		+5.20e-001		+1.45e+000	+6.10e-006
25	-1.35e-005		+4.62e-001		+1.29e+000	+2.56e-002
26	-3.15e-005		+3.49e-001		+9.74e-001	-1.38e-006
27	+6.79e-005		+1.31e-001		+3.64e-001	-6.93e-008
28	+1.61e-001		-1.13e-002		-7.12e-001	+2.27e-002
29	+1.00e-004		-6.80e-002		-5.53e-001	+1.12e-006
30	+5.68e-008		-1.03e-006		-6.42e-006	-4.79e-004
31	-3.33e-009		-3.48e-007		-9.81e-007	+1.12e-004
32	-1.43e-009		-6.06e-007		-3.72e-006	-2.60e-005
33	-6.65e-010		-5.46e-007		-3.08e-006	+2.72e-006
34	+5.72e-010		-5.59e-007		-3.23e-006	+6.10e-006
35	+1.64e-009		-5.57e-007		-3.19e-006	-1.38e-006
36	+2.43e-009		-5.53e-007		-3.24e-006	-6.78e-008
37	+2.77e-009		-2.99e-007		-1.57e-006	+1.12e-006
38	+1.25e-002		-2.30e-001		+6.43e-001	-1.78e-002

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

39	-2.87e-003	-3.53e-001	+9.85e-001	-1.73e-002	+1.12e-004	-1.08e-005
40	+6.79e-004	-4.59e-001	+1.28e+000	-2.26e-002	-2.60e-005	+2.72e-006
41	-1.51e-004	-5.19e-001	+1.45e+000	-2.55e-002	+6.10e-006	-4.95e-007
42	+3.17e-005	-5.20e-001	+1.45e+000	-2.56e-002	-1.38e-006	+6.89e-008
43	-1.35e-005	-4.62e-001	+1.29e+000	-2.27e-002	-6.93e-008	-2.63e-007
44	-3.15e-005	-3.49e-001	+9.74e-001	-1.71e-002	+1.12e-006	-1.57e-007
45	+6.79e-005	-1.31e-001	+3.64e-001	-6.39e-003	-5.87e-006	-9.00e-007
46	-4.33e-008	-7.81e-022	-4.11e-006	-2.55e-016	+1.88e-002	-3.86e-018
47	-4.00e-005	-3.84e-016	-1.88e+000	-2.55e-016	+1.69e-002	-3.39e-018
48	-4.22e-005	-6.80e-016	-3.40e+000	-2.61e-016	+1.18e-002	-2.25e-018
49	-1.82e-005	-8.40e-016	-4.26e+000	-2.74e-016	+4.34e-003	-8.03e-019
50	+1.54e-005	-8.43e-016	-4.28e+000	-2.76e-016	-3.95e-003	+7.43e-019
51	+4.02e-005	-6.88e-016	-3.46e+000	-2.74e-016	-1.16e-002	+2.23e-018
52	+3.93e-005	-3.91e-016	-1.94e+000	-2.69e-016	-1.72e-002	+3.44e-018
53	+4.25e-008	-8.33e-022	-4.79e-006	-2.69e-016	-1.93e-002	+3.93e-018

MASSIME DEFORMAZIONI NODALI

	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax				
Deform. nodali	+1.61e-001	+5.20e-001				-4.28e+000		+2.62e-002	-1.94e-002	-1.75e-004	+4.28e+000
Nodo	1	24	8	16	11	1	8				

COMBINAZIONE DI CARICO: 2 - DESCRIZIONE: SISMA 100%X 30%Y

Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z			
1	+5.22e-002	+3.14e-002	-1.29e-001	-5.42e-004	-1.35e-003	-4.58e-004			
2	+2.23e-004	+4.22e-002	-9.91e-002	-4.89e-004	-1.33e-003	-4.03e-004			
3	+1.44e-004	-4.25e-002	+3.58e-001	-1.17e-003	+3.44e-003	+4.10e-004			
4	+1.52e-006	+1.28e-007	-2.04e-006	-1.17e-003	+3.57e-003	+4.18e-004			
5	+9.51e-004	+4.26e-002	-3.68e-001	-1.17e-003	+3.33e-003	+3.85e-004			
6	+1.58e-003	+7.70e-002	-6.65e-001	-1.20e-003	+2.30e-003	+2.67e-004			
7	+1.89e-003	+9.62e-002	-8.30e-001	-1.22e-003	+8.43e-004	+9.82e-005			
8	+1.88e-003	+9.67e-002	-8.34e-001	-1.23e-003	-7.71e-004	-8.90e-005			
9	+1.56e-003	+7.82e-002	-6.75e-001	-1.21e-003	-2.26e-003	-2.63e-004			
10	+9.33e-004	+4.39e-002	-3.78e-001	-1.18e-003	-3.36e-003	-3.91e-004			
11	+1.18e-006	+9.63e-008	-1.25e-006	-1.18e-003	-3.78e-003	-4.39e-004			
12	+3.23e-007	+4.00e-007	-1.20e-006	+2.02e-003	-8.53e-005	-2.79e-005			
13	+1.99e-007	+7.77e-008	-2.73e-007	+3.15e-003	+1.92e-005	+4.12e-006			
14	+2.00e-007	+2.15e-007	-7.57e-007	+4.13e-003	-5.19e-006	-3.26e-006			
15	+2.00e-007	+1.83e-007	-6.45e-007	+4.68e-003	+4.61e-007	-1.51e-006			
16	+2.00e-007	+1.91e-007	-6.72e-007	+4.69e-003	-8.03e-007	-1.87e-006			
17	+2.00e-007	+1.89e-007	-6.60e-007	+4.15e-003	-7.96e-007	-1.75e-006			
18	+2.00e-007	+1.89e-007	-6.87e-007	+3.12e-003	+3.63e-007	-1.77e-006			
19	+1.06e-007	+8.61e-008	-3.20e-007	+1.18e-003	-4.96e-006	-1.77e-006			
20	+7.95e-003	+3.91e-002	+1.09e-001	+1.92e-003	-1.22e-004	-1.32e-004			
21	+4.02e-003	+6.20e-002	+1.73e-001	+3.05e-003	-1.80e-005	-9.96e-005			
22	+4.93e-003	+8.18e-002	+2.28e-001	+4.03e-003	-4.23e-005	-1.07e-004			
23	+4.72e-003	+9.29e-002	+2.59e-001	+4.58e-003	-3.67e-005	-1.05e-004			
24	+4.76e-003	+9.32e-002	+2.60e-001	+4.59e-003	-3.79e-005	-1.06e-004			
25	+4.76e-003	+8.24e-002	+2.30e-001	+4.05e-003	-3.79e-005	-1.05e-004			
26	+4.74e-003	+6.14e-002	+1.71e-001	+3.02e-003	-3.68e-005	-1.05e-004			
27	+2.65e-003	+2.30e-002	+6.42e-002	+1.13e-003	-2.46e-005	-5.65e-005			
28	+2.10e-002	+2.34e-002	-1.41e-001	+7.46e-004	-1.37e-003	-1.05e-004			
29	+2.04e-004	+8.54e-003	-9.93e-002	+6.85e-004	-1.35e-003	-1.60e-004			
30	+3.12e-007	-1.17e-008	-1.16e-006	-1.98e-003	-8.43e-005	+1.51e-006			
31	+2.00e-007	+2.50e-009	-2.54e-007	-3.21e-003	+1.89e-005	+2.03e-006			
32	+2.00e-007	+4.93e-009	-7.31e-007	-4.27e-003	-5.14e-006	+1.80e-006			
33	+2.00e-007	+4.18e-009	-6.20e-007	-4.87e-003	+4.53e-007	+1.84e-006			
34	+2.00e-007	+4.39e-009	-6.47e-007	-4.88e-003	-8.04e-007	+1.80e-006			
35	+2.00e-007	+4.22e-009	-6.35e-007	-4.30e-003	-8.06e-007	+1.79e-006			
36	+2.00e-007	+4.17e-009	-6.62e-007	-3.18e-003	+3.56e-007	+1.78e-006			
37	+1.06e-007	+1.65e-008	-3.06e-007	-1.16e-003	-5.00e-006	+1.85e-006			
38	+6.43e-003	-3.81e-002	+1.06e-001	-1.86e-003	-1.21e-004	+1.05e-004			
39	+4.37e-003	-6.30e-002	+1.76e-001	-3.09e-003	-1.82e-005	+1.06e-004			
40	+4.85e-003	-8.45e-002	+2.36e-001	-4.16e-003	-4.23e-005	+1.06e-004			
41	+4.74e-003	-9.66e-002	+2.70e-001	-4.75e-003	-3.67e-005	+1.06e-004			

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

42	+4.76e-003	-9.68e-002	+2.71e-001	-4.77e-003	-3.79e-005	+1.06e-004
43	+4.76e-003	-8.51e-002	+2.38e-001	-4.19e-003	-3.79e-005	+1.06e-004
44	+4.74e-003	-6.25e-002	+1.74e-001	-3.07e-003	-3.68e-005	+1.06e-004
45	+2.66e-003	-2.25e-002	+6.29e-002	-1.10e-003	-2.46e-005	+5.66e-005
46	+1.41e-007	+4.48e-008	-8.26e-007	-1.17e-003	-3.66e-003	+2.18e-004
47	+1.11e-004	+2.18e-002	-3.68e-001	-1.17e-003	+3.30e-003	+1.95e-004
48	+1.90e-004	+3.90e-002	-6.64e-001	-2.20e-003	+2.30e-003	+1.33e-004
49	+2.34e-004	+4.85e-002	-8.30e-001	-1.22e-003	+8.43e-004	+4.71e-005
50	+2.41e-004	+4.85e-002	-8.33e-001	-1.23e-003	-7.71e-004	+4.70e-005
51	+2.06e-004	+3.90e-002	-6.74e-001	-1.21e-003	-2.26e-003	-1.33e-004
52	+1.27e-004	+2.18e-002	-3.77e-001	-1.18e-003	-3.36e-003	-1.95e-004
53	+1.58e-007	+4.49e-008	-9.53e-007	-1.18e-003	-3.77e-003	-2.18e-004

MASSIME DEFORMAZIONI NODALI

Deform.	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax				
nodali	+5.22e-002			-9.68e-002		-8.34e-001		-4.88e-003	-3.78e-003	-4.58e-004	+8.40e-001
Nodo	1	42	8	34	11	1	8				

COMBINAZIONE DI CARICO: 3 - DESCRIZIONE: SISMA 100%+X 30%-Y

Node	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z			
1	+2.10e-002		-2.34e-002		-1.41e-001		-7.46e-004	-1.37e-003	+1.05e-004
2	+2.04e-004		-8.54e-003		-9.93e-002		-6.85e-004	-1.35e-003	+1.60e-004
3	+1.44e-004		+4.25e-002		+3.58e-001		+1.17e-003	+3.44e-003	-4.10e-004
4	+1.52e-006		-1.28e-007		-2.04e-006		+1.17e-003	+3.57e-003	-4.18e-004
5	+9.51e-004		-4.26e-002		-3.68e-001		+1.17e-003	+3.33e-003	-3.85e-004
6	+1.58e-003		-7.70e-002		-6.65e-001		+1.20e-003	+2.30e-003	-2.67e-004
7	+1.89e-003		-9.62e-002		-8.30e-001		+1.22e-003	+8.43e-004	-9.82e-005
8	+1.88e-003		-9.67e-002		-8.34e-001		+1.23e-003	+7.71e-004	+8.90e-005
9	+1.56e-003		-7.82e-002		-6.75e-001		+1.21e-003	-2.26e-003	+2.63e-004
10	+9.33e-004		-4.39e-002		-3.78e-001		+1.18e-003	-3.36e-003	+3.91e-004
11	+1.18e-006		-9.63e-008		-1.25e-006		+1.18e-003	-3.78e-003	+4.39e-004
12	+3.12e-007		+1.17e-008		-1.16e-006		+1.98e-003	-8.43e-005	-1.51e-006
13	+2.00e-007		-2.50e-009		-2.54e-007		+3.21e-003	+1.89e-005	-2.03e-006
14	+2.00e-007		-4.93e-009		-7.31e-007		+4.27e-003	-5.14e-006	-1.80e-006
15	+2.00e-007		-4.18e-009		-6.20e-007		+4.87e-003	+4.53e-007	-1.84e-006
16	+2.00e-007		-4.39e-009		-6.47e-007		+4.88e-003	-8.04e-007	-1.80e-006
17	+2.00e-007		-4.22e-009		-6.35e-007		+4.30e-003	-8.06e-007	-1.79e-006
18	+2.00e-007		-4.17e-009		-6.62e-007		+3.18e-003	+3.56e-007	-1.78e-006
19	+1.06e-007		-1.65e-008		-3.06e-007		+1.16e-003	-5.00e-006	-1.85e-006
20	+6.43e-003		+3.81e-002		+1.06e-001		+1.86e-003	-1.21e-004	-1.05e-004
21	+4.37e-003		+6.30e-002		+1.76e-001		+3.09e-003	-1.82e-005	-1.06e-004
22	+4.85e-003		+8.45e-002		+2.36e-001		+4.16e-003	-4.23e-005	-1.06e-004
23	+4.74e-003		+9.66e-002		+2.70e-001		+4.75e-003	-3.67e-005	-1.06e-004
24	+4.76e-003		+9.68e-002		+2.71e-001		+4.77e-003	-3.79e-005	-1.06e-004
25	+4.76e-003		+8.51e-002		+2.38e-001		+4.19e-003	-3.79e-005	-1.06e-004
26	+4.74e-003		+6.25e-002		+1.74e-001		+3.07e-003	-3.68e-005	-1.06e-004
27	+2.66e-003		+2.25e-002		+6.29e-002		+1.10e-003	-2.46e-005	-5.66e-005
28	+5.22e-002		-3.14e-002		-1.29e-001		+5.42e-004	-1.35e-003	+4.58e-004
29	+2.23e-004		-4.22e-002		-9.91e-002		+4.89e-004	-1.33e-003	+4.03e-004
30	+3.23e-007		-4.00e-007		-1.20e-006		-2.02e-003	-8.53e-005	+2.79e-005
31	+1.99e-007		-7.77e-008		-2.73e-007		-3.15e-003	+1.92e-005	-4.12e-006
32	+2.00e-007		-2.15e-007		-7.57e-007		-4.13e-003	-5.19e-006	+3.26e-006
33	+2.00e-007		-1.83e-007		-6.45e-007		-4.68e-003	+4.61e-007	+1.51e-006
34	+2.00e-007		-1.91e-007		-6.72e-007		-4.69e-003	-8.03e-007	+1.87e-006
35	+2.00e-007		-1.89e-007		-6.60e-007		-4.15e-003	-7.96e-007	+1.75e-006
36	+2.00e-007		-1.89e-007		-6.87e-007		-3.12e-003	+3.63e-007	+1.77e-006
37	+1.06e-007		-8.61e-008		-3.20e-007		-1.18e-003	-4.96e-006	+1.77e-006
38	+7.95e-003		-3.91e-002		+1.09e-001		-1.92e-003	-1.22e-004	+1.32e-004
39	+4.02e-003		-6.20e-002		+1.73e-001		-3.05e-003	-1.80e-005	+9.96e-005
40	+4.93e-003		-8.18e-002		+2.28e-001		-4.03e-003	-4.23e-005	+1.07e-004
41	+4.72e-003		-9.29e-002		+2.59e-001		-4.58e-003	-3.67e-005	+1.05e-004
42	+4.76e-003		-9.32e-002		+2.60e-001		-4.59e-003	-3.79e-005	+1.06e-004
43	+4.76e-003		-8.24e-002		+2.30e-001		-4.05e-003	-3.79e-005	+1.05e-004
44	+4.74e-003		-6.14e-002		+1.71e-001		-3.02e-003	-3.68e-005	+1.05e-004

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

45	+2.65e-003	-2.30e-002	+6.42e-002	-1.13e-003	-2.46e-005	+5.65e-005
46	+1.41e-007	-4.48e-008	-8.26e-007	+1.17e-003	+3.66e-003	-2.18e-004
47	+1.11e-004	-2.18e-002	-3.68e-001	+1.17e-003	+3.30e-003	-1.95e-004
48	+1.90e-004	-3.90e-002	-6.64e-001	+1.20e-003	+2.30e-003	-1.33e-004
49	+2.34e-004	-4.85e-002	-8.30e-001	+1.22e-003	+8.43e-004	-4.71e-005
50	+2.41e-004	-4.85e-002	-8.33e-001	+1.23e-003	-7.71e-004	+4.70e-005
51	+2.06e-004	-3.90e-002	-6.74e-001	+1.21e-003	-2.26e-003	+1.33e-004
52	+1.27e-004	-2.18e-002	-3.77e-001	+1.18e-003	-3.36e-003	+1.95e-004
53	+1.58e-007	-4.49e-008	-9.53e-007	+1.18e-003	-3.77e-003	+2.18e-004

MASSIME DEFORMAZIONI NODALI

	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax				
Deform. nodali	+5.22e-002			+9.68e-002		-8.34e-001		+4.88e-003	-3.78e-003	+4.58e-004	+8.40e-001
Nodo	28	24	8	16	11	28	8				

COMBINAZIONE DI CARICO: 4 - DESCRIZIONE: SISMA 100%-X 30%+Y

Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z			
1	+3.56e-002		+2.08e-002		-1.28e-001	-5.48e-004	-1.27e-003		-1.58e-004
2	-1.69e-004		+3.17e-002		-9.72e-002	-4.95e-004	-1.29e-003		-2.13e-004
3	-1.79e-004		-4.25e-002		+3.58e-001	-1.17e-003	+3.44e-003		+4.10e-004
4	-1.54e-006		+1.28e-007		-2.04e-006	-1.17e-003	+3.57e-003		+4.18e-004
5	-9.33e-004		+4.26e-002		-3.68e-001	-1.17e-003	+3.33e-003		+3.85e-004
6	-1.56e-003		+7.70e-002		-6.65e-001	-1.20e-003	+2.30e-003		+2.67e-004
7	-1.88e-003		+9.62e-002		-8.30e-001	-1.22e-003	+8.43e-004		+9.82e-005
8	-1.89e-003		+9.67e-002		-8.34e-001	-1.23e-003	-7.71e-004		-8.90e-005
9	-1.58e-003		+7.82e-002		-6.74e-001	-1.21e-003	-2.26e-003		-2.63e-004
10	-9.50e-004		+4.39e-002		-3.78e-001	-1.18e-003	-3.36e-003		-3.91e-004
11	-1.21e-006		+9.63e-008		-1.25e-006	-1.18e-003	-3.78e-003		-4.39e-004
12	-2.92e-007		+3.36e-007		-1.18e-006	+2.02e-003	-8.12e-005		-1.55e-005
13	-2.01e-007		+1.16e-007		-2.87e-007	+3.15e-003	+1.97e-005		+5.75e-006
14	-2.00e-007		+2.07e-007		-7.54e-007	-4.13e-003	-3.83e-006		+8.50e-007
15	-2.00e-007		+1.85e-007		-6.45e-007	+4.68e-003	+1.63e-006		+2.01e-006
16	-2.00e-007		+1.90e-007		-6.72e-007	+4.69e-003	+4.11e-007		+1.77e-006
17	-2.00e-007		+1.89e-007		-6.60e-007	+4.15e-003	+4.20e-007		+1.90e-006
18	-1.99e-007		+1.88e-007		-6.87e-007	+3.12e-003	+1.56e-006		+1.82e-006
19	-1.05e-007		+1.21e-007		-3.32e-007	+1.18e-003	-3.62e-006		+2.24e-006
20	-2.12e-003		+3.91e-002		+1.09e-001	+1.92e-003	-4.41e-005		+8.82e-005
21	-5.37e-003		+6.20e-002		+1.73e-001	+5.68e-005	+3.05e-003		+1.09e-004
22	-4.61e-003		+8.18e-002		+2.28e-001	+4.03e-003	+3.33e-005		+1.05e-004
23	-4.79e-003		+9.29e-002		+2.59e-001	+4.58e-003	+3.88e-005		+1.06e-004
24	-4.75e-003		+9.32e-002		+2.60e-001	+4.59e-003	+3.75e-005		+1.06e-004
25	-4.76e-003		+8.24e-002		+2.30e-001	+4.05e-003	+3.75e-005		+1.06e-004
26	-4.78e-003		+6.14e-002		+1.71e-001	+3.02e-003	+3.87e-005		+1.06e-004
27	-2.50e-003		+2.30e-002		+6.42e-002	+1.13e-003	+1.60e-005		+5.70e-005
28	+4.29e-003		+3.40e-002		-1.39e-001	+7.52e-004	-1.30e-003		-4.05e-004
29	-1.88e-004		+1.90e-002		-9.74e-002	+6.91e-004	-1.32e-003		-3.50e-004
30	-3.03e-007		+5.22e-008		-1.13e-006	-1.98e-003	-8.02e-005		-1.09e-005
31	-2.01e-007		-3.53e-008		-2.67e-007	-3.21e-003	+1.95e-005		+4.00e-007
32	-2.00e-007		+1.35e-008		-7.28e-007	-4.27e-003	-3.77e-006		-2.31e-006
33	-2.00e-007		+2.06e-009		-6.21e-007	-4.87e-003	+1.63e-006		-1.68e-006
34	-2.00e-007		+5.01e-009		-6.47e-007	-4.88e-003	+4.11e-007		-1.85e-006
35	-2.00e-007		+3.97e-009		-6.36e-007	-4.30e-003	+4.10e-007		-1.86e-006
36	-2.00e-007		+5.86e-009		-6.62e-007	-3.18e-003	+1.55e-006		-1.81e-006
37	-1.05e-007		-1.81e-008		-3.19e-007	-1.16e-003	-3.66e-006		-2.17e-006
38	-3.64e-003		-3.81e-002		+1.06e-001	-1.86e-003	-4.30e-005		-1.15e-004
39	-5.01e-003		-6.30e-002		+1.76e-001	-3.09e-003	+5.66e-005		-1.03e-004
40	-4.70e-003		-8.45e-002		+2.36e-001	-4.16e-003	+3.33e-005		-1.06e-004
41	-4.77e-003		-9.66e-002		+2.70e-001	-4.75e-003	+3.87e-005		-1.05e-004
42	-4.76e-003		-9.68e-002		+2.71e-001	-4.77e-003	+3.75e-005		-1.06e-004
43	-4.76e-003		-8.51e-002		+2.38e-001	-4.19e-003	+3.75e-005		-1.06e-004
44	-4.78e-003		-6.25e-002		+1.74e-001	-3.07e-003	+3.87e-005		-1.06e-004
45	-2.50e-003		-2.25e-002		+6.29e-002	-1.10e-003	+1.59e-005		-5.69e-005
46	-1.58e-007		+4.48e-008		-8.26e-007	-1.17e-003	+3.66e-003		+2.18e-004
47	-1.27e-004		+2.18e-002		-3.68e-001	-1.17e-003	+3.30e-003		+1.95e-004

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

48	-2.07e-004	+3.90e-002	-6.64e-001	-1.20e-003	+2.30e-003	+1.33e-004
49	-2.42e-004	+4.85e-002	-8.30e-001	-1.22e-003	+8.43e-004	+4.71e-005
50	-2.35e-004	+4.85e-002	-8.33e-001	-1.23e-003	-7.71e-004	-4.70e-005
51	-1.91e-004	+3.90e-002	-6.74e-001	-1.21e-003	-2.26e-003	-1.33e-004
52	-1.11e-004	+2.18e-002	-3.77e-001	-1.18e-003	-3.36e-003	-1.95e-004
53	-1.41e-007	+4.49e-008	-9.52e-007	-1.18e-003	-3.77e-003	-2.18e-004

MASSIME DEFORMAZIONI NODALI

Deform. nodali	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax				
	+3.56e-002			-9.68e-002		-8.34e-001		-4.88e-003	-3.78e-003	-4.39e-004	+8.40e-001
Nodo	1	42	8	34	11	11	8				

COMBINAZIONE DI CARICO: 5 - DESCRIZIONE: SISMA 100%-X 30%-Y

Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z			
1	+4.29e-003		-3.40e-002		-1.39e-001	-7.52e-004	-1.30e-003	+4.05e-004	
2	-1.88e-004		-1.90e-002		-9.74e-002	-6.91e-004	-1.32e-003	+3.50e-004	
3	-1.79e-004		+4.25e-002		+3.58e-001	+1.17e-003	+3.44e-003	-4.10e-004	
4	-1.54e-006		-1.28e-007		-2.04e-006	+1.17e-003	+3.57e-003	-4.18e-004	
5	-9.33e-004		-4.26e-002		-3.68e-001	+1.17e-003	+3.33e-003	-3.85e-004	
6	-1.56e-003		-7.70e-002		-6.65e-001	+1.20e-003	+2.30e-003	-2.67e-004	
7	-1.88e-003		-9.62e-002		-8.30e-001	+1.22e-003	+8.43e-004	-9.82e-005	
8	-1.89e-003		-9.67e-002		-8.34e-001	+1.23e-003	-7.71e-004	+8.90e-005	
9	-1.58e-003		-7.82e-002		-6.74e-001	+1.21e-003	-2.26e-003	+2.63e-004	
10	-9.50e-004		-4.39e-002		-3.78e-001	+1.18e-003	-3.36e-003	+3.91e-004	
11	-1.21e-006		-9.63e-008		-1.25e-006	+1.18e-003	-3.78e-003	+4.39e-004	
12	-3.03e-007		-5.12e-008		-1.13e-006	+1.98e-003	-8.02e-005	+1.09e-005	
13	-2.01e-007		+3.53e-008		-2.67e-007	+3.21e-003	+1.95e-005	-4.00e-007	
14	-2.00e-007		-1.35e-008		-7.28e-007	+4.27e-003	-3.77e-006	+2.31e-006	
15	-2.00e-007		-2.06e-009		-6.21e-007	+4.87e-003	+1.63e-006	+1.68e-006	
16	-2.00e-007		-5.01e-009		-6.47e-007	+4.88e-003	+4.11e-007	+1.85e-006	
17	-2.00e-007		-3.97e-009		-6.36e-007	+4.30e-003	+4.10e-007	+1.86e-006	
18	-2.00e-007		-5.86e-009		-6.62e-007	+3.18e-003	+1.55e-006	+1.81e-006	
19	-1.05e-007		+1.81e-008		-3.19e-007	+1.16e-003	-3.66e-006	+2.17e-006	
20	-3.64e-003		+3.81e-002		+1.06e-001	+1.86e-003	-4.30e-005	+1.15e-004	
21	-5.01e-003		+6.30e-002		+1.76e-001	+3.09e-003	+5.66e-005	+1.03e-004	
22	-4.70e-003		+8.45e-002		+2.36e-001	+4.16e-003	+3.33e-005	+1.06e-004	
23	-4.77e-003		+9.66e-002		+2.70e-001	+4.75e-003	+3.87e-005	+1.05e-004	
24	-4.76e-003		+9.68e-002		+2.71e-001	+4.77e-003	+3.75e-005	+1.06e-004	
25	-4.76e-003		+8.51e-002		+2.38e-001	+4.19e-003	+3.75e-005	+1.06e-004	
26	-4.78e-003		+6.25e-002		+1.74e-001	+3.07e-003	+3.87e-005	+1.06e-004	
27	-2.50e-003		+2.25e-002		+6.29e-002	+1.10e-003	+1.59e-005	+5.69e-005	
28	+3.56e-002		-2.08e-002		-1.28e-001	+5.48e-004	-1.27e-003	+1.58e-004	
29	-1.69e-004		-3.17e-002		-9.72e-002	+4.95e-004	-1.29e-003	+2.13e-004	
30	-2.92e-007		-3.36e-007		-1.18e-006	-2.02e-003	-8.12e-005	+1.55e-005	
31	-2.01e-007		-1.16e-007		-2.87e-007	-3.15e-003	+1.97e-005	-5.75e-006	
32	-2.00e-007		-2.07e-007		-7.54e-007	-4.13e-003	-3.83e-006	-8.50e-007	
33	-2.00e-007		-1.85e-007		-6.45e-007	-4.68e-003	+1.63e-006	-2.01e-006	
34	-2.00e-007		-1.90e-007		-6.72e-007	-4.69e-003	+4.11e-007	-1.77e-006	
35	-2.00e-007		-1.89e-007		-6.60e-007	-4.15e-003	+4.20e-007	-1.90e-006	
36	-1.99e-007		-1.88e-007		-6.87e-007	-3.12e-003	+1.56e-006	-1.82e-006	
37	-1.05e-007		-1.21e-007		-3.32e-007	-1.18e-003	-3.62e-006	-2.24e-006	
38	-2.12e-003		-3.91e-002		+1.09e-001	-1.92e-003	-4.41e-005	-8.82e-005	
39	-5.37e-003		-6.20e-002		+1.73e-001	-3.05e-003	+5.68e-005	-1.09e-004	
40	-4.61e-003		-8.18e-002		+2.28e-001	-4.03e-003	+3.33e-005	-1.05e-004	
41	-4.79e-003		-9.29e-002		+2.59e-001	-4.58e-003	+3.88e-005	-1.06e-004	
42	-4.75e-003		-9.32e-002		+2.60e-001	-4.59e-003	+3.75e-005	-1.06e-004	
43	-4.76e-003		-8.24e-002		+2.30e-001	-4.05e-003	+3.75e-005	-1.06e-004	
44	-4.78e-003		-6.14e-002		+1.71e-001	-3.02e-003	+3.87e-005	-1.06e-004	
45	-2.50e-003		-2.30e-002		+6.42e-002	-1.13e-003	+1.60e-005	-5.70e-005	
46	-1.58e-007		-4.48e-008		-8.26e-007	+1.17e-003	+3.66e-003	-2.18e-004	
47	-1.27e-004		-2.18e-002		-3.68e-001	+1.17e-003	+3.30e-003	-1.95e-004	
48	-2.07e-004		-3.90e-002		-6.64e-001	+1.20e-003	+2.30e-003	-1.33e-004	
49	-2.42e-004		-4.85e-002		-8.30e-001	+1.22e-003	+8.43e-004	+4.71e-005	
50	-2.35e-004		-4.85e-002		-8.33e-001	+1.23e-003	-7.71e-004	-4.70e-005	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

51	-1.91e-004	-3.90e-002	-6.74e-001	+1.21e-003	-2.26e-003	+1.33e-004
52	-1.11e-004	-2.18e-002	-3.77e-001	+1.18e-003	-3.36e-003	+1.95e-004
53	-1.41e-007	-4.49e-008	-9.52e-007	+1.18e-003	-3.77e-003	+2.18e-004

MASSIME DEFORMAZIONI NODALI

	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax				
Deform. nodali	+3.56e-002	+9.68e-002		-8.34e-001				+4.88e-003	-3.78e-003	+4.39e-004	+8.40e-001
Nodo	28	24	8	16	11	11	8				

COMBINAZIONE DI CARICO: 6 - DESCRIZIONE: SISMA 30%X 100%Y

Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z			
1	+8.29e-002	+9.17e-002	-1.15e-001				-3.06e-004	-1.29e-003	-1.01e-003
2	+1.09e-004	+9.77e-002	-9.83e-002				-2.62e-004	-1.28e-003	-9.93e-004
3	+3.07e-005	-1.42e-001	+3.58e-001				-3.90e-003	+3.44e-003	+1.37e-003
4	+4.49e-007	+4.28e-007	-2.04e-006				-3.90e-003	+3.57e-003	+1.39e-003
5	+2.92e-004	+1.42e-001	-3.68e-001				-3.90e-003	+3.33e-003	+1.28e-003
6	+4.80e-004	+2.57e-001	-6.65e-001				-3.99e-003	+2.30e-003	+8.90e-004
7	+5.69e-004	+3.21e-001	-8.30e-001				-4.08e-003	+8.43e-004	+3.27e-004
8	+5.61e-004	+3.22e-001	-8.34e-001				-4.09e-003	-7.71e-004	-2.97e-004
9	+4.62e-004	+2.61e-001	-6.75e-001				-4.02e-003	-2.26e-003	-8.76e-004
10	+2.74e-004	+1.46e-001	-3.78e-001				-3.93e-003	-3.36e-003	-1.30e-003
11	+3.48e-007	+3.21e-007	-1.25e-006				-3.93e-003	-3.78e-003	-1.46e-003
12	+1.20e-007	+8.31e-007	-1.24e-006				+2.06e-003	-8.52e-005	-5.44e-005
13	+5.87e-008	+1.85e-007	-3.01e-007				+3.08e-003	+1.96e-005	+1.19e-005
14	+5.94e-008	+4.69e-007	-7.86e-007				+3.96e-003	-4.78e-006	-3.53e-006
15	+5.98e-008	+4.03e-007	-6.73e-007				+4.45e-003	+8.80e-007	+1.10e-007
16	+6.03e-008	+4.18e-007	-7.01e-007				+4.46e-003	-3.78e-007	-6.81e-007
17	+6.07e-008	+4.15e-007	-6.89e-007				+3.98e-003	-3.58e-007	-4.29e-007
18	+6.09e-008	+4.15e-007	-7.16e-007				+3.04e-003	+7.91e-007	-4.96e-007
19	+3.29e-008	+2.18e-007	-3.40e-007				+1.20e-003	-4.45e-006	-2.78e-007
20	+6.19e-003	+4.03e-002	+1.12e-001				+1.98e-003	-9.63e-005	-8.55e-005
21	+3.26e-004	+6.09e-002	+1.70e-001				+3.00e-003	+8.47e-006	-1.93e-005
22	+1.69e-003	+7.87e-002	+2.20e-001				+3.88e-003	-1.59e-005	-3.46e-005
23	+1.37e-003	+8.87e-002	+2.48e-001				+4.37e-003	-1.03e-005	-3.10e-005
24	+1.44e-003	+8.89e-002	+2.48e-001				+4.38e-003	-1.15e-005	-3.18e-005
25	+1.42e-003	+7.92e-002	+2.21e-001				+3.90e-003	-1.15e-005	-3.15e-005
26	+1.40e-003	+6.02e-002	+1.68e-001				+2.96e-003	-1.03e-005	-3.16e-005
27	+8.41e-004	+2.36e-002	+6.58e-002				+1.16e-003	-1.03e-005	-1.67e-005
28	-2.13e-002	+9.10e-002	-1.54e-001				+9.86e-004	-1.38e-003	-8.67e-004
29	+4.34e-005	+7.13e-002	-9.88e-002				+9.16e-004	-1.38e-003	-8.84e-004
30	+8.37e-008	+4.64e-007	-1.10e-006				-1.93e-003	-8.16e-005	-3.36e-005
31	+6.01e-008	+8.29e-008	-2.35e-007				-3.28e-003	+1.89e-005	+8.63e-006
32	+6.00e-008	+2.65e-007	-7.00e-007				-4.44e-003	-4.59e-006	-1.35e-006
33	+6.00e-008	+2.22e-007	-5.92e-007				-5.09e-003	+8.55e-007	+9.95e-007
34	+6.00e-008	+2.32e-007	-6.18e-007				-5.11e-003	-3.79e-007	+4.35e-007
35	+6.00e-008	+2.30e-007	-6.07e-007				-4.47e-003	-3.92e-007	+5.60e-007
36	+5.99e-008	+2.31e-007	-6.33e-007				-3.26e-003	+7.66e-007	+5.33e-007
37	+3.17e-008	+1.24e-007	-2.95e-007				-1.14e-003	-4.57e-006	+5.37e-007
38	+1.14e-003	-3.69e-002	+1.03e-001				-1.80e-003	-9.27e-005	-2.53e-006
39	+1.50e-003	-6.41e-002	+1.79e-001				-3.15e-003	+7.75e-006	+3.97e-005
40	+1.41e-003	-8.76e-002	+2.45e-001				-4.31e-003	-1.57e-005	+2.98e-005
41	+1.43e-003	-1.01e-001	+2.82e-001				-4.96e-003	-1.03e-005	+3.21e-005
42	+1.43e-003	-1.01e-001	+2.83e-001				-4.98e-003	-1.15e-005	+3.16e-005
43	+1.43e-003	-8.83e-002	+2.47e-001				-4.34e-003	-1.15e-005	+3.17e-005
44	+1.41e-003	-6.37e-002	+1.78e-001				-3.12e-003	-1.04e-005	+3.17e-005
45	+8.58e-004	-2.20e-002	+6.14e-002				-1.07e-003	-1.04e-005	+1.70e-005
46	+3.65e-008	+1.49e-007	-8.26e-007				-3.90e-003	+3.66e-003	+7.25e-004
47	+2.79e-005	+7.26e-002	-3.68e-001				-3.90e-003	+3.30e-003	+6.49e-004
48	+5.13e-005	+1.30e-001	-6.64e-001				-3.99e-003	+2.30e-003	+4.43e-004
49	+6.79e-005	+1.62e-001	-8.30e-001				-4.08e-003	+8.43e-004	+1.57e-004
50	+7.44e-005	+1.32e-001	-8.33e-001				-4.09e-003	-7.71e-004	-1.57e-004
51	+6.74e-005	+1.30e-001	-6.74e-001				-4.02e-003	-2.26e-003	-4.43e-004
52	+4.34e-005	+7.26e-002	-3.77e-001				-3.93e-003	-3.36e-003	-6.49e-004
53	+5.32e-008	+1.50e-007	-9.52e-007				-3.93e-003	-3.77e-003	-7.26e-004

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PROGETTO DEFINITIVO

Relazione di calcolo strutturale

MASIME		DEFORMAZIONI NODALI																	
Deform. nodali		+8.29e-002		+3.22e-001		-8.34e-001		-5.11e-003		-3.78e-003		-1.46e-003		+8.94e-001					
Nodo		1		8		34		11		11		8							
COMBINAZIONE DI CARICO: 7 - DESCRIZIONE: SISMA 30%+X 100%-Y																			
Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax												
1	-2.13e-002		-9.10e-002		-1.54e-001		-9.86e-004		-1.38e-003		+8.67e-004								
2	+4.34e-005		-7.13e-002		-9.88e-002		-9.16e-004		-1.38e-003		+8.84e-004								
3	+3.07e-005		+1.42e-001		+3.58e-001		+3.90e-003		+3.44e-003		-1.37e-003								
4	+4.49e-007		-4.28e-007		-2.04e-006		+3.90e-003		+3.57e-003		-1.39e-003								
5	+2.92e-004		-1.42e-001		-3.68e-001		+3.90e-003		+3.33e-003		-1.28e-003								
6	+4.80e-004		-2.57e-001		-6.65e-001		+3.99e-003		+2.30e-003		-8.90e-004								
7	+5.69e-004		-3.21e-001		-8.30e-001		+4.08e-003		+8.43e-004		-3.27e-004								
8	+5.61e-004		-3.22e-001		-8.34e-001		+4.09e-003		-7.71e-004		+2.97e-004								
9	+4.62e-004		-2.61e-001		-6.75e-001		+4.02e-003		-2.26e-003		+8.76e-004								
10	+2.74e-004		-1.46e-001		-3.78e-001		+3.93e-003		-3.36e-003		+1.30e-003								
11	+3.48e-007		-3.21e-007		-1.25e-006		+3.93e-003		-3.78e-003		+1.46e-003								
12	+8.37e-008		-4.64e-007		-1.10e-006		+1.93e-003		-8.16e-005		+3.36e-005								
13	+6.01e-008		-8.29e-008		-2.35e-007		+3.28e-003		+1.89e-005		-8.63e-006								
14	+6.00e-008		-2.65e-007		-7.00e-007		+4.44e-003		-4.59e-006		+1.35e-006								
15	+6.00e-008		-2.22e-007		-5.92e-007		+5.09e-003		+8.55e-007		-9.95e-007								
16	+6.00e-008		-2.32e-007		-6.18e-007		+5.11e-003		-3.79e-007		+4.35e-007								
17	+6.00e-008		-2.30e-007		-6.07e-007		+4.47e-003		-3.92e-007		-5.60e-007								
18	+5.99e-008		-2.31e-007		-6.33e-007		+3.26e-003		+7.66e-007		-5.33e-007								
19	+3.17e-008		-1.24e-007		-2.95e-007		+1.14e-003		-4.57e-006		-5.37e-007								
20	+1.14e-003		+3.69e-002		+1.03e-001		+1.80e-003		-9.27e-005		+2.53e-006								
21	+1.50e-003		+6.41e-002		+1.79e-001		+3.15e-003		+7.75e-006		-3.97e-005								
22	+1.41e-003		+8.76e-002		+2.45e-001		+4.31e-003		-1.57e-005		-2.98e-005								
23	+1.43e-003		+1.01e-001		+2.82e-001		+4.96e-003		-1.03e-005		-3.21e-005								
24	+1.43e-003		+1.01e-001		+2.83e-001		+4.98e-003		-1.15e-005		-3.16e-005								
25	+1.43e-003		+8.83e-002		+2.47e-001		+4.34e-003		-1.15e-005		-3.17e-005								
26	+1.41e-003		+6.37e-002		+1.78e-001		+3.12e-003		-1.04e-005		-3.17e-005								
27	+8.58e-004		+2.20e-002		+6.14e-002		+1.07e-003		-1.04e-005		-1.70e-005								
28	+8.29e-002		-9.17e-002		-1.15e-001		+3.06e-004		-1.29e-003		+1.01e-003								
29	+1.09e-004		-9.77e-002		-9.83e-002		+2.62e-004		-1.28e-003		+9.93e-004								
30	+1.20e-007		-8.31e-007		-1.24e-006		-2.06e-003		-8.52e-005		+5.44e-005								
31	+5.87e-008		-1.85e-007		-3.01e-007		-3.08e-003		+1.96e-005		-1.19e-005								
32	+5.94e-008		-4.69e-007		-7.86e-007		-3.96e-003		-4.78e-006		+3.53e-006								
33	+5.98e-008		-4.03e-007		-6.73e-007		-4.45e-003		+8.80e-007		-1.10e-007								
34	+6.03e-008		-4.18e-007		-7.01e-007		-4.46e-003		-3.78e-007		+6.81e-007								
35	+6.07e-008		-4.15e-007		-6.89e-007		-3.98e-003		-3.58e-007		+4.29e-007								
36	+6.09e-008		-4.15e-007		-7.16e-007		-3.04e-003		+7.91e-007		+4.96e-007								
37	+3.29e-008		-2.18e-007		-3.40e-007		-1.20e-003		-4.45e-006		+2.78e-007								
38	+6.19e-003		-4.03e-002		+1.12e-001		-1.98e-003		-9.63e-005		+8.55e-005								
39	+3.26e-004		-6.09e-002		+1.70e-001		-3.00e-003		+8.47e-006		+1.93e-005								
40	+1.69e-003		-7.87e-002		+2.20e-001		-3.88e-003		-1.59e-005		+3.46e-005								
41	+1.37e-003		-8.87e-002		+2.48e-001		-4.37e-003		-1.03e-005		+3.10e-005								
42	+1.44e-003		-8.89e-002		+2.48e-001		-4.38e-003		-1.15e-005		+3.18e-005								
43	+1.42e-003		-7.92e-002		+2.21e-001		-3.90e-003		-1.15e-005		+3.15e-005								
44	+1.40e-003		-6.02e-002		+1.68e-001		-2.96e-003		-1.03e-005		+3.16e-005								
45	+8.41e-004		-2.36e-002		+6.58e-002		-1.16e-003		-1.03e-005		+1.67e-005								
46	+3.65e-008		-1.49e-007		-8.26e-007		+3.90e-003		+3.66e-003		+7.25e-004								
47	+2.79e-005		-7.26e-002		-3.68e-001		+3.90e-003		+3.30e-003		-6.49e-004								
48	+5.13e-005		-1.30e-001		-6.64e-001		+3.99e-003		+2.30e-003		-4.43e-004								
49	+6.79e-005		-1.62e-001		-8.30e-001		+4.08e-003		+8.43e-004		-1.57e-004								
50	+7.44e-005		-1.62e-001		-8.33e-001		+4.09e-003		-7.71e-004		+1.57e-004								
51	+6.74e-005		-1.30e-001		-6.74e-001		+4.02e-003		-2.26e-003		+4.43e-004								
52	+4.34e-005		-7.26e-002		-3.77e-001		+3.93e-003		-3.36e-003		+6.49e-004								
53	+5.32e-008		-1.50e-007		-9.52e-007		+3.93e-003		-3.77e-003		+7.26e-004								

MASSIME DEFORMAZIONI NODALI							
Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

Deform. nodali	+8.29e-002	-3.22e-001	-8.34e-001	+5.11e-003	-3.78e-003	+1.46e-003	+8.94e-001
Nodo	28	8	16	11	11	8	

COMBINAZIONE DI CARICO: 8 - DESCRIZIONE: SISMA 30%-X 100%+Y						
Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z
1	+7.79e-002		+8.85e-002	-1.15e-001	-3.08e-004	-1.27e-003
2	-8.43e-006		+9.45e-002	-9.77e-002	-2.64e-004	-1.27e-003
3	-6.62e-005		-1.42e-001	+3.58e-001	-3.90e-003	+3.44e-003
4	-4.69e-007		+4.28e-007	-2.04e-006	-3.90e-003	+3.57e-003
5	-2.74e-004		+1.42e-001	-3.68e-001	-3.90e-003	+3.33e-003
6	-4.61e-004		+2.57e-001	-6.65e-001	-3.99e-003	+2.30e-003
7	-5.61e-004		+3.21e-001	-8.30e-001	-4.08e-003	+8.43e-004
8	-5.68e-004		+3.22e-001	-8.34e-001	-4.09e-003	-7.71e-004
9	-4.79e-004		+2.61e-001	-6.75e-001	-4.02e-003	-2.26e-003
10	-2.91e-004		+1.46e-001	-3.78e-001	-3.93e-003	-3.36e-003
11	-3.69e-007		+3.21e-007	-1.25e-006	-3.93e-003	-3.78e-003
12	-6.40e-008		+8.11e-007	-1.23e-006	-1.23e-003	-8.39e-005
13	-6.14e-008		+1.96e-007	-3.06e-007	+3.08e-003	+1.98e-005
14	-6.06e-008		+4.67e-007	-7.85e-007	+3.96e-003	-4.37e-006
15	-6.03e-008		+4.03e-007	-6.74e-007	+4.45e-003	+1.23e-006
16	-5.98e-008		+4.18e-007	-7.01e-007	+4.46e-003	-1.34e-008
17	-5.94e-008		+4.15e-007	-6.89e-007	+3.98e-003	+6.64e-009
18	-5.90e-008		+4.14e-007	-7.16e-007	+3.04e-003	+1.15e-006
19	-3.06e-008		+2.28e-007	-3.44e-007	+1.20e-003	-4.05e-006
20	+3.17e-003		+4.03e-002	+1.12e-001	+1.98e-003	-7.28e-005
21	-2.49e-003		+6.09e-002	+1.70e-001	+3.09e-003	+3.09e-005
22	-1.17e-003		+7.87e-002	+2.20e-001	+3.88e-003	+6.76e-006
23	-1.48e-003		+8.87e-002	+2.48e-001	+4.37e-003	+1.24e-005
24	-1.42e-003		+8.89e-002	+2.48e-001	+4.38e-003	+1.11e-005
25	-1.43e-003		+7.92e-002	+2.21e-001	+3.90e-003	+1.11e-005
26	-1.45e-003		+6.02e-002	+1.68e-001	+1.23e-003	+1.23e-005
27	-7.06e-004		+2.36e-002	+6.58e-002	+1.16e-003	+1.83e-006
28	-2.63e-002		+9.42e-001	-1.53e-001	+9.88e-004	-1.36e-003
29	-7.42e-005		+7.45e-002	-9.82e-002	+9.18e-004	-1.37e-003
30	-1.01e-007		+4.83e-007	-1.09e-006	-1.93e-003	-8.04e-005
31	-6.00e-008		+7.16e-008	-2.39e-007	-3.28e-003	+1.91e-005
32	-6.00e-008		+2.68e-007	-6.99e-007	-4.44e-003	-4.18e-006
33	-6.00e-008		+2.22e-007	-5.92e-007	-5.09e-003	+1.21e-006
34	-6.00e-008		+2.32e-007	-6.18e-007	-5.11e-003	-1.47e-008
35	-6.00e-008		+2.30e-007	-6.07e-007	-4.47e-003	-2.73e-008
36	-6.00e-008		+2.31e-007	-6.33e-007	-3.26e-003	+1.13e-006
37	-3.17e-008		+1.14e-007	-2.99e-007	-1.14e-003	-4.17e-006
38	-1.88e-003		-3.69e-002	+1.03e-001	-1.80e-003	-6.92e-005
39	-1.32e-003		-6.41e-002	+1.79e-001	-3.15e-003	+3.02e-005
40	-1.45e-003		-8.76e-002	+2.45e-001	-4.31e-003	+6.96e-006
41	-1.42e-003		-1.01e-001	+2.82e-001	-4.96e-003	+1.23e-005
42	-1.43e-003		-1.01e-001	+2.83e-001	-4.98e-003	+1.11e-005
43	-1.42e-003		-8.83e-002	+2.47e-001	-4.34e-003	+1.11e-005
44	-1.45e-003		-6.37e-002	+1.78e-001	-3.12e-003	+1.23e-005
45	-6.89e-004		-2.20e-002	+6.14e-002	-1.07e-003	+1.71e-006
46	-5.34e-008		+1.49e-007	-8.26e-007	-3.90e-003	+3.66e-003
47	-4.35e-005		+7.26e-002	-3.68e-001	-3.90e-003	+3.30e-003
48	-6.77e-005		+1.30e-001	-6.64e-001	-3.99e-003	+2.30e-003
49	-7.50e-005		+1.62e-001	-8.30e-001	-4.08e-003	+8.43e-004
50	-6.84e-005		+1.62e-001	-8.33e-001	-4.09e-003	-7.71e-004
51	-5.17e-005		+1.30e-001	-6.74e-001	-4.02e-003	-2.26e-003
52	-2.81e-005		+7.26e-002	-3.77e-001	-3.93e-003	-3.36e-003
53	-3.66e-008		+1.50e-007	-9.52e-007	-3.93e-003	-3.77e-003

MASSIME DEFORMAZIONI NODALI							
Deform. nodali	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax
Nodo	1	8	8	34	11	11	8
		+7.79e-002		+3.22e-001	-8.34e-001	-5.11e-003	-3.78e-003
						-1.46e-003	+8.94e-001

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

COMBINAZIONE DI CARICO: 9 - DESCRIZIONE: SISMA 30%-X 100%-Y									
Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z			
1	-2.63e-002		-9.42e-002		-1.53e-001		-9.88e-004	-1.36e-003	+9.57e-004
2	-7.42e-005		-7.45e-002		-9.82e-002		-9.18e-004	-1.37e-003	+9.41e-004
3	-6.62e-005		+1.42e-001		+3.58e-001		+3.90e-003	+3.44e-003	-1.37e-003
4	-4.69e-007		-4.28e-007		-2.04e-006		+3.90e-003	+3.57e-003	-1.39e-003
5	-2.74e-004		-1.42e-001		-3.68e-001		+3.90e-003	+3.33e-003	-1.28e-003
6	-4.61e-004		-2.57e-001		-6.65e-001		+3.99e-003	+2.30e-003	-8.90e-004
7	-5.61e-004		-3.21e-001		-8.30e-001		+4.08e-003	+8.43e-004	-3.27e-004
8	-5.68e-004		-3.22e-001		-8.34e-001		+4.09e-003	-7.71e-004	+2.97e-004
9	-4.79e-004		-2.61e-001		-6.75e-001		+4.02e-003	-2.26e-003	+8.76e-004
10	-2.91e-004		-1.46e-001		-3.78e-001		+3.93e-003	-3.36e-003	+1.30e-003
11	-3.69e-007		-3.21e-007		-1.25e-006		+3.93e-003	-3.78e-003	+1.46e-003
12	-1.01e-007		-4.83e-007		-1.09e-006		+1.93e-003	-8.04e-005	+3.74e-005
13	-6.00e-008		-7.16e-008		-2.39e-007		+3.28e-003	+1.91e-005	-8.14e-006
14	-6.00e-008		-2.68e-007		-6.99e-007		+4.44e-003	-4.18e-006	+2.58e-006
15	-6.00e-008		-2.22e-007		-5.92e-007		+5.09e-003	+1.21e-006	+5.92e-008
16	-6.00e-008		-2.32e-007		-6.18e-007		+5.11e-003	-1.47e-008	+6.58e-007
17	-6.00e-008		-2.30e-007		-6.07e-007		+4.47e-003	-2.73e-008	+5.35e-007
18	-6.00e-008		-2.31e-007		-6.33e-007		+3.26e-003	+1.13e-006	+5.44e-007
19	-3.17e-008		-1.14e-007		-2.99e-007		+1.14e-003	-4.17e-006	+6.69e-007
20	-1.88e-003		+3.69e-002		+1.03e-001		+1.80e-003	-6.92e-005	+6.85e-005
21	-1.32e-003		+6.41e-002		+1.79e-001		+3.15e-003	+3.02e-005	+2.30e-005
22	-1.45e-003		+8.76e-002		+2.45e-001		+4.31e-003	+6.96e-006	+3.37e-005
23	-1.42e-003		+1.01e-001		+2.82e-001		+4.96e-003	+1.23e-005	+3.12e-005
24	-1.43e-003		+1.01e-001		+2.83e-001		+4.98e-003	+1.11e-005	+3.18e-005
25	-1.42e-003		+8.83e-002		+2.47e-001		+4.34e-003	+1.11e-005	+3.17e-005
26	-1.45e-003		+6.37e-002		+1.78e-001		+3.12e-003	+1.23e-005	+3.17e-005
27	-6.89e-004		+2.20e-002		+6.14e-002		+1.07e-003	+1.71e-006	+1.71e-005
28	+7.79e-002		-8.85e-002		-1.15e-001		+3.08e-004	-1.27e-003	+9.20e-004
29	-8.43e-006		-9.45e-002		-9.77e-002		+2.64e-004	-1.27e-003	+9.36e-004
30	-6.40e-008		-8.11e-007		-1.23e-006		-2.06e-003	-8.39e-005	+5.07e-005
31	-6.14e-008		-1.96e-007		-3.06e-007		-3.08e-003	+1.98e-005	-1.24e-005
32	-6.06e-008		-4.67e-007		-7.85e-007		-3.96e-003	-4.37e-006	+2.30e-006
33	-6.03e-008		-4.03e-007		-6.74e-007		-4.45e-003	+1.23e-006	-1.16e-006
34	-5.98e-008		-4.18e-007		-7.01e-007		-4.46e-003	-1.34e-008	-4.13e-007
35	-5.94e-008		-4.15e-007		-6.89e-007		-3.98e-003	+6.64e-009	-6.65e-007
36	-5.90e-008		-4.14e-007		-7.16e-007		-3.04e-003	+1.15e-006	-5.81e-007
37	-3.06e-008		-2.28e-007		-3.44e-007		-1.20e-003	-4.05e-006	-9.28e-007
38	+3.17e-003		-4.03e-002		+1.12e-001		-1.98e-003	-7.28e-005	+1.96e-005
39	-2.49e-003		-6.09e-002		+1.70e-001		-3.00e-003	+3.09e-005	-4.35e-005
40	-1.17e-003		-7.87e-002		+2.20e-001		-3.88e-003	+6.76e-006	-2.88e-005
41	-1.48e-003		-8.87e-002		+2.48e-001		-4.37e-003	+1.24e-005	-3.23e-005
42	-1.42e-003		-8.89e-002		+2.48e-001		-4.38e-003	+1.11e-005	-3.15e-005
43	-1.43e-003		-7.92e-002		+2.21e-001		-3.90e-003	+1.11e-005	-3.18e-005
44	-1.45e-003		-6.02e-002		+1.68e-001		-2.96e-003	+1.23e-005	-3.17e-005
45	-7.06e-004		-2.36e-002		+6.58e-002		-1.16e-003	+1.83e-006	-1.74e-005
46	-5.34e-008		-1.49e-007		-8.26e-007		+3.90e-003	+3.66e-003	-7.25e-004
47	-4.35e-005		-7.26e-002		-3.68e-001		+3.90e-003	+3.30e-003	-6.49e-004
48	-6.77e-005		-1.30e-001		-6.64e-001		+3.99e-003	+2.30e-003	-4.43e-004
49	-7.50e-005		-1.62e-001		-8.30e-001		+4.08e-003	+8.43e-004	-1.57e-004
50	-6.84e-005		-1.62e-001		-8.33e-001		+4.09e-003	-7.71e-004	+1.57e-004
51	-5.17e-005		-1.30e-001		-6.74e-001		+4.02e-003	-2.26e-003	+4.43e-004
52	-2.81e-005		-7.26e-002		-3.77e-001		+3.93e-003	-3.36e-003	+6.49e-004
53	-3.66e-008		-1.50e-007		-9.52e-007		+3.93e-003	-3.77e-003	+7.26e-004

MASSIME DEFORMAZIONI NODALI

	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax				
Deform. nodali		+7.79e-002		-3.22e-001		-8.34e-001		+5.11e-003	-3.78e-003	+1.46e-003	+8.94e-001
Nodo	28	8	8	16	11	11	8				

COMBINAZIONE DI CARICO: 10 - DESCRIZIONE: SISMA 100%+X 30%+Y									
Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z			
1	+5.22e-002		+3.14e-002		-1.29e-001		-5.42e-004	-1.35e-003	-4.58e-004

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

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Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

2	+2.23e-004	+4.22e-002	-9.91e-002	-4.89e-004	-1.33e-003	-4.03e-004
3	+1.44e-004	-4.25e-002	+3.58e-001	-1.17e-003	+3.44e-003	+4.10e-004
4	+1.52e-006	+1.28e-007	-2.04e-006	-1.17e-003	+3.57e-003	+4.18e-004
5	+9.51e-004	+4.26e-002	-3.68e-001	-1.17e-003	+3.33e-003	+3.85e-004
6	+1.58e-003	+7.70e-002	-6.65e-001	-1.20e-003	+2.30e-003	+2.67e-004
7	+1.89e-003	+9.62e-002	-8.30e-001	-1.22e-003	+8.43e-004	+9.82e-005
8	+1.88e-003	+9.67e-002	-8.34e-001	-1.23e-003	-7.71e-004	-8.90e-005
9	+1.56e-003	+7.82e-002	-6.75e-001	-1.21e-003	-2.26e-003	-2.63e-004
10	+9.33e-004	+4.39e-002	-3.78e-001	-1.18e-003	-3.36e-003	-3.91e-004
11	+1.18e-006	+9.63e-008	-1.25e-006	-1.18e-003	-3.78e-003	-4.39e-004
12	+3.23e-007	+4.00e-007	-1.20e-006	+2.02e-003	-8.53e-005	-2.79e-005
13	+1.99e-007	+7.77e-008	-2.73e-007	+3.15e-003	+1.92e-005	+4.12e-006
14	+2.00e-007	+2.15e-007	-7.57e-007	+4.13e-003	-5.19e-006	-3.26e-006
15	+2.00e-007	+1.83e-007	-6.45e-007	+4.68e-003	+4.61e-007	-1.51e-006
16	+2.00e-007	+1.91e-007	-6.72e-007	+4.69e-003	-8.03e-007	-1.87e-006
17	+2.00e-007	+1.89e-007	-6.60e-007	+4.15e-003	-7.96e-007	-1.75e-006
18	+2.00e-007	+1.89e-007	-6.87e-007	+3.12e-003	+3.63e-007	-1.77e-006
19	+1.06e-007	+8.61e-008	-3.20e-007	+1.18e-003	-4.96e-006	-1.77e-006
20	+7.95e-003	+3.91e-002	+1.09e-001	+1.92e-003	-1.22e-004	-1.32e-004
21	+4.02e-003	+6.20e-002	+1.73e-001	+3.05e-003	-1.80e-005	-9.96e-005
22	+4.93e-003	+8.18e-002	+2.28e-001	+4.03e-003	-4.23e-005	-1.07e-004
23	+4.72e-003	+9.29e-002	+2.59e-001	+4.58e-003	-3.67e-005	-1.05e-004
24	+4.76e-003	+9.32e-002	+2.60e-001	+4.59e-003	-3.79e-005	-1.06e-004
25	+4.76e-003	+8.24e-002	+2.30e-001	+4.05e-003	-3.79e-005	-1.05e-004
26	+4.74e-003	+6.14e-002	+1.71e-001	+3.02e-003	-3.68e-005	-1.05e-004
27	+2.65e-003	+2.30e-002	+6.42e-002	+1.13e-003	-2.46e-005	-5.65e-005
28	+2.10e-002	+2.34e-002	-1.41e-001	+7.46e-004	-1.37e-003	-1.05e-004
29	+2.04e-004	+8.54e-003	-9.93e-002	+6.85e-004	-1.35e-003	-1.60e-004
30	+3.12e-007	-1.17e-008	-1.16e-006	-1.98e-003	-8.43e-005	+1.51e-006
31	+2.00e-007	+2.50e-009	-2.54e-007	-3.21e-003	+1.89e-005	+2.03e-006
32	+2.00e-007	+4.93e-009	-7.31e-007	-4.27e-003	-5.14e-006	+1.80e-006
33	+2.00e-007	+4.18e-009	-6.20e-007	-4.87e-003	+4.53e-007	+1.84e-006
34	+2.00e-007	+4.39e-009	-6.47e-007	-4.88e-003	-8.04e-007	+1.80e-006
35	+2.00e-007	+4.22e-009	-6.35e-007	-4.30e-003	-8.06e-007	+1.79e-006
36	+2.00e-007	+4.17e-009	-6.62e-007	-3.18e-003	+3.56e-007	+1.78e-006
37	+1.06e-007	+1.65e-008	-3.06e-007	-1.16e-003	-5.00e-006	+1.85e-006
38	+6.43e-003	-3.81e-002	+1.06e-001	-1.86e-003	-1.21e-004	+1.05e-004
39	+4.37e-003	-6.30e-002	+1.76e-001	-3.09e-003	-1.82e-005	+1.06e-004
40	+4.85e-003	-8.45e-002	+2.36e-001	-4.16e-003	-4.23e-005	+1.06e-004
41	+4.74e-003	-9.66e-002	+2.70e-001	-4.75e-003	-3.67e-005	+1.06e-004
42	+4.76e-003	-9.68e-002	+2.71e-001	-4.77e-003	-3.79e-005	+1.06e-004
43	+4.76e-003	-8.51e-002	+2.38e-001	-4.19e-003	-3.79e-005	+1.06e-004
44	+4.74e-003	-6.25e-002	+1.74e-001	-3.07e-003	-3.68e-005	+1.06e-004
45	+2.66e-003	-2.25e-002	+6.29e-002	-1.10e-003	-2.46e-005	+5.66e-005
46	+1.41e-007	+4.48e-008	-8.26e-007	-1.17e-003	+3.66e-003	+2.18e-004
47	+1.11e-004	+2.18e-002	-3.68e-001	-1.17e-003	+3.30e-003	+1.95e-004
48	+1.90e-004	+3.90e-002	-6.64e-001	-1.20e-003	+2.30e-003	+1.33e-004
49	+2.34e-004	+4.85e-002	-8.30e-001	-1.22e-003	+8.43e-004	+4.71e-005
50	+2.41e-004	+4.85e-002	-8.33e-001	-1.23e-003	-7.71e-004	-4.70e-005
51	+2.06e-004	+3.90e-002	-6.74e-001	-1.21e-003	-2.26e-003	-1.33e-004
52	+1.27e-004	+2.18e-002	-3.77e-001	-1.18e-003	-3.36e-003	-1.95e-004
53	+1.58e-007	+4.49e-008	-9.53e-007	-1.18e-003	-3.77e-003	-2.18e-004

MASSIME DEFORMAZIONI NODALI

	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax				
Deform. nodali	+5.22e-002		-9.68e-002			-8.34e-001		-4.88e-003	-3.78e-003	-4.58e-004	+8.40e-001
Nodo	1	42	8	34	11	1	8				

COMBINAZIONE DI CARICO: 11 - DESCRIZIONE: SISMA 100%+X 30%-Y

Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z			
1	+2.10e-002		-2.34e-002		-1.41e-001		-7.46e-004	-1.37e-003	+1.05e-004
2	+2.04e-004		-8.54e-003		-9.93e-002		-6.85e-004	-1.35e-003	+1.60e-004
3	+1.44e-004		+4.25e-002		+3.58e-001		+1.17e-003	+3.44e-003	+4.10e-004
4	+1.52e-006		-1.28e-007		-2.04e-006		+1.17e-003	+3.57e-003	+4.18e-004

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

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Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

5	+9.51e-004	-4.26e-002	-3.68e-001	+1.17e-003	+3.33e-003	-3.85e-004
6	+1.58e-003	-7.70e-002	-6.65e-001	+1.20e-003	+2.30e-003	-2.67e-004
7	+1.89e-003	-9.62e-002	-8.30e-001	+1.22e-003	+8.43e-004	-9.82e-005
8	+1.88e-003	-9.67e-002	-8.34e-001	+1.23e-003	-7.71e-004	+8.90e-005
9	+1.56e-003	-7.82e-002	-6.75e-001	+1.21e-003	-2.26e-003	+2.63e-004
10	+9.33e-004	-4.39e-002	-3.78e-001	+1.18e-003	-3.36e-003	+3.91e-004
11	+1.18e-006	-9.63e-008	-1.25e-006	+1.18e-003	-3.78e-003	+4.39e-004
12	+3.12e-007	+1.17e-008	-1.16e-006	+1.98e-003	-8.43e-005	-1.51e-006
13	+2.00e-007	-2.50e-009	-2.54e-007	+3.21e-003	+1.89e-005	-2.03e-006
14	+2.00e-007	-4.93e-009	-7.31e-007	+4.27e-003	-5.14e-006	-1.80e-006
15	+2.00e-007	-4.18e-009	-6.20e-007	+4.87e-003	+4.53e-007	-1.84e-006
16	+2.00e-007	-4.39e-009	-6.47e-007	+4.88e-003	-8.04e-007	-1.80e-006
17	+2.00e-007	-4.22e-009	-6.35e-007	+4.30e-003	-8.06e-007	-1.79e-006
18	+2.00e-007	-4.17e-009	-6.62e-007	+3.18e-003	+3.56e-007	-1.78e-006
19	+1.06e-007	-1.65e-008	-3.06e-007	+1.16e-003	-5.00e-006	-1.85e-006
20	+6.43e-003	+3.81e-002	+1.06e-001	+1.86e-003	-1.21e-004	-1.05e-004
21	+4.37e-003	+6.30e-002	+1.76e-001	+1.76e-003	-1.82e-005	-1.06e-004
22	+4.85e-003	+8.45e-002	+2.36e-001	+4.16e-003	-4.23e-005	-1.06e-004
23	+4.74e-003	+9.66e-002	+2.70e-001	+4.75e-003	-3.67e-005	-1.06e-004
24	+4.76e-003	+9.68e-002	+2.71e-001	+4.77e-003	-3.79e-005	-1.06e-004
25	+4.76e-003	+8.51e-002	+2.38e-001	+4.19e-003	-3.79e-005	-1.06e-004
26	+4.74e-003	+6.25e-002	+1.74e-001	+3.07e-003	-3.68e-005	-1.06e-004
27	+2.66e-003	+2.25e-002	+6.29e-002	+1.10e-003	-2.46e-005	-5.66e-005
28	+5.22e-002	-3.14e-002	-1.29e-001	+5.42e-004	-1.35e-003	+4.58e-004
29	+2.23e-004	-4.22e-002	-9.91e-002	+4.89e-004	-1.33e-003	+4.03e-004
30	+3.23e-007	-4.00e-007	-1.20e-006	-2.02e-003	-8.53e-005	+2.79e-005
31	+1.99e-007	-7.77e-008	-2.73e-007	-3.15e-003	+1.92e-005	-4.12e-006
32	+2.00e-007	-2.15e-007	-7.57e-007	-4.13e-003	-5.19e-006	+3.26e-006
33	+2.00e-007	-1.83e-007	-6.45e-007	-4.68e-003	+4.61e-007	+1.51e-006
34	+2.00e-007	-1.91e-007	-6.72e-007	-4.69e-003	-8.03e-007	+1.87e-006
35	+2.00e-007	-1.89e-007	-6.60e-007	-4.15e-003	-7.96e-007	+1.75e-006
36	+2.00e-007	-1.89e-007	-6.87e-007	-3.12e-003	+3.63e-007	+1.77e-006
37	+1.06e-007	-8.61e-008	-3.20e-007	-1.18e-003	-4.96e-006	+1.77e-006
38	+7.95e-003	-3.91e-002	+1.09e-001	-1.92e-003	-1.22e-004	+1.32e-004
39	+4.02e-003	-6.20e-002	+1.73e-001	-3.05e-003	-1.80e-005	+9.96e-005
40	+4.93e-003	-8.18e-002	+2.28e-001	-4.03e-003	-4.23e-005	+1.07e-004
41	+4.72e-003	-9.29e-002	+2.59e-001	-4.58e-003	-3.67e-005	+1.05e-004
42	+4.76e-003	-9.32e-002	+2.60e-001	-4.59e-003	-3.79e-005	+1.06e-004
43	+4.76e-003	-8.24e-002	+2.30e-001	-4.05e-003	-3.79e-005	+1.05e-004
44	+4.74e-003	-6.14e-002	+1.71e-001	-3.02e-003	-3.68e-005	+1.05e-004
45	+2.65e-003	-2.30e-002	+6.42e-002	-1.13e-003	-2.46e-005	+5.65e-005
46	+1.41e-007	-4.48e-008	-8.26e-007	+1.17e-003	+3.66e-003	-2.18e-004
47	+1.11e-004	-2.18e-002	-3.68e-001	+1.17e-003	+3.30e-003	-1.95e-004
48	+1.90e-004	-3.90e-002	-6.64e-001	+1.20e-003	+2.30e-003	-1.33e-004
49	+2.34e-004	-4.85e-002	-8.30e-001	+1.22e-003	+8.43e-004	-4.71e-005
50	+2.41e-004	-4.85e-002	-8.33e-001	+1.23e-003	-7.71e-004	+4.70e-005
51	+2.06e-004	-3.90e-002	-6.74e-001	+1.21e-003	-2.26e-003	+1.33e-004
52	+1.27e-004	-2.18e-002	-3.77e-001	+1.18e-003	-3.36e-003	+1.95e-004
53	+1.58e-007	-4.49e-008	-9.53e-007	+1.18e-003	-3.77e-003	+2.18e-004

MASSIME DEFORMAZIONI NODALI

Deform. nodali	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMMax				
Nodo	28	24	8	16	11	28	8	+4.88e-003	-3.78e-003	+4.58e-004	+8.40e-001

COMBINAZIONE DI CARICO: 12 - DESCRIZIONE: SISMA 100%-X 30%-Y

Nodo	Trasl.X	Trasl.Y	Trasl. Z	Rotaz.X	Rotaz.Y	Rotaz.Z			
1	+3.56e-002	+2.08e-002	-1.28e-001	-5.48e-004	-1.27e-003	-1.58e-004			
2	-1.69e-004	+3.17e-002	-9.72e-002	-4.95e-004	-1.29e-003	-2.13e-004			
3	-1.79e-004	-4.25e-002	+3.58e-001	-1.17e-003	+3.44e-003	+4.10e-004			
4	-1.54e-006	+1.28e-007	-2.04e-006	-1.17e-003	+3.57e-003	+4.18e-004			
5	-9.33e-004	+4.26e-002	-3.68e-001	-1.17e-003	+3.33e-003	+3.85e-004			
6	-1.56e-003	+7.70e-002	-6.65e-001	-1.20e-003	+2.30e-003	+2.67e-004			
7	-1.88e-003	+9.62e-002	-8.30e-001	-1.22e-003	+8.43e-004	+9.82e-005			

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

8	-1.89e-003	+9.67e-002	-8.34e-001	-1.23e-003	-7.71e-004	-8.90e-005
9	-1.58e-003	+7.82e-002	-6.74e-001	-1.21e-003	-2.26e-003	-2.63e-004
10	-9.50e-004	+4.39e-002	-3.78e-001	-1.18e-003	-3.36e-003	-3.91e-004
11	-1.21e-006	+9.63e-008	-1.25e-006	-1.18e-003	-3.78e-003	-4.39e-004
12	-2.92e-007	+3.36e-007	-1.18e-006	+2.02e-003	-8.12e-005	-1.55e-005
13	-2.01e-007	+1.16e-007	-2.87e-007	+3.15e-003	+1.97e-005	+5.75e-006
14	-2.00e-007	+2.07e-007	-7.54e-007	+4.13e-003	-3.83e-006	+8.50e-007
15	-2.00e-007	+1.85e-007	-6.45e-007	+4.68e-003	+1.63e-006	+2.01e-006
16	-2.00e-007	+1.90e-007	-6.72e-007	+4.69e-003	+4.11e-007	+1.77e-006
17	-2.00e-007	+1.89e-007	-6.60e-007	+4.15e-003	+4.20e-007	+1.90e-006
18	-1.99e-007	+1.88e-007	-6.87e-007	+3.12e-003	+1.56e-006	+1.82e-006
19	-1.05e-007	+1.21e-007	-3.32e-007	+1.18e-003	-3.62e-006	+2.24e-006
20	-2.12e-003	+3.91e-002	+1.09e-001	+1.92e-003	-4.41e-005	+8.82e-005
21	-5.37e-003	+6.20e-002	+1.73e-001	+3.05e-003	+5.68e-005	+1.09e-004
22	-4.61e-003	+8.18e-002	+2.28e-001	+4.03e-003	+3.33e-005	+1.05e-004
23	-4.79e-003	+9.29e-002	+2.59e-001	+4.58e-003	+3.88e-005	+1.06e-004
24	-4.75e-003	+9.32e-002	+2.60e-001	+4.59e-003	+3.75e-005	+1.06e-004
25	-4.76e-003	+8.24e-002	+2.30e-001	+4.05e-003	+3.75e-005	+1.06e-004
26	-4.78e-003	+6.14e-002	+1.71e-001	+3.02e-003	+3.87e-005	+1.06e-004
27	-2.50e-003	+2.30e-002	+6.42e-002	+1.13e-003	+1.60e-005	+5.70e-005
28	+4.29e-003	+3.40e-002	-1.39e-001	+7.52e-004	-1.30e-003	-4.05e-004
29	-1.88e-004	+1.90e-002	-9.74e-002	+6.91e-004	-1.32e-003	-3.50e-004
30	-3.03e-007	+5.22e-008	-1.13e-006	-1.98e-003	-8.02e-005	-1.09e-005
31	-2.01e-007	-3.53e-008	-2.67e-007	-3.21e-003	+1.95e-005	+4.00e-007
32	-2.00e-007	+1.35e-008	-7.28e-007	-4.27e-003	-3.77e-006	-2.31e-006
33	-2.00e-007	+2.06e-009	-6.21e-007	-4.87e-003	+1.63e-006	-1.68e-006
34	-2.00e-007	+5.01e-009	-6.47e-007	-4.88e-003	+4.11e-007	-1.85e-006
35	-2.00e-007	+3.97e-009	-6.36e-007	-4.30e-003	+4.10e-007	-1.86e-006
36	-2.00e-007	+5.86e-009	-6.62e-007	-3.18e-003	+1.55e-006	-1.81e-006
37	-1.05e-007	-1.81e-008	-3.19e-007	-1.16e-003	-3.66e-006	-2.17e-006
38	-3.64e-003	-3.81e-002	-3.81e-001	+1.86e-003	-4.30e-005	-1.15e-004
39	-5.01e-003	-6.30e-002	+1.76e-001	-3.09e-003	+5.66e-005	-1.03e-004
40	-4.70e-003	-8.45e-002	+2.36e-001	-4.16e-003	+3.33e-005	-1.06e-004
41	-4.77e-003	-9.66e-002	+2.70e-001	-4.75e-003	+3.87e-005	-1.05e-004
42	-4.76e-003	-9.68e-002	+2.71e-001	-4.77e-003	+3.75e-005	-1.06e-004
43	-4.76e-003	-8.51e-002	+2.38e-001	-4.19e-003	+3.75e-005	-1.06e-004
44	-4.78e-003	-6.25e-002	+1.74e-001	-3.07e-003	+3.87e-005	-1.06e-004
45	-2.50e-003	-2.25e-002	+6.29e-002	-1.10e-003	+1.59e-005	-5.69e-005
46	-1.58e-007	+4.48e-008	-8.26e-007	-1.17e-003	+3.66e-003	+2.18e-004
47	-1.27e-004	+2.18e-002	-3.68e-001	-1.17e-003	+3.30e-003	+1.95e-004
48	-2.07e-004	+3.90e-002	-6.64e-001	-1.20e-003	+2.30e-003	+1.33e-004
49	-2.42e-004	+4.85e-002	-8.30e-001	-1.22e-003	+8.43e-004	+4.71e-005
50	-2.35e-004	+4.85e-002	-8.33e-001	-1.23e-003	-7.71e-004	-4.70e-005
51	-1.91e-004	+3.90e-002	-6.74e-001	-1.21e-003	-2.26e-003	-1.33e-004
52	-1.11e-004	+2.18e-002	-3.77e-001	-1.18e-003	-3.36e-003	-1.95e-004
53	-1.41e-007	+4.49e-008	-9.52e-007	-1.18e-003	-3.77e-003	-2.18e-004

MASSIME DEFORMAZIONI NODALI

	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax				
Deform. nodali	+3.56e-002			-9.68e-002		-8.34e-001		-4.88e-003	-3.78e-003	-4.39e-004	+8.40e-001
Nodo	1	42	8	34	11	11	8				

COMBINAZIONE DI CARICO: 13 - DESCRIZIONE: SISMA 100%-X 30%-Y

Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z
1	+4.29e-003	-3.40e-002	-1.39e-001	-7.52e-004	-1.30e-003	+4.05e-004
2	-1.88e-004	-1.90e-002	-9.74e-002	-6.91e-004	-1.32e-003	+3.50e-004
3	-1.79e-004	+4.25e-002	+3.58e-001	+1.17e-003	+3.44e-003	-4.10e-004
4	-1.54e-006	-1.28e-007	-2.04e-006	+1.17e-003	+3.57e-003	-4.18e-004
5	-9.33e-004	-4.26e-002	-3.68e-001	+1.17e-003	+3.33e-003	-3.85e-004
6	-1.56e-003	-7.70e-002	-6.65e-001	+1.20e-003	+2.30e-003	-2.67e-004
7	-1.88e-003	-9.62e-002	-8.30e-001	+1.22e-003	+8.43e-004	-9.82e-005
8	-1.89e-003	-9.67e-002	-8.34e-001	+1.23e-003	-7.71e-004	+8.90e-005
9	-1.58e-003	-7.82e-002	-6.74e-001	+1.21e-003	-2.26e-003	+2.63e-004
10	-9.50e-004	-4.39e-002	-3.78e-001	+1.18e-003	-3.36e-003	+3.91e-004

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

11	-1.21e-006	-9.63e-008	-1.25e-006	+1.18e-003	-3.78e-003	+4.39e-004
12	-3.03e-007	-5.22e-008	-1.13e-006	+1.98e-003	-8.02e-005	+1.09e-005
13	-2.01e-007	+3.53e-008	-2.67e-007	+3.21e-003	+1.95e-005	-4.00e-007
14	-2.00e-007	-1.35e-008	-7.28e-007	+4.27e-003	-3.77e-006	+2.31e-006
15	-2.00e-007	-2.06e-009	-6.21e-007	+4.87e-003	+1.63e-006	+1.68e-006
16	-2.00e-007	-5.01e-009	-6.47e-007	+4.88e-003	+4.11e-007	+1.85e-006
17	-2.00e-007	-3.97e-009	-6.36e-007	+4.30e-003	+4.10e-007	+1.86e-006
18	-2.00e-007	-5.86e-009	-6.62e-007	+3.18e-003	+1.55e-006	+1.81e-006
19	-1.05e-007	+1.81e-008	-3.19e-007	+1.16e-003	-3.66e-006	+2.17e-006
20	-3.64e-003	+3.81e-002	+1.06e-001	+1.86e-003	-4.30e-005	+1.15e-004
21	-5.01e-003	+6.30e-002	+1.76e-001	+3.09e-003	+5.66e-005	+1.03e-004
22	-4.70e-003	+8.45e-002	+2.36e-001	+4.16e-003	+3.33e-005	+1.06e-004
23	-4.77e-003	+9.66e-002	+2.70e-001	+4.75e-003	+3.87e-005	+1.05e-004
24	-4.76e-003	+9.68e-002	+2.71e-001	+4.77e-003	+3.75e-005	+1.06e-004
25	-4.76e-003	+8.51e-002	+2.38e-001	+4.19e-003	+3.75e-005	+1.06e-004
26	-4.78e-003	+6.25e-002	+1.74e-001	+3.07e-003	+3.87e-005	+1.06e-004
27	-2.50e-003	+6.25e-002	+6.29e-002	+1.10e-003	+1.59e-005	+5.69e-005
28	+3.56e-002	-2.08e-002	-1.28e-001	+5.48e-004	-1.27e-003	+1.58e-004
29	-1.69e-004	-3.17e-002	-9.72e-002	+4.95e-004	-1.29e-003	+2.13e-004
30	-2.92e-007	-3.36e-007	-1.18e-006	-2.02e-003	-8.12e-005	+1.55e-005
31	-2.01e-007	-1.16e-007	-2.87e-007	-3.15e-003	+1.97e-005	-5.75e-006
32	-2.00e-007	-2.07e-007	-7.54e-007	-4.13e-003	-3.83e-006	-8.50e-007
33	-2.00e-007	-1.85e-007	-6.45e-007	-4.68e-003	+1.63e-006	-2.01e-006
34	-2.00e-007	-1.90e-007	-6.72e-007	-4.69e-003	+4.11e-007	-1.77e-006
35	-2.00e-007	-1.89e-007	-6.60e-007	-4.15e-003	+4.20e-007	-1.90e-006
36	-1.99e-007	-1.88e-007	-6.87e-007	-3.12e-003	+1.56e-006	-1.82e-006
37	-1.05e-007	-1.21e-007	-3.32e-007	-1.18e-003	-3.62e-006	-2.24e-006
38	-2.12e-003	-3.91e-002	+1.09e-001	-1.92e-003	-4.41e-005	-8.82e-005
39	-5.37e-003	-6.20e-002	+1.73e-001	-3.05e-003	+5.68e-005	-1.09e-004
40	-4.61e-003	-8.18e-002	+2.28e-001	-4.03e-003	+3.33e-005	-1.05e-004
41	-4.79e-003	-9.29e-002	+9.29e-001	+2.58e-003	+3.88e-005	-1.06e-004
42	-4.75e-003	-9.32e-002	+2.60e-001	-4.59e-003	+3.75e-005	-1.06e-004
43	-4.76e-003	-8.24e-002	+2.30e-001	-4.05e-003	+3.75e-005	-1.06e-004
44	-4.78e-003	-6.14e-002	+1.71e-001	-3.02e-003	+3.87e-005	-1.06e-004
45	-2.50e-003	-2.30e-002	+6.42e-002	-1.13e-003	+1.60e-005	-5.70e-005
46	-1.58e-007	-4.48e-008	-8.26e-007	+1.17e-003	+3.66e-003	-2.18e-004
47	-1.27e-004	-2.18e-002	-3.68e-001	+1.17e-003	+3.30e-003	-1.95e-004
48	-2.07e-004	-3.90e-002	-6.64e-001	+1.20e-003	+2.30e-003	-1.33e-004
49	-2.42e-004	-4.85e-002	-8.30e-001	+1.22e-003	+8.43e-004	-4.71e-005
50	-2.35e-004	-4.85e-002	-8.33e-001	+1.23e-003	-7.71e-004	+4.70e-005
51	-1.91e-004	-3.90e-002	-6.74e-001	+1.21e-003	-2.26e-003	+1.33e-004
52	-1.11e-004	-2.18e-002	-3.77e-001	+1.18e-003	-3.36e-003	+1.95e-004
53	-1.41e-007	-4.49e-008	-9.52e-007	+1.18e-003	-3.77e-003	+2.18e-004

MASSIME DEFORMAZIONI NODALI

Deform. nodali	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax				
Nodo	28	24	8	16	11	11	8	+4.88e-003	-3.78e-003	+4.39e-004	+8.40e-001

COMBINAZIONE DI CARICO: 14 - DESCRIZIONE: SISMA 30%X 100%Y

Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z			
1	+8.29e-002	+9.17e-002	+1.15e-001	-1.15e-001	-3.06e-004	-1.29e-003	-1.01e-003		
2	+1.09e-004	+9.77e-002	-9.83e-002	-2.62e-004	-1.28e-003	-9.93e-004			
3	+3.07e-005	-1.42e-001	+3.58e-001	-3.90e-003	+3.44e-003	+1.37e-003			
4	+4.49e-007	+4.28e-007	-2.04e-006	-3.90e-003	+3.57e-003	+1.39e-003			
5	+2.92e-004	+1.42e-001	-3.68e-001	-3.90e-003	+3.33e-003	+1.28e-003			
6	+4.80e-004	+2.57e-001	-6.65e-001	-3.99e-003	+2.30e-003	+8.90e-004			
7	+5.69e-004	+3.21e-001	-8.30e-001	-4.08e-003	+8.43e-004	+3.27e-004			
8	+5.61e-004	+3.22e-001	-8.34e-001	-4.09e-003	-7.71e-004	-2.97e-004			
9	+4.62e-004	+2.61e-001	-6.75e-001	-4.02e-003	-2.26e-003	-8.76e-004			
10	+2.74e-004	+1.46e-001	-3.78e-001	-3.93e-003	-3.36e-003	-1.30e-003			
11	+3.48e-007	+3.21e-007	-1.25e-006	-3.93e-003	-3.78e-003	-1.46e-003			
12	+1.20e-007	+8.31e-007	-1.24e-006	-2.06e-003	-8.52e-005	-5.44e-005			
13	+5.87e-008	+1.85e-007	-3.01e-007	+3.08e-003	+1.96e-005	+1.19e-005			

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

14	+5.94e-008	+4.69e-007	-7.86e-007	+3.96e-003	-4.78e-006	-3.53e-006
15	+5.98e-008	+4.03e-007	-6.73e-007	+4.45e-003	+8.80e-007	+1.10e-007
16	+6.03e-008	+4.18e-007	-7.01e-007	+4.46e-003	-3.78e-007	-6.81e-007
17	+6.07e-008	+4.15e-007	-6.89e-007	+3.98e-003	-3.58e-007	-4.29e-007
18	+6.09e-008	+4.15e-007	-7.16e-007	+3.04e-003	+7.91e-007	-4.96e-007
19	+3.29e-008	+2.18e-007	-3.40e-007	+1.20e-003	-4.45e-006	-2.78e-007
20	+6.19e-003	+4.03e-002	+1.12e-001	+1.98e-003	-9.63e-005	-8.55e-005
21	+3.26e-004	+6.09e-002	+1.70e-001	+3.00e-003	+8.47e-006	-1.93e-005
22	+1.69e-003	+7.87e-002	+2.20e-001	+3.88e-003	-1.59e-005	-3.46e-005
23	+1.37e-003	+8.87e-002	+2.48e-001	+4.37e-003	-1.03e-005	-3.10e-005
24	+1.44e-003	+8.89e-002	+2.48e-001	+4.38e-003	-1.15e-005	-3.18e-005
25	+1.42e-003	+7.92e-002	+2.21e-001	+3.90e-003	-1.15e-005	-3.15e-005
26	+1.40e-003	+6.02e-002	+1.68e-001	+2.96e-003	-1.03e-005	-3.16e-005
27	+8.41e-004	+2.36e-002	+6.58e-002	+1.16e-003	-1.03e-005	-1.67e-005
28	-2.13e-002	+9.10e-002	-1.54e-001	+9.86e-004	-1.38e-003	-8.67e-004
29	+4.34e-005	+7.13e-002	-9.88e-002	+9.16e-004	-1.38e-003	-8.84e-004
30	+8.37e-008	+4.64e-007	-1.10e-006	-1.93e-003	-8.16e-005	-3.36e-005
31	+6.01e-008	+8.29e-008	-2.35e-007	-3.28e-003	+1.89e-005	+8.63e-006
32	+6.00e-008	+2.65e-007	-7.00e-007	-4.44e-003	-4.59e-006	-1.35e-006
33	+6.00e-008	+2.22e-007	-5.92e-007	-5.09e-003	+8.55e-007	+9.95e-007
34	+6.00e-008	+2.32e-007	-6.18e-007	-5.11e-003	-3.79e-007	+4.35e-007
35	+6.00e-008	+2.30e-007	-6.07e-007	-4.47e-003	-3.92e-007	+5.60e-007
36	+5.99e-008	+2.31e-007	-6.33e-007	-3.26e-003	+7.66e-007	+5.33e-007
37	+3.17e-008	+1.24e-007	-2.95e-007	-1.14e-003	-4.57e-006	+5.37e-007
38	+1.14e-003	-3.69e-002	+1.03e-001	-1.80e-003	-9.27e-005	-2.53e-006
39	+1.50e-003	-6.41e-002	+1.79e-001	-3.15e-003	+7.75e-006	+3.97e-005
40	+1.41e-003	-8.76e-002	+2.45e-001	-4.31e-003	-1.57e-005	+2.98e-005
41	+1.43e-003	-1.01e-001	+2.82e-001	-4.96e-003	-1.03e-005	+3.21e-005
42	+1.43e-003	-1.01e-001	+2.83e-001	-4.98e-003	-1.15e-005	+3.16e-005
43	+1.43e-003	-8.83e-002	+2.47e-001	-4.34e-003	-1.15e-005	+3.17e-005
44	+1.41e-003	-6.37e-002	+1.78e-001	-3.12e-003	-1.04e-005	+3.17e-005
45	+8.58e-004	-2.20e-002	+6.14e-002	-1.07e-003	-1.04e-005	+1.70e-005
46	+3.65e-008	+1.49e-007	-8.26e-007	-3.90e-003	+3.66e-003	+7.25e-004
47	+2.79e-005	+7.26e-002	-3.68e-001	-3.90e-003	+3.30e-003	+6.49e-004
48	+5.13e-005	+1.30e-001	-6.64e-001	-3.99e-003	+2.30e-003	+4.43e-004
49	+6.79e-005	+1.62e-001	-8.30e-001	-4.08e-003	+8.43e-004	+1.57e-004
50	+7.44e-005	+1.62e-001	-8.33e-001	-4.09e-003	-7.71e-004	-1.57e-004
51	+6.74e-005	+1.30e-001	-6.74e-001	-4.02e-003	-2.26e-003	-4.43e-004
52	+4.34e-005	+7.26e-002	-3.77e-001	-3.93e-003	-3.36e-003	-6.49e-004
53	+5.32e-008	+1.50e-007	-9.52e-007	-3.93e-003	-3.77e-003	-7.26e-004

MASSIME DEFORMAZIONI NODALI

Deform. nodali	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax
	+8.29e-002		+3.22e-001	-8.34e-001			
Nodo	1	8	8	34	11	11	8
	-5.11e-003	-3.78e-003	-1.46e-003	+8.94e-001			

COMBINAZIONE DI CARICO: 15 - DESCRIZIONE: SISMA 30%X 100%-Y						
Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z
1	-2.13e-002	-9.10e-002	-1.54e-001	-9.86e-004	-1.38e-003	+8.67e-004
2	+4.34e-005	-7.13e-002	-9.88e-002	-9.16e-004	-1.38e-003	+8.84e-004
3	+3.07e-005	+1.42e-001	+3.58e-001	+3.90e-003	+3.44e-003	-1.37e-003
4	+4.49e-007	-4.28e-007	-2.04e-006	+3.90e-003	+3.57e-003	-1.39e-003
5	+2.92e-004	-1.42e-001	-3.68e-001	+3.90e-003	+3.33e-003	-1.28e-003
6	+4.80e-004	-2.57e-001	-6.65e-001	+3.99e-003	+2.30e-003	-8.90e-004
7	+5.69e-004	-3.21e-001	-8.30e-001	+4.08e-003	+8.43e-004	-3.27e-004
8	+5.61e-004	-3.22e-001	-8.34e-001	+4.09e-003	-7.71e-004	+2.97e-004
9	+4.62e-004	-2.61e-001	-6.75e-001	+4.02e-003	-2.26e-003	+8.76e-004
10	+2.74e-004	-1.46e-001	-3.78e-001	+3.93e-003	-3.36e-003	+1.30e-003
11	+3.48e-007	-3.21e-007	-1.25e-006	+3.93e-003	-3.78e-003	+1.46e-003
12	+8.37e-008	-4.64e-007	-1.10e-006	+1.93e-003	-8.16e-005	+3.36e-005
13	+6.01e-008	-8.29e-008	-2.35e-007	+3.28e-003	+1.89e-005	-8.63e-006
14	+6.00e-008	-2.65e-007	-7.00e-007	+4.44e-003	-4.59e-006	+1.35e-006
15	+6.00e-008	-2.22e-007	-5.92e-007	+5.09e-003	+8.55e-007	-9.95e-007
16	+6.00e-008	-2.32e-007	-6.18e-007	+5.11e-003	-3.79e-007	-4.35e-007

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

17	+6.00e-008	-2.30e-007	-6.07e-007	+4.47e-003	-3.92e-007	-5.60e-007
18	+5.99e-008	-2.31e-007	-6.33e-007	+3.26e-003	+7.66e-007	-5.33e-007
19	+3.17e-008	-1.24e-007	-2.95e-007	+1.14e-003	-4.57e-006	-5.37e-007
20	+1.14e-003	+3.69e-002	+1.03e-001	+1.80e-003	-9.27e-005	+2.53e-006
21	+1.50e-003	+6.41e-002	+1.79e-001	+3.15e-003	+7.75e-006	-3.97e-005
22	+1.41e-003	+8.76e-002	+2.45e-001	+4.31e-003	-1.57e-005	-2.98e-005
23	+1.43e-003	+1.01e-001	+2.82e-001	+4.96e-003	-1.03e-005	-3.21e-005
24	+1.43e-003	+1.01e-001	+2.83e-001	+4.98e-003	-1.15e-005	-3.16e-005
25	+1.43e-003	+8.83e-002	+2.47e-001	+4.34e-003	-1.15e-005	-3.17e-005
26	+1.41e-003	+6.37e-002	+1.78e-001	+3.12e-003	-1.04e-005	-3.17e-005
27	+8.58e-004	+2.20e-002	+6.14e-002	+1.07e-003	-1.04e-005	-1.70e-005
28	+8.29e-002	-9.17e-002	-1.15e-001	+3.06e-004	-1.29e-003	+1.01e-003
29	+1.09e-004	-9.77e-002	-9.83e-002	+2.62e-004	-1.28e-003	+9.93e-004
30	+1.20e-007	-8.31e-007	-1.24e-006	-2.06e-003	-8.52e-005	+5.44e-005
31	+5.87e-008	-1.85e-007	-3.01e-007	-3.08e-003	+1.96e-005	-1.19e-005
32	+5.94e-008	-4.69e-007	-7.86e-007	-3.96e-003	-4.78e-006	+3.53e-006
33	+5.98e-008	-4.03e-007	-6.73e-007	-4.45e-003	+8.80e-007	-1.10e-007
34	+6.03e-008	-4.18e-007	-7.01e-007	-4.46e-003	-3.78e-007	+6.81e-007
35	+6.07e-008	-4.15e-007	-6.89e-007	-3.98e-003	-3.58e-007	+4.29e-007
36	+6.09e-008	-4.15e-007	-7.16e-007	-3.04e-003	+7.91e-007	+4.96e-007
37	+3.29e-008	-2.18e-007	-3.40e-007	-1.20e-003	-4.45e-006	+2.78e-007
38	+6.19e-003	-4.03e-002	+1.12e-001	-1.98e-003	-9.63e-005	+8.55e-005
39	+3.26e-004	-6.09e-002	+1.70e-001	-3.00e-003	+8.47e-006	+1.93e-005
40	+1.69e-003	-7.87e-002	+2.20e-001	-3.88e-003	-1.59e-005	+3.46e-005
41	+1.37e-003	-8.87e-002	+2.48e-001	-4.37e-003	-1.03e-005	+3.10e-005
42	+1.44e-003	-8.89e-002	+2.48e-001	-4.38e-003	-1.15e-005	+3.18e-005
43	+1.42e-003	-7.92e-002	+2.21e-001	-3.90e-003	-1.15e-005	+3.15e-005
44	+1.40e-003	-6.02e-002	+1.68e-001	-2.96e-003	-1.03e-005	+3.16e-005
45	+8.41e-004	-2.36e-002	+6.58e-002	-1.16e-003	-1.03e-005	+1.67e-005
46	+3.65e-008	-1.49e-007	-8.26e-007	+3.90e-003	+3.66e-003	-7.25e-004
47	+2.79e-005	-7.26e-002	-3.68e-001	+3.90e-003	+3.30e-003	-6.49e-004
48	+5.13e-005	-1.30e-001	-6.64e-001	+3.99e-003	+2.30e-003	-4.43e-004
49	+6.79e-005	-1.62e-001	-8.30e-001	+4.08e-003	+8.43e-004	-1.57e-004
50	+7.44e-005	-1.62e-001	-8.33e-001	+4.09e-003	-7.71e-004	+1.57e-004
51	+6.74e-005	-1.30e-001	-6.74e-001	+4.02e-003	-2.26e-003	+4.43e-004
52	+4.34e-005	-7.26e-002	-3.77e-001	+3.93e-003	-3.36e-003	+6.49e-004
53	+5.32e-008	-1.50e-007	-9.52e-007	+3.93e-003	-3.77e-003	+7.26e-004

MASSIME DEFORMAZIONI NODALI

Deform. nodali	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax				
Nodo	28	8	8	16	11	11	8	+5.11e-003	-3.78e-003	+1.46e-003	+8.94e-001

COMBINAZIONE DI CARICO: 16 - DESCRIZIONE: SISMA 30%-X 100%-Y

Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z			
1	+7.79e-002	+8.85e-002	-1.15e-001	-3.08e-004	-1.27e-003	-9.20e-004			
2	-8.43e-006	+9.45e-002	-9.77e-002	-2.64e-004	-1.27e-003	-9.36e-004			
3	-6.62e-005	-1.42e-001	+3.58e-001	-3.90e-003	+3.44e-003	+1.37e-003			
4	-4.69e-007	+4.28e-007	-2.04e-006	-3.90e-003	+3.57e-003	+1.39e-003			
5	-2.74e-004	+1.42e-001	-3.68e-001	-3.90e-003	+3.33e-003	+1.28e-003			
6	-4.61e-004	+2.57e-001	-6.65e-001	-3.99e-003	+2.30e-003	+8.90e-004			
7	-5.61e-004	+3.21e-001	-8.30e-001	-4.08e-003	+8.43e-004	+3.27e-004			
8	-5.68e-004	+3.22e-001	-8.34e-001	-4.09e-003	-7.71e-004	-2.97e-004			
9	-4.79e-004	+2.61e-001	-6.75e-001	-4.02e-003	-2.26e-003	-8.76e-004			
10	-2.91e-004	+1.46e-001	-3.78e-001	-3.93e-003	-3.36e-003	-1.30e-003			
11	-3.69e-007	+3.21e-007	-1.25e-006	-3.93e-003	-3.78e-003	-1.46e-003			
12	-6.40e-008	+8.11e-007	-1.23e-006	+2.06e-003	-8.39e-005	-5.07e-005			
13	-6.14e-008	+1.96e-007	-3.06e-007	+3.08e-003	+1.98e-005	+1.24e-005			
14	-6.06e-008	+4.67e-007	-7.85e-007	+3.96e-003	-4.37e-006	-2.30e-006			
15	-6.03e-008	+4.03e-007	-6.74e-007	+4.45e-003	+1.23e-006	+1.16e-006			
16	-5.98e-008	+4.18e-007	-7.01e-007	+4.46e-003	-1.34e-008	+4.13e-007			
17	-5.94e-008	+4.15e-007	-6.89e-007	+3.98e-003	+6.64e-009	+6.65e-007			
18	-5.90e-008	+4.14e-007	-7.16e-007	+3.04e-003	+1.15e-006	+5.81e-007			
19	-3.06e-008	+2.28e-007	-3.44e-007	+1.20e-003	-4.05e-006	+9.28e-007			

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

20	+3.17e-003	+4.03e-002	+1.12e-001	+1.98e-003	-7.28e-005	-1.96e-005
21	-2.49e-003	+6.09e-002	+1.70e-001	+3.00e-003	+3.09e-005	+4.35e-005
22	-1.17e-003	+7.87e-002	+2.20e-001	+3.88e-003	+6.76e-006	+2.88e-005
23	-1.48e-003	+8.87e-002	+2.48e-001	+4.37e-003	+1.24e-005	+3.23e-005
24	-1.42e-003	+8.89e-002	+2.48e-001	+4.38e-003	+1.11e-005	+3.15e-005
25	-1.43e-003	+7.92e-002	+2.21e-001	+3.90e-003	+1.11e-005	+3.18e-005
26	-1.45e-003	+6.02e-002	+1.68e-001	+2.96e-003	+1.23e-005	+3.17e-005
27	-7.06e-004	+2.36e-002	+6.58e-002	+1.16e-003	+1.83e-006	+1.74e-005
28	-2.63e-002	+9.42e-002	-1.53e-001	+9.88e-004	-1.36e-003	-9.57e-004
29	-7.42e-005	+7.45e-002	-9.82e-002	+9.18e-004	-1.37e-003	-9.41e-004
30	-1.01e-007	+4.83e-007	-1.09e-006	-1.93e-003	-8.04e-005	-3.74e-005
31	-6.00e-008	+7.16e-008	-2.39e-007	-3.28e-003	+1.91e-005	+8.14e-006
32	-6.00e-008	+2.68e-007	-6.99e-007	-4.44e-003	-4.18e-006	-2.58e-006
33	-6.00e-008	+2.22e-007	-5.92e-007	-5.09e-003	+1.21e-006	-5.92e-008
34	-6.00e-008	+2.32e-007	-6.18e-007	-5.11e-003	-1.47e-008	-6.58e-007
35	-6.00e-008	+2.30e-007	-6.07e-007	-4.47e-003	-2.73e-008	-5.35e-007
36	-6.00e-008	+2.31e-007	-6.33e-007	-3.26e-003	+1.13e-006	-5.44e-007
37	-3.17e-008	+1.14e-007	-2.99e-007	-1.14e-003	-4.17e-006	-6.69e-007
38	-1.88e-003	-3.69e-002	+1.03e-001	-1.80e-003	-6.92e-005	-6.85e-005
39	-1.32e-003	-6.41e-002	+1.79e-001	-3.15e-003	+3.02e-005	-2.30e-005
40	-1.45e-003	-8.76e-002	+2.45e-001	-4.31e-003	+6.96e-006	-3.37e-005
41	-1.42e-003	-1.01e-001	+2.82e-001	-4.96e-003	+1.23e-005	-3.12e-005
42	-1.43e-003	-1.01e-001	+2.83e-001	-4.98e-003	+1.11e-005	-3.18e-005
43	-1.42e-003	-8.83e-002	+2.47e-001	-4.34e-003	+1.11e-005	-3.17e-005
44	-1.45e-003	-6.37e-002	+1.78e-001	-3.12e-003	+1.23e-005	-3.17e-005
45	-6.89e-004	-2.20e-002	+6.14e-002	-1.07e-003	+1.71e-006	-1.71e-005
46	-5.34e-008	+1.49e-007	-8.26e-007	-3.90e-003	+3.66e-003	+7.25e-004
47	-4.35e-005	+7.26e-002	-3.68e-001	-3.90e-003	+3.30e-003	+6.49e-004
48	-6.77e-005	+1.30e-001	-6.64e-001	-3.99e-003	+2.30e-003	+4.43e-004
49	-7.50e-005	+1.62e-001	-8.30e-001	-4.08e-003	+8.43e-004	+1.57e-004
50	-6.84e-005	+1.62e-001	-8.33e-001	-4.09e-003	-7.71e-004	-1.57e-004
51	-5.17e-005	+1.30e-001	-6.74e-001	-4.02e-003	-2.26e-003	-4.43e-004
52	-2.81e-005	+7.26e-002	-3.77e-001	-3.93e-003	-3.36e-003	-6.49e-004
53	-3.66e-008	+1.50e-007	-9.52e-007	-3.93e-003	-3.77e-003	-7.26e-004

MASSIME DEFORMAZIONI NODALI

	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax				
Deform. nodali		+7.79e-002		+3.22e-001		-8.34e-001		-5.11e-003	-3.78e-003	-1.46e-003	+8.94e-001
Nodo	1	8	8	34	11	11	8				

COMBINAZIONE DI CARICO: 17 - DESCRIZIONE: SISMA 30%-X 100%-Y

Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z			
1	-2.63e-002	-9.42e-002	-1.53e-001	-9.88e-004	-1.36e-003	+9.57e-004			
2	-7.42e-005	-7.45e-002	-9.82e-002	-9.18e-004	-1.37e-003	+9.41e-004			
3	-6.62e-005	+1.42e-001	+3.58e-001	+3.90e-003	+3.44e-003	-1.37e-003			
4	-4.69e-007	-4.28e-007	-2.04e-006	+3.90e-003	+3.57e-003	-1.39e-003			
5	-2.74e-004	-1.42e-001	-3.68e-001	+3.90e-003	+3.33e-003	-1.28e-003			
6	-4.61e-004	-2.57e-001	-6.65e-001	+3.99e-003	+2.30e-003	-8.90e-004			
7	-5.61e-004	-3.21e-001	-8.30e-001	+4.08e-003	+8.43e-004	-3.27e-004			
8	-5.68e-004	-3.22e-001	-8.34e-001	+4.09e-003	-7.71e-004	+2.97e-004			
9	-4.79e-004	-2.61e-001	-6.75e-001	+4.02e-003	-2.26e-003	+8.76e-004			
10	-2.91e-004	-1.46e-001	-3.78e-001	+3.93e-003	-3.36e-003	+1.30e-003			
11	-3.69e-007	-3.21e-007	-1.25e-006	+3.93e-003	-3.78e-003	+1.46e-003			
12	-1.01e-007	-4.83e-006	-1.09e-006	+1.93e-003	-8.04e-005	+3.74e-005			
13	-6.00e-008	-7.16e-008	-2.39e-007	+3.28e-003	+1.91e-005	-8.14e-006			
14	-6.00e-008	-2.68e-007	-6.99e-007	-4.44e-003	-4.18e-006	+2.58e-006			
15	-6.00e-008	-2.22e-007	-5.92e-007	+5.09e-003	+1.21e-006	+5.92e-008			
16	-6.00e-008	-2.32e-007	-6.18e-007	+5.11e-003	-1.47e-008	+6.58e-007			
17	-6.00e-008	-2.30e-007	-6.07e-007	-4.47e-003	-2.73e-008	+5.35e-007			
18	-6.00e-008	-2.31e-007	-6.33e-007	+3.26e-003	+1.13e-006	+5.44e-007			
19	-3.17e-008	-1.14e-007	-2.99e-007	-1.14e-003	-4.17e-006	+6.69e-007			
20	-1.88e-003	+3.69e-002	+1.03e-001	+1.80e-003	-6.92e-005	+6.85e-005			
21	-1.32e-003	+6.41e-002	+1.79e-001	+3.15e-003	+3.02e-005	+2.30e-005			
22	-1.45e-003	+8.76e-002	+2.45e-001	+4.31e-003	+6.96e-006	+3.37e-005			

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

23	-1.42e-003	+1.01e-001	+2.82e-001	+4.96e-003	+1.23e-005	+3.12e-005
24	-1.43e-003	+1.01e-001	+2.83e-001	+4.98e-003	+1.11e-005	+3.18e-005
25	-1.42e-003	+8.83e-002	+2.47e-001	+4.34e-003	+1.11e-005	+3.17e-005
26	-1.45e-003	+6.37e-002	+1.78e-001	+3.12e-003	+1.23e-005	+3.17e-005
27	-6.89e-004	+2.20e-002	+6.14e-002	+1.07e-003	+1.71e-006	+1.71e-005
28	+7.79e-002	-8.85e-002	-1.15e-001	+3.08e-004	-1.27e-003	+9.20e-004
29	-8.43e-006	-9.45e-002	-9.77e-002	+2.64e-004	-1.27e-003	+9.36e-004
30	-6.40e-008	-8.11e-007	-1.23e-006	-2.06e-003	-8.39e-005	+5.07e-005
31	-6.14e-008	-1.96e-007	-3.06e-007	-3.08e-003	+1.98e-005	-1.24e-005
32	-6.06e-008	-4.67e-007	-7.85e-007	-3.96e-003	-4.37e-006	+2.30e-006
33	-6.03e-008	-4.03e-007	-6.74e-007	-4.45e-003	+1.23e-006	-1.16e-006
34	-5.98e-008	-4.18e-007	-7.01e-007	-4.46e-003	-1.34e-008	-4.13e-007
35	-5.94e-008	-4.15e-007	-6.89e-007	-3.98e-003	+6.64e-009	-6.65e-007
36	-5.90e-008	-4.14e-007	-7.16e-007	-3.04e-003	+1.15e-006	-5.81e-007
37	-3.06e-008	-2.28e-007	-3.44e-007	-1.20e-003	-4.05e-006	-9.28e-007
38	+3.17e-003	-4.03e-002	+1.12e-001	-1.98e-003	-7.28e-005	+1.96e-005
39	-2.49e-003	-6.09e-002	+1.70e-001	-3.00e-003	+3.09e-005	-4.35e-005
40	-1.17e-003	-7.87e-002	+2.20e-001	-3.88e-003	+6.76e-006	-2.88e-005
41	-1.48e-003	-8.87e-002	+2.48e-001	-4.37e-003	+1.24e-005	-3.23e-005
42	-1.42e-003	-8.89e-002	+2.48e-001	-4.38e-003	+1.11e-005	-3.15e-005
43	-1.43e-003	-7.92e-002	+2.21e-001	-3.90e-003	+1.11e-005	-3.18e-005
44	-1.45e-003	-6.02e-002	+1.68e-001	-2.96e-003	+1.23e-005	-3.17e-005
45	-7.06e-004	-2.36e-002	+6.58e-002	-1.16e-003	+1.83e-006	-1.74e-005
46	-5.34e-008	-1.49e-007	-8.26e-007	-8.26e-003	+3.66e-003	-7.25e-004
47	-4.35e-005	-7.26e-002	-3.68e-001	+3.90e-003	+3.30e-003	-6.49e-004
48	-6.77e-005	-1.30e-001	-6.64e-001	+3.99e-003	+2.30e-003	-4.43e-004
49	-7.50e-005	-1.62e-001	-8.30e-001	+4.08e-003	+8.43e-004	-1.57e-004
50	-6.84e-005	-1.62e-001	-8.33e-001	+4.09e-003	-7.71e-004	+1.57e-004
51	-5.17e-005	-1.30e-001	-6.74e-001	+4.02e-003	-2.26e-003	+4.43e-004
52	-2.81e-005	-7.26e-002	-3.77e-001	+3.93e-003	-3.36e-003	+6.49e-004
53	-3.66e-008	-1.50e-007	-9.52e-007	+3.93e-003	-3.77e-003	+7.26e-004

MASSIME DEFORMAZIONI NODALI

	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax				
Deform. nodali		+7.79e-002		-3.22e-001		-8.34e-001		+5.11e-003	-3.78e-003	+1.46e-003	+8.94e-001
Nodo	28	8	8	16	11	11	8				

COMBINAZIONE DI CARICO: 18 - DESCRIZIONE: RARA

Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z			
1	+1.08e-001	+7.10e-003	+4.81e-001	-4.81e-001	-1.95e-003	-5.03e-003	-1.17e-004		
2	+6.74e-005	+4.57e-002	-3.73e-001	-1.73e-003	-5.03e-003	-1.17e-004	-1.17e-004		
3	-6.85e-005	-2.10e-015	+1.24e+000	-2.18e-016	+1.19e-002	+2.03e-017	+2.03e-017		
4	-4.28e-008	+2.91e-021	-7.33e-006	-2.18e-016	+1.24e-002	+2.04e-017	+2.04e-017		
5	+3.11e-005	+2.05e-015	-1.28e+000	-2.18e-016	+1.15e-002	+1.87e-017	+1.87e-017		
6	+3.25e-005	+3.77e-015	-2.31e+000	-2.28e-016	+7.98e-003	+1.39e-017	+1.39e-017		
7	+1.42e-005	+4.83e-015	-2.88e+000	-2.52e-016	+2.93e-003	+6.02e-018	+6.02e-018		
8	+1.13e-005	+4.96e-015	-2.90e+000	-2.61e-016	+2.67e-003	-3.68e-018	-3.68e-018		
9	-3.02e-005	+4.07e-015	-2.34e+000	-2.60e-016	-7.86e-003	-1.32e-017	-1.32e-017		
10	-2.96e-005	+2.31e-015	-1.31e+000	-2.56e-016	-1.17e-002	-2.04e-017	-2.04e-017		
11	-3.57e-008	+5.59e-021	-4.40e-006	-2.58e-016	-1.31e-002	-2.31e-017	-2.31e-017		
12	+3.82e-008	+6.89e-007	-4.33e-006	+8.01e-003	-3.23e-004	-3.32e-005	-3.32e-005		
13	-2.25e-009	+2.34e-007	-6.76e-007	+1.21e-002	+7.54e-005	+7.28e-006	+7.28e-006		
14	-9.68e-010	+4.07e-007	-2.52e-006	+1.57e-002	-1.75e-005	-1.83e-006	-1.83e-006		
15	-4.50e-010	+3.67e-007	-2.09e-006	+1.77e-002	+4.10e-006	+3.35e-007	+3.35e-007		
16	+3.87e-010	+3.76e-007	-2.19e-006	+1.77e-002	-9.19e-007	-4.61e-008	-4.61e-008		
17	+1.11e-009	+3.75e-007	-2.16e-006	+1.58e-002	-7.49e-008	+1.79e-007	+1.79e-007		
18	+1.65e-009	+3.72e-007	-2.20e-006	+1.20e-002	+8.77e-007	+1.06e-007	+1.06e-007		
19	+1.88e-009	+2.01e-007	-1.06e-006	+4.53e-003	-4.48e-006	+6.12e-007	+6.12e-007		
20	+8.40e-003	+1.55e-001	+4.32e-001	+7.58e-003	-3.23e-004	-3.32e-005	-3.32e-005		
21	-1.93e-003	+2.38e-001	+6.64e-001	+1.17e-002	+7.54e-005	+7.28e-006	+7.28e-006		
22	+4.57e-004	+3.09e-001	+8.64e-001	+1.52e-002	-1.75e-005	-1.83e-006	-1.83e-006		
23	-1.02e-004	+3.50e-001	+9.77e-001	+1.72e-002	+4.10e-006	+3.33e-007	+3.33e-007		
24	+2.12e-005	+3.51e-001	+9.80e-001	+1.73e-002	-9.20e-007	-4.63e-008	-4.63e-008		
25	-8.55e-006	+3.11e-001	+8.70e-001	+1.53e-002	-7.58e-008	+1.78e-007	+1.78e-007		

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

26	-2.37e-005	+2.35e-001	+6.56e-001	+1.15e-002	+8.77e-007	+1.05e-007
27	+5.61e-005	+8.79e-002	+2.45e-001	+4.31e-003	-4.48e-006	+6.12e-007
28	+1.08e-001	-7.10e-003	-4.81e-001	+1.95e-003	-5.03e-003	+1.17e-004
29	+6.74e-005	-4.57e-002	-3.73e-001	+1.73e-003	-5.03e-003	+1.17e-004
30	+3.82e-008	-6.89e-007	-4.33e-006	-8.01e-003	-3.23e-004	+3.32e-005
31	-2.25e-009	-2.34e-007	-6.76e-007	-1.21e-002	+7.54e-005	-7.28e-006
32	-9.68e-010	-4.07e-007	-2.52e-006	-1.57e-002	-1.75e-005	+1.83e-006
33	-4.50e-010	-3.67e-007	-2.09e-006	-1.77e-002	+4.10e-006	-3.35e-007
34	+3.87e-010	-3.76e-007	-2.19e-006	-1.77e-002	-9.19e-007	+4.61e-008
35	+1.11e-009	-3.75e-007	-2.16e-006	-1.58e-002	-7.49e-008	-1.79e-007
36	+1.65e-009	-3.72e-007	-2.20e-006	-1.20e-002	+8.77e-007	-1.06e-007
37	+1.88e-009	-2.01e-007	-1.06e-006	-4.53e-003	-4.48e-006	-6.12e-007
38	+8.40e-003	-1.55e-001	+4.32e-001	-7.58e-003	-3.23e-004	+3.32e-005
39	-1.93e-003	-2.38e-001	+6.64e-001	-1.17e-002	+7.54e-005	-7.28e-006
40	+4.57e-004	-3.09e-001	+8.64e-001	-1.52e-002	-1.75e-005	+1.83e-006
41	-1.02e-004	-3.50e-001	+9.77e-001	-1.72e-002	+4.10e-006	-3.33e-007
42	+2.12e-005	-3.51e-001	+9.80e-001	-1.73e-002	-9.20e-007	+4.63e-008
43	-8.55e-006	-3.11e-001	+8.70e-001	-1.53e-002	-7.58e-008	-1.78e-007
44	-2.37e-005	-2.35e-001	+6.56e-001	-1.15e-002	+8.77e-007	-1.05e-007
45	+5.61e-005	-8.79e-002	+2.45e-001	-4.31e-003	-4.48e-006	-6.12e-007
46	-2.93e-008	-5.38e-022	-2.79e-006	-1.73e-016	+1.27e-002	-2.67e-018
47	-2.71e-005	-2.66e-016	-1.28e+000	-1.73e-016	+1.15e-002	-2.35e-018
48	-2.86e-005	-4.71e-016	-2.30e+000	-1.77e-016	+7.98e-003	-1.56e-018
49	-1.23e-005	-5.82e-016	-2.88e+000	-1.86e-016	+2.93e-003	-5.59e-019
50	+1.04e-005	-5.84e-016	-2.89e+000	-1.88e-016	-2.68e-003	+5.14e-019
51	+2.72e-005	-4.77e-016	-2.34e+000	-1.86e-016	-7.86e-003	+1.55e-018
52	+2.66e-005	-2.71e-016	-1.31e+000	-1.83e-016	-1.17e-002	+2.38e-018
53	+2.87e-008	-5.76e-022	-3.24e-006	-1.83e-016	-1.31e-002	+2.72e-018

MASSIME DEFORMAZIONI NODALI

Deform.	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMMax				
Nodo	1	24	8	16	11	1	8	+1.77e-002	-1.31e-002	-1.17e-004	+2.90e+000

COMBINAZIONE DI CARICO: 19 - DESCRIZIONE: FREQUENTE

Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z			
1	+5.83e-002		+1.87e-003		-2.64e-001		-1.14e-003	-2.72e-003	-6.04e-005
2	+3.62e-005		+2.44e-002		-2.01e-001		-1.02e-003	-2.72e-003	-6.04e-005
3	-3.68e-005		-1.14e-015		+6.88e-001		-1.25e-016	+6.60e-003	+1.11e-017
4	-2.23e-008		+1.59e-021		-4.02e-006		-1.25e-016	+6.86e-003	+1.11e-017
5	+1.73e-005		+1.12e-015		-7.08e-001		-1.25e-016	+6.41e-003	+1.02e-017
6	+1.80e-005		+2.05e-015		-1.28e+000		-1.32e-016	+4.43e-003	+7.52e-018
7	+7.89e-006		+2.62e-015		-1.60e+000		-1.48e-016	+1.63e-003	+3.26e-018
8	-6.29e-006		+2.69e-015		-1.61e+000		-1.54e-016	-1.49e-003	-2.00e-018
9	-1.68e-005		+2.21e-015		-1.30e+000		-1.54e-016	-4.36e-003	-7.15e-018
10	-1.64e-005		+1.25e-015		-7.28e-001		-1.52e-016	-6.48e-003	-1.11e-017
11	-1.99e-008		+3.03e-021		-2.43e-006		-1.54e-016	-7.27e-003	-1.26e-017
12	+2.05e-008		+3.67e-007		-2.35e-006		+4.25e-003	-1.73e-004	-1.78e-005
13	-1.24e-009		+1.23e-007		-4.22e-007		+6.53e-003	+4.03e-005	+3.89e-006
14	-5.40e-010		+2.16e-007		-1.41e-006		+8.50e-003	-9.36e-006	-9.85e-007
15	-2.49e-010		+1.94e-007		-1.18e-006		+9.60e-003	+2.19e-006	+1.78e-007
16	+2.15e-010		+1.99e-007		-1.23e-006		+9.63e-003	-4.67e-007	-2.43e-008
17	+6.17e-010		+1.98e-007		-1.22e-006		+8.55e-003	-1.49e-007	+1.00e-007
18	+9.10e-010		+1.97e-007		-1.25e-006		+6.46e-003	+9.27e-007	+5.45e-008
19	+1.06e-009		+1.08e-007		-5.98e-007		+2.43e-003	-4.37e-006	+3.52e-007
20	+4.49e-003		+8.22e-002		+2.29e-001		+4.02e-003	-1.73e-004	-1.78e-005
21	-1.04e-003		+1.28e-001		+3.58e-001		+6.30e-003	+4.03e-005	+3.89e-006
22	+2.45e-004		+1.68e-001		+4.69e-001		+8.27e-003	-9.36e-006	-9.85e-007
23	-5.43e-005		+1.90e-001		+5.32e-001		+9.37e-003	+2.19e-006	+1.77e-007
24	+1.08e-005		+1.91e-001		+5.33e-001		+9.40e-003	-4.68e-007	-2.43e-008
25	-2.63e-006		+1.69e-001		+4.72e-001		+8.32e-003	-1.49e-007	+9.99e-008
26	-2.18e-005		+1.27e-001		+3.54e-001		+6.23e-003	+9.27e-007	+5.43e-008
27	+6.85e-005		+4.72e-002		+1.32e-001		+2.31e-003	-4.37e-006	+3.52e-007
28	+5.83e-002		-1.87e-003		-2.64e-001		+1.14e-003	-2.72e-003	+6.04e-005

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

29	+3.62e-005	-2.44e-002	-2.01e-001	+1.02e-003	-2.72e-003	+6.04e-005
30	+2.05e-008	-3.67e-007	-2.35e-006	-4.25e-003	-1.73e-004	+1.78e-005
31	-1.24e-009	-1.23e-007	-4.22e-007	-6.53e-003	+4.03e-005	-3.89e-006
32	-5.40e-010	-2.16e-007	-1.41e-006	-8.50e-003	-9.36e-006	+9.85e-007
33	-2.49e-010	-1.94e-007	-1.18e-006	-9.60e-003	+2.19e-006	+1.78e-007
34	+2.15e-010	-1.99e-007	-1.23e-006	-9.63e-003	-4.67e-007	+2.43e-008
35	+6.17e-010	-1.98e-007	-1.22e-006	-8.55e-003	-1.49e-007	+1.00e-007
36	+9.10e-010	-1.97e-007	-1.25e-006	-6.46e-003	+9.27e-007	-5.45e-008
37	+1.06e-009	-1.08e-007	-5.98e-007	-2.43e-003	-3.52e-007	+3.89e-006
38	+4.49e-003	-8.22e-002	+2.29e-001	-4.02e-003	-1.73e-004	+1.78e-005
39	-1.04e-003	-1.28e-001	+3.58e-001	-6.30e-003	+4.03e-005	-3.89e-006
40	+2.45e-004	-1.68e-001	+4.69e-001	-8.27e-003	-9.36e-006	+9.85e-007
41	-5.43e-005	-1.90e-001	+5.32e-001	-9.37e-003	+2.19e-006	-1.77e-007
42	+1.08e-005	-1.91e-001	+5.33e-001	-9.40e-003	-4.68e-007	+2.43e-008
43	-2.63e-006	-1.69e-001	+4.72e-001	-8.32e-003	-1.49e-007	-9.99e-008
44	-2.18e-005	-1.27e-001	+3.54e-001	-6.23e-003	+9.27e-007	-5.43e-008
45	+6.85e-005	-4.72e-002	+1.32e-001	-2.31e-003	-4.37e-006	-3.52e-007
46	-1.62e-008	-3.33e-022	-1.56e-006	-9.76e-017	+7.05e-003	-1.70e-018
47	-1.50e-005	-1.70e-016	-7.08e-001	-9.76e-017	+6.37e-003	-1.51e-018
48	-1.59e-005	-3.02e-016	-1.28e+000	-9.97e-017	+4.43e-003	-1.01e-018
49	-6.84e-006	-3.74e-016	-1.60e+000	-1.07e-016	+1.63e-003	-3.67e-019
50	+5.79e-006	-3.76e-016	-1.61e+000	-1.08e-016	-1.49e-003	+3.29e-019
51	+1.51e-005	-3.07e-016	-1.30e+000	-1.07e-016	-4.36e-003	+9.98e-019
52	+1.48e-005	-1.74e-016	-7.27e-001	-1.06e-016	-6.47e-003	+1.53e-018
53	+1.59e-008	-3.66e-022	-1.81e-006	-1.06e-016	-7.26e-003	+1.75e-018

MASSIME DEFORMAZIONI NODALI

TRANSFORM DEFORMATION NUMBER									
	Transl.X	Transl.Y	Transl.Z	Rotat.X	Rotat.Y	Rotat.Z	DLMax		
Deform. nodali	+5.83e-002			+1.91e-001		-1.61e+000	+9.63e-003	-7.27e-003	-6.04e-005
Node	1	24	8	16	11	1	8		+1.61e+000

COMBINAZIONE DI CARICO: 20 - DESCRIZIONE: QUASI PERMANENTE

Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z
1	+2.83e-002	-1.27e-003	-1.34e-001	-6.47e-004	-1.32e-003	-2.63e-005
2	+1.75e-005	+1.16e-002	-9.82e-002	-5.90e-004	-1.32e-003	-2.63e-005
3	-1.78e-005	-5.66e-016	+3.58e-001	-6.99e-017	+3.44e-003	+5.49e-018
4	-1.00e-008	+7.97e-022	-2.04e-006	-6.99e-017	+3.57e-003	+5.50e-018
5	+8.94e-006	+5.54e-016	-3.68e-001	-6.99e-017	+3.33e-003	+5.05e-018
6	+9.32e-006	+1.02e-015	-6.65e-001	-7.36e-017	+2.30e-003	+3.72e-018
7	+4.08e-006	+1.30e-015	-8.30e-001	-8.59e-017	+8.43e-004	+1.60e-018
8	-3.27e-006	+1.33e-015	-8.34e-001	-8.95e-017	-9.71e-004	-9.97e-019
9	-8.71e-006	+1.09e-015	-6.75e-001	-9.03e-017	-2.26e-003	-3.54e-018
10	-8.52e-006	+6.20e-016	-3.78e-001	-9.00e-017	-3.36e-003	-5.47e-018
11	-1.03e-008	+1.49e-021	-1.25e-006	-9.14e-017	-3.78e-003	-6.22e-018
12	+9.85e-009	+1.74e-007	-1.17e-006	+2.00e-003	-8.28e-005	-8.52e-006
13	-6.28e-010	+5.65e-008	-2.70e-007	+3.18e-003	+1.93e-005	+1.86e-006
14	-2.84e-010	+1.01e-007	-7.43e-007	+4.20e-003	+4.48e-006	-4.75e-007
15	-1.28e-010	+9.06e-008	-6.33e-007	+4.77e-003	+1.04e-006	+8.45e-008
16	+1.11e-010	+9.29e-008	-6.60e-007	+4.79e-003	-1.96e-007	-1.11e-008
17	+3.21e-010	+9.26e-008	-6.48e-007	+4.23e-003	-1.93e-007	+5.29e-008
18	+4.69e-010	+9.18e-008	-6.75e-007	+3.15e-003	+9.58e-007	+2.38e-008
19	+5.63e-010	+5.21e-008	-3.19e-007	+1.17e-003	+4.31e-006	+1.96e-007
20	+2.15e-003	+3.86e-002	+1.08e-001	+1.89e-003	-8.28e-005	-8.52e-006
21	-4.96e-004	+6.25e-002	+1.75e-001	+3.07e-003	+1.93e-005	+1.86e-006
22	-1.17e-004	+8.32e-002	+2.32e-001	+4.09e-003	+4.48e-006	-4.75e-007
23	-2.58e-005	+9.48e-002	+2.65e-001	+4.67e-003	+1.04e-006	+8.41e-008
24	+4.60e-006	+9.50e-002	+2.65e-001	+4.68e-003	-1.97e-007	-1.12e-008
25	+9.15e-007	+8.37e-002	+2.34e-001	+4.12e-003	-1.93e-007	+5.28e-008
26	-2.07e-005	+6.19e-002	+1.73e-001	+3.04e-003	+9.58e-007	+2.38e-008
27	+7.60e-005	+2.28e-002	+6.36e-002	+1.12e-003	-4.31e-006	+1.96e-007
28	+2.83e-002	+1.27e-003	-1.34e-001	+6.47e-004	-1.32e-003	-2.63e-005
29	+1.75e-005	-1.16e-002	-9.82e-002	-5.90e-004	-1.32e-003	-2.63e-005
30	+9.85e-009	-1.74e-007	-1.17e-006	-2.00e-003	-8.28e-005	-8.52e-006
31	-6.28e-010	-5.65e-008	-2.70e-007	-3.18e-003	+1.93e-005	-1.86e-006

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

32	-2.84e-010	-1.01e-007	-7.43e-007	-4.20e-003	-4.48e-006	+4.75e-007
33	-1.28e-010	-9.06e-008	-6.33e-007	-4.77e-003	+1.04e-006	-8.45e-008
34	+1.11e-010	-9.29e-008	-6.60e-007	-4.79e-003	-1.96e-007	+1.11e-008
35	+3.21e-010	-9.26e-008	-6.48e-007	-4.23e-003	-1.93e-007	-5.29e-008
36	+4.69e-010	-9.18e-008	-6.75e-007	-3.15e-003	+9.58e-007	-2.38e-008
37	+5.63e-010	-5.21e-008	-3.19e-007	-1.17e-003	-4.31e-006	-1.96e-007
38	+2.15e-003	-3.86e-002	+1.08e-001	-1.89e-003	-8.28e-005	+8.52e-006
39	-4.96e-004	-6.25e-002	+1.75e-001	-3.07e-003	+1.93e-005	-1.86e-006
40	+1.17e-004	-8.32e-002	+2.32e-001	-4.09e-003	-4.48e-006	+4.75e-007
41	-2.58e-005	-9.48e-002	+2.65e-001	-4.67e-003	+1.04e-006	-8.41e-008
42	+4.60e-006	-9.50e-002	+2.65e-001	-4.68e-003	-1.97e-007	+1.12e-008
43	+9.15e-007	-8.37e-002	+2.34e-001	-4.12e-003	-1.93e-007	-5.28e-008
44	-2.07e-005	-6.19e-002	+1.73e-001	-3.04e-003	+9.58e-007	-2.38e-008
45	+7.60e-005	-2.28e-002	+6.36e-002	-1.12e-003	-4.31e-006	-1.96e-007
46	-8.43e-009	-2.11e-022	-8.26e-007	-5.23e-017	+3.66e-003	-1.12e-018
47	-7.80e-006	-1.12e-016	-3.68e-001	-5.23e-017	+3.30e-003	-9.98e-019
48	-8.22e-006	-2.00e-016	-6.64e-001	-5.34e-017	+2.30e-003	-6.78e-019
49	-3.54e-006	-2.49e-016	-8.30e-001	-6.00e-017	+8.43e-004	-2.52e-019
50	+3.01e-006	-2.51e-016	-8.33e-001	-6.03e-017	-7.71e-004	+2.17e-019
51	+7.85e-006	-2.05e-016	-6.74e-001	-5.99e-017	-2.26e-003	+6.68e-019
52	+7.66e-006	-1.16e-016	-3.77e-001	-5.91e-017	-3.36e-003	+1.02e-018
53	+8.28e-009	-2.39e-022	-9.52e-007	-5.91e-017	-3.77e-003	+1.17e-018

MASSIME DEFORMAZIONI NODALI

	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax				
Deform. nodali	+2.83e-002			+9.50e-002		-8.34e-001		+4.79e-003	-3.78e-003	-2.63e-005	+8.34e-001
Nodo	1	24	8	16	11	1	8				

FORZE/MOMENTI

FORZE MOMENTI PER GRUPPI TRAVE

GRUPPO NUMERO: 1 - DESCRIZIONE: FP_PUNTONI

Elem./C.c.	Fx/I	Fx/J	Fy/I	Fy/J	Fz/I	Fz/J	Mx/I	Mx/J	My/I	My/J	Mz/I	Mz/J			
El: 1 - C.c: 1	-7.051e-11		1.427e+02		-1.715e-11		3.987e+02		-1.287e-13		1.287e-13		7.996e-12	-7.996e-12	-1.597e-
11	1.073e-11	-3.454e-10		-1.196e+04											
El: 1 - C.c: 2	-4.619e+00		2.941e+01		1.653e+00		6.762e+01		-1.635e+01		1.635e+01		2.681e-12	-2.681e-12	-3.441e-
12	9.812e+02	-5.267e-11		-1.979e+03											
El: 1 - C.c: 3	4.619e+00		2.017e+01		-1.653e+00		7.093e+01		-1.635e+01		1.635e+01		1.048e-12	-1.048e-12	-5.811e-
13	9.812e+02	-6.823e-11		-2.177e+03											
El: 1 - C.c: 4	-4.619e+00		2.941e+01		1.653e+00		6.762e+01		1.635e+01		-1.635e+01		1.821e-12	-1.821e-12	-4.782e-
12	-9.812e+02	-5.499e-11		-1.979e+03											
El: 1 - C.c: 5	4.619e+00		2.017e+01		-1.653e+00		7.093e+01		1.635e+01		-1.635e+01		1.885e-13	-1.885e-13	-1.923e-
12	-9.812e+02	-7.056e-11		-2.177e+03											
El: 1 - C.c: 6	-1.540e+01		4.019e+01		5.510e+00		6.376e+01		-4.906e+00		4.906e+00		4.284e-12	-4.284e-12	-7.246e-
12	2.944e+02	-3.533e-11		-1.748e+03											
El: 1 - C.c: 7	1.540e+01		9.393e+00		-5.510e+00		7.478e+01		-4.906e+00		4.906e+00		-1.157e-12	1.157e-12	2.285e-
12	2.944e+02	-8.720e-11		-2.409e+03											
El: 1 - C.c: 8	-1.540e+01		4.019e+01		5.510e+00		6.376e+01		4.906e+00		-4.906e+00		4.026e-12	-4.026e-12	-7.649e-
12	-2.944e+02	-3.602e-11		-1.748e+03											
El: 1 - C.c: 9	1.540e+01		9.393e+00		-5.510e+00		7.478e+01		4.906e+00		-4.906e+00		-1.415e-12	1.415e-12	1.883e-
12	-2.944e+02	-8.790e-11		-2.409e+03											
El: 1 - C.c: 10	-4.619e+00		2.941e+01		1.653e+00		6.762e+01		-1.635e+01		1.635e+01		2.681e-12	-2.681e-12	-3.441e-
12	9.812e+02	-5.267e-11		-1.979e+03											
El: 1 - C.c: 11	4.619e+00		2.017e+01		-1.653e+00		7.093e+01		-1.635e+01		1.635e+01		1.048e-12	-1.048e-12	-5.811e-
13	9.812e+02	-6.823e-11		-2.177e+03											
El: 1 - C.c: 12	-4.619e+00		2.941e+01		1.653e+00		6.762e+01		1.635e+01		-1.635e+01		1.821e-12	-1.821e-12	-4.782e-
12	-9.812e+02	-5.499e-11		-1.979e+03											
El: 1 - C.c: 13	4.619e+00		2.017e+01		-1.653e+00		7.093e+01		1.635e+01		-1.635e+01		1.885e-13	-1.885e-13	-1.923e-
12	-9.812e+02	-7.056e-11		-2.177e+03											
El: 1 - C.c: 14	-1.540e+01		4.019e+01		5.510e+00		6.376e+01		-4.906e+00		4.906e+00		4.284e-12	-4.284e-12	-7.246e-
12	2.944e+02	-3.533e-11		-1.748e+03											
El: 1 - C.c: 15	1.540e+01		9.393e+00		-5.510e+00		7.478e+01		-4.906e+00		4.906e+00		-1.157e-12	1.157e-12	2.285e-
12	2.944e+02	-8.720e-11		-2.409e+03											

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	1	- C.c: 16	-1.540e+01	4.019e+01	5.510e+00	6.376e+01	4.906e+00	-4.906e+00	4.026e-12	-4.026e-12	-7.649e-
12		-2.944e+02	-3.602e-11	-1.748e+03							
El:	1	- C.c: 17	1.540e+01	9.393e+00	-5.510e+00	7.478e+01	4.906e+00	-4.906e+00	-1.415e-12	1.415e-12	1.883e-
12		-2.944e+02	-8.790e-11	-2.409e+03							
El:	1	- C.c: 18	-4.749e-11	9.605e+01	-1.157e-11	2.684e+02	-8.764e-14	8.764e-14	5.390e-12	-5.390e-12	-1.074e-
11		7.264e-12	-2.328e-10	-8.052e+03							
El:	1	- C.c: 19	-2.556e-11	5.151e+01	-6.272e-12	1.440e+02	-5.072e-14	5.072e-14	2.918e-12	-2.918e-12	-5.703e-
12		4.044e-12	-1.258e-10	-4.319e+03							
El:	1	- C.c: 20	-1.240e-11	2.479e+01	-3.096e-12	6.927e+01	-2.857e-14	2.857e-14	1.435e-12	-1.435e-12	-2.682e-
12		2.112e-12	-6.161e-11	-2.078e+03							
El:	2	- C.c: 1	6.352e+02	0.000e+00	9.323e+02	8.428e+02	5.500e+01	-5.500e+01	3.090e+02	-3.090e+02	-
1.504e+04		3.446e+02	1.195e+04	2.161e-11							
El:	2	- C.c: 2	1.104e+02	0.000e+00	1.616e+02	1.468e+02	1.705e+01	-1.705e+01	5.537e+01	-5.537e+01	-
4.641e+03		8.529e+01	1.977e+03	1.473e-12							
El:	2	- C.c: 3	1.104e+02	0.000e+00	1.623e+02	1.461e+02	6.219e+00	-6.219e+00	6.184e+01	-6.184e+01	-
1.708e+03		4.670e+01	2.176e+03	6.162e-12							
El:	2	- C.c: 4	1.104e+02	0.000e+00	1.616e+02	1.468e+02	1.299e+01	-1.299e+01	5.581e+01	-5.581e+01	-
3.561e+03		9.235e+01	1.977e+03	1.486e-12							
El:	2	- C.c: 5	1.104e+02	0.000e+00	1.623e+02	1.461e+02	2.152e+00	-2.152e+00	6.228e+01	-6.228e+01	-
6.287e+02		5.375e+01	2.176e+03	6.175e-12							
El:	2	- C.c: 6	1.104e+02	0.000e+00	1.607e+02	1.477e+02	2.827e+01	-2.827e+01	4.798e+01	-4.798e+01	-
7.685e+03		1.328e+02	1.746e+03	-3.993e-12							
El:	2	- C.c: 7	1.104e+02	0.000e+00	1.632e+02	1.452e+02	-7.845e+00	7.845e+00	6.954e+01	-6.954e+01	-
2.091e+03		4.144e+00	2.407e+03	1.164e-11							
El:	2	- C.c: 8	1.104e+02	0.000e+00	1.607e+02	1.477e+02	2.705e+01	-2.705e+01	4.811e+01	-4.811e+01	-
7.361e+03		1.349e+02	1.746e+03	-3.989e-12							
El:	2	- C.c: 9	1.104e+02	0.000e+00	1.632e+02	1.452e+02	-9.065e+00	9.065e+00	6.967e+01	-6.967e+01	-
2.415e+03		6.260e+00	2.407e+03	1.164e-11							
El:	2	- C.c: 10	1.104e+02	0.000e+00	1.616e+02	1.468e+02	1.705e+01	-1.705e+01	5.537e+01	-5.537e+01	-
4.641e+03		8.529e+01	1.977e+03	1.473e-12							
El:	2	- C.c: 11	1.104e+02	0.000e+00	1.623e+02	1.461e+02	6.219e+00	-6.219e+00	6.184e+01	-6.184e+01	-
1.708e+03		4.670e+01	2.176e+03	6.162e-12							
El:	2	- C.c: 12	1.104e+02	0.000e+00	1.616e+02	1.468e+02	1.299e+01	-1.299e+01	5.581e+01	-5.581e+01	-
3.561e+03		9.235e+01	1.977e+03	1.486e-12							
El:	2	- C.c: 13	1.104e+02	0.000e+00	1.623e+02	1.461e+02	2.152e+00	-2.152e+00	6.228e+01	-6.228e+01	-
6.287e+02		5.375e+01	2.176e+03	6.175e-12							
El:	2	- C.c: 14	1.104e+02	0.000e+00	1.607e+02	1.477e+02	2.827e+01	-2.827e+01	4.798e+01	-4.798e+01	-
7.685e+03		1.328e+02	1.746e+03	-3.993e-12							
El:	2	- C.c: 15	1.104e+02	0.000e+00	1.632e+02	1.452e+02	-7.845e+00	7.845e+00	6.954e+01	-6.954e+01	-
2.091e+03		4.144e+00	2.407e+03	1.164e-11							
El:	2	- C.c: 16	1.104e+02	0.000e+00	1.607e+02	1.477e+02	2.705e+01	-2.705e+01	4.811e+01	-4.811e+01	-
7.361e+03		1.349e+02	1.746e+03	-3.989e-12							
El:	2	- C.c: 17	1.104e+02	0.000e+00	1.632e+02	1.452e+02	-9.065e+00	9.065e+00	6.967e+01	-6.967e+01	-
2.415e+03		6.260e+00	2.407e+03	1.164e-11							
El:	2	- C.c: 18	4.276e+02	0.000e+00	6.276e+02	5.674e+02	3.703e+01	-3.703e+01	2.088e+02	-2.088e+02	-
1.013e+04		2.335e+02	8.046e+03	1.456e-11							
El:	2	- C.c: 19	2.293e+02	0.000e+00	3.366e+02	3.043e+02	1.989e+01	-1.989e+01	1.151e+02	-1.151e+02	-
5.444e+03		1.310e+02	4.315e+03	7.849e-12							
El:	2	- C.c: 20	1.104e+02	0.000e+00	1.620e+02	1.464e+02	9.603e+00	-9.603e+00	5.882e+01	-5.882e+01	-
2.635e+03		6.952e+01	2.076e+03	3.824e-12							
El:	3	- C.c: 1	2.622e-06	2.818e+02	7.326e-06	7.875e+02	6.620e-05	-6.620e-05	3.549e-03	-3.549e-03	-3.256e-
03		-7.162e-04	5.828e-05	-2.363e+04							
El:	3	- C.c: 2	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	6.030e-04	-6.030e-04	-5.530e-
04		1.859e+03	1.037e-05	-3.740e+03							
El:	3	- C.c: 3	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	5.864e-04	-5.864e-04	-5.382e-
04		1.859e+03	1.024e-05	-4.116e+03							
El:	3	- C.c: 4	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	6.030e-04	-6.030e-04	-5.530e-
04		-1.859e+03	9.873e-06	-3.740e+03							
El:	3	- C.c: 5	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	5.864e-04	-5.864e-04	-5.382e-
04		-1.859e+03	9.743e-06	-4.116e+03							
El:	3	- C.c: 6	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	6.224e-04	-6.224e-04	-5.702e-
04		5.577e+02	1.035e-05	-3.301e+03							
El:	3	- C.c: 7	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	5.670e-04	-5.670e-04	-5.210e-
04		5.577e+02	9.917e-06	-4.554e+03							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	3	- C.c: 8	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	6.224e-04	-6.224e-04	-5.702e-
04		-5.577e+02	1.020e-05	-3.301e+03							
El:	3	- C.c: 9	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	5.670e-04	-5.670e-04	-5.210e-
04		-5.577e+02	9.767e-06	-4.554e+03							
El:	3	- C.c: 10	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	6.030e-04	-6.030e-04	-5.530e-
04		1.859e+03	1.037e-05	-3.740e+03							
El:	3	- C.c: 11	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	5.864e-04	-5.864e-04	-5.382e-
04		1.859e+03	1.024e-05	-4.116e+03							
El:	3	- C.c: 12	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	6.030e-04	-6.030e-04	-5.530e-
04		-1.859e+03	9.873e-06	-3.740e+03							
El:	3	- C.c: 13	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	5.864e-04	-5.864e-04	-5.382e-
04		-1.859e+03	9.743e-06	-4.116e+03							
El:	3	- C.c: 14	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	6.224e-04	-6.224e-04	-5.702e-
04		5.577e+02	1.035e-05	-3.301e+03							
El:	3	- C.c: 15	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	5.670e-04	-5.670e-04	-5.210e-
04		5.577e+02	9.917e-06	-4.554e+03							
El:	3	- C.c: 16	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	6.224e-04	-6.224e-04	-5.702e-
04		-5.577e+02	1.020e-05	-3.301e+03							
El:	3	- C.c: 17	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	5.670e-04	-5.670e-04	-5.210e-
04		-5.577e+02	9.767e-06	-4.554e+03							
El:	3	- C.c: 18	1.764e-06	1.894e+02	4.930e-06	5.292e+02	4.450e-05	-4.450e-05	2.385e-03	-2.385e-03	-2.189e-
03		-4.814e-04	3.922e-05	-1.588e+04							
El:	3	- C.c: 19	9.444e-07	1.003e+02	2.639e-06	2.803e+02	2.362e-05	-2.362e-05	1.266e-03	-1.266e-03	-1.162e-
03		-2.555e-04	2.099e-05	-8.408e+03							
El:	3	- C.c: 20	4.525e-07	4.685e+01	1.264e-06	1.309e+02	1.109e-05	-1.109e-05	5.947e-04	-5.947e-04	-5.456e-
04		-1.200e-04	1.006e-05	-3.928e+03							
El:	4	- C.c: 1	1.255e+03	0.000e+00	1.826e+03	1.680e+03	1.866e+00	-1.866e+00	2.318e+02	-2.318e+02	-
9.534e+02		4.550e+02	1.939e+04	1.106e-11							
El:	4	- C.c: 2	2.086e+02	0.000e+00	3.025e+02	2.804e+02	5.080e-01	-5.080e-01	4.325e+01	-4.325e+01	-
2.537e+02		1.180e+02	2.947e+03	1.569e-12							
El:	4	- C.c: 3	2.086e+02	0.000e+00	3.036e+02	2.792e+02	2.990e-01	-2.990e-01	4.706e+01	-4.706e+01	-
1.395e+02		5.966e+01	3.255e+03	1.569e-12							
El:	4	- C.c: 4	2.086e+02	0.000e+00	3.025e+02	2.804e+02	2.275e-01	-2.275e-01	4.326e+01	-4.326e+01	-
1.792e+02		1.185e+02	2.947e+03	1.569e-12							
El:	4	- C.c: 5	2.086e+02	0.000e+00	3.036e+02	2.792e+02	1.857e-02	-1.857e-02	4.707e+01	-4.707e+01	-
6.510e+01		6.014e+01	3.255e+03	1.569e-12							
El:	4	- C.c: 6	2.086e+02	0.000e+00	3.011e+02	2.817e+02	6.536e-01	-6.536e-01	3.881e+01	-3.881e+01	-
3.608e+02		1.862e+02	2.589e+03	1.569e-12							
El:	4	- C.c: 7	2.086e+02	0.000e+00	3.050e+02	2.779e+02	-4.293e-02	4.293e-02	5.151e+01	-5.151e+01	-
1.968e+01		-8.211e+00	3.613e+03	1.569e-12							
El:	4	- C.c: 8	2.086e+02	0.000e+00	3.011e+02	2.817e+02	5.695e-01	-5.695e-01	3.881e+01	-3.881e+01	-
3.385e+02		1.863e+02	2.589e+03	1.569e-12							
El:	4	- C.c: 9	2.086e+02	0.000e+00	3.050e+02	2.779e+02	-1.271e-01	1.271e-01	5.151e+01	-5.151e+01	-
4.201e+01		-8.065e+00	3.613e+03	1.569e-12							
El:	4	- C.c: 10	2.086e+02	0.000e+00	3.025e+02	2.804e+02	5.080e-01	-5.080e-01	4.325e+01	-4.325e+01	-
2.537e+02		1.180e+02	2.947e+03	1.569e-12							
El:	4	- C.c: 11	2.086e+02	0.000e+00	3.036e+02	2.792e+02	2.990e-01	-2.990e-01	4.706e+01	-4.706e+01	-
1.395e+02		5.966e+01	3.255e+03	1.569e-12							
El:	4	- C.c: 12	2.086e+02	0.000e+00	3.025e+02	2.804e+02	2.275e-01	-2.275e-01	4.326e+01	-4.326e+01	-
1.792e+02		1.185e+02	2.947e+03	1.569e-12							
El:	4	- C.c: 13	2.086e+02	0.000e+00	3.036e+02	2.792e+02	1.857e-02	-1.857e-02	4.707e+01	-4.707e+01	-
6.510e+01		6.014e+01	3.255e+03	1.569e-12							
El:	4	- C.c: 14	2.086e+02	0.000e+00	3.011e+02	2.817e+02	6.536e-01	-6.536e-01	3.881e+01	-3.881e+01	-
3.608e+02		1.862e+02	2.589e+03	1.569e-12							
El:	4	- C.c: 15	2.086e+02	0.000e+00	3.050e+02	2.779e+02	-4.293e-02	4.293e-02	5.151e+01	-5.151e+01	-
1.968e+01		-8.211e+00	3.613e+03	1.569e-12							
El:	4	- C.c: 16	2.086e+02	0.000e+00	3.011e+02	2.817e+02	5.695e-01	-5.695e-01	3.881e+01	-3.881e+01	-
3.385e+02		1.863e+02	2.589e+03	1.569e-12							
El:	4	- C.c: 17	2.086e+02	0.000e+00	3.050e+02	2.779e+02	-1.271e-01	1.271e-01	5.151e+01	-5.151e+01	-
4.201e+01		-8.065e+00	3.613e+03	1.569e-12							
El:	4	- C.c: 18	8.431e+02	0.000e+00	1.227e+03	1.129e+03	1.246e+00	-1.246e+00	1.569e+02	-1.569e+02	-
6.408e+02		3.079e+02	1.301e+04	7.390e-12							
El:	4	- C.c: 19	4.465e+02	0.000e+00	6.494e+02	5.984e+02	6.318e-01	-6.318e-01	8.705e+01	-8.705e+01	-
3.399e+02		1.711e+02	6.816e+03	3.752e-12							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	4	- C.c: 20	2.086e+02	0.000e+00	3.030e+02	2.798e+02	2.633e-01	-2.633e-01	4.516e+01	-4.516e+01	-
1.594e+02	8.906e+01	3.101e+03	1.569e-12								
El:	5	- C.c: 1	-8.162e-12	2.818e+02	5.143e-11	7.875e+02	2.028e-04	-2.028e-04	-2.221e-13	2.221e-13	-6.083e-
03	-6.083e-03	1.176e-09	-2.363e+04								
El:	5	- C.c: 2	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	3.713e-13	-3.713e-13	-1.069e-
03	1.859e+03	2.070e-10	-3.740e+03								
El:	5	- C.c: 3	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	3.987e-13	-3.987e-13	-1.086e-
03	1.859e+03	2.100e-10	-4.116e+03								
El:	5	- C.c: 4	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	-4.739e-13	4.739e-13	-1.069e-
03	-1.859e+03	2.070e-10	-3.740e+03								
El:	5	- C.c: 5	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	-4.465e-13	4.465e-13	-1.086e-
03	-1.859e+03	2.100e-10	-4.116e+03								
El:	5	- C.c: 6	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	4.343e-14	-4.343e-14	-1.050e-
03	5.577e+02	2.035e-10	-3.301e+03								
El:	5	- C.c: 7	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	1.349e-13	-1.349e-13	-1.105e-
03	5.577e+02	2.135e-10	-4.554e+03								
El:	5	- C.c: 8	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	-2.101e-13	2.101e-13	-1.050e-
03	-5.577e+02	2.035e-10	-3.301e+03								
El:	5	- C.c: 9	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	-1.186e-13	1.186e-13	-1.105e-
03	-5.577e+02	2.135e-10	-4.554e+03								
El:	5	- C.c: 10	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	3.713e-13	-3.713e-13	-1.069e-
03	1.859e+03	2.070e-10	-3.740e+03								
El:	5	- C.c: 11	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	3.987e-13	-3.987e-13	-1.086e-
03	1.859e+03	2.100e-10	-4.116e+03								
El:	5	- C.c: 12	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	-4.739e-13	4.739e-13	-1.069e-
03	-1.859e+03	2.070e-10	-3.740e+03								
El:	5	- C.c: 13	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	-4.465e-13	4.465e-13	-1.086e-
03	-1.859e+03	2.100e-10	-4.116e+03								
El:	5	- C.c: 14	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	4.343e-14	-4.343e-14	-1.050e-
03	5.577e+02	2.035e-10	-3.301e+03								
El:	5	- C.c: 15	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	1.349e-13	-1.349e-13	-1.105e-
03	5.577e+02	2.135e-10	-4.554e+03								
El:	5	- C.c: 16	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	-2.101e-13	2.101e-13	-1.050e-
03	-5.577e+02	2.035e-10	-3.301e+03								
El:	5	- C.c: 17	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	-1.186e-13	1.186e-13	-1.105e-
03	-5.577e+02	2.135e-10	-4.554e+03								
El:	5	- C.c: 18	-5.260e-12	1.894e+02	3.465e-11	5.292e+02	1.366e-04	-1.366e-04	-1.493e-13	1.493e-13	-4.099e-
03	-4.099e-03	7.924e-10	-1.588e+04								
El:	5	- C.c: 19	-1.948e-12	1.003e+02	1.870e-11	2.803e+02	7.368e-05	-7.368e-05	-7.950e-14	7.950e-14	-2.210e-
03	-2.210e-03	4.275e-10	-8.408e+03								
El:	5	- C.c: 20	3.824e-14	4.685e+01	9.121e-12	1.309e+02	3.591e-05	-3.591e-05	-3.759e-14	3.759e-14	-1.077e-
03	-1.077e-03	2.085e-10	-3.928e+03								
El:	6	- C.c: 1	1.255e+03	0.000e+00	1.844e+03	1.662e+03	-3.445e+00	3.445e+00	2.100e+02	-2.100e+02	
4.860e+02	4.342e+02	2.420e+04	1.106e-11								
El:	6	- C.c: 2	2.086e+02	0.000e+00	3.058e+02	2.770e+02	-7.685e-01	7.685e-01	3.926e+01	-3.926e+01	
9.374e+01	1.115e+02	3.847e+03	1.569e-12								
El:	6	- C.c: 3	2.086e+02	0.000e+00	3.073e+02	2.756e+02	-3.374e-01	3.374e-01	4.265e+01	-4.265e+01	
3.335e+01	5.678e+01	4.232e+03	1.569e-12								
El:	6	- C.c: 4	2.086e+02	0.000e+00	3.058e+02	2.770e+02	-9.595e-01	9.595e-01	3.926e+01	-3.926e+01	
1.439e+02	1.124e+02	3.847e+03	1.569e-12								
El:	6	- C.c: 5	2.086e+02	0.000e+00	3.073e+02	2.756e+02	-5.284e-01	5.284e-01	4.265e+01	-4.265e+01	
8.351e+01	5.763e+01	4.232e+03	1.569e-12								
El:	6	- C.c: 6	2.086e+02	0.000e+00	3.042e+02	2.787e+02	-1.338e+00	1.338e+00	3.530e+01	-3.530e+01	
1.818e+02	1.757e+02	3.398e+03	1.569e-12								
El:	6	- C.c: 7	2.086e+02	0.000e+00	3.090e+02	2.739e+02	9.867e-02	-9.867e-02	4.660e+01	-4.660e+01	-
1.955e+01	-6.805e+00	4.682e+03	1.569e-12								
El:	6	- C.c: 8	2.086e+02	0.000e+00	3.042e+02	2.787e+02	-1.396e+00	1.396e+00	3.530e+01	-3.530e+01	
1.968e+02	1.760e+02	3.398e+03	1.569e-12								
El:	6	- C.c: 9	2.086e+02	0.000e+00	3.090e+02	2.739e+02	4.138e-02	-4.138e-02	4.660e+01	-4.660e+01	-
4.505e+00	-6.548e+00	4.682e+03	1.569e-12								
El:	6	- C.c: 10	2.086e+02	0.000e+00	3.058e+02	2.770e+02	-7.685e-01	7.685e-01	3.926e+01	-3.926e+01	
9.374e+01	1.115e+02	3.847e+03	1.569e-12								
El:	6	- C.c: 11	2.086e+02	0.000e+00	3.073e+02	2.756e+02	-3.374e-01	3.374e-01	4.265e+01	-4.265e+01	
3.335e+01	5.678e+01	4.232e+03	1.569e-12								

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	6	- C.c: 12	2.086e+02	0.000e+00	3.058e+02	2.770e+02	-9.595e-01	9.595e-01	3.926e+01	-3.926e+01	
	1.439e+02	1.124e+02	3.847e+03	1.569e-12	3.073e+02	2.756e+02	-5.284e-01	5.284e-01	4.265e+01	-4.265e+01	
El:	6	- C.c: 13	2.086e+02	0.000e+00	3.042e+02	2.787e+02	-1.338e+00	1.338e+00	3.530e+01	-3.530e+01	
	8.351e+01	5.763e+01	4.232e+03	1.569e-12	3.090e+02	2.739e+02	9.867e-02	-9.867e-02	4.660e+01	-4.660e+01	-
El:	6	- C.c: 14	2.086e+02	0.000e+00	3.042e+02	2.787e+02	-1.338e+00	1.338e+00	3.530e+01	-3.530e+01	
	1.818e+02	1.757e+02	3.398e+03	1.569e-12	3.090e+02	2.739e+02	9.867e-02	-9.867e-02	4.660e+01	-4.660e+01	-
El:	6	- C.c: 15	2.086e+02	0.000e+00	3.042e+02	2.787e+02	-1.338e+00	1.338e+00	3.530e+01	-3.530e+01	
	1.955e+01	-6.805e+00	4.682e+03	1.569e-12	3.042e+02	2.787e+02	-1.338e+00	1.338e+00	3.530e+01	-3.530e+01	
El:	6	- C.c: 16	2.086e+02	0.000e+00	3.042e+02	2.787e+02	-1.338e+00	1.338e+00	3.530e+01	-3.530e+01	
	1.968e+02	1.760e+02	3.398e+03	1.569e-12	3.090e+02	2.739e+02	4.138e-02	-4.138e-02	4.660e+01	-4.660e+01	-
El:	6	- C.c: 17	2.086e+02	0.000e+00	3.090e+02	2.739e+02	4.138e-02	-4.138e-02	4.660e+01	-4.660e+01	-
	4.505e+00	-6.548e+00	4.682e+03	1.569e-12	1.239e+03	1.117e+03	-2.327e+00	2.327e+00	1.421e+02	-1.421e+02	
El:	6	- C.c: 18	8.431e+02	0.000e+00	1.239e+03	1.117e+03	-2.327e+00	2.327e+00	1.421e+02	-1.421e+02	
	3.279e+02	2.938e+02	1.626e+04	7.390e-12	6.562e+02	5.916e+02	-1.278e+00	1.278e+00	7.887e+01	-7.887e+01	
El:	6	- C.c: 19	4.465e+02	0.000e+00	6.562e+02	5.916e+02	-1.278e+00	1.278e+00	7.887e+01	-7.887e+01	
	1.783e+02	1.630e+02	8.623e+03	3.752e-12	3.066e+02	2.763e+02	-6.484e-01	6.484e-01	4.095e+01	-4.095e+01	
El:	6	- C.c: 20	2.086e+02	0.000e+00	3.066e+02	2.763e+02	-6.484e-01	6.484e-01	4.095e+01	-4.095e+01	
	8.862e+01	8.458e+01	4.040e+03	1.569e-12	1.554e-10	7.875e+02	3.955e-04	-3.955e-04	-2.189e-14	2.189e-14	-1.187e-
El:	7	- C.c: 1	-3.732e-11	2.818e+02	1.554e-10	7.875e+02	3.955e-04	-3.955e-04	-2.189e-14	2.189e-14	-1.187e-
	02	-1.187e-02	4.122e-09	-2.363e+04	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-3.972e-14	3.972e-14	-2.115e-
El:	7	- C.c: 2	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-3.972e-14	3.972e-14	-2.115e-
	03	1.859e+03	7.381e-10	-3.740e+03	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-4.029e-14	4.029e-14	-2.184e-
El:	7	- C.c: 3	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-4.029e-14	4.029e-14	-2.184e-
	03	1.859e+03	7.631e-10	-4.116e+03	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	3.280e-14	-3.280e-14	-2.115e-
El:	7	- C.c: 4	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	3.280e-14	-3.280e-14	-2.115e-
	03	-1.859e+03	7.381e-10	-3.740e+03	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	3.222e-14	-3.222e-14	-2.184e-
El:	7	- C.c: 5	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	3.222e-14	-3.222e-14	-2.184e-
	03	-1.859e+03	7.631e-10	-4.116e+03	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	-1.367e-14	1.367e-14	-2.035e-
El:	7	- C.c: 6	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	-1.367e-14	1.367e-14	-2.035e-
	03	5.577e+02	7.089e-10	-3.301e+03	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	-1.558e-14	1.558e-14	-2.265e-
El:	7	- C.c: 7	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	-1.558e-14	1.558e-14	-2.265e-
	03	5.577e+02	7.923e-10	-4.554e+03	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	8.083e-15	-8.083e-15	-2.035e-
El:	7	- C.c: 8	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	8.083e-15	-8.083e-15	-2.035e-
	03	-5.577e+02	7.089e-10	-3.301e+03	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	6.177e-15	-6.177e-15	-2.265e-
El:	7	- C.c: 9	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	6.177e-15	-6.177e-15	-2.265e-
	03	-5.577e+02	7.923e-10	-4.554e+03	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-3.972e-14	3.972e-14	-2.115e-
El:	7	- C.c: 10	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-3.972e-14	3.972e-14	-2.115e-
	03	1.859e+03	7.381e-10	-3.740e+03	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-4.029e-14	4.029e-14	-2.184e-
El:	7	- C.c: 11	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-4.029e-14	4.029e-14	-2.184e-
	03	1.859e+03	7.631e-10	-4.116e+03	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	3.280e-14	-3.280e-14	-2.115e-
El:	7	- C.c: 12	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	3.280e-14	-3.280e-14	-2.115e-
	03	-1.859e+03	7.381e-10	-3.740e+03	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	3.222e-14	-3.222e-14	-2.184e-
El:	7	- C.c: 13	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	3.222e-14	-3.222e-14	-2.184e-
	03	-1.859e+03	7.631e-10	-4.116e+03	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	-1.367e-14	1.367e-14	-2.035e-
El:	7	- C.c: 14	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	-1.367e-14	1.367e-14	-2.035e-
	03	5.577e+02	7.089e-10	-3.301e+03	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	-1.558e-14	1.558e-14	-2.265e-
El:	7	- C.c: 15	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	-1.558e-14	1.558e-14	-2.265e-
	03	5.577e+02	7.923e-10	-4.554e+03	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	8.083e-15	-8.083e-15	-2.035e-
El:	7	- C.c: 16	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	8.083e-15	-8.083e-15	-2.035e-
	03	-5.577e+02	7.089e-10	-3.301e+03	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	6.177e-15	-6.177e-15	-2.265e-
El:	7	- C.c: 17	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	6.177e-15	-6.177e-15	-2.265e-
	03	-5.577e+02	7.923e-10	-4.554e+03	1.048e-10	5.292e+02	2.667e-04	-2.667e-04	-1.473e-14	1.473e-14	-8.002e-
El:	7	- C.c: 18	-2.511e-11	1.894e+02	1.048e-10	5.292e+02	2.667e-04	-2.667e-04	-1.473e-14	1.473e-14	-8.002e-
	03	-8.002e-03	2.781e-09	-1.588e+04	5.699e-11	2.803e+02	1.448e-04	-1.448e-04	-7.865e-15	7.865e-15	-4.345e-
El:	7	- C.c: 19	-1.343e-11	1.003e+02	5.699e-11	2.803e+02	1.448e-04	-1.448e-04	-7.865e-15	7.865e-15	-4.345e-
	03	-4.345e-03	1.512e-09	-8.408e+03	2.830e-11	1.309e+02	7.166e-05	-7.166e-05	-3.748e-15	3.748e-15	-2.150e-
El:	7	- C.c: 20	-6.424e-12	4.685e+01	2.830e-11	1.309e+02	7.166e-05	-7.166e-05	-3.748e-15	3.748e-15	-2.150e-
	03	-2.150e-03	7.506e-10	-3.928e+03	1.848e+03	1.659e+03	-1.428e+00	1.428e+00	1.464e+02	-1.464e+02	
El:	8	- C.c: 1	1.255e+03	0.000e+00	1.848e+03	1.659e+03	-1.428e+00	1.428e+00	1.464e+02	-1.464e+02	
	8.285e+01	2.986e+02	2.524e+04	1.106e-11	3.066e+02	2.763e+02	-1.995e-01	1.995e-01	2.732e+01	-2.732e+01	-
El:	8	- C.c: 2	2.086e+02	0.000e+00	3.066e+02	2.763e+02	-1.995e-01	1.995e-01	2.732e+01	-2.732e+01	-
	2.300e+01	7.630e+01	4.041e+03	1.569e-12	3.081e+02	2.748e+02	-1.762e-02	1.762e-02	2.969e+01	-2.969e+01	-
El:	8	- C.c: 3	2.086e+02	0.000e+00	3.081e+02	2.748e+02	-1.762e-02	1.762e-02	2.969e+01	-2.969e+01	-
	3.382e+01	3.852e+01	4.442e+03	1.569e-12							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	8	- C.c:	4	2.086e+02	0.000e+00	3.066e+02	2.763e+02	-5.491e-01	5.491e-01	2.732e+01	-2.732e+01	
6.890e+01	7.778e+01			4.041e+03	1.569e-12							
El:	8	- C.c:	5	2.086e+02	0.000e+00	3.081e+02	2.748e+02	-3.672e-01	3.672e-01	2.969e+01	-2.969e+01	
5.809e+01	4.001e+01			4.442e+03	1.569e-12							
El:	8	- C.c:	6	2.086e+02	0.000e+00	3.048e+02	2.781e+02	-5.341e-01	5.341e-01	2.455e+01	-2.455e+01	
2.178e+01	1.209e+02			3.572e+03	1.569e-12							
El:	8	- C.c:	7	2.086e+02	0.000e+00	3.098e+02	2.730e+02	7.223e-02	-7.223e-02	3.246e+01	-3.246e+01	-
1.427e+01	-5.028e+00			4.911e+03	1.569e-12							
El:	8	- C.c:	8	2.086e+02	0.000e+00	3.048e+02	2.781e+02	-6.390e-01	6.390e-01	2.455e+01	-2.455e+01	
4.935e+01	1.213e+02			3.572e+03	1.569e-12							
El:	8	- C.c:	9	2.086e+02	0.000e+00	3.098e+02	2.730e+02	-3.265e-02	3.265e-02	3.246e+01	-3.246e+01	
1.331e+01	-4.583e+00			4.911e+03	1.569e-12							
El:	8	- C.c:	10	2.086e+02	0.000e+00	3.066e+02	2.763e+02	-1.995e-01	1.995e-01	2.732e+01	-2.732e+01	-
2.300e+01	7.630e+01			4.041e+03	1.569e-12							
El:	8	- C.c:	11	2.086e+02	0.000e+00	3.081e+02	2.748e+02	-1.762e-02	1.762e-02	2.969e+01	-2.969e+01	-
3.382e+01	3.852e+01			4.442e+03	1.569e-12							
El:	8	- C.c:	12	2.086e+02	0.000e+00	3.066e+02	2.763e+02	-5.491e-01	5.491e-01	2.732e+01	-2.732e+01	
6.890e+01	7.778e+01			4.041e+03	1.569e-12							
El:	8	- C.c:	13	2.086e+02	0.000e+00	3.081e+02	2.748e+02	-3.672e-01	3.672e-01	2.969e+01	-2.969e+01	
5.809e+01	4.001e+01			4.442e+03	1.569e-12							
El:	8	- C.c:	14	2.086e+02	0.000e+00	3.048e+02	2.781e+02	-5.341e-01	5.341e-01	2.455e+01	-2.455e+01	
2.178e+01	1.209e+02			3.572e+03	1.569e-12							
El:	8	- C.c:	15	2.086e+02	0.000e+00	3.098e+02	2.730e+02	7.223e-02	-7.223e-02	3.246e+01	-3.246e+01	-
1.427e+01	-5.028e+00			4.911e+03	1.569e-12							
El:	8	- C.c:	16	2.086e+02	0.000e+00	3.048e+02	2.781e+02	-6.390e-01	6.390e-01	2.455e+01	-2.455e+01	
4.935e+01	1.213e+02			3.572e+03	1.569e-12							
El:	8	- C.c:	17	2.086e+02	0.000e+00	3.098e+02	2.730e+02	-3.265e-02	3.265e-02	3.246e+01	-3.246e+01	
1.331e+01	-4.583e+00			4.911e+03	1.569e-12							
El:	8	- C.c:	18	8.431e+02	0.000e+00	1.242e+03	1.114e+03	-9.670e-01	9.670e-01	9.906e+01	-9.906e+01	
5.628e+01	2.020e+02			1.696e+04	7.390e-12							
El:	8	- C.c:	19	4.465e+02	0.000e+00	6.576e+02	5.901e+02	-5.397e-01	5.397e-01	5.497e+01	-5.497e+01	
3.207e+01	1.121e+02			9.013e+03	3.752e-12							
El:	8	- C.c:	20	2.086e+02	0.000e+00	3.073e+02	2.756e+02	-2.834e-01	2.834e-01	2.851e+01	-2.851e+01	
1.754e+01	5.815e+01			4.242e+03	1.569e-12							
El:	9	- C.c:	1	1.636e-07	2.818e+02	-5.856e-08	7.875e+02	2.613e-14	-2.613e-14	4.821e-15	-4.821e-15	-1.788e-
02	1.788e-02			7.956e-09	-2.363e+04							
El:	9	- C.c:	2	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-1.078e-13	1.078e-13	-3.204e-
03	1.859e+03			1.424e-09	-3.740e+03							
El:	9	- C.c:	3	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-1.082e-13	1.082e-13	-3.329e-
03	1.859e+03			1.480e-09	-4.116e+03							
El:	9	- C.c:	4	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	1.102e-13	-1.102e-13	-3.204e-
03	-1.859e+03			1.424e-09	-3.740e+03							
El:	9	- C.c:	5	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	1.098e-13	-1.098e-13	-3.329e-
03	-1.859e+03			1.480e-09	-4.116e+03							
El:	9	- C.c:	6	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	-3.116e-14	3.116e-14	-3.058e-
03	5.577e+02			1.359e-09	-3.301e+03							
El:	9	- C.c:	7	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	-3.223e-14	3.223e-14	-3.475e-
03	5.577e+02			1.544e-09	-4.554e+03							
El:	9	- C.c:	8	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	3.424e-14	-3.424e-14	-3.058e-
03	-5.577e+02			1.359e-09	-3.301e+03							
El:	9	- C.c:	9	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	3.317e-14	-3.317e-14	-3.475e-
03	-5.577e+02			1.544e-09	-4.554e+03							
El:	9	- C.c:	10	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-1.078e-13	1.078e-13	-3.204e-
03	1.859e+03			1.424e-09	-3.740e+03							
El:	9	- C.c:	11	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-1.082e-13	1.082e-13	-3.329e-
03	1.859e+03			1.480e-09	-4.116e+03							
El:	9	- C.c:	12	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	1.102e-13	-1.102e-13	-3.204e-
03	-1.859e+03			1.424e-09	-3.740e+03							
El:	9	- C.c:	13	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	1.098e-13	-1.098e-13	-3.329e-
03	-1.859e+03			1.480e-09	-4.116e+03							
El:	9	- C.c:	14	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	-3.116e-14	3.116e-14	-3.058e-
03	5.577e+02			1.359e-09	-3.301e+03							
El:	9	- C.c:	15	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	-3.223e-14	3.223e-14	-3.475e-
03	5.577e+02			1.544e-09	-4.554e+03							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	9	- C.c: 16	-2.917e+01		7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	3.424e-14	-3.424e-14	-3.058e-
03		-5.577e+02		1.359e-09	-3.301e+03							
El:	9	- C.c: 17	2.917e+01		1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	3.317e-14	-3.317e-14	-3.475e-
03		-5.577e+02		1.544e-09	-4.554e+03							
El:	9	- C.c: 18	1.101e-07		1.894e+02	-3.940e-08	5.292e+02	1.757e-14	-1.757e-14	3.272e-15	-3.272e-15	-1.206e-
02		1.206e-02		5.367e-09	-1.588e+04							
El:	9	- C.c: 19	5.875e-08		1.003e+02	-2.103e-08	2.803e+02	9.367e-15	-9.367e-15	1.855e-15	-1.855e-15	-6.564e-
03		6.564e-03		2.920e-09	-8.408e+03							
El:	9	- C.c: 20	2.796e-08		4.685e+01	-1.001e-08	1.309e+02	4.442e-15	-4.442e-15	1.004e-15	-1.004e-15	-3.267e-
03		3.267e-03		1.452e-09	-3.928e+03							
El:	10	- C.c: 1	1.255e+03		4.619e-15	1.849e+03	1.657e+03	-6.671e-01	6.671e-01	5.358e+01	-5.358e+01	
6.832e+01		1.099e+02		2.565e+04	-1.842e-11							
El:	10	- C.c: 2	2.086e+02		3.553e-15	3.068e+02	2.760e+02	2.293e-02	-2.293e-02	9.984e+00	-9.984e+00	-
3.359e+01		2.746e+01		4.117e+03	-4.111e-12							
El:	10	- C.c: 3	2.086e+02		3.553e-15	3.084e+02	2.745e+02	1.076e-01	-1.076e-01	1.085e+01	-1.085e+01	-
4.227e+01		1.354e+01		4.525e+03	-4.582e-12							
El:	10	- C.c: 4	2.086e+02		3.553e-15	3.068e+02	2.760e+02	-3.645e-01	3.645e-01	9.985e+00	-9.985e+00	
6.817e+01		2.919e+01		4.117e+03	-4.110e-12							
El:	10	- C.c: 5	2.086e+02		3.553e-15	3.084e+02	2.745e+02	-2.798e-01	2.798e-01	1.085e+01	-1.085e+01	
5.948e+01		1.526e+01		4.525e+03	-4.582e-12							
El:	10	- C.c: 6	2.086e+02		3.553e-15	3.051e+02	2.778e+02	-2.114e-01	2.114e-01	8.970e+00	-8.970e+00	
1.216e+01		4.431e+01		3.640e+03	-3.560e-12							
El:	10	- C.c: 7	2.086e+02		3.553e-15	3.102e+02	2.727e+02	7.075e-02	-7.075e-02	1.187e+01	-1.187e+01	-
1.680e+01		-2.102e+00		5.002e+03	-5.133e-12							
El:	10	- C.c: 8	2.086e+02		3.553e-15	3.051e+02	2.778e+02	-3.276e-01	3.276e-01	8.971e+00	-8.971e+00	
4.269e+01		4.483e+01		3.640e+03	-3.560e-12							
El:	10	- C.c: 9	2.086e+02		3.553e-15	3.102e+02	2.727e+02	-4.547e-02	4.547e-02	1.187e+01	-1.187e+01	
1.373e+01		-1.585e+00		5.002e+03	-5.133e-12							
El:	10	- C.c: 10	2.086e+02		3.553e-15	3.068e+02	2.760e+02	2.293e-02	-2.293e-02	9.984e+00	-9.984e+00	-
3.359e+01		2.746e+01		4.117e+03	-4.111e-12							
El:	10	- C.c: 11	2.086e+02		3.553e-15	3.084e+02	2.745e+02	1.076e-01	-1.076e-01	1.085e+01	-1.085e+01	-
4.227e+01		1.354e+01		4.525e+03	-4.582e-12							
El:	10	- C.c: 12	2.086e+02		3.553e-15	3.068e+02	2.760e+02	-3.645e-01	3.645e-01	9.985e+00	-9.985e+00	
6.817e+01		2.919e+01		4.117e+03	-4.110e-12							
El:	10	- C.c: 13	2.086e+02		3.553e-15	3.084e+02	2.745e+02	-2.798e-01	2.798e-01	1.085e+01	-1.085e+01	
5.948e+01		1.526e+01		4.525e+03	-4.582e-12							
El:	10	- C.c: 14	2.086e+02		3.553e-15	3.051e+02	2.778e+02	-2.114e-01	2.114e-01	8.970e+00	-8.970e+00	
1.216e+01		4.431e+01		3.640e+03	-3.560e-12							
El:	10	- C.c: 15	2.086e+02		3.553e-15	3.102e+02	2.727e+02	7.075e-02	-7.075e-02	1.187e+01	-1.187e+01	-
1.680e+01		-2.102e+00		5.002e+03	-5.133e-12							
El:	10	- C.c: 16	2.086e+02		3.553e-15	3.051e+02	2.778e+02	-3.276e-01	3.276e-01	8.971e+00	-8.971e+00	
4.269e+01		4.483e+01		3.640e+03	-3.560e-12							
El:	10	- C.c: 17	2.086e+02		3.553e-15	3.102e+02	2.727e+02	-4.547e-02	4.547e-02	1.187e+01	-1.187e+01	
1.373e+01		-1.585e+00		5.002e+03	-5.133e-12							
El:	10	- C.c: 18	8.431e+02		3.553e-15	1.243e+03	1.113e+03	-4.511e-01	4.511e-01	3.625e+01	-3.625e+01	
4.617e+01		7.433e+01		1.724e+04	-1.259e-11							
El:	10	- C.c: 19	4.465e+02		3.553e-15	6.582e+02	5.896e+02	-2.494e-01	2.494e-01	2.010e+01	-2.010e+01	
2.540e+01		4.123e+01		9.166e+03	-7.436e-12							
El:	10	- C.c: 20	2.086e+02		3.553e-15	3.076e+02	2.753e+02	-1.284e-01	1.284e-01	1.042e+01	-1.042e+01	
1.295e+01		2.136e+01		4.321e+03	-4.346e-12							
El:	11	- C.c: 1	-3.763e-08		2.818e+02	1.346e-08	7.875e+02	-7.385e-15	7.385e-15	7.107e-03	-7.107e-03	-2.543e-
03		2.543e-03		1.922e-09	-2.363e+04							
El:	11	- C.c: 2	-8.751e+00		5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	1.274e-03	-1.274e-03	-4.559e-
04		1.859e+03		3.425e-10	-3.740e+03							
El:	11	- C.c: 3	8.751e+00		3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	1.324e-03	-1.324e-03	-4.738e-
04		1.859e+03		3.569e-10	-4.116e+03							
El:	11	- C.c: 4	-8.751e+00		5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	1.274e-03	-1.274e-03	-4.559e-
04		-1.859e+03		3.425e-10	-3.740e+03							
El:	11	- C.c: 5	8.751e+00		3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	1.324e-03	-1.324e-03	-4.737e-
04		-1.859e+03		3.569e-10	-4.116e+03							
El:	11	- C.c: 6	-2.917e+01		7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	1.216e-03	-1.216e-03	-4.350e-
04		5.577e+02		3.257e-10	-3.301e+03							
El:	11	- C.c: 7	2.917e+01		1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	1.382e-03	-1.382e-03	-4.946e-
04		5.577e+02		3.738e-10	-4.554e+03							

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	11	- C.c: 8	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	1.216e-03	-1.216e-03	-4.350e-
04		-5.577e+02	3.257e-10	-3.301e+03							
El:	11	- C.c: 9	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	1.382e-03	-1.382e-03	-4.946e-
04		-5.577e+02	3.738e-10	-4.554e+03							
El:	11	- C.c: 10	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	1.274e-03	-1.274e-03	-4.559e-
04		1.859e+03	3.425e-10	-3.740e+03							
El:	11	- C.c: 11	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	1.324e-03	-1.324e-03	-4.738e-
04		1.859e+03	3.569e-10	-4.116e+03							
El:	11	- C.c: 12	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	1.274e-03	-1.274e-03	-4.559e-
04		-1.859e+03	3.425e-10	-3.740e+03							
El:	11	- C.c: 13	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	1.324e-03	-1.324e-03	-4.737e-
04		-1.859e+03	3.569e-10	-4.116e+03							
El:	11	- C.c: 14	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	1.216e-03	-1.216e-03	-4.350e-
04		5.577e+02	3.257e-10	-3.301e+03							
El:	11	- C.c: 15	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	1.382e-03	-1.382e-03	-4.946e-
04		5.577e+02	3.738e-10	-4.554e+03							
El:	11	- C.c: 16	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	1.216e-03	-1.216e-03	-4.350e-
04		-5.577e+02	3.257e-10	-3.301e+03							
El:	11	- C.c: 17	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	1.382e-03	-1.382e-03	-4.946e-
04		-5.577e+02	3.738e-10	-4.554e+03							
El:	11	- C.c: 18	-2.514e-08	1.894e+02	8.993e-09	5.292e+02	-4.934e-15	4.934e-15	4.795e-03	-4.795e-03	-1.716e-
03		1.716e-03	1.297e-09	-1.588e+04							
El:	11	- C.c: 19	-1.279e-08	1.003e+02	4.573e-09	2.803e+02	-2.509e-15	2.509e-15	2.610e-03	-2.610e-03	-9.339e-
04		9.339e-04	7.048e-10	-8.408e+03							
El:	11	- C.c: 20	-5.372e-09	4.685e+01	1.921e-09	1.309e+02	-1.053e-15	1.053e-15	1.299e-03	-1.299e-03	-4.648e-
04		4.648e-04	3.497e-10	-3.928e+03							
El:	12	- C.c: 1	1.255e+03	4.619e-15	1.849e+03	1.657e+03	5.710e-01	-5.710e-01	-4.893e+01	4.893e+01	-
5.235e+01		-1.002e+02	2.569e+04	-1.856e-11							
El:	12	- C.c: 2	2.086e+02	3.553e-15	3.069e+02	2.760e+02	3.420e-01	-3.420e-01	-9.151e+00	9.151e+00	-
6.466e+01		-2.671e+01	4.124e+03	-4.136e-12							
El:	12	- C.c: 3	2.086e+02	3.553e-15	3.084e+02	2.745e+02	2.699e-01	-2.699e-01	-9.940e+00	9.940e+00	-
5.801e+01		-1.410e+01	4.533e+03	-4.610e-12							
El:	12	- C.c: 4	2.086e+02	3.553e-15	3.069e+02	2.760e+02	-4.831e-02	4.831e-02	-9.150e+00	9.150e+00	-
3.789e+01		-2.498e+01	4.124e+03	-4.136e-12							
El:	12	- C.c: 5	2.086e+02	3.553e-15	3.084e+02	2.745e+02	-1.204e-01	1.204e-01	-9.939e+00	9.939e+00	-
4.453e+01		-1.237e+01	4.533e+03	-4.610e-12							
El:	12	- C.c: 6	2.086e+02	3.553e-15	3.051e+02	2.778e+02	2.895e-01	-2.895e-01	-8.231e+00	8.231e+00	-
3.652e+01		-4.082e+01	3.647e+03	-3.583e-12							
El:	12	- C.c: 7	2.086e+02	3.553e-15	3.102e+02	2.727e+02	4.920e-02	-4.920e-02	-1.086e+01	1.086e+01	-
1.436e+01		1.221e+00	5.010e+03	-5.164e-12							
El:	12	- C.c: 8	2.086e+02	3.553e-15	3.051e+02	2.778e+02	1.724e-01	-1.724e-01	-8.230e+00	8.230e+00	-
5.759e+00		-4.030e+01	3.647e+03	-3.583e-12							
El:	12	- C.c: 9	2.086e+02	3.553e-15	3.102e+02	2.727e+02	-6.790e-02	6.790e-02	-1.086e+01	1.086e+01	-
1.640e+01		1.740e+00	5.010e+03	-5.164e-12							
El:	12	- C.c: 10	2.086e+02	3.553e-15	3.069e+02	2.760e+02	3.420e-01	-3.420e-01	-9.151e+00	9.151e+00	-
6.466e+01		-2.671e+01	4.124e+03	-4.136e-12							
El:	12	- C.c: 11	2.086e+02	3.553e-15	3.084e+02	2.745e+02	2.699e-01	-2.699e-01	-9.940e+00	9.940e+00	-
5.801e+01		-1.410e+01	4.533e+03	-4.610e-12							
El:	12	- C.c: 12	2.086e+02	3.553e-15	3.069e+02	2.760e+02	-4.831e-02	4.831e-02	-9.150e+00	9.150e+00	-
3.789e+01		-2.498e+01	4.124e+03	-4.136e-12							
El:	12	- C.c: 13	2.086e+02	3.553e-15	3.084e+02	2.745e+02	-1.204e-01	1.204e-01	-9.939e+00	9.939e+00	-
4.453e+01		-1.237e+01	4.533e+03	-4.610e-12							
El:	12	- C.c: 14	2.086e+02	3.553e-15	3.051e+02	2.778e+02	2.895e-01	-2.895e-01	-8.231e+00	8.231e+00	-
3.652e+01		-4.082e+01	3.647e+03	-3.583e-12							
El:	12	- C.c: 15	2.086e+02	3.553e-15	3.102e+02	2.727e+02	4.920e-02	-4.920e-02	-1.086e+01	1.086e+01	-
1.436e+01		1.221e+00	5.010e+03	-5.164e-12							
El:	12	- C.c: 16	2.086e+02	3.553e-15	3.051e+02	2.778e+02	1.724e-01	-1.724e-01	-8.230e+00	8.230e+00	-
5.759e+00		-4.030e+01	3.647e+03	-3.583e-12							
El:	12	- C.c: 17	2.086e+02	3.553e-15	3.102e+02	2.727e+02	-6.790e-02	6.790e-02	-1.086e+01	1.086e+01	-
1.640e+01		1.740e+00	5.010e+03	-5.164e-12							
El:	12	- C.c: 18	8.431e+02	3.553e-15	1.243e+03	1.113e+03	3.863e-01	-3.863e-01	-3.310e+01	3.310e+01	-
3.540e+01		-6.778e+01	1.727e+04	-1.268e-11							
El:	12	- C.c: 19	4.465e+02	3.553e-15	6.583e+02	5.895e+02	2.141e-01	-2.141e-01	-1.838e+01	1.838e+01	-
1.956e+01		-3.763e+01	9.181e+03	-7.489e-12							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1.	12	- C.c: 20	2.086e+02	3.553e-15	3.076e+02	2.752e+02	1.108e-01	-1.108e-01	-9.545e+00	9.545e+00	-
El:	13	- C.c: 1	-2.279e-09	2.818e+02	8.303e-10	7.875e+02	-3.867e-16	3.867e-16	7.577e-03	-7.577e-03	-2.711e-
03		2.711e-03	1.638e-09	-2.363e+04							
El:	13	- C.c: 2	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	1.351e-03	-1.351e-03	-4.835e-
04		1.859e+03	2.840e-10	-3.740e+03							
El:	13	- C.c: 3	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	1.396e-03	-1.396e-03	-4.995e-
04		1.859e+03	2.938e-10	-4.116e+03							
El:	13	- C.c: 4	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	1.351e-03	-1.351e-03	-4.835e-
04		-1.859e+03	2.840e-10	-3.740e+03							
El:	13	- C.c: 5	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	1.396e-03	-1.396e-03	-4.995e-
04		-1.859e+03	2.938e-10	-4.116e+03							
El:	13	- C.c: 6	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	1.299e-03	-1.299e-03	-4.648e-
04		5.577e+02	2.726e-10	-3.301e+03							
El:	13	- C.c: 7	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	1.448e-03	-1.448e-03	-5.182e-
04		5.577e+02	3.051e-10	-4.554e+03							
El:	13	- C.c: 8	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	1.299e-03	-1.299e-03	-4.648e-
04		-5.577e+02	2.726e-10	-3.301e+03							
El:	13	- C.c: 9	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	1.448e-03	-1.448e-03	-5.182e-
04		-5.577e+02	3.051e-10	-4.554e+03							
El:	13	- C.c: 10	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	1.351e-03	-1.351e-03	-4.835e-
04		1.859e+03	2.840e-10	-3.740e+03							
El:	13	- C.c: 11	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	1.396e-03	-1.396e-03	-4.995e-
04		1.859e+03	2.938e-10	-4.116e+03							
El:	13	- C.c: 12	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	1.351e-03	-1.351e-03	-4.835e-
04		-1.859e+03	2.840e-10	-3.740e+03							
El:	13	- C.c: 13	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	1.396e-03	-1.396e-03	-4.995e-
04		-1.859e+03	2.938e-10	-4.116e+03							
El:	13	- C.c: 14	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	1.299e-03	-1.299e-03	-4.648e-
04		5.577e+02	2.726e-10	-3.301e+03							
El:	13	- C.c: 15	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	1.448e-03	-1.448e-03	-5.182e-
04		5.577e+02	3.051e-10	-4.554e+03							
El:	13	- C.c: 16	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	1.299e-03	-1.299e-03	-4.648e-
04		-5.577e+02	2.726e-10	-3.301e+03							
El:	13	- C.c: 17	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	1.448e-03	-1.448e-03	-5.182e-
04		-5.577e+02	3.051e-10	-4.554e+03							
El:	13	- C.c: 18	-2.492e-09	1.894e+02	9.016e-10	5.292e+02	-4.893e-16	4.893e-16	5.110e-03	-5.110e-03	-1.829e-
03		1.829e-03	1.103e-09	-1.588e+04							
El:	13	- C.c: 19	-4.892e-09	1.003e+02	1.756e-09	2.803e+02	-1.113e-15	1.113e-15	2.775e-03	-2.775e-03	-9.929e-
04		9.929e-04	5.943e-10	-8.408e+03							
El:	13	- C.c: 20	-6.333e-09	4.685e+01	2.269e-09	1.309e+02	-1.487e-15	1.487e-15	1.373e-03	-1.373e-03	-4.915e-
04		4.915e-04	2.889e-10	-3.928e+03							
El:	14	- C.c: 1	1.255e+03	4.619e-15	1.849e+03	1.657e+03	1.641e+00	-1.641e+00	-1.439e+02	1.439e+02	-
1.438e+02		-2.944e+02	2.554e+04	-1.295e-11							
El:	14	- C.c: 2	2.086e+02	3.553e-15	3.067e+02	2.761e+02	5.942e-01	-5.942e-01	-2.687e+01	2.687e+01	-
8.203e+01		-7.670e+01	4.091e+03	-3.087e-12							
El:	14	- C.c: 3	2.086e+02	3.553e-15	3.083e+02	2.746e+02	3.867e-01	-3.867e-01	-2.920e+01	2.920e+01	-
6.381e+01		-3.950e+01	4.493e+03	-3.471e-12							
El:	14	- C.c: 4	2.086e+02	3.553e-15	3.067e+02	2.761e+02	2.551e-01	-2.551e-01	-2.687e+01	2.687e+01	-
7.089e+00		-7.524e+01	4.091e+03	-3.087e-12							
El:	14	- C.c: 5	2.086e+02	3.553e-15	3.083e+02	2.746e+02	4.761e-02	-4.761e-02	-2.919e+01	2.919e+01	-
2.531e+01		-3.803e+01	4.493e+03	-3.471e-12							
El:	14	- C.c: 6	2.086e+02	3.553e-15	3.050e+02	2.779e+02	7.177e-01	-7.177e-01	-2.415e+01	2.415e+01	-
7.210e+01		-1.196e+02	3.622e+03	-2.640e-12							
El:	14	- C.c: 7	2.086e+02	3.553e-15	3.100e+02	2.729e+02	2.593e-02	-2.593e-02	-3.191e+01	3.191e+01	-
1.135e+01		4.426e+00	4.962e+03	-3.919e-12							
El:	14	- C.c: 8	2.086e+02	3.553e-15	3.050e+02	2.779e+02	6.159e-01	-6.159e-01	-2.415e+01	2.415e+01	-
4.536e+01		-1.192e+02	3.622e+03	-2.640e-12							
El:	14	- C.c: 9	2.086e+02	3.553e-15	3.100e+02	2.729e+02	-7.580e-02	7.580e-02	-3.191e+01	3.191e+01	-
1.538e+01		4.865e+00	4.962e+03	-3.919e-12							
El:	14	- C.c: 10	2.086e+02	3.553e-15	3.067e+02	2.761e+02	5.942e-01	-5.942e-01	-2.687e+01	2.687e+01	-
8.203e+01		-7.670e+01	4.091e+03	-3.087e-12							
El:	14	- C.c: 11	2.086e+02	3.553e-15	3.083e+02	2.746e+02	3.867e-01	-3.867e-01	-2.920e+01	2.920e+01	-
6.381e+01		-3.950e+01	4.493e+03	-3.471e-12							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	14	- C.c: 12	2.086e+02	3.553e-15	3.067e+02	2.761e+02	2.551e-01	-2.551e-01	-2.687e+01	2.687e+01	
7.089e+00	-7.524e+01	4.091e+03		-3.087e-12							
El:	14	- C.c: 13	2.086e+02	3.553e-15	3.083e+02	2.746e+02	4.761e-02	-4.761e-02	-2.919e+01	2.919e+01	
2.531e+01	-3.803e+01	4.493e+03		-3.471e-12							
El:	14	- C.c: 14	2.086e+02	3.553e-15	3.050e+02	2.779e+02	7.177e-01	-7.177e-01	-2.415e+01	2.415e+01	-
7.210e+01	-1.196e+02	3.622e+03		-2.640e-12							
El:	14	- C.c: 15	2.086e+02	3.553e-15	3.100e+02	2.729e+02	2.593e-02	-2.593e-02	-3.191e+01	3.191e+01	-
1.135e+01	4.426e+00	4.962e+03		-3.919e-12							
El:	14	- C.c: 16	2.086e+02	3.553e-15	3.050e+02	2.779e+02	6.159e-01	-6.159e-01	-2.415e+01	2.415e+01	-
4.536e+01	-1.192e+02	3.622e+03		-2.640e-12							
El:	14	- C.c: 17	2.086e+02	3.553e-15	3.100e+02	2.729e+02	-7.580e-02	7.580e-02	-3.191e+01	3.191e+01	
1.538e+01	4.865e+00	4.962e+03		-3.919e-12							
El:	14	- C.c: 18	8.431e+02	3.553e-15	1.242e+03	1.114e+03	1.110e+00	-1.110e+00	-9.735e+01	9.735e+01	-
9.737e+01	-1.992e+02	1.717e+04		-8.884e-12							
El:	14	- C.c: 19	4.465e+02	3.553e-15	6.580e+02	5.897e+02	6.169e-01	-6.169e-01	-5.402e+01	5.402e+01	-
5.424e+01	-1.106e+02	9.121e+03		-5.381e-12							
El:	14	- C.c: 20	2.086e+02	3.553e-15	3.075e+02	2.754e+02	3.209e-01	-3.209e-01	-2.803e+01	2.803e+01	-
2.836e+01	-5.737e+01	4.292e+03		-3.279e-12							
El:	15	- C.c: 1	-3.352e-11	2.818e+02	2.665e-11	7.875e+02	-8.029e-17	8.029e-17	1.774e-15	-1.774e-15	4.455e-
16	-4.604e-15	-1.256e-11		-2.363e+04							
El:	15	- C.c: 2	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-3.023e-13	3.023e-13	-1.454e-
13	1.859e+03	-2.135e-12		-3.740e+03							
El:	15	- C.c: 3	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-3.024e-13	3.024e-13	-1.454e-
13	1.859e+03	-1.580e-12		-4.116e+03							
El:	15	- C.c: 4	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	3.049e-13	-3.049e-13	1.445e-
13	-1.859e+03	-2.135e-12		-3.740e+03							
El:	15	- C.c: 5	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	3.049e-13	-3.049e-13	1.445e-
13	-1.859e+03	-1.580e-12		-4.116e+03							
El:	15	- C.c: 6	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	-8.977e-14	8.977e-14	-4.390e-
14	5.577e+02	-2.781e-12		-3.301e+03							
El:	15	- C.c: 7	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	-8.989e-14	8.989e-14	-4.396e-
14	5.577e+02	-9.335e-13		-4.554e+03							
El:	15	- C.c: 8	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	9.240e-14	-9.240e-14	4.307e-
14	-5.577e+02	-2.781e-12		-3.301e+03							
El:	15	- C.c: 9	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	9.228e-14	-9.228e-14	4.302e-
14	-5.577e+02	-9.335e-13		-4.554e+03							
El:	15	- C.c: 10	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-3.023e-13	3.023e-13	-1.454e-
13	1.859e+03	-2.135e-12		-3.740e+03							
El:	15	- C.c: 11	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-3.024e-13	3.024e-13	-1.454e-
13	1.859e+03	-1.580e-12		-4.116e+03							
El:	15	- C.c: 12	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	3.049e-13	-3.049e-13	1.445e-
13	-1.859e+03	-2.135e-12		-3.740e+03							
El:	15	- C.c: 13	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	3.049e-13	-3.049e-13	1.445e-
13	-1.859e+03	-1.580e-12		-4.116e+03							
El:	15	- C.c: 14	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	-8.977e-14	8.977e-14	-4.390e-
14	5.577e+02	-2.781e-12		-3.301e+03							
El:	15	- C.c: 15	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	-8.989e-14	8.989e-14	-4.396e-
14	5.577e+02	-9.335e-13		-4.554e+03							
El:	15	- C.c: 16	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	9.240e-14	-9.240e-14	4.307e-
14	-5.577e+02	-2.781e-12		-3.301e+03							
El:	15	- C.c: 17	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	9.228e-14	-9.228e-14	4.302e-
14	-5.577e+02	-9.335e-13		-4.554e+03							
El:	15	- C.c: 18	-2.262e-11	1.894e+02	1.795e-11	5.292e+02	-6.044e-17	6.044e-17	1.347e-15	-1.347e-15	2.164e-
16	-3.492e-15	-8.406e-12		-1.588e+04							
El:	15	- C.c: 19	-1.236e-11	1.003e+02	9.648e-12	2.803e+02	-5.612e-17	5.612e-17	1.290e-15	-1.290e-15	-1.941e-
16	-3.332e-15	-4.313e-12		-8.408e+03							
El:	15	- C.c: 20	-6.196e-12	4.685e+01	4.668e-12	1.309e+02	-5.353e-17	5.353e-17	1.256e-15	-1.256e-15	-4.404e-
16	-3.235e-15	-1.857e-12		-3.928e+03							
El:	16	- C.c: 1	1.255e+03	4.619e-15	1.856e+03	1.650e+03	2.432e+00	-2.432e+00	-2.135e+02	2.135e+02	-
2.128e+02	-4.369e+02	2.745e+04		-2.523e-12							
El:	16	- C.c: 2	2.086e+02	3.553e-15	3.078e+02	2.751e+02	7.410e-01	-7.410e-01	-3.988e+01	3.988e+01	-
8.470e+01	-1.132e+02	4.371e+03		-1.140e-12							
El:	16	- C.c: 3	2.086e+02	3.553e-15	3.092e+02	2.737e+02	4.316e-01	-4.316e-01	-4.334e+01	4.334e+01	-
5.735e+01	-5.793e+01	4.746e+03		-1.355e-12							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	16	- C.c:	4	2.086e+02	3.553e-15	3.078e+02	2.751e+02	5.057e-01	-5.057e-01	-3.988e+01	3.988e+01	-
2.280e+01	-1.123e+02	4.371e+03			-1.140e-12							
El:	16	- C.c:	5	2.086e+02	3.553e-15	3.092e+02	2.737e+02	1.963e-01	-1.963e-01	-4.334e+01	4.334e+01	
4.548e+00	-5.699e+01	4.746e+03			-1.355e-12							
El:	16	- C.c:	6	2.086e+02	3.553e-15	3.062e+02	2.767e+02	1.020e+00	-1.020e+00	-3.584e+01	3.584e+01	-
9.495e+01	-1.774e+02	3.934e+03			-8.896e-13							
El:	16	- C.c:	7	2.086e+02	3.553e-15	3.108e+02	2.720e+02	-1.175e-02	1.175e-02	-4.737e+01	4.737e+01	-
3.777e+00	6.916e+00	5.183e+03			-1.606e-12							
El:	16	- C.c:	8	2.086e+02	3.553e-15	3.062e+02	2.767e+02	9.491e-01	-9.491e-01	-3.584e+01	3.584e+01	-
7.638e+01	-1.771e+02	3.934e+03			-8.895e-13							
El:	16	- C.c:	9	2.086e+02	3.553e-15	3.108e+02	2.720e+02	-8.232e-02	8.232e-02	-4.737e+01	4.737e+01	
1.479e+01	7.197e+00	5.183e+03			-1.606e-12							
El:	16	- C.c:	10	2.086e+02	3.553e-15	3.078e+02	2.751e+02	7.410e-01	-7.410e-01	-3.988e+01	3.988e+01	-
8.470e+01	-1.132e+02	4.371e+03			-1.140e-12							
El:	16	- C.c:	11	2.086e+02	3.553e-15	3.092e+02	2.737e+02	4.316e-01	-4.316e-01	-4.334e+01	4.334e+01	-
5.735e+01	-5.793e+01	4.746e+03			-1.355e-12							
El:	16	- C.c:	12	2.086e+02	3.553e-15	3.078e+02	2.751e+02	5.057e-01	-5.057e-01	-3.988e+01	3.988e+01	-
2.280e+01	-1.123e+02	4.371e+03			-1.140e-12							
El:	16	- C.c:	13	2.086e+02	3.553e-15	3.092e+02	2.737e+02	1.963e-01	-1.963e-01	-4.334e+01	4.334e+01	
4.548e+00	-5.699e+01	4.746e+03			-1.355e-12							
El:	16	- C.c:	14	2.086e+02	3.553e-15	3.062e+02	2.767e+02	1.020e+00	-1.020e+00	-3.584e+01	3.584e+01	-
9.495e+01	-1.774e+02	3.934e+03			-8.896e-13							
El:	16	- C.c:	15	2.086e+02	3.553e-15	3.108e+02	2.720e+02	-1.175e-02	1.175e-02	-4.737e+01	4.737e+01	-
3.777e+00	6.916e+00	5.183e+03			-1.606e-12							
El:	16	- C.c:	16	2.086e+02	3.553e-15	3.062e+02	2.767e+02	9.491e-01	-9.491e-01	-3.584e+01	3.584e+01	-
7.638e+01	-1.771e+02	3.934e+03			-8.895e-13							
El:	16	- C.c:	17	2.086e+02	3.553e-15	3.108e+02	2.720e+02	-8.232e-02	8.232e-02	-4.737e+01	4.737e+01	
1.479e+01	7.197e+00	5.183e+03			-1.606e-12							
El:	16	- C.c:	18	8.431e+02	3.553e-15	1.247e+03	1.109e+03	1.645e+00	-1.645e+00	-1.445e+02	1.445e+02	-
1.438e+02	-2.956e+02	1.844e+04			-1.829e-12							
El:	16	- C.c:	19	4.465e+02	3.553e-15	6.604e+02	5.873e+02	9.097e-01	-9.097e-01	-8.018e+01	8.018e+01	-
7.896e+01	-1.640e+02	9.765e+03			-1.466e-12							
El:	16	- C.c:	20	2.086e+02	3.553e-15	3.085e+02	2.744e+02	4.686e-01	-4.686e-01	-4.161e+01	4.161e+01	-
4.008e+01	-8.511e+01	4.558e+03			-1.248e-12							
El:	17	- C.c:	1	4.753e-12	1.427e+02	-1.458e-12	3.987e+02	1.839e-16	-1.839e-16	-1.087e-14	1.087e-14	5.076e-
15	1.370e-15	-4.547e-11			-1.196e+04							
El:	17	- C.c:	2	-4.619e+00	2.941e+01	1.653e+00	6.762e+01	-1.635e+01	1.635e+01	8.226e-15	-8.226e-15	2.193e-
13	9.812e+02	-7.466e-12			-1.979e+03							
El:	17	- C.c:	3	4.619e+00	2.017e+01	-1.653e+00	7.093e+01	-1.635e+01	1.635e+01	8.213e-15	-8.213e-15	2.201e-
13	9.812e+02	-7.395e-12			-2.177e+03							
El:	17	- C.c:	4	-4.619e+00	2.941e+01	1.653e+00	6.762e+01	1.635e+01	-1.635e+01	-2.305e-14	2.305e-14	-2.080e-
13	-9.812e+02	-7.466e-12			-1.979e+03							
El:	17	- C.c:	5	4.619e+00	2.017e+01	-1.653e+00	7.093e+01	1.635e+01	-1.635e+01	-2.306e-14	2.306e-14	-2.071e-
13	-9.812e+02	-7.395e-12			-2.177e+03							
El:	17	- C.c:	6	-1.540e+01	4.019e+01	5.510e+00	6.376e+01	-4.906e+00	4.906e+00	-2.704e-15	2.704e-15	6.874e-
14	2.944e+02	-7.550e-12			-1.748e+03							
El:	17	- C.c:	7	1.540e+01	9.393e+00	-5.510e+00	7.478e+01	-4.906e+00	4.906e+00	-2.747e-15	2.747e-15	7.156e-
14	2.944e+02	-7.312e-12			-2.409e+03							
El:	17	- C.c:	8	-1.540e+01	4.019e+01	5.510e+00	6.376e+01	4.906e+00	-4.906e+00	-1.209e-14	1.209e-14	-5.942e-
14	-2.944e+02	-7.550e-12			-1.748e+03							
El:	17	- C.c:	9	1.540e+01	9.393e+00	-5.510e+00	7.478e+01	4.906e+00	-4.906e+00	-1.213e-14	1.213e-14	-5.661e-
14	-2.944e+02	-7.312e-12			-2.409e+03							
El:	17	- C.c:	10	-4.619e+00	2.941e+01	1.653e+00	6.762e+01	-1.635e+01	1.635e+01	8.226e-15	-8.226e-15	2.193e-
13	9.812e+02	-7.466e-12			-1.979e+03							
El:	17	- C.c:	11	4.619e+00	2.017e+01	-1.653e+00	7.093e+01	-1.635e+01	1.635e+01	8.213e-15	-8.213e-15	2.201e-
13	9.812e+02	-7.395e-12			-2.177e+03							
El:	17	- C.c:	12	-4.619e+00	2.941e+01	1.653e+00	6.762e+01	1.635e+01	-1.635e+01	-2.305e-14	2.305e-14	-2.080e-
13	-9.812e+02	-7.466e-12			-1.979e+03							
El:	17	- C.c:	13	4.619e+00	2.017e+01	-1.653e+00	7.093e+01	1.635e+01	-1.635e+01	-2.306e-14	2.306e-14	-2.071e-
13	-9.812e+02	-7.395e-12			-2.177e+03							
El:	17	- C.c:	14	-1.540e+01	4.019e+01	5.510e+00	6.376e+01	-4.906e+00	4.906e+00	-2.704e-15	2.704e-15	6.874e-
14	2.944e+02	-7.550e-12			-1.748e+03							
El:	17	- C.c:	15	1.540e+01	9.393e+00	-5.510e+00	7.478e+01	-4.906e+00	4.906e+00	-2.747e-15	2.747e-15	7.156e-
14	2.944e+02	-7.312e-12			-2.409e+03							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	17	- C.c:	16	-1.540e+01	4.019e+01	5.510e+00	6.376e+01	4.906e+00	-4.906e+00	-1.209e-14	1.209e-14	-5.942e-
14				-2.944e+02	-7.550e-12	-1.748e+03						
El:	17	- C.c:	17	1.540e+01	9.393e+00	-5.510e+00	7.478e+01	4.906e+00	-4.906e+00	-1.213e-14	1.213e-14	-5.661e-
14				-2.944e+02	-7.312e-12	-2.409e+03						
El:	17	- C.c:	18	3.189e-12	9.605e+01	-9.792e-13	2.684e+02	1.645e-16	-1.645e-16	-8.207e-15	8.207e-15	4.253e-
15				9.495e-16	-3.053e-11	-8.052e+03						
El:	17	- C.c:	19	1.672e-12	5.151e+01	-5.174e-13	1.440e+02	2.392e-16	-2.392e-16	-7.713e-15	7.713e-15	5.387e-
15				6.099e-16	-1.609e-11	-4.319e+03						
El:	17	- C.c:	20	7.618e-13	2.479e+01	-2.403e-13	6.927e+01	2.841e-16	-2.841e-16	-7.417e-15	7.417e-15	6.067e-
15				4.062e-16	-7.431e-12	-2.078e+03						
El:	18	- C.c:	1	6.352e+02	2.309e-15	9.033e+02	8.718e+02	2.773e+00	-2.773e+00	-2.398e+02	2.398e+02	-
2.499e+02				-4.909e+02	4.215e+03	5.309e-12						
El:	18	- C.c:	2	1.104e+02	1.776e-15	1.565e+02	1.519e+02	7.814e-01	-7.814e-01	-4.475e+01	4.475e+01	-
8.189e+01				-1.268e+02	6.212e+02	6.139e-13						
El:	18	- C.c:	3	1.104e+02	1.776e-15	1.571e+02	1.513e+02	4.354e-01	-4.354e-01	-4.864e+01	4.864e+01	-
5.157e+01				-6.474e+01	7.621e+02	6.139e-13						
El:	18	- C.c:	4	1.104e+02	1.776e-15	1.565e+02	1.519e+02	6.905e-01	-6.905e-01	-4.475e+01	4.475e+01	-
5.775e+01				-1.267e+02	6.212e+02	6.139e-13						
El:	18	- C.c:	5	1.104e+02	1.776e-15	1.571e+02	1.513e+02	3.444e-01	-3.444e-01	-4.863e+01	4.863e+01	-
2.743e+01				-6.458e+01	7.621e+02	6.139e-13						
El:	18	- C.c:	6	1.104e+02	1.776e-15	1.559e+02	1.525e+02	1.153e+00	-1.153e+00	-4.022e+01	4.022e+01	-
1.088e+02				-1.992e+02	4.569e+02	6.139e-13						
El:	18	- C.c:	7	1.104e+02	1.776e-15	1.577e+02	1.507e+02	-1.036e-04	1.036e-04	-5.317e+01	5.317e+01	-
7.750e+00				7.778e+00	9.265e+02	6.139e-13						
El:	18	- C.c:	8	1.104e+02	1.776e-15	1.559e+02	1.525e+02	1.126e+00	-1.126e+00	-4.021e+01	4.021e+01	-
1.016e+02				-1.992e+02	4.569e+02	6.139e-13						
El:	18	- C.c:	9	1.104e+02	1.776e-15	1.577e+02	1.507e+02	-2.740e-02	2.740e-02	-5.317e+01	5.317e+01	-5.068e-
01				7.826e+00	9.265e+02	6.139e-13						
El:	18	- C.c:	10	1.104e+02	1.776e-15	1.565e+02	1.519e+02	7.814e-01	-7.814e-01	-4.475e+01	4.475e+01	-
8.189e+01				-1.268e+02	6.212e+02	6.139e-13						
El:	18	- C.c:	11	1.104e+02	1.776e-15	1.571e+02	1.513e+02	4.354e-01	-4.354e-01	-4.864e+01	4.864e+01	-
5.157e+01				-6.474e+01	7.621e+02	6.139e-13						
El:	18	- C.c:	12	1.104e+02	1.776e-15	1.565e+02	1.519e+02	6.905e-01	-6.905e-01	-4.475e+01	4.475e+01	-
5.775e+01				-1.267e+02	6.212e+02	6.139e-13						
El:	18	- C.c:	13	1.104e+02	1.776e-15	1.571e+02	1.513e+02	3.444e-01	-3.444e-01	-4.863e+01	4.863e+01	-
2.743e+01				-6.458e+01	7.621e+02	6.139e-13						
El:	18	- C.c:	14	1.104e+02	1.776e-15	1.559e+02	1.525e+02	1.153e+00	-1.153e+00	-4.022e+01	4.022e+01	-
1.088e+02				-1.992e+02	4.569e+02	6.139e-13						
El:	18	- C.c:	15	1.104e+02	1.776e-15	1.577e+02	1.507e+02	-1.036e-04	1.036e-04	-5.317e+01	5.317e+01	-
7.750e+00				7.778e+00	9.265e+02	6.139e-13						
El:	18	- C.c:	16	1.104e+02	1.776e-15	1.559e+02	1.525e+02	1.126e+00	-1.126e+00	-4.021e+01	4.021e+01	-
1.016e+02				-1.992e+02	4.569e+02	6.139e-13						
El:	18	- C.c:	17	1.104e+02	1.776e-15	1.577e+02	1.507e+02	-2.740e-02	2.740e-02	-5.317e+01	5.317e+01	-5.068e-
01				7.826e+00	9.265e+02	6.139e-13						
El:	18	- C.c:	18	4.276e+02	1.776e-15	6.081e+02	5.869e+02	1.880e+00	-1.880e+00	-1.622e+02	1.622e+02	-
1.700e+02				-3.321e+02	2.831e+03	3.524e-12						
El:	18	- C.c:	19	2.293e+02	1.776e-15	3.260e+02	3.148e+02	1.057e+00	-1.057e+00	-9.001e+01	9.001e+01	-
9.793e+01				-1.844e+02	1.494e+03	1.705e-12						
El:	18	- C.c:	20	1.104e+02	1.776e-15	1.568e+02	1.516e+02	5.629e-01	-5.629e-01	-4.669e+01	4.669e+01	-
5.466e+01				-9.571e+01	6.917e+02	6.139e-13						
El:	19	- C.c:	1	-6.629e-11	1.427e+02	-1.822e-11	3.987e+02	1.093e-13	-1.093e-13	-8.037e-12	8.037e-12	1.640e-
11				-1.000e-11	-3.779e-10	-1.196e+04						
El:	19	- C.c:	2	4.619e+00	2.017e+01	-1.653e+00	7.093e+01	1.635e+01	-1.635e+01	-1.091e-12	1.091e-12	3.726e-
12				-9.812e+02	-6.676e-11	-2.177e+03						
El:	19	- C.c:	3	-4.619e+00	2.941e+01	1.653e+00	6.762e+01	1.635e+01	-1.635e+01	-2.620e-12	2.620e-12	1.984e-
12				-9.812e+02	-5.377e-11	-1.979e+03						
El:	19	- C.c:	4	4.619e+00	2.017e+01	-1.653e+00	7.093e+01	-1.635e+01	1.635e+01	-2.601e-13	2.601e-13	4.516e-
12				9.812e+02	-6.914e-11	-2.177e+03						
El:	19	- C.c:	5	-4.619e+00	2.941e+01	1.653e+00	6.762e+01	-1.635e+01	1.635e+01	-1.790e-12	1.790e-12	2.774e-
12				9.812e+02	-5.615e-11	-1.979e+03						
El:	19	- C.c:	6	1.540e+01	9.393e+00	-5.510e+00	7.478e+01	4.906e+00	-4.906e+00	9.849e-13	-9.849e-13	6.035e-
12				-2.944e+02	-8.275e-11	-2.409e+03						
El:	19	- C.c:	7	-1.540e+01	4.019e+01	5.510e+00	6.376e+01	4.906e+00	-4.906e+00	-4.114e-12	4.114e-12	2.276e-
13				-2.944e+02	-3.944e-11	-1.748e+03						

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	19	- C.c: 8	1.540e+01	9.393e+00	-5.510e+00	7.478e+01	-4.906e+00	4.906e+00	1.234e-12	-1.234e-12	6.272e-
12		2.944e+02	-8.347e-11	-2.409e+03	5.510e+00						
El:	19	- C.c: 9	-1.540e+01	4.019e+01	5.510e+00	6.376e+01	-4.906e+00	4.906e+00	-3.865e-12	3.865e-12	4.646e-
13		2.944e+02	-4.015e-11	-1.748e+03							
El:	19	- C.c: 10	4.619e+00	2.017e+01	-1.653e+00	7.093e+01	1.635e+01	-1.635e+01	-1.091e-12	1.091e-12	3.726e-
12		-9.812e+02	-6.676e-11	-2.177e+03	1.653e+00						
El:	19	- C.c: 11	-4.619e+00	2.941e+01	1.653e+00	6.762e+01	1.635e+01	-1.635e+01	-2.620e-12	2.620e-12	1.984e-
12		-9.812e+02	-5.377e-11	-1.979e+03	-1.653e+00						
El:	19	- C.c: 12	4.619e+00	2.017e+01	-1.653e+00	7.093e+01	-1.635e+01	1.635e+01	-2.601e-13	2.601e-13	4.516e-
12		9.812e+02	-6.914e-11	-2.177e+03	1.653e+00						
El:	19	- C.c: 13	-4.619e+00	2.941e+01	1.653e+00	6.762e+01	-1.635e+01	1.635e+01	-1.790e-12	1.790e-12	2.774e-
12		9.812e+02	-5.615e-11	-1.979e+03	-1.653e+00						
El:	19	- C.c: 14	1.540e+01	9.393e+00	-5.510e+00	7.478e+01	4.906e+00	-4.906e+00	9.849e-13	-9.849e-13	6.035e-
12		-2.944e+02	-8.275e-11	-2.409e+03	5.510e+00						
El:	19	- C.c: 15	-1.540e+01	4.019e+01	5.510e+00	6.376e+01	4.906e+00	-4.906e+00	-4.114e-12	4.114e-12	2.276e-
13		-2.944e+02	-3.944e-11	-1.748e+03	-5.510e+00						
El:	19	- C.c: 16	1.540e+01	9.393e+00	-5.510e+00	7.478e+01	-4.906e+00	4.906e+00	1.234e-12	-1.234e-12	6.272e-
12		2.944e+02	-8.347e-11	-2.409e+03	5.510e+00						
El:	19	- C.c: 17	-1.540e+01	4.019e+01	5.510e+00	6.376e+01	-4.906e+00	4.906e+00	-3.865e-12	3.865e-12	4.646e-
13		2.944e+02	-4.015e-11	-1.748e+03	-1.225e-11						
El:	19	- C.c: 18	-4.469e-11	9.605e+01	-1.225e-11	2.684e+02	7.196e-14	-7.196e-14	-5.418e-12	5.418e-12	1.110e-
11		-6.695e-12	-2.537e-10	-8.052e+03	-6.525e-12						
El:	19	- C.c: 19	-2.423e-11	5.151e+01	-6.525e-12	1.440e+02	3.257e-14	-3.257e-14	-2.932e-12	2.932e-12	6.195e-
12		-3.450e-12	-1.336e-10	-4.319e+03	-3.088e-12						
El:	19	- C.c: 20	-1.195e-11	2.479e+01	-3.088e-12	6.927e+01	8.931e-15	-8.931e-15	-1.440e-12	1.440e-12	3.250e-
12		-1.504e-12	-6.145e-11	-2.078e+03	9.323e+02						
El:	20	- C.c: 1	6.352e+02	0.000e+00	9.323e+02	8.428e+02	-5.500e+01	5.500e+01	-3.090e+02	3.090e+02	
1.504e+04		-3.446e+02	1.195e+04	2.161e-11	1.623e+02						
El:	20	- C.c: 2	1.104e+02	0.000e+00	1.623e+02	1.461e+02	-6.219e+00	6.219e+00	-6.184e+01	6.184e+01	
1.708e+03		-4.670e+01	2.176e+03	6.162e-12	1.616e+02						
El:	20	- C.c: 3	1.104e+02	0.000e+00	1.616e+02	1.468e+02	-1.705e+01	1.705e+01	-5.537e+01	5.537e+01	
4.641e+03		-8.529e+01	1.977e+03	1.473e-12	1.623e+02						
El:	20	- C.c: 4	1.104e+02	0.000e+00	1.623e+02	1.461e+02	-2.152e+00	2.152e+00	-6.228e+01	6.228e+01	
6.287e+02		-5.375e+01	2.176e+03	6.175e-12	1.616e+02						
El:	20	- C.c: 5	1.104e+02	0.000e+00	1.616e+02	1.468e+02	-1.299e+01	1.299e+01	-5.581e+01	5.581e+01	
3.561e+03		-9.235e+01	1.977e+03	1.486e-12	1.632e+02						
El:	20	- C.c: 6	1.104e+02	0.000e+00	1.632e+02	1.452e+02	7.845e+00	-7.845e+00	-6.954e+01	6.954e+01	-
2.091e+03		-4.144e+00	2.407e+03	1.164e-11	1.607e+02						
El:	20	- C.c: 7	1.104e+02	0.000e+00	1.607e+02	1.477e+02	-2.827e+01	2.827e+01	-4.798e+01	4.798e+01	
7.685e+03		-1.328e+02	1.746e+03	-3.993e-12	1.632e+02						
El:	20	- C.c: 8	1.104e+02	0.000e+00	1.632e+02	1.452e+02	9.065e+00	-9.065e+00	-6.967e+01	6.967e+01	-
2.415e+03		-6.260e+00	2.407e+03	1.164e-11	1.607e+02						
El:	20	- C.c: 9	1.104e+02	0.000e+00	1.607e+02	1.477e+02	-2.705e+01	2.705e+01	-4.811e+01	4.811e+01	
7.361e+03		-1.349e+02	1.746e+03	-3.989e-12	1.623e+02						
El:	20	- C.c: 10	1.104e+02	0.000e+00	1.623e+02	1.461e+02	-6.219e+00	6.219e+00	-6.184e+01	6.184e+01	
1.708e+03		-4.670e+01	2.176e+03	6.162e-12	1.616e+02						
El:	20	- C.c: 11	1.104e+02	0.000e+00	1.616e+02	1.468e+02	-1.705e+01	1.705e+01	-5.537e+01	5.537e+01	
4.641e+03		-8.529e+01	1.977e+03	1.473e-12	1.623e+02						
El:	20	- C.c: 12	1.104e+02	0.000e+00	1.623e+02	1.461e+02	-2.152e+00	2.152e+00	-6.228e+01	6.228e+01	
6.287e+02		-5.375e+01	2.176e+03	6.175e-12	1.616e+02						
El:	20	- C.c: 13	1.104e+02	0.000e+00	1.616e+02	1.468e+02	-1.299e+01	1.299e+01	-5.581e+01	5.581e+01	
3.561e+03		-9.235e+01	1.977e+03	1.486e-12	1.632e+02						
El:	20	- C.c: 14	1.104e+02	0.000e+00	1.632e+02	1.452e+02	7.845e+00	-7.845e+00	-6.954e+01	6.954e+01	-
2.091e+03		-4.144e+00	2.407e+03	1.164e-11	1.607e+02						
El:	20	- C.c: 15	1.104e+02	0.000e+00	1.607e+02	1.477e+02	-2.827e+01	2.827e+01	-4.798e+01	4.798e+01	
7.685e+03		-1.328e+02	1.746e+03	-3.993e-12	1.632e+02						
El:	20	- C.c: 16	1.104e+02	0.000e+00	1.632e+02	1.452e+02	9.065e+00	-9.065e+00	-6.967e+01	6.967e+01	-
2.415e+03		-6.260e+00	2.407e+03	1.164e-11	1.607e+02						
El:	20	- C.c: 17	1.104e+02	0.000e+00	1.607e+02	1.477e+02	-2.705e+01	2.705e+01	-4.811e+01	4.811e+01	
7.361e+03		-1.349e+02	1.746e+03	-3.989e-12	6.276e+02						
El:	20	- C.c: 18	4.276e+02	0.000e+00	6.276e+02	5.674e+02	-3.703e+01	3.703e+01	-2.088e+02	2.088e+02	
1.013e+04		-2.335e+02	8.046e+03	1.456e-11	3.366e+02						
El:	20	- C.c: 19	2.293e+02	0.000e+00	3.366e+02	3.043e+02	-1.989e+01	1.989e+01	-1.151e+02	1.151e+02	
5.444e+03		-1.310e+02	4.315e+03	7.849e-12							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	20	- C.c:	20	1.104e+02	0.000e+00	1.620e+02	1.464e+02	-9.603e+00	9.603e+00	-5.882e+01	5.882e+01	
2.635e+03	-6.952e+01			2.076e+03		3.824e-12						
El:	21	- C.c:	1	2.622e-06	2.818e+02	7.326e-06	7.875e+02	-6.620e-05	6.620e-05	-3.549e-03	3.549e-03	3.256e-
03	7.162e-04			5.828e-05		-2.363e+04						
El:	21	- C.c:	2	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	-5.864e-04	5.864e-04	5.382e-
04	-1.859e+03			1.024e-05		-4.116e+03						
El:	21	- C.c:	3	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	-6.030e-04	6.030e-04	5.530e-
04	-1.859e+03			1.037e-05		-3.740e+03						
El:	21	- C.c:	4	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-5.864e-04	5.864e-04	5.382e-
04	1.859e+03			9.743e-06		-4.116e+03						
El:	21	- C.c:	5	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-6.030e-04	6.030e-04	5.530e-
04	1.859e+03			9.873e-06		-3.740e+03						
El:	21	- C.c:	6	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	-5.670e-04	5.670e-04	5.210e-
04	-5.577e+02			9.917e-06		-4.554e+03						
El:	21	- C.c:	7	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	-6.224e-04	6.224e-04	5.702e-
04	-5.577e+02			1.035e-05		-3.301e+03						
El:	21	- C.c:	8	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	-5.670e-04	5.670e-04	5.210e-
04	5.577e+02			9.767e-06		-4.554e+03						
El:	21	- C.c:	9	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	-6.224e-04	6.224e-04	5.702e-
04	5.577e+02			1.020e-05		-3.301e+03						
El:	21	- C.c:	10	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	-5.864e-04	5.864e-04	5.382e-
04	-1.859e+03			1.024e-05		-4.116e+03						
El:	21	- C.c:	11	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	-6.030e-04	6.030e-04	5.530e-
04	-1.859e+03			1.037e-05		-3.740e+03						
El:	21	- C.c:	12	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-5.864e-04	5.864e-04	5.382e-
04	1.859e+03			9.743e-06		-4.116e+03						
El:	21	- C.c:	13	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-6.030e-04	6.030e-04	5.530e-
04	1.859e+03			9.873e-06		-3.740e+03						
El:	21	- C.c:	14	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	-5.670e-04	5.670e-04	5.210e-
04	-5.577e+02			9.917e-06		-4.554e+03						
El:	21	- C.c:	15	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	-6.224e-04	6.224e-04	5.702e-
04	-5.577e+02			1.035e-05		-3.301e+03						
El:	21	- C.c:	16	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	-5.670e-04	5.670e-04	5.210e-
04	5.577e+02			9.767e-06		-4.554e+03						
El:	21	- C.c:	17	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	-6.224e-04	6.224e-04	5.702e-
04	5.577e+02			1.020e-05		-3.301e+03						
El:	21	- C.c:	18	1.764e-06	1.894e+02	4.930e-06	5.292e+02	-4.450e-05	4.450e-05	-2.385e-03	2.385e-03	2.189e-
03	4.814e-04			3.922e-05		-1.588e+04						
El:	21	- C.c:	19	9.444e-07	1.003e+02	2.639e-06	2.803e+02	-2.362e-05	2.362e-05	-1.266e-03	1.266e-03	1.162e-
03	2.555e-04			2.099e-05		-8.408e+03						
El:	21	- C.c:	20	4.525e-07	4.685e+01	1.264e-06	1.309e+02	-1.109e-05	1.109e-05	-5.947e-04	5.947e-04	5.456e-
04	1.200e-04			1.006e-05		-3.928e+03						
El:	22	- C.c:	1	1.255e+03	0.000e+00	1.826e+03	1.680e+03	-1.866e+00	1.866e+00	-2.318e+02	2.318e+02	
9.534e+02	-4.550e+02			1.939e+04		1.106e-11						
El:	22	- C.c:	2	2.086e+02	0.000e+00	3.036e+02	2.792e+02	-2.990e-01	2.990e-01	-4.706e+01	4.706e+01	
1.395e+02	-5.966e+01			3.255e+03		1.569e-12						
El:	22	- C.c:	3	2.086e+02	0.000e+00	3.025e+02	2.804e+02	-5.080e-01	5.080e-01	-4.325e+01	4.325e+01	
2.537e+02	-1.180e+02			2.947e+03		1.569e-12						
El:	22	- C.c:	4	2.086e+02	0.000e+00	3.036e+02	2.792e+02	-1.857e-02	1.857e-02	-4.707e+01	4.707e+01	
6.510e+01	-6.014e+01			3.255e+03		1.569e-12						
El:	22	- C.c:	5	2.086e+02	0.000e+00	3.025e+02	2.804e+02	-2.275e-01	2.275e-01	-4.326e+01	4.326e+01	
1.792e+02	-1.185e+02			2.947e+03		1.569e-12						
El:	22	- C.c:	6	2.086e+02	0.000e+00	3.050e+02	2.779e+02	4.293e-02	-4.293e-02	-5.151e+01	5.151e+01	-
1.968e+01	8.211e+00			3.613e+03		1.569e-12						
El:	22	- C.c:	7	2.086e+02	0.000e+00	3.011e+02	2.817e+02	-6.536e-01	6.536e-01	-3.881e+01	3.881e+01	
3.608e+02	-1.862e+02			2.589e+03		1.569e-12						
El:	22	- C.c:	8	2.086e+02	0.000e+00	3.050e+02	2.779e+02	1.271e-01	-1.271e-01	-5.151e+01	5.151e+01	-
4.201e+01	8.065e+00			3.613e+03		1.569e-12						
El:	22	- C.c:	9	2.086e+02	0.000e+00	3.011e+02	2.817e+02	-5.695e-01	5.695e-01	-3.881e+01	3.881e+01	
3.385e+02	-1.863e+02			2.589e+03		1.569e-12						
El:	22	- C.c:	10	2.086e+02	0.000e+00	3.036e+02	2.792e+02	-2.990e-01	2.990e-01	-4.706e+01	4.706e+01	
1.395e+02	-5.966e+01			3.255e+03		1.569e-12						
El:	22	- C.c:	11	2.086e+02	0.000e+00	3.025e+02	2.804e+02	-5.080e-01	5.080e-01	-4.325e+01	4.325e+01	
2.537e+02	-1.180e+02			2.947e+03		1.569e-12						

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	22	- C.c: 12	2.086e+02	0.000e+00	3.036e+02	2.792e+02	-1.857e-02	1.857e-02	-4.707e+01	4.707e+01	
6.510e+01	-6.014e+01		3.255e+03	1.569e-12							
El:	22	- C.c: 13	2.086e+02	0.000e+00	3.025e+02	2.804e+02	-2.275e-01	2.275e-01	-4.326e+01	4.326e+01	
1.792e+02	-1.185e+02		2.947e+03	1.569e-12							
El:	22	- C.c: 14	2.086e+02	0.000e+00	3.050e+02	2.779e+02	4.293e-02	-4.293e-02	-5.151e+01	5.151e+01	-
1.968e+01	8.211e+00		3.613e+03	1.569e-12							
El:	22	- C.c: 15	2.086e+02	0.000e+00	3.011e+02	2.817e+02	-6.536e-01	6.536e-01	-3.881e+01	3.881e+01	
3.608e+02	-1.862e+02		2.589e+03	1.569e-12							
El:	22	- C.c: 16	2.086e+02	0.000e+00	3.050e+02	2.779e+02	1.271e-01	-1.271e-01	-5.151e+01	5.151e+01	-
4.201e+01	8.065e+00		3.613e+03	1.569e-12							
El:	22	- C.c: 17	2.086e+02	0.000e+00	3.011e+02	2.817e+02	-5.695e-01	5.695e-01	-3.881e+01	3.881e+01	
3.385e+02	-1.863e+02		2.589e+03	1.569e-12							
El:	22	- C.c: 18	8.431e+02	0.000e+00	1.227e+03	1.129e+03	-1.246e+00	1.246e+00	-1.569e+02	1.569e+02	
6.408e+02	-3.079e+02		1.301e+04	7.390e-12							
El:	22	- C.c: 19	4.465e+02	0.000e+00	6.494e+02	5.984e+02	-6.318e-01	6.318e-01	-8.705e+01	8.705e+01	
3.399e+02	-1.711e+02		6.816e+03	3.752e-12							
El:	22	- C.c: 20	2.086e+02	0.000e+00	3.030e+02	2.798e+02	-2.633e-01	2.633e-01	-4.516e+01	4.516e+01	
1.594e+02	-8.906e+01		3.101e+03	1.569e-12							
El:	23	- C.c: 1	6.112e-12	2.818e+02	5.228e-11	7.875e+02	-2.028e-04	2.028e-04	2.252e-13	-2.252e-13	6.083e-
03	6.083e-03		1.201e-09	-2.363e+04							
El:	23	- C.c: 2	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	-4.339e-13	4.339e-13	1.086e-
03	-1.859e+03		2.119e-10	-4.116e+03							
El:	23	- C.c: 3	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	-4.069e-13	4.069e-13	1.069e-
03	-1.859e+03		2.087e-10	-3.740e+03							
El:	23	- C.c: 4	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	4.869e-13	-4.869e-13	1.086e-
03	1.859e+03		2.119e-10	-4.116e+03							
El:	23	- C.c: 5	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	5.139e-13	-5.139e-13	1.069e-
03	1.859e+03		2.087e-10	-3.740e+03							
El:	23	- C.c: 6	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	-1.431e-13	1.431e-13	1.105e-
03	-5.577e+02		2.157e-10	-4.554e+03							
El:	23	- C.c: 7	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	-5.319e-14	5.319e-14	1.050e-
03	-5.577e+02		2.049e-10	-3.301e+03							
El:	23	- C.c: 8	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	1.332e-13	-1.332e-13	1.105e-
03	5.577e+02		2.157e-10	-4.554e+03							
El:	23	- C.c: 9	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	2.231e-13	-2.231e-13	1.050e-
03	5.577e+02		2.049e-10	-3.301e+03							
El:	23	- C.c: 10	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	-4.339e-13	4.339e-13	1.086e-
03	-1.859e+03		2.119e-10	-4.116e+03							
El:	23	- C.c: 11	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	-4.069e-13	4.069e-13	1.069e-
03	-1.859e+03		2.087e-10	-3.740e+03							
El:	23	- C.c: 12	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	4.869e-13	-4.869e-13	1.086e-
03	1.859e+03		2.119e-10	-4.116e+03							
El:	23	- C.c: 13	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	5.139e-13	-5.139e-13	1.069e-
03	1.859e+03		2.087e-10	-3.740e+03							
El:	23	- C.c: 14	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	-1.431e-13	1.431e-13	1.105e-
03	-5.577e+02		2.157e-10	-4.554e+03							
El:	23	- C.c: 15	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	-5.319e-14	5.319e-14	1.050e-
03	-5.577e+02		2.049e-10	-3.301e+03							
El:	23	- C.c: 16	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	1.332e-13	-1.332e-13	1.105e-
03	5.577e+02		2.157e-10	-4.554e+03							
El:	23	- C.c: 17	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	2.231e-13	-2.231e-13	1.050e-
03	5.577e+02		2.049e-10	-3.301e+03							
El:	23	- C.c: 18	4.159e-12	1.894e+02	3.521e-11	5.292e+02	-1.366e-04	1.366e-04	1.517e-13	-1.517e-13	4.099e-
03	4.099e-03		8.087e-10	-1.588e+04							
El:	23	- C.c: 19	2.397e-12	1.003e+02	1.896e-11	2.803e+02	-7.368e-05	7.368e-05	8.189e-14	-8.189e-14	2.210e-
03	2.210e-03		4.347e-10	-8.408e+03							
El:	23	- C.c: 20	1.340e-12	4.685e+01	9.201e-12	1.309e+02	-3.591e-05	3.591e-05	3.998e-14	-3.998e-14	1.077e-
03	1.077e-03		2.103e-10	-3.928e+03							
El:	24	- C.c: 1	1.255e+03	0.000e+00	1.844e+03	1.662e+03	3.445e+00	-3.445e+00	-2.100e+02	2.100e+02	-
4.860e+02	-4.342e+02		2.420e+04	1.106e-11							
El:	24	- C.c: 2	2.086e+02	0.000e+00	3.073e+02	2.756e+02	3.374e-01	-3.374e-01	-4.265e+01	4.265e+01	-
3.335e+01	-5.678e+01		4.232e+03	1.569e-12							
El:	24	- C.c: 3	2.086e+02	0.000e+00	3.058e+02	2.770e+02	7.685e-01	-7.685e-01	-3.926e+01	3.926e+01	-
9.374e+01	-1.115e+02		3.847e+03	1.569e-12							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	24	- C.c:	4	2.086e+02	0.000e+00	3.073e+02	2.756e+02	5.284e-01	-5.284e-01	-4.265e+01	4.265e+01	-
8.351e+01	-5.763e+01	4.232e+03	1.569e-12	3.058e+02	2.770e+02	9.595e-01	-9.595e-01	-3.926e+01	3.926e+01	-		
El:	24	- C.c:	5	2.086e+02	0.000e+00	3.058e+02	2.770e+02	9.595e-01	-9.595e-01	-3.926e+01	3.926e+01	-
1.439e+02	-1.124e+02	3.847e+03	1.569e-12	3.090e+02	2.739e+02	-9.867e-02	9.867e-02	-4.660e+01	4.660e+01	-		
El:	24	- C.c:	6	2.086e+02	0.000e+00	3.090e+02	2.739e+02	-9.867e-02	9.867e-02	-4.660e+01	4.660e+01	-
1.955e+01	6.805e+00	4.682e+03	1.569e-12	3.042e+02	2.787e+02	1.338e+00	-1.338e+00	-3.530e+01	3.530e+01	-		
El:	24	- C.c:	7	2.086e+02	0.000e+00	3.042e+02	2.787e+02	1.338e+00	-1.338e+00	-3.530e+01	3.530e+01	-
1.818e+02	-1.757e+02	3.398e+03	1.569e-12	3.090e+02	2.739e+02	-4.138e-02	4.138e-02	-4.660e+01	4.660e+01	-		
El:	24	- C.c:	8	2.086e+02	0.000e+00	3.090e+02	2.739e+02	-4.138e-02	4.138e-02	-4.660e+01	4.660e+01	-
4.505e+00	6.548e+00	4.682e+03	1.569e-12	3.042e+02	2.787e+02	1.396e+00	-1.396e+00	-3.530e+01	3.530e+01	-		
El:	24	- C.c:	9	2.086e+02	0.000e+00	3.042e+02	2.787e+02	1.396e+00	-1.396e+00	-3.530e+01	3.530e+01	-
1.968e+02	-1.760e+02	3.398e+03	1.569e-12	3.073e+02	2.756e+02	3.374e-01	-3.374e-01	-4.265e+01	4.265e+01	-		
El:	24	- C.c:	10	2.086e+02	0.000e+00	3.073e+02	2.756e+02	3.374e-01	-3.374e-01	-4.265e+01	4.265e+01	-
3.335e+01	-5.678e+01	4.232e+03	1.569e-12	3.058e+02	2.770e+02	7.685e-01	-7.685e-01	-3.926e+01	3.926e+01	-		
El:	24	- C.c:	11	2.086e+02	0.000e+00	3.058e+02	2.770e+02	7.685e-01	-7.685e-01	-3.926e+01	3.926e+01	-
9.374e+01	-1.115e+02	3.847e+03	1.569e-12	3.073e+02	2.756e+02	5.284e-01	-5.284e-01	-4.265e+01	4.265e+01	-		
El:	24	- C.c:	12	2.086e+02	0.000e+00	3.073e+02	2.756e+02	5.284e-01	-5.284e-01	-4.265e+01	4.265e+01	-
8.351e+01	-5.763e+01	4.232e+03	1.569e-12	3.058e+02	2.770e+02	9.595e-01	-9.595e-01	-3.926e+01	3.926e+01	-		
El:	24	- C.c:	13	2.086e+02	0.000e+00	3.058e+02	2.770e+02	9.595e-01	-9.595e-01	-3.926e+01	3.926e+01	-
1.439e+02	-1.124e+02	3.847e+03	1.569e-12	3.090e+02	2.739e+02	-9.867e-02	9.867e-02	-4.660e+01	4.660e+01	-		
El:	24	- C.c:	14	2.086e+02	0.000e+00	3.090e+02	2.739e+02	-9.867e-02	9.867e-02	-4.660e+01	4.660e+01	-
1.955e+01	6.805e+00	4.682e+03	1.569e-12	3.042e+02	2.787e+02	1.338e+00	-1.338e+00	-3.530e+01	3.530e+01	-		
El:	24	- C.c:	15	2.086e+02	0.000e+00	3.042e+02	2.787e+02	1.338e+00	-1.338e+00	-3.530e+01	3.530e+01	-
1.818e+02	-1.757e+02	3.398e+03	1.569e-12	3.090e+02	2.739e+02	-4.138e-02	4.138e-02	-4.660e+01	4.660e+01	-		
El:	24	- C.c:	16	2.086e+02	0.000e+00	3.090e+02	2.739e+02	-4.138e-02	4.138e-02	-4.660e+01	4.660e+01	-
4.505e+00	6.548e+00	4.682e+03	1.569e-12	3.042e+02	2.787e+02	1.396e+00	-1.396e+00	-3.530e+01	3.530e+01	-		
El:	24	- C.c:	17	2.086e+02	0.000e+00	3.042e+02	2.787e+02	1.396e+00	-1.396e+00	-3.530e+01	3.530e+01	-
1.968e+02	-1.760e+02	3.398e+03	1.569e-12	1.239e+03	1.117e+03	2.327e+00	-2.327e+00	-1.421e+02	1.421e+02	-		
El:	24	- C.c:	18	8.431e+02	0.000e+00	1.239e+03	1.117e+03	2.327e+00	-2.327e+00	-1.421e+02	1.421e+02	-
3.279e+02	-2.938e+02	1.626e+04	7.390e-12	6.562e+02	5.916e+02	1.278e+00	-1.278e+00	-7.887e+01	7.887e+01	-		
El:	24	- C.c:	19	4.465e+02	0.000e+00	6.562e+02	5.916e+02	1.278e+00	-1.278e+00	-7.887e+01	7.887e+01	-
1.783e+02	-1.630e+02	8.623e+03	3.752e-12	3.066e+02	2.763e+02	6.484e-01	-6.484e-01	-4.095e+01	4.095e+01	-		
El:	24	- C.c:	20	2.086e+02	0.000e+00	3.066e+02	2.763e+02	6.484e-01	-6.484e-01	-4.095e+01	4.095e+01	-
8.862e+01	-8.458e+01	4.040e+03	1.569e-12	1.499e-10	7.875e+02	-3.955e-04	3.955e-04	2.231e-14	-2.231e-14	1.187e-		
El:	25	- C.c:	1	-3.225e-11	2.818e+02	1.499e-10	7.875e+02	-3.955e-04	3.955e-04	2.231e-14	-2.231e-14	1.187e-
02	1.187e-02	3.923e-09	-2.363e+04	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	3.989e-14	-3.989e-14	2.184e-		
El:	25	- C.c:	2	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	3.989e-14	-3.989e-14	2.184e-
03	-1.859e+03	7.334e-10	-4.116e+03	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	3.952e-14	-3.952e-14	2.115e-		
El:	25	- C.c:	3	-8.751e+00	5.560e+01	-3.132e+00	1.278e+02	3.098e+01	-3.098e+01	3.952e-14	-3.952e-14	2.115e-
03	-1.859e+03	7.096e-10	-3.740e+03	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-3.139e-14	3.139e-14	2.184e-		
El:	25	- C.c:	4	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-3.139e-14	3.139e-14	2.184e-
03	1.859e+03	7.334e-10	-4.116e+03	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-3.176e-14	3.176e-14	2.115e-		
El:	25	- C.c:	5	-8.751e+00	5.560e+01	-3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-3.176e-14	3.176e-14	2.115e-
03	1.859e+03	7.096e-10	-3.740e+03	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	1.538e-14	-1.538e-14	2.265e-		
El:	25	- C.c:	6	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	1.538e-14	-1.538e-14	2.265e-
03	-5.577e+02	7.611e-10	-4.554e+03	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	1.414e-14	-1.414e-14	2.035e-		
El:	25	- C.c:	7	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	1.414e-14	-1.414e-14	2.035e-
03	-5.577e+02	6.819e-10	-3.301e+03	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	-6.007e-15	6.007e-15	2.265e-		
El:	25	- C.c:	8	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	-6.007e-15	6.007e-15	2.265e-
03	5.577e+02	7.611e-10	-4.554e+03	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	-7.245e-15	7.245e-15	2.035e-		
El:	25	- C.c:	9	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	-7.245e-15	7.245e-15	2.035e-
03	5.577e+02	6.819e-10	-3.301e+03	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	3.989e-14	-3.989e-14	2.184e-		
El:	25	- C.c:	10	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	3.989e-14	-3.989e-14	2.184e-
03	-1.859e+03	7.334e-10	-4.116e+03	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	3.952e-14	-3.952e-14	2.115e-		
El:	25	- C.c:	11	-8.751e+00	5.560e+01	-3.132e+00	1.278e+02	3.098e+01	-3.098e+01	3.952e-14	-3.952e-14	2.115e-
03	-1.859e+03	7.096e-10	-3.740e+03	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-3.139e-14	3.139e-14	2.184e-		
El:	25	- C.c:	12	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-3.139e-14	3.139e-14	2.184e-
03	1.859e+03	7.334e-10	-4.116e+03	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-3.176e-14	3.176e-14	2.115e-		
El:	25	- C.c:	13	-8.751e+00	5.560e+01	-3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-3.176e-14	3.176e-14	2.115e-
03	1.859e+03	7.096e-10	-3.740e+03	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	1.538e-14	-1.538e-14	2.265e-		
El:	25	- C.c:	14	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	1.538e-14	-1.538e-14	2.265e-
03	-5.577e+02	7.611e-10	-4.554e+03	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	1.414e-14	-1.414e-14	2.035e-		
El:	25	- C.c:	15	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	1.414e-14	-1.414e-14	2.035e-
03	-5.577e+02	6.819e-10	-3.301e+03									

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	25	- C.c: 16	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	-6.007e-15	6.007e-15	2.265e-
03		5.577e+02	7.611e-10	-4.554e+03							
El:	25	- C.c: 17	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	-7.245e-15	7.245e-15	2.035e-
03		5.577e+02	6.819e-10	-3.301e+03							
El:	25	- C.c: 18	-2.175e-11	1.894e+02	1.011e-10	5.292e+02	-2.667e-04	2.667e-04	1.505e-14	-1.505e-14	8.002e-
03		8.002e-03	2.647e-09	-1.588e+04							
El:	25	- C.c: 19	-1.179e-11	1.003e+02	5.512e-11	2.803e+02	-1.448e-04	1.448e-04	8.183e-15	-8.183e-15	4.345e-
03		4.345e-03	1.444e-09	-8.408e+03							
El:	25	- C.c: 20	-5.820e-12	4.685e+01	2.752e-11	1.309e+02	-7.166e-05	7.166e-05	4.066e-15	-4.066e-15	2.150e-
03		2.150e-03	7.215e-10	-3.928e+03							
El:	26	- C.c: 1	1.255e+03	0.000e+00	1.848e+03	1.659e+03	1.428e+00	-1.428e+00	-1.464e+02	1.464e+02	-
		8.285e+01	-2.986e+02	2.524e+04	1.106e-11						
El:	26	- C.c: 2	2.086e+02	0.000e+00	3.081e+02	2.748e+02	1.762e-02	-1.762e-02	-2.969e+01	2.969e+01	
		3.382e+01	-3.852e+01	4.442e+03	1.569e-12						
El:	26	- C.c: 3	2.086e+02	0.000e+00	3.066e+02	2.763e+02	1.995e-01	-1.995e-01	-2.732e+01	2.732e+01	
		2.300e+01	-7.630e+01	4.041e+03	1.569e-12						
El:	26	- C.c: 4	2.086e+02	0.000e+00	3.081e+02	2.748e+02	3.672e-01	-3.672e-01	-2.969e+01	2.969e+01	-
		5.809e+01	-4.001e+01	4.442e+03	1.569e-12						
El:	26	- C.c: 5	2.086e+02	0.000e+00	3.066e+02	2.763e+02	5.491e-01	-5.491e-01	-2.732e+01	2.732e+01	-
		6.890e+01	-7.778e+01	4.041e+03	1.569e-12						
El:	26	- C.c: 6	2.086e+02	0.000e+00	3.098e+02	2.730e+02	-7.223e-02	7.223e-02	-3.246e+01	3.246e+01	
		1.427e+01	5.028e+00	4.911e+03	1.569e-12						
El:	26	- C.c: 7	2.086e+02	0.000e+00	3.048e+02	2.781e+02	5.341e-01	-5.341e-01	-2.455e+01	2.455e+01	-
		2.178e+01	-1.209e+02	3.572e+03	1.569e-12						
El:	26	- C.c: 8	2.086e+02	0.000e+00	3.098e+02	2.730e+02	3.265e-02	-3.265e-02	-3.246e+01	3.246e+01	-
		1.331e+01	4.583e+00	4.911e+03	1.569e-12						
El:	26	- C.c: 9	2.086e+02	0.000e+00	3.048e+02	2.781e+02	6.390e-01	-6.390e-01	-2.455e+01	2.455e+01	-
		4.935e+01	-1.213e+02	3.572e+03	1.569e-12						
El:	26	- C.c: 10	2.086e+02	0.000e+00	3.081e+02	2.748e+02	1.762e-02	-1.762e-02	-2.969e+01	2.969e+01	
		3.382e+01	-3.852e+01	4.442e+03	1.569e-12						
El:	26	- C.c: 11	2.086e+02	0.000e+00	3.066e+02	2.763e+02	1.995e-01	-1.995e-01	-2.732e+01	2.732e+01	
		2.300e+01	-7.630e+01	4.041e+03	1.569e-12						
El:	26	- C.c: 12	2.086e+02	0.000e+00	3.081e+02	2.748e+02	3.672e-01	-3.672e-01	-2.969e+01	2.969e+01	-
		5.809e+01	-4.001e+01	4.442e+03	1.569e-12						
El:	26	- C.c: 13	2.086e+02	0.000e+00	3.066e+02	2.763e+02	5.491e-01	-5.491e-01	-2.732e+01	2.732e+01	-
		6.890e+01	-7.778e+01	4.041e+03	1.569e-12						
El:	26	- C.c: 14	2.086e+02	0.000e+00	3.098e+02	2.730e+02	-7.223e-02	7.223e-02	-3.246e+01	3.246e+01	
		1.427e+01	5.028e+00	4.911e+03	1.569e-12						
El:	26	- C.c: 15	2.086e+02	0.000e+00	3.048e+02	2.781e+02	5.341e-01	-5.341e-01	-2.455e+01	2.455e+01	-
		2.178e+01	-1.209e+02	3.572e+03	1.569e-12						
El:	26	- C.c: 16	2.086e+02	0.000e+00	3.098e+02	2.730e+02	3.265e-02	-3.265e-02	-3.246e+01	3.246e+01	-
		1.331e+01	4.583e+00	4.911e+03	1.569e-12						
El:	26	- C.c: 17	2.086e+02	0.000e+00	3.048e+02	2.781e+02	6.390e-01	-6.390e-01	-2.455e+01	2.455e+01	-
		4.935e+01	-1.213e+02	3.572e+03	1.569e-12						
El:	26	- C.c: 18	8.431e+02	0.000e+00	1.242e+03	1.114e+03	9.670e-01	-9.670e-01	-9.906e+01	9.906e+01	-
		5.628e+01	-2.020e+02	1.696e+04	7.390e-12						
El:	26	- C.c: 19	4.465e+02	0.000e+00	6.576e+02	5.901e+02	5.397e-01	-5.397e-01	-5.497e+01	5.497e+01	-
		3.207e+01	-1.121e+02	9.013e+03	3.752e-12						
El:	26	- C.c: 20	2.086e+02	0.000e+00	3.073e+02	2.756e+02	2.834e-01	-2.834e-01	-2.851e+01	2.851e+01	-
		1.754e+01	-5.815e+01	4.242e+03	1.569e-12						
El:	27	- C.c: 1	1.636e-07	2.818e+02	-5.856e-08	7.875e+02	-2.575e-14	2.575e-14	-4.682e-15	4.682e-15	1.788e-
02		-1.788e-02	8.225e-09	-2.363e+04							
El:	27	- C.c: 2	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	1.054e-13	-1.054e-13	3.329e-
03		-1.859e+03	1.516e-09	-4.116e+03							
El:	27	- C.c: 3	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	1.051e-13	-1.051e-13	3.204e-
03		-1.859e+03	1.460e-09	-3.740e+03							
El:	27	- C.c: 4	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-1.067e-13	1.067e-13	3.329e-
03		1.859e+03	1.516e-09	-4.116e+03							
El:	27	- C.c: 5	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-1.070e-13	1.070e-13	3.204e-
03		1.859e+03	1.460e-09	-3.740e+03							
El:	27	- C.c: 6	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	3.156e-14	-3.156e-14	3.475e-
03		-5.577e+02	1.582e-09	-4.554e+03							
El:	27	- C.c: 7	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	3.045e-14	-3.045e-14	3.058e-
03		-5.577e+02	1.394e-09	-3.301e+03							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	27	- C.c: 8	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	-3.205e-14	3.205e-14	3.475e-
03		5.577e+02	1.582e-09	-4.554e+03							
El:	27	- C.c: 9	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	-3.316e-14	3.316e-14	3.058e-
03		5.577e+02	1.394e-09	-3.301e+03							
El:	27	- C.c: 10	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	1.054e-13	-1.054e-13	3.329e-
03		-1.859e+03	1.516e-09	-4.116e+03							
El:	27	- C.c: 11	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	1.051e-13	-1.051e-13	3.204e-
03		-1.859e+03	1.460e-09	-3.740e+03							
El:	27	- C.c: 12	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-1.067e-13	1.067e-13	3.329e-
03		1.859e+03	1.516e-09	-4.116e+03							
El:	27	- C.c: 13	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-1.070e-13	1.070e-13	3.204e-
03		1.859e+03	1.460e-09	-3.740e+03							
El:	27	- C.c: 14	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	3.156e-14	-3.156e-14	3.475e-
03		-5.577e+02	1.582e-09	-4.554e+03							
El:	27	- C.c: 15	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	3.045e-14	-3.045e-14	3.058e-
03		-5.577e+02	1.394e-09	-3.301e+03							
El:	27	- C.c: 16	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	-3.205e-14	3.205e-14	3.475e-
03		5.577e+02	1.582e-09	-4.554e+03							
El:	27	- C.c: 17	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	-3.316e-14	3.316e-14	3.058e-
03		5.577e+02	1.394e-09	-3.301e+03							
El:	27	- C.c: 18	1.101e-07	1.894e+02	-3.939e-08	5.292e+02	-1.732e-14	1.732e-14	-3.150e-15	3.150e-15	1.206e-
02		-1.206e-02	5.547e-09	-1.588e+04							
El:	27	- C.c: 19	5.875e-08	1.003e+02	-2.103e-08	2.803e+02	-9.241e-15	9.241e-15	-1.681e-15	1.681e-15	6.564e-
03		-6.564e-03	3.010e-09	-8.408e+03							
El:	27	- C.c: 20	2.796e-08	4.685e+01	-1.001e-08	1.309e+02	-4.391e-15	4.391e-15	-7.991e-16	7.991e-16	3.267e-
03		-3.267e-03	1.488e-09	-3.928e+03							
El:	28	- C.c: 1	1.255e+03	0.000e+00	1.849e+03	1.657e+03	6.671e-01	-6.671e-01	-5.358e+01	5.358e+01	-
6.832e+01		-1.099e+02	2.565e+04	-4.074e-12							
El:	28	- C.c: 2	2.086e+02	0.000e+00	3.084e+02	2.745e+02	-1.076e-01	1.076e-01	-1.085e+01	1.085e+01	-
4.227e+01		-1.354e+01	4.525e+03	-8.197e-13							
El:	28	- C.c: 3	2.086e+02	0.000e+00	3.068e+02	2.760e+02	-2.293e-02	2.293e-02	-9.984e+00	9.984e+00	-
3.359e+01		-2.746e+01	4.117e+03	-5.274e-13							
El:	28	- C.c: 4	2.086e+02	0.000e+00	3.084e+02	2.745e+02	2.798e-01	-2.798e-01	-1.085e+01	1.085e+01	-
5.948e+01		-1.526e+01	4.525e+03	-8.197e-13							
El:	28	- C.c: 5	2.086e+02	0.000e+00	3.068e+02	2.760e+02	3.645e-01	-3.645e-01	-9.985e+00	9.985e+00	-
6.817e+01		-2.919e+01	4.117e+03	-5.274e-13							
El:	28	- C.c: 6	2.086e+02	0.000e+00	3.102e+02	2.727e+02	-7.075e-02	7.075e-02	-1.187e+01	1.187e+01	-
1.680e+01		2.102e+00	5.002e+03	-1.161e-12							
El:	28	- C.c: 7	2.086e+02	0.000e+00	3.051e+02	2.778e+02	2.114e-01	-2.114e-01	-8.970e+00	8.970e+00	-
1.216e+01		-4.431e+01	3.640e+03	-1.863e-13							
El:	28	- C.c: 8	2.086e+02	0.000e+00	3.102e+02	2.727e+02	4.547e-02	-4.547e-02	-1.187e+01	1.187e+01	-
1.373e+01		1.585e+00	5.002e+03	-1.161e-12							
El:	28	- C.c: 9	2.086e+02	0.000e+00	3.051e+02	2.778e+02	3.276e-01	-3.276e-01	-8.971e+00	8.971e+00	-
4.269e+01		-4.483e+01	3.640e+03	-1.863e-13							
El:	28	- C.c: 10	2.086e+02	0.000e+00	3.084e+02	2.745e+02	-1.076e-01	1.076e-01	-1.085e+01	1.085e+01	-
4.227e+01		-1.354e+01	4.525e+03	-8.197e-13							
El:	28	- C.c: 11	2.086e+02	0.000e+00	3.068e+02	2.760e+02	-2.293e-02	2.293e-02	-9.984e+00	9.984e+00	-
3.359e+01		-2.746e+01	4.117e+03	-5.274e-13							
El:	28	- C.c: 12	2.086e+02	0.000e+00	3.084e+02	2.745e+02	2.798e-01	-2.798e-01	-1.085e+01	1.085e+01	-
5.948e+01		-1.526e+01	4.525e+03	-8.197e-13							
El:	28	- C.c: 13	2.086e+02	0.000e+00	3.068e+02	2.760e+02	3.645e-01	-3.645e-01	-9.985e+00	9.985e+00	-
6.817e+01		-2.919e+01	4.117e+03	-5.274e-13							
El:	28	- C.c: 14	2.086e+02	0.000e+00	3.102e+02	2.727e+02	-7.075e-02	7.075e-02	-1.187e+01	1.187e+01	-
1.680e+01		2.102e+00	5.002e+03	-1.161e-12							
El:	28	- C.c: 15	2.086e+02	0.000e+00	3.051e+02	2.778e+02	2.114e-01	-2.114e-01	-8.970e+00	8.970e+00	-
1.216e+01		-4.431e+01	3.640e+03	-1.863e-13							
El:	28	- C.c: 16	2.086e+02	0.000e+00	3.102e+02	2.727e+02	4.547e-02	-4.547e-02	-1.187e+01	1.187e+01	-
1.373e+01		1.585e+00	5.002e+03	-1.161e-12							
El:	28	- C.c: 17	2.086e+02	0.000e+00	3.051e+02	2.778e+02	3.276e-01	-3.276e-01	-8.971e+00	8.971e+00	-
4.269e+01		-4.483e+01	3.640e+03	-1.863e-13							
El:	28	- C.c: 18	8.431e+02	0.000e+00	1.243e+03	1.113e+03	4.511e-01	-4.511e-01	-3.625e+01	3.625e+01	-
4.617e+01		-7.433e+01	1.724e+04	-2.737e-12							
El:	28	- C.c: 19	4.465e+02	0.000e+00	6.582e+02	5.896e+02	2.494e-01	-2.494e-01	-2.010e+01	2.010e+01	-
2.540e+01		-4.123e+01	9.166e+03	-1.447e-12							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	28	- C.c: 20	2.086e+02	0.000e+00	3.076e+02	2.753e+02	1.284e-01	-1.284e-01	-1.042e+01	1.042e+01	-
1.295e+01	-2.136e+01		4.321e+03	-6.735e-13							
El:	29	- C.c: 1	-3.762e-08	2.818e+02	1.346e-08	7.875e+02	7.446e-15	-7.446e-15	-7.107e-03	7.107e-03	2.543e-
03	-2.543e-03		2.019e-09	-2.363e+04							
El:	29	- C.c: 2	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	-1.324e-03	1.324e-03	4.738e-
04	-1.859e+03		3.624e-10	-4.116e+03							
El:	29	- C.c: 3	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	-1.274e-03	1.274e-03	4.559e-
04	-1.859e+03		3.483e-10	-3.740e+03							
El:	29	- C.c: 4	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-1.324e-03	1.324e-03	4.737e-
04	1.859e+03		3.624e-10	-4.116e+03							
El:	29	- C.c: 5	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-1.274e-03	1.274e-03	4.559e-
04	1.859e+03		3.483e-10	-3.740e+03							
El:	29	- C.c: 6	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	-1.382e-03	1.382e-03	4.946e-
04	-5.577e+02		3.788e-10	-4.554e+03							
El:	29	- C.c: 7	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	-1.216e-03	1.216e-03	4.350e-
04	-5.577e+02		3.319e-10	-3.301e+03							
El:	29	- C.c: 8	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	-1.382e-03	1.382e-03	4.946e-
04	5.577e+02		3.788e-10	-4.554e+03							
El:	29	- C.c: 9	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	-1.216e-03	1.216e-03	4.350e-
04	5.577e+02		3.319e-10	-3.301e+03							
El:	29	- C.c: 10	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	-1.324e-03	1.324e-03	4.738e-
04	-1.859e+03		3.624e-10	-4.116e+03							
El:	29	- C.c: 11	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	-1.274e-03	1.274e-03	4.559e-
04	-1.859e+03		3.483e-10	-3.740e+03							
El:	29	- C.c: 12	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-1.324e-03	1.324e-03	4.737e-
04	1.859e+03		3.624e-10	-4.116e+03							
El:	29	- C.c: 13	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-1.274e-03	1.274e-03	4.559e-
04	1.859e+03		3.483e-10	-3.740e+03							
El:	29	- C.c: 14	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	-1.382e-03	1.382e-03	4.946e-
04	-5.577e+02		3.788e-10	-4.554e+03							
El:	29	- C.c: 15	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	-1.216e-03	1.216e-03	4.350e-
04	-5.577e+02		3.319e-10	-3.301e+03							
El:	29	- C.c: 16	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	-1.382e-03	1.382e-03	4.946e-
04	5.577e+02		3.788e-10	-4.554e+03							
El:	29	- C.c: 17	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	-1.216e-03	1.216e-03	4.350e-
04	5.577e+02		3.319e-10	-3.301e+03							
El:	29	- C.c: 18	-2.513e-08	1.894e+02	8.995e-09	5.292e+02	4.974e-15	-4.974e-15	-4.795e-03	4.795e-03	1.716e-
03	-1.716e-03		1.360e-09	-1.588e+04							
El:	29	- C.c: 19	-1.278e-08	1.003e+02	4.574e-09	2.803e+02	2.527e-15	-2.527e-15	-2.610e-03	2.610e-03	9.339e-
04	-9.339e-04		7.321e-10	-8.408e+03							
El:	29	- C.c: 20	-5.370e-09	4.685e+01	1.921e-09	1.309e+02	1.059e-15	-1.059e-15	-1.299e-03	1.299e-03	4.648e-
04	-4.648e-04		3.553e-10	-3.928e+03							
El:	30	- C.c: 1	1.255e+03	0.000e+00	1.849e+03	1.657e+03	-5.710e-01	5.710e-01	4.893e+01	-4.893e+01	
5.235e+01	1.002e+02		2.569e+04	-4.153e-12							
El:	30	- C.c: 2	2.086e+02	0.000e+00	3.084e+02	2.745e+02	-2.699e-01	2.699e-01	9.940e+00	-9.940e+00	
5.801e+01	1.410e+01		4.533e+03	-8.352e-13							
El:	30	- C.c: 3	2.086e+02	0.000e+00	3.069e+02	2.760e+02	-3.420e-01	3.420e-01	9.151e+00	-9.151e+00	
6.466e+01	2.671e+01		4.124e+03	-5.416e-13							
El:	30	- C.c: 4	2.086e+02	0.000e+00	3.084e+02	2.745e+02	1.204e-01	-1.204e-01	9.939e+00	-9.939e+00	-
4.453e+01	1.237e+01		4.533e+03	-8.352e-13							
El:	30	- C.c: 5	2.086e+02	0.000e+00	3.069e+02	2.760e+02	4.831e-02	-4.831e-02	9.150e+00	-9.150e+00	-
3.789e+01	2.498e+01		4.124e+03	-5.415e-13							
El:	30	- C.c: 6	2.086e+02	0.000e+00	3.102e+02	2.727e+02	-4.920e-02	4.920e-02	1.086e+01	-1.086e+01	
1.436e+01	-1.221e+00		5.010e+03	-1.178e-12							
El:	30	- C.c: 7	2.086e+02	0.000e+00	3.051e+02	2.778e+02	-2.895e-01	2.895e-01	8.231e+00	-8.231e+00	
3.652e+01	4.082e+01		3.647e+03	-1.989e-13							
El:	30	- C.c: 8	2.086e+02	0.000e+00	3.102e+02	2.727e+02	6.790e-02	-6.790e-02	1.086e+01	-1.086e+01	-
1.640e+01	-1.740e+00		5.010e+03	-1.178e-12							
El:	30	- C.c: 9	2.086e+02	0.000e+00	3.051e+02	2.778e+02	-1.724e-01	1.724e-01	8.230e+00	-8.230e+00	
5.759e+00	4.030e+01		3.647e+03	-1.989e-13							
El:	30	- C.c: 10	2.086e+02	0.000e+00	3.084e+02	2.745e+02	-2.699e-01	2.699e-01	9.940e+00	-9.940e+00	
5.801e+01	1.410e+01		4.533e+03	-8.352e-13							
El:	30	- C.c: 11	2.086e+02	0.000e+00	3.069e+02	2.760e+02	-3.420e-01	3.420e-01	9.151e+00	-9.151e+00	
6.466e+01	2.671e+01		4.124e+03	-5.416e-13							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	30	- C.c: 12	2.086e+02	0.000e+00	3.084e+02	2.745e+02	1.204e-01	-1.204e-01	9.939e+00	-9.939e+00	-
4.453e+01	1.237e+01	4.533e+03	-8.352e-13	3.069e+02	2.760e+02	4.831e-02	-4.831e-02	9.150e+00	-9.150e+00	-	
El:	30	- C.c: 13	2.086e+02	0.000e+00	3.102e+02	2.727e+02	-4.920e-02	4.920e-02	1.086e+01	-1.086e+01	
3.789e+01	2.498e+01	4.124e+03	-5.415e-13	3.051e+02	2.778e+02	-2.895e-01	2.895e-01	8.231e+00	-8.231e+00		
El:	30	- C.c: 14	2.086e+02	0.000e+00	3.102e+02	2.727e+02	-4.920e-02	4.920e-02	1.086e+01	-1.086e+01	
1.436e+01	-1.221e+00	5.010e+03	-1.178e-12	3.051e+02	2.778e+02	-2.895e-01	2.895e-01	8.231e+00	-8.231e+00		
El:	30	- C.c: 15	2.086e+02	0.000e+00	3.102e+02	2.727e+02	-4.920e-02	4.920e-02	1.086e+01	-1.086e+01	-
3.652e+01	4.082e+01	3.647e+03	-1.989e-13	3.051e+02	2.778e+02	-2.895e-01	2.895e-01	8.231e+00	-8.231e+00		
El:	30	- C.c: 16	2.086e+02	0.000e+00	3.102e+02	2.727e+02	-4.920e-02	4.920e-02	1.086e+01	-1.086e+01	-
1.640e+01	-1.740e+00	5.010e+03	-1.178e-12	3.051e+02	2.778e+02	-1.724e-01	1.724e-01	8.230e+00	-8.230e+00		
El:	30	- C.c: 17	2.086e+02	0.000e+00	3.051e+02	2.778e+02	-1.724e-01	1.724e-01	8.230e+00	-8.230e+00	
5.759e+00	4.030e+01	3.647e+03	-1.989e-13	3.051e+02	2.778e+02	-1.724e-01	1.724e-01	8.230e+00	-8.230e+00		
El:	30	- C.c: 18	8.431e+02	0.000e+00	1.243e+03	1.113e+03	-3.863e-01	3.863e-01	3.310e+01	-3.310e+01	
3.540e+01	6.778e+01	1.727e+04	-2.790e-12	6.583e+02	5.895e+02	-2.141e-01	2.141e-01	1.838e+01	-1.838e+01		
El:	30	- C.c: 19	4.465e+02	0.000e+00	6.583e+02	5.895e+02	-2.141e-01	2.141e-01	1.838e+01	-1.838e+01	
1.956e+01	3.763e+01	9.181e+03	-1.477e-12	3.076e+02	2.752e+02	-1.108e-01	1.108e-01	9.545e+00	-9.545e+00		
El:	30	- C.c: 20	2.086e+02	0.000e+00	3.076e+02	2.752e+02	-1.108e-01	1.108e-01	9.545e+00	-9.545e+00	
1.006e+01	1.954e+01	4.328e+03	-6.884e-13	8.329e-10	7.875e+02	4.211e-16	-4.211e-16	-7.577e-03	7.577e-03	2.711e-	
El:	31	- C.c: 1	-2.279e-09	2.818e+02	8.329e-10	7.875e+02	4.211e-16	-4.211e-16	-7.577e-03	7.577e-03	2.711e-
03	-2.711e-03	1.685e-09	-2.363e+04	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	-1.396e-03	1.396e-03	4.995e-	
El:	31	- C.c: 2	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	-1.396e-03	1.396e-03	4.995e-
04	-1.859e+03	3.039e-10	-4.116e+03	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	-1.351e-03	1.351e-03	4.835e-	
El:	31	- C.c: 3	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	-1.351e-03	1.351e-03	4.835e-
04	-1.859e+03	2.942e-10	-3.740e+03	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-1.396e-03	1.396e-03	4.995e-	
El:	31	- C.c: 4	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-1.396e-03	1.396e-03	4.995e-
04	1.859e+03	3.039e-10	-4.116e+03	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-1.351e-03	1.351e-03	4.835e-	
El:	31	- C.c: 5	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-1.351e-03	1.351e-03	4.835e-
04	1.859e+03	2.942e-10	-3.740e+03	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-1.396e-03	1.396e-03	4.995e-	
El:	31	- C.c: 6	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	-1.448e-03	1.448e-03	5.182e-
04	-5.577e+02	3.152e-10	-4.554e+03	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	-1.299e-03	1.299e-03	4.648e-	
El:	31	- C.c: 7	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	-1.299e-03	1.299e-03	4.648e-
04	-5.577e+02	2.829e-10	-3.301e+03	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	-1.448e-03	1.448e-03	5.182e-	
El:	31	- C.c: 8	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	-1.448e-03	1.448e-03	5.182e-
04	5.577e+02	3.152e-10	-4.554e+03	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	-1.299e-03	1.299e-03	4.648e-	
El:	31	- C.c: 9	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	-1.299e-03	1.299e-03	4.648e-
04	5.577e+02	2.829e-10	-3.301e+03	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	-1.396e-03	1.396e-03	4.995e-	
El:	31	- C.c: 10	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	-1.396e-03	1.396e-03	4.995e-
04	-1.859e+03	3.039e-10	-4.116e+03	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	-1.351e-03	1.351e-03	4.835e-	
El:	31	- C.c: 11	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	-1.351e-03	1.351e-03	4.835e-
04	-1.859e+03	2.942e-10	-3.740e+03	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-1.396e-03	1.396e-03	4.995e-	
El:	31	- C.c: 12	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-1.396e-03	1.396e-03	4.995e-
04	1.859e+03	3.039e-10	-4.116e+03	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-1.351e-03	1.351e-03	4.835e-	
El:	31	- C.c: 13	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-1.351e-03	1.351e-03	4.835e-
04	1.859e+03	2.942e-10	-3.740e+03	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	-1.448e-03	1.448e-03	5.182e-	
El:	31	- C.c: 14	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	-1.448e-03	1.448e-03	5.182e-
04	-5.577e+02	3.152e-10	-4.554e+03	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	-1.299e-03	1.299e-03	4.648e-	
El:	31	- C.c: 15	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	-1.299e-03	1.299e-03	4.648e-
04	-5.577e+02	2.829e-10	-3.301e+03	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	-1.448e-03	1.448e-03	5.182e-	
El:	31	- C.c: 16	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	-1.448e-03	1.448e-03	5.182e-
04	5.577e+02	3.152e-10	-4.554e+03	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	-1.299e-03	1.299e-03	4.648e-	
El:	31	- C.c: 17	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	-1.299e-03	1.299e-03	4.648e-
04	5.577e+02	2.829e-10	-3.301e+03	9.033e-10	5.292e+02	5.097e-16	-5.097e-16	-5.110e-03	5.110e-03	1.829e-	
El:	31	- C.c: 18	-2.492e-09	1.894e+02	9.033e-10	5.292e+02	5.097e-16	-5.097e-16	-5.110e-03	5.110e-03	1.829e-
03	-1.829e-03	1.135e-09	-1.588e+04	1.757e-09	2.803e+02	1.113e-15	-1.113e-15	-2.775e-03	2.775e-03	9.929e-	
El:	31	- C.c: 19	-4.892e-09	1.003e+02	1.757e-09	2.803e+02	1.113e-15	-1.113e-15	-2.775e-03	2.775e-03	9.929e-
04	-9.929e-04	6.127e-10	-8.408e+03	2.269e-09	1.309e+02	1.476e-15	-1.476e-15	-1.373e-03	1.373e-03	4.915e-	
El:	31	- C.c: 20	-6.333e-09	4.685e+01	2.269e-09	1.309e+02	1.476e-15	-1.476e-15	-1.373e-03	1.373e-03	4.915e-
04	-4.915e-04	2.991e-10	-3.928e+03	1.849e+03	1.657e+03	-1.641e+00	1.641e+00	1.439e+02	-1.439e+02		
El:	32	- C.c: 1	1.255e+03	0.000e+00	1.849e+03	1.657e+03	-1.641e+00	1.641e+00	1.439e+02	-1.439e+02	
1.438e+02	2.944e+02	2.554e+04	-1.212e-12	3.083e+02	2.746e+02	-3.867e-01	3.867e-01	2.920e+01	-2.920e+01		
El:	32	- C.c: 2	2.086e+02	0.000e+00	3.083e+02	2.746e+02	-3.867e-01	3.867e-01	2.920e+01	-2.920e+01	
6.381e+01	3.950e+01	4.493e+03	-2.373e-13	3.067e+02	2.761e+02	-5.942e-01	5.942e-01	2.687e+01	-2.687e+01		
El:	32	- C.c: 3	2.086e+02	0.000e+00	3.067e+02	2.761e+02	-5.942e-01	5.942e-01	2.687e+01	-2.687e+01	
8.203e+01	7.670e+01	4.091e+03	8.423e-15								

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	32	- C.c:	4	2.086e+02	0.000e+00	3.083e+02	2.746e+02	-4.761e-02	4.761e-02	2.919e+01	-2.919e+01	-
2.531e+01	3.803e+01	4.493e+03	-2.373e-13	0.000e+00	3.067e+02	2.761e+02	-2.551e-01	2.551e-01	2.687e+01	-2.687e+01	-	
El:	32	- C.c:	5	2.086e+02	0.000e+00	3.067e+02	2.761e+02	-2.551e-01	2.551e-01	2.687e+01	-2.687e+01	-
7.089e+00	7.524e+01	4.091e+03	8.451e-15	0.000e+00	3.100e+02	2.729e+02	-2.593e-02	2.593e-02	3.191e+01	-3.191e+01	-	
El:	32	- C.c:	6	2.086e+02	0.000e+00	3.100e+02	2.729e+02	-2.593e-02	2.593e-02	3.191e+01	-3.191e+01	-
1.135e+01	-4.426e+00	4.962e+03	-5.240e-13	0.000e+00	3.050e+02	2.779e+02	-7.177e-01	7.177e-01	2.415e+01	-2.415e+01	-	
El:	32	- C.c:	7	2.086e+02	0.000e+00	3.050e+02	2.779e+02	-7.177e-01	7.177e-01	2.415e+01	-2.415e+01	-
7.210e+01	1.196e+02	3.622e+03	2.951e-13	0.000e+00	3.100e+02	2.729e+02	7.580e-02	-7.580e-02	3.191e+01	-3.191e+01	-	
El:	32	- C.c:	8	2.086e+02	0.000e+00	3.100e+02	2.729e+02	7.580e-02	-7.580e-02	3.191e+01	-3.191e+01	-
1.538e+01	-4.865e+00	4.962e+03	-5.240e-13	0.000e+00	3.050e+02	2.779e+02	-6.159e-01	6.159e-01	2.415e+01	-2.415e+01	-	
El:	32	- C.c:	9	2.086e+02	0.000e+00	3.050e+02	2.779e+02	-6.159e-01	6.159e-01	2.415e+01	-2.415e+01	-
4.536e+01	1.192e+02	3.622e+03	2.951e-13	0.000e+00	3.083e+02	2.746e+02	-3.867e-01	3.867e-01	2.920e+01	-2.920e+01	-	
El:	32	- C.c:	10	2.086e+02	0.000e+00	3.083e+02	2.746e+02	-3.867e-01	3.867e-01	2.920e+01	-2.920e+01	-
6.381e+01	3.950e+01	4.493e+03	-2.373e-13	0.000e+00	3.067e+02	2.761e+02	-5.942e-01	5.942e-01	2.687e+01	-2.687e+01	-	
El:	32	- C.c:	11	2.086e+02	0.000e+00	3.067e+02	2.761e+02	-5.942e-01	5.942e-01	2.687e+01	-2.687e+01	-
8.203e+01	7.670e+01	4.091e+03	8.423e-15	0.000e+00	3.083e+02	2.746e+02	-4.761e-02	4.761e-02	2.919e+01	-2.919e+01	-	
El:	32	- C.c:	12	2.086e+02	0.000e+00	3.083e+02	2.746e+02	-4.761e-02	4.761e-02	2.919e+01	-2.919e+01	-
2.531e+01	3.803e+01	4.493e+03	-2.373e-13	0.000e+00	3.067e+02	2.761e+02	-2.551e-01	2.551e-01	2.687e+01	-2.687e+01	-	
El:	32	- C.c:	13	2.086e+02	0.000e+00	3.067e+02	2.761e+02	-2.551e-01	2.551e-01	2.687e+01	-2.687e+01	-
7.089e+00	7.524e+01	4.091e+03	8.451e-15	0.000e+00	3.100e+02	2.729e+02	-2.593e-02	2.593e-02	3.191e+01	-3.191e+01	-	
El:	32	- C.c:	14	2.086e+02	0.000e+00	3.100e+02	2.729e+02	-2.593e-02	2.593e-02	3.191e+01	-3.191e+01	-
1.135e+01	-4.426e+00	4.962e+03	-5.240e-13	0.000e+00	3.050e+02	2.779e+02	-7.177e-01	7.177e-01	2.415e+01	-2.415e+01	-	
El:	32	- C.c:	15	2.086e+02	0.000e+00	3.050e+02	2.779e+02	-7.177e-01	7.177e-01	2.415e+01	-2.415e+01	-
7.210e+01	1.196e+02	3.622e+03	2.951e-13	0.000e+00	3.100e+02	2.729e+02	7.580e-02	-7.580e-02	3.191e+01	-3.191e+01	-	
El:	32	- C.c:	16	2.086e+02	0.000e+00	3.100e+02	2.729e+02	7.580e-02	-7.580e-02	3.191e+01	-3.191e+01	-
1.538e+01	-4.865e+00	4.962e+03	-5.240e-13	0.000e+00	3.050e+02	2.779e+02	-6.159e-01	6.159e-01	2.415e+01	-2.415e+01	-	
El:	32	- C.c:	17	2.086e+02	0.000e+00	3.050e+02	2.779e+02	-6.159e-01	6.159e-01	2.415e+01	-2.415e+01	-
4.536e+01	1.192e+02	3.622e+03	2.951e-13	0.000e+00	1.242e+03	1.114e+03	-1.110e+00	1.110e+00	9.735e+01	-9.735e+01	-	
El:	32	- C.c:	18	8.431e+02	0.000e+00	1.242e+03	1.114e+03	-1.110e+00	1.110e+00	9.735e+01	-9.735e+01	-
9.737e+01	1.992e+02	1.717e+04	-8.007e-13	0.000e+00	6.580e+02	5.897e+02	-6.169e-01	6.169e-01	5.402e+01	-5.402e+01	-	
El:	32	- C.c:	19	4.465e+02	0.000e+00	6.580e+02	5.897e+02	-6.169e-01	6.169e-01	5.402e+01	-5.402e+01	-
5.424e+01	1.106e+02	9.121e+03	-3.718e-13	0.000e+00	3.075e+02	2.754e+02	-3.209e-01	3.209e-01	2.803e+01	-2.803e+01	-	
El:	32	- C.c:	20	2.086e+02	0.000e+00	3.075e+02	2.754e+02	-3.209e-01	3.209e-01	2.803e+01	-2.803e+01	-
2.836e+01	5.737e+01	4.292e+03	-1.144e-13	2.818e+02	2.540e-11	7.875e+02	9.395e-17	-9.395e-17	-1.631e-15	1.631e-15	-7.836e-	
El:	33	- C.c:	1	-3.906e-11	2.818e+02	2.540e-11	7.875e+02	9.395e-17	-9.395e-17	-1.631e-15	1.631e-15	-7.836e-
16	4.124e-15	1.396e-11	-2.363e+04	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	3.032e-13	-3.032e-13	1.397e-	
El:	33	- C.c:	2	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	3.032e-13	-3.032e-13	1.397e-
13	-1.859e+03	6.281e-12	-4.116e+03	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	3.031e-13	-3.031e-13	1.397e-	
El:	33	- C.c:	3	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	3.031e-13	-3.031e-13	1.397e-
13	-1.859e+03	5.653e-12	-3.740e+03	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-3.056e-13	3.056e-13	-1.403e-	
El:	33	- C.c:	4	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-3.056e-13	3.056e-13	-1.403e-
13	1.859e+03	6.281e-12	-4.116e+03	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-3.056e-13	3.056e-13	-1.403e-	
El:	33	- C.c:	5	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-3.056e-13	3.056e-13	-1.403e-
13	1.859e+03	5.653e-12	-3.740e+03	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	9.013e-14	-9.013e-14	4.167e-	
El:	33	- C.c:	6	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	9.013e-14	-9.013e-14	4.167e-
14	-5.577e+02	7.014e-12	-4.554e+03	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	9.002e-14	-9.002e-14	4.175e-	
El:	33	- C.c:	7	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	9.002e-14	-9.002e-14	4.175e-
14	-5.577e+02	4.920e-12	-3.301e+03	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	-9.250e-14	9.250e-14	-4.233e-	
El:	33	- C.c:	8	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	-9.250e-14	9.250e-14	-4.233e-
14	5.577e+02	7.014e-12	-4.554e+03	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	-9.261e-14	9.261e-14	-4.226e-	
El:	33	- C.c:	9	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	-9.261e-14	9.261e-14	-4.226e-
14	5.577e+02	4.920e-12	-3.301e+03	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	3.032e-13	-3.032e-13	1.397e-	
El:	33	- C.c:	10	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	3.098e+01	-3.098e+01	3.032e-13	-3.032e-13	1.397e-
13	-1.859e+03	6.281e-12	-4.116e+03	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	3.031e-13	-3.031e-13	1.397e-	
El:	33	- C.c:	11	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	3.098e+01	-3.098e+01	3.031e-13	-3.031e-13	1.397e-
13	-1.859e+03	5.653e-12	-3.740e+03	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-3.056e-13	3.056e-13	-1.403e-	
El:	33	- C.c:	12	8.751e+00	3.810e+01	-3.132e+00	1.341e+02	-3.098e+01	3.098e+01	-3.056e-13	3.056e-13	-1.403e-
13	1.859e+03	6.281e-12	-4.116e+03	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-3.056e-13	3.056e-13	-1.403e-	
El:	33	- C.c:	13	-8.751e+00	5.560e+01	3.132e+00	1.278e+02	-3.098e+01	3.098e+01	-3.056e-13	3.056e-13	-1.403e-
13	1.859e+03	5.653e-12	-3.740e+03	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	9.013e-14	-9.013e-14	4.167e-	
El:	33	- C.c:	14	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	9.295e+00	-9.295e+00	9.013e-14	-9.013e-14	4.167e-
14	-5.577e+02	7.014e-12	-4.554e+03	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	9.002e-14	-9.002e-14	4.175e-	
El:	33	- C.c:	15	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	9.295e+00	-9.295e+00	9.002e-14	-9.002e-14	4.175e-
14	-5.577e+02	4.920e-12	-3.301e+03									

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	33	- C.c: 16	2.917e+01	1.768e+01	-1.044e+01	1.414e+02	-9.295e+00	9.295e+00	-9.250e-14	9.250e-14	-4.233e-
14		5.577e+02	7.014e-12	-4.554e+03							
El:	33	- C.c: 17	-2.917e+01	7.602e+01	1.044e+01	1.205e+02	-9.295e+00	9.295e+00	-9.261e-14	9.261e-14	-4.226e-
14		5.577e+02	4.920e-12	-3.301e+03							
El:	33	- C.c: 18	-2.632e-11	1.894e+02	1.713e-11	5.292e+02	7.325e-17	-7.325e-17	-1.252e-15	1.252e-15	-5.526e-
16		3.061e-15	9.969e-12	-1.588e+04							
El:	33	- C.c: 19	-1.420e-11	1.003e+02	9.316e-12	2.803e+02	7.643e-17	-7.643e-17	-1.245e-15	1.245e-15	-3.894e-
16		2.699e-15	7.468e-12	-8.408e+03							
El:	33	- C.c: 20	-6.936e-12	4.685e+01	4.627e-12	1.309e+02	7.833e-17	-7.833e-17	-1.241e-15	1.241e-15	-2.915e-
16		2.481e-15	5.967e-12	-3.928e+03							
El:	34	- C.c: 1	1.255e+03	0.000e+00	1.856e+03	1.650e+03	-2.432e+00	2.432e+00	2.135e+02	-2.135e+02	
2.128e+02		4.369e+02	2.745e+04	4.000e-12							
El:	34	- C.c: 2	2.086e+02	0.000e+00	3.092e+02	2.737e+02	-4.316e-01	4.316e-01	4.334e+01	-4.334e+01	
5.735e+01		5.793e+01	4.746e+03	8.357e-13							
El:	34	- C.c: 3	2.086e+02	0.000e+00	3.078e+02	2.751e+02	-7.410e-01	7.410e-01	3.988e+01	-3.988e+01	
8.470e+01		1.132e+02	4.371e+03	9.905e-13							
El:	34	- C.c: 4	2.086e+02	0.000e+00	3.092e+02	2.737e+02	-1.963e-01	1.963e-01	4.334e+01	-4.334e+01	-
4.548e+00		5.699e+01	4.746e+03	8.357e-13							
El:	34	- C.c: 5	2.086e+02	0.000e+00	3.078e+02	2.751e+02	-5.057e-01	5.057e-01	3.988e+01	-3.988e+01	
2.280e+01		1.123e+02	4.371e+03	9.905e-13							
El:	34	- C.c: 6	2.086e+02	0.000e+00	3.108e+02	2.720e+02	1.175e-02	-1.175e-02	4.737e+01	-4.737e+01	
3.777e+00		-6.916e+00	5.183e+03	6.551e-13							
El:	34	- C.c: 7	2.086e+02	0.000e+00	3.062e+02	2.767e+02	-1.020e+00	1.020e+00	3.584e+01	-3.584e+01	
9.495e+01		1.774e+02	3.934e+03	1.171e-12							
El:	34	- C.c: 8	2.086e+02	0.000e+00	3.108e+02	2.720e+02	8.232e-02	-8.232e-02	4.737e+01	-4.737e+01	-
1.479e+01		-7.197e+00	5.183e+03	6.551e-13							
El:	34	- C.c: 9	2.086e+02	0.000e+00	3.062e+02	2.767e+02	-9.491e-01	9.491e-01	3.584e+01	-3.584e+01	
7.638e+01		1.771e+02	3.934e+03	1.171e-12							
El:	34	- C.c: 10	2.086e+02	0.000e+00	3.092e+02	2.737e+02	-4.316e-01	4.316e-01	4.334e+01	-4.334e+01	
5.735e+01		5.793e+01	4.746e+03	8.357e-13							
El:	34	- C.c: 11	2.086e+02	0.000e+00	3.078e+02	2.751e+02	-7.410e-01	7.410e-01	3.988e+01	-3.988e+01	
8.470e+01		1.132e+02	4.371e+03	9.905e-13							
El:	34	- C.c: 12	2.086e+02	0.000e+00	3.092e+02	2.737e+02	-1.963e-01	1.963e-01	4.334e+01	-4.334e+01	-
4.548e+00		5.699e+01	4.746e+03	8.357e-13							
El:	34	- C.c: 13	2.086e+02	0.000e+00	3.078e+02	2.751e+02	-5.057e-01	5.057e-01	3.988e+01	-3.988e+01	
2.280e+01		1.123e+02	4.371e+03	9.905e-13							
El:	34	- C.c: 14	2.086e+02	0.000e+00	3.108e+02	2.720e+02	1.175e-02	-1.175e-02	4.737e+01	-4.737e+01	
3.777e+00		-6.916e+00	5.183e+03	6.551e-13							
El:	34	- C.c: 15	2.086e+02	0.000e+00	3.062e+02	2.767e+02	-1.020e+00	1.020e+00	3.584e+01	-3.584e+01	
9.495e+01		1.774e+02	3.934e+03	1.171e-12							
El:	34	- C.c: 16	2.086e+02	0.000e+00	3.108e+02	2.720e+02	8.232e-02	-8.232e-02	4.737e+01	-4.737e+01	-
1.479e+01		-7.197e+00	5.183e+03	6.551e-13							
El:	34	- C.c: 17	2.086e+02	0.000e+00	3.062e+02	2.767e+02	-9.491e-01	9.491e-01	3.584e+01	-3.584e+01	
7.638e+01		1.771e+02	3.934e+03	1.171e-12							
El:	34	- C.c: 18	8.431e+02	0.000e+00	1.247e+03	1.109e+03	-1.645e+00	1.645e+00	1.445e+02	-1.445e+02	
1.438e+02		2.956e+02	1.844e+04	2.728e-12							
El:	34	- C.c: 19	4.465e+02	0.000e+00	6.604e+02	5.873e+02	-9.097e-01	9.097e-01	8.018e+01	-8.018e+01	
7.896e+01		1.640e+02	9.765e+03	1.594e-12							
El:	34	- C.c: 20	2.086e+02	0.000e+00	3.085e+02	2.744e+02	-4.686e-01	4.686e-01	4.161e+01	-4.161e+01	
4.008e+01		8.511e+01	4.558e+03	9.131e-13							
El:	35	- C.c: 1	-7.631e-13	1.427e+02	-5.405e-13	3.987e+02	-3.078e-16	3.078e-16	1.677e-14	-1.677e-14	-4.205e-
15		5.206e-15	-1.839e-11	-1.196e+04							
El:	35	- C.c: 2	4.619e+00	2.017e+01	-1.653e+00	7.093e+01	1.635e+01	-1.635e+01	-4.829e-15	4.829e-15	-2.177e-
13		-9.812e+02	-3.325e-12	-2.177e+03							
El:	35	- C.c: 3	-4.619e+00	2.941e+01	1.653e+00	6.762e+01	1.635e+01	-1.635e+01	-4.842e-15	4.842e-15	-2.171e-
13		-9.812e+02	-3.718e-12	-1.979e+03							
El:	35	- C.c: 4	4.619e+00	2.017e+01	-1.653e+00	7.093e+01	-1.635e+01	1.635e+01	2.904e-14	-2.904e-14	2.018e-
13		9.812e+02	-3.325e-12	-2.177e+03							
El:	35	- C.c: 5	-4.619e+00	2.941e+01	1.653e+00	6.762e+01	-1.635e+01	1.635e+01	2.903e-14	-2.903e-14	2.024e-
13		9.812e+02	-3.718e-12	-1.979e+03							
El:	35	- C.c: 6	1.540e+01	9.393e+00	-5.510e+00	7.478e+01	4.906e+00	-4.906e+00	7.040e-15	-7.040e-15	-7.156e-
14		-2.944e+02	-2.867e-12	-2.409e+03							
El:	35	- C.c: 7	-1.540e+01	4.019e+01	5.510e+00	6.376e+01	4.906e+00	-4.906e+00	6.997e-15	-6.997e-15	-6.956e-
14		-2.944e+02	-4.176e-12	-1.748e+03							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	35	- C.c: 8	1.540e+01	9.393e+00	-5.510e+00	7.478e+01	-4.906e+00	4.906e+00	1.720e-14	-1.720e-14	5.429e-
14		2.944e+02	-2.867e-12	-2.409e+03	5.510e+00						
El:	35	- C.c: 9	-1.540e+01	4.019e+01	5.510e+00	6.376e+01	-4.906e+00	4.906e+00	1.716e-14	-1.716e-14	5.628e-
14		2.944e+02	-4.176e-12	-1.748e+03							
El:	35	- C.c: 10	4.619e+00	2.017e+01	-1.653e+00	7.093e+01	1.635e+01	-1.635e+01	-4.829e-15	4.829e-15	-2.177e-
13		-9.812e+02	-3.325e-12	-2.177e+03							
El:	35	- C.c: 11	-4.619e+00	2.941e+01	1.653e+00	6.762e+01	1.635e+01	-1.635e+01	-4.842e-15	4.842e-15	-2.171e-
13		-9.812e+02	-3.718e-12	-1.979e+03							
El:	35	- C.c: 12	4.619e+00	2.017e+01	-1.653e+00	7.093e+01	-1.635e+01	1.635e+01	2.904e-14	-2.904e-14	2.018e-
13		9.812e+02	-3.325e-12	-2.177e+03							
El:	35	- C.c: 13	-4.619e+00	2.941e+01	1.653e+00	6.762e+01	-1.635e+01	1.635e+01	2.903e-14	-2.903e-14	2.024e-
13		9.812e+02	-3.718e-12	-1.979e+03							
El:	35	- C.c: 14	1.540e+01	9.393e+00	-5.510e+00	7.478e+01	4.906e+00	-4.906e+00	7.040e-15	-7.040e-15	-7.156e-
14		-2.944e+02	-2.867e-12	-2.409e+03							
El:	35	- C.c: 15	-1.540e+01	4.019e+01	5.510e+00	6.376e+01	4.906e+00	-4.906e+00	6.997e-15	-6.997e-15	-6.956e-
14		-2.944e+02	-4.176e-12	-1.748e+03							
El:	35	- C.c: 16	1.540e+01	9.393e+00	-5.510e+00	7.478e+01	-4.906e+00	4.906e+00	1.720e-14	-1.720e-14	5.429e-
14		2.944e+02	-2.867e-12	-2.409e+03							
El:	35	- C.c: 17	-1.540e+01	4.019e+01	5.510e+00	6.376e+01	-4.906e+00	4.906e+00	1.716e-14	-1.716e-14	5.628e-
14		2.944e+02	-4.176e-12	-1.748e+03							
El:	35	- C.c: 18	-4.940e-13	9.605e+01	-3.633e-13	2.684e+02	-2.481e-16	2.481e-16	1.277e-14	-1.277e-14	-3.944e-
15		3.771e-15	-1.243e-11	-8.052e+03							
El:	35	- C.c: 19	-1.921e-13	5.151e+01	-1.927e-13	1.440e+02	-2.851e-16	2.851e-16	1.235e-14	-1.235e-14	-6.252e-
15		3.010e-15	-6.864e-12	-4.319e+03							
El:	35	- C.c: 20	-1.088e-14	2.479e+01	-9.042e-14	6.927e+01	-3.073e-16	3.073e-16	1.210e-14	-1.210e-14	-7.637e-
15		2.554e-15	-3.521e-12	-2.078e+03							
El:	36	- C.c: 1	6.352e+02	0.000e+00	9.033e+02	8.718e+02	-2.773e+00	2.773e+00	2.398e+02	-2.398e+02	
2.499e+02		4.909e+02	4.215e+03	6.704e-12							
El:	36	- C.c: 2	1.104e+02	0.000e+00	1.571e+02	1.513e+02	-4.354e-01	4.354e-01	4.864e+01	-4.864e+01	
5.157e+01		6.474e+01	7.621e+02	1.425e-12							
El:	36	- C.c: 3	1.104e+02	0.000e+00	1.565e+02	1.519e+02	-7.814e-01	7.814e-01	4.475e+01	-4.475e+01	
8.189e+01		1.268e+02	6.212e+02	1.441e-12							
El:	36	- C.c: 4	1.104e+02	0.000e+00	1.571e+02	1.513e+02	-3.444e-01	3.444e-01	4.863e+01	-4.863e+01	
2.743e+01		6.458e+01	7.621e+02	1.425e-12							
El:	36	- C.c: 5	1.104e+02	0.000e+00	1.565e+02	1.519e+02	-6.905e-01	6.905e-01	4.475e+01	-4.475e+01	
5.775e+01		1.267e+02	6.212e+02	1.441e-12							
El:	36	- C.c: 6	1.104e+02	0.000e+00	1.577e+02	1.507e+02	1.036e-04	-1.036e-04	5.317e+01	-5.317e+01	
7.750e+00		-7.778e+00	9.265e+02	1.407e-12							
El:	36	- C.c: 7	1.104e+02	0.000e+00	1.559e+02	1.525e+02	-1.153e+00	1.153e+00	4.022e+01	-4.022e+01	
1.088e+02		1.992e+02	4.569e+02	1.460e-12							
El:	36	- C.c: 8	1.104e+02	0.000e+00	1.577e+02	1.507e+02	2.740e-02	-2.740e-02	5.317e+01	-5.317e+01	5.068e-
01		-7.826e+00	9.265e+02	1.407e-12							
El:	36	- C.c: 9	1.104e+02	0.000e+00	1.559e+02	1.525e+02	-1.126e+00	1.126e+00	4.021e+01	-4.021e+01	
1.016e+02		1.992e+02	4.569e+02	1.460e-12							
El:	36	- C.c: 10	1.104e+02	0.000e+00	1.571e+02	1.513e+02	-4.354e-01	4.354e-01	4.864e+01	-4.864e+01	
5.157e+01		6.474e+01	7.621e+02	1.425e-12							
El:	36	- C.c: 11	1.104e+02	0.000e+00	1.565e+02	1.519e+02	-7.814e-01	7.814e-01	4.475e+01	-4.475e+01	
8.189e+01		1.268e+02	6.212e+02	1.441e-12							
El:	36	- C.c: 12	1.104e+02	0.000e+00	1.571e+02	1.513e+02	-3.444e-01	3.444e-01	4.863e+01	-4.863e+01	
2.743e+01		6.458e+01	7.621e+02	1.425e-12							
El:	36	- C.c: 13	1.104e+02	0.000e+00	1.565e+02	1.519e+02	-6.905e-01	6.905e-01	4.475e+01	-4.475e+01	
5.775e+01		1.267e+02	6.212e+02	1.441e-12							
El:	36	- C.c: 14	1.104e+02	0.000e+00	1.577e+02	1.507e+02	1.036e-04	-1.036e-04	5.317e+01	-5.317e+01	
7.750e+00		-7.778e+00	9.265e+02	1.407e-12							
El:	36	- C.c: 15	1.104e+02	0.000e+00	1.559e+02	1.525e+02	-1.153e+00	1.153e+00	4.022e+01	-4.022e+01	
1.088e+02		1.992e+02	4.569e+02	1.460e-12							
El:	36	- C.c: 16	1.104e+02	0.000e+00	1.577e+02	1.507e+02	2.740e-02	-2.740e-02	5.317e+01	-5.317e+01	5.068e-
01		-7.826e+00	9.265e+02	1.407e-12							
El:	36	- C.c: 17	1.104e+02	0.000e+00	1.559e+02	1.525e+02	-1.126e+00	1.126e+00	4.021e+01	-4.021e+01	
1.016e+02		1.992e+02	4.569e+02	1.460e-12							
El:	36	- C.c: 18	4.276e+02	0.000e+00	6.081e+02	5.869e+02	-1.880e+00	1.880e+00	1.622e+02	-1.622e+02	
1.700e+02		3.321e+02	2.831e+03	4.556e-12							
El:	36	- C.c: 19	2.293e+02	0.000e+00	3.260e+02	3.148e+02	-1.057e+00	1.057e+00	9.001e+01	-9.001e+01	
9.793e+01		1.844e+02	1.494e+03	2.605e-12							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	36	- C.c:	20	1.104e+02	0.000e+00	1.568e+02	1.516e+02	-5.629e-01	5.629e-01	4.669e+01	-4.669e+01						
	5.466e+01		9.571e+01		6.917e+02	1.433e-12											
GRUPPO NUMERO: 2 - DESCRIZIONE: FP_COLMO																	
Elem./C.c.				Fx/I	Fx/J	Fy/I	Fy/J	Fz/I	Fz/J	Mx/I	Mx/J	My/I	My/J	Mz/I	Mz/J		
El:	1	- C.c:	1	-1.100e+02		1.100e+02		-1.587e+03		1.662e+03		-8.532e-16		8.532e-16		-1.177e-24	1.177e-24
12			5.205e-12		8.140e+02		-1.683e+05									-5.117e-	
El:	1	- C.c:	2	1.539e+02		-1.539e+02		-2.757e+02		3.333e+02		-1.418e+01		1.418e+01		-4.733e-12	4.733e-12
3.852e+01			1.501e+03		1.548e+02		-3.156e+04									-	
El:	1	- C.c:	3	1.539e+02		-1.539e+02		-2.757e+02		3.333e+02		1.418e+01		-1.418e+01		4.733e-12	-4.733e-12
3.852e+01			-1.501e+03		1.548e+02		-3.156e+04									-	
El:	1	- C.c:	4	-1.923e+02		1.923e+02		-2.757e+02		3.333e+02		-1.418e+01		1.418e+01		-4.733e-12	4.733e-12
3.852e+01			1.501e+03		1.604e+02		-3.156e+04									-	
El:	1	- C.c:	5	-1.923e+02		1.923e+02		-2.757e+02		3.333e+02		1.418e+01		-1.418e+01		4.733e-12	-4.733e-12
3.852e+01			-1.501e+03		1.604e+02		-3.156e+04									-	
El:	1	- C.c:	6	3.273e+01		-3.273e+01		-2.757e+02		3.333e+02		-4.728e+01		4.728e+01		-1.578e-11	1.578e-11
1.284e+02			5.004e+03		1.568e+02		-3.156e+04									-	
El:	1	- C.c:	7	3.273e+01		-3.273e+01		-2.757e+02		3.333e+02		4.728e+01		-4.728e+01		1.578e-11	-1.578e-11
1.284e+02			-5.004e+03		1.568e+02		-3.156e+04									-	
El:	1	- C.c:	8	-7.114e+01		7.114e+01		-2.757e+02		3.333e+02		-4.728e+01		4.728e+01		-1.578e-11	1.578e-11
1.284e+02			5.004e+03		1.585e+02		-3.156e+04									-	
El:	1	- C.c:	9	-7.114e+01		7.114e+01		-2.757e+02		3.333e+02		4.728e+01		-4.728e+01		1.578e-11	-1.578e-11
1.284e+02			-5.004e+03		1.585e+02		-3.156e+04									-	
El:	1	- C.c:	10	1.539e+02		-1.539e+02		-2.757e+02		3.333e+02		-1.418e+01		1.418e+01		-4.733e-12	4.733e-12
3.852e+01			1.501e+03		1.548e+02		-3.156e+04									-	
El:	1	- C.c:	11	1.539e+02		-1.539e+02		-2.757e+02		3.333e+02		1.418e+01		-1.418e+01		4.733e-12	-4.733e-12
3.852e+01			-1.501e+03		1.548e+02		-3.156e+04									-	
El:	1	- C.c:	12	-1.923e+02		1.923e+02		-2.757e+02		3.333e+02		-1.418e+01		1.418e+01		-4.733e-12	4.733e-12
3.852e+01			1.501e+03		1.604e+02		-3.156e+04									-	
El:	1	- C.c:	13	-1.923e+02		1.923e+02		-2.757e+02		3.333e+02		1.418e+01		-1.418e+01		4.733e-12	-4.733e-12
3.852e+01			-1.501e+03		1.604e+02		-3.156e+04									-	
El:	1	- C.c:	14	3.273e+01		-3.273e+01		-2.757e+02		3.333e+02		-4.728e+01		4.728e+01		-1.578e-11	1.578e-11
1.284e+02			5.004e+03		1.568e+02		-3.156e+04									-	
El:	1	- C.c:	15	3.273e+01		-3.273e+01		-2.757e+02		3.333e+02		4.728e+01		-4.728e+01		1.578e-11	-1.578e-11
1.284e+02			-5.004e+03		1.568e+02		-3.156e+04									-	
El:	1	- C.c:	16	-7.114e+01		7.114e+01		-2.757e+02		3.333e+02		-4.728e+01		4.728e+01		-1.578e-11	1.578e-11
1.284e+02			5.004e+03		1.585e+02		-3.156e+04									-	
El:	1	- C.c:	17	-7.114e+01		7.114e+01		-2.757e+02		3.333e+02		4.728e+01		-4.728e+01		1.578e-11	-1.578e-11
1.284e+02			-5.004e+03		1.585e+02		-3.156e+04									-	
El:	1	- C.c:	18	-7.406e+01		7.406e+01		-1.068e+03		1.126e+03		-5.771e-16		5.771e-16		-8.008e-25	8.008e-25
12			3.510e-12		5.506e+02		-1.137e+05									-3.450e-	
El:	1	- C.c:	19	-3.978e+01		3.978e+01		-5.730e+02		6.305e+02		-3.198e-16		3.198e-16		-4.621e-25	4.621e-25
12			1.903e-12		3.050e+02		-6.236e+04									-1.870e-	
El:	1	- C.c:	20	-1.921e+01		1.921e+01		-2.757e+02		3.333e+02		-1.653e-16		1.653e-16		-2.589e-25	2.589e-25
13			9.389e-13		1.576e+02		-3.156e+04									-9.218e-	
El:	2	- C.c:	1	-4.988e+01		4.988e+01		6.018e+03		-5.943e+03		4.269e-12		-4.269e-12		4.743e-19	-4.743e-19
12			-4.309e-10		1.691e+05		4.476e+05									-9.382e-	
El:	2	- C.c:	2	-1.028e+03		1.028e+03		1.182e+03		-1.124e+03		8.627e+01		-8.627e+01		6.388e-06	-6.388e-06
1.557e+03			-7.339e+03		3.170e+04		8.719e+04									-	
El:	2	- C.c:	3	-1.028e+03		1.028e+03		1.182e+03		-1.124e+03		-8.627e+01		8.627e+01		-6.388e-06	6.388e-06
1.557e+03			7.339e+03		3.170e+04		8.719e+04									-	
El:	2	- C.c:	4	1.008e+03		-1.008e+03		1.182e+03		-1.124e+03		8.627e+01		-8.627e+01		6.388e-06	-6.388e-06
1.557e+03			-7.339e+03		3.171e+04		8.719e+04									-	
El:	2	- C.c:	5	1.008e+03		-1.008e+03		1.182e+03		-1.124e+03		-8.627e+01		8.627e+01		-6.388e-06	6.388e-06
1.557e+03			7.339e+03		3.171e+04		8.719e+04									-	
El:	2	- C.c:	6	-3.150e+02		3.150e+02		1.182e+03		-1.124e+03		2.876e+02		-2.876e+02		2.129e-05	-2.129e-05
5.191e+03			-2.446e+04		3.170e+04		8.719e+04									-	
El:	2	- C.c:	7	-3.150e+02		3.150e+02		1.182e+03		-1.124e+03		-2.876e+02		2.876e+02		-2.129e-05	2.129e-05
5.191e+03			2.446e+04		3.170e+04		8.719e+04									-	
El:	2	- C.c:	8	2.957e+02		-2.957e+02		1.182e+03		-1.124e+03		2.876e+02		-2.876e+02		2.129e-05	-2.129e-05
5.191e+03			-2.446e+04		3.171e+04		8.719e+04									-	
El:	2	- C.c:	9	2.957e+02		-2.957e+02		1.182e+03		-1.124e+03		-2.876e+02		2.876e+02		-2.129e-05	2.129e-05
5.191e+03			2.446e+04		3.171e+04		8.719e+04									-	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	2	- C.c: 10	-1.028e+03	1.028e+03	1.182e+03	-1.124e+03	8.627e+01	-8.627e+01	6.388e-06	-6.388e-06	-
1.557e+03	-7.339e+03	3.170e+04		8.719e+04							
El:	2	- C.c: 11	-1.028e+03	1.028e+03	1.182e+03	-1.124e+03	-8.627e+01	8.627e+01	-6.388e-06	6.388e-06	
1.557e+03	7.339e+03	3.170e+04		8.719e+04							
El:	2	- C.c: 12	1.008e+03	-1.008e+03	1.182e+03	-1.124e+03	8.627e+01	-8.627e+01	6.388e-06	-6.388e-06	-
1.557e+03	-7.339e+03	3.171e+04		8.719e+04							
El:	2	- C.c: 13	1.008e+03	-1.008e+03	1.182e+03	-1.124e+03	-8.627e+01	8.627e+01	-6.388e-06	6.388e-06	
1.557e+03	7.339e+03	3.171e+04		8.719e+04							
El:	2	- C.c: 14	-3.150e+02	3.150e+02	1.182e+03	-1.124e+03	2.876e+02	-2.876e+02	2.129e-05	-2.129e-05	-
5.191e+03	-2.446e+04	3.170e+04		8.719e+04							
El:	2	- C.c: 15	-3.150e+02	3.150e+02	1.182e+03	-1.124e+03	-2.876e+02	2.876e+02	-2.129e-05	2.129e-05	
5.191e+03	2.446e+04	3.170e+04		8.719e+04							
El:	2	- C.c: 16	2.957e+02	-2.957e+02	1.182e+03	-1.124e+03	2.876e+02	-2.876e+02	2.129e-05	-2.129e-05	-
5.191e+03	-2.446e+04	3.171e+04		8.719e+04							
El:	2	- C.c: 17	2.957e+02	-2.957e+02	1.182e+03	-1.124e+03	-2.876e+02	2.876e+02	-2.129e-05	2.129e-05	
5.191e+03	2.446e+04	3.171e+04		8.719e+04							
El:	2	- C.c: 18	-3.374e+01	3.374e+01	4.073e+03	-4.015e+03	2.882e-12	-2.882e-12	3.199e-19	-3.199e-19	-6.327e-
12	-2.909e-10	1.142e+05		3.029e+05							
El:	2	- C.c: 19	-1.870e+01	1.870e+01	2.266e+03	-2.208e+03	1.575e-12	-1.575e-12	1.739e-19	-1.739e-19	-3.434e-
12	-1.590e-10	6.264e+04		1.681e+05							
El:	2	- C.c: 20	-9.683e+00	9.683e+00	1.182e+03	-1.124e+03	7.904e-13	-7.904e-13	8.628e-20	-8.628e-20	-1.698e-
12	-7.982e-11	3.171e+04		8.719e+04							
El:	3	- C.c: 1	-2.103e+00	2.103e+00	3.304e+03	-3.230e+03	3.849e-12	-3.849e-12	9.076e-12	-9.076e-12	4.269e-
10	-8.237e-10	-4.463e+05		7.832e+05							
El:	3	- C.c: 2	-6.788e+02	6.788e+02	6.636e+02	-6.060e+02	5.706e+01	-5.706e+01	1.713e+01	-1.713e+01	
7.285e+03	-1.317e+04	-8.694e+04		1.524e+05							
El:	3	- C.c: 3	-6.788e+02	6.788e+02	6.636e+02	-6.060e+02	-5.706e+01	5.706e+01	-1.713e+01	1.713e+01	-
7.285e+03	1.317e+04	-8.694e+04		1.524e+05							
El:	3	- C.c: 4	6.780e+02	-6.780e+02	6.636e+02	-6.061e+02	5.706e+01	-5.706e+01	1.713e+01	-1.713e+01	
7.285e+03	-1.317e+04	-8.693e+04		1.524e+05							
El:	3	- C.c: 5	6.780e+02	-6.780e+02	6.636e+02	-6.061e+02	-5.706e+01	5.706e+01	-1.713e+01	1.713e+01	-
7.285e+03	1.317e+04	-8.693e+04		1.524e+05							
El:	3	- C.c: 6	-2.039e+02	2.039e+02	6.636e+02	-6.060e+02	1.902e+02	-1.902e+02	5.711e+01	-5.711e+01	
2.428e+04	-4.390e+04	-8.693e+04		1.524e+05							
El:	3	- C.c: 7	-2.039e+02	2.039e+02	6.636e+02	-6.060e+02	-1.902e+02	1.902e+02	-5.711e+01	5.711e+01	-
2.428e+04	4.390e+04	-8.693e+04		1.524e+05							
El:	3	- C.c: 8	2.031e+02	-2.031e+02	6.636e+02	-6.061e+02	1.902e+02	-1.902e+02	5.711e+01	-5.711e+01	
2.428e+04	-4.390e+04	-8.693e+04		1.524e+05							
El:	3	- C.c: 9	2.031e+02	-2.031e+02	6.636e+02	-6.061e+02	-1.902e+02	1.902e+02	-5.711e+01	5.711e+01	-
2.428e+04	4.390e+04	-8.693e+04		1.524e+05							
El:	3	- C.c: 10	-6.788e+02	6.788e+02	6.636e+02	-6.060e+02	5.706e+01	-5.706e+01	1.713e+01	-1.713e+01	
7.285e+03	-1.317e+04	-8.694e+04		1.524e+05							
El:	3	- C.c: 11	-6.788e+02	6.788e+02	6.636e+02	-6.060e+02	-5.706e+01	5.706e+01	-1.713e+01	1.713e+01	-
7.285e+03	1.317e+04	-8.694e+04		1.524e+05							
El:	3	- C.c: 12	6.780e+02	-6.780e+02	6.636e+02	-6.061e+02	5.706e+01	-5.706e+01	1.713e+01	-1.713e+01	
7.285e+03	-1.317e+04	-8.693e+04		1.524e+05							
El:	3	- C.c: 13	6.780e+02	-6.780e+02	6.636e+02	-6.061e+02	-5.706e+01	5.706e+01	-1.713e+01	1.713e+01	-
7.285e+03	1.317e+04	-8.693e+04		1.524e+05							
El:	3	- C.c: 14	-2.039e+02	2.039e+02	6.636e+02	-6.060e+02	1.902e+02	-1.902e+02	5.711e+01	-5.711e+01	
2.428e+04	-4.390e+04	-8.693e+04		1.524e+05							
El:	3	- C.c: 15	-2.039e+02	2.039e+02	6.636e+02	-6.060e+02	-1.902e+02	1.902e+02	-5.711e+01	5.711e+01	-
2.428e+04	4.390e+04	-8.693e+04		1.524e+05							
El:	3	- C.c: 16	2.031e+02	-2.031e+02	6.636e+02	-6.061e+02	1.902e+02	-1.902e+02	5.711e+01	-5.711e+01	
2.428e+04	-4.390e+04	-8.693e+04		1.524e+05							
El:	3	- C.c: 17	2.031e+02	-2.031e+02	6.636e+02	-6.061e+02	-1.902e+02	1.902e+02	-5.711e+01	5.711e+01	-
2.428e+04	4.390e+04	-8.693e+04		1.524e+05							
El:	3	- C.c: 18	-1.424e+00	1.424e+00	2.239e+03	-2.181e+03	2.595e-12	-2.595e-12	6.206e-12	-6.206e-12	2.881e-
10	-5.558e-10	-3.020e+05		5.299e+05							
El:	3	- C.c: 19	-7.944e-01	7.944e-01	1.254e+03	-1.197e+03	1.408e-12	-1.408e-12	3.685e-12	-3.685e-12	1.575e-
10	-3.027e-10	-1.676e+05		2.940e+05							
El:	3	- C.c: 20	-4.166e-01	4.166e-01	6.636e+02	-6.060e+02	6.962e-13	-6.962e-13	2.172e-12	-2.172e-12	7.908e-
11	-1.509e-10	-8.693e+04		1.524e+05							
El:	4	- C.c: 1	2.912e+01	-2.912e+01	1.780e+03	-1.706e+03	3.605e-12	-3.605e-12	-9.080e-12	9.080e-12	8.216e-
10	-1.193e-09	-7.823e+05		9.621e+05							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	4	- C.c:	2	-3.335e+02	3.335e+02	3.663e+02	-3.088e+02	2.918e+01	-2.918e+01	1.471e+01	-1.471e+01	
1.313e+04	-1.614e+04			-1.522e+05	1.870e+05	3.663e+02	-3.088e+02	-2.918e+01	2.918e+01	-1.471e+01	1.471e+01	-
El:	4	- C.c:	3	-3.335e+02	3.335e+02	3.663e+02	-3.088e+02	-2.918e+01	2.918e+01	-1.471e+01	1.471e+01	-
1.313e+04	1.614e+04			-1.522e+05	1.870e+05	3.663e+02	-3.088e+02	2.918e+01	-2.918e+01	1.471e+01	-1.471e+01	-
El:	4	- C.c:	4	3.448e+02	-3.448e+02	3.663e+02	-3.088e+02	2.918e+01	-2.918e+01	1.471e+01	-1.471e+01	-
1.313e+04	-1.614e+04			-1.522e+05	1.870e+05	3.663e+02	-3.088e+02	-2.918e+01	2.918e+01	-1.471e+01	1.471e+01	-
El:	4	- C.c:	5	3.448e+02	-3.448e+02	3.663e+02	-3.088e+02	-2.918e+01	2.918e+01	-1.471e+01	1.471e+01	-
1.313e+04	1.614e+04			-1.522e+05	1.870e+05	3.663e+02	-3.088e+02	9.726e+01	-9.726e+01	4.904e+01	-4.904e+01	-
El:	4	- C.c:	6	-9.607e+01	9.607e+01	3.663e+02	-3.088e+02	-9.726e+01	9.726e+01	-4.904e+01	4.904e+01	-
4.377e+04	-5.380e+04			-1.522e+05	1.870e+05	3.663e+02	-3.088e+02	9.726e+01	-9.726e+01	4.904e+01	-4.904e+01	-
El:	4	- C.c:	7	-9.607e+01	9.607e+01	3.663e+02	-3.088e+02	-9.726e+01	9.726e+01	-4.904e+01	4.904e+01	-
4.377e+04	5.380e+04			-1.522e+05	1.870e+05	3.663e+02	-3.088e+02	9.726e+01	-9.726e+01	4.904e+01	-4.904e+01	-
El:	4	- C.c:	8	1.074e+02	-1.074e+02	3.663e+02	-3.088e+02	-9.726e+01	9.726e+01	-4.904e+01	4.904e+01	-
4.377e+04	-5.380e+04			-1.522e+05	1.870e+05	3.663e+02	-3.088e+02	9.726e+01	-9.726e+01	4.904e+01	-4.904e+01	-
El:	4	- C.c:	9	1.074e+02	-1.074e+02	3.663e+02	-3.088e+02	-9.726e+01	9.726e+01	-4.904e+01	4.904e+01	-
4.377e+04	5.380e+04			-1.522e+05	1.870e+05	3.663e+02	-3.088e+02	2.918e+01	-2.918e+01	1.471e+01	-1.471e+01	-
El:	4	- C.c:	10	-3.335e+02	3.335e+02	3.663e+02	-3.088e+02	-2.918e+01	2.918e+01	-1.471e+01	1.471e+01	-
1.313e+04	-1.614e+04			-1.522e+05	1.870e+05	3.663e+02	-3.088e+02	2.918e+01	-2.918e+01	1.471e+01	-1.471e+01	-
El:	4	- C.c:	11	-3.335e+02	3.335e+02	3.663e+02	-3.088e+02	-2.918e+01	2.918e+01	-1.471e+01	1.471e+01	-
1.313e+04	1.614e+04			-1.522e+05	1.870e+05	3.663e+02	-3.088e+02	2.918e+01	-2.918e+01	1.471e+01	-1.471e+01	-
El:	4	- C.c:	12	3.448e+02	-3.448e+02	3.663e+02	-3.088e+02	-2.918e+01	2.918e+01	-1.471e+01	1.471e+01	-
1.313e+04	-1.614e+04			-1.522e+05	1.870e+05	3.663e+02	-3.088e+02	2.918e+01	-2.918e+01	1.471e+01	-1.471e+01	-
El:	4	- C.c:	13	3.448e+02	-3.448e+02	3.663e+02	-3.088e+02	-2.918e+01	2.918e+01	-1.471e+01	1.471e+01	-
1.313e+04	1.614e+04			-1.522e+05	1.870e+05	3.663e+02	-3.088e+02	9.726e+01	-9.726e+01	4.904e+01	-4.904e+01	-
El:	4	- C.c:	14	-9.607e+01	9.607e+01	3.663e+02	-3.088e+02	-9.726e+01	9.726e+01	-4.904e+01	4.904e+01	-
4.377e+04	-5.380e+04			-1.522e+05	1.870e+05	3.663e+02	-3.088e+02	9.726e+01	-9.726e+01	4.904e+01	-4.904e+01	-
El:	4	- C.c:	15	-9.607e+01	9.607e+01	3.663e+02	-3.088e+02	-9.726e+01	9.726e+01	-4.904e+01	4.904e+01	-
4.377e+04	5.380e+04			-1.522e+05	1.870e+05	3.663e+02	-3.088e+02	9.726e+01	-9.726e+01	4.904e+01	-4.904e+01	-
El:	4	- C.c:	16	1.074e+02	-1.074e+02	3.663e+02	-3.088e+02	-9.726e+01	9.726e+01	-4.904e+01	4.904e+01	-
4.377e+04	-5.380e+04			-1.522e+05	1.870e+05	3.663e+02	-3.088e+02	9.726e+01	-9.726e+01	4.904e+01	-4.904e+01	-
El:	4	- C.c:	17	1.074e+02	-1.074e+02	3.663e+02	-3.088e+02	-9.726e+01	9.726e+01	-4.904e+01	4.904e+01	-
4.377e+04	5.380e+04			-1.522e+05	1.870e+05	3.663e+02	-3.088e+02	2.428e-12	-2.428e-12	-5.611e-12	5.611e-12	5.544e-
El:	4	- C.c:	18	1.970e+01	-1.970e+01	1.208e+03	-1.150e+03	6.819e+02	-6.819e+02	1.149e-12	-1.149e-12	3.020e-
10	-8.048e-10			-5.293e+05	6.509e+05	3.663e+02	-3.088e+02	6.346e-13	-6.346e-13	1.529e-12	-1.529e-12	1.505e-
El:	4	- C.c:	19	1.093e+01	-1.093e+01	6.819e+02	-6.243e+02	1.307e-12	-1.307e-12	7.356e-12	-7.356e-12	1.195e-
10	-4.368e-10			-2.936e+05	3.610e+05	3.663e+02	-3.088e+02	2.028e+00	-2.028e+00	1.467e+00	-1.467e+00	-
El:	4	- C.c:	20	5.674e+00	-5.674e+00	3.663e+02	-3.088e+02	6.711e+00	-6.711e+00	1.467e+00	-1.467e+00	-
10	-2.160e-10			-1.522e+05	1.870e+05	3.663e+02	-3.088e+02	2.028e+00	-2.028e+00	1.467e+00	-1.467e+00	-
El:	5	- C.c:	1	4.087e+01	-4.087e+01	1.547e+02	-7.988e+01	9.884e-13	-9.884e-13	7.356e-12	-7.356e-12	1.195e-
09	-1.297e-09			-9.618e+05	9.739e+05	5.079e+01	6.750e+00	2.028e+00	-2.028e+00	1.467e+00	-1.467e+00	-
El:	5	- C.c:	2	8.013e+00	-8.013e+00	5.079e+01	6.750e+00	2.028e+00	-2.028e+00	1.467e+00	-1.467e+00	-
1.613e+04	-1.634e+04			-1.870e+05	1.892e+05	5.083e+01	6.711e+00	2.028e+00	-2.028e+00	1.467e+00	-1.467e+00	-
El:	5	- C.c:	3	8.013e+00	-8.013e+00	5.079e+01	6.750e+00	-2.028e+00	2.028e+00	-1.467e+00	1.467e+00	-
1.613e+04	1.634e+04			-1.870e+05	1.892e+05	5.083e+01	6.711e+00	2.028e+00	-2.028e+00	1.467e+00	-1.467e+00	-
El:	5	- C.c:	4	7.900e+00	-7.900e+00	5.083e+01	6.711e+00	-2.028e+00	2.028e+00	-1.467e+00	1.467e+00	-
1.613e+04	-1.634e+04			-1.870e+05	1.892e+05	5.083e+01	6.711e+00	2.028e+00	-2.028e+00	1.467e+00	-1.467e+00	-
El:	5	- C.c:	5	7.900e+00	-7.900e+00	5.083e+01	6.711e+00	-2.028e+00	2.028e+00	-1.467e+00	1.467e+00	-
1.613e+04	1.634e+04			-1.870e+05	1.892e+05	5.081e+01	6.736e+00	6.762e+00	-6.762e+00	4.891e+00	-4.891e+00	-
El:	5	- C.c:	6	7.974e+00	-7.974e+00	5.081e+01	6.736e+00	-6.762e+00	6.762e+00	-4.891e+00	4.891e+00	-
5.376e+04	-5.445e+04			-1.870e+05	1.892e+05	5.081e+01	6.736e+00	6.762e+00	-6.762e+00	4.891e+00	-4.891e+00	-
El:	5	- C.c:	7	7.974e+00	-7.974e+00	5.081e+01	6.736e+00	-6.762e+00	6.762e+00	-4.891e+00	4.891e+00	-
5.376e+04	5.445e+04			-1.870e+05	1.892e+05	5.082e+01	6.725e+00	6.762e+00	-6.762e+00	4.891e+00	-4.891e+00	-
El:	5	- C.c:	8	7.940e+00	-7.940e+00	5.082e+01	6.725e+00	-6.762e+00	6.762e+00	-4.891e+00	4.891e+00	-
5.376e+04	-5.445e+04			-1.870e+05	1.892e+05	5.082e+01	6.725e+00	6.762e+00	-6.762e+00	4.891e+00	-4.891e+00	-
El:	5	- C.c:	9	7.940e+00	-7.940e+00	5.082e+01	6.725e+00	-6.762e+00	6.762e+00	-4.891e+00	4.891e+00	-
5.376e+04	5.445e+04			-1.870e+05	1.892e+05	5.079e+01	6.750e+00	2.028e+00	-2.028e+00	1.467e+00	-1.467e+00	-
El:	5	- C.c:	10	8.013e+00	-8.013e+00	5.079e+01	6.750e+00	-2.028e+00	2.028e+00	-1.467e+00	1.467e+00	-
1.613e+04	-1.634e+04			-1.870e+05	1.892e+05	5.079e+01	6.750e+00	2.028e+00	-2.028e+00	1.467e+00	-1.467e+00	-
El:	5	- C.c:	11	8.013e+00	-8.013e+00	5.079e+01	6.750e+00	-2.028e+00	2.028e+00	-1.467e+00	1.467e+00	-
1.613e+04	1.634e+04			-1.870e+05	1.892e+05	5.083e+01	6.711e+00	2.028e+00	-2.028e+00	1.467e+00	-1.467e+00	-
El:	5	- C.c:	12	7.900e+00	-7.900e+00	5.083e+01	6.711e+00	-2.028e+00	2.028e+00	-1.467e+00	1.467e+00	-
1.613e+04	-1.634e+04			-1.870e+05	1.892e+05	5.083e+01	6.711e+00	2.028e+00	-2.028e+00	1.467e+00	-1.467e+00	-
El:	5	- C.c:	13	7.900e+00	-7.900e+00	5.083e+01	6.711e+00	-2.028e+00	2.028e+00	-1.467e+00	1.467e+00	-
1.613e+04	1.634e+04			-1.870e+05	1.892e+05							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	5	- C.c: 14	7.974e+00	-7.974e+00	5.081e+01	6.736e+00	6.762e+00	-6.762e+00	4.891e+00	-4.891e+00	
5.376e+04	-5.445e+04		-1.870e+05	1.892e+05	5.081e+01	6.736e+00	-6.762e+00	6.762e+00	-4.891e+00	4.891e+00	-
El:	5	- C.c: 15	7.974e+00	-7.974e+00	5.081e+01	6.736e+00	-6.762e+00	6.762e+00	-4.891e+00	4.891e+00	-
5.376e+04	5.445e+04		-1.870e+05	1.892e+05	5.082e+01	6.725e+00	6.762e+00	-6.762e+00	4.891e+00	-4.891e+00	
El:	5	- C.c: 16	7.940e+00	-7.940e+00	5.082e+01	6.725e+00	-6.762e+00	6.762e+00	-4.891e+00	4.891e+00	-
5.376e+04	-5.445e+04		-1.870e+05	1.892e+05	5.082e+01	6.725e+00	-6.762e+00	6.762e+00	-4.891e+00	4.891e+00	-
El:	5	- C.c: 17	7.940e+00	-7.940e+00	5.082e+01	6.725e+00	-6.762e+00	6.762e+00	-4.891e+00	4.891e+00	-
5.376e+04	5.445e+04		-1.870e+05	1.892e+05	1.080e+02	-5.045e+01	6.653e-13	-6.653e-13	5.087e-12	-5.087e-12	8.059e-
El:	5	- C.c: 18	2.765e+01	-2.765e+01	1.080e+02	-5.045e+01	6.653e-13	-6.653e-13	5.087e-12	-5.087e-12	8.059e-
10	-8.745e-10		-6.506e+05	6.588e+05	7.226e+01	-1.471e+01	3.567e-13	-3.567e-13	3.230e-12	-3.230e-12	4.376e-
El:	5	- C.c: 19	1.534e+01	-1.534e+01	7.226e+01	-1.471e+01	3.567e-13	-3.567e-13	3.230e-12	-3.230e-12	4.376e-
10	-4.744e-10		-3.608e+05	3.653e+05	5.081e+01	6.731e+00	1.715e-13	-1.715e-13	2.116e-12	-2.116e-12	2.166e-
El:	5	- C.c: 20	7.957e+00	-7.957e+00	5.081e+01	6.731e+00	1.715e-13	-1.715e-13	2.116e-12	-2.116e-12	2.166e-
10	-2.343e-10		-1.870e+05	1.892e+05	-1.487e+03	1.562e+03	-1.510e-12	1.510e-12	-4.102e-13	4.102e-13	1.297e-
El:	6	- C.c: 1	3.023e+01	-3.023e+01	8.169e+05	1.562e+03	-1.510e-12	1.510e-12	-4.102e-13	4.102e-13	1.297e-
09	-1.142e-09		-9.742e+05	8.169e+05	-2.678e+02	3.253e+02	-2.509e+01	2.509e+01	-1.228e+01	1.228e+01	
El:	6	- C.c: 2	3.451e+02	-3.451e+02	1.587e+05	3.253e+02	-2.509e+01	2.509e+01	-1.228e+01	1.228e+01	
1.635e+04	-1.376e+04		-1.893e+05	1.587e+05	-2.678e+02	3.253e+02	-2.509e+01	2.509e+01	-1.228e+01	1.228e+01	-
El:	6	- C.c: 3	3.451e+02	-3.451e+02	1.587e+05	3.253e+02	-2.509e+01	2.509e+01	-1.228e+01	1.228e+01	-
1.635e+04	1.376e+04		-1.893e+05	1.587e+05	-2.677e+02	3.253e+02	-2.509e+01	2.509e+01	-1.228e+01	1.228e+01	
El:	6	- C.c: 4	-3.334e+02	3.334e+02	1.587e+05	3.253e+02	-2.509e+01	2.509e+01	-1.228e+01	1.228e+01	
1.635e+04	-1.376e+04		-1.893e+05	1.587e+05	-2.677e+02	3.253e+02	-2.509e+01	2.509e+01	-1.228e+01	1.228e+01	-
El:	6	- C.c: 5	-3.334e+02	3.334e+02	1.587e+05	3.253e+02	-2.509e+01	2.509e+01	-1.228e+01	1.228e+01	-
1.635e+04	1.376e+04		-1.893e+05	1.587e+05	-2.677e+02	3.253e+02	-2.509e+01	2.509e+01	-1.228e+01	1.228e+01	
El:	6	- C.c: 6	1.077e+02	-1.077e+02	1.587e+05	3.253e+02	-8.363e+01	8.363e+01	-4.094e+01	4.094e+01	
5.449e+04	-4.587e+04		-1.893e+05	1.587e+05	-2.677e+02	3.253e+02	-8.363e+01	8.363e+01	-4.094e+01	4.094e+01	-
El:	6	- C.c: 7	1.077e+02	-1.077e+02	1.587e+05	3.253e+02	-8.363e+01	8.363e+01	-4.094e+01	4.094e+01	-
5.449e+04	4.587e+04		-1.893e+05	1.587e+05	-2.677e+02	3.253e+02	-8.363e+01	8.363e+01	-4.094e+01	4.094e+01	-
El:	6	- C.c: 8	-9.589e+01	9.589e+01	1.587e+05	3.253e+02	-8.363e+01	8.363e+01	-4.094e+01	4.094e+01	-
5.449e+04	-4.587e+04		-1.893e+05	1.587e+05	-2.677e+02	3.253e+02	-8.363e+01	8.363e+01	-4.094e+01	4.094e+01	-
El:	6	- C.c: 9	-9.589e+01	9.589e+01	1.587e+05	3.253e+02	-8.363e+01	8.363e+01	-4.094e+01	4.094e+01	-
5.449e+04	4.587e+04		-1.893e+05	1.587e+05	-2.678e+02	3.253e+02	-2.509e+01	2.509e+01	-1.228e+01	1.228e+01	
El:	6	- C.c: 10	3.451e+02	-3.451e+02	1.587e+05	3.253e+02	-2.509e+01	2.509e+01	-1.228e+01	1.228e+01	
1.635e+04	-1.376e+04		-1.893e+05	1.587e+05	-2.678e+02	3.253e+02	-2.509e+01	2.509e+01	-1.228e+01	1.228e+01	-
El:	6	- C.c: 11	3.451e+02	-3.451e+02	1.587e+05	3.253e+02	-2.509e+01	2.509e+01	-1.228e+01	1.228e+01	-
1.635e+04	1.376e+04		-1.893e+05	1.587e+05	-2.677e+02	3.253e+02	-2.509e+01	2.509e+01	-1.228e+01	1.228e+01	
El:	6	- C.c: 12	-3.334e+02	3.334e+02	1.587e+05	3.253e+02	-2.509e+01	2.509e+01	-1.228e+01	1.228e+01	-
1.635e+04	-1.376e+04		-1.893e+05	1.587e+05	-2.677e+02	3.253e+02	-2.509e+01	2.509e+01	-1.228e+01	1.228e+01	-
El:	6	- C.c: 13	-3.334e+02	3.334e+02	1.587e+05	3.253e+02	-2.509e+01	2.509e+01	-1.228e+01	1.228e+01	-
1.635e+04	1.376e+04		-1.893e+05	1.587e+05	-2.677e+02	3.253e+02	-2.509e+01	2.509e+01	-1.228e+01	1.228e+01	
El:	6	- C.c: 14	1.077e+02	-1.077e+02	1.587e+05	3.253e+02	-8.363e+01	8.363e+01	-4.094e+01	4.094e+01	
5.449e+04	-4.587e+04		-1.893e+05	1.587e+05	-2.677e+02	3.253e+02	-8.363e+01	8.363e+01	-4.094e+01	4.094e+01	-
El:	6	- C.c: 15	1.077e+02	-1.077e+02	1.587e+05	3.253e+02	-8.363e+01	8.363e+01	-4.094e+01	4.094e+01	-
5.449e+04	4.587e+04		-1.893e+05	1.587e+05	-2.677e+02	3.253e+02	-8.363e+01	8.363e+01	-4.094e+01	4.094e+01	-
El:	6	- C.c: 16	-9.589e+01	9.589e+01	1.587e+05	3.253e+02	-8.363e+01	8.363e+01	-4.094e+01	4.094e+01	-
5.449e+04	-4.587e+04		-1.893e+05	1.587e+05	-2.677e+02	3.253e+02	-8.363e+01	8.363e+01	-4.094e+01	4.094e+01	-
El:	6	- C.c: 17	-9.589e+01	9.589e+01	1.587e+05	3.253e+02	-8.363e+01	8.363e+01	-4.094e+01	4.094e+01	-
5.449e+04	4.587e+04		-1.893e+05	1.587e+05	-1.003e+03	1.060e+03	-1.018e-12	1.018e-12	-1.831e-13	1.831e-13	8.748e-
El:	6	- C.c: 18	2.045e+01	-2.045e+01	1.003e+03	1.060e+03	-1.018e-12	1.018e-12	-1.831e-13	1.831e-13	8.748e-
10	-7.698e-10		-6.590e+05	5.527e+05	-5.433e+02	6.009e+02	-5.524e-13	5.524e-13	2.474e-13	-2.474e-13	4.746e-
El:	6	- C.c: 19	1.135e+01	-1.135e+01	5.433e+02	6.009e+02	-5.524e-13	5.524e-13	2.474e-13	-2.474e-13	4.746e-
10	-4.176e-10		-3.654e+05	3.064e+05	-2.677e+02	3.253e+02	-2.729e-13	2.729e-13	5.057e-13	-5.057e-13	2.344e-
El:	6	- C.c: 20	5.882e+00	-5.882e+00	2.677e+02	3.253e+02	-2.729e-13	2.729e-13	5.057e-13	-5.057e-13	2.344e-
10	-2.063e-10		-1.893e+05	1.587e+05	-3.089e+03	3.164e+03	-4.196e-12	4.196e-12	-3.725e-12	3.725e-12	1.144e-
El:	7	- C.c: 1	-9.842e-01	9.842e-01	3.089e+03	3.164e+03	-4.196e-12	4.196e-12	-3.725e-12	3.725e-12	1.144e-
09	-7.108e-10		-8.178e+05	4.954e+05	-5.796e+02	6.372e+02	-5.289e+01	5.289e+01	-1.595e+01	1.595e+01	
El:	7	- C.c: 2	6.783e+02	-6.783e+02	9.616e+04	6.372e+02	-5.289e+01	5.289e+01	-1.595e+01	1.595e+01	
1.380e+04	-8.344e+03		-1.589e+05	9.616e+04	-5.796e+02	6.372e+02	-5.289e+01	5.289e+01	-1.595e+01	1.595e+01	-
El:	7	- C.c: 3	6.783e+02	-6.783e+02	9.616e+04	6.372e+02	-5.289e+01	5.289e+01	-1.595e+01	1.595e+01	-
1.380e+04	8.344e+03		-1.589e+05	9.616e+04	-5.796e+02	6.371e+02	-5.289e+01	5.289e+01	-1.595e+01	1.595e+01	
El:	7	- C.c: 4	-6.787e+02	6.787e+02	9.616e+04	6.371e+02	-5.289e+01	5.289e+01	-1.595e+01	1.595e+01	
1.380e+04	-8.344e+03		-1.589e+05	9.616e+04	-5.796e+02	6.371e+02	-5.289e+01	5.289e+01	-1.595e+01	1.595e+01	-
El:	7	- C.c: 5	-6.787e+02	6.787e+02	9.616e+04	6.371e+02	-5.289e+01	5.289e+01	-1.595e+01	1.595e+01	-
1.380e+04	8.344e+03		-1.589e+05	9.616e+04							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	7	- C.c:	6	2.034e+02	-2.034e+02	-5.796e+02	6.372e+02	-1.763e+02	1.763e+02	-5.317e+01	5.317e+01	
4.599e+04	-2.781e+04	-1.589e+05			9.616e+04	-5.796e+02	6.372e+02	1.763e+02	-1.763e+02	5.317e+01	-5.317e+01	-
El:	7	- C.c:	7	2.034e+02	-2.034e+02	-5.796e+02	6.372e+02	1.763e+02	-1.763e+02	5.317e+01	-5.317e+01	-
4.599e+04	2.781e+04	-1.589e+05			9.616e+04	-5.796e+02	6.372e+02	-1.763e+02	1.763e+02	-5.317e+01	5.317e+01	-
El:	7	- C.c:	8	-2.038e+02	2.038e+02	-5.796e+02	6.372e+02	-1.763e+02	1.763e+02	-5.317e+01	5.317e+01	-
4.599e+04	-2.781e+04	-1.589e+05			9.616e+04	-5.796e+02	6.372e+02	1.763e+02	-1.763e+02	5.317e+01	-5.317e+01	-
El:	7	- C.c:	9	-2.038e+02	2.038e+02	-5.796e+02	6.372e+02	1.763e+02	-1.763e+02	5.317e+01	-5.317e+01	-
4.599e+04	2.781e+04	-1.589e+05			9.616e+04	-5.796e+02	6.372e+02	-5.289e+01	5.289e+01	-1.595e+01	1.595e+01	-
El:	7	- C.c:	10	6.783e+02	-6.783e+02	-5.796e+02	6.372e+02	5.289e+01	-5.289e+01	1.595e+01	-1.595e+01	-
1.380e+04	-8.344e+03	-1.589e+05			9.616e+04	-5.796e+02	6.372e+02	5.289e+01	-5.289e+01	1.595e+01	-1.595e+01	-
El:	7	- C.c:	11	6.783e+02	-6.783e+02	-5.796e+02	6.372e+02	5.289e+01	-5.289e+01	1.595e+01	-1.595e+01	-
1.380e+04	8.344e+03	-1.589e+05			9.616e+04	-5.796e+02	6.371e+02	-5.289e+01	5.289e+01	-1.595e+01	1.595e+01	-
El:	7	- C.c:	12	-6.787e+02	6.787e+02	-5.796e+02	6.371e+02	5.289e+01	-5.289e+01	1.595e+01	-1.595e+01	-
1.380e+04	-8.344e+03	-1.589e+05			9.616e+04	-5.796e+02	6.371e+02	5.289e+01	-5.289e+01	1.595e+01	-1.595e+01	-
El:	7	- C.c:	13	-6.787e+02	6.787e+02	-5.796e+02	6.371e+02	5.289e+01	-5.289e+01	1.595e+01	-1.595e+01	-
1.380e+04	8.344e+03	-1.589e+05			9.616e+04	-5.796e+02	6.372e+02	-1.763e+02	1.763e+02	-5.317e+01	5.317e+01	-
El:	7	- C.c:	14	2.034e+02	-2.034e+02	-5.796e+02	6.372e+02	1.763e+02	-1.763e+02	5.317e+01	-5.317e+01	-
4.599e+04	-2.781e+04	-1.589e+05			9.616e+04	-5.796e+02	6.372e+02	1.763e+02	-1.763e+02	5.317e+01	-5.317e+01	-
El:	7	- C.c:	15	2.034e+02	-2.034e+02	-5.796e+02	6.372e+02	1.763e+02	-1.763e+02	5.317e+01	-5.317e+01	-
4.599e+04	2.781e+04	-1.589e+05			9.616e+04	-5.796e+02	6.372e+02	-1.763e+02	1.763e+02	-5.317e+01	5.317e+01	-
El:	7	- C.c:	16	-2.038e+02	2.038e+02	-5.796e+02	6.372e+02	1.763e+02	-1.763e+02	5.317e+01	-5.317e+01	-
4.599e+04	-2.781e+04	-1.589e+05			9.616e+04	-5.796e+02	6.372e+02	1.763e+02	-1.763e+02	5.317e+01	-5.317e+01	-
El:	7	- C.c:	17	-2.038e+02	2.038e+02	-5.796e+02	6.372e+02	1.763e+02	-1.763e+02	5.317e+01	-5.317e+01	-
4.599e+04	2.781e+04	-1.589e+05			9.616e+04	-5.796e+02	2.144e+03	-2.829e-12	2.829e-12	-2.432e-12	2.432e-12	7.711e-
El:	7	- C.c:	18	-6.677e-01	6.677e-01	-2.087e+03	2.144e+03	-2.829e-12	2.829e-12	-2.432e-12	2.432e-12	7.711e-
10	-4.793e-10	-5.533e+05			3.351e+05	-1.145e+03	1.202e+03	-1.533e-12	1.533e-12	-1.024e-12	1.024e-12	4.183e-
El:	7	- C.c:	19	-3.769e-01	3.769e-01	-1.145e+03	1.202e+03	-1.533e-12	1.533e-12	-1.024e-12	1.024e-12	4.183e-
10	-2.602e-10	-3.068e+05			1.858e+05	-5.796e+02	6.372e+02	-7.557e-13	7.557e-13	-1.786e-13	1.786e-13	2.066e-
El:	7	- C.c:	20	-2.025e-01	2.025e-01	-5.796e+02	6.372e+02	-7.557e-13	7.557e-13	-1.786e-13	1.786e-13	2.066e-
10	-1.287e-10	-1.589e+05			9.616e+04	-4.787e+03	4.862e+03	-6.954e-12	6.954e-12	1.395e-12	-1.395e-12	7.139e-
El:	8	- C.c:	1	-4.727e+01	4.727e+01	-4.787e+03	4.862e+03	-6.954e-12	6.954e-12	1.395e-12	-1.395e-12	7.139e-
10	3.268e-12	-4.967e+05			-7.823e+02	-9.077e+02	9.652e+02	-8.203e+01	8.203e+01	5.442e-05	-5.442e-05	-
El:	8	- C.c:	2	1.009e+03	-1.009e+03	-9.077e+02	9.652e+02	-8.203e+01	8.203e+01	5.442e-05	-5.442e-05	-
8.399e+03	5.979e+01	-9.642e+04			-1.525e+02	-9.077e+02	9.652e+02	8.203e+01	-8.203e+01	-5.442e-05	5.442e-05	-
El:	8	- C.c:	3	1.009e+03	-1.009e+03	-9.077e+02	9.652e+02	8.203e+01	-8.203e+01	-5.442e-05	5.442e-05	-
8.399e+03	-5.979e+01	-9.642e+04			-1.525e+02	-9.076e+02	9.652e+02	-8.203e+01	8.203e+01	5.442e-05	-5.442e-05	-
El:	8	- C.c:	4	-1.027e+03	1.027e+03	-9.076e+02	9.652e+02	8.203e+01	-8.203e+01	-5.442e-05	5.442e-05	-
8.399e+03	5.979e+01	-9.641e+04			-1.524e+02	-9.076e+02	9.652e+02	-2.734e+02	2.734e+02	1.814e-04	-1.814e-04	-
El:	8	- C.c:	5	-1.027e+03	1.027e+03	-9.076e+02	9.652e+02	2.734e+02	-2.734e+02	1.814e-04	-1.814e-04	-
8.399e+03	-5.979e+01	-9.641e+04			-1.524e+02	-9.076e+02	9.652e+02	-2.734e+02	2.734e+02	1.814e-04	-1.814e-04	-
El:	8	- C.c:	6	2.962e+02	-2.962e+02	-9.076e+02	9.652e+02	-2.734e+02	2.734e+02	1.814e-04	-1.814e-04	-
2.800e+04	1.993e+02	-9.642e+04			-1.524e+02	-9.076e+02	9.652e+02	2.734e+02	-2.734e+02	1.814e-04	-1.814e-04	-
El:	8	- C.c:	7	2.962e+02	-2.962e+02	-9.076e+02	9.652e+02	2.734e+02	-2.734e+02	1.814e-04	-1.814e-04	-
2.800e+04	-1.993e+02	-9.642e+04			-1.524e+02	-9.076e+02	9.652e+02	-2.734e+02	2.734e+02	1.814e-04	-1.814e-04	-
El:	8	- C.c:	8	-3.146e+02	3.146e+02	-9.076e+02	9.652e+02	-2.734e+02	2.734e+02	1.814e-04	-1.814e-04	-
2.800e+04	1.993e+02	-9.641e+04			-1.524e+02	-9.076e+02	9.652e+02	2.734e+02	-2.734e+02	1.814e-04	-1.814e-04	-
El:	8	- C.c:	9	-3.146e+02	3.146e+02	-9.076e+02	9.652e+02	2.734e+02	-2.734e+02	1.814e-04	-1.814e-04	-
2.800e+04	-1.993e+02	-9.641e+04			-1.524e+02	-9.077e+02	9.652e+02	-8.203e+01	8.203e+01	5.442e-05	-5.442e-05	-
El:	8	- C.c:	10	1.009e+03	-1.009e+03	-9.077e+02	9.652e+02	8.203e+01	-8.203e+01	-5.442e-05	5.442e-05	-
8.399e+03	5.979e+01	-9.642e+04			-1.525e+02	-9.077e+02	9.652e+02	-8.203e+01	8.203e+01	5.442e-05	-5.442e-05	-
El:	8	- C.c:	11	1.009e+03	-1.009e+03	-9.077e+02	9.652e+02	8.203e+01	-8.203e+01	-5.442e-05	5.442e-05	-
8.399e+03	-5.979e+01	-9.642e+04			-1.525e+02	-9.076e+02	9.652e+02	-8.203e+01	8.203e+01	5.442e-05	-5.442e-05	-
El:	8	- C.c:	12	-1.027e+03	1.027e+03	-9.076e+02	9.652e+02	8.203e+01	-8.203e+01	-5.442e-05	5.442e-05	-
8.399e+03	5.979e+01	-9.641e+04			-1.524e+02	-9.076e+02	9.652e+02	-2.734e+02	2.734e+02	1.814e-04	-1.814e-04	-
El:	8	- C.c:	13	-1.027e+03	1.027e+03	-9.076e+02	9.652e+02	2.734e+02	-2.734e+02	1.814e-04	-1.814e-04	-
8.399e+03	-5.979e+01	-9.641e+04			-1.524e+02	-9.076e+02	9.652e+02	-2.734e+02	2.734e+02	1.814e-04	-1.814e-04	-
El:	8	- C.c:	14	2.962e+02	-2.962e+02	-9.076e+02	9.652e+02	-2.734e+02	2.734e+02	1.814e-04	-1.814e-04	-
2.800e+04	1.993e+02	-9.642e+04			-1.524e+02	-9.076e+02	9.652e+02	2.734e+02	-2.734e+02	1.814e-04	-1.814e-04	-
El:	8	- C.c:	15	2.962e+02	-2.962e+02	-9.076e+02	9.652e+02	2.734e+02	-2.734e+02	1.814e-04	-1.814e-04	-
2.800e+04	-1.993e+02	-9.642e+04			-1.524e+02	-9.076e+02	9.652e+02	-2.734e+02	2.734e+02	1.814e-04	-1.814e-04	-
El:	8	- C.c:	16	-3.146e+02	3.146e+02	-9.076e+02	9.652e+02	-2.734e+02	2.734e+02	1.814e-04	-1.814e-04	-
2.800e+04	1.993e+02	-9.641e+04			-1.524e+02	-9.076e+02	9.652e+02	2.734e+02	-2.734e+02	1.814e-04	-1.814e-04	-
El:	8	- C.c:	17	-3.146e+02	3.146e+02	-9.076e+02	9.652e+02	2.734e+02	-2.734e+02	1.814e-04	-1.814e-04	-
2.800e+04	-1.993e+02	-9.641e+04			-1.524e+02	-9.076e+02	9.652e+02	-2.734e+02	2.734e+02	1.814e-04	-1.814e-04	-

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	8	- C.c: 18	-3.198e+01		3.198e+01		-3.235e+03		3.292e+03		-4.689e-12		4.689e-12		1.032e-12		-1.032e-12		4.814e-
10			2.201e-12	-3.360e+05		-5.293e+02													
El:	8	- C.c: 19	-1.775e+01		1.775e+01		-1.780e+03		1.838e+03		-2.545e-12		2.545e-12		8.993e-13		-8.993e-13		2.613e-
10			1.183e-12	-1.863e+05		-2.937e+02													
El:	8	- C.c: 20	-9.211e+00		9.211e+00		-9.076e+02		9.652e+02		-1.258e-12		1.258e-12		8.195e-13		-8.195e-13		1.292e-
10			5.722e-13	-9.641e+04		-1.524e+02													
GRUPPO NUMERO: 3 - DESCRIZIONE: FP_PASSAFUORI																			
Elem./C.c.			Fx/I	Fx/J	Fy/I	Fy/J	Fz/I	Fz/J	Mx/I	Mx/J	My/I	My/J	Mz/I	Mz/J					
El:	1	- C.c: 1	5.500e+01		-5.500e+01		-1.515e+03		1.544e+03		-2.840e+02		2.840e+02		-1.019e+01		1.019e+01		
1.405e+04			1.523e+04	-5.357e+03		-1.524e+05													
El:	1	- C.c: 2	1.226e+02		-1.226e+02		-2.698e+02		2.917e+02		-1.005e+02		1.005e+02		-1.765e+00		1.765e+00		
3.427e+03			6.935e+03	-1.285e+03		-2.767e+04													
El:	1	- C.c: 3	1.117e+02		-1.117e+02		-2.567e+02		2.785e+02		1.805e+00		-1.805e+00		-1.877e+00		1.877e+00		
6.634e+02			-8.495e+02	-3.031e+02		-2.729e+04													
El:	1	- C.c: 4	-9.252e+01		9.252e+01		-2.698e+02		2.917e+02		-1.005e+02		1.005e+02		-1.770e+00		1.770e+00		
4.258e+03			6.103e+03	-1.583e+03		-2.737e+04													
El:	1	- C.c: 5	-1.034e+02		1.034e+02		-2.567e+02		2.785e+02		1.805e+00		-1.805e+00		-1.881e+00		1.881e+00		
1.495e+03			-1.681e+03	-6.011e+02		-2.700e+04													
El:	1	- C.c: 6	5.992e+01		-5.992e+01		-2.852e+02		3.071e+02		-2.198e+02		2.198e+02		-1.637e+00		1.637e+00		
6.942e+03			1.573e+04	-2.535e+03		-2.800e+04													
El:	1	- C.c: 7	2.381e+01		-2.381e+01		-2.413e+02		2.632e+02		1.211e+02		-1.211e+02		-2.009e+00		2.009e+00		-
2.270e+03			-1.022e+04	7.383e+02		-2.675e+04													
El:	1	- C.c: 8	-4.602e+00		4.602e+00		-2.852e+02		3.071e+02		-2.198e+02		2.198e+02		-1.638e+00		1.638e+00		
7.191e+03			1.548e+04	-2.625e+03		-2.791e+04													
El:	1	- C.c: 9	-4.072e+01		4.072e+01		-2.413e+02		2.632e+02		1.211e+02		-1.211e+02		-2.010e+00		2.010e+00		-
2.020e+03			-1.047e+04	6.489e+02		-2.666e+04													
El:	1	- C.c: 10	1.226e+02		-1.226e+02		-2.698e+02		2.917e+02		-1.005e+02		1.005e+02		-1.765e+00		1.765e+00		
3.427e+03			6.935e+03	-1.285e+03		-2.767e+04													
El:	1	- C.c: 11	1.117e+02		-1.117e+02		-2.567e+02		2.785e+02		1.805e+00		-1.805e+00		-1.877e+00		1.877e+00		
6.634e+02			-8.495e+02	-3.031e+02		-2.729e+04													
El:	1	- C.c: 12	-9.252e+01		9.252e+01		-2.698e+02		2.917e+02		-1.005e+02		1.005e+02		-1.770e+00		1.770e+00		
4.258e+03			6.103e+03	-1.583e+03		-2.737e+04													
El:	1	- C.c: 13	-1.034e+02		1.034e+02		-2.567e+02		2.785e+02		1.805e+00		-1.805e+00		-1.881e+00		1.881e+00		
1.495e+03			-1.681e+03	-6.011e+02		-2.700e+04													
El:	1	- C.c: 14	5.992e+01		-5.992e+01		-2.852e+02		3.071e+02		-2.198e+02		2.198e+02		-1.637e+00		1.637e+00		
6.942e+03			1.573e+04	-2.535e+03		-2.800e+04													
El:	1	- C.c: 15	2.381e+01		-2.381e+01		-2.413e+02		2.632e+02		1.211e+02		-1.211e+02		-2.009e+00		2.009e+00		-
2.270e+03			-1.022e+04	7.383e+02		-2.675e+04													
El:	1	- C.c: 16	-4.602e+00		4.602e+00		-2.852e+02		3.071e+02		-2.198e+02		2.198e+02		-1.638e+00		1.638e+00		
7.191e+03			1.548e+04	-2.625e+03		-2.791e+04													
El:	1	- C.c: 17	-4.072e+01		4.072e+01		-2.413e+02		2.632e+02		1.211e+02		-1.211e+02		-2.010e+00		2.010e+00		-
2.020e+03			-1.047e+04	6.489e+02		-2.666e+04													
El:	1	- C.c: 18	3.703e+01		-3.703e+01		-1.020e+03		1.042e+03		-1.912e+02		1.912e+02		-6.869e+00		6.869e+00		
9.463e+03			1.025e+04	-3.608e+03		-1.027e+05													
El:	1	- C.c: 19	1.989e+01		-1.989e+01		-5.471e+02		5.689e+02		-1.025e+02		1.025e+02		-3.716e+00		3.716e+00		
5.087e+03			5.486e+03	-1.942e+03		-5.560e+04													
El:	1	- C.c: 20	9.603e+00		-9.603e+00		-2.633e+02		2.851e+02		-4.934e+01		4.934e+01		-1.823e+00		1.823e+00		
2.461e+03			2.627e+03	-9.431e+02		-2.733e+04													
El:	2	- C.c: 1	5.500e+01		-5.500e+01		-1.515e+03		1.544e+03		2.840e+02		-2.840e+02		1.019e+01		-1.019e+01		-
1.405e+04			-1.523e+04	-5.357e+03		-1.524e+05													
El:	2	- C.c: 2	1.117e+02		-1.117e+02		-2.567e+02		2.785e+02		-1.805e+00		1.805e+00		1.877e+00		-1.877e+00		-
6.634e+02			-8.495e+02	-3.031e+02		-2.729e+04													
El:	2	- C.c: 3	1.226e+02		-1.226e+02		-2.698e+02		2.917e+02		1.005e+02		-1.005e+02		1.765e+00		-1.765e+00		-
3.427e+03			-6.935e+03	-1.285e+03		-2.767e+04													
El:	2	- C.c: 4	-1.034e+02		1.034e+02		-2.567e+02		2.785e+02		-1.805e+00		1.805e+00		1.881e+00		-1.881e+00		-
1.495e+03			1.681e+03	-6.011e+02		-2.700e+04													
El:	2	- C.c: 5	-9.252e+01		9.252e+01		-2.698e+02		2.917e+02		1.005e+02		-1.005e+02		1.770e+00		-1.770e+00		-
4.258e+03			-6.103e+03	-1.583e+03		-2.737e+04													
El:	2	- C.c: 6	2.381e+01		-2.381e+01		-2.413e+02		2.632e+02		-1.211e+02		1.211e+02		2.009e+00		-2.009e+00		-
2.270e+03			1.022e+04	7.383e+02		-2.675e+04													
El:	2	- C.c: 7	5.992e+01		-5.992e+01		-2.852e+02		3.071e+02		2.198e+02		-2.198e+02		1.637e+00		-1.637e+00		-
6.942e+03			-1.573e+04	-2.535e+03		-2.800e+04													

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	2	- C.c:	8	-4.072e+01	4.072e+01	-2.413e+02	2.632e+02	-1.211e+02	1.211e+02	2.010e+00	-2.010e+00	
2.020e+03	1.047e+04	6.489e+02			-2.666e+04							
El:	2	- C.c:	9	-4.602e+00	4.602e+00	-2.852e+02	3.071e+02	2.198e+02	-2.198e+02	1.638e+00	-1.638e+00	-
7.191e+03	-1.548e+04	-2.625e+03			-2.791e+04							
El:	2	- C.c:	10	1.117e+02	-1.117e+02	-2.567e+02	2.785e+02	-1.805e+00	1.805e+00	1.877e+00	-1.877e+00	-
6.634e+02	8.495e+02	-3.031e+02			-2.729e+04							
El:	2	- C.c:	11	1.226e+02	-1.226e+02	-2.698e+02	2.917e+02	1.005e+02	-1.005e+02	1.765e+00	-1.765e+00	-
3.427e+03	-6.935e+03	-1.285e+03			-2.767e+04							
El:	2	- C.c:	12	-1.034e+02	1.034e+02	-2.567e+02	2.785e+02	-1.805e+00	1.805e+00	1.881e+00	-1.881e+00	-
1.495e+03	1.681e+03	-6.011e+02			-2.700e+04							
El:	2	- C.c:	13	-9.252e+01	9.252e+01	-2.698e+02	2.917e+02	1.005e+02	-1.005e+02	1.770e+00	-1.770e+00	-
4.258e+03	-6.103e+03	-1.583e+03			-2.737e+04							
El:	2	- C.c:	14	2.381e+01	-2.381e+01	-2.413e+02	2.632e+02	-1.211e+02	1.211e+02	2.009e+00	-2.009e+00	
2.270e+03	1.022e+04	7.383e+02			-2.675e+04							
El:	2	- C.c:	15	5.992e+01	-5.992e+01	-2.852e+02	3.071e+02	2.198e+02	-2.198e+02	1.637e+00	-1.637e+00	-
6.942e+03	-1.573e+04	-2.535e+03			-2.800e+04							
El:	2	- C.c:	16	-4.072e+01	4.072e+01	-2.413e+02	2.632e+02	-1.211e+02	1.211e+02	2.010e+00	-2.010e+00	
2.020e+03	1.047e+04	6.489e+02			-2.666e+04							
El:	2	- C.c:	17	-4.602e+00	4.602e+00	-2.852e+02	3.071e+02	2.198e+02	-2.198e+02	1.638e+00	-1.638e+00	-
7.191e+03	-1.548e+04	-2.625e+03			-2.791e+04							
El:	2	- C.c:	18	3.703e+01	-3.703e+01	-1.020e+03	1.042e+03	1.912e+02	-1.912e+02	6.869e+00	-6.869e+00	-
9.463e+03	-1.025e+04	-3.608e+03			-1.027e+05							
El:	2	- C.c:	19	1.989e+01	-1.989e+01	-5.471e+02	5.689e+02	1.025e+02	-1.025e+02	3.716e+00	-3.716e+00	-
5.087e+03	-5.486e+03	-1.942e+03			-5.560e+04							
El:	2	- C.c:	20	9.603e+00	-9.603e+00	-2.633e+02	2.851e+02	4.934e+01	-4.934e+01	1.823e+00	-1.823e+00	-
2.461e+03	-2.627e+03	-9.431e+02			-2.733e+04							

GRUPPO NUMERO:		4 - DESCRIZIONE:		FP_CORDOLI													
Elem./C.c.		Fx/I	Fx/J	Fy/I	Fy/J	Fz/I	Fz/J	Mx/I	Mx/J	My/I	My/J	Mz/I	Mz/J				
El:	1 - C.c:	1	1.122e-01	-1.122e-01		1.896e+03		-1.695e+03		1.750e+02		-1.750e+02		-4.248e+03	4.248e+03	-	
1.441e+04	-3.639e+03		1.518e+05		3.332e+04												
El:	1 - C.c:	2	2.304e-01	-2.304e-01		4.007e+02		-2.460e+02		1.084e+02		-1.084e+02		-7.942e+02	7.942e+02	-	
8.461e+03	-2.715e+03		2.817e+04		5.179e+03												
El:	1 - C.c:	3	2.091e-01	-2.091e-01		3.966e+02		-2.419e+02		1.612e+01		-1.612e+01		-8.628e+02	8.628e+02	-	
7.852e+02	-8.773e+02		2.783e+04		5.089e+03												
El:	1 - C.c:	4	-1.700e-01	1.700e-01		3.779e+02		-2.232e+02		4.446e+01		-4.446e+01		-7.942e+02	7.942e+02	-	
4.199e+03	-3.860e+02		2.664e+04		4.348e+03												
El:	1 - C.c:	5	-1.913e-01	1.913e-01		3.737e+02		-2.190e+02		-4.779e+01		4.779e+01		-8.628e+02	8.628e+02	-	
3.477e+03	1.451e+03		2.630e+04		4.258e+03												
El:	1 - C.c:	6	1.152e-01	-1.152e-01		3.976e+02		-2.429e+02		1.936e+02		-1.936e+02		-7.141e+02	7.141e+02	-	
1.592e+04	-4.043e+03		2.803e+04		4.993e+03												
El:	1 - C.c:	7	4.404e-02	-4.404e-02		3.837e+02		-2.290e+02		-1.139e+02		1.139e+02		-9.429e+02	9.429e+02	-	
9.661e+03	2.081e+03		2.690e+04		4.693e+03												
El:	1 - C.c:	8	-4.909e-03	4.909e-03		3.907e+02		-2.360e+02		1.744e+02		-1.744e+02		-7.141e+02	7.141e+02	-	
1.465e+04	-3.344e+03		2.757e+04		4.744e+03												
El:	1 - C.c:	9	-7.608e-02	7.608e-02		3.768e+02		-2.221e+02		-1.330e+02		1.330e+02		-9.429e+02	9.429e+02	-	
1.094e+04	2.780e+03		2.644e+04		4.444e+03												
El:	1 - C.c:	10	2.304e-01	-2.304e-01		4.007e+02		-2.460e+02		1.084e+02		-1.084e+02		-7.942e+02	7.942e+02	-	
8.461e+03	-2.715e+03		2.817e+04		5.179e+03												
El:	1 - C.c:	11	2.091e-01	-2.091e-01		3.966e+02		-2.419e+02		1.612e+01		-1.612e+01		-8.628e+02	8.628e+02	-	
7.852e+02	-8.773e+02		2.783e+04		5.089e+03												
El:	1 - C.c:	12	-1.700e-01	1.700e-01		3.779e+02		-2.232e+02		4.446e+01		-4.446e+01		-7.942e+02	7.942e+02	-	
4.199e+03	-3.860e+02		2.664e+04		4.348e+03												
El:	1 - C.c:	13	-1.913e-01	1.913e-01		3.737e+02		-2.190e+02		-4.779e+01		4.779e+01		-8.628e+02	8.628e+02	-	
3.477e+03	1.451e+03		2.630e+04		4.258e+03												
El:	1 - C.c:	14	1.152e-01	-1.152e-01		3.976e+02		-2.429e+02		1.936e+02		-1.936e+02		-7.141e+02	7.141e+02	-	
1.592e+04	-4.043e+03		2.803e+04		4.993e+03												
El:	1 - C.c:	15	4.404e-02	-4.404e-02		3.837e+02		-2.290e+02		-1.139e+02		1.139e+02		-9.429e+02	9.429e+02	-	
9.661e+03	2.081e+03		2.690e+04		4.693e+03												
El:	1 - C.c:	16	-4.909e-03	4.909e-03		3.907e+02		-2.360e+02		1.744e+02		-1.744e+02		-7.141e+02	7.141e+02	-	
1.465e+04	-3.344e+03		2.757e+04		4.744e+03												
El:	1 - C.c:	17	-7.608e-02	7.608e-02		3.768e+02		-2.221e+02		-1.330e+02		1.330e+02		-9.429e+02	9.429e+02	-	
1.094e+04	2.780e+03		2.644e+04		4.444e+03												

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	1	- C.c: 18	7.555e-02	-7.555e-02	1.286e+03	-1.131e+03	1.178e+02	-1.178e+02	-2.874e+03	2.874e+03	-
	9.700e+03	-2.450e+03	1.023e+05	2.226e+04							
El:	1	- C.c: 19	4.056e-02	-4.056e-02	7.241e+02	-5.694e+02	6.311e+01	-6.311e+01	-1.596e+03	1.596e+03	-
	5.195e+03	-1.313e+03	5.540e+04	1.130e+04							
El:	1	- C.c: 20	1.956e-02	-1.956e-02	3.872e+02	-2.325e+02	3.029e+01	-3.029e+01	-8.285e+02	8.285e+02	-
	2.492e+03	-6.317e+02	2.724e+04	4.719e+03							
El:	2	- C.c: 1	-3.548e-03	3.548e-03	-3.195e+02	5.206e+02	-3.680e+01	3.680e+01	-3.676e+03	3.676e+03	
	3.111e+03	6.840e+02	-3.335e+04	-9.967e+03							
El:	2	- C.c: 2	-6.307e-04	6.307e-04	9.111e+00	1.456e+02	-3.895e+00	3.895e+00	-6.866e+02	6.866e+02	
	8.627e+02	-4.610e+02	-4.558e+03	-2.478e+03							
El:	2	- C.c: 3	-2.065e-04	2.065e-04	9.883e+00	1.448e+02	1.742e+01	-1.742e+01	-7.460e+02	7.460e+02	-
	9.188e+02	-8.780e+02	-4.492e+03	-2.465e+03							
El:	2	- C.c: 4	-1.080e-03	1.080e-03	-2.732e-01	1.550e+02	-3.003e+01	3.003e+01	-6.866e+02	6.866e+02	
	1.988e+03	1.109e+03	-4.963e+03	-3.041e+03							
El:	2	- C.c: 5	-6.562e-04	6.562e-04	4.988e-01	1.542e+02	-8.712e+00	8.712e+00	-7.460e+02	7.460e+02	
	2.061e+02	6.924e+02	-4.896e+03	-3.028e+03							
El:	2	- C.c: 6	-1.283e-03	1.283e-03	4.926e+00	1.498e+02	-3.791e+01	3.791e+01	-6.173e+02	6.173e+02	
	3.335e+03	5.750e+02	-4.777e+03	-2.691e+03							
El:	2	- C.c: 7	1.311e-04	-1.311e-04	7.499e+00	1.472e+02	3.315e+01	-3.315e+01	-8.153e+02	8.153e+02	-
	2.604e+03	-8.148e+02	-4.556e+03	-2.647e+03							
El:	2	- C.c: 8	-1.418e-03	1.418e-03	2.111e+00	1.526e+02	-4.576e+01	4.576e+01	-6.173e+02	6.173e+02	
	3.672e+03	1.046e+03	-4.899e+03	-2.860e+03							
El:	2	- C.c: 9	-3.856e-06	3.856e-06	4.684e+00	1.500e+02	2.531e+01	-2.531e+01	-8.153e+02	8.153e+02	-
	2.266e+03	-3.437e+02	-4.677e+03	-2.816e+03							
El:	2	- C.c: 10	-6.307e-04	6.307e-04	9.111e+00	1.456e+02	-3.895e+00	3.895e+00	-6.866e+02	6.866e+02	
	8.627e+02	-4.610e+02	-4.558e+03	-2.478e+03							
El:	2	- C.c: 11	-2.065e-04	2.065e-04	9.883e+00	1.448e+02	1.742e+01	-1.742e+01	-7.460e+02	7.460e+02	-
	9.188e+02	-8.780e+02	-4.492e+03	-2.465e+03							
El:	2	- C.c: 12	-1.080e-03	1.080e-03	-2.732e-01	1.550e+02	-3.003e+01	3.003e+01	-6.866e+02	6.866e+02	
	1.988e+03	1.109e+03	-4.963e+03	-3.041e+03							
El:	2	- C.c: 13	-6.562e-04	6.562e-04	4.988e-01	1.542e+02	-8.712e+00	8.712e+00	-7.460e+02	7.460e+02	
	2.061e+02	6.924e+02	-4.896e+03	-3.028e+03							
El:	2	- C.c: 14	-1.283e-03	1.283e-03	4.926e+00	1.498e+02	-3.791e+01	3.791e+01	-6.173e+02	6.173e+02	
	3.335e+03	5.750e+02	-4.777e+03	-2.691e+03							
El:	2	- C.c: 15	1.311e-04	-1.311e-04	7.499e+00	1.472e+02	3.315e+01	-3.315e+01	-8.153e+02	8.153e+02	-
	2.604e+03	-8.148e+02	-4.556e+03	-2.647e+03							
El:	2	- C.c: 16	-1.418e-03	1.418e-03	2.111e+00	1.526e+02	-4.576e+01	4.576e+01	-6.173e+02	6.173e+02	
	3.672e+03	1.046e+03	-4.899e+03	-2.860e+03							
El:	2	- C.c: 17	-3.856e-06	3.856e-06	4.684e+00	1.500e+02	2.531e+01	-2.531e+01	-8.153e+02	8.153e+02	-
	2.266e+03	-3.437e+02	-4.677e+03	-2.816e+03							
El:	2	- C.c: 18	-2.393e-03	2.393e-03	-2.054e+02	3.601e+02	-2.476e+01	2.476e+01	-2.487e+03	2.487e+03	
	2.093e+03	4.600e+02	-2.228e+04	-6.875e+03							
El:	2	- C.c: 19	-1.299e-03	1.299e-03	-7.401e+01	2.287e+02	-1.322e+01	1.322e+01	-1.380e+03	1.380e+03	
	1.119e+03	2.448e+02	-1.131e+04	-4.299e+03							
El:	2	- C.c: 20	-6.435e-04	6.435e-04	4.805e+00	1.499e+02	-6.304e+00	6.304e+00	-7.163e+02	7.163e+02	
	5.344e+02	1.157e+02	-4.727e+03	-2.753e+03							
El:	3	- C.c: 1	-1.427e-03	1.427e-03	1.977e+02	3.410e+00	1.013e+01	-1.013e+01	-2.067e+03	2.067e+03	-
	8.114e+02	-2.337e+02	9.857e+03	1.601e+02							
El:	3	- C.c: 2	-4.163e-04	4.163e-04	1.005e+02	5.423e+01	2.171e+01	-2.171e+01	-3.857e+02	3.857e+02	-
	1.277e+03	-9.619e+02	3.071e+03	-6.873e+02							
El:	3	- C.c: 3	-2.340e-04	2.340e-04	1.002e+02	5.447e+01	1.656e+01	-1.656e+01	-4.191e+02	4.191e+02	-
	8.505e+02	-8.573e+02	3.052e+03	-6.937e+02							
El:	3	- C.c: 4	-3.468e-04	3.468e-04	8.805e+01	6.663e+01	-1.301e+01	1.301e+01	-3.857e+02	3.857e+02	
	5.669e+02	7.743e+02	2.413e+03	-1.308e+03							
El:	3	- C.c: 5	-1.645e-04	1.645e-04	8.781e+01	6.688e+01	-1.815e+01	1.815e+01	-4.191e+02	4.191e+02	
	9.932e+02	8.790e+02	2.394e+03	-1.315e+03							
El:	3	- C.c: 6	-6.046e-04	6.046e-04	9.641e+01	5.828e+01	1.557e+01	-1.557e+01	-3.466e+02	3.466e+02	-
	1.129e+03	-4.763e+02	2.863e+03	-8.972e+02							
El:	3	- C.c: 7	2.983e-06	-2.983e-06	9.558e+01	5.910e+01	-1.597e+00	1.597e+00	-4.581e+02	4.581e+02	
	2.922e+02	-1.275e+02	2.799e+03	-9.184e+02							
El:	3	- C.c: 8	-5.838e-04	5.838e-04	9.268e+01	6.200e+01	5.152e+00	-5.152e+00	-3.466e+02	3.466e+02	-
	5.758e+02	4.453e+01	2.665e+03	-1.083e+03							
El:	3	- C.c: 9	2.383e-05	-2.383e-05	9.186e+01	6.283e+01	-1.201e+01	1.201e+01	-4.581e+02	4.581e+02	
	8.453e+02	3.934e+02	2.602e+03	-1.105e+03							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	3	- C.c: 10	-4.163e-04	4.163e-04	1.005e+02	5.423e+01	2.171e+01	-2.171e+01	-3.857e+02	3.857e+02	-
1.277e+03	-9.619e+02	3.071e+03	-6.873e+02	1.002e+02	5.447e+01	1.656e+01	-1.656e+01	-4.191e+02	4.191e+02	-	
El:	3	- C.c: 11	-2.340e-04	2.340e-04	1.002e+02	5.447e+01	1.656e+01	-1.656e+01	-4.191e+02	4.191e+02	-
8.505e+02	-8.573e+02	3.052e+03	-6.937e+02	8.805e+01	6.663e+01	-1.301e+01	1.301e+01	-3.857e+02	3.857e+02	-	
El:	3	- C.c: 12	-3.468e-04	3.468e-04	8.805e+01	6.663e+01	-1.301e+01	1.301e+01	-3.857e+02	3.857e+02	-
5.669e+02	7.743e+02	2.413e+03	-1.308e+03	8.781e+01	6.688e+01	-1.815e+01	1.815e+01	-4.191e+02	4.191e+02	-	
El:	3	- C.c: 13	-1.645e-04	1.645e-04	8.781e+01	6.688e+01	-1.815e+01	1.815e+01	-4.191e+02	4.191e+02	-
9.932e+02	8.790e+02	2.394e+03	-1.315e+03	9.641e+01	5.828e+01	1.557e+01	-1.557e+01	-3.466e+02	3.466e+02	-	
El:	3	- C.c: 14	-6.046e-04	6.046e-04	9.641e+01	5.828e+01	1.557e+01	-1.557e+01	-3.466e+02	3.466e+02	-
1.129e+03	-4.763e+02	2.863e+03	-8.972e+02	9.558e+01	5.910e+01	-1.597e+00	1.597e+00	-4.581e+02	4.581e+02	-	
El:	3	- C.c: 15	2.983e-06	-2.983e-06	9.558e+01	5.910e+01	-1.597e+00	1.597e+00	-4.581e+02	4.581e+02	-
2.922e+02	-1.275e+02	2.799e+03	-9.184e+02	9.268e+01	6.200e+01	5.152e+00	-5.152e+00	-3.466e+02	3.466e+02	-	
El:	3	- C.c: 16	-5.838e-04	5.838e-04	9.268e+01	6.200e+01	5.152e+00	-5.152e+00	-3.466e+02	3.466e+02	-
5.758e+02	4.453e+01	2.665e+03	-1.083e+03	9.186e+01	6.283e+01	-1.201e+01	1.201e+01	-4.581e+02	4.581e+02	-	
El:	3	- C.c: 17	2.383e-05	-2.383e-05	9.186e+01	6.283e+01	-1.201e+01	1.201e+01	-4.581e+02	4.581e+02	-
8.453e+02	3.934e+02	2.602e+03	-1.105e+03	1.427e+02	1.197e+01	6.825e+00	-6.825e+00	-1.399e+03	1.399e+03	-	
El:	3	- C.c: 18	-9.675e-04	9.675e-04	1.427e+02	1.197e+01	6.825e+00	-6.825e+00	-1.399e+03	1.399e+03	-
5.463e+02	-1.575e+02	6.800e+03	-5.817e+01	1.124e+02	4.233e+01	3.670e+00	-3.670e+00	-7.760e+02	7.760e+02	-	
El:	3	- C.c: 19	-5.443e-04	5.443e-04	1.124e+02	4.233e+01	3.670e+00	-3.670e+00	-7.760e+02	7.760e+02	-
2.935e+02	-8.498e+01	4.258e+03	-6.474e+02	9.413e+01	6.055e+01	1.777e+00	-1.777e+00	-4.024e+02	4.024e+02	-	
El:	3	- C.c: 20	-2.904e-04	2.904e-04	9.413e+01	6.055e+01	1.777e+00	-1.777e+00	-4.024e+02	4.024e+02	-
1.418e+02	-4.148e+01	2.732e+03	-1.001e+03	7.749e+01	1.236e+02	-1.950e+00	1.950e+00	-4.800e+01	4.800e+01	-	
El:	4	- C.c: 1	-2.311e-03	2.311e-03	7.749e+01	1.236e+02	-1.950e+00	1.950e+00	-4.800e+01	4.800e+01	-
1.513e+02	4.982e+01	-1.875e+02	-2.190e+03	7.902e+01	7.567e+01	1.537e+01	-1.537e+01	-8.634e+00	8.634e+00	-	
El:	4	- C.c: 2	-5.955e-04	5.955e-04	7.902e+01	7.567e+01	1.537e+01	-1.537e+01	-8.634e+00	8.634e+00	-
7.601e+02	-8.254e+02	1.293e+03	-1.120e+03	7.906e+01	7.563e+01	1.655e+01	-1.655e+01	-9.488e+00	9.488e+00	-	
El:	4	- C.c: 3	-3.030e-04	3.030e-04	7.906e+01	7.563e+01	1.655e+01	-1.655e+01	-9.488e+00	9.488e+00	-
8.569e+02	-8.496e+02	1.296e+03	-1.119e+03	6.735e+01	8.733e+01	-1.721e+01	1.721e+01	-8.631e+00	8.631e+00	-	
El:	4	- C.c: 4	-5.901e-04	5.901e-04	6.735e+01	8.733e+01	-1.721e+01	1.721e+01	-8.631e+00	8.631e+00	-
9.084e+02	8.668e+02	6.954e+02	-1.726e+03	6.739e+01	8.730e+01	-1.604e+01	1.604e+01	-9.485e+00	9.485e+00	-	
El:	4	- C.c: 5	-2.976e-04	2.976e-04	6.739e+01	8.730e+01	-1.604e+01	1.604e+01	-9.485e+00	9.485e+00	-
8.117e+02	8.427e+02	6.981e+02	-1.724e+03	7.489e+01	7.979e+01	2.600e+00	-2.600e+00	-7.636e+00	7.636e+00	-	
El:	4	- C.c: 6	-9.348e-04	9.348e-04	7.489e+01	7.979e+01	2.600e+00	-2.600e+00	-7.636e+00	7.636e+00	-
6.323e+01	-2.049e+02	1.081e+03	-1.333e+03	7.502e+01	7.967e+01	6.509e+00	-6.509e+00	-1.048e+01	1.048e+01	-	
El:	4	- C.c: 7	4.009e-05	-4.009e-05	7.502e+01	7.967e+01	6.509e+00	-6.509e+00	-1.048e+01	1.048e+01	-
3.858e+02	-2.855e+02	1.089e+03	-1.329e+03	7.139e+01	8.329e+01	-7.177e+00	7.177e+00	-7.635e+00	7.635e+00	-	
El:	4	- C.c: 8	-9.332e-04	9.332e-04	7.139e+01	8.329e+01	-7.177e+00	7.177e+00	-7.635e+00	7.635e+00	-
4.373e+02	3.028e+02	9.015e+02	-1.515e+03	7.152e+01	8.317e+01	-3.268e+00	3.268e+00	-1.048e+01	1.048e+01	-	
El:	4	- C.c: 9	4.173e-05	-4.173e-05	7.152e+01	8.317e+01	-3.268e+00	3.268e+00	-1.048e+01	1.048e+01	-
1.148e+02	2.222e+02	9.102e+02	-1.511e+03	7.902e+01	7.567e+01	1.537e+01	-1.537e+01	-8.634e+00	8.634e+00	-	
El:	4	- C.c: 10	-5.955e-04	5.955e-04	7.902e+01	7.567e+01	1.537e+01	-1.537e+01	-8.634e+00	8.634e+00	-
7.601e+02	-8.254e+02	1.293e+03	-1.120e+03	7.906e+01	7.563e+01	1.655e+01	-1.655e+01	-9.488e+00	9.488e+00	-	
El:	4	- C.c: 11	-3.030e-04	3.030e-04	7.906e+01	7.563e+01	1.655e+01	-1.655e+01	-9.488e+00	9.488e+00	-
8.569e+02	-8.496e+02	1.296e+03	-1.119e+03	6.735e+01	8.733e+01	-1.721e+01	1.721e+01	-8.631e+00	8.631e+00	-	
El:	4	- C.c: 12	-5.901e-04	5.901e-04	6.735e+01	8.733e+01	-1.721e+01	1.721e+01	-8.631e+00	8.631e+00	-
9.084e+02	8.668e+02	6.954e+02	-1.726e+03	6.739e+01	8.730e+01	-1.604e+01	1.604e+01	-9.485e+00	9.485e+00	-	
El:	4	- C.c: 13	-2.976e-04	2.976e-04	6.739e+01	8.730e+01	-1.604e+01	1.604e+01	-9.485e+00	9.485e+00	-
8.117e+02	8.427e+02	6.981e+02	-1.724e+03	7.489e+01	7.979e+01	2.600e+00	-2.600e+00	-7.636e+00	7.636e+00	-	
El:	4	- C.c: 14	-9.348e-04	9.348e-04	7.489e+01	7.979e+01	2.600e+00	-2.600e+00	-7.636e+00	7.636e+00	-
6.323e+01	-2.049e+02	1.081e+03	-1.333e+03	7.502e+01	7.967e+01	6.509e+00	-6.509e+00	-1.048e+01	1.048e+01	-	
El:	4	- C.c: 15	4.009e-05	-4.009e-05	7.502e+01	7.967e+01	6.509e+00	-6.509e+00	-1.048e+01	1.048e+01	-
3.858e+02	-2.855e+02	1.089e+03	-1.329e+03	7.139e+01	8.329e+01	-7.177e+00	7.177e+00	-7.635e+00	7.635e+00	-	
El:	4	- C.c: 16	-9.332e-04	9.332e-04	7.139e+01	8.329e+01	-7.177e+00	7.177e+00	-7.635e+00	7.635e+00	-
4.373e+02	3.028e+02	9.015e+02	-1.515e+03	7.152e+01	8.317e+01	-3.268e+00	3.268e+00	-1.048e+01	1.048e+01	-	
El:	4	- C.c: 17	4.173e-05	-4.173e-05	7.152e+01	8.317e+01	-3.268e+00	3.268e+00	-1.048e+01	1.048e+01	-
1.148e+02	2.222e+02	9.102e+02	-1.511e+03	6.180e+01	9.289e+01	-1.312e+00	1.312e+00	-3.243e+01	3.243e+01	-	
El:	4	- C.c: 18	-1.563e-03	1.563e-03	6.180e+01	9.289e+01	-1.312e+00	1.312e+00	-3.243e+01	3.243e+01	-
1.018e+02	3.354e+01	3.960e+01	-1.642e+03	6.893e+01	8.576e+01	-7.006e-01	7.006e-01	-1.782e+01	1.782e+01	-	
El:	4	- C.c: 19	-8.651e-04	8.651e-04	6.893e+01	8.576e+01	-7.006e-01	7.006e-01	-1.782e+01	1.782e+01	-
5.428e+01	1.797e+01	6.370e+02	-1.505e+03	7.321e+01	8.148e+01	-3.337e-01	3.337e-01	-9.059e+00	9.059e+00	-	
El:	4	- C.c: 20	-4.466e-04	4.466e-04	7.321e+01	8.148e+01	-3.337e-01	3.337e-01	-9.059e+00	9.059e+00	-
2.578e+01	8.633e+00	9.955e+02	-1.422e+03	1.076e+02	9.350e+01	-8.870e-01	8.870e-01	2.013e+03	-2.013e+03	-	
El:	5	- C.c: 1	-1.998e-03	1.998e-03	1.076e+02	9.350e+01	-8.870e-01	8.870e-01	2.013e+03	-2.013e+03	-
1.596e+01	7.552e+01	2.219e+03	-1.492e+03								

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	5	- C.c:	2	-4.704e-04	4.704e-04	8.516e+01	6.953e+01	1.649e+01	-1.649e+01	3.755e+02	-3.755e+02	-
8.609e+02	-8.396e+02	1.733e+03		-9.272e+02								
El:	5	- C.c:	3	-2.175e-04	2.175e-04	8.521e+01	6.948e+01	1.633e+01	-1.633e+01	4.076e+02	-4.076e+02	-
8.428e+02	-8.416e+02	1.735e+03		-9.236e+02								
El:	5	- C.c:	4	-5.673e-04	5.673e-04	7.328e+01	8.141e+01	-1.671e+01	1.671e+01	3.755e+02	-3.755e+02	
8.509e+02	8.727e+02	1.121e+03		-1.540e+03								
El:	5	- C.c:	5	-3.144e-04	3.144e-04	7.333e+01	8.136e+01	-1.687e+01	1.687e+01	4.076e+02	-4.076e+02	
8.690e+02	8.706e+02	1.122e+03		-1.536e+03								
El:	5	- C.c:	6	-7.993e-04	7.993e-04	8.094e+01	7.375e+01	5.051e+00	-5.051e+00	3.380e+02	-3.380e+02	-
2.830e+02	-2.379e+02	1.517e+03		-1.146e+03								
El:	5	- C.c:	7	4.360e-05	-4.360e-05	8.111e+01	7.358e+01	4.530e+00	-4.530e+00	4.451e+02	-4.451e+02	-
2.224e+02	-2.447e+02	1.522e+03		-1.134e+03								
El:	5	- C.c:	8	-8.284e-04	8.284e-04	7.738e+01	7.731e+01	-4.910e+00	4.910e+00	3.380e+02	-3.380e+02	
2.305e+02	2.758e+02	1.333e+03		-1.330e+03								
El:	5	- C.c:	9	1.452e-05	-1.452e-05	7.755e+01	7.714e+01	-5.431e+00	5.431e+00	4.451e+02	-4.451e+02	
2.911e+02	2.690e+02	1.339e+03		-1.318e+03								
El:	5	- C.c:	10	-4.704e-04	4.704e-04	8.516e+01	6.953e+01	1.649e+01	-1.649e+01	3.755e+02	-3.755e+02	-
8.609e+02	-8.396e+02	1.733e+03		-9.272e+02								
El:	5	- C.c:	11	-2.175e-04	2.175e-04	8.521e+01	6.948e+01	1.633e+01	-1.633e+01	4.076e+02	-4.076e+02	-
8.428e+02	-8.416e+02	1.735e+03		-9.236e+02								
El:	5	- C.c:	12	-5.673e-04	5.673e-04	7.328e+01	8.141e+01	-1.671e+01	1.671e+01	3.755e+02	-3.755e+02	
8.509e+02	8.727e+02	1.121e+03		-1.540e+03								
El:	5	- C.c:	13	-3.144e-04	3.144e-04	7.333e+01	8.136e+01	-1.687e+01	1.687e+01	4.076e+02	-4.076e+02	
8.690e+02	8.706e+02	1.122e+03		-1.536e+03								
El:	5	- C.c:	14	-7.993e-04	7.993e-04	8.094e+01	7.375e+01	5.051e+00	-5.051e+00	3.380e+02	-3.380e+02	-
2.830e+02	-2.379e+02	1.517e+03		-1.146e+03								
El:	5	- C.c:	15	4.360e-05	-4.360e-05	8.111e+01	7.358e+01	4.530e+00	-4.530e+00	4.451e+02	-4.451e+02	-
2.224e+02	-2.447e+02	1.522e+03		-1.134e+03								
El:	5	- C.c:	16	-8.284e-04	8.284e-04	7.738e+01	7.731e+01	-4.910e+00	4.910e+00	3.380e+02	-3.380e+02	
2.305e+02	2.758e+02	1.333e+03		-1.330e+03								
El:	5	- C.c:	17	1.452e-05	-1.452e-05	7.755e+01	7.714e+01	-5.431e+00	5.431e+00	4.451e+02	-4.451e+02	
2.911e+02	2.690e+02	1.339e+03		-1.318e+03								
El:	5	- C.c:	18	-1.352e-03	1.352e-03	8.220e+01	7.249e+01	-6.029e-01	6.029e-01	1.362e+03	-1.362e+03	
1.095e+01	5.123e+01	1.662e+03		-1.161e+03								
El:	5	- C.c:	19	-7.523e-04	7.523e-04	8.035e+01	7.434e+01	-3.448e-01	3.448e-01	7.553e+02	-7.553e+02	
6.641e+00	2.892e+01	1.515e+03		-1.205e+03								
El:	5	- C.c:	20	-3.924e-04	3.924e-04	7.924e+01	7.544e+01	-1.900e-01	1.900e-01	3.916e+02	-3.916e+02	
4.057e+00	1.553e+01	1.428e+03		-1.232e+03								
El:	6	- C.c:	1	-1.478e-03	1.478e-03	9.541e+01	1.057e+02	-1.918e+00	1.918e+00	3.926e+03	-3.926e+03	
1.084e+02	8.939e+01	1.579e+03		-2.108e+03								
El:	6	- C.c:	2	5.268e-05	-5.268e-05	7.946e+01	7.523e+01	1.601e+01	-1.601e+01	7.265e+02	-7.265e+02	-
8.244e+02	-8.271e+02	1.551e+03		-1.333e+03								
El:	6	- C.c:	3	2.429e-04	-2.429e-04	7.955e+01	7.514e+01	1.624e+01	-1.624e+01	7.850e+02	-7.850e+02	-
8.388e+02	-8.364e+02	1.556e+03		-1.329e+03								
El:	6	- C.c:	4	-7.949e-04	7.949e-04	6.767e+01	8.702e+01	-1.694e+01	1.694e+01	7.265e+02	-7.265e+02	
8.800e+02	8.672e+02	9.412e+02		-1.939e+03								
El:	6	- C.c:	5	-6.047e-04	6.047e-04	6.775e+01	8.694e+01	-1.671e+01	1.671e+01	7.850e+02	-7.850e+02	
8.657e+02	8.579e+02	9.459e+02		-1.935e+03								
El:	6	- C.c:	6	-4.659e-04	4.659e-04	7.523e+01	7.946e+01	4.213e+00	-4.213e+00	6.583e+02	-6.583e+02	-
2.112e+02	-2.232e+02	1.332e+03		-1.550e+03								
El:	6	- C.c:	7	1.681e-04	-1.681e-04	7.552e+01	7.917e+01	4.976e+00	-4.976e+00	8.532e+02	-8.532e+02	-
2.589e+02	-2.542e+02	1.348e+03		-1.536e+03								
El:	6	- C.c:	8	-7.201e-04	7.201e-04	7.169e+01	8.299e+01	-5.675e+00	5.675e+00	6.583e+02	-6.583e+02	
3.002e+02	2.850e+02	1.149e+03		-1.732e+03								
El:	6	- C.c:	9	-8.616e-05	8.616e-05	7.198e+01	8.271e+01	-4.911e+00	4.911e+00	8.532e+02	-8.532e+02	
2.524e+02	2.541e+02	1.165e+03		-1.718e+03								
El:	6	- C.c:	10	5.268e-05	-5.268e-05	7.946e+01	7.523e+01	1.601e+01	-1.601e+01	7.265e+02	-7.265e+02	-
8.244e+02	-8.271e+02	1.551e+03		-1.333e+03								
El:	6	- C.c:	11	2.429e-04	-2.429e-04	7.955e+01	7.514e+01	1.624e+01	-1.624e+01	7.850e+02	-7.850e+02	-
8.388e+02	-8.364e+02	1.556e+03		-1.329e+03								
El:	6	- C.c:	12	-7.949e-04	7.949e-04	6.767e+01	8.702e+01	-1.694e+01	1.694e+01	7.265e+02	-7.265e+02	
8.800e+02	8.672e+02	9.412e+02		-1.939e+03								
El:	6	- C.c:	13	-6.047e-04	6.047e-04	6.775e+01	8.694e+01	-1.671e+01	1.671e+01	7.850e+02	-7.850e+02	
8.657e+02	8.579e+02	9.459e+02		-1.935e+03								

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	6	- C.c: 14	-4.659e-04	4.659e-04	7.523e+01	7.946e+01	4.213e+00	-4.213e+00	6.583e+02	-6.583e+02	-
	2.112e+02	-2.232e+02	1.332e+03	-1.550e+03							
El:	6	- C.c: 15	1.681e-04	-1.681e-04	7.552e+01	7.917e+01	4.976e+00	-4.976e+00	8.532e+02	-8.532e+02	-
	2.589e+02	-2.542e+02	1.348e+03	-1.536e+03							
El:	6	- C.c: 16	-7.201e-04	7.201e-04	7.169e+01	8.299e+01	-5.675e+00	5.675e+00	6.583e+02	-6.583e+02	
	3.002e+02	2.850e+02	1.149e+03	-1.732e+03							
El:	6	- C.c: 17	-8.616e-05	8.616e-05	7.198e+01	8.271e+01	-4.911e+00	4.911e+00	8.532e+02	-8.532e+02	
	2.524e+02	2.541e+02	1.165e+03	-1.718e+03							
El:	6	- C.c: 18	-9.983e-04	9.983e-04	7.343e+01	8.126e+01	-1.294e+00	1.294e+00	2.655e+03	-2.655e+03	
	7.325e+01	6.016e+01	1.220e+03	-1.624e+03							
El:	6	- C.c: 19	-5.469e-04	5.469e-04	7.354e+01	8.115e+01	-7.034e-01	7.034e-01	1.468e+03	-1.468e+03	
	4.035e+01	3.219e+01	1.238e+03	-1.630e+03							
El:	6	- C.c: 20	-2.760e-04	2.760e-04	7.361e+01	8.108e+01	-3.493e-01	3.493e-01	7.558e+02	-7.558e+02	
	2.061e+01	1.541e+01	1.249e+03	-1.634e+03							
El:	7	- C.c: 1	-6.353e-04	6.353e-04	1.236e+02	7.748e+01	-4.839e+00	4.839e+00	7.747e+03	-7.747e+03	
	1.829e+02	3.161e+02	2.238e+03	1.416e+02							
El:	7	- C.c: 2	1.756e-01	-1.756e-01	9.978e+01	5.491e+01	1.611e+01	-1.611e+01	1.358e+03	-1.358e+03	-
	8.300e+02	-8.316e+02	1.968e+03	3.451e+02							
El:	7	- C.c: 3	1.756e-01	-1.756e-01	9.999e+01	5.470e+01	1.653e+01	-1.653e+01	1.415e+03	-1.415e+03	-
	8.453e+02	-8.589e+02	1.977e+03	3.590e+02							
El:	7	- C.c: 4	-1.760e-01	1.760e-01	8.738e+01	6.731e+01	-1.853e+01	1.853e+01	1.358e+03	-1.358e+03	
	9.180e+02	9.933e+02	1.343e+03	-3.079e+02							
El:	7	- C.c: 5	-1.759e-01	1.759e-01	8.759e+01	6.709e+01	-1.812e+01	1.812e+01	1.415e+03	-1.415e+03	
	9.027e+02	9.660e+02	1.351e+03	-2.940e+02							
El:	7	- C.c: 6	5.244e-02	-5.244e-02	9.519e+01	5.950e+01	3.506e+00	-3.506e+00	1.291e+03	-1.291e+03	-
	2.004e+02	-1.612e+02	1.740e+03	1.004e+02							
El:	7	- C.c: 7	5.267e-02	-5.267e-02	9.590e+01	5.878e+01	4.880e+00	-4.880e+00	1.482e+03	-1.482e+03	-
	2.514e+02	-2.519e+02	1.767e+03	1.466e+02							
El:	7	- C.c: 8	-5.302e-02	5.302e-02	9.147e+01	6.322e+01	-6.888e+00	6.888e+00	1.291e+03	-1.291e+03	
	3.240e+02	3.863e+02	1.552e+03	-9.554e+01							
El:	7	- C.c: 9	-5.279e-02	5.279e-02	9.218e+01	6.250e+01	-5.514e+00	5.514e+00	1.482e+03	-1.482e+03	
	2.731e+02	2.955e+02	1.580e+03	-4.929e+01							
El:	7	- C.c: 10	1.756e-01	-1.756e-01	9.978e+01	5.491e+01	1.611e+01	-1.611e+01	1.358e+03	-1.358e+03	-
	8.300e+02	-8.316e+02	1.968e+03	3.451e+02							
El:	7	- C.c: 11	1.756e-01	-1.756e-01	9.999e+01	5.470e+01	1.653e+01	-1.653e+01	1.415e+03	-1.415e+03	-
	8.453e+02	-8.589e+02	1.977e+03	3.590e+02							
El:	7	- C.c: 12	-1.760e-01	1.760e-01	8.738e+01	6.731e+01	-1.853e+01	1.853e+01	1.358e+03	-1.358e+03	
	9.180e+02	9.933e+02	1.343e+03	-3.079e+02							
El:	7	- C.c: 13	-1.759e-01	1.759e-01	8.759e+01	6.709e+01	-1.812e+01	1.812e+01	1.415e+03	-1.415e+03	
	9.027e+02	9.660e+02	1.351e+03	-2.940e+02							
El:	7	- C.c: 14	5.244e-02	-5.244e-02	9.519e+01	5.950e+01	3.506e+00	-3.506e+00	1.291e+03	-1.291e+03	-
	2.004e+02	-1.612e+02	1.740e+03	1.004e+02							
El:	7	- C.c: 15	5.267e-02	-5.267e-02	9.590e+01	5.878e+01	4.880e+00	-4.880e+00	1.482e+03	-1.482e+03	-
	2.514e+02	-2.519e+02	1.767e+03	1.466e+02							
El:	7	- C.c: 16	-5.302e-02	5.302e-02	9.147e+01	6.322e+01	-6.888e+00	6.888e+00	1.291e+03	-1.291e+03	
	3.240e+02	3.863e+02	1.552e+03	-9.554e+01							
El:	7	- C.c: 17	-5.279e-02	5.279e-02	9.218e+01	6.250e+01	-5.514e+00	5.514e+00	1.482e+03	-1.482e+03	
	2.731e+02	2.955e+02	1.580e+03	-4.929e+01							
El:	7	- C.c: 18	-4.382e-04	4.382e-04	9.486e+01	5.982e+01	-3.284e+00	3.284e+00	5.222e+03	-5.222e+03	
	1.239e+02	2.147e+02	1.711e+03	9.544e+01							
El:	7	- C.c: 19	-2.742e-04	2.742e-04	9.413e+01	6.056e+01	-1.859e+00	1.859e+00	2.825e+03	-2.825e+03	
	6.917e+01	1.225e+02	1.679e+03	5.176e+01							
El:	7	- C.c: 20	-1.757e-04	1.757e-04	9.369e+01	6.100e+01	-1.004e+00	1.004e+00	1.387e+03	-1.387e+03	
	3.634e+01	6.719e+01	1.660e+03	2.555e+01							
El:	8	- C.c: 1	1.122e-01	-1.122e-01	1.896e+03	-1.695e+03	-1.750e+02	1.750e+02	4.248e+03	-4.248e+03	
	1.441e+04	3.639e+03	1.518e+05	3.332e+04							
El:	8	- C.c: 2	2.091e-01	-2.091e-01	3.966e+02	-2.419e+02	-1.612e+01	1.612e+01	8.628e+02	-8.628e+02	
	7.852e+02	8.773e+02	2.783e+04	5.089e+03							
El:	8	- C.c: 3	2.304e-01	-2.304e-01	4.007e+02	-2.460e+02	-1.084e+02	1.084e+02	7.942e+02	-7.942e+02	
	8.461e+03	2.715e+03	2.817e+04	5.179e+03							
El:	8	- C.c: 4	-1.913e-01	1.913e-01	3.737e+02	-2.190e+02	4.779e+01	-4.779e+01	8.628e+02	-8.628e+02	-
	3.477e+03	-1.451e+03	2.630e+04	4.258e+03							
El:	8	- C.c: 5	-1.700e-01	1.700e-01	3.779e+02	-2.232e+02	-4.446e+01	4.446e+01	7.942e+02	-7.942e+02	
	4.199e+03	3.860e+02	2.664e+04	4.348e+03							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	8	- C.c:	6	4.404e-02	-4.404e-02	3.837e+02	-2.290e+02	1.139e+02	-1.139e+02	9.429e+02	-9.429e+02	-
9.661e+03	-2.081e+03	2.690e+04		4.693e+03		3.976e+02	-2.429e+02	-1.936e+02	1.936e+02	7.141e+02	-7.141e+02	
El:	8	- C.c:	7	1.152e-01	-1.152e-01	3.976e+02	-2.429e+02	-1.936e+02	1.936e+02	7.141e+02	-7.141e+02	
1.592e+04	4.043e+03	2.803e+04		4.993e+03		3.768e+02	-2.221e+02	1.330e+02	-1.330e+02	9.429e+02	-9.429e+02	-
El:	8	- C.c:	8	-7.608e-02	7.608e-02	3.768e+02	-2.221e+02	1.330e+02	-1.330e+02	9.429e+02	-9.429e+02	-
1.094e+04	-2.780e+03	2.644e+04		4.444e+03		3.907e+02	-2.360e+02	-1.744e+02	1.744e+02	7.141e+02	-7.141e+02	
El:	8	- C.c:	9	-4.909e-03	4.909e-03	3.907e+02	-2.360e+02	-1.744e+02	1.744e+02	7.141e+02	-7.141e+02	
1.465e+04	3.344e+03	2.757e+04		4.744e+03		3.966e+02	-2.419e+02	-1.612e+01	1.612e+01	8.628e+02	-8.628e+02	
El:	8	- C.c:	10	2.091e-01	-2.091e-01	3.966e+02	-2.419e+02	-1.612e+01	1.612e+01	8.628e+02	-8.628e+02	
7.852e+02	8.773e+02	2.783e+04		5.089e+03		4.007e+02	-2.460e+02	-1.084e+02	1.084e+02	7.942e+02	-7.942e+02	
El:	8	- C.c:	11	2.304e-01	-2.304e-01	4.007e+02	-2.460e+02	-1.084e+02	1.084e+02	7.942e+02	-7.942e+02	
8.461e+03	2.715e+03	2.817e+04		5.179e+03		3.737e+02	-2.190e+02	4.779e+01	-4.779e+01	8.628e+02	-8.628e+02	-
El:	8	- C.c:	12	-1.913e-01	1.913e-01	3.737e+02	-2.190e+02	4.779e+01	-4.779e+01	8.628e+02	-8.628e+02	-
3.477e+03	-1.451e+03	2.630e+04		4.258e+03		3.779e+02	-2.232e+02	-4.446e+01	4.446e+01	7.942e+02	-7.942e+02	
El:	8	- C.c:	13	-1.700e-01	1.700e-01	3.779e+02	-2.232e+02	-4.446e+01	4.446e+01	7.942e+02	-7.942e+02	
4.199e+03	3.860e+02	2.664e+04		4.348e+03		3.837e+02	-2.290e+02	1.139e+02	-1.139e+02	9.429e+02	-9.429e+02	-
El:	8	- C.c:	14	4.404e-02	-4.404e-02	3.837e+02	-2.290e+02	1.139e+02	-1.139e+02	9.429e+02	-9.429e+02	-
9.661e+03	-2.081e+03	2.690e+04		4.693e+03		3.976e+02	-2.429e+02	-1.936e+02	1.936e+02	7.141e+02	-7.141e+02	
El:	8	- C.c:	15	1.152e-01	-1.152e-01	3.976e+02	-2.429e+02	-1.936e+02	1.936e+02	7.141e+02	-7.141e+02	
1.592e+04	4.043e+03	2.803e+04		4.993e+03		3.768e+02	-2.221e+02	1.330e+02	-1.330e+02	9.429e+02	-9.429e+02	-
El:	8	- C.c:	16	-7.608e-02	7.608e-02	3.768e+02	-2.221e+02	1.330e+02	-1.330e+02	9.429e+02	-9.429e+02	-
1.094e+04	-2.780e+03	2.644e+04		4.444e+03		3.907e+02	-2.360e+02	-1.744e+02	1.744e+02	7.141e+02	-7.141e+02	
El:	8	- C.c:	17	-4.909e-03	4.909e-03	3.907e+02	-2.360e+02	-1.744e+02	1.744e+02	7.141e+02	-7.141e+02	
1.465e+04	3.344e+03	2.757e+04		4.744e+03		1.286e+03	-1.131e+03	-1.178e+02	1.178e+02	2.874e+03	-2.874e+03	
El:	8	- C.c:	18	7.555e-02	-7.555e-02	1.286e+03	-1.131e+03	-1.178e+02	1.178e+02	2.874e+03	-2.874e+03	
9.700e+03	2.450e+03	1.023e+05		2.226e+04		7.241e+02	-5.694e+02	-6.311e+01	6.311e+01	1.596e+03	-1.596e+03	
El:	8	- C.c:	19	4.056e-02	-4.056e-02	7.241e+02	-5.694e+02	-6.311e+01	6.311e+01	1.596e+03	-1.596e+03	
5.195e+03	1.313e+03	5.540e+04		1.130e+04		3.872e+02	-2.325e+02	-3.029e+01	3.029e+01	8.285e+02	-8.285e+02	
El:	8	- C.c:	20	1.956e-02	-1.956e-02	3.872e+02	-2.325e+02	-3.029e+01	3.029e+01	8.285e+02	-8.285e+02	
2.492e+03	6.317e+02	2.724e+04		4.719e+03		-3.195e+02	5.206e+02	3.680e+01	-3.680e+01	3.676e+03	-3.676e+03	-
El:	9	- C.c:	1	-3.548e-03	3.548e-03	-3.195e+02	5.206e+02	3.680e+01	-3.680e+01	3.676e+03	-3.676e+03	-
3.111e+03	-6.840e+02	-3.335e+04		-9.967e+03		9.883e+00	1.448e+02	-1.742e+01	1.742e+01	7.460e+02	-7.460e+02	
El:	9	- C.c:	2	-2.065e-04	2.065e-04	9.883e+00	1.448e+02	-1.742e+01	1.742e+01	7.460e+02	-7.460e+02	
9.188e+02	8.780e+02	-4.492e+03		-2.465e+03		9.111e+00	1.456e+02	3.895e+00	-3.895e+00	6.866e+02	-6.866e+02	-
El:	9	- C.c:	3	-6.307e-04	6.307e-04	9.111e+00	1.456e+02	3.895e+00	-3.895e+00	6.866e+02	-6.866e+02	-
8.627e+02	4.610e+02	-4.558e+03		-2.478e+03		4.988e-01	1.542e+02	8.712e+00	-8.712e+00	7.460e+02	-7.460e+02	-
El:	9	- C.c:	4	-6.562e-04	6.562e-04	4.988e-01	1.542e+02	8.712e+00	-8.712e+00	7.460e+02	-7.460e+02	-
2.061e+02	-6.924e+02	-4.896e+03		-3.028e+03		-2.732e-01	1.550e+02	3.003e+01	-3.003e+01	6.866e+02	-6.866e+02	-
El:	9	- C.c:	5	-1.080e-03	1.080e-03	-2.732e-01	1.550e+02	3.003e+01	-3.003e+01	6.866e+02	-6.866e+02	-
1.988e+03	-1.109e+03	-4.963e+03		-3.041e+03		7.499e+00	1.472e+02	-3.315e+01	3.315e+01	8.153e+02	-8.153e+02	
El:	9	- C.c:	6	1.311e-04	-1.311e-04	7.499e+00	1.472e+02	-3.315e+01	3.315e+01	8.153e+02	-8.153e+02	
2.604e+03	8.148e+02	-4.556e+03		-2.647e+03		4.926e+00	1.498e+02	3.791e+01	-3.791e+01	6.173e+02	-6.173e+02	-
El:	9	- C.c:	7	-1.283e-03	1.283e-03	4.926e+00	1.498e+02	3.791e+01	-3.791e+01	6.173e+02	-6.173e+02	-
3.335e+03	-5.750e+02	-4.777e+03		-2.691e+03		4.684e+00	1.500e+02	-2.531e+01	2.531e+01	8.153e+02	-8.153e+02	
El:	9	- C.c:	8	-3.856e-06	3.856e-06	4.684e+00	1.500e+02	-2.531e+01	2.531e+01	8.153e+02	-8.153e+02	
2.266e+03	3.437e+02	-4.677e+03		-2.816e+03		2.111e+00	1.526e+02	4.576e+01	-4.576e+01	6.173e+02	-6.173e+02	-
El:	9	- C.c:	9	-1.418e-03	1.418e-03	2.111e+00	1.526e+02	4.576e+01	-4.576e+01	6.173e+02	-6.173e+02	-
3.672e+03	-1.046e+03	-4.899e+03		-2.860e+03		9.883e+00	1.448e+02	-1.742e+01	1.742e+01	7.460e+02	-7.460e+02	
El:	9	- C.c:	10	-2.065e-04	2.065e-04	9.883e+00	1.448e+02	-1.742e+01	1.742e+01	7.460e+02	-7.460e+02	
9.188e+02	8.780e+02	-4.492e+03		-2.465e+03		9.111e+00	1.456e+02	3.895e+00	-3.895e+00	6.866e+02	-6.866e+02	-
El:	9	- C.c:	11	-6.307e-04	6.307e-04	9.111e+00	1.456e+02	3.895e+00	-3.895e+00	6.866e+02	-6.866e+02	-
8.627e+02	4.610e+02	-4.558e+03		-2.478e+03		4.988e-01	1.542e+02	8.712e+00	-8.712e+00	7.460e+02	-7.460e+02	-
El:	9	- C.c:	12	-6.562e-04	6.562e-04	4.988e-01	1.542e+02	8.712e+00	-8.712e+00	7.460e+02	-7.460e+02	-
2.061e+02	-6.924e+02	-4.896e+03		-3.028e+03		-2.732e-01	1.550e+02	3.003e+01	-3.003e+01	6.866e+02	-6.866e+02	-
El:	9	- C.c:	13	-1.080e-03	1.080e-03	-2.732e-01	1.550e+02	3.003e+01	-3.003e+01	6.866e+02	-6.866e+02	-
1.988e+03	-1.109e+03	-4.963e+03		-3.041e+03		7.499e+00	1.472e+02	-3.315e+01	3.315e+01	8.153e+02	-8.153e+02	
El:	9	- C.c:	14	1.311e-04	-1.311e-04	7.499e+00	1.472e+02	-3.315e+01	3.315e+01	8.153e+02	-8.153e+02	
2.604e+03	8.148e+02	-4.556e+03		-2.647e+03		4.926e+00	1.498e+02	3.791e+01	-3.791e+01	6.173e+02	-6.173e+02	-
El:	9	- C.c:	15	-1.283e-03	1.283e-03	4.926e+00	1.498e+02	3.791e+01	-3.791e+01	6.173e+02	-6.173e+02	-
3.335e+03	-5.750e+02	-4.777e+03		-2.691e+03		4.684e+00	1.500e+02	-2.531e+01	2.531e+01	8.153e+02	-8.153e+02	
El:	9	- C.c:	16	-3.856e-06	3.856e-06	4.684e+00	1.500e+02	-2.531e+01	2.531e+01	8.153e+02	-8.153e+02	
2.266e+03	3.437e+02	-4.677e+03		-2.816e+03		2.111e+00	1.526e+02	4.576e+01	-4.576e+01	6.173e+02	-6.173e+02	-
El:	9	- C.c:	17	-1.418e-03	1.418e-03	2.111e+00	1.526e+02	4.576e+01	-4.576e+01	6.173e+02	-6.173e+02	-
3.672e+03	-1.046e+03	-4.899e+03		-2.860e+03								

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	9	- C.c: 18	-2.393e-03	2.393e-03	-2.054e+02	3.601e+02	2.476e+01	-2.476e+01	2.487e+03	-2.487e+03	-
	2.093e+03	-4.600e+02	-2.228e+04	-6.875e+03							
El:	9	- C.c: 19	-1.299e-03	1.299e-03	-7.401e+01	2.287e+02	1.322e+01	-1.322e+01	1.380e+03	-1.380e+03	-
	1.119e+03	-2.448e+02	-1.131e+04	-4.299e+03							
El:	9	- C.c: 20	-6.435e-04	6.435e-04	4.805e+00	1.499e+02	6.304e+00	-6.304e+00	7.163e+02	-7.163e+02	-
	5.344e+02	-1.157e+02	-4.727e+03	-2.753e+03							
El:	10	- C.c: 1	-1.427e-03	1.427e-03	1.977e+02	3.410e+00	-1.013e+01	1.013e+01	2.067e+03	-2.067e+03	
	8.114e+02	2.337e+02	9.857e+03	1.601e+02							
El:	10	- C.c: 2	-2.340e-04	2.340e-04	1.002e+02	5.447e+01	-1.656e+01	1.656e+01	4.191e+02	-4.191e+02	
	8.505e+02	8.573e+02	3.052e+03	-6.937e+02							
El:	10	- C.c: 3	-4.163e-04	4.163e-04	1.005e+02	5.423e+01	-2.171e+01	2.171e+01	3.857e+02	-3.857e+02	
	1.277e+03	9.619e+02	3.071e+03	-6.873e+02							
El:	10	- C.c: 4	-1.645e-04	1.645e-04	8.781e+01	6.688e+01	1.815e+01	-1.815e+01	4.191e+02	-4.191e+02	-
	9.932e+02	-8.790e+02	2.394e+03	-1.315e+03							
El:	10	- C.c: 5	-3.468e-04	3.468e-04	8.805e+01	6.663e+01	1.301e+01	-1.301e+01	3.857e+02	-3.857e+02	-
	5.669e+02	-7.743e+02	2.413e+03	-1.308e+03							
El:	10	- C.c: 6	2.983e-06	-2.983e-06	9.558e+01	5.910e+01	1.597e+00	-1.597e+00	4.581e+02	-4.581e+02	-
	2.922e+02	1.275e+02	2.799e+03	-9.184e+02							
El:	10	- C.c: 7	-6.046e-04	6.046e-04	9.641e+01	5.828e+01	-1.557e+01	1.557e+01	3.466e+02	-3.466e+02	
	1.129e+03	4.763e+02	2.863e+03	-8.972e+02							
El:	10	- C.c: 8	2.383e-05	-2.383e-05	9.186e+01	6.283e+01	1.201e+01	-1.201e+01	4.581e+02	-4.581e+02	-
	8.453e+02	-3.934e+02	2.602e+03	-1.105e+03							
El:	10	- C.c: 9	-5.838e-04	5.838e-04	9.268e+01	6.200e+01	-5.152e+00	5.152e+00	3.466e+02	-3.466e+02	
	5.758e+02	-4.453e+01	2.665e+03	-1.083e+03							
El:	10	- C.c: 10	-2.340e-04	2.340e-04	1.002e+02	5.447e+01	-1.656e+01	1.656e+01	4.191e+02	-4.191e+02	
	8.505e+02	8.573e+02	3.052e+03	-6.937e+02							
El:	10	- C.c: 11	-4.163e-04	4.163e-04	1.005e+02	5.423e+01	-2.171e+01	2.171e+01	3.857e+02	-3.857e+02	
	1.277e+03	9.619e+02	3.071e+03	-6.873e+02							
El:	10	- C.c: 12	-1.645e-04	1.645e-04	8.781e+01	6.688e+01	1.815e+01	-1.815e+01	4.191e+02	-4.191e+02	-
	9.932e+02	-8.790e+02	2.394e+03	-1.315e+03							
El:	10	- C.c: 13	-3.468e-04	3.468e-04	8.805e+01	6.663e+01	1.301e+01	-1.301e+01	3.857e+02	-3.857e+02	-
	5.669e+02	-7.743e+02	2.413e+03	-1.308e+03							
El:	10	- C.c: 14	2.983e-06	-2.983e-06	9.558e+01	5.910e+01	1.597e+00	-1.597e+00	4.581e+02	-4.581e+02	-
	2.922e+02	1.275e+02	2.799e+03	-9.184e+02							
El:	10	- C.c: 15	-6.046e-04	6.046e-04	9.641e+01	5.828e+01	-1.557e+01	1.557e+01	3.466e+02	-3.466e+02	
	1.129e+03	4.763e+02	2.863e+03	-8.972e+02							
El:	10	- C.c: 16	2.383e-05	-2.383e-05	9.186e+01	6.283e+01	1.201e+01	-1.201e+01	4.581e+02	-4.581e+02	-
	8.453e+02	-3.934e+02	2.602e+03	-1.105e+03							
El:	10	- C.c: 17	-5.838e-04	5.838e-04	9.268e+01	6.200e+01	-5.152e+00	5.152e+00	3.466e+02	-3.466e+02	
	5.758e+02	-4.453e+01	2.665e+03	-1.083e+03							
El:	10	- C.c: 18	-9.675e-04	9.675e-04	1.427e+02	1.197e+01	-6.825e+00	6.825e+00	1.399e+03	-1.399e+03	
	5.463e+02	1.575e+02	6.800e+03	-5.817e+01							
El:	10	- C.c: 19	-5.443e-04	5.443e-04	1.124e+02	4.233e+01	-3.670e+00	3.670e+00	7.760e+02	-7.760e+02	
	2.935e+02	8.498e+01	4.258e+03	-6.474e+02							
El:	10	- C.c: 20	-2.904e-04	2.904e-04	9.413e+01	6.055e+01	-1.777e+00	1.777e+00	4.024e+02	-4.024e+02	
	1.418e+02	4.148e+01	2.732e+03	-1.001e+03							
El:	11	- C.c: 1	-2.311e-03	2.311e-03	7.749e+01	1.236e+02	1.950e+00	-1.950e+00	4.800e+01	-4.800e+01	-
	1.513e+02	-4.982e+01	-1.875e+02	-2.190e+03							
El:	11	- C.c: 2	-3.030e-04	3.030e-04	7.906e+01	7.563e+01	-1.655e+01	1.655e+01	9.488e+00	-9.488e+00	
	8.569e+02	8.496e+02	1.296e+03	-1.119e+03							
El:	11	- C.c: 3	-5.955e-04	5.955e-04	7.902e+01	7.567e+01	-1.537e+01	1.537e+01	8.634e+00	-8.634e+00	
	7.601e+02	8.254e+02	1.293e+03	-1.120e+03							
El:	11	- C.c: 4	-2.976e-04	2.976e-04	6.739e+01	8.730e+01	1.604e+01	-1.604e+01	9.485e+00	-9.485e+00	-
	8.117e+02	-8.427e+02	6.981e+02	-1.724e+03							
El:	11	- C.c: 5	-5.901e-04	5.901e-04	6.735e+01	8.733e+01	1.721e+01	-1.721e+01	8.631e+00	-8.631e+00	-
	9.084e+02	-8.668e+02	6.954e+02	-1.726e+03							
El:	11	- C.c: 6	4.009e-05	-4.009e-05	7.502e+01	7.967e+01	-6.509e+00	6.509e+00	1.048e+01	-1.048e+01	
	3.858e+02	2.855e+02	1.089e+03	-1.329e+03							
El:	11	- C.c: 7	-9.348e-04	9.348e-04	7.489e+01	7.979e+01	-2.600e+00	2.600e+00	7.636e+00	-7.636e+00	
	6.323e+01	2.049e+02	1.081e+03	-1.333e+03							
El:	11	- C.c: 8	4.173e-05	-4.173e-05	7.152e+01	8.317e+01	3.268e+00	-3.268e+00	1.048e+01	-1.048e+01	-
	1.148e+02	-2.222e+02	9.102e+02	-1.511e+03							
El:	11	- C.c: 9	-9.332e-04	9.332e-04	7.139e+01	8.329e+01	7.177e+00	-7.177e+00	7.635e+00	-7.635e+00	-
	4.373e+02	-3.028e+02	9.015e+02	-1.515e+03							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	11	- C.c: 10	-3.030e-04	3.030e-04	7.906e+01	7.563e+01	-1.655e+01	1.655e+01	9.488e+00	-9.488e+00	
8.569e+02	8.496e+02		1.296e+03	-1.119e+03							
El:	11	- C.c: 11	-5.955e-04	5.955e-04	7.902e+01	7.567e+01	-1.537e+01	1.537e+01	8.634e+00	-8.634e+00	
7.601e+02	8.254e+02		1.293e+03	-1.120e+03							
El:	11	- C.c: 12	-2.976e-04	2.976e-04	6.739e+01	8.730e+01	1.604e+01	-1.604e+01	9.485e+00	-9.485e+00	-
8.117e+02	-8.427e+02		6.981e+02	-1.724e+03							
El:	11	- C.c: 13	-5.901e-04	5.901e-04	6.735e+01	8.733e+01	1.721e+01	-1.721e+01	8.631e+00	-8.631e+00	-
9.084e+02	-8.668e+02		6.954e+02	-1.726e+03							
El:	11	- C.c: 14	4.009e-05	-4.009e-05	7.502e+01	7.967e+01	-6.509e+00	6.509e+00	1.048e+01	-1.048e+01	
3.858e+02	2.855e+02		1.089e+03	-1.329e+03							
El:	11	- C.c: 15	-9.348e-04	9.348e-04	7.489e+01	7.979e+01	-2.600e+00	2.600e+00	7.636e+00	-7.636e+00	
6.323e+01	2.049e+02		1.081e+03	-1.333e+03							
El:	11	- C.c: 16	4.173e-05	-4.173e-05	7.152e+01	8.317e+01	3.268e+00	-3.268e+00	1.048e+01	-1.048e+01	-
1.148e+02	-2.222e+02		9.102e+02	-1.511e+03							
El:	11	- C.c: 17	-9.332e-04	9.332e-04	7.139e+01	8.329e+01	7.177e+00	-7.177e+00	7.635e+00	-7.635e+00	-
4.373e+02	-3.028e+02		9.015e+02	-1.515e+03							
El:	11	- C.c: 18	-1.563e-03	1.563e-03	6.180e+01	9.289e+01	1.312e+00	-1.312e+00	3.243e+01	-3.243e+01	-
1.018e+02	-3.354e+01		3.960e+01	-1.642e+03							
El:	11	- C.c: 19	-8.651e-04	8.651e-04	6.893e+01	8.576e+01	7.006e-01	-7.006e-01	1.782e+01	-1.782e+01	-
5.428e+01	-1.797e+01		6.370e+02	-1.505e+03							
El:	11	- C.c: 20	-4.466e-04	4.466e-04	7.321e+01	8.148e+01	3.337e-01	-3.337e-01	9.059e+00	-9.059e+00	-
2.578e+01	-8.633e+00		9.955e+02	-1.422e+03							
El:	12	- C.c: 1	-1.998e-03	1.998e-03	1.076e+02	9.350e+01	8.870e-01	-8.870e-01	-2.013e+03	2.013e+03	-
1.596e+01	-7.552e+01		2.219e+03	-1.492e+03							
El:	12	- C.c: 2	-2.175e-04	2.175e-04	8.521e+01	6.948e+01	-1.633e+01	1.633e+01	-4.076e+02	4.076e+02	
8.428e+02	8.416e+02		1.735e+03	-9.236e+02							
El:	12	- C.c: 3	-4.704e-04	4.704e-04	8.516e+01	6.953e+01	-1.649e+01	1.649e+01	-3.755e+02	3.755e+02	
8.609e+02	8.396e+02		1.733e+03	-9.272e+02							
El:	12	- C.c: 4	-3.144e-04	3.144e-04	7.333e+01	8.136e+01	1.687e+01	-1.687e+01	-4.076e+02	4.076e+02	-
8.690e+02	-8.706e+02		1.122e+03	-1.536e+03							
El:	12	- C.c: 5	-5.673e-04	5.673e-04	7.328e+01	8.141e+01	1.671e+01	-1.671e+01	-3.755e+02	3.755e+02	-
8.509e+02	-8.727e+02		1.121e+03	-1.540e+03							
El:	12	- C.c: 6	4.360e-05	-4.360e-05	8.111e+01	7.358e+01	-4.530e+00	4.530e+00	-4.451e+02	4.451e+02	
2.224e+02	2.447e+02		1.522e+03	-1.134e+03							
El:	12	- C.c: 7	-7.993e-04	7.993e-04	8.094e+01	7.375e+01	-5.051e+00	5.051e+00	-3.380e+02	3.380e+02	
2.830e+02	2.379e+02		1.517e+03	-1.146e+03							
El:	12	- C.c: 8	1.452e-05	-1.452e-05	7.755e+01	7.714e+01	5.431e+00	-5.431e+00	-4.451e+02	4.451e+02	-
2.911e+02	-2.690e+02		1.339e+03	-1.318e+03							
El:	12	- C.c: 9	-8.284e-04	8.284e-04	7.738e+01	7.731e+01	4.910e+00	-4.910e+00	-3.380e+02	3.380e+02	-
2.305e+02	-2.758e+02		1.333e+03	-1.330e+03							
El:	12	- C.c: 10	-2.175e-04	2.175e-04	8.521e+01	6.948e+01	-1.633e+01	1.633e+01	-4.076e+02	4.076e+02	
8.428e+02	8.416e+02		1.735e+03	-9.236e+02							
El:	12	- C.c: 11	-4.704e-04	4.704e-04	8.516e+01	6.953e+01	-1.649e+01	1.649e+01	-3.755e+02	3.755e+02	
8.609e+02	8.396e+02		1.733e+03	-9.272e+02							
El:	12	- C.c: 12	-3.144e-04	3.144e-04	7.333e+01	8.136e+01	1.687e+01	-1.687e+01	-4.076e+02	4.076e+02	-
8.690e+02	-8.706e+02		1.122e+03	-1.536e+03							
El:	12	- C.c: 13	-5.673e-04	5.673e-04	7.328e+01	8.141e+01	1.671e+01	-1.671e+01	-3.755e+02	3.755e+02	-
8.509e+02	-8.727e+02		1.121e+03	-1.540e+03							
El:	12	- C.c: 14	4.360e-05	-4.360e-05	8.111e+01	7.358e+01	-4.530e+00	4.530e+00	-4.451e+02	4.451e+02	
2.224e+02	2.447e+02		1.522e+03	-1.134e+03							
El:	12	- C.c: 15	-7.993e-04	7.993e-04	8.094e+01	7.375e+01	-5.051e+00	5.051e+00	-3.380e+02	3.380e+02	
2.830e+02	2.379e+02		1.517e+03	-1.146e+03							
El:	12	- C.c: 16	1.452e-05	-1.452e-05	7.755e+01	7.714e+01	5.431e+00	-5.431e+00	-4.451e+02	4.451e+02	-
2.911e+02	-2.690e+02		1.339e+03	-1.318e+03							
El:	12	- C.c: 17	-8.284e-04	8.284e-04	7.738e+01	7.731e+01	4.910e+00	-4.910e+00	-3.380e+02	3.380e+02	-
2.305e+02	-2.758e+02		1.333e+03	-1.330e+03							
El:	12	- C.c: 18	-1.352e-03	1.352e-03	8.220e+01	7.249e+01	6.029e-01	-6.029e-01	-1.362e+03	1.362e+03	-
1.095e+01	-5.123e+01		1.662e+03	-1.161e+03							
El:	12	- C.c: 19	-7.523e-04	7.523e-04	8.035e+01	7.434e+01	3.448e-01	-3.448e-01	-7.553e+02	7.553e+02	-
6.641e+00	-2.892e+01		1.515e+03	-1.205e+03							
El:	12	- C.c: 20	-3.924e-04	3.924e-04	7.924e+01	7.544e+01	1.900e-01	-1.900e-01	-3.916e+02	3.916e+02	-
4.057e+00	-1.553e+01		1.428e+03	-1.232e+03							
El:	13	- C.c: 1	-1.478e-03	1.478e-03	9.541e+01	1.057e+02	1.918e+00	-1.918e+00	-3.926e+03	3.926e+03	-
1.084e+02	-8.939e+01		1.579e+03	-2.108e+03							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El: 13 - C.c: 2	2.429e-04	-2.429e-04	7.955e+01	7.514e+01	-1.624e+01	1.624e+01	-7.850e+02	7.850e+02	
8.388e+02	8.364e+02	1.556e+03	-1.329e+03						
El: 13 - C.c: 3	5.268e-05	-5.268e-05	7.946e+01	7.523e+01	-1.601e+01	1.601e+01	-7.265e+02	7.265e+02	
8.244e+02	8.271e+02	1.551e+03	-1.333e+03						
El: 13 - C.c: 4	-6.047e-04	6.047e-04	6.775e+01	8.694e+01	1.671e+01	-1.671e+01	-7.850e+02	7.850e+02	-
8.657e+02	-8.579e+02	9.459e+02	-1.935e+03						
El: 13 - C.c: 5	-7.949e-04	7.949e-04	6.767e+01	8.702e+01	1.694e+01	-1.694e+01	-7.265e+02	7.265e+02	-
8.800e+02	-8.672e+02	9.412e+02	-1.939e+03						
El: 13 - C.c: 6	1.681e-04	-1.681e-04	7.552e+01	7.917e+01	-4.976e+00	4.976e+00	-8.532e+02	8.532e+02	
2.589e+02	2.542e+02	1.348e+03	-1.536e+03						
El: 13 - C.c: 7	-4.659e-04	4.659e-04	7.523e+01	7.946e+01	-4.213e+00	4.213e+00	-6.583e+02	6.583e+02	
2.112e+02	2.232e+02	1.332e+03	-1.550e+03						
El: 13 - C.c: 8	-8.616e-05	8.616e-05	7.198e+01	8.271e+01	4.911e+00	-4.911e+00	-8.532e+02	8.532e+02	-
2.524e+02	-2.541e+02	1.165e+03	-1.718e+03						
El: 13 - C.c: 9	-7.201e-04	7.201e-04	7.169e+01	8.299e+01	5.675e+00	-5.675e+00	-6.583e+02	6.583e+02	-
3.002e+02	-2.850e+02	1.149e+03	-1.732e+03						
El: 13 - C.c: 10	2.429e-04	-2.429e-04	7.955e+01	7.514e+01	-1.624e+01	1.624e+01	-7.850e+02	7.850e+02	
8.388e+02	8.364e+02	1.556e+03	-1.329e+03						
El: 13 - C.c: 11	5.268e-05	-5.268e-05	7.946e+01	7.523e+01	-1.601e+01	1.601e+01	-7.265e+02	7.265e+02	
8.244e+02	8.271e+02	1.551e+03	-1.333e+03						
El: 13 - C.c: 12	-6.047e-04	6.047e-04	6.775e+01	8.694e+01	1.671e+01	-1.671e+01	-7.850e+02	7.850e+02	-
8.657e+02	-8.579e+02	9.459e+02	-1.935e+03						
El: 13 - C.c: 13	-7.949e-04	7.949e-04	6.767e+01	8.702e+01	1.694e+01	-1.694e+01	-7.265e+02	7.265e+02	-
8.800e+02	-8.672e+02	9.412e+02	-1.939e+03						
El: 13 - C.c: 14	1.681e-04	-1.681e-04	7.552e+01	7.917e+01	-4.976e+00	4.976e+00	-8.532e+02	8.532e+02	
2.589e+02	2.542e+02	1.348e+03	-1.536e+03						
El: 13 - C.c: 15	-4.659e-04	4.659e-04	7.523e+01	7.946e+01	-4.213e+00	4.213e+00	-6.583e+02	6.583e+02	
2.112e+02	2.232e+02	1.332e+03	-1.550e+03						
El: 13 - C.c: 16	-8.616e-05	8.616e-05	7.198e+01	8.271e+01	4.911e+00	-4.911e+00	-8.532e+02	8.532e+02	-
2.524e+02	-2.541e+02	1.165e+03	-1.718e+03						
El: 13 - C.c: 17	-7.201e-04	7.201e-04	7.169e+01	8.299e+01	5.675e+00	-5.675e+00	-6.583e+02	6.583e+02	-
3.002e+02	-2.850e+02	1.149e+03	-1.732e+03						
El: 13 - C.c: 18	-9.983e-04	9.983e-04	7.343e+01	8.126e+01	1.294e+00	-1.294e+00	-2.655e+03	2.655e+03	-
7.325e+01	-6.016e+01	1.220e+03	-1.624e+03						
El: 13 - C.c: 19	-5.469e-04	5.469e-04	7.354e+01	8.115e+01	7.034e-01	-7.034e-01	-1.468e+03	1.468e+03	-
4.035e+01	-3.219e+01	1.238e+03	-1.630e+03						
El: 13 - C.c: 20	-2.760e-04	2.760e-04	7.361e+01	8.108e+01	3.493e-01	-3.493e-01	-7.558e+02	7.558e+02	-
2.061e+01	-1.541e+01	1.249e+03	-1.634e+03						
El: 14 - C.c: 1	-6.353e-04	6.353e-04	1.236e+02	7.748e+01	4.839e+00	-4.839e+00	-7.747e+03	7.747e+03	-
1.829e+02	-3.161e+02	2.238e+03	1.416e+02						
El: 14 - C.c: 2	1.756e-01	-1.756e-01	9.999e+01	5.470e+01	-1.653e+01	1.653e+01	-1.415e+03	1.415e+03	
8.453e+02	8.589e+02	1.977e+03	3.590e+02						
El: 14 - C.c: 3	1.756e-01	-1.756e-01	9.978e+01	5.491e+01	-1.611e+01	1.611e+01	-1.358e+03	1.358e+03	
8.300e+02	8.316e+02	1.968e+03	3.451e+02						
El: 14 - C.c: 4	-1.759e-01	1.759e-01	8.759e+01	6.709e+01	1.812e+01	-1.812e+01	-1.415e+03	1.415e+03	-
9.027e+02	-9.660e+02	1.351e+03	-2.940e+02						
El: 14 - C.c: 5	-1.760e-01	1.760e-01	8.738e+01	6.731e+01	1.853e+01	-1.853e+01	-1.358e+03	1.358e+03	-
9.180e+02	-9.933e+02	1.343e+03	-3.079e+02						
El: 14 - C.c: 6	5.267e-02	-5.267e-02	9.590e+01	5.878e+01	-4.880e+00	4.880e+00	-1.482e+03	1.482e+03	
2.514e+02	2.519e+02	1.767e+03	1.466e+02						
El: 14 - C.c: 7	5.244e-02	-5.244e-02	9.519e+01	5.950e+01	-3.506e+00	3.506e+00	-1.291e+03	1.291e+03	
2.004e+02	1.612e+02	1.740e+03	1.004e+02						
El: 14 - C.c: 8	-5.279e-02	5.279e-02	9.218e+01	6.250e+01	5.514e+00	-5.514e+00	-1.482e+03	1.482e+03	-
2.731e+02	-2.955e+02	1.580e+03	-4.929e+01						
El: 14 - C.c: 9	-5.302e-02	5.302e-02	9.147e+01	6.322e+01	6.888e+00	-6.888e+00	-1.291e+03	1.291e+03	-
3.240e+02	-3.863e+02	1.552e+03	-9.554e+01						
El: 14 - C.c: 10	1.756e-01	-1.756e-01	9.999e+01	5.470e+01	-1.653e+01	1.653e+01	-1.415e+03	1.415e+03	
8.453e+02	8.589e+02	1.977e+03	3.590e+02						
El: 14 - C.c: 11	1.756e-01	-1.756e-01	9.978e+01	5.491e+01	-1.611e+01	1.611e+01	-1.358e+03	1.358e+03	
8.300e+02	8.316e+02	1.968e+03	3.451e+02						
El: 14 - C.c: 12	-1.759e-01	1.759e-01	8.759e+01	6.709e+01	1.812e+01	-1.812e+01	-1.415e+03	1.415e+03	-
9.027e+02	-9.660e+02	1.351e+03	-2.940e+02						
El: 14 - C.c: 13	-1.760e-01	1.760e-01	8.738e+01	6.731e+01	1.853e+01	-1.853e+01	-1.358e+03	1.358e+03	-
9.180e+02	-9.933e+02	1.343e+03	-3.079e+02						

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	14	- C.c:	14	5.267e-02	-5.267e-02	9.590e+01	5.878e+01	-4.880e+00	4.880e+00	-1.482e+03	1.482e+03		
2.514e+02	2.519e+02			1.767e+03	1.466e+02								
El:	14	- C.c:	15	5.244e-02	-5.244e-02	9.519e+01	5.950e+01	-3.506e+00	3.506e+00	-1.291e+03	1.291e+03		
2.004e+02	1.612e+02			1.740e+03	1.004e+02								
El:	14	- C.c:	16	-5.279e-02	5.279e-02	9.218e+01	6.250e+01	5.514e+00	-5.514e+00	-1.482e+03	1.482e+03	-	
2.731e+02	-2.955e+02			1.580e+03	-4.929e+01								
El:	14	- C.c:	17	-5.302e-02	5.302e-02	9.147e+01	6.322e+01	6.888e+00	-6.888e+00	-1.291e+03	1.291e+03	-	
3.240e+02	-3.863e+02			1.552e+03	-9.554e+01								
El:	14	- C.c:	18	-4.382e-04	4.382e-04	9.486e+01	5.982e+01	3.284e+00	-3.284e+00	-5.222e+03	5.222e+03	-	
1.239e+02	-2.147e+02			1.711e+03	9.544e+01								
El:	14	- C.c:	19	-2.742e-04	2.742e-04	9.413e+01	6.056e+01	1.859e+00	-1.859e+00	-2.825e+03	2.825e+03	-	
6.917e+01	-1.225e+02			1.679e+03	5.176e+01								
El:	14	- C.c:	20	-1.757e-04	1.757e-04	9.369e+01	6.100e+01	1.004e+00	-1.004e+00	-1.387e+03	1.387e+03	-	
3.634e+01	-6.719e+01			1.660e+03	2.555e+01								
GRUPPO NUMERO: 5 - DESCRIZIONE: FP_SOTTO-COLMO													
Elem./C.c.		Fx/I	Fx/J	Fy/I	Fy/J	Fz/I	Fz/J	Mx/I	Mx/J	My/I	My/J	Mz/I	Mz/J
El:	1	- C.c:	1	4.327e+01	-4.327e+01	4.115e+03	-4.040e+03	-7.809e-13	7.809e-13	2.454e-26	-2.454e-26	-1.081e-	
25		8.053e-11	-2.784e-10	4.205e+05									
El:	1	- C.c:	2	-1.203e+02	1.203e+02	8.262e+02	-7.687e+02	3.847e+01	-3.847e+01	1.392e-13	-1.392e-13	2.920e-	
12		-3.967e+03	-7.087e-11	8.223e+04									
El:	1	- C.c:	3	-1.203e+02	1.203e+02	8.262e+02	-7.687e+02	-3.847e+01	3.847e+01	-1.392e-13	1.392e-13	-2.920e-	
12		3.967e+03	-7.087e-11	8.223e+04									
El:	1	- C.c:	4	1.371e+02	-1.371e+02	8.262e+02	-7.687e+02	3.847e+01	-3.847e+01	1.392e-13	-1.392e-13	2.920e-	
12		-3.967e+03	-7.087e-11	8.223e+04									
El:	1	- C.c:	5	1.371e+02	-1.371e+02	8.262e+02	-7.687e+02	-3.847e+01	3.847e+01	-1.392e-13	1.392e-13	-2.920e-	
12		3.967e+03	-7.087e-11	8.223e+04									
El:	1	- C.c:	6	-3.018e+01	3.018e+01	8.262e+02	-7.687e+02	1.282e+02	-1.282e+02	4.639e-13	-4.639e-13	9.733e-	
12		-1.322e+04	-7.087e-11	8.223e+04									
El:	1	- C.c:	7	-3.018e+01	3.018e+01	8.262e+02	-7.687e+02	-1.282e+02	1.282e+02	-4.639e-13	4.639e-13	-9.733e-	
12		1.322e+04	-7.087e-11	8.223e+04									
El:	1	- C.c:	8	4.703e+01	-4.703e+01	8.262e+02	-7.687e+02	1.282e+02	-1.282e+02	4.639e-13	-4.639e-13	9.733e-	
12		-1.322e+04	-7.087e-11	8.223e+04									
El:	1	- C.c:	9	4.703e+01	-4.703e+01	8.262e+02	-7.687e+02	-1.282e+02	1.282e+02	-4.639e-13	4.639e-13	-9.733e-	
12		1.322e+04	-7.087e-11	8.223e+04									
El:	1	- C.c:	10	-1.203e+02	1.203e+02	8.262e+02	-7.687e+02	3.847e+01	-3.847e+01	1.392e-13	-1.392e-13	2.920e-	
12		-3.967e+03	-7.087e-11	8.223e+04									
El:	1	- C.c:	11	-1.203e+02	1.203e+02	8.262e+02	-7.687e+02	-3.847e+01	3.847e+01	-1.392e-13	1.392e-13	-2.920e-	
12		3.967e+03	-7.087e-11	8.223e+04									
El:	1	- C.c:	12	1.371e+02	-1.371e+02	8.262e+02	-7.687e+02	3.847e+01	-3.847e+01	1.392e-13	-1.392e-13	2.920e-	
12		-3.967e+03	-7.087e-11	8.223e+04									
El:	1	- C.c:	13	1.371e+02	-1.371e+02	8.262e+02	-7.687e+02	-3.847e+01	3.847e+01	-1.392e-13	1.392e-13	-2.920e-	
12		3.967e+03	-7.087e-11	8.223e+04									
El:	1	- C.c:	14	-3.018e+01	3.018e+01	8.262e+02	-7.687e+02	1.282e+02	-1.282e+02	4.639e-13	-4.639e-13	9.733e-	
12		-1.322e+04	-7.087e-11	8.223e+04									
El:	1	- C.c:	15	-3.018e+01	3.018e+01	8.262e+02	-7.687e+02	-1.282e+02	1.282e+02	-4.639e-13	4.639e-13	-9.733e-	
12		1.322e+04	-7.087e-11	8.223e+04									
El:	1	- C.c:	16	4.703e+01	-4.703e+01	8.262e+02	-7.687e+02	1.282e+02	-1.282e+02	4.639e-13	-4.639e-13	9.733e-	
12		-1.322e+04	-7.087e-11	8.223e+04									
El:	1	- C.c:	17	4.703e+01	-4.703e+01	8.262e+02	-7.687e+02	-1.282e+02	1.282e+02	-4.639e-13	4.639e-13	-9.733e-	
12		1.322e+04	-7.087e-11	8.223e+04									
El:	1	- C.c:	18	2.928e+01	-2.928e+01	2.788e+03	-2.730e+03	-5.378e-13	5.378e-13	1.666e-26	-1.666e-26	-7.252e-	
26		5.546e-11	-1.910e-10	2.845e+05									
El:	1	- C.c:	19	1.625e+01	-1.625e+01	1.562e+03	-1.504e+03	-3.334e-13	3.334e-13	9.456e-27	-9.456e-27	-3.801e-	
26		3.438e-11	-1.159e-10	1.581e+05									
El:	1	- C.c:	20	8.429e+00	-8.429e+00	8.262e+02	-7.687e+02	-2.108e-13	2.108e-13	5.134e-27	-5.134e-27	-1.731e-	
26		2.174e-11	-7.087e-11	8.223e+04									
El:	2	- C.c:	1	2.389e+00	-2.389e+00	3.546e+03	-3.471e+03	-3.646e-13	3.646e-13	3.411e-12	-3.411e-12	-8.027e-	
11		1.179e-10	-4.199e+05	7.817e+05									
El:	2	- C.c:	2	-8.537e+01	8.537e+01	7.074e+02	-6.498e+02	2.677e+01	-2.677e+01	1.713e+01	-1.713e+01		
3.968e+03	-6.729e+03			-8.212e+04	1.521e+05								
El:	2	- C.c:	3	-8.537e+01	8.537e+01	7.074e+02	-6.498e+02	-2.677e+01	2.677e+01	-1.713e+01	1.713e+01	-	
3.968e+03	6.729e+03			-8.212e+04	1.521e+05								

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	2	- C.c:	4	8.629e+01	-8.629e+01	7.074e+02	-6.499e+02	2.677e+01	-2.677e+01	1.713e+01	-1.713e+01	
3.968e+03	-6.729e+03	-8.212e+04	1.521e+05									
El:	2	- C.c:	5	8.629e+01	-8.629e+01	7.074e+02	-6.499e+02	-2.677e+01	2.677e+01	-1.713e+01	1.713e+01	-
3.968e+03	6.729e+03	-8.212e+04	1.521e+05									
El:	2	- C.c:	6	-2.529e+01	2.529e+01	7.074e+02	-6.499e+02	8.923e+01	-8.923e+01	5.711e+01	-5.711e+01	
1.323e+04	-2.243e+04	-8.212e+04	1.521e+05									
El:	2	- C.c:	7	-2.529e+01	2.529e+01	7.074e+02	-6.499e+02	-8.923e+01	8.923e+01	-5.711e+01	5.711e+01	-
1.323e+04	2.243e+04	-8.212e+04	1.521e+05									
El:	2	- C.c:	8	2.621e+01	-2.621e+01	7.074e+02	-6.499e+02	8.923e+01	-8.923e+01	5.711e+01	-5.711e+01	
1.323e+04	-2.243e+04	-8.212e+04	1.521e+05									
El:	2	- C.c:	9	2.621e+01	-2.621e+01	7.074e+02	-6.499e+02	-8.923e+01	8.923e+01	-5.711e+01	5.711e+01	-
1.323e+04	2.243e+04	-8.212e+04	1.521e+05									
El:	2	- C.c:	10	-8.537e+01	8.537e+01	7.074e+02	-6.498e+02	2.677e+01	-2.677e+01	1.713e+01	-1.713e+01	
3.968e+03	-6.729e+03	-8.212e+04	1.521e+05									
El:	2	- C.c:	11	-8.537e+01	8.537e+01	7.074e+02	-6.498e+02	-2.677e+01	2.677e+01	-1.713e+01	1.713e+01	-
3.968e+03	6.729e+03	-8.212e+04	1.521e+05									
El:	2	- C.c:	12	8.629e+01	-8.629e+01	7.074e+02	-6.499e+02	2.677e+01	-2.677e+01	1.713e+01	-1.713e+01	
3.968e+03	-6.729e+03	-8.212e+04	1.521e+05									
El:	2	- C.c:	13	8.629e+01	-8.629e+01	7.074e+02	-6.499e+02	-2.677e+01	2.677e+01	-1.713e+01	1.713e+01	-
3.968e+03	6.729e+03	-8.212e+04	1.521e+05									
El:	2	- C.c:	14	-2.529e+01	2.529e+01	7.074e+02	-6.499e+02	8.923e+01	-8.923e+01	5.711e+01	-5.711e+01	
1.323e+04	-2.243e+04	-8.212e+04	1.521e+05									
El:	2	- C.c:	15	-2.529e+01	2.529e+01	7.074e+02	-6.499e+02	-8.923e+01	8.923e+01	-5.711e+01	5.711e+01	-
1.323e+04	2.243e+04	-8.212e+04	1.521e+05									
El:	2	- C.c:	16	2.621e+01	-2.621e+01	7.074e+02	-6.499e+02	8.923e+01	-8.923e+01	5.711e+01	-5.711e+01	
1.323e+04	-2.243e+04	-8.212e+04	1.521e+05									
El:	2	- C.c:	17	2.621e+01	-2.621e+01	7.074e+02	-6.499e+02	-8.923e+01	8.923e+01	-5.711e+01	5.711e+01	-
1.323e+04	2.243e+04	-8.212e+04	1.521e+05									
El:	2	- C.c:	18	1.615e+00	-1.615e+00	2.402e+03	-2.344e+03	-2.541e-13	2.541e-13	2.303e-12	-2.303e-12	-5.528e-
11	8.149e-11	-2.841e+05	5.289e+05									
El:	2	- C.c:	19	8.929e-01	-8.929e-01	1.343e+03	-1.285e+03	-1.686e-13	1.686e-13	1.259e-12	-1.259e-12	-3.429e-
11	5.167e-11	-1.579e+05	2.934e+05									
El:	2	- C.c:	20	4.594e-01	-4.594e-01	7.074e+02	-6.499e+02	-1.173e-13	1.173e-13	6.327e-13	-6.327e-13	-2.169e-
11	3.378e-11	-8.212e+04	1.521e+05									
El:	3	- C.c:	1	-2.598e+01	2.598e+01	1.795e+03	-1.721e+03	-1.383e-13	1.383e-13	-2.125e-11	2.125e-11	-1.183e-
10	1.326e-10	-7.813e+05	9.626e+05									
El:	3	- C.c:	2	-4.799e+01	4.799e+01	3.692e+02	-3.116e+02	1.377e+01	-1.377e+01	1.471e+01	-1.471e+01	
6.730e+03	-8.150e+03	-1.520e+05	1.871e+05									
El:	3	- C.c:	3	-4.799e+01	4.799e+01	3.692e+02	-3.116e+02	-1.377e+01	1.377e+01	-1.471e+01	1.471e+01	-
6.730e+03	8.150e+03	-1.520e+05	1.871e+05									
El:	3	- C.c:	4	3.786e+01	-3.786e+01	3.692e+02	-3.117e+02	1.377e+01	-1.377e+01	1.471e+01	-1.471e+01	
6.730e+03	-8.150e+03	-1.520e+05	1.871e+05									
El:	3	- C.c:	5	3.786e+01	-3.786e+01	3.692e+02	-3.117e+02	-1.377e+01	1.377e+01	-1.471e+01	1.471e+01	-
6.730e+03	8.150e+03	-1.520e+05	1.871e+05									
El:	3	- C.c:	6	-1.794e+01	1.794e+01	3.692e+02	-3.117e+02	4.590e+01	-4.590e+01	4.904e+01	-4.904e+01	
2.243e+04	-2.717e+04	-1.520e+05	1.871e+05									
El:	3	- C.c:	7	-1.794e+01	1.794e+01	3.692e+02	-3.117e+02	-4.590e+01	4.590e+01	-4.904e+01	4.904e+01	-
2.243e+04	2.717e+04	-1.520e+05	1.871e+05									
El:	3	- C.c:	8	7.813e+00	-7.813e+00	3.692e+02	-3.117e+02	4.590e+01	-4.590e+01	4.904e+01	-4.904e+01	
2.243e+04	-2.717e+04	-1.520e+05	1.871e+05									
El:	3	- C.c:	9	7.813e+00	-7.813e+00	3.692e+02	-3.117e+02	-4.590e+01	4.590e+01	-4.904e+01	4.904e+01	-
2.243e+04	2.717e+04	-1.520e+05	1.871e+05									
El:	3	- C.c:	10	-4.799e+01	4.799e+01	3.692e+02	-3.116e+02	1.377e+01	-1.377e+01	1.471e+01	-1.471e+01	
6.730e+03	-8.150e+03	-1.520e+05	1.871e+05									
El:	3	- C.c:	11	-4.799e+01	4.799e+01	3.692e+02	-3.116e+02	-1.377e+01	1.377e+01	-1.471e+01	1.471e+01	-
6.730e+03	8.150e+03	-1.520e+05	1.871e+05									
El:	3	- C.c:	12	3.786e+01	-3.786e+01	3.692e+02	-3.117e+02	1.377e+01	-1.377e+01	1.471e+01	-1.471e+01	
6.730e+03	-8.150e+03	-1.520e+05	1.871e+05									
El:	3	- C.c:	13	3.786e+01	-3.786e+01	3.692e+02	-3.117e+02	-1.377e+01	1.377e+01	-1.471e+01	1.471e+01	-
6.730e+03	8.150e+03	-1.520e+05	1.871e+05									
El:	3	- C.c:	14	-1.794e+01	1.794e+01	3.692e+02	-3.117e+02	4.590e+01	-4.590e+01	4.904e+01	-4.904e+01	
2.243e+04	-2.717e+04	-1.520e+05	1.871e+05									
El:	3	- C.c:	15	-1.794e+01	1.794e+01	3.692e+02	-3.117e+02	-4.590e+01	4.590e+01	-4.904e+01	4.904e+01	-
2.243e+04	2.717e+04	-1.520e+05	1.871e+05									

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	3	- C.c: 16	7.813e+00	-7.813e+00	3.692e+02	-3.117e+02	4.590e+01	-4.590e+01	4.904e+01	-4.904e+01	
2.243e+04		-2.717e+04	-1.520e+05	1.871e+05							
El:	3	- C.c: 17	7.813e+00	-7.813e+00	3.692e+02	-3.117e+02	-4.590e+01	4.590e+01	-4.904e+01	4.904e+01	-
2.243e+04		2.717e+04	-1.520e+05	1.871e+05							
El:	3	- C.c: 18	-1.758e+01	1.758e+01	1.218e+03	-1.160e+03	-9.888e-14	9.888e-14	-1.400e-11	1.400e-11	-8.178e-
11		9.198e-11	-5.286e+05	6.512e+05							
El:	3	- C.c: 19	-9.756e+00	9.756e+00	6.874e+02	-6.299e+02	-7.440e-14	7.440e-14	-6.361e-12	6.361e-12	-5.183e-
11		5.951e-11	-2.932e+05	3.612e+05							
El:	3	- C.c: 20	-5.064e+00	5.064e+00	3.692e+02	-3.117e+02	-5.971e-14	5.971e-14	-1.780e-12	1.780e-12	-3.387e-
11		4.002e-11	-1.520e+05	1.871e+05							
El:	4	- C.c: 1	-3.639e+01	3.639e+01	1.493e+02	-7.450e+01	-1.784e-14	1.784e-14	1.187e-12	-1.187e-12	-1.331e-
10		1.349e-10	-9.624e+05	9.740e+05							
El:	4	- C.c: 2	-7.090e+00	7.090e+00	4.979e+01	7.754e+00	4.932e-02	-4.932e-02	1.467e+00	-1.467e+00	
8.151e+03		-8.156e+03	-1.871e+05	1.893e+05							
El:	4	- C.c: 3	-7.090e+00	7.090e+00	4.979e+01	7.754e+00	-4.932e-02	4.932e-02	-1.467e+00	1.467e+00	-
8.151e+03		8.156e+03	-1.871e+05	1.893e+05							
El:	4	- C.c: 4	-7.090e+00	7.090e+00	4.982e+01	7.726e+00	4.932e-02	-4.932e-02	1.467e+00	-1.467e+00	
8.151e+03		-8.156e+03	-1.871e+05	1.893e+05							
El:	4	- C.c: 5	-7.090e+00	7.090e+00	4.982e+01	7.726e+00	-4.932e-02	4.932e-02	-1.467e+00	1.467e+00	-
8.151e+03		8.156e+03	-1.871e+05	1.893e+05							
El:	4	- C.c: 6	-7.090e+00	7.090e+00	4.980e+01	7.744e+00	1.644e-01	-1.644e-01	4.891e+00	-4.891e+00	
2.717e+04		-2.719e+04	-1.871e+05	1.893e+05							
El:	4	- C.c: 7	-7.090e+00	7.090e+00	4.980e+01	7.744e+00	-1.644e-01	1.644e-01	-4.891e+00	4.891e+00	-
2.717e+04		2.719e+04	-1.871e+05	1.893e+05							
El:	4	- C.c: 8	-7.090e+00	7.090e+00	4.981e+01	7.736e+00	1.644e-01	-1.644e-01	4.891e+00	-4.891e+00	
2.717e+04		-2.719e+04	-1.871e+05	1.893e+05							
El:	4	- C.c: 9	-7.090e+00	7.090e+00	4.981e+01	7.736e+00	-1.644e-01	1.644e-01	-4.891e+00	4.891e+00	-
2.717e+04		2.719e+04	-1.871e+05	1.893e+05							
El:	4	- C.c: 10	-7.090e+00	7.090e+00	4.979e+01	7.754e+00	4.932e-02	-4.932e-02	1.467e+00	-1.467e+00	
8.151e+03		-8.156e+03	-1.871e+05	1.893e+05							
El:	4	- C.c: 11	-7.090e+00	7.090e+00	4.979e+01	7.754e+00	-4.932e-02	4.932e-02	-1.467e+00	1.467e+00	-
8.151e+03		8.156e+03	-1.871e+05	1.893e+05							
El:	4	- C.c: 12	-7.090e+00	7.090e+00	4.982e+01	7.726e+00	4.932e-02	-4.932e-02	1.467e+00	-1.467e+00	
8.151e+03		-8.156e+03	-1.871e+05	1.893e+05							
El:	4	- C.c: 13	-7.090e+00	7.090e+00	4.982e+01	7.726e+00	-4.932e-02	4.932e-02	-1.467e+00	1.467e+00	-
8.151e+03		8.156e+03	-1.871e+05	1.893e+05							
El:	4	- C.c: 14	-7.090e+00	7.090e+00	4.980e+01	7.744e+00	1.644e-01	-1.644e-01	4.891e+00	-4.891e+00	
2.717e+04		-2.719e+04	-1.871e+05	1.893e+05							
El:	4	- C.c: 15	-7.090e+00	7.090e+00	4.980e+01	7.744e+00	-1.644e-01	1.644e-01	-4.891e+00	4.891e+00	-
2.717e+04		2.719e+04	-1.871e+05	1.893e+05							
El:	4	- C.c: 16	-7.090e+00	7.090e+00	4.981e+01	7.736e+00	1.644e-01	-1.644e-01	4.891e+00	-4.891e+00	
2.717e+04		-2.719e+04	-1.871e+05	1.893e+05							
El:	4	- C.c: 17	-7.090e+00	7.090e+00	4.981e+01	7.736e+00	-1.644e-01	1.644e-01	-4.891e+00	4.891e+00	-
2.717e+04		2.719e+04	-1.871e+05	1.893e+05							
El:	4	- C.c: 18	-2.462e+01	2.462e+01	1.044e+02	-4.681e+01	-1.324e-14	1.324e-14	8.003e-13	-8.003e-13	-9.233e-
11		9.370e-11	-6.511e+05	6.589e+05							
El:	4	- C.c: 19	-1.367e+01	1.367e+01	7.026e+01	-1.272e+01	-1.167e-14	1.167e-14	4.330e-13	-4.330e-13	-5.970e-
11		6.091e-11	-3.611e+05	3.654e+05							
El:	4	- C.c: 20	-7.090e+00	7.090e+00	4.980e+01	7.740e+00	-1.073e-14	1.073e-14	2.126e-13	-2.126e-13	-4.013e-
11		4.123e-11	-1.871e+05	1.893e+05							
El:	5	- C.c: 1	-2.689e+01	2.689e+01	-1.480e+03	1.555e+03	1.164e-13	-1.164e-13	-1.431e-12	1.431e-12	-1.350e-
10		1.230e-10	-9.741e+05	8.176e+05							
El:	5	- C.c: 2	3.769e+01	-3.769e+01	-2.665e+02	3.241e+02	-1.371e+01	1.371e+01	-1.228e+01	1.228e+01	
8.155e+03		-6.742e+03	-1.893e+05	1.588e+05							
El:	5	- C.c: 3	3.769e+01	-3.769e+01	-2.665e+02	3.241e+02	1.371e+01	-1.371e+01	1.228e+01	-1.228e+01	-
8.155e+03		6.742e+03	-1.893e+05	1.588e+05							
El:	5	- C.c: 4	-4.816e+01	4.816e+01	-2.665e+02	3.240e+02	-1.371e+01	1.371e+01	-1.228e+01	1.228e+01	
8.155e+03		-6.742e+03	-1.893e+05	1.588e+05							
El:	5	- C.c: 5	-4.816e+01	4.816e+01	-2.665e+02	3.240e+02	1.371e+01	-1.371e+01	1.228e+01	-1.228e+01	-
8.155e+03		6.742e+03	-1.893e+05	1.588e+05							
El:	5	- C.c: 6	7.641e+00	-7.641e+00	-2.665e+02	3.241e+02	-4.568e+01	4.568e+01	-4.094e+01	4.094e+01	
2.718e+04		-2.247e+04	-1.893e+05	1.588e+05							
El:	5	- C.c: 7	7.641e+00	-7.641e+00	-2.665e+02	3.241e+02	4.568e+01	-4.568e+01	4.094e+01	-4.094e+01	-
2.718e+04		2.247e+04	-1.893e+05	1.588e+05							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	5	- C.c:	8	-1.811e+01	1.811e+01	-2.665e+02	3.240e+02	-4.568e+01	4.568e+01	-4.094e+01	4.094e+01	
2.718e+04	-2.247e+04			-1.893e+05	1.588e+05							
El:	5	- C.c:	9	-1.811e+01	1.811e+01	-2.665e+02	3.240e+02	4.568e+01	-4.568e+01	4.094e+01	-4.094e+01	-
2.718e+04	2.247e+04			-1.893e+05	1.588e+05							
El:	5	- C.c:	10	3.769e+01	-3.769e+01	-2.665e+02	3.241e+02	-1.371e+01	1.371e+01	-1.228e+01	1.228e+01	
8.155e+03	-6.742e+03			-1.893e+05	1.588e+05							
El:	5	- C.c:	11	3.769e+01	-3.769e+01	-2.665e+02	3.241e+02	1.371e+01	-1.371e+01	1.228e+01	-1.228e+01	-
8.155e+03	6.742e+03			-1.893e+05	1.588e+05							
El:	5	- C.c:	12	-4.816e+01	4.816e+01	-2.665e+02	3.240e+02	-1.371e+01	1.371e+01	-1.228e+01	1.228e+01	
8.155e+03	-6.742e+03			-1.893e+05	1.588e+05							
El:	5	- C.c:	13	-4.816e+01	4.816e+01	-2.665e+02	3.240e+02	1.371e+01	-1.371e+01	1.228e+01	-1.228e+01	-
8.155e+03	6.742e+03			-1.893e+05	1.588e+05							
El:	5	- C.c:	14	7.641e+00	-7.641e+00	-2.665e+02	3.241e+02	-4.568e+01	4.568e+01	-4.094e+01	4.094e+01	
2.718e+04	-2.247e+04			-1.893e+05	1.588e+05							
El:	5	- C.c:	15	7.641e+00	-7.641e+00	-2.665e+02	3.241e+02	4.568e+01	-4.568e+01	4.094e+01	-4.094e+01	-
2.718e+04	2.247e+04			-1.893e+05	1.588e+05							
El:	5	- C.c:	16	-1.811e+01	1.811e+01	-2.665e+02	3.240e+02	-4.568e+01	4.568e+01	-4.094e+01	4.094e+01	
2.718e+04	-2.247e+04			-1.893e+05	1.588e+05							
El:	5	- C.c:	17	-1.811e+01	1.811e+01	-2.665e+02	3.240e+02	4.568e+01	-4.568e+01	4.094e+01	-4.094e+01	-
2.718e+04	2.247e+04			-1.893e+05	1.588e+05							
El:	5	- C.c:	18	-1.819e+01	1.819e+01	-9.980e+02	1.056e+03	8.194e-14	-8.194e-14	-9.656e-13	9.656e-13	-9.373e-
11	8.528e-11			-6.590e+05	5.531e+05							
El:	5	- C.c:	19	-1.010e+01	1.010e+01	-5.408e+02	5.984e+02	5.729e-14	-5.729e-14	-5.276e-13	5.276e-13	-6.093e-
11	5.502e-11			-3.654e+05	3.067e+05							
El:	5	- C.c:	20	-5.236e+00	5.236e+00	-2.665e+02	3.240e+02	4.250e-14	-4.250e-14	-2.648e-13	2.648e-13	-4.124e-
11	3.686e-11			-1.893e+05	1.588e+05							
El:	6	- C.c:	1	1.043e+00	-1.043e+00	-3.151e+03	3.226e+03	3.640e-13	-3.640e-13	-2.423e-12	2.423e-12	-1.232e-
10	8.562e-11			-8.180e+05	4.892e+05							
El:	6	- C.c:	2	8.603e+01	-8.603e+01	-5.898e+02	6.473e+02	-2.679e+01	2.679e+01	-1.595e+01	1.595e+01	
6.741e+03	-3.978e+03			-1.589e+05	9.514e+04							
El:	6	- C.c:	3	8.603e+01	-8.603e+01	-5.898e+02	6.473e+02	2.679e+01	-2.679e+01	1.595e+01	-1.595e+01	-
6.741e+03	3.978e+03			-1.589e+05	9.514e+04							
El:	6	- C.c:	4	-8.562e+01	8.562e+01	-5.897e+02	6.473e+02	-2.679e+01	2.679e+01	-1.595e+01	1.595e+01	
6.741e+03	-3.978e+03			-1.589e+05	9.514e+04							
El:	6	- C.c:	5	-8.562e+01	8.562e+01	-5.897e+02	6.473e+02	2.679e+01	-2.679e+01	1.595e+01	-1.595e+01	-
6.741e+03	3.978e+03			-1.589e+05	9.514e+04							
El:	6	- C.c:	6	2.595e+01	-2.595e+01	-5.897e+02	6.473e+02	-8.929e+01	8.929e+01	-5.317e+01	5.317e+01	
2.247e+04	-1.326e+04			-1.589e+05	9.514e+04							
El:	6	- C.c:	7	2.595e+01	-2.595e+01	-5.897e+02	6.473e+02	8.929e+01	-8.929e+01	5.317e+01	-5.317e+01	-
2.247e+04	1.326e+04			-1.589e+05	9.514e+04							
El:	6	- C.c:	8	-2.554e+01	2.554e+01	-5.897e+02	6.473e+02	-8.929e+01	8.929e+01	-5.317e+01	5.317e+01	
2.247e+04	-1.326e+04			-1.589e+05	9.514e+04							
El:	6	- C.c:	9	-2.554e+01	2.554e+01	-5.897e+02	6.473e+02	8.929e+01	-8.929e+01	5.317e+01	-5.317e+01	-
2.247e+04	1.326e+04			-1.589e+05	9.514e+04							
El:	6	- C.c:	10	8.603e+01	-8.603e+01	-5.898e+02	6.473e+02	-2.679e+01	2.679e+01	-1.595e+01	1.595e+01	
6.741e+03	-3.978e+03			-1.589e+05	9.514e+04							
El:	6	- C.c:	11	8.603e+01	-8.603e+01	-5.898e+02	6.473e+02	2.679e+01	-2.679e+01	1.595e+01	-1.595e+01	-
6.741e+03	3.978e+03			-1.589e+05	9.514e+04							
El:	6	- C.c:	12	-8.562e+01	8.562e+01	-5.897e+02	6.473e+02	-2.679e+01	2.679e+01	-1.595e+01	1.595e+01	
6.741e+03	-3.978e+03			-1.589e+05	9.514e+04							
El:	6	- C.c:	13	-8.562e+01	8.562e+01	-5.897e+02	6.473e+02	2.679e+01	-2.679e+01	1.595e+01	-1.595e+01	-
6.741e+03	3.978e+03			-1.589e+05	9.514e+04							
El:	6	- C.c:	14	2.595e+01	-2.595e+01	-5.897e+02	6.473e+02	-8.929e+01	8.929e+01	-5.317e+01	5.317e+01	
2.247e+04	-1.326e+04			-1.589e+05	9.514e+04							
El:	6	- C.c:	15	2.595e+01	-2.595e+01	-5.897e+02	6.473e+02	8.929e+01	-8.929e+01	5.317e+01	-5.317e+01	-
2.247e+04	1.326e+04			-1.589e+05	9.514e+04							
El:	6	- C.c:	16	-2.554e+01	2.554e+01	-5.897e+02	6.473e+02	-8.929e+01	8.929e+01	-5.317e+01	5.317e+01	
2.247e+04	-1.326e+04			-1.589e+05	9.514e+04							
El:	6	- C.c:	17	-2.554e+01	2.554e+01	-5.897e+02	6.473e+02	8.929e+01	-8.929e+01	5.317e+01	-5.317e+01	-
2.247e+04	1.326e+04			-1.589e+05	9.514e+04							
El:	6	- C.c:	18	7.063e-01	-7.063e-01	-2.128e+03	2.186e+03	2.540e-13	-2.540e-13	-1.636e-12	1.636e-12	-8.541e-
11	5.921e-11			-5.534e+05	3.310e+05							
El:	6	- C.c:	19	3.940e-01	-3.940e-01	-1.167e+03	1.224e+03	1.696e-13	-1.696e-13	-8.955e-13	8.955e-13	-5.509e-
11	3.759e-11			-3.068e+05	1.836e+05							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	6	- C.c: 20	2.066e-01	-2.066e-01	-5.897e+02	6.473e+02	1.190e-13	-1.190e-13	-4.512e-13	4.512e-13	-3.689e-
11		2.463e-11	-1.589e+05	9.514e+04							
El:	7	- C.c: 1	4.247e+01	-4.247e+01	-4.712e+03	4.787e+03	8.329e-13	-8.329e-13	-2.631e-26	2.631e-26	-8.589e-
11		1.034e-17	-4.898e+05	9.298e-10							
El:	7	- C.c: 2	1.370e+02	-1.370e+02	-8.950e+02	9.525e+02	-3.856e+01	3.856e+01	-1.392e-13	1.392e-13	
3.977e+03		4.326e-12	-9.526e+04	1.140e-10							
El:	7	- C.c: 3	1.370e+02	-1.370e+02	-8.950e+02	9.525e+02	3.856e+01	-3.856e+01	1.392e-13	-1.392e-13	-
3.977e+03		4.326e-12	-9.526e+04	1.140e-10							
El:	7	- C.c: 4	-1.204e+02	1.204e+02	-8.949e+02	9.525e+02	-3.856e+01	3.856e+01	-1.392e-13	1.392e-13	
3.977e+03		4.326e-12	-9.526e+04	1.140e-10							
El:	7	- C.c: 5	-1.204e+02	1.204e+02	-8.949e+02	9.525e+02	3.856e+01	-3.856e+01	1.392e-13	-1.392e-13	-
3.977e+03		4.326e-12	-9.526e+04	1.140e-10							
El:	7	- C.c: 6	4.688e+01	-4.688e+01	-8.950e+02	9.525e+02	-1.285e+02	1.285e+02	-4.641e-13	4.641e-13	
1.326e+04		1.442e-11	-9.526e+04	1.140e-10							
El:	7	- C.c: 7	4.688e+01	-4.688e+01	-8.950e+02	9.525e+02	1.285e+02	-1.285e+02	4.641e-13	-4.641e-13	-
1.326e+04		-1.442e-11	-9.526e+04	1.140e-10							
El:	7	- C.c: 8	-3.033e+01	3.033e+01	-8.949e+02	9.525e+02	-1.285e+02	1.285e+02	-4.641e-13	4.641e-13	
1.326e+04		1.442e-11	-9.526e+04	1.140e-10							
El:	7	- C.c: 9	-3.033e+01	3.033e+01	-8.949e+02	9.525e+02	1.285e+02	-1.285e+02	4.641e-13	-4.641e-13	-
1.326e+04		-1.442e-11	-9.526e+04	1.140e-10							
El:	7	- C.c: 10	1.370e+02	-1.370e+02	-8.950e+02	9.525e+02	-3.856e+01	3.856e+01	-1.392e-13	1.392e-13	
3.977e+03		4.326e-12	-9.526e+04	1.140e-10							
El:	7	- C.c: 11	1.370e+02	-1.370e+02	-8.950e+02	9.525e+02	3.856e+01	-3.856e+01	1.392e-13	-1.392e-13	-
3.977e+03		4.326e-12	-9.526e+04	1.140e-10							
El:	7	- C.c: 12	-1.204e+02	1.204e+02	-8.949e+02	9.525e+02	-3.856e+01	3.856e+01	-1.392e-13	1.392e-13	
3.977e+03		4.326e-12	-9.526e+04	1.140e-10							
El:	7	- C.c: 13	-1.204e+02	1.204e+02	-8.949e+02	9.525e+02	3.856e+01	-3.856e+01	1.392e-13	-1.392e-13	-
3.977e+03		4.326e-12	-9.526e+04	1.140e-10							
El:	7	- C.c: 14	4.688e+01	-4.688e+01	-8.950e+02	9.525e+02	-1.285e+02	1.285e+02	-4.641e-13	4.641e-13	
1.326e+04		1.442e-11	-9.526e+04	1.140e-10							
El:	7	- C.c: 15	4.688e+01	-4.688e+01	-8.950e+02	9.525e+02	1.285e+02	-1.285e+02	4.641e-13	-4.641e-13	-
1.326e+04		-1.442e-11	-9.526e+04	1.140e-10							
El:	7	- C.c: 16	-3.033e+01	3.033e+01	-8.949e+02	9.525e+02	-1.285e+02	1.285e+02	-4.641e-13	4.641e-13	
1.326e+04		1.442e-11	-9.526e+04	1.140e-10							
El:	7	- C.c: 17	-3.033e+01	3.033e+01	-8.949e+02	9.525e+02	1.285e+02	-1.285e+02	4.641e-13	-4.641e-13	-
1.326e+04		-1.442e-11	-9.526e+04	1.140e-10							
El:	7	- C.c: 18	2.873e+01	-2.873e+01	-3.185e+03	3.242e+03	5.760e-13	-5.760e-13	-1.802e-26	1.802e-26	-5.940e-
11		7.003e-18	-3.314e+05	6.182e-10							
El:	7	- C.c: 19	1.595e+01	-1.595e+01	-1.754e+03	1.811e+03	3.656e-13	-3.656e-13	-1.081e-26	1.081e-26	-3.770e-
11		3.923e-18	-1.838e+05	3.031e-10							
El:	7	- C.c: 20	8.278e+00	-8.278e+00	-8.949e+02	9.525e+02	2.393e-13	-2.393e-13	-6.486e-27	6.486e-27	-2.468e-
11		2.075e-18	-9.526e+04	1.140e-10							

GRUPPO NUMERO:		6 - DESCRIZIONE: FP_BIELLE														
Elem./C.c.		Fx/I	Fx/J	Fy/I	Fy/J	Fz/I	Fz/J	Mx/I	Mx/J	My/I	My/J	Mz/I	Mz/J			
El:	1 - C.c: 1	4.940e+02		-4.920e+02		-4.088e+01		4.088e+01		-4.163e-13		4.163e-13		-2.570e-13	2.570e-13	3.411e-
12	9.076e-12		-6.080e+02		-6.185e+02											
El:	1 - C.c: 2	6.127e+01		-5.977e+01		-7.903e+00		7.903e+00		-1.142e+00		1.142e+00		-1.571e+00	1.571e+00	
1.713e+01	1.713e+01		-1.176e+02		-1.195e+02											
El:	1 - C.c: 3	6.127e+01		-5.977e+01		-7.903e+00		7.903e+00		1.142e+00		-1.142e+00		1.571e+00	-1.571e+00	-
1.713e+01	-1.713e+01		-1.176e+02		-1.195e+02											
El:	1 - C.c: 4	6.124e+01		-5.974e+01		-8.035e+00		8.035e+00		-1.142e+00		1.142e+00		-1.571e+00	1.571e+00	
1.713e+01	1.713e+01		-1.196e+02		-1.215e+02											
El:	1 - C.c: 5	6.124e+01		-5.974e+01		-8.035e+00		8.035e+00		1.142e+00		-1.142e+00		1.571e+00	-1.571e+00	-
1.713e+01	-1.713e+01		-1.196e+02		-1.215e+02											
El:	1 - C.c: 6	6.126e+01		-5.976e+01		-7.949e+00		7.949e+00		-3.807e+00		3.807e+00		-5.237e+00	5.237e+00	
5.711e+01	5.711e+01		-1.183e+02		-1.202e+02											
El:	1 - C.c: 7	6.126e+01		-5.976e+01		-7.949e+00		7.949e+00		3.807e+00		-3.807e+00		5.237e+00	-5.237e+00	-
5.711e+01	-5.711e+01		-1.183e+02		-1.202e+02											
El:	1 - C.c: 8	6.125e+01		-5.975e+01		-7.989e+00		7.989e+00		-3.807e+00		3.807e+00		-5.237e+00	5.237e+00	
5.711e+01	5.711e+01		-1.189e+02		-1.208e+02											
El:	1 - C.c: 9	6.125e+01		-5.975e+01		-7.989e+00		7.989e+00		3.807e+00		-3.807e+00		5.237e+00	-5.237e+00	-
5.711e+01	-5.711e+01		-1.189e+02		-1.208e+02											

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	1	- C.c: 10	6.127e+01	-5.977e+01	-7.903e+00	7.903e+00	-1.142e+00	1.142e+00	-1.571e+00	1.571e+00	
1.713e+01	1.713e+01		-1.176e+02	-1.195e+02							
El:	1	- C.c: 11	6.127e+01	-5.977e+01	-7.903e+00	7.903e+00	1.142e+00	-1.142e+00	1.571e+00	-1.571e+00	-
1.713e+01	-1.713e+01		-1.176e+02	-1.195e+02							
El:	1	- C.c: 12	6.124e+01	-5.974e+01	-8.035e+00	8.035e+00	-1.142e+00	1.142e+00	-1.571e+00	1.571e+00	
1.713e+01	1.713e+01		-1.196e+02	-1.215e+02							
El:	1	- C.c: 13	6.124e+01	-5.974e+01	-8.035e+00	8.035e+00	1.142e+00	-1.142e+00	1.571e+00	-1.571e+00	-
1.713e+01	-1.713e+01		-1.196e+02	-1.215e+02							
El:	1	- C.c: 14	6.126e+01	-5.976e+01	-7.949e+00	7.949e+00	-3.807e+00	3.807e+00	-5.237e+00	5.237e+00	
5.711e+01	5.711e+01		-1.183e+02	-1.202e+02							
El:	1	- C.c: 15	6.126e+01	-5.976e+01	-7.949e+00	7.949e+00	3.807e+00	-3.807e+00	5.237e+00	-5.237e+00	-
5.711e+01	-5.711e+01		-1.183e+02	-1.202e+02							
El:	1	- C.c: 16	6.125e+01	-5.975e+01	-7.989e+00	7.989e+00	-3.807e+00	3.807e+00	-5.237e+00	5.237e+00	
5.711e+01	5.711e+01		-1.189e+02	-1.208e+02							
El:	1	- C.c: 17	6.125e+01	-5.975e+01	-7.989e+00	7.989e+00	3.807e+00	-3.807e+00	5.237e+00	-5.237e+00	-
5.711e+01	-5.711e+01		-1.189e+02	-1.208e+02							
El:	1	- C.c: 18	3.286e+02	-3.271e+02	-2.766e+01	2.766e+01	-2.836e-13	2.836e-13	-1.739e-13	1.739e-13	2.303e-
12	6.206e-12		-4.114e+02	-4.184e+02							
El:	1	- C.c: 19	1.615e+02	-1.600e+02	-1.535e+01	1.535e+01	-1.648e-13	1.648e-13	-9.635e-14	9.635e-14	1.259e-
12	3.685e-12		-2.284e+02	-2.322e+02							
El:	1	- C.c: 20	6.125e+01	-5.975e+01	-7.969e+00	7.969e+00	-9.351e-14	9.351e-14	-4.985e-14	4.985e-14	6.327e-
13	2.173e-12		-1.186e+02	-1.205e+02							
El:	2	- C.c: 1	1.676e+03	-1.674e+03	-2.837e+01	2.837e+01	-2.144e-13	2.144e-13	-1.881e-13	1.881e-13	-4.033e-
14	6.473e-12		-4.255e+02	-4.255e+02							
El:	2	- C.c: 2	2.807e+02	-2.792e+02	-5.414e+00	5.414e+00	1.613e-01	-1.613e-01	-1.107e+00	1.107e+00	-
2.420e+00	-2.420e+00		-8.121e+01	-8.121e+01							
El:	2	- C.c: 3	2.807e+02	-2.792e+02	-5.414e+00	5.414e+00	-1.613e-01	1.613e-01	1.107e+00	-1.107e+00	
2.420e+00	2.420e+00		-8.121e+01	-8.121e+01							
El:	2	- C.c: 4	2.807e+02	-2.792e+02	-5.634e+00	5.634e+00	1.613e-01	-1.613e-01	-1.107e+00	1.107e+00	-
2.420e+00	-2.420e+00		-8.450e+01	-8.450e+01							
El:	2	- C.c: 5	2.807e+02	-2.792e+02	-5.634e+00	5.634e+00	-1.613e-01	1.613e-01	1.107e+00	-1.107e+00	
2.420e+00	2.420e+00		-8.450e+01	-8.450e+01							
El:	2	- C.c: 6	2.807e+02	-2.792e+02	-5.491e+00	5.491e+00	5.377e-01	-5.377e-01	-3.689e+00	3.689e+00	-
8.065e+00	-8.065e+00		-8.236e+01	-8.236e+01							
El:	2	- C.c: 7	2.807e+02	-2.792e+02	-5.491e+00	5.491e+00	-5.377e-01	5.377e-01	3.689e+00	-3.689e+00	
8.065e+00	8.065e+00		-8.236e+01	-8.236e+01							
El:	2	- C.c: 8	2.807e+02	-2.792e+02	-5.557e+00	5.557e+00	5.377e-01	-5.377e-01	-3.689e+00	3.689e+00	-
8.065e+00	-8.065e+00		-8.335e+01	-8.335e+01							
El:	2	- C.c: 9	2.807e+02	-2.792e+02	-5.557e+00	5.557e+00	-5.377e-01	5.377e-01	3.689e+00	-3.689e+00	
8.065e+00	8.065e+00		-8.335e+01	-8.335e+01							
El:	2	- C.c: 10	2.807e+02	-2.792e+02	-5.414e+00	5.414e+00	1.613e-01	-1.613e-01	-1.107e+00	1.107e+00	-
2.420e+00	-2.420e+00		-8.121e+01	-8.121e+01							
El:	2	- C.c: 11	2.807e+02	-2.792e+02	-5.414e+00	5.414e+00	-1.613e-01	1.613e-01	1.107e+00	-1.107e+00	
2.420e+00	2.420e+00		-8.121e+01	-8.121e+01							
El:	2	- C.c: 12	2.807e+02	-2.792e+02	-5.634e+00	5.634e+00	1.613e-01	-1.613e-01	-1.107e+00	1.107e+00	-
2.420e+00	-2.420e+00		-8.450e+01	-8.450e+01							
El:	2	- C.c: 13	2.807e+02	-2.792e+02	-5.634e+00	5.634e+00	-1.613e-01	1.613e-01	1.107e+00	-1.107e+00	
2.420e+00	2.420e+00		-8.450e+01	-8.450e+01							
El:	2	- C.c: 14	2.807e+02	-2.792e+02	-5.491e+00	5.491e+00	5.377e-01	-5.377e-01	-3.689e+00	3.689e+00	-
8.065e+00	-8.065e+00		-8.236e+01	-8.236e+01							
El:	2	- C.c: 15	2.807e+02	-2.792e+02	-5.491e+00	5.491e+00	-5.377e-01	5.377e-01	3.689e+00	-3.689e+00	
8.065e+00	8.065e+00		-8.236e+01	-8.236e+01							
El:	2	- C.c: 16	2.807e+02	-2.792e+02	-5.557e+00	5.557e+00	5.377e-01	-5.377e-01	-3.689e+00	3.689e+00	-
8.065e+00	-8.065e+00		-8.335e+01	-8.335e+01							
El:	2	- C.c: 17	2.807e+02	-2.792e+02	-5.557e+00	5.557e+00	-5.377e-01	5.377e-01	3.689e+00	-3.689e+00	
8.065e+00	8.065e+00		-8.335e+01	-8.335e+01							
El:	2	- C.c: 18	1.126e+03	-1.125e+03	-1.919e+01	1.919e+01	-1.473e-13	1.473e-13	-1.272e-13	1.272e-13	-3.511e-
14	4.453e-12		-2.879e+02	-2.879e+02							
El:	2	- C.c: 19	5.978e+02	-5.963e+02	-1.065e+01	1.065e+01	-8.976e-14	8.976e-14	-7.036e-14	7.036e-14	-4.839e-
14	2.741e-12		-1.597e+02	-1.597e+02							
El:	2	- C.c: 20	2.807e+02	-2.792e+02	-5.524e+00	5.524e+00	-5.526e-14	5.526e-14	-3.627e-14	3.627e-14	-5.636e-
14	1.714e-12		-8.286e+01	-8.286e+01							
El:	3	- C.c: 1	1.571e+03	-1.569e+03	-1.042e+01	1.042e+01	-1.323e-13	1.323e-13	-8.025e-14	8.025e-14	-2.184e-
12	6.154e-12		-1.564e+02	-1.561e+02							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	3	- C.c:	2	2.619e+02	-2.604e+02	-1.894e+00	1.894e+00	8.831e-01	-8.831e-01	-4.218e-01	4.218e-01	-
1.325e+01	-1.325e+01			-2.843e+01	-2.839e+01							
El:	3	- C.c:	3	2.619e+02	-2.604e+02	-1.894e+00	1.894e+00	-8.831e-01	8.831e-01	4.218e-01	-4.218e-01	
1.325e+01	1.325e+01			-2.843e+01	-2.839e+01							
El:	3	- C.c:	4	2.619e+02	-2.604e+02	-2.157e+00	2.157e+00	8.831e-01	-8.831e-01	-4.218e-01	4.218e-01	-
1.325e+01	-1.325e+01			-3.238e+01	-3.234e+01							
El:	3	- C.c:	5	2.619e+02	-2.604e+02	-2.157e+00	2.157e+00	-8.831e-01	8.831e-01	4.218e-01	-4.218e-01	
1.325e+01	1.325e+01			-3.238e+01	-3.234e+01							
El:	3	- C.c:	6	2.619e+02	-2.604e+02	-1.986e+00	1.986e+00	2.944e+00	-2.944e+00	-1.406e+00	1.406e+00	-
4.415e+01	-4.415e+01			-2.981e+01	-2.977e+01							
El:	3	- C.c:	7	2.619e+02	-2.604e+02	-1.986e+00	1.986e+00	-2.944e+00	2.944e+00	1.406e+00	-1.406e+00	
4.415e+01	4.415e+01			-2.981e+01	-2.977e+01							
El:	3	- C.c:	8	2.619e+02	-2.604e+02	-2.065e+00	2.065e+00	2.944e+00	-2.944e+00	-1.406e+00	1.406e+00	-
4.415e+01	-4.415e+01			-3.100e+01	-3.096e+01							
El:	3	- C.c:	9	2.619e+02	-2.604e+02	-2.065e+00	2.065e+00	-2.944e+00	2.944e+00	1.406e+00	-1.406e+00	
4.415e+01	4.415e+01			-3.100e+01	-3.096e+01							
El:	3	- C.c:	10	2.619e+02	-2.604e+02	-1.894e+00	1.894e+00	8.831e-01	-8.831e-01	-4.218e-01	4.218e-01	-
1.325e+01	-1.325e+01			-2.843e+01	-2.839e+01							
El:	3	- C.c:	11	2.619e+02	-2.604e+02	-1.894e+00	1.894e+00	-8.831e-01	8.831e-01	4.218e-01	-4.218e-01	
1.325e+01	1.325e+01			-2.843e+01	-2.839e+01							
El:	3	- C.c:	12	2.619e+02	-2.604e+02	-2.157e+00	2.157e+00	8.831e-01	-8.831e-01	-4.218e-01	4.218e-01	-
1.325e+01	-1.325e+01			-3.238e+01	-3.234e+01							
El:	3	- C.c:	13	2.619e+02	-2.604e+02	-2.157e+00	2.157e+00	-8.831e-01	8.831e-01	4.218e-01	-4.218e-01	
1.325e+01	1.325e+01			-3.238e+01	-3.234e+01							
El:	3	- C.c:	14	2.619e+02	-2.604e+02	-1.986e+00	1.986e+00	2.944e+00	-2.944e+00	-1.406e+00	1.406e+00	-
4.415e+01	-4.415e+01			-2.981e+01	-2.977e+01							
El:	3	- C.c:	15	2.619e+02	-2.604e+02	-1.986e+00	1.986e+00	-2.944e+00	2.944e+00	1.406e+00	-1.406e+00	
4.415e+01	4.415e+01			-2.981e+01	-2.977e+01							
El:	3	- C.c:	16	2.619e+02	-2.604e+02	-2.065e+00	2.065e+00	2.944e+00	-2.944e+00	-1.406e+00	1.406e+00	-
4.415e+01	-4.415e+01			-3.100e+01	-3.096e+01							
El:	3	- C.c:	17	2.619e+02	-2.604e+02	-2.065e+00	2.065e+00	-2.944e+00	2.944e+00	1.406e+00	-1.406e+00	
4.415e+01	4.415e+01			-3.100e+01	-3.096e+01							
El:	3	- C.c:	18	1.056e+03	-1.054e+03	-7.048e+00	7.048e+00	-9.365e-14	9.365e-14	-5.424e-14	5.424e-14	-1.468e-
12	4.277e-12			-1.058e+02	-1.056e+02							
El:	3	- C.c:	19	5.596e+02	-5.581e+02	-3.909e+00	3.909e+00	-6.718e-14	6.718e-14	-2.991e-14	2.991e-14	-7.777e-
13	2.793e-12			-5.868e+01	-5.859e+01							
El:	3	- C.c:	20	2.619e+02	-2.604e+02	-2.026e+00	2.026e+00	-5.129e-14	5.129e-14	-1.531e-14	1.531e-14	-3.638e-
13	1.903e-12			-3.041e+01	-3.036e+01							
El:	4	- C.c:	1	1.555e+03	-1.553e+03	9.502e+00	-9.502e+00	-1.342e-13	1.342e-13	5.109e-14	-5.109e-14	-2.618e-
12	6.644e-12			1.426e+02	1.425e+02							
El:	4	- C.c:	2	2.588e+02	-2.573e+02	1.985e+00	-1.985e+00	9.166e-01	-9.166e-01	3.471e-01	-3.471e-01	-
1.375e+01	-1.375e+01			2.978e+01	2.978e+01							
El:	4	- C.c:	3	2.588e+02	-2.573e+02	1.985e+00	-1.985e+00	-9.166e-01	9.166e-01	-3.471e-01	3.471e-01	
1.375e+01	1.375e+01			2.978e+01	2.978e+01							
El:	4	- C.c:	4	2.588e+02	-2.573e+02	1.722e+00	-1.722e+00	9.166e-01	-9.166e-01	3.471e-01	-3.471e-01	-
1.375e+01	-1.375e+01			2.583e+01	2.582e+01							
El:	4	- C.c:	5	2.588e+02	-2.573e+02	1.722e+00	-1.722e+00	-9.166e-01	9.166e-01	-3.471e-01	3.471e-01	
1.375e+01	1.375e+01			2.583e+01	2.582e+01							
El:	4	- C.c:	6	2.588e+02	-2.573e+02	1.893e+00	-1.893e+00	3.055e+00	-3.055e+00	1.157e+00	-1.157e+00	-
4.583e+01	-4.583e+01			2.840e+01	2.839e+01							
El:	4	- C.c:	7	2.588e+02	-2.573e+02	1.893e+00	-1.893e+00	-3.055e+00	3.055e+00	-1.157e+00	1.157e+00	
4.583e+01	4.583e+01			2.840e+01	2.839e+01							
El:	4	- C.c:	8	2.588e+02	-2.573e+02	1.814e+00	-1.814e+00	3.055e+00	-3.055e+00	1.157e+00	-1.157e+00	-
4.583e+01	-4.583e+01			2.722e+01	2.721e+01							
El:	4	- C.c:	9	2.588e+02	-2.573e+02	1.814e+00	-1.814e+00	-3.055e+00	3.055e+00	-1.157e+00	1.157e+00	
4.583e+01	4.583e+01			2.722e+01	2.721e+01							
El:	4	- C.c:	10	2.588e+02	-2.573e+02	1.985e+00	-1.985e+00	9.166e-01	-9.166e-01	3.471e-01	-3.471e-01	-
1.375e+01	-1.375e+01			2.978e+01	2.978e+01							
El:	4	- C.c:	11	2.588e+02	-2.573e+02	1.985e+00	-1.985e+00	-9.166e-01	9.166e-01	-3.471e-01	3.471e-01	
1.375e+01	1.375e+01			2.978e+01	2.978e+01							
El:	4	- C.c:	12	2.588e+02	-2.573e+02	1.722e+00	-1.722e+00	9.166e-01	-9.166e-01	3.471e-01	-3.471e-01	-
1.375e+01	-1.375e+01			2.583e+01	2.582e+01							
El:	4	- C.c:	13	2.588e+02	-2.573e+02	1.722e+00	-1.722e+00	-9.166e-01	9.166e-01	-3.471e-01	3.471e-01	
1.375e+01	1.375e+01			2.583e+01	2.582e+01							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	4	- C.c: 14	2.588e+02	-2.573e+02	1.893e+00	-1.893e+00	3.055e+00	-3.055e+00	1.157e+00	-1.157e+00	-
4.583e+01	-4.583e+01		2.840e+01	2.839e+01							
El:	4	- C.c: 15	2.588e+02	-2.573e+02	1.893e+00	-1.893e+00	-3.055e+00	3.055e+00	-1.157e+00	1.157e+00	
4.583e+01	4.583e+01		2.840e+01	2.839e+01							
El:	4	- C.c: 16	2.588e+02	-2.573e+02	1.814e+00	-1.814e+00	3.055e+00	-3.055e+00	1.157e+00	-1.157e+00	-
4.583e+01	-4.583e+01		2.722e+01	2.721e+01							
El:	4	- C.c: 17	2.588e+02	-2.573e+02	1.814e+00	-1.814e+00	-3.055e+00	3.055e+00	-1.157e+00	1.157e+00	
4.583e+01	4.583e+01		2.722e+01	2.721e+01							
El:	4	- C.c: 18	1.045e+03	-1.043e+03	6.429e+00	-6.429e+00	-9.518e-14	9.518e-14	3.457e-14	-3.457e-14	-1.766e-
12	4.621e-12		9.646e+01	9.642e+01							
El:	4	- C.c: 19	5.535e+02	-5.520e+02	3.569e+00	-3.569e+00	-6.896e-14	6.896e-14	1.923e-14	-1.923e-14	-9.605e-
13	3.029e-12		5.355e+01	5.353e+01							
El:	4	- C.c: 20	2.588e+02	-2.573e+02	1.854e+00	-1.854e+00	-5.323e-14	5.323e-14	1.002e-14	-1.002e-14	-4.773e-
13	2.074e-12		2.781e+01	2.780e+01							
El:	5	- C.c: 1	1.596e+03	-1.594e+03	2.794e+01	-2.794e+01	-2.477e-13	2.477e-13	1.794e-13	-1.794e-13	-9.926e-
13	8.422e-12		4.192e+02	4.189e+02							
El:	5	- C.c: 2	2.657e+02	-2.642e+02	5.553e+00	-5.553e+00	2.445e-01	-2.445e-01	1.071e+00	-1.071e+00	-
3.668e+00	-3.668e+00		8.332e+01	8.327e+01							
El:	5	- C.c: 3	2.657e+02	-2.642e+02	5.553e+00	-5.553e+00	-2.445e-01	2.445e-01	-1.071e+00	1.071e+00	
3.668e+00	3.668e+00		8.332e+01	8.327e+01							
El:	5	- C.c: 4	2.657e+02	-2.642e+02	5.333e+00	-5.333e+00	2.445e-01	-2.445e-01	1.071e+00	-1.071e+00	-
3.668e+00	-3.668e+00		8.002e+01	7.997e+01							
El:	5	- C.c: 5	2.657e+02	-2.642e+02	5.333e+00	-5.333e+00	-2.445e-01	2.445e-01	-1.071e+00	1.071e+00	
3.668e+00	3.668e+00		8.002e+01	7.997e+01							
El:	5	- C.c: 6	2.657e+02	-2.642e+02	5.476e+00	-5.476e+00	8.150e-01	-8.150e-01	3.570e+00	-3.570e+00	-
1.223e+01	-1.223e+01		8.216e+01	8.211e+01							
El:	5	- C.c: 7	2.657e+02	-2.642e+02	5.476e+00	-5.476e+00	-8.150e-01	8.150e-01	-3.570e+00	3.570e+00	
1.223e+01	1.223e+01		8.216e+01	8.211e+01							
El:	5	- C.c: 8	2.657e+02	-2.642e+02	5.410e+00	-5.410e+00	8.150e-01	-8.150e-01	3.570e+00	-3.570e+00	-
1.223e+01	-1.223e+01		8.117e+01	8.113e+01							
El:	5	- C.c: 9	2.657e+02	-2.642e+02	5.410e+00	-5.410e+00	-8.150e-01	8.150e-01	-3.570e+00	3.570e+00	
1.223e+01	1.223e+01		8.117e+01	8.113e+01							
El:	5	- C.c: 10	2.657e+02	-2.642e+02	5.553e+00	-5.553e+00	2.445e-01	-2.445e-01	1.071e+00	-1.071e+00	-
3.668e+00	-3.668e+00		8.332e+01	8.327e+01							
El:	5	- C.c: 11	2.657e+02	-2.642e+02	5.553e+00	-5.553e+00	-2.445e-01	2.445e-01	-1.071e+00	1.071e+00	
3.668e+00	3.668e+00		8.332e+01	8.327e+01							
El:	5	- C.c: 12	2.657e+02	-2.642e+02	5.333e+00	-5.333e+00	2.445e-01	-2.445e-01	1.071e+00	-1.071e+00	-
3.668e+00	-3.668e+00		8.002e+01	7.997e+01							
El:	5	- C.c: 13	2.657e+02	-2.642e+02	5.333e+00	-5.333e+00	-2.445e-01	2.445e-01	-1.071e+00	1.071e+00	
3.668e+00	3.668e+00		8.002e+01	7.997e+01							
El:	5	- C.c: 14	2.657e+02	-2.642e+02	5.476e+00	-5.476e+00	8.150e-01	-8.150e-01	3.570e+00	-3.570e+00	-
1.223e+01	-1.223e+01		8.216e+01	8.211e+01							
El:	5	- C.c: 15	2.657e+02	-2.642e+02	5.476e+00	-5.476e+00	-8.150e-01	8.150e-01	-3.570e+00	3.570e+00	
1.223e+01	1.223e+01		8.216e+01	8.211e+01							
El:	5	- C.c: 16	2.657e+02	-2.642e+02	5.410e+00	-5.410e+00	8.150e-01	-8.150e-01	3.570e+00	-3.570e+00	-
1.223e+01	-1.223e+01		8.117e+01	8.113e+01							
El:	5	- C.c: 17	2.657e+02	-2.642e+02	5.410e+00	-5.410e+00	-8.150e-01	8.150e-01	-3.570e+00	3.570e+00	
1.223e+01	1.223e+01		8.117e+01	8.113e+01							
El:	5	- C.c: 18	1.072e+03	-1.071e+03	1.890e+01	-1.890e+01	-1.721e-13	1.721e-13	1.214e-13	-1.214e-13	-6.705e-
13	5.834e-12		2.836e+02	2.834e+02							
El:	5	- C.c: 19	5.682e+02	-5.667e+02	1.049e+01	-1.049e+01	-1.123e-13	1.123e-13	6.720e-14	-6.720e-14	-3.680e-
13	3.738e-12		1.574e+02	1.573e+02							
El:	5	- C.c: 20	2.657e+02	-2.642e+02	5.443e+00	-5.443e+00	-7.647e-14	7.647e-14	3.470e-14	-3.470e-14	-1.865e-
13	2.481e-12		8.167e+01	8.162e+01							
El:	6	- C.c: 1	1.487e+03	-1.485e+03	4.142e+01	-4.142e+01	-4.689e-13	4.689e-13	2.776e-13	-2.776e-13	2.423e-
12	1.164e-11		6.204e+02	6.224e+02							
El:	6	- C.c: 2	2.477e+02	-2.462e+02	8.137e+00	-8.137e+00	-1.063e+00	1.063e+00	1.615e+00	-1.615e+00	
1.595e+01	1.595e+01		1.219e+02	1.222e+02							
El:	6	- C.c: 3	2.477e+02	-2.462e+02	8.137e+00	-8.137e+00	1.063e+00	-1.063e+00	-1.615e+00	1.615e+00	-
1.595e+01	-1.595e+01		1.219e+02	1.222e+02							
El:	6	- C.c: 4	2.477e+02	-2.462e+02	8.005e+00	-8.005e+00	-1.063e+00	1.063e+00	1.615e+00	-1.615e+00	
1.595e+01	1.595e+01		1.199e+02	1.202e+02							
El:	6	- C.c: 5	2.477e+02	-2.462e+02	8.005e+00	-8.005e+00	1.063e+00	-1.063e+00	-1.615e+00	1.615e+00	-
1.595e+01	-1.595e+01		1.199e+02	1.202e+02							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

El:	6	- C.c:	6	2.477e+02	-2.462e+02	8.091e+00	-8.091e+00	-3.544e+00	3.544e+00	5.382e+00	-5.382e+00	
5.317e+01	5.317e+01			1.212e+02	1.215e+02							
El:	6	- C.c:	7	2.477e+02	-2.462e+02	8.091e+00	-8.091e+00	3.544e+00	-3.544e+00	-5.382e+00	5.382e+00	-
5.317e+01	-5.317e+01			1.212e+02	1.215e+02							
El:	6	- C.c:	8	2.477e+02	-2.462e+02	8.052e+00	-8.052e+00	-3.544e+00	3.544e+00	5.382e+00	-5.382e+00	
5.317e+01	5.317e+01			1.206e+02	1.209e+02							
El:	6	- C.c:	9	2.477e+02	-2.462e+02	8.052e+00	-8.052e+00	3.544e+00	-3.544e+00	-5.382e+00	5.382e+00	-
5.317e+01	-5.317e+01			1.206e+02	1.209e+02							
El:	6	- C.c:	10	2.477e+02	-2.462e+02	8.137e+00	-8.137e+00	-1.063e+00	1.063e+00	1.615e+00	-1.615e+00	
1.595e+01	1.595e+01			1.219e+02	1.222e+02							
El:	6	- C.c:	11	2.477e+02	-2.462e+02	8.137e+00	-8.137e+00	1.063e+00	-1.063e+00	-1.615e+00	1.615e+00	-
1.595e+01	-1.595e+01			1.219e+02	1.222e+02							
El:	6	- C.c:	12	2.477e+02	-2.462e+02	8.005e+00	-8.005e+00	-1.063e+00	1.063e+00	1.615e+00	-1.615e+00	
1.595e+01	1.595e+01			1.199e+02	1.202e+02							
El:	6	- C.c:	13	2.477e+02	-2.462e+02	8.005e+00	-8.005e+00	1.063e+00	-1.063e+00	-1.615e+00	1.615e+00	-
1.595e+01	-1.595e+01			1.199e+02	1.202e+02							
El:	6	- C.c:	14	2.477e+02	-2.462e+02	8.091e+00	-8.091e+00	-3.544e+00	3.544e+00	5.382e+00	-5.382e+00	
5.317e+01	5.317e+01			1.212e+02	1.215e+02							
El:	6	- C.c:	15	2.477e+02	-2.462e+02	8.091e+00	-8.091e+00	3.544e+00	-3.544e+00	-5.382e+00	5.382e+00	-
5.317e+01	-5.317e+01			1.212e+02	1.215e+02							
El:	6	- C.c:	16	2.477e+02	-2.462e+02	8.052e+00	-8.052e+00	-3.544e+00	3.544e+00	5.382e+00	-5.382e+00	
5.317e+01	5.317e+01			1.206e+02	1.209e+02							
El:	6	- C.c:	17	2.477e+02	-2.462e+02	8.052e+00	-8.052e+00	3.544e+00	-3.544e+00	-5.382e+00	5.382e+00	-
5.317e+01	-5.317e+01			1.206e+02	1.209e+02							
El:	6	- C.c:	18	9.991e+02	-9.976e+02	2.803e+01	-2.803e+01	-3.219e-13	3.219e-13	1.877e-13	-1.877e-13	1.636e-
12	8.021e-12			4.198e+02	4.211e+02							
El:	6	- C.c:	19	5.295e+02	-5.280e+02	1.555e+01	-1.555e+01	-1.959e-13	1.959e-13	1.039e-13	-1.039e-13	8.955e-
13	4.982e-12			2.330e+02	2.337e+02							
El:	6	- C.c:	20	2.477e+02	-2.462e+02	8.071e+00	-8.071e+00	-1.203e-13	1.203e-13	5.358e-14	-5.358e-14	4.512e-
13	3.159e-12			1.209e+02	1.212e+02							

REAZIONI VINCOLARI STATICA

FORZE MOMENTI PER GRUPPI VINCOLO

GRUPPO	NUMERO:	1 - DESCRIZIONE:	CERNIERE_FISSE									
Nodo	c.c.	FX	FY	FZ	MX	MY	MZ					
4	1	+6.385e+001		-4.317e-012		+1.084e+004		-0.000e+000	-0.000e+000	-0.000e+000		
4	2	-1.520e+003		-1.284e+002		+2.042e+003		-0.000e+000	-0.000e+000	-0.000e+000		
4	3	-1.520e+003		+1.284e+002		+2.042e+003		-0.000e+000	-0.000e+000	-0.000e+000		
4	4	+1.540e+003		-1.284e+002		+2.042e+003		-0.000e+000	-0.000e+000	-0.000e+000		
4	5	+1.540e+003		+1.284e+002		+2.042e+003		-0.000e+000	-0.000e+000	-0.000e+000		
4	6	-4.489e+002		-4.280e+002		+2.042e+003		-0.000e+000	-0.000e+000	-0.000e+000		
4	7	-4.489e+002		+4.280e+002		+2.042e+003		-0.000e+000	-0.000e+000	-0.000e+000		
4	8	+4.690e+002		-4.280e+002		+2.042e+003		-0.000e+000	-0.000e+000	-0.000e+000		
4	9	+4.690e+002		+4.280e+002		+2.042e+003		-0.000e+000	-0.000e+000	-0.000e+000		
4	10	-1.520e+003		-1.284e+002		+2.042e+003		-0.000e+000	-0.000e+000	-0.000e+000		
4	11	-1.520e+003		+1.284e+002		+2.042e+003		-0.000e+000	-0.000e+000	-0.000e+000		
4	12	+1.540e+003		-1.284e+002		+2.042e+003		-0.000e+000	-0.000e+000	-0.000e+000		
4	13	+1.540e+003		+1.284e+002		+2.042e+003		-0.000e+000	-0.000e+000	-0.000e+000		
4	14	-4.489e+002		-4.280e+002		+2.042e+003		-0.000e+000	-0.000e+000	-0.000e+000		
4	15	-4.489e+002		+4.280e+002		+2.042e+003		-0.000e+000	-0.000e+000	-0.000e+000		
4	16	+4.690e+002		-4.280e+002		+2.042e+003		-0.000e+000	-0.000e+000	-0.000e+000		
4	17	+4.690e+002		+4.280e+002		+2.042e+003		-0.000e+000	-0.000e+000	-0.000e+000		
4	18	+4.281e+001		-2.914e-012		+7.325e+003		-0.000e+000	-0.000e+000	-0.000e+000		
4	19	+2.234e+001		-1.591e-012		+4.023e+003		-0.000e+000	-0.000e+000	-0.000e+000		
4	20	+1.005e+001		-7.970e-013		+2.042e+003		-0.000e+000	-0.000e+000	-0.000e+000		
11	1	+5.282e+001		-8.293e-012		+6.503e+003		-0.000e+000	-0.000e+000	-0.000e+000		
11	2	-1.185e+003		-9.628e+001		+1.251e+003		-0.000e+000	-0.000e+000	-0.000e+000		
11	3	-1.185e+003		+9.628e+001		+1.251e+003		-0.000e+000	-0.000e+000	-0.000e+000		
11	4	+1.205e+003		-9.628e+001		+1.251e+003		-0.000e+000	-0.000e+000	-0.000e+000		
11	5	+1.205e+003		+9.628e+001		+1.251e+003		-0.000e+000	-0.000e+000	-0.000e+000		

11	6	-3.482e+002	-3.209e+002	+1.251e+003	-0.000e+000	-0.000e+000	-0.000e+000
11	7	-3.482e+002	+3.209e+002	+1.251e+003	-0.000e+000	-0.000e+000	-0.000e+000
11	8	+3.689e+002	-3.209e+002	+1.251e+003	-0.000e+000	-0.000e+000	-0.000e+000
11	9	+3.689e+002	+3.209e+002	+1.251e+003	-0.000e+000	-0.000e+000	-0.000e+000
11	10	-1.185e+003	-9.628e+001	+1.251e+003	-0.000e+000	-0.000e+000	-0.000e+000
11	11	-1.185e+003	+9.628e+001	+1.251e+003	-0.000e+000	-0.000e+000	-0.000e+000
11	12	+1.205e+003	-9.628e+001	+1.251e+003	-0.000e+000	-0.000e+000	-0.000e+000
11	13	+1.205e+003	+9.628e+001	+1.251e+003	-0.000e+000	-0.000e+000	-0.000e+000
11	14	-3.482e+002	-3.209e+002	+1.251e+003	-0.000e+000	-0.000e+000	-0.000e+000
11	15	-3.482e+002	+3.209e+002	+1.251e+003	-0.000e+000	-0.000e+000	-0.000e+000
11	16	+3.689e+002	-3.209e+002	+1.251e+003	-0.000e+000	-0.000e+000	-0.000e+000
11	17	+3.689e+002	+3.209e+002	+1.251e+003	-0.000e+000	-0.000e+000	-0.000e+000
11	18	+3.574e+001	-5.591e-012	+4.397e+003	-0.000e+000	-0.000e+000	-0.000e+000
11	19	+1.986e+001	-3.030e-012	+2.431e+003	-0.000e+000	-0.000e+000	-0.000e+000
11	20	+1.034e+001	-1.494e-012	+1.251e+003	-0.000e+000	-0.000e+000	-0.000e+000
12	1	-5.675e+001	-1.025e+003	+6.418e+003	-0.000e+000	-0.000e+000	-0.000e+000
12	2	-3.227e+002	-4.000e+002	+1.200e+003	-0.000e+000	-0.000e+000	-0.000e+000
12	3	-3.117e+002	-1.175e+001	+1.157e+003	-0.000e+000	-0.000e+000	-0.000e+000
12	4	+2.920e+002	-3.361e+002	+1.177e+003	-0.000e+000	-0.000e+000	-0.000e+000
12	5	+3.030e+002	+5.216e+001	+1.134e+003	-0.000e+000	-0.000e+000	-0.000e+000
12	6	-1.204e+002	-8.305e+002	+1.241e+003	-0.000e+000	-0.000e+000	-0.000e+000
12	7	-8.369e+001	+4.635e+002	+1.100e+003	-0.000e+000	-0.000e+000	-0.000e+000
12	8	+6.400e+001	-8.113e+002	+1.234e+003	-0.000e+000	-0.000e+000	-0.000e+000
12	9	+1.007e+002	+4.827e+002	+1.093e+003	-0.000e+000	-0.000e+000	-0.000e+000
12	10	-3.227e+002	-4.000e+002	+1.200e+003	-0.000e+000	-0.000e+000	-0.000e+000
12	11	-3.117e+002	-1.175e+001	+1.157e+003	-0.000e+000	-0.000e+000	-0.000e+000
12	12	+2.920e+002	-3.361e+002	+1.177e+003	-0.000e+000	-0.000e+000	-0.000e+000
12	13	+3.030e+002	+5.216e+001	+1.134e+003	-0.000e+000	-0.000e+000	-0.000e+000
12	14	-1.204e+002	-8.305e+002	+1.241e+003	-0.000e+000	-0.000e+000	-0.000e+000
12	15	-8.369e+001	+4.635e+002	+1.100e+003	-0.000e+000	-0.000e+000	-0.000e+000
12	16	+6.400e+001	-8.113e+002	+1.234e+003	-0.000e+000	-0.000e+000	-0.000e+000
12	17	+1.007e+002	+4.827e+002	+1.093e+003	-0.000e+000	-0.000e+000	-0.000e+000
12	18	-3.820e+001	-6.895e+002	+4.329e+003	-0.000e+000	-0.000e+000	-0.000e+000
12	19	-2.048e+001	-3.672e+002	+2.353e+003	-0.000e+000	-0.000e+000	-0.000e+000
12	20	-9.847e+000	-1.739e+002	+1.167e+003	-0.000e+000	-0.000e+000	-0.000e+000
13	1	+3.329e+000	-3.483e+002	+9.806e+002	-0.000e+000	-0.000e+000	-0.000e+000
13	2	-1.994e+002	-7.773e+001	+2.735e+002	-0.000e+000	-0.000e+000	-0.000e+000
13	3	-1.998e+002	+2.500e+000	+2.535e+002	-0.000e+000	-0.000e+000	-0.000e+000
13	4	+2.010e+002	-1.155e+002	+2.870e+002	-0.000e+000	-0.000e+000	-0.000e+000
13	5	+2.006e+002	-3.527e+001	+2.670e+002	-0.000e+000	-0.000e+000	-0.000e+000
13	6	-5.875e+001	-1.846e+002	+3.015e+002	-0.000e+000	-0.000e+000	-0.000e+000
13	7	-6.011e+001	+8.288e+001	+2.350e+002	-0.000e+000	-0.000e+000	-0.000e+000
13	8	+6.137e+001	-1.959e+002	+3.055e+002	-0.000e+000	-0.000e+000	-0.000e+000
13	9	+6.001e+001	+7.155e+001	+2.390e+002	-0.000e+000	-0.000e+000	-0.000e+000
13	10	-1.994e+002	-7.773e+001	+2.735e+002	-0.000e+000	-0.000e+000	-0.000e+000
13	11	-1.998e+002	+2.500e+000	+2.535e+002	-0.000e+000	-0.000e+000	-0.000e+000
13	12	+2.010e+002	-1.155e+002	+2.870e+002	-0.000e+000	-0.000e+000	-0.000e+000
13	13	+2.006e+002	-3.527e+001	+2.670e+002	-0.000e+000	-0.000e+000	-0.000e+000
13	14	-5.875e+001	-1.846e+002	+3.015e+002	-0.000e+000	-0.000e+000	-0.000e+000
13	15	-6.011e+001	+8.288e+001	+2.350e+002	-0.000e+000	-0.000e+000	-0.000e+000
13	16	+6.137e+001	-1.959e+002	+3.055e+002	-0.000e+000	-0.000e+000	-0.000e+000
13	17	+6.001e+001	+7.155e+001	+2.390e+002	-0.000e+000	-0.000e+000	-0.000e+000
13	18	+2.249e+000	-2.338e+002	+6.762e+002	-0.000e+000	-0.000e+000	-0.000e+000
13	19	+1.236e+000	-1.230e+002	+4.225e+002	-0.000e+000	-0.000e+000	-0.000e+000
13	20	+6.281e-001	-5.650e+001	+2.702e+002	-0.000e+000	-0.000e+000	-0.000e+000
14	1	+1.429e+000	-6.058e+002	+3.717e+003	-0.000e+000	-0.000e+000	-0.000e+000
14	2	-1.997e+002	-2.154e+002	+7.571e+002	-0.000e+000	-0.000e+000	-0.000e+000
14	3	-1.999e+002	+4.930e+000	+7.313e+002	-0.000e+000	-0.000e+000	-0.000e+000
14	4	+2.004e+002	-2.068e+002	+7.541e+002	-0.000e+000	-0.000e+000	-0.000e+000
14	5	+2.003e+002	+1.351e+001	+7.282e+002	-0.000e+000	-0.000e+000	-0.000e+000
14	6	-5.944e+001	-4.693e+002	+7.862e+002	-0.000e+000	-0.000e+000	-0.000e+000
14	7	-6.004e+001	+2.649e+002	+7.000e+002	-0.000e+000	-0.000e+000	-0.000e+000
14	8	+6.061e+001	-4.668e+002	+7.853e+002	-0.000e+000	-0.000e+000	-0.000e+000
14	9	+6.000e+001	+2.675e+002	+6.991e+002	-0.000e+000	-0.000e+000	-0.000e+000

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

14	10	-1.997e+002	-2.154e+002	+7.571e+002	-0.000e+000	-0.000e+000	-0.000e+000
14	11	-1.999e+002	+4.930e+000	+7.313e+002	-0.000e+000	-0.000e+000	-0.000e+000
14	12	+2.004e+002	-2.068e+002	+7.541e+002	-0.000e+000	-0.000e+000	-0.000e+000
14	13	+2.003e+002	+1.351e+001	+7.282e+002	-0.000e+000	-0.000e+000	-0.000e+000
14	14	-5.944e+001	-4.693e+002	+7.862e+002	-0.000e+000	-0.000e+000	-0.000e+000
14	15	-6.004e+001	+2.649e+002	+7.000e+002	-0.000e+000	-0.000e+000	-0.000e+000
14	16	+6.061e+001	-4.668e+002	+7.853e+002	-0.000e+000	-0.000e+000	-0.000e+000
14	17	+6.000e+001	+2.675e+002	+6.991e+002	-0.000e+000	-0.000e+000	-0.000e+000
14	18	+9.678e-001	-4.071e+002	+2.518e+003	-0.000e+000	-0.000e+000	-0.000e+000
14	19	+5.402e-001	-2.157e+002	+1.408e+003	-0.000e+000	-0.000e+000	-0.000e+000
14	20	+2.836e-001	-1.009e+002	+7.427e+002	-0.000e+000	-0.000e+000	-0.000e+000
15	1	+6.651e-001	-5.462e+002	+3.081e+003	-0.000e+000	-0.000e+000	-0.000e+000
15	2	-1.999e+002	-1.833e+002	+6.446e+002	-0.000e+000	-0.000e+000	-0.000e+000
15	3	-2.000e+002	+4.184e+000	+6.201e+002	-0.000e+000	-0.000e+000	-0.000e+000
15	4	+2.003e+002	-1.854e+002	+6.453e+002	-0.000e+000	-0.000e+000	-0.000e+000
15	5	+2.002e+002	+2.059e+000	+6.208e+002	-0.000e+000	-0.000e+000	-0.000e+000
15	6	-5.976e+001	-4.028e+002	+6.735e+002	-0.000e+000	-0.000e+000	-0.000e+000
15	7	-6.004e+001	+2.222e+002	+5.917e+002	-0.000e+000	-0.000e+000	-0.000e+000
15	8	+6.030e+001	-4.035e+002	+6.737e+002	-0.000e+000	-0.000e+000	-0.000e+000
15	9	+6.002e+001	+2.216e+002	+5.919e+002	-0.000e+000	-0.000e+000	-0.000e+000
15	10	-1.999e+002	-1.833e+002	+6.446e+002	-0.000e+000	-0.000e+000	-0.000e+000
15	11	-2.000e+002	+4.184e+000	+6.201e+002	-0.000e+000	-0.000e+000	-0.000e+000
15	12	+2.003e+002	-1.854e+002	+6.453e+002	-0.000e+000	-0.000e+000	-0.000e+000
15	13	+2.002e+002	+2.059e+000	+6.208e+002	-0.000e+000	-0.000e+000	-0.000e+000
15	14	-5.976e+001	-4.028e+002	+6.735e+002	-0.000e+000	-0.000e+000	-0.000e+000
15	15	-6.004e+001	+2.222e+002	+5.917e+002	-0.000e+000	-0.000e+000	-0.000e+000
15	16	+6.030e+001	-4.035e+002	+6.737e+002	-0.000e+000	-0.000e+000	-0.000e+000
15	17	+6.002e+001	+2.216e+002	+5.919e+002	-0.000e+000	-0.000e+000	-0.000e+000
15	18	+4.497e-001	-3.670e+002	+2.090e+003	-0.000e+000	-0.000e+000	-0.000e+000
15	19	+2.487e-001	-1.943e+002	+1.179e+003	-0.000e+000	-0.000e+000	-0.000e+000
15	20	+1.281e-001	-9.063e+001	+6.327e+002	-0.000e+000	-0.000e+000	-0.000e+000
16	1	-5.721e-001	-5.593e+002	+3.231e+003	-0.000e+000	-0.000e+000	-0.000e+000
16	2	-2.002e+002	-1.908e+002	+6.722e+002	-0.000e+000	-0.000e+000	-0.000e+000
16	3	-2.002e+002	+4.395e+000	+6.474e+002	-0.000e+000	-0.000e+000	-0.000e+000
16	4	+1.999e+002	-1.901e+002	+6.720e+002	-0.000e+000	-0.000e+000	-0.000e+000
16	5	+2.000e+002	+5.009e+000	+6.472e+002	-0.000e+000	-0.000e+000	-0.000e+000
16	6	-6.026e+001	-4.182e+002	+7.011e+002	-0.000e+000	-0.000e+000	-0.000e+000
16	7	-6.002e+001	+2.323e+002	+6.184e+002	-0.000e+000	-0.000e+000	-0.000e+000
16	8	+5.980e+001	-4.180e+002	+7.010e+002	-0.000e+000	-0.000e+000	-0.000e+000
16	9	+6.004e+001	+2.325e+002	+6.183e+002	-0.000e+000	-0.000e+000	-0.000e+000
16	10	-2.002e+002	-1.908e+002	+6.722e+002	-0.000e+000	-0.000e+000	-0.000e+000
16	11	-2.002e+002	+4.395e+000	+6.474e+002	-0.000e+000	-0.000e+000	-0.000e+000
16	12	+1.999e+002	-1.901e+002	+6.720e+002	-0.000e+000	-0.000e+000	-0.000e+000
16	13	+2.000e+002	+5.009e+000	+6.472e+002	-0.000e+000	-0.000e+000	-0.000e+000
16	14	-6.026e+001	-4.182e+002	+7.011e+002	-0.000e+000	-0.000e+000	-0.000e+000
16	15	-6.002e+001	+2.323e+002	+6.184e+002	-0.000e+000	-0.000e+000	-0.000e+000
16	16	+5.980e+001	-4.180e+002	+7.010e+002	-0.000e+000	-0.000e+000	-0.000e+000
16	17	+6.004e+001	+2.325e+002	+6.183e+002	-0.000e+000	-0.000e+000	-0.000e+000
16	18	-3.870e-001	-3.758e+002	+2.191e+003	-0.000e+000	-0.000e+000	-0.000e+000
16	19	-2.145e-001	-1.990e+002	+1.234e+003	-0.000e+000	-0.000e+000	-0.000e+000
16	20	-1.110e-001	-9.288e+001	+6.597e+002	-0.000e+000	-0.000e+000	-0.000e+000
17	1	-1.642e+000	-5.574e+002	+3.189e+003	-0.000e+000	-0.000e+000	-0.000e+000
17	2	-2.005e+002	-1.892e+002	+6.603e+002	-0.000e+000	-0.000e+000	-0.000e+000
17	3	-2.003e+002	+4.220e+000	+6.355e+002	-0.000e+000	-0.000e+000	-0.000e+000
17	4	+1.996e+002	-1.895e+002	+6.603e+002	-0.000e+000	-0.000e+000	-0.000e+000
17	5	+1.999e+002	+3.974e+000	+6.355e+002	-0.000e+000	-0.000e+000	-0.000e+000
17	6	-6.069e+001	-4.150e+002	+6.892e+002	-0.000e+000	-0.000e+000	-0.000e+000
17	7	-6.000e+001	+2.298e+002	+6.065e+002	-0.000e+000	-0.000e+000	-0.000e+000
17	8	+5.935e+001	-4.150e+002	+6.893e+002	-0.000e+000	-0.000e+000	-0.000e+000
17	9	+6.005e+001	+2.297e+002	+6.066e+002	-0.000e+000	-0.000e+000	-0.000e+000
17	10	-2.005e+002	-1.892e+002	+6.603e+002	-0.000e+000	-0.000e+000	-0.000e+000
17	11	-2.003e+002	+4.220e+000	+6.355e+002	-0.000e+000	-0.000e+000	-0.000e+000
17	12	+1.996e+002	-1.895e+002	+6.603e+002	-0.000e+000	-0.000e+000	-0.000e+000
17	13	+1.999e+002	+3.974e+000	+6.355e+002	-0.000e+000	-0.000e+000	-0.000e+000

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

17	14	-6.069e+001	-4.150e+002	+6.892e+002	-0.000e+000	-0.000e+000	-0.000e+000
17	15	-6.000e+001	+2.298e+002	+6.065e+002	-0.000e+000	-0.000e+000	-0.000e+000
17	16	+5.935e+001	-4.150e+002	+6.893e+002	-0.000e+000	-0.000e+000	-0.000e+000
17	17	+6.005e+001	+2.297e+002	+6.066e+002	-0.000e+000	-0.000e+000	-0.000e+000
17	18	-1.111e+000	-3.745e+002	+2.162e+003	-0.000e+000	-0.000e+000	-0.000e+000
17	19	-6.173e-001	-1.983e+002	+1.216e+003	-0.000e+000	-0.000e+000	-0.000e+000
17	20	-3.211e-001	-9.262e+001	+6.479e+002	-0.000e+000	-0.000e+000	-0.000e+000
18	1	-2.433e+000	-5.531e+002	+3.236e+003	-0.000e+000	-0.000e+000	-0.000e+000
18	2	-2.005e+002	-1.894e+002	+6.873e+002	-0.000e+000	-0.000e+000	-0.000e+000
18	3	-2.002e+002	+4.168e+000	+6.625e+002	-0.000e+000	-0.000e+000	-0.000e+000
18	4	+1.992e+002	-1.877e+002	+6.867e+002	-0.000e+000	-0.000e+000	-0.000e+000
18	5	+1.995e+002	+5.858e+000	+6.618e+002	-0.000e+000	-0.000e+000	-0.000e+000
18	6	-6.094e+001	-4.147e+002	+7.160e+002	-0.000e+000	-0.000e+000	-0.000e+000
18	7	-5.991e+001	+2.306e+002	+6.333e+002	-0.000e+000	-0.000e+000	-0.000e+000
18	8	+5.897e+001	-4.142e+002	+7.158e+002	-0.000e+000	-0.000e+000	-0.000e+000
18	9	+6.000e+001	+2.311e+002	+6.331e+002	-0.000e+000	-0.000e+000	-0.000e+000
18	10	-2.005e+002	-1.894e+002	+6.873e+002	-0.000e+000	-0.000e+000	-0.000e+000
18	11	-2.002e+002	+4.168e+000	+6.625e+002	-0.000e+000	-0.000e+000	-0.000e+000
18	12	+1.992e+002	-1.877e+002	+6.867e+002	-0.000e+000	-0.000e+000	-0.000e+000
18	13	+1.995e+002	+5.858e+000	+6.618e+002	-0.000e+000	-0.000e+000	-0.000e+000
18	14	-6.094e+001	-4.147e+002	+7.160e+002	-0.000e+000	-0.000e+000	-0.000e+000
18	15	-5.991e+001	+2.306e+002	+6.333e+002	-0.000e+000	-0.000e+000	-0.000e+000
18	16	+5.897e+001	-4.142e+002	+7.158e+002	-0.000e+000	-0.000e+000	-0.000e+000
18	17	+6.000e+001	+2.311e+002	+6.331e+002	-0.000e+000	-0.000e+000	-0.000e+000
18	18	-1.646e+000	-3.716e+002	+2.196e+003	-0.000e+000	-0.000e+000	-0.000e+000
18	19	-9.101e-001	-1.967e+002	+1.245e+003	-0.000e+000	-0.000e+000	-0.000e+000
18	20	-4.689e-001	-9.179e+001	+6.745e+002	-0.000e+000	-0.000e+000	-0.000e+000
19	1	-2.774e+000	-2.986e+002	+1.566e+003	-0.000e+000	-0.000e+000	-0.000e+000
19	2	-1.065e+002	-8.607e+001	+3.200e+002	-0.000e+000	-0.000e+000	-0.000e+000
19	3	-1.061e+002	+1.655e+001	+3.064e+002	-0.000e+000	-0.000e+000	-0.000e+000
19	4	+1.050e+002	-1.207e+002	+3.324e+002	-0.000e+000	-0.000e+000	-0.000e+000
19	5	+1.053e+002	-1.810e+001	+3.188e+002	-0.000e+000	-0.000e+000	-0.000e+000
19	6	-3.286e+001	-2.179e+002	+3.401e+002	-0.000e+000	-0.000e+000	-0.000e+000
19	7	-3.171e+001	+1.241e+002	+2.949e+002	-0.000e+000	-0.000e+000	-0.000e+000
19	8	+3.058e+001	-2.283e+002	+3.439e+002	-0.000e+000	-0.000e+000	-0.000e+000
19	9	+3.173e+001	+1.138e+002	+2.986e+002	-0.000e+000	-0.000e+000	-0.000e+000
19	10	-1.065e+002	-8.607e+001	+3.200e+002	-0.000e+000	-0.000e+000	-0.000e+000
19	11	-1.061e+002	+1.655e+001	+3.064e+002	-0.000e+000	-0.000e+000	-0.000e+000
19	12	+1.050e+002	-1.207e+002	+3.324e+002	-0.000e+000	-0.000e+000	-0.000e+000
19	13	+1.053e+002	-1.810e+001	+3.188e+002	-0.000e+000	-0.000e+000	-0.000e+000
19	14	-3.286e+001	-2.179e+002	+3.401e+002	-0.000e+000	-0.000e+000	-0.000e+000
19	15	-3.171e+001	+1.241e+002	+2.949e+002	-0.000e+000	-0.000e+000	-0.000e+000
19	16	+3.058e+001	-2.283e+002	+3.439e+002	-0.000e+000	-0.000e+000	-0.000e+000
19	17	+3.173e+001	+1.138e+002	+2.986e+002	-0.000e+000	-0.000e+000	-0.000e+000
19	18	-1.880e+000	-2.010e+002	+1.062e+003	-0.000e+000	-0.000e+000	-0.000e+000
19	19	-1.057e+000	-1.079e+002	+5.977e+002	-0.000e+000	-0.000e+000	-0.000e+000
19	20	-5.630e-001	-5.209e+001	+3.194e+002	-0.000e+000	-0.000e+000	-0.000e+000
30	1	-5.675e+001	+1.025e+003	+6.418e+003	-0.000e+000	-0.000e+000	-0.000e+000
30	2	-3.117e+002	+1.175e+001	+1.157e+003	-0.000e+000	-0.000e+000	-0.000e+000
30	3	-3.227e+002	+4.000e+002	+1.200e+003	-0.000e+000	-0.000e+000	-0.000e+000
30	4	+3.030e+002	-5.216e+001	+1.134e+003	-0.000e+000	-0.000e+000	-0.000e+000
30	5	+2.920e+002	+3.361e+002	+1.177e+003	-0.000e+000	-0.000e+000	-0.000e+000
30	6	-8.369e+001	-4.635e+002	+1.100e+003	-0.000e+000	-0.000e+000	-0.000e+000
30	7	-1.204e+002	+8.305e+002	+1.241e+003	-0.000e+000	-0.000e+000	-0.000e+000
30	8	+1.007e+002	-4.827e+002	+1.093e+003	-0.000e+000	-0.000e+000	-0.000e+000
30	9	+6.400e+001	+8.113e+002	+1.234e+003	-0.000e+000	-0.000e+000	-0.000e+000
30	10	-3.117e+002	+1.175e+001	+1.157e+003	-0.000e+000	-0.000e+000	-0.000e+000
30	11	-3.227e+002	+4.000e+002	+1.200e+003	-0.000e+000	-0.000e+000	-0.000e+000
30	12	+3.030e+002	-5.216e+001	+1.134e+003	-0.000e+000	-0.000e+000	-0.000e+000
30	13	+2.920e+002	+3.361e+002	+1.177e+003	-0.000e+000	-0.000e+000	-0.000e+000
30	14	-8.369e+001	-4.635e+002	+1.100e+003	-0.000e+000	-0.000e+000	-0.000e+000
30	15	-1.204e+002	+8.305e+002	+1.241e+003	-0.000e+000	-0.000e+000	-0.000e+000
30	16	+1.007e+002	-4.827e+002	+1.093e+003	-0.000e+000	-0.000e+000	-0.000e+000
30	17	+6.400e+001	+8.113e+002	+1.234e+003	-0.000e+000	-0.000e+000	-0.000e+000

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

30	18	-3.820e+001	+6.895e+002	+4.329e+003	-0.000e+000	-0.000e+000	-0.000e+000
30	19	-2.048e+001	+3.672e+002	+2.353e+003	-0.000e+000	-0.000e+000	-0.000e+000
30	20	-9.847e+000	+1.739e+002	+1.167e+003	-0.000e+000	-0.000e+000	-0.000e+000
31	1	+3.329e+000	+3.483e+002	+9.806e+002	-0.000e+000	-0.000e+000	-0.000e+000
31	2	-1.998e+002	-2.500e+000	+2.535e+002	-0.000e+000	-0.000e+000	-0.000e+000
31	3	-1.994e+002	+7.773e+001	+2.735e+002	-0.000e+000	-0.000e+000	-0.000e+000
31	4	+2.006e+002	+3.527e+001	+2.670e+002	-0.000e+000	-0.000e+000	-0.000e+000
31	5	+2.010e+002	+1.155e+002	+2.870e+002	-0.000e+000	-0.000e+000	-0.000e+000
31	6	-6.011e+001	-8.288e+001	+2.350e+002	-0.000e+000	-0.000e+000	-0.000e+000
31	7	-5.875e+001	+1.846e+002	+3.015e+002	-0.000e+000	-0.000e+000	-0.000e+000
31	8	+6.001e+001	-7.155e+001	+2.390e+002	-0.000e+000	-0.000e+000	-0.000e+000
31	9	+6.137e+001	+1.959e+002	+3.055e+002	-0.000e+000	-0.000e+000	-0.000e+000
31	10	-1.998e+002	-2.500e+000	+2.535e+002	-0.000e+000	-0.000e+000	-0.000e+000
31	11	-1.994e+002	+7.773e+001	+2.735e+002	-0.000e+000	-0.000e+000	-0.000e+000
31	12	+2.006e+002	+3.527e+001	+2.670e+002	-0.000e+000	-0.000e+000	-0.000e+000
31	13	+2.010e+002	+1.155e+002	+2.870e+002	-0.000e+000	-0.000e+000	-0.000e+000
31	14	-6.011e+001	-8.288e+001	+2.350e+002	-0.000e+000	-0.000e+000	-0.000e+000
31	15	-5.875e+001	+1.846e+002	+3.015e+002	-0.000e+000	-0.000e+000	-0.000e+000
31	16	+6.001e+001	-7.155e+001	+2.390e+002	-0.000e+000	-0.000e+000	-0.000e+000
31	17	+6.137e+001	+1.959e+002	+3.055e+002	-0.000e+000	-0.000e+000	-0.000e+000
31	18	+2.249e+000	+2.338e+002	+6.762e+002	-0.000e+000	-0.000e+000	-0.000e+000
31	19	+1.236e+000	+1.230e+002	+4.225e+002	-0.000e+000	-0.000e+000	-0.000e+000
31	20	+6.281e-001	+5.650e+001	+2.702e+002	-0.000e+000	-0.000e+000	-0.000e+000
32	1	+1.429e+000	+6.058e+002	+3.717e+003	-0.000e+000	-0.000e+000	-0.000e+000
32	2	-1.999e+002	-4.930e+000	+7.313e+002	-0.000e+000	-0.000e+000	-0.000e+000
32	3	-1.997e+002	+2.154e+002	+7.571e+002	-0.000e+000	-0.000e+000	-0.000e+000
32	4	+2.003e+002	-1.351e+001	+7.282e+002	-0.000e+000	-0.000e+000	-0.000e+000
32	5	+2.004e+002	+2.068e+002	+7.541e+002	-0.000e+000	-0.000e+000	-0.000e+000
32	6	-6.004e+001	-2.649e+002	+7.000e+002	-0.000e+000	-0.000e+000	-0.000e+000
32	7	-5.944e+001	+4.693e+002	+7.862e+002	-0.000e+000	-0.000e+000	-0.000e+000
32	8	+6.000e+001	-2.675e+002	+6.991e+002	-0.000e+000	-0.000e+000	-0.000e+000
32	9	+6.061e+001	+4.668e+002	+7.853e+002	-0.000e+000	-0.000e+000	-0.000e+000
32	10	-1.999e+002	-4.930e+000	+7.313e+002	-0.000e+000	-0.000e+000	-0.000e+000
32	11	-1.997e+002	+2.154e+002	+7.571e+002	-0.000e+000	-0.000e+000	-0.000e+000
32	12	+2.003e+002	-1.351e+001	+7.282e+002	-0.000e+000	-0.000e+000	-0.000e+000
32	13	+2.004e+002	+2.068e+002	+7.541e+002	-0.000e+000	-0.000e+000	-0.000e+000
32	14	-6.004e+001	-2.649e+002	+7.000e+002	-0.000e+000	-0.000e+000	-0.000e+000
32	15	-5.944e+001	+4.693e+002	+7.862e+002	-0.000e+000	-0.000e+000	-0.000e+000
32	16	+6.000e+001	-2.675e+002	+6.991e+002	-0.000e+000	-0.000e+000	-0.000e+000
32	17	+6.061e+001	+4.668e+002	+7.853e+002	-0.000e+000	-0.000e+000	-0.000e+000
32	18	+9.678e-001	+4.071e+002	+2.518e+003	-0.000e+000	-0.000e+000	-0.000e+000
32	19	+5.402e-001	+2.157e+002	+1.408e+003	-0.000e+000	-0.000e+000	-0.000e+000
32	20	+2.836e-001	+1.009e+002	+7.427e+002	-0.000e+000	-0.000e+000	-0.000e+000
33	1	+6.651e-001	+5.462e+002	+3.081e+003	-0.000e+000	-0.000e+000	-0.000e+000
33	2	-2.000e+002	-4.184e+000	+6.201e+002	-0.000e+000	-0.000e+000	-0.000e+000
33	3	-1.999e+002	+1.833e+002	+6.446e+002	-0.000e+000	-0.000e+000	-0.000e+000
33	4	+2.002e+002	-2.059e+000	+6.208e+002	-0.000e+000	-0.000e+000	-0.000e+000
33	5	+2.003e+002	+1.854e+002	+6.453e+002	-0.000e+000	-0.000e+000	-0.000e+000
33	6	-6.004e+001	-2.222e+002	+5.917e+002	-0.000e+000	-0.000e+000	-0.000e+000
33	7	-5.976e+001	+4.028e+002	+6.735e+002	-0.000e+000	-0.000e+000	-0.000e+000
33	8	+6.002e+001	-2.216e+002	+5.919e+002	-0.000e+000	-0.000e+000	-0.000e+000
33	9	+6.030e+001	+4.035e+002	+6.737e+002	-0.000e+000	-0.000e+000	-0.000e+000
33	10	-2.000e+002	-4.184e+000	+6.201e+002	-0.000e+000	-0.000e+000	-0.000e+000
33	11	-1.999e+002	+1.833e+002	+6.446e+002	-0.000e+000	-0.000e+000	-0.000e+000
33	12	+2.002e+002	-2.059e+000	+6.208e+002	-0.000e+000	-0.000e+000	-0.000e+000
33	13	+2.003e+002	+1.854e+002	+6.453e+002	-0.000e+000	-0.000e+000	-0.000e+000
33	14	-6.004e+001	-2.222e+002	+5.917e+002	-0.000e+000	-0.000e+000	-0.000e+000
33	15	-5.976e+001	+4.028e+002	+6.735e+002	-0.000e+000	-0.000e+000	-0.000e+000
33	16	+6.002e+001	-2.216e+002	+5.919e+002	-0.000e+000	-0.000e+000	-0.000e+000
33	17	+6.030e+001	+4.035e+002	+6.737e+002	-0.000e+000	-0.000e+000	-0.000e+000
33	18	+4.497e-001	+3.670e+002	+2.090e+003	-0.000e+000	-0.000e+000	-0.000e+000
33	19	+2.487e-001	+1.943e+002	+1.179e+003	-0.000e+000	-0.000e+000	-0.000e+000
33	20	+1.281e-001	+9.063e+001	+6.327e+002	-0.000e+000	-0.000e+000	-0.000e+000
34	1	-5.721e-001	+5.593e+002	+3.231e+003	-0.000e+000	-0.000e+000	-0.000e+000

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

34	2	-2.002e+002	-4.395e+000	+6.474e+002	-0.000e+000	-0.000e+000	-0.000e+000
34	3	-2.002e+002	+1.908e+002	+6.722e+002	-0.000e+000	-0.000e+000	-0.000e+000
34	4	+2.000e+002	-5.009e+000	+6.472e+002	-0.000e+000	-0.000e+000	-0.000e+000
34	5	+1.999e+002	+1.901e+002	+6.720e+002	-0.000e+000	-0.000e+000	-0.000e+000
34	6	-6.002e+001	-2.323e+002	+6.184e+002	-0.000e+000	-0.000e+000	-0.000e+000
34	7	-6.026e+001	+4.182e+002	+7.011e+002	-0.000e+000	-0.000e+000	-0.000e+000
34	8	+6.004e+001	-2.325e+002	+6.183e+002	-0.000e+000	-0.000e+000	-0.000e+000
34	9	+5.980e+001	+4.180e+002	+7.010e+002	-0.000e+000	-0.000e+000	-0.000e+000
34	10	-2.002e+002	-4.395e+000	+6.474e+002	-0.000e+000	-0.000e+000	-0.000e+000
34	11	-2.002e+002	+1.908e+002	+6.722e+002	-0.000e+000	-0.000e+000	-0.000e+000
34	12	+2.000e+002	-5.009e+000	+6.472e+002	-0.000e+000	-0.000e+000	-0.000e+000
34	13	+1.999e+002	+1.901e+002	+6.720e+002	-0.000e+000	-0.000e+000	-0.000e+000
34	14	-6.002e+001	-2.323e+002	+6.184e+002	-0.000e+000	-0.000e+000	-0.000e+000
34	15	-6.026e+001	+4.182e+002	+7.011e+002	-0.000e+000	-0.000e+000	-0.000e+000
34	16	+6.004e+001	-2.325e+002	+6.183e+002	-0.000e+000	-0.000e+000	-0.000e+000
34	17	+5.980e+001	+4.180e+002	+7.010e+002	-0.000e+000	-0.000e+000	-0.000e+000
34	18	-3.870e-001	+3.758e+002	+2.191e+003	-0.000e+000	-0.000e+000	-0.000e+000
34	19	-2.145e-001	+1.990e+002	+1.234e+003	-0.000e+000	-0.000e+000	-0.000e+000
34	20	-1.110e-001	+9.288e+001	+6.597e+002	-0.000e+000	-0.000e+000	-0.000e+000
35	1	-1.642e+000	+5.574e+002	+3.189e+003	-0.000e+000	-0.000e+000	-0.000e+000
35	2	-2.003e+002	-4.220e+000	+6.355e+002	-0.000e+000	-0.000e+000	-0.000e+000
35	3	-2.005e+002	+1.892e+002	+6.603e+002	-0.000e+000	-0.000e+000	-0.000e+000
35	4	+1.999e+002	-3.974e+000	+6.355e+002	-0.000e+000	-0.000e+000	-0.000e+000
35	5	+1.996e+002	+1.895e+002	+6.603e+002	-0.000e+000	-0.000e+000	-0.000e+000
35	6	-6.000e+001	-2.298e+002	+6.065e+002	-0.000e+000	-0.000e+000	-0.000e+000
35	7	-6.069e+001	+4.150e+002	+6.892e+002	-0.000e+000	-0.000e+000	-0.000e+000
35	8	+6.005e+001	-2.297e+002	+6.066e+002	-0.000e+000	-0.000e+000	-0.000e+000
35	9	+5.935e+001	+4.150e+002	+6.893e+002	-0.000e+000	-0.000e+000	-0.000e+000
35	10	-2.003e+002	-4.220e+000	+6.355e+002	-0.000e+000	-0.000e+000	-0.000e+000
35	11	-2.005e+002	+1.892e+002	+6.603e+002	-0.000e+000	-0.000e+000	-0.000e+000
35	12	+1.999e+002	-3.974e+000	+6.355e+002	-0.000e+000	-0.000e+000	-0.000e+000
35	13	+1.996e+002	+1.895e+002	+6.603e+002	-0.000e+000	-0.000e+000	-0.000e+000
35	14	-6.000e+001	-2.298e+002	+6.065e+002	-0.000e+000	-0.000e+000	-0.000e+000
35	15	-6.069e+001	+4.150e+002	+6.892e+002	-0.000e+000	-0.000e+000	-0.000e+000
35	16	+6.005e+001	-2.297e+002	+6.066e+002	-0.000e+000	-0.000e+000	-0.000e+000
35	17	+5.935e+001	+4.150e+002	+6.893e+002	-0.000e+000	-0.000e+000	-0.000e+000
35	18	-1.111e+000	+3.745e+002	+2.162e+003	-0.000e+000	-0.000e+000	-0.000e+000
35	19	-6.173e-001	+1.983e+002	+1.216e+003	-0.000e+000	-0.000e+000	-0.000e+000
35	20	-3.211e-001	+9.262e+001	+6.479e+002	-0.000e+000	-0.000e+000	-0.000e+000
36	1	-2.433e+000	+5.531e+002	+3.236e+003	-0.000e+000	-0.000e+000	-0.000e+000
36	2	-2.002e+002	-4.168e+000	+6.625e+002	-0.000e+000	-0.000e+000	-0.000e+000
36	3	-2.005e+002	+1.894e+002	+6.873e+002	-0.000e+000	-0.000e+000	-0.000e+000
36	4	+1.995e+002	-5.858e+000	+6.618e+002	-0.000e+000	-0.000e+000	-0.000e+000
36	5	+1.992e+002	+1.877e+002	+6.867e+002	-0.000e+000	-0.000e+000	-0.000e+000
36	6	-5.991e+001	-2.306e+002	+6.333e+002	-0.000e+000	-0.000e+000	-0.000e+000
36	7	-6.094e+001	+4.147e+002	+7.160e+002	-0.000e+000	-0.000e+000	-0.000e+000
36	8	+6.000e+001	-2.311e+002	+6.331e+002	-0.000e+000	-0.000e+000	-0.000e+000
36	9	+5.897e+001	+4.142e+002	+7.158e+002	-0.000e+000	-0.000e+000	-0.000e+000
36	10	-2.002e+002	-4.168e+000	+6.625e+002	-0.000e+000	-0.000e+000	-0.000e+000
36	11	-2.005e+002	+1.894e+002	+6.873e+002	-0.000e+000	-0.000e+000	-0.000e+000
36	12	+1.995e+002	-5.858e+000	+6.618e+002	-0.000e+000	-0.000e+000	-0.000e+000
36	13	+1.992e+002	+1.877e+002	+6.867e+002	-0.000e+000	-0.000e+000	-0.000e+000
36	14	-5.991e+001	-2.306e+002	+6.333e+002	-0.000e+000	-0.000e+000	-0.000e+000
36	15	-6.094e+001	+4.147e+002	+7.160e+002	-0.000e+000	-0.000e+000	-0.000e+000
36	16	+6.000e+001	-2.311e+002	+6.331e+002	-0.000e+000	-0.000e+000	-0.000e+000
36	17	+5.897e+001	+4.142e+002	+7.158e+002	-0.000e+000	-0.000e+000	-0.000e+000
36	18	-1.646e+000	+3.716e+002	+2.196e+003	-0.000e+000	-0.000e+000	-0.000e+000
36	19	-9.101e-001	+1.967e+002	+1.245e+003	-0.000e+000	-0.000e+000	-0.000e+000
36	20	-4.689e-001	+9.179e+001	+6.745e+002	-0.000e+000	-0.000e+000	-0.000e+000
37	1	-2.774e+000	+2.986e+002	+1.566e+003	-0.000e+000	-0.000e+000	-0.000e+000
37	2	-1.061e+002	-1.655e+001	+3.064e+002	-0.000e+000	-0.000e+000	-0.000e+000
37	3	-1.065e+002	+8.607e+001	+3.200e+002	-0.000e+000	-0.000e+000	-0.000e+000
37	4	+1.053e+002	+1.810e+001	+3.188e+002	-0.000e+000	-0.000e+000	-0.000e+000
37	5	+1.050e+002	+1.207e+002	+3.324e+002	-0.000e+000	-0.000e+000	-0.000e+000

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

37	6	-3.171e+001	-1.241e+002	+2.949e+002	-0.000e+000	-0.000e+000	-0.000e+000
37	7	-3.286e+001	+2.179e+002	+3.401e+002	-0.000e+000	-0.000e+000	-0.000e+000
37	8	+3.173e+001	-1.138e+002	+2.986e+002	-0.000e+000	-0.000e+000	-0.000e+000
37	9	+3.058e+001	+2.283e+002	+3.439e+002	-0.000e+000	-0.000e+000	-0.000e+000
37	10	-1.061e+002	-1.655e+001	+3.064e+002	-0.000e+000	-0.000e+000	-0.000e+000
37	11	-1.065e+002	+8.607e+001	+3.200e+002	-0.000e+000	-0.000e+000	-0.000e+000
37	12	+1.053e+002	+1.810e+001	+3.188e+002	-0.000e+000	-0.000e+000	-0.000e+000
37	13	+1.050e+002	+1.207e+002	+3.324e+002	-0.000e+000	-0.000e+000	-0.000e+000
37	14	-3.171e+001	-1.241e+002	+2.949e+002	-0.000e+000	-0.000e+000	-0.000e+000
37	15	-3.286e+001	+2.179e+002	+3.401e+002	-0.000e+000	-0.000e+000	-0.000e+000
37	16	+3.173e+001	-1.138e+002	+2.986e+002	-0.000e+000	-0.000e+000	-0.000e+000
37	17	+3.058e+001	+2.283e+002	+3.439e+002	-0.000e+000	-0.000e+000	-0.000e+000
37	18	-1.880e+000	+2.010e+002	+1.062e+003	-0.000e+000	-0.000e+000	-0.000e+000
37	19	-1.057e+000	+1.079e+002	+5.977e+002	-0.000e+000	-0.000e+000	-0.000e+000
37	20	-5.630e-001	+5.209e+001	+3.194e+002	-0.000e+000	-0.000e+000	-0.000e+000
46	1	+4.327e+001	+7.809e-013	+4.115e+003	-0.000e+000	-0.000e+000	-0.000e+000
46	2	-1.413e+002	-4.478e+001	+8.262e+002	-0.000e+000	-0.000e+000	-0.000e+000
46	3	-1.413e+002	+4.478e+001	+8.262e+002	-0.000e+000	-0.000e+000	-0.000e+000
46	4	+1.582e+002	-4.478e+001	+8.262e+002	-0.000e+000	-0.000e+000	-0.000e+000
46	5	+1.582e+002	+4.478e+001	+8.262e+002	-0.000e+000	-0.000e+000	-0.000e+000
46	6	-3.649e+001	-1.493e+002	+8.262e+002	-0.000e+000	-0.000e+000	-0.000e+000
46	7	-3.649e+001	+1.493e+002	+8.262e+002	-0.000e+000	-0.000e+000	-0.000e+000
46	8	+5.335e+001	-1.493e+002	+8.262e+002	-0.000e+000	-0.000e+000	-0.000e+000
46	9	+5.335e+001	+1.493e+002	+8.262e+002	-0.000e+000	-0.000e+000	-0.000e+000
46	10	-1.413e+002	-4.478e+001	+8.262e+002	-0.000e+000	-0.000e+000	-0.000e+000
46	11	-1.413e+002	+4.478e+001	+8.262e+002	-0.000e+000	-0.000e+000	-0.000e+000
46	12	+1.582e+002	-4.478e+001	+8.262e+002	-0.000e+000	-0.000e+000	-0.000e+000
46	13	+1.582e+002	+4.478e+001	+8.262e+002	-0.000e+000	-0.000e+000	-0.000e+000
46	14	-3.649e+001	-1.493e+002	+8.262e+002	-0.000e+000	-0.000e+000	-0.000e+000
46	15	-3.649e+001	+1.493e+002	+8.262e+002	-0.000e+000	-0.000e+000	-0.000e+000
46	16	+5.335e+001	-1.493e+002	+8.262e+002	-0.000e+000	-0.000e+000	-0.000e+000
46	17	+5.335e+001	+1.493e+002	+8.262e+002	-0.000e+000	-0.000e+000	-0.000e+000
46	18	+2.928e+001	+5.378e-013	+2.788e+003	-0.000e+000	-0.000e+000	-0.000e+000
46	19	+1.625e+001	+3.334e-013	+1.562e+003	-0.000e+000	-0.000e+000	-0.000e+000
46	20	+8.429e+000	+2.108e-013	+8.262e+002	-0.000e+000	-0.000e+000	-0.000e+000
53	1	-4.247e+001	+8.329e-013	+4.787e+003	-0.000e+000	-0.000e+000	-0.000e+000
53	2	-1.580e+002	-4.488e+001	+9.525e+002	-0.000e+000	-0.000e+000	-0.000e+000
53	3	-1.580e+002	+4.488e+001	+9.525e+002	-0.000e+000	-0.000e+000	-0.000e+000
53	4	+1.415e+002	-4.488e+001	+9.525e+002	-0.000e+000	-0.000e+000	-0.000e+000
53	5	+1.415e+002	+4.488e+001	+9.525e+002	-0.000e+000	-0.000e+000	-0.000e+000
53	6	-5.320e+001	-1.496e+002	+9.525e+002	-0.000e+000	-0.000e+000	-0.000e+000
53	7	-5.320e+001	+1.496e+002	+9.525e+002	-0.000e+000	-0.000e+000	-0.000e+000
53	8	+3.664e+001	-1.496e+002	+9.525e+002	-0.000e+000	-0.000e+000	-0.000e+000
53	9	+3.664e+001	+1.496e+002	+9.525e+002	-0.000e+000	-0.000e+000	-0.000e+000
53	10	-1.580e+002	-4.488e+001	+9.525e+002	-0.000e+000	-0.000e+000	-0.000e+000
53	11	-1.580e+002	+4.488e+001	+9.525e+002	-0.000e+000	-0.000e+000	-0.000e+000
53	12	+1.415e+002	-4.488e+001	+9.525e+002	-0.000e+000	-0.000e+000	-0.000e+000
53	13	+1.415e+002	+4.488e+001	+9.525e+002	-0.000e+000	-0.000e+000	-0.000e+000
53	14	-5.320e+001	-1.496e+002	+9.525e+002	-0.000e+000	-0.000e+000	-0.000e+000
53	15	-5.320e+001	+1.496e+002	+9.525e+002	-0.000e+000	-0.000e+000	-0.000e+000
53	16	+3.664e+001	-1.496e+002	+9.525e+002	-0.000e+000	-0.000e+000	-0.000e+000
53	17	+3.664e+001	+1.496e+002	+9.525e+002	-0.000e+000	-0.000e+000	-0.000e+000
53	18	-2.873e+001	+5.760e-013	+3.242e+003	-0.000e+000	-0.000e+000	-0.000e+000
53	19	-1.595e+001	+3.656e-013	+1.811e+003	-0.000e+000	-0.000e+000	-0.000e+000
53	20	-8.278e+000	+2.393e-013	+9.525e+002	-0.000e+000	-0.000e+000	-0.000e+000

TABELLA RIASSUNTIVA CALCOLO FORZE SISMICHE

ELEMENTO FINITO: TRAVE - GRUPPO: 1 - DESCRIZIONE: FP_PUNTONI
Peso sismico Coord. Z baricentrica.gruppo Coeff.distrib. Gamma
12790.983 34.892 0.930 0.426

Coeff. accel.sismica.gruppo Forza sismica
5442.976

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

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PROGETTO DEFINITIVO

Relazione di calcolo strutturale

ELEMENTO FINITO: TRAVE - GRUPPO: 2 - DESCRIZIONE: FP_COLMO					
Peso sismico	Coord. Z baricentrica.gruppo	Coeff.distrib. Gamma	Coeff. accel.sismica.gruppo	Forza sismica	
460.350	90.000	2.399	1.098	505.284	
ELEMENTO FINITO: TRAVE - GRUPPO: 5 - DESCRIZIONE: FP_SOTTO-COLMO					
Peso sismico	Coord. Z baricentrica.gruppo	Coeff.distrib. Gamma	Coeff. accel.sismica.gruppo	Forza sismica	
402.806	60.000	1.599	0.732	294.749	
ELEMENTO FINITO: TRAVE - GRUPPO: 6 - DESCRIZIONE: FP_BIELLE					
Peso sismico	Coord. Z baricentrica.gruppo	Coeff.distrib. Gamma	Coeff. accel.sismica.gruppo	Forza sismica	
9.000	75.000	1.999	0.915	8.232	

SPOSTAMENTI/ROTAZIONI NODI NON BLOCCATI

COMBINAZIONE DI CARICO: 2 - DESCRIZIONE: SISMA 100%X 30%Y							
Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	
1	+5.22e-002		+3.14e-002	-1.29e-001	-5.42e-004	-1.35e-003	-4.58e-004
2	+2.23e-004		+4.22e-002	-9.91e-002	-4.89e-004	-1.33e-003	-4.03e-004
3	+1.44e-004		-4.25e-002	+3.58e-001	+3.44e-003	+1.17e-003	+4.10e-004
4	+1.52e-006		+1.28e-007	-2.04e-006	-1.17e-003	+3.57e-003	+4.18e-004
5	+9.51e-004		+4.26e-002	-3.68e-001	-1.17e-003	+3.33e-003	+3.85e-004
6	+1.58e-003		+7.70e-002	-6.65e-001	-1.20e-003	+2.30e-003	+2.67e-004
7	+1.89e-003		+9.62e-002	-8.30e-001	-1.22e-003	+8.43e-004	+9.82e-005
8	+1.88e-003		+9.67e-002	-8.34e-001	-1.23e-003	-7.71e-004	-8.90e-005
9	+1.56e-003		+7.82e-002	-6.75e-001	-1.21e-003	-2.26e-003	-2.63e-004
10	+9.33e-004		+4.39e-002	-3.78e-001	-1.18e-003	-3.36e-003	-3.91e-004
11	+1.18e-006		+9.63e-008	-1.25e-006	-1.18e-003	-3.78e-003	-4.39e-004
12	+3.23e-007		+4.00e-007	-1.20e-006	+2.02e-003	-8.53e-005	-2.79e-005
13	+1.99e-007		+7.77e-008	-2.73e-007	+3.15e-003	+1.92e-005	+4.12e-006
14	+2.00e-007		+2.15e-007	-7.57e-007	+4.13e-003	-5.19e-006	-3.26e-006
15	+2.00e-007		+1.83e-007	-6.45e-007	+4.68e-003	+4.61e-007	-1.51e-006
16	+2.00e-007		+1.91e-007	-6.72e-007	+4.69e-003	-8.03e-007	-1.87e-006
17	+2.00e-007		+1.89e-007	-6.60e-007	+4.15e-003	-7.96e-007	-1.75e-006
18	+2.00e-007		+1.89e-007	-6.87e-007	+3.12e-003	+3.63e-007	-1.77e-006
19	+1.06e-007		+8.61e-008	-3.20e-007	+1.18e-003	-4.96e-006	-1.77e-006
20	+7.95e-003		+3.91e-002	+1.09e-001	+1.92e-003	-1.22e-004	-1.32e-004
21	+4.02e-003		+6.20e-002	+1.73e-001	+3.05e-003	-1.80e-005	-9.96e-005
22	+4.93e-003		+8.18e-002	+2.28e-001	+4.03e-003	-4.23e-005	-1.07e-004
23	+4.72e-003		+9.29e-002	+2.59e-001	+4.58e-003	-3.67e-005	-1.05e-004
24	+4.76e-003		+9.32e-002	+2.60e-001	+4.59e-003	-3.79e-005	-1.06e-004
25	+4.76e-003		+8.24e-002	+2.30e-001	+4.05e-003	-3.79e-005	-1.05e-004
26	+4.74e-003		+6.14e-002	+1.71e-001	+3.02e-003	-3.68e-005	-1.05e-004
27	+2.65e-003		+2.30e-002	+6.42e-002	+1.13e-003	-2.46e-005	-5.65e-005
28	+2.10e-002		+2.34e-002	-1.41e-001	+7.46e-004	-1.37e-003	-1.05e-004
29	+2.04e-004		+8.54e-003	-9.93e-002	+6.85e-004	-1.35e-003	-1.60e-004
30	+3.12e-007		-1.17e-008	-1.16e-006	-1.98e-003	-8.43e-005	+1.51e-006
31	+2.00e-007		+2.50e-009	-2.54e-007	-3.21e-003	+1.89e-005	+2.03e-006
32	+2.00e-007		+4.93e-009	-7.31e-007	-4.27e-003	-5.14e-006	+1.80e-006
33	+2.00e-007		+4.18e-009	-6.20e-007	-4.87e-003	+4.53e-007	+1.84e-006
34	+2.00e-007		+4.39e-009	-6.47e-007	-4.88e-003	-8.04e-007	+1.80e-006
35	+2.00e-007		+4.22e-009	-6.35e-007	-4.30e-003	-8.06e-007	+1.79e-006
36	+2.00e-007		+4.17e-009	-6.62e-007	-3.18e-003	+3.56e-007	+1.78e-006
37	+1.06e-007		+1.65e-008	-3.06e-007	-1.16e-003	-5.00e-006	+1.85e-006
38	+6.43e-003		-3.81e-002	+1.06e-001	-1.86e-003	-1.21e-004	+1.05e-004
39	+4.37e-003		-6.30e-002	+1.76e-001	-3.09e-003	-1.82e-005	+1.06e-004
40	+4.85e-003		-8.45e-002	+2.36e-001	-4.16e-003	-4.23e-005	+1.06e-004
41	+4.74e-003		-9.66e-002	+2.70e-001	-4.75e-003	-3.67e-005	+1.06e-004
42	+4.76e-003		-9.68e-002	+2.71e-001	-4.77e-003	-3.79e-005	+1.06e-004
43	+4.76e-003		-8.51e-002	+2.38e-001	-4.19e-003	-3.79e-005	+1.06e-004
44	+4.74e-003		-6.25e-002	+1.74e-001	-3.07e-003	-3.68e-005	+1.06e-004
45	+2.66e-003		-2.25e-002	+6.29e-002	-1.10e-003	-2.46e-005	+5.66e-005
46	+1.41e-007		+4.48e-008	-8.26e-007	-1.17e-003	+3.66e-003	+2.18e-004
47	+1.11e-004		+2.18e-002	-3.68e-001	-1.17e-003	+3.30e-003	+1.95e-004
48	+1.90e-004		+3.90e-002	-6.64e-001	-1.20e-003	+2.30e-003	+1.33e-004

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

49	+2.34e-004	+4.85e-002	-8.30e-001	-1.22e-003	+8.43e-004	+4.71e-005
50	+2.41e-004	+4.85e-002	-8.33e-001	-1.23e-003	-7.71e-004	-4.70e-005
51	+2.06e-004	+3.90e-002	-6.74e-001	-1.21e-003	-2.26e-003	-1.33e-004
52	+1.27e-004	+2.18e-002	-3.77e-001	-1.18e-003	-3.36e-003	-1.95e-004
53	+1.58e-007	+4.49e-008	-9.53e-007	-1.18e-003	-3.77e-003	-2.18e-004

MASSIME DEFORMAZIONI NODALI

	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax				
Deform. nodali	+5.22e-002			-9.68e-002		-8.34e-001		-4.88e-003	-3.78e-003	-4.58e-004	+8.40e-001
Nodo	1	42	8	34	11	1	8				

COMBINAZIONE DI CARICO: 3 - DESCRIZIONE: SISMA 100%X 30%-Y									
Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z			
1	+2.10e-002	-2.34e-002	-1.41e-001	-7.46e-004	-1.37e-003	+1.05e-004			
2	+2.04e-004	-8.54e-003	-9.93e-002	-6.85e-004	-1.35e-003	+1.60e-004			
3	+1.44e-004	+4.25e-002	+3.58e-001	+1.17e-003	+3.44e-003	-4.10e-004			
4	+1.52e-006	-1.28e-007	-2.04e-006	+1.17e-003	+3.57e-003	-4.18e-004			
5	+9.51e-004	-4.26e-002	-3.68e-001	+1.17e-003	+3.33e-003	-3.85e-004			
6	+1.58e-003	-7.70e-002	-6.65e-002	+1.20e-003	+2.30e-003	-2.67e-004			
7	+1.89e-003	-9.62e-002	-8.30e-001	+1.22e-003	+8.43e-004	-9.82e-005			
8	+1.88e-003	-9.67e-002	-8.34e-001	+1.23e-003	-7.71e-004	+8.90e-005			
9	+1.56e-003	-7.82e-002	-6.75e-001	+1.21e-003	-2.26e-003	+2.63e-004			
10	+9.33e-004	-4.39e-002	-3.78e-001	+1.18e-003	-3.36e-003	+3.91e-004			
11	+1.18e-006	-9.63e-008	-1.25e-006	+1.18e-003	-3.78e-003	+4.39e-004			
12	+3.12e-007	+1.17e-008	-1.16e-006	+1.98e-003	-8.43e-005	-1.51e-006			
13	+2.00e-007	-2.50e-009	-2.54e-007	+3.21e-003	+1.89e-005	-2.03e-006			
14	+2.00e-007	-4.93e-009	-7.31e-007	+4.27e-003	-5.14e-006	-1.80e-006			
15	+2.00e-007	-4.18e-009	-6.20e-007	+4.87e-003	+4.53e-007	-1.84e-006			
16	+2.00e-007	-4.39e-009	-6.47e-007	+4.88e-003	-8.04e-007	-1.80e-006			
17	+2.00e-007	-4.22e-009	-6.35e-007	+4.30e-003	-8.06e-007	-1.79e-006			
18	+2.00e-007	-4.17e-009	-6.62e-007	+3.18e-003	+3.56e-007	-1.78e-006			
19	+1.06e-007	-1.65e-008	-3.06e-007	+1.16e-003	-5.00e-006	-1.85e-006			
20	+6.43e-003	+3.81e-002	+1.06e-001	+1.86e-003	-1.21e-004	-1.05e-004			
21	+4.37e-003	+6.30e-002	+1.76e-001	+3.09e-003	-1.82e-005	-1.06e-004			
22	+4.85e-003	+8.45e-002	+2.36e-001	+4.16e-003	-4.23e-005	-1.06e-004			
23	+4.74e-003	+9.66e-002	+2.70e-001	+4.75e-003	-3.67e-005	-1.06e-004			
24	+4.76e-003	+9.68e-002	+2.71e-001	+4.77e-003	-3.79e-005	-1.06e-004			
25	+4.76e-003	+8.51e-002	+2.38e-001	+4.19e-003	-3.79e-005	-1.06e-004			
26	+4.74e-003	+6.25e-002	+1.74e-001	+3.07e-003	-3.68e-005	-1.06e-004			
27	+2.66e-003	+2.25e-002	+6.29e-002	+1.10e-003	-2.46e-005	-5.66e-005			
28	+5.22e-002	-3.14e-002	-1.29e-001	+5.42e-004	-1.35e-003	+4.58e-004			
29	+2.23e-004	-4.22e-002	-9.91e-002	+4.89e-004	-1.33e-003	+4.03e-004			
30	+3.23e-007	-4.00e-007	-1.20e-006	-2.02e-003	-8.53e-005	+2.79e-005			
31	+1.99e-007	-7.77e-008	-2.73e-007	-3.15e-003	+1.92e-005	-4.12e-006			
32	+2.00e-007	-2.15e-007	-7.57e-007	-4.13e-003	-5.19e-006	+3.26e-006			
33	+2.00e-007	-1.83e-007	-6.45e-007	-4.68e-003	+4.61e-007	+1.51e-006			
34	+2.00e-007	-1.91e-007	-6.72e-007	-4.69e-003	-8.03e-007	+1.87e-006			
35	+2.00e-007	-1.89e-007	-6.60e-007	-4.15e-003	-7.96e-007	+1.75e-006			
36	+2.00e-007	-1.89e-007	-6.87e-007	+3.12e-003	+3.63e-007	+1.77e-006			
37	+1.06e-007	-8.61e-008	-3.20e-007	-1.18e-003	-4.96e-006	+1.77e-006			
38	+7.95e-003	-3.91e-002	+1.09e-001	-1.92e-003	-1.22e-004	+1.32e-004			
39	+4.02e-003	-6.20e-002	+1.73e-001	-3.05e-003	-1.80e-005	+9.96e-005			
40	+4.93e-003	-8.18e-002	+2.28e-001	-4.03e-003	-4.23e-005	+1.07e-004			
41	+4.72e-003	-9.29e-002	+2.59e-001	-4.58e-003	-3.67e-005	+1.05e-004			
42	+4.76e-003	-9.32e-002	+2.60e-001	-4.59e-003	-3.79e-005	+1.06e-004			
43	+4.76e-003	-8.24e-002	+2.30e-001	-4.05e-003	-3.79e-005	+1.05e-004			
44	+4.74e-003	-6.14e-002	+1.71e-001	-3.02e-003	-3.68e-005	+1.05e-004			
45	+2.65e-003	-2.30e-002	+6.42e-002	-1.13e-003	-2.46e-005	+5.65e-005			
46	+1.41e-007	-4.48e-008	-8.26e-007	+1.17e-003	+3.66e-003	-2.18e-004			
47	+1.11e-004	-2.18e-002	-3.68e-001	+1.17e-003	+3.30e-003	-1.95e-004			
48	+1.90e-004	-3.90e-002	-6.64e-001	+1.20e-003	+2.30e-003	-1.33e-004			
49	+2.34e-004	-4.85e-002	-8.30e-001	+1.22e-003	+8.43e-004	-4.71e-005			
50	+2.41e-004	-4.85e-002	-8.33e-001	+1.23e-003	-7.71e-004	-4.70e-005			
51	+2.06e-004	-3.90e-002	-6.74e-001	+1.21e-003	-2.26e-003	-1.33e-004			

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

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PROGETTO DEFINITIVO

Relazione di calcolo strutturale

52	+1.27e-004	-2.18e-002	-3.77e-001	+1.18e-003	-3.36e-003	+1.95e-004
53	+1.58e-007	-4.49e-008	-9.53e-007	+1.18e-003	-3.77e-003	+2.18e-004
MASSIME DEFORMAZIONI NODALI						
Deform. nodali	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z
Nodo	28	24	8	16	11	28
						8
COMBINAZIONE DI CARICO: 4 - DESCRIZIONE: SISMA 100%-X 30%+Y						
Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z
1	+3.56e-002	+2.08e-002	-1.28e-001	-5.48e-004	-1.27e-003	-1.58e-004
2	-1.69e-004	+3.17e-002	-9.72e-002	-4.95e-004	-1.29e-003	-2.13e-004
3	-1.79e-004	-4.25e-002	+3.58e-001	-1.17e-003	+3.44e-003	+4.10e-004
4	-1.54e-006	+1.28e-007	-2.04e-006	-1.17e-003	+3.57e-003	+4.18e-004
5	-9.33e-004	+4.26e-002	-3.68e-001	-1.17e-003	+3.33e-003	+3.85e-004
6	-1.56e-003	+7.70e-002	-6.65e-001	-1.20e-003	+2.30e-003	+2.67e-004
7	-1.88e-003	+9.62e-002	-8.30e-001	-1.22e-003	+8.43e-004	+9.82e-005
8	-1.89e-003	+9.67e-002	-8.34e-001	-1.23e-003	-7.71e-004	-8.90e-005
9	-1.58e-003	+7.82e-002	-6.74e-001	-1.21e-003	-2.26e-003	-2.63e-004
10	-9.50e-004	+4.39e-002	-3.78e-001	-1.18e-003	-3.36e-003	-3.91e-004
11	-1.21e-006	+9.63e-008	-1.25e-006	-1.18e-003	-3.78e-003	-4.39e-004
12	-2.92e-007	+3.36e-007	-1.18e-006	+2.02e-003	-8.12e-005	-1.55e-005
13	-2.01e-007	+1.16e-007	-2.87e-007	+3.15e-003	+1.97e-005	+5.75e-006
14	-2.00e-007	+2.07e-007	-7.54e-007	+4.13e-003	-3.83e-006	+8.50e-007
15	-2.00e-007	+1.85e-007	-6.45e-007	+4.68e-003	+1.63e-006	+2.01e-006
16	-2.00e-007	+1.90e-007	-6.72e-007	+4.69e-003	+4.11e-007	+1.77e-006
17	-2.00e-007	+1.89e-007	-6.60e-007	+4.15e-003	+4.20e-007	+1.90e-006
18	-1.99e-007	+1.88e-007	-6.87e-007	+3.12e-003	+1.56e-006	+1.82e-006
19	-1.05e-007	+1.21e-007	-3.32e-007	+1.18e-003	-3.62e-006	+2.24e-006
20	-2.12e-003	+3.91e-002	+1.09e-001	+1.92e-003	-4.41e-005	+8.82e-005
21	-5.37e-003	+6.20e-002	+1.73e-001	+3.05e-003	+5.68e-005	+1.09e-004
22	-4.61e-003	+8.18e-002	+2.28e-001	+4.03e-003	+3.33e-005	+1.05e-004
23	-4.79e-003	+9.29e-002	+2.59e-001	+4.58e-003	+3.88e-005	+1.06e-004
24	-4.75e-003	+9.32e-002	+2.60e-001	+4.59e-003	+3.75e-005	+1.06e-004
25	-4.76e-003	+8.24e-002	+2.30e-001	+4.05e-003	+3.75e-005	+1.06e-004
26	-4.78e-003	+6.14e-002	+1.71e-001	+3.02e-003	+3.87e-005	+1.06e-004
27	-2.50e-003	+2.30e-002	+6.42e-002	+1.13e-003	+1.60e-005	+5.70e-005
28	+4.29e-003	+3.40e-002	-1.39e-001	+7.52e-004	-1.30e-003	-4.05e-004
29	-1.88e-004	+1.90e-002	-9.74e-002	+6.91e-004	-1.32e-003	-3.50e-004
30	-3.03e-007	+5.22e-008	-1.13e-006	-1.98e-003	-8.02e-005	-1.09e-005
31	-2.01e-007	-3.53e-008	-2.67e-007	-3.21e-003	+1.95e-005	+4.00e-007
32	-2.00e-007	+1.35e-008	-7.28e-007	-4.27e-003	-3.77e-006	-2.31e-006
33	-2.00e-007	+2.06e-009	-6.21e-007	-4.87e-003	+1.63e-006	-1.68e-006
34	-2.00e-007	+5.01e-009	-6.47e-007	-4.88e-003	+4.11e-007	-1.85e-006
35	-2.00e-007	+3.97e-009	-6.36e-007	-4.30e-003	+4.10e-007	-1.86e-006
36	-2.00e-007	+5.86e-009	-6.62e-007	-3.18e-003	+1.55e-006	-1.81e-006
37	-1.05e-007	-1.81e-008	-3.19e-007	-3.16e-003	-3.66e-006	-2.17e-006
38	-3.64e-003	-3.81e-002	+1.06e-001	-1.86e-003	-4.30e-005	-1.15e-004
39	-5.01e-003	-6.30e-002	+1.76e-001	-3.09e-003	+5.66e-005	-1.03e-004
40	-4.70e-003	-8.45e-002	+2.36e-001	-4.16e-003	+3.33e-005	-1.06e-004
41	-4.77e-003	-9.66e-002	+2.70e-001	-4.75e-003	+3.87e-005	-1.05e-004
42	-4.76e-003	-9.68e-002	+2.71e-001	-4.77e-003	+3.75e-005	-1.06e-004
43	-4.76e-003	-8.51e-002	+2.38e-001	-4.19e-003	+3.75e-005	-1.06e-004
44	-4.78e-003	-6.25e-002	+1.74e-001	-3.07e-003	+3.87e-005	-1.06e-004
45	-2.50e-003	-2.25e-002	+6.29e-002	-1.10e-003	+1.59e-005	-5.69e-005
46	-1.58e-007	+4.48e-008	-8.26e-007	-1.17e-003	+3.66e-003	+2.18e-004
47	-1.27e-004	+2.18e-002	-3.68e-001	-1.17e-003	+3.30e-003	+1.95e-004
48	-2.07e-004	+3.90e-002	-6.64e-001	-1.20e-003	+2.30e-003	+1.33e-004
49	-2.42e-004	+4.85e-002	-8.30e-001	-1.22e-003	+8.43e-004	+4.71e-005
50	-2.35e-004	+4.85e-002	-8.33e-001	-1.23e-003	-7.71e-004	-4.70e-005
51	-1.91e-004	+3.90e-002	-6.74e-001	-1.21e-003	-2.26e-003	-1.33e-004
52	-1.11e-004	+2.18e-002	-3.77e-001	-1.18e-003	-3.36e-003	-1.95e-004
53	-1.41e-007	+4.49e-008	-9.52e-007	-1.18e-003	-3.77e-003	-2.18e-004

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

MASSIME DEFORMAZIONI NODALI									
Deform. nodali	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax		
	+3.56e-002			-9.68e-002		-8.34e-001		-4.88e-003	-3.78e-003
Nodo	1	42	8	34	11	11	8	-4.39e-004	+8.40e-001
COMBINAZIONE DI CARICO: 5 - DESCRIZIONE: SISMA 100%-X 30%-Y									
Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z			
1	+4.29e-003		-3.40e-002		-1.39e-001		-7.52e-004	-1.30e-003	+4.05e-004
2	-1.88e-004		-1.90e-002		-9.74e-002		-6.91e-004	-1.32e-003	+3.50e-004
3	-1.79e-004		+4.25e-002		+3.58e-001		+1.17e-003	+3.44e-003	-4.10e-004
4	-1.54e-006		-1.28e-007		-2.04e-006		+1.17e-003	+3.57e-003	-4.18e-004
5	-9.33e-004		-4.26e-002		-3.68e-001		+1.17e-003	+3.33e-003	-3.85e-004
6	-1.56e-003		-7.70e-002		-6.65e-001		+1.20e-003	+2.30e-003	-2.67e-004
7	-1.88e-003		-9.62e-002		-8.30e-001		+1.22e-003	+8.43e-004	-9.82e-005
8	-1.89e-003		-9.67e-002		-8.34e-001		+1.23e-003	-7.71e-004	+8.90e-005
9	-1.58e-003		-7.82e-002		-6.74e-001		+1.21e-003	-2.26e-003	+2.63e-004
10	-9.50e-004		-4.39e-002		-3.78e-001		+1.18e-003	-3.36e-003	+3.91e-004
11	-1.21e-006		-9.63e-008		-1.25e-006		+1.18e-003	-3.78e-003	+4.39e-004
12	-3.03e-007		-5.12e-008		-1.13e-006		+1.98e-003	-8.02e-005	+1.09e-005
13	-2.01e-007		+3.53e-008		-2.67e-007		+3.21e-003	+1.95e-005	-4.00e-007
14	-2.00e-007		-1.35e-008		-7.28e-007		+4.27e-003	-3.77e-006	+2.31e-006
15	-2.00e-007		-2.06e-009		-6.21e-007		+4.87e-003	+1.63e-006	+1.68e-006
16	-2.00e-007		-5.01e-009		-6.47e-007		+4.88e-003	+4.11e-007	+1.85e-006
17	-2.00e-007		-3.97e-009		-6.36e-007		+4.30e-003	+4.10e-007	+1.86e-006
18	-2.00e-007		-5.86e-009		-6.62e-007		+3.18e-003	+1.55e-006	+1.81e-006
19	-1.05e-007		+1.81e-008		-3.19e-007		+1.16e-003	-3.66e-006	+2.17e-006
20	-3.64e-003		+3.81e-002		+1.06e-001		+1.86e-003	-4.30e-005	+1.15e-004
21	-5.01e-003		+6.30e-002		+1.76e-001		+3.09e-003	+5.66e-005	+1.03e-004
22	-4.70e-003		+8.45e-002		+2.36e-001		+4.16e-003	+3.33e-005	+1.06e-004
23	-4.77e-003		+9.66e-002		+2.70e-001		+4.75e-003	+3.87e-005	+1.05e-004
24	-4.76e-003		+9.68e-002		+2.71e-001		+4.77e-003	+3.75e-005	+1.06e-004
25	-4.76e-003		+8.51e-002		+2.38e-001		+4.19e-003	+3.75e-005	+1.06e-004
26	-4.78e-003		+6.25e-002		+1.74e-001		+3.07e-003	+3.87e-005	+1.06e-004
27	-2.50e-003		+2.25e-002		+6.29e-002		+1.10e-003	+1.59e-005	+5.69e-005
28	+3.56e-002		-2.08e-002		-1.28e-001		+5.48e-004	-1.27e-003	+1.58e-004
29	-1.69e-004		-3.17e-002		-9.72e-002		+4.95e-004	-1.29e-003	+2.13e-004
30	-2.92e-007		-3.36e-007		-1.18e-006		-2.02e-003	-8.12e-005	+1.55e-005
31	-2.01e-007		-1.16e-007		-2.87e-007		-3.15e-003	+1.97e-005	-5.75e-006
32	-2.00e-007		-2.07e-007		-7.54e-007		-4.13e-003	-3.83e-006	-8.50e-007
33	-2.00e-007		-1.85e-007		-6.45e-007		-4.68e-003	+1.63e-006	-2.01e-006
34	-2.00e-007		-1.90e-007		-6.72e-007		-4.69e-003	+4.11e-007	-1.77e-006
35	-2.00e-007		-1.89e-007		-6.60e-007		-4.15e-003	+4.20e-007	-1.90e-006
36	-1.99e-007		-1.88e-007		-6.87e-007		-3.12e-003	+1.56e-006	-1.82e-006
37	-1.05e-007		-1.21e-007		-3.32e-007		-1.18e-003	-3.62e-006	-2.24e-006
38	-2.12e-003		-3.91e-002		+1.09e-001		-1.92e-003	-4.41e-005	-8.82e-005
39	-5.37e-003		-6.20e-002		+1.73e-001		-3.05e-003	+5.68e-005	-1.09e-004
40	-4.61e-003		-8.18e-002		+2.28e-001		-4.03e-003	+3.33e-005	-1.05e-004
41	-4.79e-003		-9.29e-002		+2.59e-001		-4.58e-003	+3.88e-005	-1.06e-004
42	-4.75e-003		-9.32e-002		+2.60e-001		-4.59e-003	+3.75e-005	-1.06e-004
43	-4.76e-003		-8.24e-002		+2.30e-001		-4.05e-003	+3.75e-005	-1.06e-004
44	-4.78e-003		-6.14e-002		+1.71e-001		-3.02e-003	+3.87e-005	-1.06e-004
45	-2.50e-003		-2.30e-002		+6.42e-002		-1.13e-003	+1.60e-005	-5.70e-005
46	-1.58e-007		-4.48e-008		-8.26e-007		+1.17e-003	+3.66e-003	-2.18e-004
47	-1.27e-004		-2.18e-002		-3.68e-001		+1.17e-003	+3.30e-003	-1.95e-004
48	-2.07e-004		-3.90e-002		-6.64e-001		+1.20e-003	+2.30e-003	-1.33e-004
49	-2.42e-004		-4.85e-002		-8.30e-001		+1.22e-003	+8.43e-004	-4.71e-005
50	-2.35e-004		-4.85e-002		-8.33e-001		+1.23e-003	-7.71e-004	+4.70e-005
51	-1.91e-004		-3.90e-002		-6.74e-001		+1.21e-003	-2.26e-003	+1.33e-004
52	-1.11e-004		-2.18e-002		-3.77e-001		+1.18e-003	-3.36e-003	+1.95e-004
53	-1.41e-007		-4.49e-008		-9.52e-007		+1.18e-003	-3.77e-003	+2.18e-004
MASSIME DEFORMAZIONI NODALI									
Deform. nodali	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax		
	+3.56e-002			+9.68e-002		-8.34e-001		+4.88e-003	-3.78e-003
								+4.39e-004	+8.40e-001

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

Nodo	28	24	8	16	11	11	8			
COMBINAZIONE DI CARICO: 6 - DESCRIZIONE: SISMA 30%X 100%Y										
Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z				
1	+8.29e-002		+9.17e-002	-1.15e-001	-1.15e-001	-3.06e-004	-1.29e-003	-1.01e-003		
2	+1.09e-004		+9.77e-002	-9.83e-002	-2.62e-004	-1.28e-003	-1.28e-003	-9.93e-004		
3	+3.07e-005		-1.42e-001	+3.58e-001	-3.90e-003	+3.44e-003	+3.44e-003	+1.37e-003		
4	+4.49e-007		+4.28e-007	-2.04e-006	-3.90e-003	+3.57e-003	+3.57e-003	+1.39e-003		
5	+2.92e-004		+1.42e-001	-3.68e-001	-3.90e-003	+3.33e-003	+3.33e-003	+1.28e-003		
6	+4.80e-004		+2.57e-001	-6.65e-001	-3.99e-003	+2.30e-003	+2.30e-003	+8.90e-004		
7	+5.69e-004		+3.21e-001	-8.30e-001	-4.08e-003	+8.43e-004	+8.43e-004	+3.27e-004		
8	+5.61e-004		+3.22e-001	-8.34e-001	-4.09e-003	-7.71e-004	-7.71e-004	-2.97e-004		
9	+4.62e-004		+2.61e-001	-6.75e-001	-4.02e-003	-2.26e-003	-2.26e-003	-8.76e-004		
10	+2.74e-004		+1.46e-001	-3.78e-001	-3.93e-003	-3.36e-003	-3.36e-003	-1.30e-003		
11	+3.48e-007		+3.21e-007	-1.25e-006	-3.93e-003	-3.78e-003	-3.78e-003	-1.46e-003		
12	+1.20e-007		+8.31e-007	-1.24e-006	+2.06e-003	-8.52e-005	-8.52e-005	-5.44e-005		
13	+5.87e-008		+1.85e-007	-3.01e-007	+3.08e-003	+1.96e-005	+1.96e-005	+1.19e-005		
14	+5.94e-008		+4.69e-007	-7.86e-007	+3.96e-003	-4.78e-006	-4.78e-006	-3.53e-006		
15	+5.98e-008		+4.03e-007	-6.73e-007	+4.45e-003	+8.80e-007	+8.80e-007	+1.10e-007		
16	+6.03e-008		+4.18e-007	-7.01e-007	+4.46e-003	-3.78e-007	-3.78e-007	-6.81e-007		
17	+6.07e-008		+4.15e-007	-6.89e-007	+3.98e-003	-3.58e-007	-3.58e-007	-4.29e-007		
18	+6.09e-008		+4.15e-007	-7.16e-007	+3.04e-003	+7.91e-007	+7.91e-007	-4.96e-007		
19	+3.29e-008		+2.18e-007	-3.40e-007	+1.20e-003	-4.45e-006	-4.45e-006	-2.78e-007		
20	+6.19e-003		+4.03e-002	+1.12e-001	+1.98e-003	-9.63e-005	-9.63e-005	-8.55e-005		
21	+3.26e-004		+6.09e-002	+1.70e-001	+3.00e-003	+8.47e-006	+8.47e-006	-1.93e-005		
22	+1.69e-003		+7.87e-002	+2.20e-001	+3.88e-003	-1.59e-005	-1.59e-005	-3.46e-005		
23	+1.37e-003		+8.87e-002	+2.48e-001	+4.37e-003	-1.03e-005	-1.03e-005	-3.10e-005		
24	+1.44e-003		+8.89e-002	+2.48e-001	+4.38e-003	-1.15e-005	-1.15e-005	-3.18e-005		
25	+1.42e-003		+7.92e-002	+2.21e-001	+3.90e-003	-1.15e-005	-1.15e-005	-3.15e-005		
26	+1.40e-003		+6.02e-002	+1.68e-001	+2.96e-003	-1.03e-005	-1.03e-005	-3.16e-005		
27	+8.41e-004		+2.36e-002	+6.58e-002	+1.16e-003	-1.03e-005	-1.03e-005	-1.67e-005		
28	-2.13e-002		+9.10e-002	-1.54e-001	+9.86e-004	-1.38e-003	-1.38e-003	-8.67e-004		
29	+4.34e-005		+7.13e-002	-9.88e-002	+9.16e-004	-1.38e-003	-1.38e-003	-8.84e-004		
30	+8.37e-008		+4.64e-007	-1.10e-006	-1.93e-003	-8.16e-005	-8.16e-005	-3.36e-005		
31	+6.01e-008		+8.29e-008	-2.35e-007	+3.28e-003	+1.89e-005	+1.89e-005	+8.63e-006		
32	+6.00e-008		+2.65e-007	-7.00e-007	-4.44e-003	-4.59e-006	-4.59e-006	-1.35e-006		
33	+6.00e-008		+2.22e-007	-5.92e-007	-5.09e-003	+8.55e-007	+8.55e-007	+9.95e-007		
34	+6.00e-008		+2.32e-007	-6.18e-007	-5.11e-003	-3.79e-007	-3.79e-007	+4.35e-007		
35	+6.00e-008		+2.30e-007	-6.07e-007	-4.47e-003	-3.92e-007	-3.92e-007	+5.60e-007		
36	+5.99e-008		+2.31e-007	-6.33e-007	-3.26e-003	+7.66e-007	+7.66e-007	+5.33e-007		
37	+3.17e-008		+1.24e-007	-2.95e-007	-1.14e-003	-4.57e-006	-4.57e-006	+5.37e-007		
38	+1.14e-003		-3.69e-002	+1.03e-001	-1.80e-003	-9.27e-005	-9.27e-005	-2.53e-006		
39	+1.50e-003		-6.41e-002	+1.79e-001	-3.15e-003	+7.75e-006	+7.75e-006	+3.97e-005		
40	+1.41e-003		-8.76e-002	+2.45e-001	-4.31e-003	-1.57e-005	-1.57e-005	+2.98e-005		
41	+1.43e-003		-1.01e-001	+2.82e-001	-4.96e-003	-1.03e-005	-1.03e-005	+3.21e-005		
42	+1.43e-003		-1.01e-001	+2.83e-001	-4.98e-003	-1.15e-005	-1.15e-005	+3.16e-005		
43	+1.43e-003		-8.83e-002	+2.47e-001	-4.34e-003	-1.15e-005	-1.15e-005	+3.17e-005		
44	+1.41e-003		-6.37e-002	+1.78e-001	-3.12e-003	-1.04e-005	-1.04e-005	+3.17e-005		
45	+8.58e-004		-2.20e-002	+6.14e-002	-1.07e-003	-1.04e-005	-1.04e-005	+1.70e-005		
46	+3.65e-008		+1.49e-007	-8.26e-007	-3.90e-003	+3.66e-003	+3.66e-003	+7.25e-004		
47	+2.79e-005		+7.26e-002	-3.68e-001	-3.90e-003	+3.30e-003	+3.30e-003	+6.49e-004		
48	+5.13e-005		+1.30e-001	-6.64e-001	-3.99e-003	+2.30e-003	+2.30e-003	+4.43e-004		
49	+6.79e-005		+1.62e-001	-8.30e-001	-4.08e-003	+8.43e-004	+8.43e-004	+1.57e-004		
50	+7.44e-005		+1.62e-001	-8.33e-001	-4.09e-003	-7.71e-004	-7.71e-004	-1.57e-004		
51	+6.74e-005		+1.30e-001	-6.74e-001	-4.02e-003	-2.26e-003	-2.26e-003	-4.43e-004		
52	+4.34e-005		+7.26e-002	-3.77e-001	-3.93e-003	-3.36e-003	-3.36e-003	-6.49e-004		
53	+5.32e-008		+1.50e-007	-9.52e-007	-3.93e-003	-3.77e-003	-3.77e-003	-7.26e-004		

MASSIME DEFORMAZIONI NODALI

	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax				
Deform. nodali	+8.29e-002			+3.22e-001		-8.34e-001		-5.11e-003	-3.78e-003	-1.46e-003	+8.94e-001
Nodo	1	8	8	34	11	11	8				

COMBINAZIONE DI CARICO: 7 - DESCRIZIONE: SISMA 30%X 100%-Y

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

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Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z			
1	-2.13e-002		-9.10e-002		-1.54e-001	-9.86e-004	-1.38e-003		+8.67e-004
2	+4.34e-005		-7.13e-002		-9.88e-002	-9.16e-004	-1.38e-003		+8.84e-004
3	+3.07e-005		+1.42e-001		+3.58e-001	+3.90e-003	+3.44e-003		-1.37e-003
4	+4.49e-007		-4.28e-007		-2.04e-006	+3.90e-003	+3.57e-003		-1.39e-003
5	+2.92e-004		-1.42e-001		-3.68e-001	+3.90e-003	+3.33e-003		-1.28e-003
6	+4.80e-004		-2.57e-001		-6.65e-001	+3.99e-003	+2.30e-003		-8.90e-004
7	+5.69e-004		-3.21e-001		-8.30e-001	+4.08e-003	+8.43e-004		-3.27e-004
8	+5.61e-004		-3.22e-001		-8.34e-001	+4.09e-003	-7.71e-004		+2.97e-004
9	+4.62e-004		-2.61e-001		-6.75e-001	+4.02e-003	-2.26e-003		+8.76e-004
10	+2.74e-004		-1.46e-001		-3.78e-001	+3.93e-003	-3.36e-003		+1.30e-003
11	+3.48e-007		-3.21e-007		-1.25e-006	+3.93e-003	-3.78e-003		+1.46e-003
12	+8.37e-008		-4.64e-007		-1.10e-006	+1.93e-003	-8.16e-005		+3.36e-005
13	+6.01e-008		-8.29e-008		-2.35e-007	+3.28e-003	+1.89e-005		-8.63e-006
14	+6.00e-008		-2.65e-007		-7.00e-007	+4.44e-003	-4.59e-006		+1.35e-006
15	+6.00e-008		-2.22e-007		-5.92e-007	+5.09e-003	+8.55e-007		-9.95e-007
16	+6.00e-008		-2.32e-007		-6.18e-007	+5.11e-003	-3.79e-007		-4.35e-007
17	+6.00e-008		-2.30e-007		-6.07e-007	+4.47e-003	-3.92e-007		-5.60e-007
18	+5.99e-008		-2.31e-007		-6.33e-007	+3.26e-003	+7.66e-007		-5.33e-007
19	+3.17e-008		-1.24e-007		-2.95e-007	+1.14e-003	-4.57e-006		-5.37e-007
20	+1.14e-003		+3.69e-002		+1.03e-001	+1.80e-003	-9.27e-005		+2.53e-006
21	+1.50e-003		+6.41e-002		+1.79e-001	+3.15e-003	+7.75e-006		-3.97e-005
22	+1.41e-003		+8.76e-002		+2.45e-001	+4.31e-003	-1.57e-005		-2.98e-005
23	+1.43e-003		+1.01e-001		+2.82e-001	+4.96e-003	-1.03e-005		-3.21e-005
24	+1.43e-003		+1.01e-001		+2.83e-001	+4.98e-003	-1.15e-005		-3.16e-005
25	+1.43e-003		+8.83e-002		+2.47e-001	+4.34e-003	-1.15e-005		-3.17e-005
26	+1.41e-003		+6.37e-002		+1.78e-001	+3.12e-003	-1.04e-005		-3.17e-005
27	+8.58e-004		+2.20e-002		+6.14e-002	+1.07e-003	-1.04e-005		-1.70e-005
28	+8.29e-002		-9.17e-002		-1.15e-001	+3.06e-004	-1.29e-003		+1.01e-003
29	+1.09e-004		-9.77e-002		-9.83e-002	+2.62e-004	-1.28e-003		+9.93e-004
30	+1.20e-007		-8.31e-007		-1.24e-006	-2.06e-003	-8.52e-005		+5.44e-005
31	+5.87e-008		-1.85e-007		-3.01e-007	-3.08e-003	+1.96e-005		-1.19e-005
32	+5.94e-008		-4.69e-007		-7.86e-007	-3.96e-003	-4.78e-006		+3.53e-006
33	+5.98e-008		-4.03e-007		-6.73e-007	-4.45e-003	+8.80e-007		-1.10e-007
34	+6.03e-008		-4.18e-007		-7.01e-007	-4.46e-003	-3.78e-007		+6.81e-007
35	+6.07e-008		-4.15e-007		-6.89e-007	-3.98e-003	-3.58e-007		+4.29e-007
36	+6.09e-008		-4.15e-007		-7.16e-007	-3.04e-003	+7.91e-007		+4.96e-007
37	+3.29e-008		-2.18e-007		-3.40e-007	-1.20e-003	-4.45e-006		+2.78e-007
38	+6.19e-003		-4.03e-002		+1.12e-001	-1.98e-003	-9.63e-005		+8.55e-005
39	+3.26e-004		-6.09e-002		+1.70e-001	-3.00e-003	+8.47e-006		+1.93e-005
40	+1.69e-003		-7.87e-002		+2.20e-001	-3.88e-003	-1.59e-005		+3.46e-005
41	+1.37e-003		-8.87e-002		+2.48e-001	-4.37e-003	-1.03e-005		+3.10e-005
42	+1.44e-003		-8.89e-002		+2.48e-001	-4.38e-003	-1.15e-005		+3.18e-005
43	+1.42e-003		-7.92e-002		+2.21e-001	-3.90e-003	-1.15e-005		+3.15e-005
44	+1.40e-003		-6.02e-002		+1.68e-001	-2.96e-003	-1.03e-005		+3.16e-005
45	+8.41e-004		-2.36e-002		+6.58e-002	-1.16e-003	-1.03e-005		+1.67e-005
46	+3.65e-008		-1.49e-007		-8.26e-007	+3.90e-003	+3.66e-003		-7.25e-004
47	+2.79e-005		-7.26e-002		-3.68e-001	+3.90e-003	+3.30e-003		-6.49e-004
48	+5.13e-005		-1.30e-001		-6.64e-001	+3.99e-003	+2.30e-003		-4.43e-004
49	+6.79e-005		-1.62e-001		-8.30e-001	+4.08e-003	+8.43e-004		-1.57e-004
50	+7.44e-005		-1.62e-001		-8.33e-001	+4.09e-003	-7.71e-004		+1.57e-004
51	+6.74e-005		-1.30e-001		-6.74e-001	+4.02e-003	-2.26e-003		+4.43e-004
52	+4.34e-005		-7.26e-002		-3.77e-001	+3.93e-003	-3.36e-003		+6.49e-004
53	+5.32e-008		-1.50e-007		-9.52e-007	+3.93e-003	-3.77e-003		+7.26e-004

MASSIME DEFORMAZIONI NODALI

Deform. nodali	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMMax				
Nodo	28	8	8	16	11	11	8	+5.11e-003	-3.78e-003	+1.46e-003	+8.94e-001

COMBINAZIONE DI CARICO: 8 - DESCRIZIONE: SISMA 30%-X 100%+Y

Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z			
1	+7.79e-002		+8.85e-002		-1.15e-001	-3.08e-004	-1.27e-003		-9.20e-004
2	-8.43e-006		+9.45e-002		-9.77e-002	-2.64e-004	-1.27e-003		-9.36e-004

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

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Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

3	-6.62e-005	-1.42e-001	+3.58e-001	-3.90e-003	+3.44e-003	+1.37e-003
4	-4.69e-007	+4.28e-007	-2.04e-006	-3.90e-003	+3.57e-003	+1.39e-003
5	-2.74e-004	+1.42e-001	-3.68e-001	-3.90e-003	+3.33e-003	+1.28e-003
6	-4.61e-004	+2.57e-001	-6.65e-001	-3.99e-003	+2.30e-003	+8.90e-004
7	-5.61e-004	+3.21e-001	-8.30e-001	-4.08e-003	+8.43e-004	+3.27e-004
8	-5.68e-004	+3.22e-001	-8.34e-001	-4.09e-003	-7.71e-004	-2.97e-004
9	-4.79e-004	+2.61e-001	-6.75e-001	-4.02e-003	-2.26e-003	-8.76e-004
10	-2.91e-004	+1.46e-001	-3.78e-001	-3.93e-003	-3.36e-003	-1.30e-003
11	-3.69e-007	+3.21e-007	-1.25e-006	-3.93e-003	-3.78e-003	-1.46e-003
12	-6.40e-008	+8.11e-007	-1.23e-006	+2.06e-003	-8.39e-005	-5.07e-005
13	-6.14e-008	+1.96e-007	-3.06e-007	+3.08e-003	+1.98e-005	+1.24e-005
14	-6.06e-008	+4.67e-007	-7.85e-007	+3.96e-003	-4.37e-006	-2.30e-006
15	-6.03e-008	+4.03e-007	-6.74e-007	+4.45e-003	+1.23e-006	+1.16e-006
16	-5.98e-008	+4.18e-007	-7.01e-007	+4.46e-003	-1.34e-008	+4.13e-007
17	-5.94e-008	+4.15e-007	-6.89e-007	+3.98e-003	+6.64e-009	+6.65e-007
18	-5.90e-008	+4.14e-007	-7.16e-007	+3.04e-003	+1.15e-006	+5.81e-007
19	-3.06e-008	+2.28e-007	-3.44e-007	+1.20e-003	-4.05e-006	+9.28e-007
20	+3.17e-003	+4.03e-002	+1.12e-001	+1.98e-003	-7.28e-005	-1.96e-005
21	-2.49e-003	+6.09e-002	+1.70e-001	+3.00e-003	+3.09e-005	+4.35e-005
22	-1.17e-003	+7.87e-002	+2.20e-001	+3.88e-003	+6.76e-006	+2.88e-005
23	-1.48e-003	+8.87e-002	+2.48e-001	+4.37e-003	+1.24e-005	+3.23e-005
24	-1.42e-003	+8.89e-002	+2.48e-001	+4.38e-003	+1.11e-005	+3.15e-005
25	-1.43e-003	+7.92e-002	+2.21e-001	+3.90e-003	+1.11e-005	+3.18e-005
26	-1.45e-003	+6.02e-002	+1.68e-001	+1.96e-003	+1.23e-005	+3.17e-005
27	-7.06e-004	+2.36e-002	+6.58e-002	+1.16e-003	+1.83e-006	+1.74e-005
28	-2.63e-002	+9.42e-002	-1.53e-001	+9.88e-004	-1.36e-003	-9.57e-004
29	-7.42e-005	+7.45e-002	-9.82e-002	+9.18e-004	-1.37e-003	-9.41e-004
30	-1.01e-007	+4.83e-006	-1.09e-006	-1.93e-003	-8.04e-005	-3.74e-005
31	-6.00e-008	+7.16e-008	-2.39e-007	-3.28e-003	+1.91e-005	+8.14e-006
32	-6.00e-008	+2.68e-007	-6.99e-007	-4.44e-003	-4.18e-006	-2.58e-006
33	-6.00e-008	+2.22e-007	-5.92e-007	-5.09e-003	+1.21e-006	-5.92e-008
34	-6.00e-008	+2.32e-007	-6.18e-007	-5.11e-003	-1.47e-008	-6.58e-007
35	-6.00e-008	+2.30e-007	-6.07e-007	-4.47e-003	-2.73e-008	-5.35e-007
36	-6.00e-008	+2.31e-007	-6.33e-007	-3.26e-003	+1.13e-006	-5.44e-007
37	-3.17e-008	+1.14e-007	-2.99e-007	-1.14e-003	-4.17e-006	-6.69e-007
38	-1.88e-003	-3.69e-002	+1.03e-001	-1.80e-003	-6.92e-005	-6.85e-005
39	-1.32e-003	-6.41e-002	+1.79e-001	-3.15e-003	+3.02e-005	-2.30e-005
40	-1.45e-003	-8.76e-002	+2.45e-001	-4.31e-003	+6.96e-006	-3.37e-005
41	-1.42e-003	-1.01e-001	+2.82e-001	-4.96e-003	+1.23e-005	-3.12e-005
42	-1.43e-003	-1.01e-001	+2.83e-001	-4.98e-003	+1.11e-005	-3.18e-005
43	-1.42e-003	-8.83e-002	+2.47e-001	-4.34e-003	+1.11e-005	-3.17e-005
44	-1.45e-003	-6.37e-002	+1.78e-001	-3.12e-003	+1.23e-005	-3.17e-005
45	-6.89e-004	-2.20e-002	+6.14e-002	-1.07e-003	+1.71e-006	-1.71e-005
46	-5.34e-008	+1.49e-007	-8.26e-007	-3.90e-003	+3.66e-003	+7.25e-004
47	-4.35e-005	+7.26e-002	-3.68e-001	-3.90e-003	+3.30e-003	+6.49e-004
48	-6.77e-005	+1.30e-001	-6.64e-001	-3.99e-003	+2.30e-003	+4.43e-004
49	-7.50e-005	+1.62e-001	-8.30e-001	-4.08e-003	+8.43e-004	+1.57e-004
50	-6.84e-005	+1.62e-001	-8.33e-001	-4.09e-003	-7.71e-004	-1.57e-004
51	-5.17e-005	+1.30e-001	-6.74e-001	-4.02e-003	-2.26e-003	-4.43e-004
52	-2.81e-005	+7.26e-002	-3.77e-001	-3.93e-003	-3.36e-003	-6.49e-004
53	-3.66e-008	+1.50e-007	-9.52e-007	-3.93e-003	-3.77e-003	-7.26e-004

MASSIME DEFORMAZIONI NODALI

Deform. nodali	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax				
Nodo	1	8	8	34	11	11	8	-5.11e-003	-3.78e-003	-1.46e-003	+8.94e-001

COMBINAZIONE DI CARICO: 9 - DESCRIZIONE: SISMA 30%-X 100%-Y

Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z			
1	-2.63e-002	-9.42e-002	-1.53e-001	-9.88e-004	-1.36e-003	+9.57e-004			
2	-7.42e-005	-7.45e-002	-9.82e-002	-9.18e-004	-1.37e-003	+9.41e-004			
3	-6.62e-005	+1.42e-001	+3.58e-001	+3.90e-003	+3.44e-003	-1.37e-003			
4	-4.69e-007	-4.28e-007	-2.04e-006	-3.90e-003	+3.57e-003	-1.39e-003			
5	-2.74e-004	-1.42e-001	-3.68e-001	-3.90e-003	+3.33e-003	-1.28e-003			

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Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

6	-4.61e-004	-2.57e-001	-6.65e-001	+3.99e-003	+2.30e-003	-8.90e-004
7	-5.61e-004	-3.21e-001	-8.30e-001	+4.08e-003	+8.43e-004	-3.27e-004
8	-5.68e-004	-3.22e-001	-8.34e-001	+4.09e-003	-7.71e-004	+2.97e-004
9	-4.79e-004	-2.61e-001	-6.75e-001	+4.02e-003	-2.26e-003	+8.76e-004
10	-2.91e-004	-1.46e-001	-3.78e-001	+3.93e-003	-3.36e-003	+1.30e-003
11	-3.69e-007	-3.21e-007	-1.25e-006	+3.93e-003	-3.78e-003	+1.46e-003
12	-1.01e-007	-4.83e-007	-1.09e-006	+1.93e-003	-8.04e-005	+3.74e-005
13	-6.00e-008	-7.16e-008	-2.39e-007	+3.28e-003	+1.91e-005	-8.14e-006
14	-6.00e-008	-2.68e-007	-6.99e-007	+4.44e-003	-4.18e-006	+2.58e-006
15	-6.00e-008	-2.22e-007	-5.92e-007	+5.09e-003	+1.21e-006	+5.92e-008
16	-6.00e-008	-2.32e-007	-6.18e-007	+5.11e-003	-1.47e-008	+6.58e-007
17	-6.00e-008	-2.30e-007	-6.07e-007	+4.47e-003	-2.73e-008	+5.35e-007
18	-6.00e-008	-2.31e-007	-6.33e-007	+3.26e-003	+1.13e-006	+5.44e-007
19	-3.17e-008	-1.14e-007	-2.99e-007	+1.14e-003	-4.17e-006	+6.69e-007
20	-1.88e-003	+3.69e-002	+1.03e-001	+1.80e-003	-6.92e-005	+6.85e-005
21	-1.32e-003	+6.41e-002	+1.79e-001	+3.15e-003	+3.02e-005	+2.30e-005
22	-1.45e-003	+8.76e-002	+2.45e-001	+4.31e-003	+6.96e-006	+3.37e-005
23	-1.42e-003	+1.01e-001	+2.82e-001	+4.96e-003	+1.23e-005	+3.12e-005
24	-1.43e-003	+1.01e-001	+2.83e-001	+4.98e-003	+1.11e-005	+3.18e-005
25	-1.42e-003	+8.83e-002	+2.47e-001	+4.34e-003	+1.11e-005	+3.17e-005
26	-1.45e-003	+6.37e-002	+1.78e-001	+3.12e-003	+1.23e-005	+3.17e-005
27	-6.89e-004	+2.20e-002	+6.14e-002	+1.07e-003	+1.71e-006	+1.71e-005
28	+7.79e-002	-8.85e-002	-1.15e-001	+3.08e-004	-1.27e-003	+9.20e-004
29	-8.43e-006	-9.45e-002	-9.77e-002	+2.64e-004	-1.27e-003	+9.36e-004
30	-6.40e-008	-8.11e-007	-1.23e-006	-2.06e-003	-8.39e-005	+5.07e-005
31	-6.14e-008	-1.96e-007	-3.06e-007	-3.08e-003	+1.98e-005	-1.24e-005
32	-6.06e-008	-4.67e-007	-7.85e-007	-3.96e-003	-4.37e-006	+2.30e-006
33	-6.03e-008	-4.03e-007	-6.74e-007	-4.45e-003	+1.23e-006	-1.16e-006
34	-5.98e-008	-4.18e-007	-7.01e-007	-4.46e-003	-1.34e-008	-4.13e-007
35	-5.94e-008	-4.15e-007	-6.89e-007	-3.98e-003	+6.64e-009	-6.65e-007
36	-5.90e-008	-4.14e-007	-7.16e-007	-3.04e-003	+1.15e-006	-5.81e-007
37	-3.06e-008	-2.28e-007	-3.44e-007	-1.20e-003	-4.05e-006	-9.28e-007
38	+3.17e-003	-4.03e-002	+1.12e-001	-1.98e-003	-7.28e-005	+1.96e-005
39	-2.49e-003	-6.09e-002	+1.70e-001	-3.00e-003	+3.09e-005	-4.35e-005
40	-1.17e-003	-7.87e-002	+2.20e-001	-3.88e-003	+6.76e-006	-2.88e-005
41	-1.48e-003	-8.87e-002	+2.48e-001	-4.37e-003	+1.24e-005	-3.23e-005
42	-1.42e-003	-8.89e-002	+2.48e-001	-4.38e-003	+1.11e-005	-3.15e-005
43	-1.43e-003	-7.92e-002	+2.21e-001	-3.90e-003	+1.11e-005	-3.18e-005
44	-1.45e-003	-6.02e-002	+1.68e-001	-2.96e-003	+1.23e-005	-3.17e-005
45	-7.06e-004	-2.36e-002	+6.58e-002	-1.16e-003	+1.83e-006	-1.74e-005
46	-5.34e-008	-1.49e-007	-8.26e-007	+3.90e-003	+3.66e-003	-7.25e-004
47	-4.35e-005	-7.26e-002	-3.68e-001	+3.90e-003	+3.30e-003	-6.49e-004
48	-6.77e-005	-1.30e-001	-6.64e-001	+3.99e-003	+2.30e-003	-4.43e-004
49	-7.50e-005	-1.62e-001	-8.30e-001	+4.08e-003	+8.43e-004	-1.57e-004
50	-6.84e-005	-1.62e-001	-8.33e-001	+4.09e-003	-7.71e-004	+1.57e-004
51	-5.17e-005	-1.30e-001	-6.74e-001	+4.02e-003	-2.26e-003	+4.43e-004
52	-2.81e-005	-7.26e-002	-3.77e-001	+3.93e-003	-3.36e-003	+6.49e-004
53	-3.66e-008	-1.50e-007	-9.52e-007	+3.93e-003	-3.77e-003	+7.26e-004

MASSIME DEFORMAZIONI NODALI

	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax			
Deform. nodali	+7.79e-002			-3.22e-001		-8.34e-001	+5.11e-003	-3.78e-003	+1.46e-003	+8.94e-001
Nodo	28	8	8	16	11	11	8			

COMBINAZIONE DI CARICO: 10 - DESCRIZIONE: SISMA 100%X 30%Y

Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z
1	+5.22e-002	+3.14e-002	-1.29e-001	-5.42e-004	-1.35e-003	-4.58e-004
2	+2.23e-004	+4.22e-002	-9.91e-002	-4.89e-004	-1.33e-003	-4.03e-004
3	+1.44e-004	-4.25e-002	-3.58e-001	-1.17e-003	+3.44e-003	+4.10e-004
4	+1.52e-006	+1.28e-007	-2.04e-006	-1.17e-003	+3.57e-003	+4.18e-004
5	+9.51e-004	+4.26e-002	-3.68e-001	-1.17e-003	+3.33e-003	+3.85e-004
6	+1.58e-003	+7.70e-002	-6.65e-001	-1.20e-003	+2.30e-003	+2.67e-004
7	+1.89e-003	+9.62e-002	-8.30e-001	-1.22e-003	+8.43e-004	+9.82e-005
8	+1.88e-003	+9.67e-002	-8.34e-001	-1.23e-003	-7.71e-004	-8.90e-005

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

9	+1.56e-003	+7.82e-002	-6.75e-001	-1.21e-003	-2.26e-003	-2.63e-004
10	+9.33e-004	+4.39e-002	-3.78e-001	-1.18e-003	-3.36e-003	-3.91e-004
11	+1.18e-006	+9.63e-008	-1.25e-006	-1.18e-003	-3.78e-003	-4.39e-004
12	+3.23e-007	+4.00e-007	-1.20e-006	+2.02e-003	-8.53e-005	-2.79e-005
13	+1.99e-007	+7.77e-008	-2.73e-007	+3.15e-003	+1.92e-005	+4.12e-006
14	+2.00e-007	+2.15e-007	-7.57e-007	+4.13e-003	-5.19e-006	-3.26e-006
15	+2.00e-007	+1.83e-007	-6.45e-007	+4.68e-003	+4.61e-007	-1.51e-006
16	+2.00e-007	+1.91e-007	-6.72e-007	+4.69e-003	-8.03e-007	-1.87e-006
17	+2.00e-007	+1.89e-007	-6.60e-007	+4.15e-003	-7.96e-007	-1.75e-006
18	+2.00e-007	+1.89e-007	-6.87e-007	+3.12e-003	+3.63e-007	-1.77e-006
19	+1.06e-007	+8.61e-008	-3.20e-007	+1.18e-003	-4.96e-006	-1.77e-006
20	+7.95e-003	+3.91e-002	+1.09e-001	+1.92e-003	-1.22e-004	-1.32e-004
21	+4.02e-003	+6.20e-002	+1.73e-001	+3.05e-003	-1.80e-005	-9.96e-005
22	+4.93e-003	+8.18e-002	+2.28e-001	+4.03e-003	-4.23e-005	-1.07e-004
23	+4.72e-003	+9.29e-002	+2.59e-001	+4.58e-003	-3.67e-005	-1.05e-004
24	+4.76e-003	+9.32e-002	+2.60e-001	+4.59e-003	-3.79e-005	-1.06e-004
25	+4.76e-003	+8.24e-002	+2.30e-001	+4.05e-003	-3.79e-005	-1.05e-004
26	+4.74e-003	+6.14e-002	+1.71e-001	+3.02e-003	-3.68e-005	-1.05e-004
27	+2.65e-003	+2.30e-002	+6.42e-002	+1.13e-003	-2.46e-005	-5.65e-005
28	+2.10e-002	+2.34e-002	-1.41e-001	+7.46e-004	-1.37e-003	-1.05e-004
29	+2.04e-004	+8.54e-003	-9.93e-002	+6.85e-004	-1.35e-003	-1.60e-004
30	+3.12e-007	-1.17e-008	-1.16e-006	-1.98e-003	-8.43e-005	+1.51e-006
31	+2.00e-007	+2.50e-009	-2.54e-007	-3.21e-003	+1.89e-005	+2.03e-006
32	+2.00e-007	+4.93e-009	-7.31e-007	-4.27e-003	-5.14e-006	+1.80e-006
33	+2.00e-007	+4.18e-009	-6.20e-007	-4.87e-003	+4.53e-007	+1.84e-006
34	+2.00e-007	+4.39e-009	-6.47e-007	-4.88e-003	-8.04e-007	+1.80e-006
35	+2.00e-007	+4.22e-009	-6.35e-007	-4.30e-003	-8.06e-007	+1.79e-006
36	+2.00e-007	+4.17e-009	-6.62e-007	-3.18e-003	+3.56e-007	+1.78e-006
37	+1.06e-007	+1.65e-008	-3.06e-007	-1.16e-003	-5.00e-006	+1.85e-006
38	+6.43e-003	-3.81e-002	+1.06e-001	-1.86e-003	-1.21e-004	+1.05e-004
39	+4.37e-003	-6.30e-002	+1.76e-001	-3.09e-003	-1.82e-005	+1.06e-004
40	+4.85e-003	-8.45e-002	+2.36e-001	-4.16e-003	-4.23e-005	+1.06e-004
41	+4.74e-003	-9.66e-002	+2.70e-001	-4.75e-003	-3.67e-005	+1.06e-004
42	+4.76e-003	-9.68e-002	+2.71e-001	-4.77e-003	-3.79e-005	+1.06e-004
43	+4.76e-003	-8.51e-002	+2.38e-001	-4.19e-003	-3.79e-005	+1.06e-004
44	+4.74e-003	-6.25e-002	+1.74e-001	-3.07e-003	-3.68e-005	+1.06e-004
45	+2.66e-003	-2.25e-002	+6.29e-002	-1.10e-003	-2.46e-005	+5.66e-005
46	+1.41e-007	+4.48e-008	-8.26e-007	-1.17e-003	+3.66e-003	+2.18e-004
47	+1.11e-004	+2.18e-002	-3.68e-001	-1.17e-003	+3.30e-003	+1.95e-004
48	+1.90e-004	+3.90e-002	-6.64e-002	-1.20e-003	+2.30e-003	+1.33e-004
49	+2.34e-004	+4.85e-002	-8.30e-001	-1.22e-003	+8.43e-004	+4.71e-005
50	+2.41e-004	+4.85e-002	-8.33e-001	-1.23e-003	-7.71e-004	-4.70e-005
51	+2.06e-004	+3.90e-002	-6.74e-001	-1.21e-003	-2.26e-003	-1.33e-004
52	+1.27e-004	+2.18e-002	-3.77e-001	-1.18e-003	-3.36e-003	-1.95e-004
53	+1.58e-007	+4.49e-008	-9.53e-007	-1.18e-003	-3.77e-003	-2.18e-004

MASSIME DEFORMAZIONI NODALI

	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax				
Deform. nodali	+5.22e-002		-9.68e-002			-8.34e-001		-4.88e-003	-3.78e-003	-4.58e-004	+8.40e-001
Nodo	1	42	8	34	11	1	8				

COMBINAZIONE DI CARICO: 11 - DESCRIZIONE: SISMA 100%X 30%-Y

Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z			
1	+2.10e-002	-2.34e-002	-1.41e-001				-7.46e-004	-1.37e-003	+1.05e-004
2	+2.04e-004	-8.54e-003	-9.93e-002				-6.85e-004	-1.35e-003	+1.60e-004
3	+1.44e-004	+4.25e-002	+3.58e-001				+1.17e-003	+3.44e-003	-4.10e-004
4	+1.52e-006	-1.28e-007	-2.04e-006				+1.17e-003	+3.57e-003	-4.18e-004
5	+9.51e-004	-4.26e-002	-3.68e-001				+1.17e-003	+3.33e-003	-3.85e-004
6	+1.58e-003	-7.70e-002	-6.65e-001				+1.20e-003	+2.30e-003	-2.67e-004
7	+1.89e-003	-9.62e-002	-8.30e-001				+1.22e-003	+8.43e-004	-9.82e-005
8	+1.88e-003	-9.67e-002	-8.34e-001				+1.23e-003	-7.71e-004	+8.90e-005
9	+1.56e-003	-7.82e-002	-6.75e-001				+1.21e-003	-2.26e-003	+2.63e-004
10	+9.33e-004	-4.39e-002	-3.78e-001				+1.18e-003	-3.36e-003	+3.91e-004
11	+1.18e-006	-9.63e-008	-1.25e-006				+1.18e-003	-3.78e-003	+4.39e-004

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

12	+3.12e-007	+1.17e-008	-1.16e-006	+1.98e-003	-8.43e-005	-1.51e-006
13	+2.00e-007	-2.50e-009	-2.54e-007	+3.21e-003	+1.89e-005	-2.03e-006
14	+2.00e-007	-4.93e-009	-7.31e-007	+4.27e-003	-5.14e-006	-1.80e-006
15	+2.00e-007	-4.18e-009	-6.20e-007	+4.87e-003	+4.53e-007	-1.84e-006
16	+2.00e-007	-4.39e-009	-6.47e-007	+4.88e-003	-8.04e-007	-1.80e-006
17	+2.00e-007	-4.22e-009	-6.35e-007	+4.30e-003	-8.06e-007	-1.79e-006
18	+2.00e-007	-4.17e-009	-6.62e-007	+3.18e-003	+3.56e-007	-1.78e-006
19	+1.06e-007	-1.65e-008	-3.06e-007	+1.16e-003	-5.00e-006	-1.85e-006
20	+6.43e-003	+3.81e-002	+1.06e-001	+1.86e-003	-1.21e-004	-1.05e-004
21	+4.37e-003	+6.30e-002	+1.76e-001	+3.09e-003	-1.82e-005	-1.06e-004
22	+4.85e-003	+8.45e-002	+2.36e-001	+4.16e-003	-4.23e-005	-1.06e-004
23	+4.74e-003	+9.66e-002	+2.70e-001	+4.75e-003	-3.67e-005	-1.06e-004
24	+4.76e-003	+9.68e-002	+2.71e-001	+4.77e-003	-3.79e-005	-1.06e-004
25	+4.76e-003	+8.51e-002	+2.38e-001	+4.19e-003	-3.79e-005	-1.06e-004
26	+4.74e-003	+6.25e-002	+1.74e-001	+3.07e-003	-3.68e-005	-1.06e-004
27	+2.66e-003	+2.25e-002	+6.29e-002	+1.10e-003	-2.46e-005	-5.66e-005
28	+5.22e-002	-3.14e-002	-1.29e-001	+5.42e-004	-1.35e-003	+4.58e-004
29	+2.23e-004	-4.22e-002	-9.91e-002	+4.89e-004	-1.33e-003	+4.03e-004
30	+3.23e-007	-4.00e-007	-1.20e-006	-2.02e-003	-8.53e-005	+2.79e-005
31	+1.99e-007	-7.77e-008	-2.73e-007	-3.15e-003	+1.92e-005	-4.12e-006
32	+2.00e-007	-2.15e-007	-7.57e-007	-4.13e-003	-5.19e-006	+3.26e-006
33	+2.00e-007	-1.83e-007	-6.45e-007	-4.68e-003	+4.61e-007	+1.51e-006
34	+2.00e-007	-1.91e-007	-6.72e-007	-4.69e-003	-8.03e-007	+1.87e-006
35	+2.00e-007	-1.89e-007	-6.60e-007	-4.15e-003	-7.96e-007	+1.75e-006
36	+2.00e-007	-1.89e-007	-6.87e-007	-3.12e-003	+3.63e-007	+1.77e-006
37	+1.06e-007	-8.61e-008	-3.20e-007	-1.18e-003	-4.96e-006	+1.77e-006
38	+7.95e-003	-3.91e-002	+1.09e-001	-1.92e-003	-1.22e-004	+1.32e-004
39	+4.02e-003	-6.20e-002	+1.73e-001	-3.05e-003	-1.80e-005	+9.96e-005
40	+4.93e-003	-8.18e-002	+2.28e-001	-4.03e-003	-4.23e-005	+1.07e-004
41	+4.72e-003	-9.29e-002	+2.59e-001	-4.58e-003	-3.67e-005	+1.05e-004
42	+4.76e-003	-9.32e-002	+2.60e-001	-4.59e-003	-3.79e-005	+1.06e-004
43	+4.76e-003	-8.24e-002	+2.30e-001	-4.05e-003	-3.79e-005	+1.05e-004
44	+4.74e-003	-6.14e-002	+1.71e-001	-3.02e-003	-3.68e-005	+1.05e-004
45	+2.65e-003	-2.30e-002	+6.42e-002	-1.13e-003	-2.46e-005	+5.65e-005
46	+1.41e-007	-4.48e-008	-8.26e-007	+1.17e-003	+3.66e-003	-2.18e-004
47	+1.11e-004	-2.18e-002	-3.68e-001	+1.17e-003	+3.30e-003	-1.95e-004
48	+1.90e-004	-3.90e-002	-6.64e-001	+1.20e-003	+2.30e-003	-1.33e-004
49	+2.34e-004	-4.85e-002	-8.30e-001	+1.22e-003	+8.43e-004	-4.71e-005
50	+2.41e-004	-4.85e-002	-8.33e-001	+1.23e-003	-7.71e-004	+4.70e-005
51	+2.06e-004	-3.90e-002	-6.74e-001	+1.21e-003	-2.26e-003	+1.33e-004
52	+1.27e-004	-2.18e-002	-3.77e-001	+1.18e-003	-3.36e-003	+1.95e-004
53	+1.58e-007	-4.49e-008	-9.53e-007	+1.18e-003	-3.77e-003	+2.18e-004

MASSIME DEFORMAZIONI NODALI

Deform.	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax				
Nodo	28	24	8	16	11	28	8	+4.88e-003	-3.78e-003	+4.58e-004	+8.40e-001

COMBINAZIONE DI CARICO: 12 - DESCRIZIONE: SISMA 100%-X 30%-Y

Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z			
1	+3.56e-002	+2.08e-002	-1.28e-001	-5.48e-004	-1.27e-003	-1.58e-004			
2	-1.69e-004	+3.17e-002	-9.72e-002	-4.95e-004	-1.29e-003	-2.13e-004			
3	-1.79e-004	-4.25e-002	+3.58e-001	-1.17e-003	+3.44e-003	+4.10e-004			
4	-1.54e-006	+1.28e-007	-2.04e-006	-1.17e-003	+3.57e-003	+4.18e-004			
5	-9.33e-004	+4.26e-002	-3.68e-001	-1.17e-003	+3.33e-003	+3.85e-004			
6	-1.56e-003	+7.70e-002	-6.65e-001	-1.20e-003	+2.30e-003	+2.67e-004			
7	-1.88e-003	+9.62e-002	-8.30e-001	-1.22e-003	+8.43e-004	+9.82e-005			
8	-1.89e-003	+9.67e-002	-8.34e-001	-1.23e-003	-7.71e-004	-8.90e-005			
9	-1.58e-003	+7.82e-002	-6.74e-001	-1.21e-003	-2.26e-003	-2.63e-004			
10	-9.50e-004	+4.39e-002	-3.78e-001	-1.18e-003	-3.36e-003	-3.91e-004			
11	-1.21e-006	+9.63e-008	-1.25e-006	-1.18e-003	-3.78e-003	-4.39e-004			
12	-2.92e-007	+3.36e-007	-1.18e-006	+2.02e-003	-8.12e-005	-1.55e-005			
13	-2.01e-007	+1.16e-007	-2.87e-007	+3.15e-003	+1.97e-005	+5.75e-006			
14	-2.00e-007	+2.07e-007	-7.54e-007	+4.13e-003	-3.83e-006	+8.50e-007			

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

15	-2.00e-007	+1.85e-007	-6.45e-007	+4.68e-003	+1.63e-006	+2.01e-006
16	-2.00e-007	+1.90e-007	-6.72e-007	+4.69e-003	+4.11e-007	+1.77e-006
17	-2.00e-007	+1.89e-007	-6.60e-007	+4.15e-003	+4.20e-007	+1.90e-006
18	-1.99e-007	+1.88e-007	-6.87e-007	+3.12e-003	+1.56e-006	+1.82e-006
19	-1.05e-007	+1.21e-007	-3.32e-007	+1.18e-003	-3.62e-006	+2.24e-006
20	-2.12e-003	+3.91e-002	+1.09e-001	+1.92e-003	-4.41e-005	+8.82e-005
21	-5.37e-003	+6.20e-002	+1.73e-001	+3.05e-003	+5.68e-005	+1.09e-004
22	-4.61e-003	+8.18e-002	+2.28e-001	+4.03e-003	+3.33e-005	+1.05e-004
23	-4.79e-003	+9.29e-002	+2.59e-001	+4.58e-003	+3.88e-005	+1.06e-004
24	-4.75e-003	+9.32e-002	+2.60e-001	+4.59e-003	+3.75e-005	+1.06e-004
25	-4.76e-003	+8.24e-002	+2.30e-001	+4.05e-003	+3.75e-005	+1.06e-004
26	-4.78e-003	+6.14e-002	+1.71e-001	+3.02e-003	+3.87e-005	+1.06e-004
27	-2.50e-003	+2.30e-002	+6.42e-002	+1.13e-003	+1.60e-005	+5.70e-005
28	+4.29e-003	+3.40e-002	-1.39e-001	+7.52e-004	-1.30e-003	-4.05e-004
29	-1.88e-004	+1.90e-002	-9.74e-002	+6.91e-004	-1.32e-003	-3.50e-004
30	-3.03e-007	+5.22e-008	-1.13e-006	-1.98e-003	-8.02e-005	-1.09e-005
31	-2.01e-007	-3.53e-008	-2.67e-007	-3.21e-003	+1.95e-005	+4.00e-007
32	-2.00e-007	+1.35e-008	-7.28e-007	-4.27e-003	-3.77e-006	-2.31e-006
33	-2.00e-007	+2.06e-009	-6.21e-007	-4.87e-003	+1.63e-006	-1.68e-006
34	-2.00e-007	+5.01e-009	-6.47e-007	-4.88e-003	+4.11e-007	-1.85e-006
35	-2.00e-007	+3.97e-009	-6.36e-007	-4.30e-003	+4.10e-007	-1.86e-006
36	-2.00e-007	+5.86e-009	-6.62e-007	-3.18e-003	+1.55e-006	-1.81e-006
37	-1.05e-007	-1.81e-008	-3.19e-007	-1.16e-003	-3.66e-006	-2.17e-006
38	-3.64e-003	-3.81e-002	-1.86e-001	-1.86e-003	-4.30e-005	-1.15e-004
39	-5.01e-003	-6.30e-002	+1.76e-001	-3.09e-003	+5.66e-005	-1.03e-004
40	-4.70e-003	-8.45e-002	+2.36e-001	-4.16e-003	+3.33e-005	-1.06e-004
41	-4.77e-003	-9.66e-002	+2.70e-001	-4.75e-003	+3.87e-005	-1.05e-004
42	-4.76e-003	-9.68e-002	+2.71e-001	-4.77e-003	+3.75e-005	-1.06e-004
43	-4.76e-003	-8.51e-002	+2.38e-001	-4.19e-003	+3.75e-005	-1.06e-004
44	-4.78e-003	-6.25e-002	+1.74e-001	-3.07e-003	+3.87e-005	-1.06e-004
45	-2.50e-003	-2.25e-002	+6.29e-002	-1.10e-003	+1.59e-005	-5.69e-005
46	-1.58e-007	+4.48e-008	-8.26e-007	-1.17e-003	+3.66e-003	+2.18e-004
47	-1.27e-004	+2.18e-002	-3.68e-001	-1.17e-003	+3.30e-003	+1.95e-004
48	-2.07e-004	+3.90e-002	-6.64e-001	-1.20e-003	+2.30e-003	+1.33e-004
49	-2.42e-004	+4.85e-002	-8.30e-001	-1.22e-003	+8.43e-004	+4.71e-005
50	-2.35e-004	+4.85e-002	-8.33e-001	-1.23e-003	-7.71e-004	-4.70e-005
51	-1.91e-004	+3.90e-002	-6.74e-001	-1.21e-003	-2.26e-003	-1.33e-004
52	-1.11e-004	+2.18e-002	-3.77e-001	-1.18e-003	-3.36e-003	-1.95e-004
53	-1.41e-007	+4.49e-008	-9.52e-007	-1.18e-003	-3.77e-003	-2.18e-004

MASSIME DEFORMAZIONI NODALI

	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax				
Deform. nodali	+3.56e-002			-9.68e-002		-8.34e-001		-4.88e-003	-3.78e-003	-4.39e-004	+8.40e-001
Nodo	1	42	8	34	11	11	8				

COMBINAZIONE DI CARICO: 13 - DESCRIZIONE: SISMA 100%-X 30%-Y

Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z
1	+4.29e-003	-3.40e-002	-1.39e-001	-7.52e-004	-1.30e-003	+4.05e-004
2	-1.88e-004	-1.90e-002	-9.74e-002	-6.91e-004	-1.32e-003	+3.50e-004
3	-1.79e-004	+4.25e-002	+3.58e-001	+1.17e-003	+3.44e-003	-4.10e-004
4	-1.54e-006	-1.28e-007	-2.04e-006	+1.17e-003	+3.57e-003	-4.18e-004
5	-9.33e-004	-4.26e-002	-3.68e-001	+1.17e-003	+3.33e-003	-3.85e-004
6	-1.56e-003	-7.70e-002	-6.65e-001	+1.20e-003	+2.30e-003	-2.67e-004
7	-1.88e-003	-9.62e-002	-8.30e-001	+1.22e-003	+8.43e-004	-9.82e-005
8	-1.89e-003	-9.67e-002	-8.34e-001	+1.23e-003	-7.71e-004	+8.90e-005
9	-1.58e-003	-7.82e-002	-6.74e-001	+1.21e-003	-2.26e-003	+2.63e-004
10	-9.50e-004	-4.39e-002	-3.78e-001	+1.18e-003	-3.36e-003	+3.91e-004
11	-1.21e-006	-9.63e-008	-1.25e-006	+1.18e-003	-3.78e-003	+4.39e-004
12	-3.03e-007	-5.22e-008	-1.13e-006	+1.98e-003	-8.02e-005	+1.09e-005
13	-2.01e-007	+3.53e-008	-2.67e-007	+3.21e-003	+1.95e-005	-4.00e-007
14	-2.00e-007	+1.35e-008	-7.28e-007	-4.27e-003	-3.77e-006	+2.31e-006
15	-2.00e-007	+2.06e-009	-6.21e-007	-4.87e-003	+1.63e-006	+1.68e-006
16	-2.00e-007	-5.01e-009	-6.47e-007	-4.88e-003	+4.11e-007	+1.85e-006
17	-2.00e-007	-3.97e-009	-6.36e-007	-4.30e-003	+4.10e-007	+1.86e-006

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

18	-2.00e-007	-5.86e-009	-6.62e-007	+3.18e-003	+1.55e-006	+1.81e-006
19	-1.05e-007	+1.81e-008	-3.19e-007	+1.16e-003	-3.66e-006	+2.17e-006
20	-3.64e-003	+3.81e-002	+1.06e-001	+1.86e-003	-4.30e-005	+1.15e-004
21	-5.01e-003	+6.30e-002	+1.76e-001	+3.09e-003	+5.66e-005	+1.03e-004
22	-4.70e-003	+8.45e-002	+2.36e-001	+4.16e-003	+3.33e-005	+1.06e-004
23	-4.77e-003	+9.66e-002	+2.70e-001	+4.75e-003	+3.87e-005	+1.05e-004
24	-4.76e-003	+9.68e-002	+2.71e-001	+4.77e-003	+3.75e-005	+1.06e-004
25	-4.76e-003	+8.51e-002	+2.38e-001	+4.19e-003	+3.75e-005	+1.06e-004
26	-4.78e-003	+6.25e-002	+1.74e-001	+3.07e-003	+3.87e-005	+1.06e-004
27	-2.50e-003	+2.25e-002	+6.29e-002	+1.10e-003	+1.59e-005	+5.69e-005
28	+3.56e-002	-2.08e-002	-1.28e-001	+5.48e-004	-1.27e-003	+1.58e-004
29	-1.69e-004	-3.17e-002	-9.72e-002	+4.95e-004	-1.29e-003	+2.13e-004
30	-2.92e-007	-3.36e-007	-1.18e-006	-2.02e-003	-8.12e-005	+1.55e-005
31	-2.01e-007	-1.16e-007	-2.87e-007	-3.15e-003	+1.97e-005	-5.75e-006
32	-2.00e-007	-2.07e-007	-7.54e-007	-4.13e-003	-3.83e-006	-8.50e-007
33	-2.00e-007	-1.85e-007	-6.45e-007	-4.68e-003	+1.63e-006	-2.01e-006
34	-2.00e-007	-1.90e-007	-6.72e-007	-4.69e-003	+4.11e-007	-1.77e-006
35	-2.00e-007	-1.89e-007	-6.60e-007	-4.15e-003	+4.20e-007	-1.90e-006
36	-1.99e-007	-1.88e-007	-6.87e-007	-3.12e-003	+1.56e-006	-1.82e-006
37	-1.05e-007	-1.21e-007	-3.32e-007	-1.18e-003	-3.62e-006	-2.24e-006
38	-2.12e-003	-3.91e-002	+1.09e-001	-1.92e-003	-4.41e-005	-8.82e-005
39	-5.37e-003	-6.20e-002	+1.73e-001	-3.05e-003	+5.68e-005	-1.09e-004
40	-4.61e-003	-8.18e-002	+2.28e-001	-4.03e-003	+3.33e-005	-1.05e-004
41	-4.79e-003	-9.29e-002	+2.59e-001	-4.58e-003	+3.88e-005	-1.06e-004
42	-4.75e-003	-9.32e-002	+2.60e-001	-4.59e-003	+3.75e-005	-1.06e-004
43	-4.76e-003	-8.24e-002	+2.30e-001	-4.05e-003	+3.75e-005	-1.06e-004
44	-4.78e-003	-6.14e-002	+1.71e-001	-3.02e-003	+3.87e-005	-1.06e-004
45	-2.50e-003	-2.30e-002	+6.42e-002	-1.13e-003	+1.60e-005	-5.70e-005
46	-1.58e-007	-4.48e-008	-8.26e-007	+1.17e-003	+3.66e-003	-2.18e-004
47	-1.27e-004	-2.18e-002	-3.68e-001	+1.17e-003	+3.30e-003	-1.95e-004
48	-2.07e-004	-3.90e-002	-6.64e-001	+1.20e-003	+2.30e-003	-1.33e-004
49	-2.42e-004	-4.85e-002	-8.30e-001	+1.22e-003	+8.43e-004	-4.71e-005
50	-2.35e-004	-4.85e-002	-8.33e-001	+1.23e-003	-7.71e-004	+4.70e-005
51	-1.91e-004	-3.90e-002	-6.74e-001	+1.21e-003	-2.26e-003	+1.33e-004
52	-1.11e-004	-2.18e-002	-3.77e-001	+1.18e-003	-3.36e-003	+1.95e-004
53	-1.41e-007	-4.49e-008	-9.52e-007	+1.18e-003	-3.77e-003	+2.18e-004

MASSIME DEFORMAZIONI NODALI

	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax				
Deform. nodali	+3.56e-002			+9.68e-002		-8.34e-001		+4.88e-003	-3.78e-003	+4.39e-004	+8.40e-001
Nodo	28	24	8	16	11	11	8				

COMBINAZIONE DI CARICO: 14 - DESCRIZIONE: SISMA 30%X 100%Y

Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z			
1	+8.29e-002	+9.17e-002	+1.15e-001	-1.15e-001	-3.06e-004	-1.29e-003	-1.01e-003		
2	+1.09e-004	+9.77e-002	-9.83e-002	-2.62e-004	-1.28e-003	-9.93e-004			
3	+3.07e-005	-1.42e-001	+3.58e-001	-3.90e-003	+3.44e-003	+1.37e-003			
4	+4.49e-007	+4.28e-007	-2.04e-006	-3.90e-003	+3.57e-003	+1.39e-003			
5	+2.92e-004	+1.42e-001	-3.68e-001	-3.90e-003	+3.33e-003	+1.28e-003			
6	+4.80e-004	+2.57e-001	-6.65e-001	-3.99e-003	+2.30e-003	+8.90e-004			
7	+5.69e-004	+3.21e-001	-8.30e-001	-4.08e-003	+8.43e-004	+3.27e-004			
8	+5.61e-004	+3.22e-001	-8.34e-001	-4.09e-003	-7.71e-004	-2.97e-004			
9	+4.62e-004	+2.61e-001	-6.75e-001	-4.02e-003	-2.26e-003	-8.76e-004			
10	+2.74e-004	+1.46e-001	-3.78e-001	-3.93e-003	-3.36e-003	-1.30e-003			
11	+3.48e-007	+3.21e-007	-1.25e-006	-3.93e-003	-3.78e-003	-1.46e-003			
12	+1.20e-007	+8.31e-007	-1.24e-006	-8.52e-005	+2.06e-003	-5.44e-005			
13	+5.87e-008	+1.85e-007	-3.01e-007	+3.08e-003	+1.96e-005	+1.19e-005			
14	+5.94e-008	+4.69e-007	-7.86e-007	+3.96e-003	-4.78e-006	-3.53e-006			
15	+5.98e-008	+4.03e-007	-6.73e-007	+4.45e-003	+8.80e-007	+1.10e-007			
16	+6.03e-008	+4.18e-007	-7.01e-007	+4.46e-003	-3.78e-007	-6.81e-007			
17	+6.07e-008	+4.15e-007	-6.89e-007	+3.98e-003	-3.58e-007	-4.29e-007			
18	+6.09e-008	+4.15e-007	-7.16e-007	+3.04e-003	+7.91e-007	-4.96e-007			
19	+3.29e-008	+2.18e-007	-3.40e-007	+1.20e-003	-4.45e-006	-2.78e-007			
20	+6.19e-003	+4.03e-002	+1.12e-001	+1.98e-003	-9.63e-005	-8.55e-005			

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

21	+3.26e-004	+6.09e-002	+1.70e-001	+3.00e-003	+8.47e-006	-1.93e-005
22	+1.69e-003	+7.87e-002	+2.20e-001	+3.88e-003	-1.59e-005	-3.46e-005
23	+1.37e-003	+8.87e-002	+2.48e-001	+4.37e-003	-1.03e-005	-3.10e-005
24	+1.44e-003	+8.89e-002	+2.48e-001	+4.38e-003	-1.15e-005	-3.18e-005
25	+1.42e-003	+7.92e-002	+2.21e-001	+3.90e-003	-1.15e-005	-3.15e-005
26	+1.40e-003	+6.02e-002	+1.68e-001	+2.96e-003	-1.03e-005	-3.16e-005
27	+8.41e-004	+2.36e-002	+6.58e-002	+1.16e-003	-1.03e-005	-1.67e-005
28	-2.13e-002	+9.10e-002	-1.54e-001	+9.86e-004	-1.38e-003	-8.67e-004
29	+4.34e-005	+7.13e-002	-9.88e-002	+9.16e-004	-1.38e-003	-8.84e-004
30	+8.37e-008	+4.64e-007	-1.10e-006	-1.93e-003	-8.16e-005	-3.36e-005
31	+6.01e-008	+8.29e-008	-2.35e-007	-3.28e-003	+1.89e-005	+8.63e-006
32	+6.00e-008	+2.65e-007	-7.00e-007	-4.44e-003	-4.59e-006	-1.35e-006
33	+6.00e-008	+2.22e-007	-5.92e-007	-5.09e-003	+8.55e-007	+9.95e-007
34	+6.00e-008	+2.32e-007	-6.18e-007	-5.11e-003	-3.79e-007	+4.35e-007
35	+6.00e-008	+2.30e-007	-6.07e-007	-4.47e-003	-3.92e-007	+5.60e-007
36	+5.99e-008	+2.31e-007	-6.33e-007	-3.26e-003	+7.66e-007	+5.33e-007
37	+3.17e-008	+1.24e-007	-2.95e-007	-1.14e-003	-4.57e-006	+5.37e-007
38	+1.14e-003	-3.69e-002	+1.03e-001	-1.80e-003	-9.27e-005	-2.53e-006
39	+1.50e-003	-6.41e-002	+1.79e-001	-3.15e-003	+7.75e-006	+3.97e-005
40	+1.41e-003	-8.76e-002	+2.45e-001	-4.31e-003	-1.57e-005	+2.98e-005
41	+1.43e-003	-1.01e-001	+2.82e-001	-4.96e-003	-1.03e-005	+3.21e-005
42	+1.43e-003	-1.01e-001	+2.83e-001	-4.98e-003	-1.15e-005	+3.16e-005
43	+1.43e-003	-8.83e-002	+2.47e-001	-4.34e-003	-1.15e-005	+3.17e-005
44	+1.41e-003	-6.37e-002	+1.78e-001	-3.12e-003	-1.04e-005	+3.17e-005
45	+8.58e-004	-2.20e-002	+6.14e-002	-1.07e-003	-1.04e-005	+1.70e-005
46	+3.65e-008	+1.49e-007	-8.26e-007	-3.90e-003	+3.66e-003	+7.25e-004
47	+2.79e-005	+7.26e-002	-3.68e-001	-3.90e-003	+3.30e-003	+6.49e-004
48	+5.13e-005	+1.30e-001	-6.64e-001	-3.99e-003	+2.30e-003	+4.43e-004
49	+6.79e-005	+1.62e-001	-8.30e-001	-4.08e-003	+8.43e-004	+1.57e-004
50	+7.44e-005	+1.62e-001	-8.33e-001	-4.09e-003	-7.71e-004	-1.57e-004
51	+6.74e-005	+1.30e-001	-6.74e-001	-4.02e-003	-2.26e-003	-4.43e-004
52	+4.34e-005	+7.26e-002	-3.77e-001	-3.93e-003	-3.36e-003	-6.49e-004
53	+5.32e-008	+1.50e-007	-9.52e-007	-3.93e-003	-3.77e-003	-7.26e-004

MASSIME DEFORMAZIONI NODALI

	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax				
Deform. nodali	+8.29e-002		+3.22e-001		-8.34e-001			-5.11e-003	-3.78e-003	-1.46e-003	+8.94e-001
Nodo	1	8	8	34	11	11	8				

COMBINAZIONE DI CARICO: 15 - DESCRIZIONE: SISMA 30%X 100%-Y									
Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z			
1	-2.13e-002		-9.10e-002		-1.54e-001		-9.86e-004	-1.38e-003	+8.67e-004
2	+4.34e-005		-7.13e-002		-9.88e-002		-9.16e-004	-1.38e-003	+8.84e-004
3	+3.07e-005		+1.42e-001		+3.58e-001		+3.90e-003	+3.44e-003	-1.37e-003
4	+4.49e-007		-4.28e-007		-2.04e-006		+3.90e-003	+3.57e-003	-1.39e-003
5	+2.92e-004		-1.42e-001		-3.68e-001		+3.90e-003	+3.33e-003	-1.28e-003
6	+4.80e-004		-2.57e-001		-6.65e-001		+3.99e-003	+2.30e-003	-8.90e-004
7	+5.69e-004		-3.21e-001		-8.30e-001		+4.08e-003	+8.43e-004	-3.27e-004
8	+5.61e-004		-3.22e-001		-8.34e-001		+4.09e-003	-7.71e-004	+2.97e-004
9	+4.62e-004		-2.61e-001		-6.75e-001		+4.02e-003	-2.26e-003	+8.76e-004
10	+2.74e-004		-1.46e-001		-3.78e-001		+3.93e-003	-3.36e-003	+1.30e-003
11	+3.48e-007		-3.21e-007		-1.25e-006		+3.93e-003	-3.78e-003	+1.46e-003
12	+8.37e-008		-4.64e-007		-1.10e-006		+1.93e-003	-8.16e-005	+3.36e-005
13	+6.01e-008		-8.29e-008		-2.35e-007		+3.28e-003	+1.89e-005	-8.63e-006
14	+6.00e-008		-2.65e-007		-7.00e-007		+4.44e-003	-4.59e-006	+1.35e-006
15	+6.00e-008		-2.22e-007		-5.92e-007		+5.09e-003	+8.55e-007	-9.95e-007
16	+6.00e-008		-2.32e-007		-6.18e-007		+5.11e-003	-3.79e-007	-4.35e-007
17	+6.00e-008		-2.30e-007		-6.07e-007		+4.47e-003	-3.92e-007	-5.60e-007
18	+5.99e-008		-2.31e-007		-6.33e-007		+7.66e-007	-4.57e-006	-5.33e-007
19	+3.17e-008		-1.24e-007		-2.95e-007		+1.14e-003	-4.57e-006	-5.37e-007
20	+1.14e-003		+3.69e-002		+1.03e-001		-1.80e-003	-9.27e-005	+2.53e-006
21	+1.50e-003		+6.41e-002		+1.79e-001		+3.15e-003	+7.75e-006	-3.97e-005
22	+1.41e-003		+8.76e-002		+2.45e-001		+4.31e-003	-1.57e-005	-2.98e-005
23	+1.43e-003		+1.01e-001		+2.82e-001		+4.96e-003	-1.03e-005	-3.21e-005

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

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24	+1.43e-003	+1.01e-001	+2.83e-001	+4.98e-003	-1.15e-005	-3.16e-005
25	+1.43e-003	+8.83e-002	+2.47e-001	+4.34e-003	-1.15e-005	-3.17e-005
26	+1.41e-003	+6.37e-002	+1.78e-001	+3.12e-003	-1.04e-005	-3.17e-005
27	+8.58e-004	+2.20e-002	+6.14e-002	+1.07e-003	-1.04e-005	-1.70e-005
28	+8.29e-002	-9.17e-002	-1.15e-001	+3.06e-004	-1.29e-003	+1.01e-003
29	+1.09e-004	-9.77e-002	-9.83e-002	+2.62e-004	-1.28e-003	+9.93e-004
30	+1.20e-007	-8.31e-007	-1.24e-006	-2.06e-003	-8.52e-005	+5.44e-005
31	+5.87e-008	-1.85e-007	-3.01e-007	-3.08e-003	+1.96e-005	-1.19e-005
32	+5.94e-008	-4.69e-007	-7.86e-007	-3.96e-003	-4.78e-006	+3.53e-006
33	+5.98e-008	-4.03e-007	-6.73e-007	-4.45e-003	+8.80e-007	-1.10e-007
34	+6.03e-008	-4.18e-007	-7.01e-007	-4.46e-003	-3.78e-007	+6.81e-007
35	+6.07e-008	-4.15e-007	-6.89e-007	-3.98e-003	-3.58e-007	+4.29e-007
36	+6.09e-008	-4.15e-007	-7.16e-007	-3.04e-003	+7.91e-007	+4.96e-007
37	+3.29e-008	-2.18e-007	-3.40e-007	-1.20e-003	-4.45e-006	+2.78e-007
38	+6.19e-003	-4.03e-002	+1.12e-001	-1.98e-003	-9.63e-005	+8.55e-005
39	+3.26e-004	-6.09e-002	+1.70e-001	-3.00e-003	+8.47e-006	+1.93e-005
40	+1.69e-003	-7.87e-002	+2.20e-001	-3.88e-003	-1.59e-005	+3.46e-005
41	+1.37e-003	-8.87e-002	+2.48e-001	-4.37e-003	-1.03e-005	+3.10e-005
42	+1.44e-003	-8.89e-002	+2.48e-001	-4.38e-003	-1.15e-005	+3.18e-005
43	+1.42e-003	-7.92e-002	+2.21e-001	-3.90e-003	-1.15e-005	+3.15e-005
44	+1.40e-003	-6.02e-002	+1.68e-001	-2.96e-003	-1.03e-005	+3.16e-005
45	+8.41e-004	-2.36e-002	+6.58e-002	-1.16e-003	-1.03e-005	+1.67e-005
46	+3.65e-008	-1.49e-007	-8.26e-007	+3.90e-003	+3.66e-003	-7.25e-004
47	+2.79e-005	-7.26e-002	-3.68e-001	+3.90e-003	+3.30e-003	-6.49e-004
48	+5.13e-005	-1.30e-001	-6.64e-001	+3.99e-003	+2.30e-003	-4.43e-004
49	+6.79e-005	-1.62e-001	-8.30e-001	+4.08e-003	+8.43e-004	-1.57e-004
50	+7.44e-005	-1.62e-001	-8.33e-001	+4.09e-003	-7.71e-004	+1.57e-004
51	+6.74e-005	-1.30e-001	-6.74e-001	+4.02e-003	-2.26e-003	+4.43e-004
52	+4.34e-005	-7.26e-002	-3.77e-001	+3.93e-003	-3.36e-003	+6.49e-004
53	+5.32e-008	-1.50e-007	-9.52e-007	+3.93e-003	-3.77e-003	+7.26e-004

MASSIME DEFORMAZIONI NODALI

Deform. nodali	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax				
Nodo	28	8	8	16	11	11	8	+5.11e-003	-3.78e-003	+1.46e-003	+8.94e-001

COMBINAZIONE DI CARICO: 16 - DESCRIZIONE: SISMA 30%-X 100%+Y

Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z			
1	+7.79e-002	+8.85e-002	-1.15e-001	-3.08e-004	-1.27e-003	-9.20e-004			
2	-8.43e-006	+9.45e-002	-9.77e-002	-2.64e-004	-1.27e-003	-9.36e-004			
3	-6.62e-005	-1.42e-001	+3.58e-001	-3.90e-003	+3.44e-003	+1.37e-003			
4	-4.69e-007	+4.28e-007	-2.04e-006	-3.90e-003	+3.57e-003	+1.39e-003			
5	-2.74e-004	+1.42e-001	-3.68e-001	-3.90e-003	+3.33e-003	+1.28e-003			
6	-4.61e-004	+2.57e-001	-6.65e-001	-3.99e-003	+2.30e-003	+8.90e-004			
7	-5.61e-004	+3.21e-001	-8.30e-001	-4.08e-003	+8.43e-004	+3.27e-004			
8	-5.68e-004	+3.22e-001	-8.34e-001	-4.09e-003	-7.71e-004	-2.97e-004			
9	-4.79e-004	+2.61e-001	-6.75e-001	-4.02e-003	-2.26e-003	-8.76e-004			
10	-2.91e-004	+1.46e-001	-3.78e-001	-3.93e-003	-3.36e-003	-1.30e-003			
11	-3.69e-007	+3.21e-007	-1.25e-006	-3.93e-003	-3.78e-003	-1.46e-003			
12	-6.40e-008	+8.11e-007	-1.23e-006	+2.06e-003	-8.39e-005	-5.07e-005			
13	-6.14e-008	+1.96e-007	-3.06e-007	+3.08e-003	+1.98e-005	+1.24e-005			
14	-6.06e-008	+4.67e-007	-7.85e-007	+3.96e-003	-4.37e-006	-2.30e-006			
15	-6.03e-008	+4.03e-007	-6.74e-007	+4.45e-003	+1.23e-006	+1.16e-006			
16	-5.98e-008	+4.18e-007	-7.01e-007	+4.46e-003	-1.34e-008	+4.13e-007			
17	-5.94e-008	+4.15e-007	-6.89e-007	+3.98e-003	+6.64e-009	+6.65e-007			
18	-5.90e-008	+4.14e-007	-7.16e-007	+3.04e-003	+1.15e-006	+5.81e-007			
19	-3.06e-008	+2.28e-007	-3.44e-007	+1.20e-003	-4.05e-006	+9.28e-007			
20	+3.17e-003	+4.03e-002	+1.12e-001	+1.98e-003	-7.28e-005	-1.96e-005			
21	-2.49e-003	+6.09e-002	+1.70e-001	+3.00e-003	+3.09e-005	+4.35e-005			
22	-1.17e-003	+7.87e-002	+2.20e-001	+3.88e-003	+6.76e-006	+2.88e-005			
23	-1.48e-003	+8.87e-002	+2.48e-001	+4.37e-003	+1.24e-005	+3.23e-005			
24	-1.42e-003	+8.89e-002	+2.48e-001	+4.38e-003	+1.11e-005	+3.15e-005			
25	-1.43e-003	+7.92e-002	+2.21e-001	+3.90e-003	+1.11e-005	+3.18e-005			
26	-1.45e-003	+6.02e-002	+1.68e-001	+2.96e-003	+1.23e-005	+3.17e-005			

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

27	-7.06e-004	+2.36e-002	+6.58e-002	+1.16e-003	+1.83e-006	+1.74e-005
28	-2.63e-002	+9.42e-002	-1.53e-001	+9.88e-004	-1.36e-003	-9.57e-004
29	-7.42e-005	+7.45e-002	-9.82e-002	+9.18e-004	-1.37e-003	-9.41e-004
30	-1.01e-007	+4.83e-007	-1.09e-006	-1.93e-003	-8.04e-005	-3.74e-005
31	-6.00e-008	+7.16e-008	-2.39e-007	-3.28e-003	+1.91e-005	+8.14e-006
32	-6.00e-008	+2.68e-007	-6.99e-007	-4.44e-003	-4.18e-006	-2.58e-006
33	-6.00e-008	+2.22e-007	-5.92e-007	-5.09e-003	+1.21e-006	-5.92e-008
34	-6.00e-008	+2.32e-007	-6.18e-007	-5.11e-003	-1.47e-008	-6.58e-007
35	-6.00e-008	+2.30e-007	-6.07e-007	-4.47e-003	-2.73e-008	-5.35e-007
36	-6.00e-008	+2.31e-007	-6.33e-007	-3.26e-003	+1.13e-006	-5.44e-007
37	-3.17e-008	+1.14e-007	-2.99e-007	-1.14e-003	-4.17e-006	-6.69e-007
38	-1.88e-003	-3.69e-002	+1.03e-001	-1.80e-003	-6.92e-005	-6.85e-005
39	-1.32e-003	-6.41e-002	+1.79e-001	-3.15e-003	+3.02e-005	-2.30e-005
40	-1.45e-003	-8.76e-002	+2.45e-001	-4.31e-003	+6.96e-006	-3.37e-005
41	-1.42e-003	-1.01e-001	+2.82e-001	-4.96e-003	+1.23e-005	-3.12e-005
42	-1.43e-003	-1.01e-001	+2.83e-001	-4.98e-003	+1.11e-005	-3.18e-005
43	-1.42e-003	-8.83e-002	+2.47e-001	-4.34e-003	+1.11e-005	-3.17e-005
44	-1.45e-003	-6.37e-002	+1.78e-001	-3.12e-003	+1.23e-005	-3.17e-005
45	-6.89e-004	-2.20e-002	+6.14e-002	-1.07e-003	+1.71e-006	-1.71e-005
46	-5.34e-008	+1.49e-007	-8.26e-007	-3.90e-003	+3.66e-003	+7.25e-004
47	-4.35e-005	+7.26e-002	-3.68e-001	-3.90e-003	+3.30e-003	+6.49e-004
48	-6.77e-005	+1.30e-001	-6.64e-001	-3.99e-003	+2.30e-003	+4.43e-004
49	-7.50e-005	+1.62e-001	-8.30e-001	-4.08e-003	+8.43e-004	+1.57e-004
50	-6.84e-005	+1.62e-001	-8.33e-001	-4.09e-003	-7.71e-004	-1.57e-004
51	-5.17e-005	+1.30e-001	-6.74e-001	-4.02e-003	-2.26e-003	-4.43e-004
52	-2.81e-005	+7.26e-002	-3.77e-001	-3.93e-003	-3.36e-003	-6.49e-004
53	-3.66e-008	+1.50e-007	-9.52e-007	-3.93e-003	-3.77e-003	-7.26e-004

MASSIME DEFORMAZIONI NODALI

	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax				
Deform. nodali		+7.79e-002		+3.22e-001		-8.34e-001		-5.11e-003	-3.78e-003	-1.46e-003	+8.94e-001
Nodo	1	8	8	34	11	11	8				

COMBINAZIONE DI CARICO: 17 - DESCRIZIONE: SISMA 30%-X 100%-Y

Nodo	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z			
1	-2.63e-002	-9.42e-002	-1.53e-001	-9.88e-004	-1.36e-003	+9.57e-004			
2	-7.42e-005	-7.45e-002	-9.82e-002	-9.18e-004	-1.37e-003	+9.41e-004			
3	-6.62e-005	+1.42e-001	+3.58e-001	+3.90e-003	+3.44e-003	-1.37e-003			
4	-4.69e-007	-4.28e-007	-2.04e-006	+3.90e-003	+3.57e-003	-1.39e-003			
5	-2.74e-004	-1.42e-001	-3.68e-001	+3.90e-003	+3.33e-003	-1.28e-003			
6	-4.61e-004	-2.57e-001	-6.65e-001	+3.99e-003	+2.30e-003	-8.90e-004			
7	-5.61e-004	-3.21e-001	-8.30e-001	+4.08e-003	+8.43e-004	-3.27e-004			
8	-5.68e-004	-3.22e-001	-8.34e-001	+4.09e-003	-7.71e-004	+2.97e-004			
9	-4.79e-004	-2.61e-001	-6.75e-001	+4.02e-003	-2.26e-003	+8.76e-004			
10	-2.91e-004	-1.46e-001	-3.78e-001	+3.93e-003	-3.36e-003	+1.30e-003			
11	-3.69e-007	-3.21e-007	-1.25e-006	+3.93e-003	-3.78e-003	+1.46e-003			
12	-1.01e-007	-4.83e-006	-1.09e-006	+1.93e-003	-8.04e-005	+3.74e-005			
13	-6.00e-008	-7.16e-008	-2.39e-007	+3.28e-003	+1.91e-005	-8.14e-006			
14	-6.00e-008	-2.68e-007	-6.99e-007	-4.44e-003	-4.18e-006	+2.58e-006			
15	-6.00e-008	-2.22e-007	-5.92e-007	+5.09e-003	+1.21e-006	+5.92e-008			
16	-6.00e-008	-2.32e-007	-6.18e-007	+5.11e-003	-1.47e-008	+6.58e-007			
17	-6.00e-008	-2.30e-007	-6.07e-007	-4.47e-003	-2.73e-008	+5.35e-007			
18	-6.00e-008	-2.31e-007	-6.33e-007	+3.26e-003	+1.13e-006	+5.44e-007			
19	-3.17e-008	-1.14e-007	-2.99e-007	-1.14e-003	-4.17e-006	+6.69e-007			
20	-1.88e-003	+3.69e-002	+1.03e-001	+1.80e-003	-6.92e-005	+6.85e-005			
21	-1.32e-003	+6.41e-002	+1.79e-001	-3.15e-003	+3.02e-005	+2.30e-005			
22	-1.45e-003	+8.76e-002	+2.45e-001	-4.31e-003	+6.96e-006	+3.37e-005			
23	-1.42e-003	+1.01e-001	+2.82e-001	-4.96e-003	+1.23e-005	+3.12e-005			
24	-1.43e-003	+1.01e-001	+2.83e-001	-4.98e-003	+1.11e-005	+3.18e-005			
25	-1.42e-003	+8.83e-002	+2.47e-001	-4.34e-003	+1.11e-005	+3.17e-005			
26	-1.45e-003	+6.37e-002	+1.78e-001	-3.12e-003	+1.23e-005	+3.17e-005			
27	-6.89e-004	+2.20e-002	+6.14e-002	-1.07e-003	+1.71e-006	+1.71e-005			
28	+7.79e-002	-8.85e-002	-1.15e-001	-3.90e-003	-3.30e-003	+9.20e-004			
29	-8.43e-006	-9.45e-002	-9.77e-002	+2.64e-004	-1.27e-003	+9.36e-004			

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

30	-6.40e-008	-8.11e-007	-1.23e-006	-2.06e-003	-8.39e-005	+5.07e-005
31	-6.14e-008	-1.96e-007	-3.06e-007	-3.08e-003	+1.98e-005	-1.24e-005
32	-6.06e-008	-4.67e-007	-7.85e-007	-3.96e-003	-4.37e-006	+2.30e-006
33	-6.03e-008	-4.03e-007	-6.74e-007	-4.45e-003	+1.23e-006	-1.16e-006
34	-5.98e-008	-4.18e-007	-7.01e-007	-4.46e-003	-1.34e-008	-4.13e-007
35	-5.94e-008	-4.15e-007	-6.89e-007	-3.98e-003	+6.64e-009	-6.65e-007
36	-5.90e-008	-4.14e-007	-7.16e-007	-3.04e-003	+1.15e-006	-5.81e-007
37	-3.06e-008	-2.28e-007	-3.44e-007	-1.20e-003	-4.05e-006	-9.28e-007
38	+3.17e-003	-4.03e-002	+1.12e-001	-1.98e-003	-7.28e-005	+1.96e-005
39	-2.49e-003	-6.09e-002	+1.70e-001	-3.00e-003	+3.09e-005	-4.35e-005
40	-1.17e-003	-7.87e-002	+2.20e-001	-3.88e-003	+6.76e-006	-2.88e-005
41	-1.48e-003	-8.87e-002	+2.48e-001	-4.37e-003	+1.24e-005	-3.23e-005
42	-1.42e-003	-8.89e-002	+2.48e-001	-4.38e-003	+1.11e-005	-3.15e-005
43	-1.43e-003	-7.92e-002	+2.21e-001	-3.90e-003	+1.11e-005	-3.18e-005
44	-1.45e-003	-6.02e-002	+1.68e-001	-2.96e-003	+1.23e-005	-3.17e-005
45	-7.06e-004	-2.36e-002	+6.58e-002	-1.16e-003	+1.83e-006	-1.74e-005
46	-5.34e-008	-1.49e-007	-8.26e-007	-8.26e-007	+3.66e-003	-7.25e-004
47	-4.35e-005	-7.26e-002	-3.68e-001	+3.90e-003	+3.30e-003	-6.49e-004
48	-6.77e-005	-1.30e-001	-6.64e-001	+3.99e-003	+2.30e-003	-4.43e-004
49	-7.50e-005	-1.62e-001	-8.30e-001	+4.08e-003	+8.43e-004	-1.57e-004
50	-6.84e-005	-1.62e-001	-8.33e-001	+4.09e-003	-7.71e-004	+1.57e-004
51	-5.17e-005	-1.30e-001	-6.74e-001	+4.02e-003	-2.26e-003	+4.43e-004
52	-2.81e-005	-7.26e-002	-3.77e-001	+3.93e-003	-3.36e-003	+6.49e-004
53	-3.66e-008	-1.50e-007	-9.52e-007	+3.93e-003	-3.77e-003	+7.26e-004

MASSIME DEFORMAZIONI NODALI

	Trasl.X	Trasl.Y	Trasl.Z	Rotaz.X	Rotaz.Y	Rotaz.Z	DLMax				
Deform. nodali	+7.79e-002		-3.22e-001		-8.34e-001			+5.11e-003	-3.78e-003	+1.46e-003	+8.94e-001
Nodo	28	8	8	16	11	11	8				

06.02 INPUT GRAFICO

Si allegano delle fotografiche che riassumono i dati di input del problema ingegneristico.

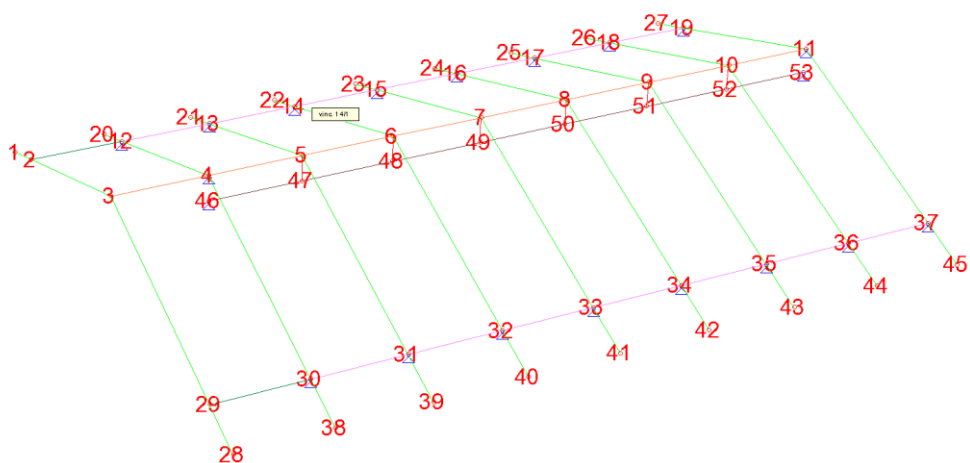


Figura 14, nodi strutturali.

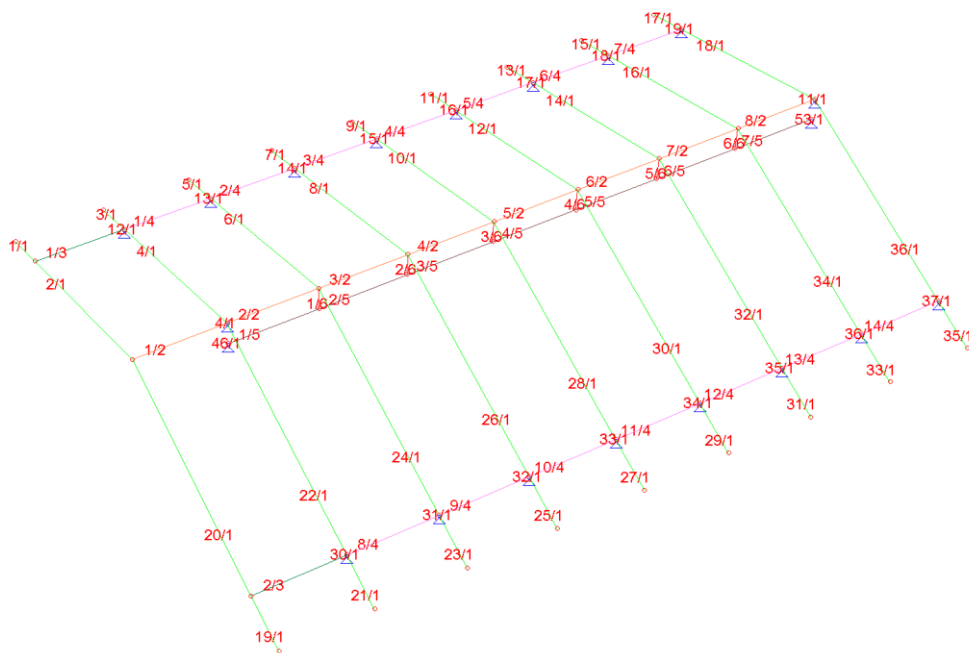


Figura 15, elementi strutturali.

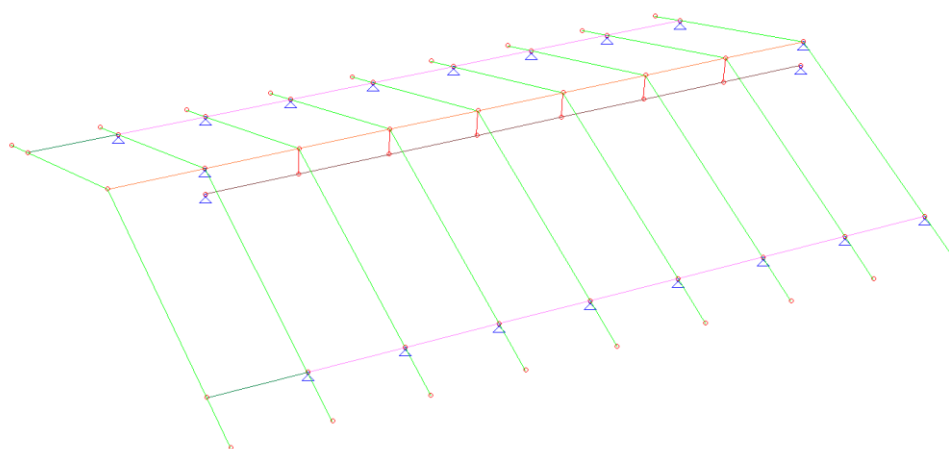


Figura 16, schema FEM 3D unifilare.

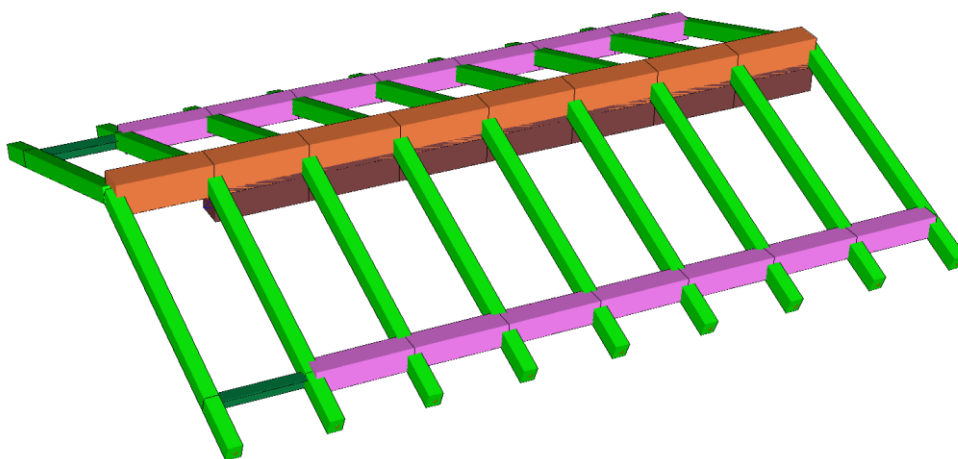


Figura 17, schema FEM 3D solido.

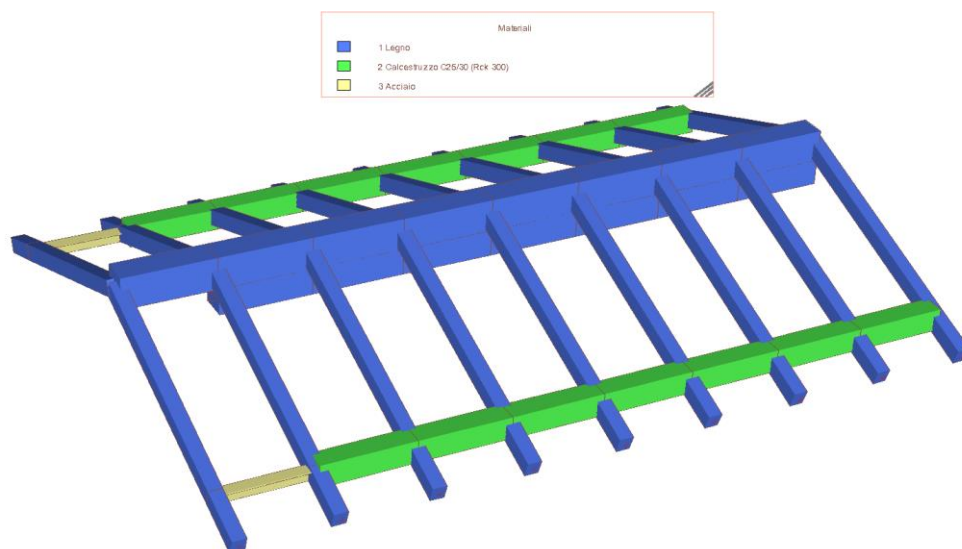


Figura 18, materiali.

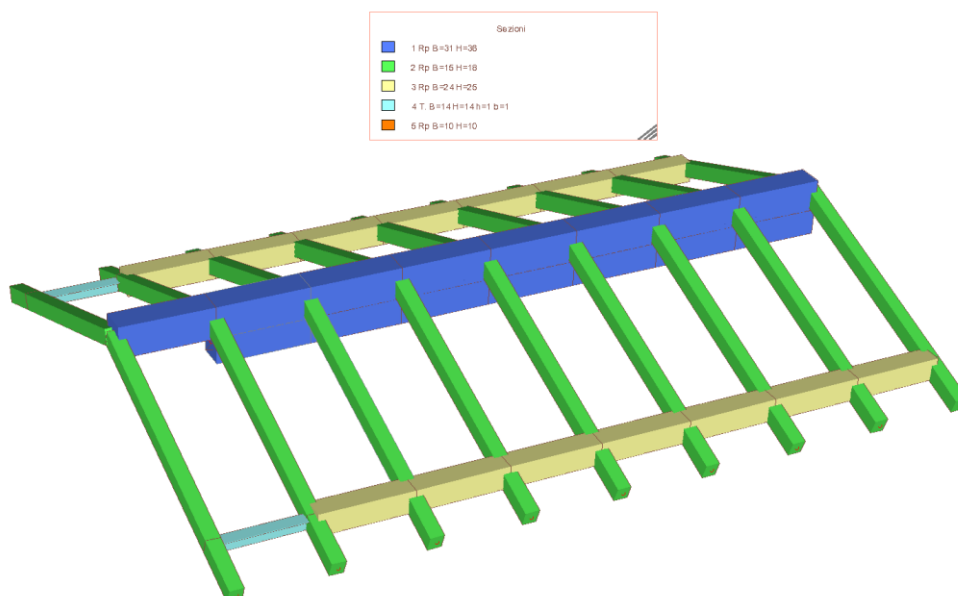


Figura 19, sezioni.

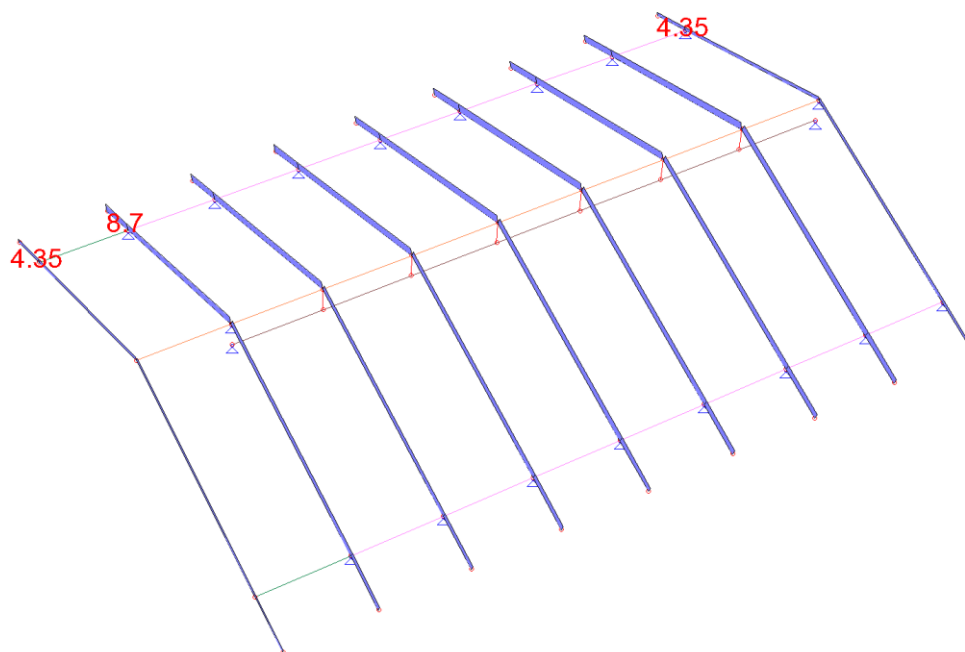


Figura 20, carichi.

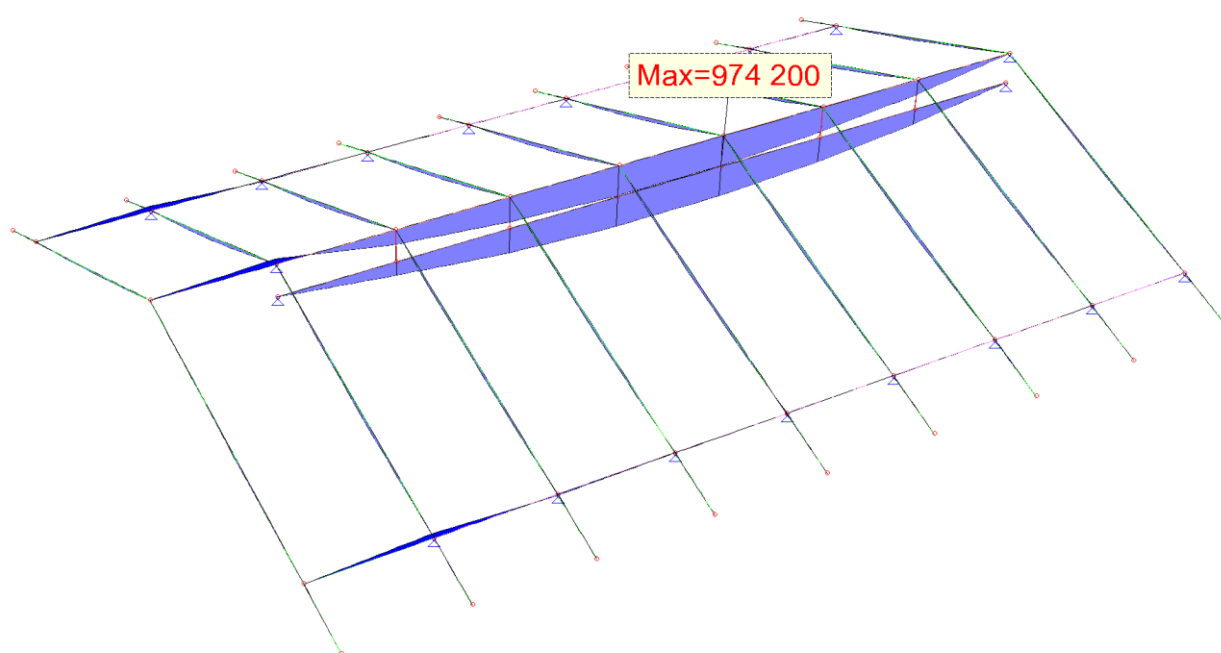


Figura 21, momento M_z su elementi principali.

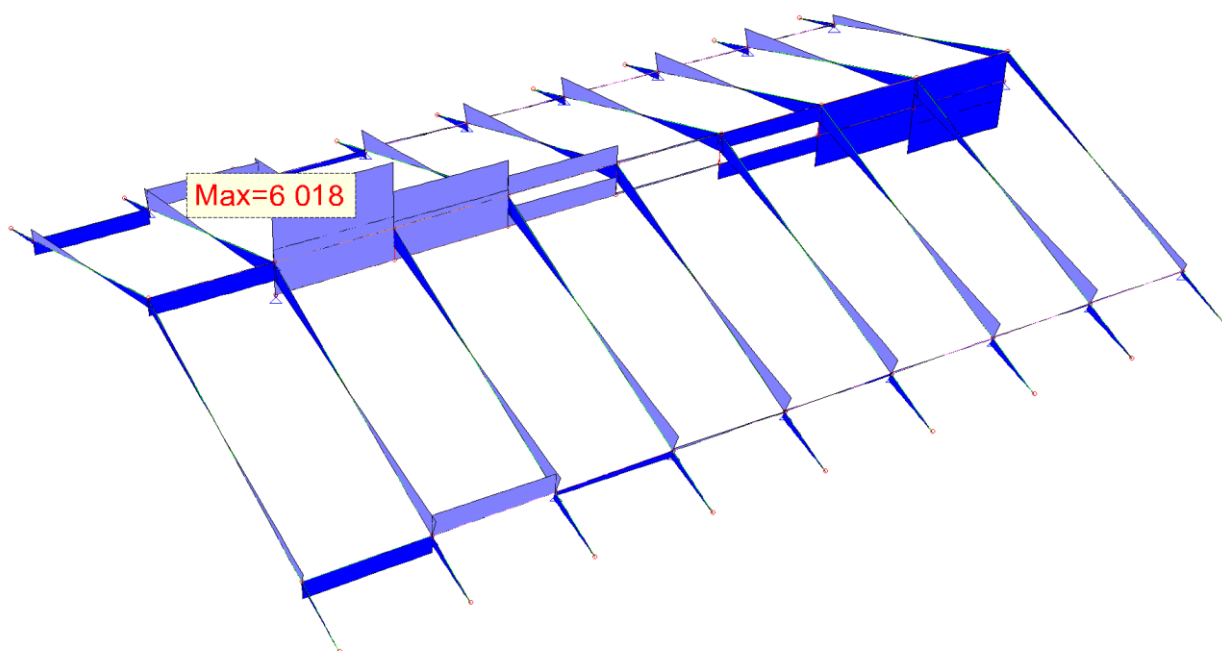


Figura 22, taglio Ty su elementi principali.

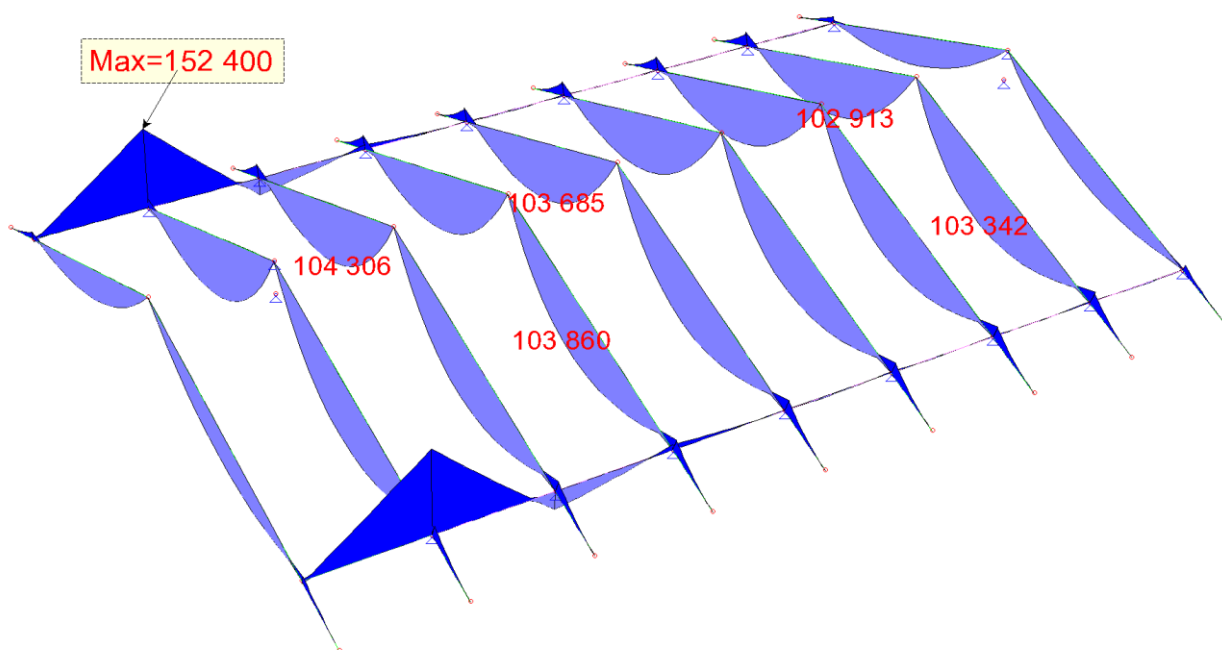


Figura 23, momento Mz su elementi principali.

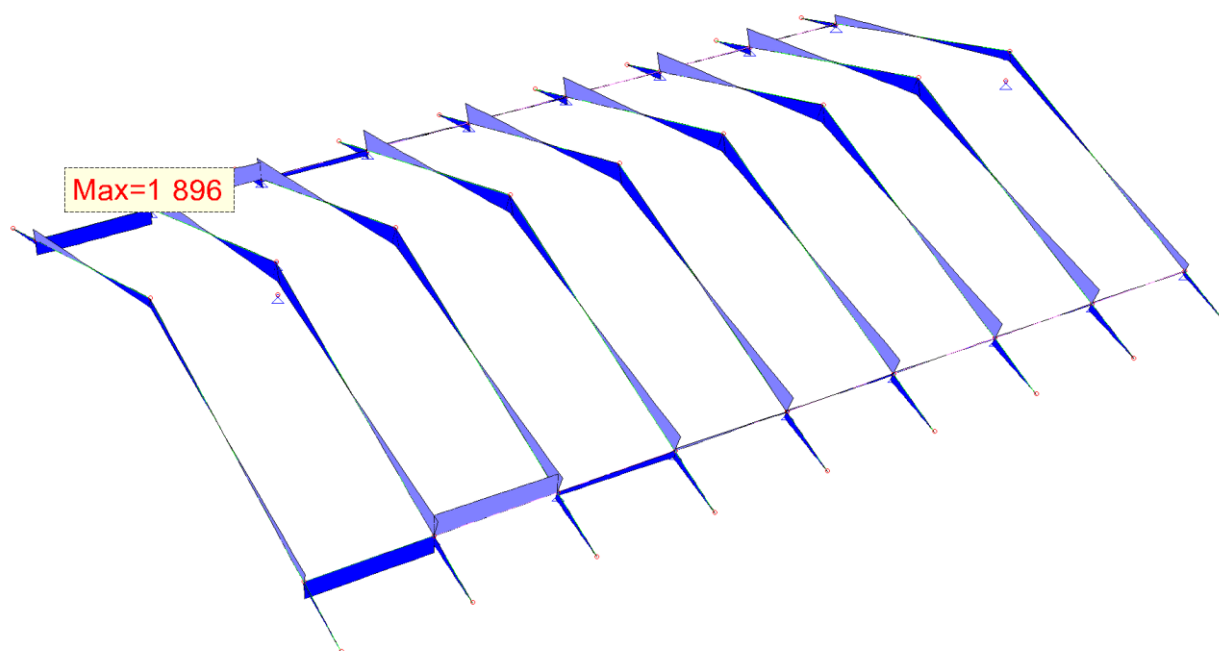


Figura 24, taglio Ty su elementi principali.

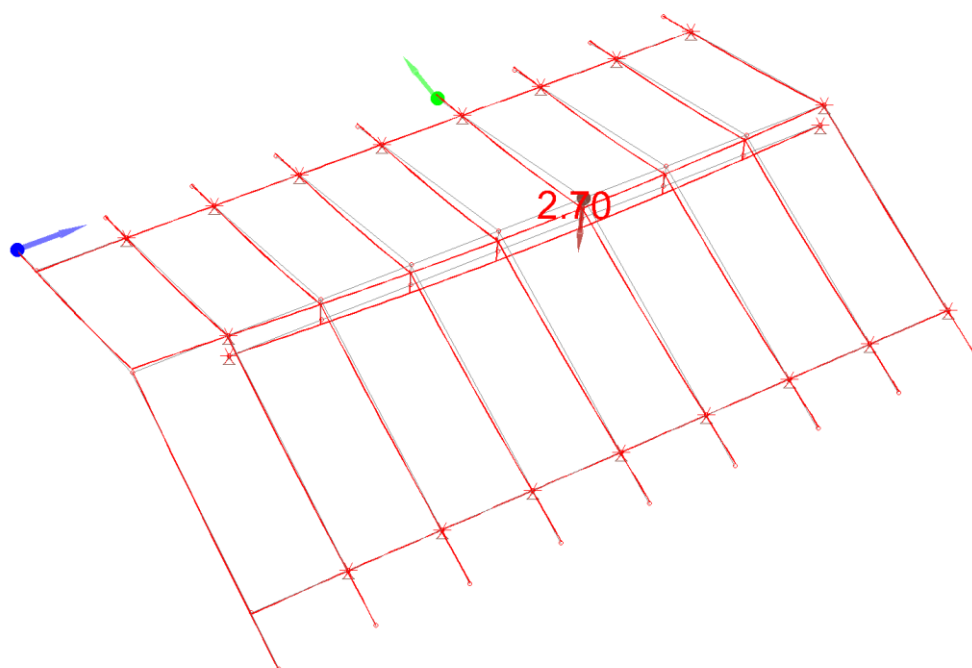


Figura 25, freccia dei colmi allo SLE in condizione rara.

06.03 OUTPUT TESTUALE

Si allega il listato di output del problema ingegneristico.

AMV s.r.l.
Via San Lorenzo, 106 Tel. 0481/779903
34077 Ronchi dei Legionari (GO)

Lavoro: B655-15_v_10 Intestazione lavoro: B655-15_v_10_Tetto
Elemento: TRAVE Metodo di verifica: NTC 2008 - Eurocodice 5
Gruppo: 1 Descrizione: FP_PUNTONI
Tabella: Tabella travi
Tipo legno: Legno massiccio C24 Beta piano 'yx': 1.000 Beta piano 'zx': 1.000
k mod: 0.900

ASTA NUM. 1 NI 1 NF 2 Lungh. 60.0 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.1977 4.1487 4.4735 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	cm	kg			kg*m						
<hr/>											
1	0	0	-0	0	0	0	0	0.00	0.00	0.00	
2	0	5	2	16	0	0	0	0.00	0.01	0.00	
3	0	-5	-2	16	0	0	0	0.00	0.01	0.00	
4	0	5	2	-16	0	0	0	0.00	0.01	0.00	
5	0	-5	-2	-16	0	0	0	0.00	0.01	0.00	
6	0	15	6	5	0	0	0	0.00	0.00	0.00	
7	0	-15	-6	5	0	0	0	0.00	0.00	0.00	
8	0	15	6	-5	0	0	0	0.00	0.00	0.00	
9	0	-15	-6	-5	0	0	0	0.00	0.00	0.00	
10	0	5	2	16	0	0	0	0.00	0.01	0.00	
11	0	-5	-2	16	0	0	0	0.00	0.01	0.00	
12	0	5	2	-16	0	0	0	0.00	0.01	0.00	
13	0	-5	-2	-16	0	0	0	0.00	0.01	0.00	
14	0	15	6	5	0	0	0	0.00	0.00	0.00	
15	0	-15	-6	5	0	0	0	0.00	0.00	0.00	
16	0	15	6	-5	0	0	0	0.00	0.00	0.00	
17	0	-15	-6	-5	0	0	0	0.00	0.00	0.00	
<hr/>											
1	6	14	-40	0	0	-0	-1	0.00	0.01	0.00	
2	6	7	-5	16	0	-1	-0	0.00	0.01	0.00	
3	6	-2	-9	16	0	-1	-0	0.00	0.01	0.00	
4	6	7	-5	-16	0	1	-0	0.00	0.01	0.00	
5	6	-2	-9	-16	0	1	-0	0.00	0.01	0.00	
6	6	18	-1	5	0	-0	0	0.00	0.00	0.00	
7	6	-13	-12	5	0	-0	-1	0.00	0.00	0.00	
8	6	18	-1	-5	0	0	0	0.00	0.00	0.00	
9	6	-13	-12	-5	0	0	-1	0.00	0.00	0.00	
10	6	7	-5	16	0	-1	-0	0.00	0.01	0.00	
11	6	-2	-9	16	0	-1	-0	0.00	0.01	0.00	
12	6	7	-5	-16	0	1	-0	0.00	0.01	0.00	
13	6	-2	-9	-16	0	1	-0	0.00	0.01	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

14	6	18	-1	5	0	-0	0	0.00	0.00	0.00
15	6	-13	-12	5	0	-0	-1	0.00	0.00	0.00
16	6	18	-1	-5	0	0	0	0.00	0.00	0.00
17	6	-13	-12	-5	0	0	-1	0.00	0.00	0.00
1	12	29	-80	0	0	-0	-5	0.01	0.03	0.00
2	12	10	-12	16	0	-2	-1	0.00	0.01	0.00
3	12	0	-16	16	0	-2	-1	0.00	0.01	0.00
4	12	10	-12	-16	0	2	-1	0.00	0.01	0.00
5	12	0	-16	-16	0	2	-1	0.00	0.01	0.00
6	12	20	-8	5	0	-1	-0	0.00	0.00	0.00
7	12	-10	-19	5	0	-1	-1	0.00	0.01	0.00
8	12	20	-8	-5	0	1	-0	0.00	0.00	0.00
9	12	-10	-19	-5	0	1	-1	0.00	0.01	0.00
10	12	10	-12	16	0	-2	-1	0.00	0.01	0.00
11	12	0	-16	16	0	-2	-1	0.00	0.01	0.00
12	12	10	-12	-16	0	2	-1	0.00	0.01	0.00
13	12	0	-16	-16	0	2	-1	0.00	0.01	0.00
14	12	20	-8	5	0	-1	-0	0.00	0.00	0.00
15	12	-10	-19	5	0	-1	-1	0.00	0.01	0.00
16	12	20	-8	-5	0	1	-0	0.00	0.00	0.00
17	12	-10	-19	-5	0	1	-1	0.00	0.01	0.00
1	18	43	-120	0	0	-0	-11	0.01	0.04	0.00
2	18	12	-19	16	0	-3	-2	0.00	0.01	0.00
3	18	3	-22	16	0	-3	-2	0.00	0.01	0.00
4	18	12	-19	-16	0	3	-2	0.00	0.01	0.00
5	18	3	-22	-16	0	3	-2	0.00	0.01	0.00
6	18	23	-15	5	0	-1	-1	0.00	0.01	0.00
7	18	-8	-26	5	0	-1	-3	0.00	0.01	0.00
8	18	23	-15	-5	0	1	-1	0.00	0.01	0.00
9	18	-8	-26	-5	0	1	-3	0.00	0.01	0.00
10	18	12	-19	16	0	-3	-2	0.00	0.01	0.00
11	18	3	-22	16	0	-3	-2	0.00	0.01	0.00
12	18	12	-19	-16	0	3	-2	0.00	0.01	0.00
13	18	3	-22	-16	0	3	-2	0.00	0.01	0.00
14	18	23	-15	5	0	-1	-1	0.00	0.01	0.00
15	18	-8	-26	5	0	-1	-3	0.00	0.01	0.00
16	18	23	-15	-5	0	1	-1	0.00	0.01	0.00
17	18	-8	-26	-5	0	1	-3	0.00	0.01	0.00
1	24	57	-159	0	0	-0	-19	0.02	0.06	0.00
2	24	15	-26	16	0	-4	-3	0.01	0.01	0.00
3	24	5	-29	16	0	-4	-4	0.01	0.01	0.00
4	24	15	-26	-16	0	4	-3	0.01	0.01	0.00
5	24	5	-29	-16	0	4	-4	0.01	0.01	0.00
6	24	25	-22	5	0	-1	-2	0.00	0.01	0.00
7	24	-5	-33	5	0	-1	-5	0.00	0.01	0.00
8	24	25	-22	-5	0	1	-2	0.00	0.01	0.00
9	24	-5	-33	-5	0	1	-5	0.00	0.01	0.00
10	24	15	-26	16	0	-4	-3	0.01	0.01	0.00
11	24	5	-29	16	0	-4	-4	0.01	0.01	0.00
12	24	15	-26	-16	0	4	-3	0.01	0.01	0.00
13	24	5	-29	-16	0	4	-4	0.01	0.01	0.00
14	24	25	-22	5	0	-1	-2	0.00	0.01	0.00
15	24	-5	-33	5	0	-1	-5	0.00	0.01	0.00
16	24	25	-22	-5	0	1	-2	0.00	0.01	0.00
17	24	-5	-33	-5	0	1	-5	0.00	0.01	0.00
1	30	71	-199	0	0	0	-30	0.03	0.07	0.00
2	30	17	-33	16	0	-5	-5	0.01	0.01	0.00
3	30	8	-36	16	0	-5	-6	0.01	0.01	0.00
4	30	17	-33	-16	0	5	-5	0.01	0.01	0.00
5	30	8	-36	-16	0	5	-6	0.01	0.01	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

6	30	28	-29	5	0	-1	-4	0.01	0.01	0.00
7	30	-3	-40	5	0	-1	-7	0.01	0.01	0.00
8	30	28	-29	-5	0	1	-4	0.01	0.01	0.00
9	30	-3	-40	-5	0	1	-7	0.01	0.01	0.00
10	30	17	-33	16	0	-5	-5	0.01	0.01	0.00
11	30	8	-36	16	0	-5	-6	0.01	0.01	0.00
12	30	17	-33	-16	0	5	-5	0.01	0.01	0.00
13	30	8	-36	-16	0	5	-6	0.01	0.01	0.00
14	30	28	-29	5	0	-1	-4	0.01	0.01	0.00
15	30	-3	-40	5	0	-1	-7	0.01	0.01	0.00
16	30	28	-29	-5	0	1	-4	0.01	0.01	0.00
17	30	-3	-40	-5	0	1	-7	0.01	0.01	0.00
1	36	86	-239	0	0	0	-43	0.04	0.09	0.00
2	36	19	-40	16	0	-6	-7	0.01	0.02	0.00
3	36	10	-43	16	0	-6	-8	0.01	0.02	0.00
4	36	19	-40	-16	0	6	-7	0.01	0.02	0.00
5	36	10	-43	-16	0	6	-8	0.01	0.02	0.00
6	36	30	-36	5	0	-2	-6	0.01	0.01	0.00
7	36	-1	-47	5	0	-2	-9	0.01	0.02	0.00
8	36	30	-36	-5	0	2	-6	0.01	0.01	0.00
9	36	-1	-47	-5	0	2	-9	0.01	0.02	0.00
10	36	19	-40	16	0	-6	-7	0.01	0.02	0.00
11	36	10	-43	16	0	-6	-8	0.01	0.02	0.00
12	36	19	-40	-16	0	6	-7	0.01	0.02	0.00
13	36	10	-43	-16	0	6	-8	0.01	0.02	0.00
14	36	30	-36	5	0	-2	-6	0.01	0.01	0.00
15	36	-1	-47	5	0	-2	-9	0.01	0.02	0.00
16	36	30	-36	-5	0	2	-6	0.01	0.01	0.00
17	36	-1	-47	-5	0	2	-9	0.01	0.02	0.00
1	42	100	-279	0	0	0	-59	0.05	0.10	0.00
2	42	22	-47	16	0	-7	-9	0.01	0.02	0.00
3	42	13	-50	16	0	-7	-11	0.01	0.02	0.00
4	42	22	-47	-16	0	7	-9	0.01	0.02	0.00
5	42	13	-50	-16	0	7	-11	0.01	0.02	0.00
6	42	33	-43	5	0	-2	-8	0.01	0.02	0.00
7	42	2	-54	5	0	-2	-12	0.01	0.02	0.00
8	42	33	-43	-5	0	2	-8	0.01	0.02	0.00
9	42	2	-54	-5	0	2	-12	0.01	0.02	0.00
10	42	22	-47	16	0	-7	-9	0.01	0.02	0.00
11	42	13	-50	16	0	-7	-11	0.01	0.02	0.00
12	42	22	-47	-16	0	7	-9	0.01	0.02	0.00
13	42	13	-50	-16	0	7	-11	0.01	0.02	0.00
14	42	33	-43	5	0	-2	-8	0.01	0.02	0.00
15	42	2	-54	5	0	-2	-12	0.01	0.02	0.00
16	42	33	-43	-5	0	2	-8	0.01	0.02	0.00
17	42	2	-54	-5	0	2	-12	0.01	0.02	0.00
1	48	114	-319	0	0	0	-77	0.07	0.12	0.00
2	48	24	-54	16	0	-8	-13	0.02	0.02	0.00
3	48	15	-57	16	0	-8	-14	0.02	0.02	0.00
4	48	24	-54	-16	0	8	-13	0.02	0.02	0.00
5	48	15	-57	-16	0	8	-14	0.02	0.02	0.00
6	48	35	-50	5	0	-2	-11	0.01	0.02	0.00
7	48	4	-61	5	0	-2	-16	0.02	0.02	0.00
8	48	35	-50	-5	0	2	-11	0.01	0.02	0.00
9	48	4	-61	-5	0	2	-16	0.02	0.02	0.00
10	48	24	-54	16	0	-8	-13	0.02	0.02	0.00
11	48	15	-57	16	0	-8	-14	0.02	0.02	0.00
12	48	24	-54	-16	0	8	-13	0.02	0.02	0.00
13	48	15	-57	-16	0	8	-14	0.02	0.02	0.00
14	48	35	-50	5	0	-2	-11	0.01	0.02	0.00
15	48	4	-61	5	0	-2	-16	0.02	0.02	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

16	48	35	-50	-5	0	2	-11	0.01	0.02	0.00
17	48	4	-61	-5	0	2	-16	0.02	0.02	0.00
1	54	128	-359	0	0	0	-97	0.09	0.13	0.00
2	54	27	-61	16	0	-9	-16	0.02	0.02	0.00
3	54	18	-64	16	0	-9	-18	0.02	0.02	0.00
4	54	27	-61	-16	0	9	-16	0.02	0.02	0.00
5	54	18	-64	-16	0	9	-18	0.02	0.02	0.00
6	54	38	-57	5	0	-3	-14	0.02	0.02	0.00
7	54	7	-68	5	0	-3	-20	0.02	0.02	0.00
8	54	38	-57	-5	0	3	-14	0.02	0.02	0.00
9	54	7	-68	-5	0	3	-20	0.02	0.02	0.00
10	54	27	-61	16	0	-9	-16	0.02	0.02	0.00
11	54	18	-64	16	0	-9	-18	0.02	0.02	0.00
12	54	27	-61	-16	0	9	-16	0.02	0.02	0.00
13	54	18	-64	-16	0	9	-18	0.02	0.02	0.00
14	54	38	-57	5	0	-3	-14	0.02	0.02	0.00
15	54	7	-68	5	0	-3	-20	0.02	0.02	0.00
16	54	38	-57	-5	0	3	-14	0.02	0.02	0.00
17	54	7	-68	-5	0	3	-20	0.02	0.02	0.00
1	60	143	-399	0	0	0	-120	0.11	0.14	0.00
2	60	29	-68	16	0	-10	-20	0.02	0.03	0.00
3	60	20	-71	16	0	-10	-22	0.03	0.03	0.00
4	60	29	-68	-16	0	10	-20	0.02	0.03	0.00
5	60	20	-71	-16	0	10	-22	0.03	0.03	0.00
6	60	40	-64	5	0	-3	-17	0.02	0.02	0.00
7	60	9	-75	5	0	-3	-24	0.02	0.03	0.00
8	60	40	-64	-5	0	3	-17	0.02	0.02	0.00
9	60	9	-75	-5	0	3	-24	0.02	0.03	0.00
10	60	29	-68	16	0	-10	-20	0.02	0.03	0.00
11	60	20	-71	16	0	-10	-22	0.03	0.03	0.00
12	60	29	-68	-16	0	10	-20	0.02	0.03	0.00
13	60	20	-71	-16	0	10	-22	0.03	0.03	0.00
14	60	40	-64	5	0	-3	-17	0.02	0.02	0.00
15	60	9	-75	5	0	-3	-24	0.02	0.03	0.00
16	60	40	-64	-5	0	3	-17	0.02	0.02	0.00
17	60	9	-75	-5	0	3	-24	0.02	0.03	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota

3	-5	10	22	12	14	1.000	1.000	0.00	Piano 'zx'
5	-5	10	22	12	14	1.000	1.000	0.00	Piano 'zx'
7	-15	3	24	12	14	1.000	1.000	0.00	Piano 'zx'
9	-15	3	24	12	14	1.000	1.000	0.00	Piano 'zx'
11	-5	10	22	12	14	1.000	1.000	0.00	Piano 'zx'
13	-5	10	22	12	14	1.000	1.000	0.00	Piano 'zx'
15	-15	3	24	12	14	1.000	1.000	0.00	Piano 'zx'
17	-15	3	24	12	14	1.000	1.000	0.00	Piano 'zx'

ASTA NUM. 2 NI 2 NF 3 Lungh. 267.1 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.1977 4.1487 4.4735 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
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File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

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cm		kg		kg*m						
1	0	-635	932	-55	0	-150	-120	0.22	0.34	0.00
2	0	-110	162	-17	0	-46	-20	0.06	0.06	0.00
3	0	-110	162	-6	0	-17	-22	0.03	0.06	0.00
4	0	-110	162	-13	0	-36	-20	0.05	0.06	0.00
5	0	-110	162	-2	0	-6	-22	0.02	0.06	0.00
6	0	-110	161	-28	0	-77	-17	0.09	0.06	0.00
7	0	-110	163	8	0	21	-24	0.04	0.06	0.00
8	0	-110	161	-27	0	-74	-17	0.08	0.06	0.00
9	0	-110	163	9	0	24	-24	0.04	0.06	0.00
10	0	-110	162	-17	0	-46	-20	0.06	0.06	0.00
11	0	-110	162	-6	0	-17	-22	0.03	0.06	0.00
12	0	-110	162	-13	0	-36	-20	0.05	0.06	0.00
13	0	-110	162	-2	0	-6	-22	0.02	0.06	0.00
14	0	-110	161	-28	0	-77	-17	0.09	0.06	0.00
15	0	-110	163	8	0	21	-24	0.04	0.06	0.00
16	0	-110	161	-27	0	-74	-17	0.08	0.06	0.00
17	0	-110	163	9	0	24	-24	0.04	0.06	0.00
1	27	-572	755	-55	0	-136	106	0.20	0.27	0.00
2	27	-99	131	-17	0	-42	19	0.05	0.05	0.00
3	27	-99	131	-6	0	-15	17	0.03	0.05	0.00
4	27	-99	131	-13	0	-32	19	0.04	0.05	0.00
5	27	-99	131	-2	0	-6	17	0.02	0.05	0.00
6	27	-99	130	-28	0	-69	21	0.08	0.05	0.00
7	27	-99	132	8	0	19	15	0.03	0.05	0.00
8	27	-99	130	-27	0	-66	21	0.08	0.05	0.00
9	27	-99	132	9	0	22	15	0.03	0.05	0.00
10	27	-99	131	-17	0	-42	19	0.05	0.05	0.00
11	27	-99	131	-6	0	-15	17	0.03	0.05	0.00
12	27	-99	131	-13	0	-32	19	0.04	0.05	0.00
13	27	-99	131	-2	0	-6	17	0.02	0.05	0.00
14	27	-99	130	-28	0	-69	21	0.08	0.05	0.00
15	27	-99	132	8	0	19	15	0.03	0.05	0.00
16	27	-99	130	-27	0	-66	21	0.08	0.05	0.00
17	27	-99	132	9	0	22	15	0.03	0.05	0.00
1	53	-508	577	-55	0	-121	284	0.32	0.21	0.00
2	53	-88	100	-17	0	-37	50	0.07	0.04	0.00
3	53	-88	101	-6	0	-14	48	0.05	0.04	0.00
4	53	-88	100	-13	0	-29	50	0.06	0.04	0.00
5	53	-88	101	-2	0	-5	48	0.04	0.04	0.00
6	53	-88	99	-28	0	-62	52	0.09	0.04	0.00
7	53	-88	102	8	0	17	47	0.05	0.04	0.00
8	53	-88	99	-27	0	-59	52	0.09	0.04	0.00
9	53	-88	102	9	0	19	47	0.05	0.04	0.00
10	53	-88	100	-17	0	-37	50	0.07	0.04	0.00
11	53	-88	101	-6	0	-14	48	0.05	0.04	0.00
12	53	-88	100	-13	0	-29	50	0.06	0.04	0.00
13	53	-88	101	-2	0	-5	48	0.04	0.04	0.00
14	53	-88	99	-28	0	-62	52	0.09	0.04	0.00
15	53	-88	102	8	0	17	47	0.05	0.04	0.00
16	53	-88	99	-27	0	-59	52	0.09	0.04	0.00
17	53	-88	102	9	0	19	47	0.05	0.04	0.00
1	80	-445	400	-55	0	-106	414	0.42	0.15	0.00
2	80	-77	69	-17	0	-33	73	0.08	0.03	0.00
3	80	-77	70	-6	0	-12	71	0.07	0.03	0.00
4	80	-77	69	-13	0	-25	73	0.08	0.03	0.00
5	80	-77	70	-2	0	-5	71	0.06	0.03	0.00
6	80	-77	68	-28	0	-54	74	0.10	0.03	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

7	80	-77	71	8	0	15	70	0.07	0.03	0.00
8	80	-77	68	-27	0	-52	74	0.10	0.03	0.00
9	80	-77	71	9	0	17	70	0.07	0.03	0.00
10	80	-77	69	-17	0	-33	73	0.08	0.03	0.00
11	80	-77	70	-6	0	-12	71	0.07	0.03	0.00
12	80	-77	69	-13	0	-25	73	0.08	0.03	0.00
13	80	-77	70	-2	0	-5	71	0.06	0.03	0.00
14	80	-77	68	-28	0	-54	74	0.10	0.03	0.00
15	80	-77	71	8	0	15	70	0.07	0.03	0.00
16	80	-77	68	-27	0	-52	74	0.10	0.03	0.00
17	80	-77	71	9	0	17	70	0.07	0.03	0.00

1	107	-381	222	-55	0	-92	497	0.48	0.08	0.00
2	107	-66	38	-17	0	-28	87	0.09	0.02	0.00
3	107	-66	39	-6	0	-10	86	0.08	0.01	0.00
4	107	-66	38	-13	0	-22	87	0.09	0.01	0.00
5	107	-66	39	-2	0	-4	86	0.07	0.01	0.00
6	107	-66	37	-28	0	-47	88	0.11	0.02	0.00
7	107	-66	40	8	0	13	84	0.08	0.01	0.00
8	107	-66	37	-27	0	-45	88	0.11	0.02	0.00
9	107	-66	40	9	0	14	84	0.08	0.01	0.00
10	107	-66	38	-17	0	-28	87	0.09	0.02	0.00
11	107	-66	39	-6	0	-10	86	0.08	0.01	0.00
12	107	-66	38	-13	0	-22	87	0.09	0.01	0.00
13	107	-66	39	-2	0	-4	86	0.07	0.01	0.00
14	107	-66	37	-28	0	-47	88	0.11	0.02	0.00
15	107	-66	40	8	0	13	84	0.08	0.01	0.00
16	107	-66	37	-27	0	-45	88	0.11	0.02	0.00
17	107	-66	40	9	0	14	84	0.08	0.01	0.00

1	134	-318	45	-55	0	-77	533	0.50	0.03	0.00
2	134	-55	7	-17	0	-24	93	0.09	0.01	0.00
3	134	-55	8	-6	0	-9	92	0.08	0.00	0.00
4	134	-55	7	-13	0	-18	93	0.09	0.01	0.00
5	134	-55	8	-2	0	-3	92	0.08	0.00	0.00
6	134	-55	6	-28	0	-39	94	0.11	0.01	0.00
7	134	-55	9	8	0	10	91	0.08	0.00	0.00
8	134	-55	6	-27	0	-37	94	0.11	0.01	0.00
9	134	-55	9	9	0	12	91	0.08	0.00	0.00
10	134	-55	7	-17	0	-24	93	0.09	0.01	0.00
11	134	-55	8	-6	0	-9	92	0.08	0.00	0.00
12	134	-55	7	-13	0	-18	93	0.09	0.01	0.00
13	134	-55	8	-2	0	-3	92	0.08	0.00	0.00
14	134	-55	6	-28	0	-39	94	0.11	0.01	0.00
15	134	-55	9	8	0	10	91	0.08	0.00	0.00
16	134	-55	6	-27	0	-37	94	0.11	0.01	0.00
17	134	-55	9	9	0	12	91	0.08	0.00	0.00

1	160	-254	-133	-55	0	-62	521	0.48	0.05	0.00
2	160	-44	-23	-17	0	-19	91	0.09	0.01	0.00
3	160	-44	-23	-6	0	-7	90	0.08	0.01	0.00
4	160	-44	-23	-13	0	-15	91	0.09	0.01	0.00
5	160	-44	-23	-2	0	-3	90	0.08	0.01	0.00
6	160	-44	-24	-28	0	-32	92	0.10	0.01	0.00
7	160	-44	-22	8	0	8	89	0.08	0.01	0.00
8	160	-44	-24	-27	0	-30	92	0.10	0.01	0.00
9	160	-44	-22	9	0	10	89	0.08	0.01	0.00
10	160	-44	-23	-17	0	-19	91	0.09	0.01	0.00
11	160	-44	-23	-6	0	-7	90	0.08	0.01	0.00
12	160	-44	-23	-13	0	-15	91	0.09	0.01	0.00
13	160	-44	-23	-2	0	-3	90	0.08	0.01	0.00
14	160	-44	-24	-28	0	-32	92	0.10	0.01	0.00
15	160	-44	-22	8	0	8	89	0.08	0.01	0.00
16	160	-44	-24	-27	0	-30	92	0.10	0.01	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

17	160	-44	-22	9	0	10	89	0.08	0.01	0.00
1	187	-191	-310	-55	0	-48	462	0.42	0.11	0.00
2	187	-33	-54	-17	0	-15	81	0.08	0.02	0.00
3	187	-33	-54	-6	0	-5	80	0.07	0.02	0.00
4	187	-33	-54	-13	0	-11	81	0.08	0.02	0.00
5	187	-33	-54	-2	0	-2	80	0.07	0.02	0.00
6	187	-33	-55	-28	0	-24	81	0.09	0.02	0.00
7	187	-33	-53	8	0	6	79	0.07	0.02	0.00
8	187	-33	-55	-27	0	-23	81	0.08	0.02	0.00
9	187	-33	-53	9	0	7	79	0.07	0.02	0.00
10	187	-33	-54	-17	0	-15	81	0.08	0.02	0.00
11	187	-33	-54	-6	0	-5	80	0.07	0.02	0.00
12	187	-33	-54	-13	0	-11	81	0.08	0.02	0.00
13	187	-33	-54	-2	0	-2	80	0.07	0.02	0.00
14	187	-33	-55	-28	0	-24	81	0.09	0.02	0.00
15	187	-33	-53	8	0	6	79	0.07	0.02	0.00
16	187	-33	-55	-27	0	-23	81	0.08	0.02	0.00
17	187	-33	-53	9	0	7	79	0.07	0.02	0.00
1	214	-127	-488	-55	0	-33	355	0.32	0.18	0.00
2	214	-22	-85	-17	0	-10	62	0.06	0.03	0.00
3	214	-22	-84	-6	0	-4	62	0.05	0.03	0.00
4	214	-22	-85	-13	0	-8	62	0.06	0.03	0.00
5	214	-22	-84	-2	0	-2	62	0.05	0.03	0.00
6	214	-22	-86	-28	0	-16	62	0.06	0.03	0.00
7	214	-22	-84	8	0	4	61	0.05	0.03	0.00
8	214	-22	-86	-27	0	-16	62	0.06	0.03	0.00
9	214	-22	-84	9	0	5	61	0.05	0.03	0.00
10	214	-22	-85	-17	0	-10	62	0.06	0.03	0.00
11	214	-22	-84	-6	0	-4	62	0.05	0.03	0.00
12	214	-22	-85	-13	0	-8	62	0.06	0.03	0.00
13	214	-22	-84	-2	0	-2	62	0.05	0.03	0.00
14	214	-22	-86	-28	0	-16	62	0.06	0.03	0.00
15	214	-22	-84	8	0	4	61	0.05	0.03	0.00
16	214	-22	-86	-27	0	-16	62	0.06	0.03	0.00
17	214	-22	-84	9	0	5	61	0.05	0.03	0.00
1	240	-64	-665	-55	0	-18	201	0.18	0.24	0.00
2	240	-11	-116	-17	0	-5	35	0.03	0.04	0.00
3	240	-11	-115	-6	0	-2	35	0.03	0.04	0.00
4	240	-11	-116	-13	0	-4	35	0.03	0.04	0.00
5	240	-11	-115	-2	0	-1	35	0.03	0.04	0.00
6	240	-11	-117	-28	0	-9	35	0.04	0.04	0.00
7	240	-11	-114	8	0	2	35	0.03	0.04	0.00
8	240	-11	-117	-27	0	-9	35	0.04	0.04	0.00
9	240	-11	-114	9	0	2	35	0.03	0.04	0.00
10	240	-11	-116	-17	0	-5	35	0.03	0.04	0.00
11	240	-11	-115	-6	0	-2	35	0.03	0.04	0.00
12	240	-11	-116	-13	0	-4	35	0.03	0.04	0.00
13	240	-11	-115	-2	0	-1	35	0.03	0.04	0.00
14	240	-11	-117	-28	0	-9	35	0.04	0.04	0.00
15	240	-11	-114	8	0	2	35	0.03	0.04	0.00
16	240	-11	-117	-27	0	-9	35	0.04	0.04	0.00
17	240	-11	-114	9	0	2	35	0.03	0.04	0.00
1	267	-0	-843	-55	0	-3	-0	0.00	0.31	0.00
2	267	0	-147	-17	0	-1	-0	0.00	0.05	0.00
3	267	0	-146	-6	0	-0	-0	0.00	0.05	0.00
4	267	0	-147	-13	0	-1	-0	0.00	0.05	0.00
5	267	0	-146	-2	0	-1	-0	0.00	0.05	0.00
6	267	0	-148	-28	0	-1	-0	0.00	0.05	0.00
7	267	0	-145	8	0	-0	-0	0.00	0.05	0.00
8	267	0	-148	-27	0	-1	-0	0.00	0.05	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

9	267	0	-145	9	0	-0	-0	0.00	0.05	0.00
10	267	0	-147	-17	0	-1	-0	0.00	0.05	0.00
11	267	0	-146	-6	0	-0	-0	0.00	0.05	0.00
12	267	0	-147	-13	0	-1	-0	0.00	0.05	0.00
13	267	0	-146	-2	0	-1	-0	0.00	0.05	0.00
14	267	0	-148	-28	0	-1	-0	0.00	0.05	0.00
15	267	0	-145	8	0	-0	-0	0.00	0.05	0.00
16	267	0	-148	-27	0	-1	-0	0.00	0.05	0.00
17	267	0	-145	9	0	-0	-0	0.00	0.05	0.00

Verifica di STABILITA'

NC	Fx -- kg	My -- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
1	-635	150	533	52	62	0.781	0.655	0.58	Piano 'zx'
2	-110	46	93	52	62	0.781	0.655	0.12	Piano 'zx'
3	-110	17	92	52	62	0.781	0.655	0.09	Piano 'zx'
4	-110	36	93	52	62	0.781	0.655	0.11	Piano 'zx'
5	-110	6	92	52	62	0.781	0.655	0.09	Piano 'zx'
6	-110	77	94	52	62	0.781	0.655	0.14	Piano 'zx'
7	-110	21	91	52	62	0.781	0.655	0.10	Piano 'zx'
8	-110	74	94	52	62	0.781	0.655	0.14	Piano 'zx'
9	-110	24	91	52	62	0.781	0.655	0.10	Piano 'zx'
10	-110	46	93	52	62	0.781	0.655	0.12	Piano 'zx'
11	-110	17	92	52	62	0.781	0.655	0.09	Piano 'zx'
12	-110	36	93	52	62	0.781	0.655	0.11	Piano 'zx'
13	-110	6	92	52	62	0.781	0.655	0.09	Piano 'zx'
14	-110	77	94	52	62	0.781	0.655	0.14	Piano 'zx'
15	-110	21	91	52	62	0.781	0.655	0.10	Piano 'zx'
16	-110	74	94	52	62	0.781	0.655	0.14	Piano 'zx'
17	-110	24	91	52	62	0.781	0.655	0.10	Piano 'zx'

ASTA NUM. 3 NI 20 NF 12 Lungh. 60.0 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x -- cm	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
1	0	-0	0	-0	0	-0	0	0.00	0.00	0.00	
2	0	9	3	31	0	-0	0	0.00	0.01	0.00	
3	0	-9	-3	31	0	-0	0	0.00	0.01	0.00	
4	0	9	3	-31	0	-0	0	0.00	0.01	0.00	
5	0	-9	-3	-31	0	-0	0	0.00	0.01	0.00	
6	0	29	10	9	0	-0	0	0.00	0.01	0.00	
7	0	-29	-10	9	0	-0	0	0.00	0.01	0.00	
8	0	29	10	-9	0	-0	0	0.00	0.01	0.00	
9	0	-29	-10	-9	0	-0	0	0.00	0.01	0.00	
10	0	9	3	31	0	-0	0	0.00	0.01	0.00	
11	0	-9	-3	31	0	-0	0	0.00	0.01	0.00	
12	0	9	3	-31	0	-0	0	0.00	0.01	0.00	
13	0	-9	-3	-31	0	-0	0	0.00	0.01	0.00	
14	0	29	10	9	0	-0	0	0.00	0.01	0.00	
15	0	-29	-10	9	0	-0	0	0.00	0.01	0.00	
16	0	29	10	-9	0	-0	0	0.00	0.01	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

17	0	-29	-10	-9	0	-0	0	0.00	0.01	0.00
1	6	28	-79	-0	0	-0	-2	0.00	0.03	0.00
2	6	13	-10	31	0	-2	-0	0.00	0.01	0.00
3	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00
4	6	13	-10	-31	0	2	-0	0.00	0.01	0.00
5	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00
6	6	34	-3	9	0	-1	0	0.00	0.00	0.00
7	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00
8	6	34	-3	-9	0	1	0	0.00	0.00	0.00
9	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00
10	6	13	-10	31	0	-2	-0	0.00	0.01	0.00
11	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00
12	6	13	-10	-31	0	2	-0	0.00	0.01	0.00
13	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00
14	6	34	-3	9	0	-1	0	0.00	0.00	0.00
15	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00
16	6	34	-3	-9	0	1	0	0.00	0.00	0.00
17	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00
1	12	56	-157	-0	0	-0	-9	0.01	0.06	0.00
2	12	18	-23	31	0	-4	-1	0.01	0.01	0.00
3	12	1	-29	31	0	-4	-2	0.00	0.02	0.00
4	12	18	-23	-31	0	4	-1	0.01	0.01	0.00
5	12	1	-29	-31	0	4	-2	0.00	0.02	0.00
6	12	39	-16	9	0	-1	-0	0.00	0.01	0.00
7	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00
8	12	39	-16	-9	0	1	-0	0.00	0.01	0.00
9	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00
10	12	18	-23	31	0	-4	-1	0.01	0.01	0.00
11	12	1	-29	31	0	-4	-2	0.00	0.02	0.00
12	12	18	-23	-31	0	4	-1	0.01	0.01	0.00
13	12	1	-29	-31	0	4	-2	0.00	0.02	0.00
14	12	39	-16	9	0	-1	-0	0.00	0.01	0.00
15	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00
16	12	39	-16	-9	0	1	-0	0.00	0.01	0.00
17	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00
1	18	85	-236	-0	0	-0	-21	0.02	0.09	0.00
2	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
3	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
4	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
5	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
6	18	43	-29	9	0	-2	-2	0.00	0.01	0.00
7	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
8	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
9	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
10	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
11	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
12	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
13	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
14	18	43	-29	9	0	-2	-2	0.00	0.01	0.00
15	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
16	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
17	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
1	24	113	-315	-0	0	-0	-38	0.04	0.11	0.00
2	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
3	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
4	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
5	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
6	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
7	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
8	24	48	-42	-9	0	2	-4	0.01	0.02	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

9	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
10	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
11	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
12	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
13	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
14	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
15	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
16	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
17	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
1	30	141	-394	-0	0	-0	-59	0.06	0.14	0.00
2	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
3	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
4	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
5	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
6	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
7	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
8	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
9	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
10	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
11	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
12	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
13	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
14	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
15	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
16	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
17	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
1	36	169	-473	-0	0	-0	-85	0.08	0.17	0.00
2	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
3	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
4	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
5	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
6	36	57	-68	9	0	-3	-10	0.01	0.02	0.00
7	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
8	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
9	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
10	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
11	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
12	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
13	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
14	36	57	-68	9	0	-3	-10	0.01	0.02	0.00
15	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
16	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
17	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
1	42	197	-551	-0	0	-0	-116	0.11	0.20	0.00
2	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
3	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
4	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
5	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
6	42	62	-81	9	0	-4	-15	0.02	0.03	0.00
7	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
8	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
9	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
10	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
11	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
12	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
13	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
14	42	62	-81	9	0	-4	-15	0.02	0.03	0.00
15	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
16	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
17	42	4	-102	-9	0	4	-24	0.02	0.04	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	48	225	-630	-0	0	-0	-151	0.14	0.23	0.00
2	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
3	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
4	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
5	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
6	48	67	-94	9	0	-4	-20	0.02	0.03	0.00
7	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
8	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
9	48	8	-115	-9	0	4	-30	0.03	0.04	0.00
10	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
11	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
12	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
13	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
14	48	67	-94	9	0	-4	-20	0.02	0.03	0.00
15	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
16	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
17	48	8	-115	-9	0	4	-30	0.03	0.04	0.00

1	54	254	-709	-0	0	0	-191	0.17	0.26	0.00
2	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
3	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
4	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
5	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
6	54	71	-107	9	0	-5	-26	0.03	0.04	0.00
7	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
8	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
9	54	13	-128	-9	0	5	-37	0.04	0.05	0.00
10	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
11	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
12	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
13	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
14	54	71	-107	9	0	-5	-26	0.03	0.04	0.00
15	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
16	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
17	54	13	-128	-9	0	5	-37	0.04	0.05	0.00

1	60	282	-788	-0	0	0	-236	0.21	0.29	0.00
2	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
3	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
4	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
5	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
6	60	76	-121	9	0	-6	-33	0.03	0.04	0.00
7	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
8	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
9	60	18	-141	-9	0	6	-46	0.04	0.05	0.00
10	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
11	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
12	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
13	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
14	60	76	-121	9	0	-6	-33	0.03	0.04	0.00
15	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
16	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
17	60	18	-141	-9	0	6	-46	0.04	0.05	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota

1	-0	0	236	12	14	1.000	1.000	0.10	Piano 'zx'

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

3	-9	19	41	12	14	1.000	1.000	0.10	Piano 'zx'
5	-9	19	41	12	14	1.000	1.000	0.10	Piano 'zx'
7	-29	6	46	12	14	1.000	1.000	0.10	Piano 'zx'
9	-29	6	46	12	14	1.000	1.000	0.10	Piano 'zx'
11	-9	19	41	12	14	1.000	1.000	0.10	Piano 'zx'
13	-9	19	41	12	14	1.000	1.000	0.10	Piano 'zx'
15	-29	6	46	12	14	1.000	1.000	0.10	Piano 'zx'
17	-29	6	46	12	14	1.000	1.000	0.10	Piano 'zx'

ASTA NUM. 4 NI 12 NF 4 Lungh. 267.1 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	cm	kg			kg*m						
1	0	-1255	1826	-2	0	-10	-194	0.17	0.66	0.00	
2	0	-209	303	-1	0	-3	-29	0.03	0.11	0.00	
3	0	-209	304	-0	0	-1	-33	0.03	0.11	0.00	
4	0	-209	303	-0	0	-2	-29	0.03	0.11	0.00	
5	0	-209	304	-0	0	-1	-33	0.03	0.11	0.00	
6	0	-209	301	-1	0	-4	-26	0.02	0.11	0.00	
7	0	-209	305	0	0	0	-36	0.03	0.11	0.00	
8	0	-209	301	-1	0	-3	-26	0.02	0.11	0.00	
9	0	-209	305	0	0	0	-36	0.03	0.11	0.00	
10	0	-209	303	-1	0	-3	-29	0.03	0.11	0.00	
11	0	-209	304	-0	0	-1	-33	0.03	0.11	0.00	
12	0	-209	303	-0	0	-2	-29	0.03	0.11	0.00	
13	0	-209	304	-0	0	-1	-33	0.03	0.11	0.00	
14	0	-209	301	-1	0	-4	-26	0.02	0.11	0.00	
15	0	-209	305	0	0	0	-36	0.03	0.11	0.00	
16	0	-209	301	-1	0	-3	-26	0.02	0.11	0.00	
17	0	-209	305	0	0	0	-36	0.03	0.11	0.00	
1	27	-1130	1475	-2	0	-9	247	0.22	0.54	0.00	
2	27	-188	244	-1	0	-2	44	0.04	0.09	0.00	
3	27	-188	245	-0	0	-1	41	0.04	0.09	0.00	
4	27	-188	244	-0	0	-2	44	0.04	0.09	0.00	
5	27	-188	245	-0	0	-1	41	0.03	0.09	0.00	
6	27	-188	243	-1	0	-3	47	0.04	0.09	0.00	
7	27	-188	247	0	0	0	38	0.03	0.09	0.00	
8	27	-188	243	-1	0	-3	47	0.04	0.09	0.00	
9	27	-188	247	0	0	0	38	0.03	0.09	0.00	
10	27	-188	244	-1	0	-2	44	0.04	0.09	0.00	
11	27	-188	245	-0	0	-1	41	0.04	0.09	0.00	
12	27	-188	244	-0	0	-2	44	0.04	0.09	0.00	
13	27	-188	245	-0	0	-1	41	0.03	0.09	0.00	
14	27	-188	243	-1	0	-3	47	0.04	0.09	0.00	
15	27	-188	247	0	0	0	38	0.03	0.09	0.00	
16	27	-188	243	-1	0	-3	47	0.04	0.09	0.00	
17	27	-188	247	0	0	0	38	0.03	0.09	0.00	
1	53	-1004	1125	-2	0	-9	594	0.51	0.41	0.00	
2	53	-167	186	-1	0	-2	101	0.09	0.07	0.00	
3	53	-167	187	-0	0	-1	99	0.08	0.07	0.00	
4	53	-167	186	-0	0	-2	101	0.09	0.07	0.00	
5	53	-167	187	-0	0	-1	99	0.08	0.07	0.00	
6	53	-167	185	-1	0	-3	104	0.09	0.07	0.00	
7	53	-167	188	0	0	0	96	0.08	0.07	0.00	
8	53	-167	185	-1	0	-3	104	0.09	0.07	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

9	53	-167	188	0	0	0	96	0.08	0.07	0.00
10	53	-167	186	-1	0	-2	101	0.09	0.07	0.00
11	53	-167	187	-0	0	-1	99	0.08	0.07	0.00
12	53	-167	186	-0	0	-2	101	0.09	0.07	0.00
13	53	-167	187	-0	0	-1	99	0.08	0.07	0.00
14	53	-167	185	-1	0	-3	104	0.09	0.07	0.00
15	53	-167	188	0	0	0	96	0.08	0.07	0.00
16	53	-167	185	-1	0	-3	104	0.09	0.07	0.00
17	53	-167	188	0	0	0	96	0.08	0.07	0.00
1	80	-879	774	-2	0	-8	848	0.72	0.28	0.00
2	80	-146	128	-1	0	-2	143	0.12	0.05	0.00
3	80	-146	129	-0	0	-1	141	0.12	0.05	0.00
4	80	-146	128	-0	0	-2	143	0.12	0.05	0.00
5	80	-146	129	-0	0	-1	141	0.12	0.05	0.00
6	80	-146	126	-1	0	-3	145	0.12	0.05	0.00
7	80	-146	130	0	0	0	138	0.12	0.05	0.00
8	80	-146	126	-1	0	-3	145	0.12	0.05	0.00
9	80	-146	130	0	0	0	138	0.12	0.05	0.00
10	80	-146	128	-1	0	-2	143	0.12	0.05	0.00
11	80	-146	129	-0	0	-1	141	0.12	0.05	0.00
12	80	-146	128	-0	0	-2	143	0.12	0.05	0.00
13	80	-146	129	-0	0	-1	141	0.12	0.05	0.00
14	80	-146	126	-1	0	-3	145	0.12	0.05	0.00
15	80	-146	130	0	0	0	138	0.12	0.05	0.00
16	80	-146	126	-1	0	-3	145	0.12	0.05	0.00
17	80	-146	130	0	0	0	138	0.12	0.05	0.00
1	107	-753	424	-2	0	-8	1007	0.85	0.15	0.00
2	107	-125	69	-1	0	-2	169	0.14	0.03	0.00
3	107	-125	70	-0	0	-1	167	0.14	0.03	0.00
4	107	-125	69	-0	0	-2	169	0.14	0.03	0.00
5	107	-125	70	-0	0	-1	167	0.14	0.03	0.00
6	107	-125	68	-1	0	-3	171	0.15	0.02	0.00
7	107	-125	72	0	0	0	165	0.14	0.03	0.00
8	107	-125	68	-1	0	-3	171	0.15	0.02	0.00
9	107	-125	72	0	0	0	165	0.14	0.03	0.00
10	107	-125	69	-1	0	-2	169	0.14	0.03	0.00
11	107	-125	70	-0	0	-1	167	0.14	0.03	0.00
12	107	-125	69	-0	0	-2	169	0.14	0.03	0.00
13	107	-125	70	-0	0	-1	167	0.14	0.03	0.00
14	107	-125	68	-1	0	-3	171	0.15	0.02	0.00
15	107	-125	72	0	0	0	165	0.14	0.03	0.00
16	107	-125	68	-1	0	-3	171	0.15	0.02	0.00
17	107	-125	72	0	0	0	165	0.14	0.03	0.00
1	134	-628	73	-2	0	-7	1074	0.91	0.03	0.00
2	134	-104	11	-1	0	-2	180	0.15	0.00	0.00
3	134	-104	12	-0	0	-1	178	0.15	0.00	0.00
4	134	-104	11	-0	0	-1	180	0.15	0.00	0.00
5	134	-104	12	-0	0	-1	178	0.15	0.00	0.00
6	134	-104	10	-1	0	-3	182	0.15	0.00	0.00
7	134	-104	14	0	0	0	177	0.15	0.00	0.00
8	134	-104	10	-1	0	-3	182	0.15	0.00	0.00
9	134	-104	14	0	0	0	177	0.15	0.00	0.00
10	134	-104	11	-1	0	-2	180	0.15	0.00	0.00
11	134	-104	12	-0	0	-1	178	0.15	0.00	0.00
12	134	-104	11	-0	0	-1	180	0.15	0.00	0.00
13	134	-104	12	-0	0	-1	178	0.15	0.00	0.00
14	134	-104	10	-1	0	-3	182	0.15	0.00	0.00
15	134	-104	14	0	0	0	177	0.15	0.00	0.00
16	134	-104	10	-1	0	-3	182	0.15	0.00	0.00
17	134	-104	14	0	0	0	177	0.15	0.00	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	160	-502	-278	-2	0	-7	1046	0.88	0.10	0.00
2	160	-83	-47	-1	0	-2	175	0.15	0.02	0.00
3	160	-83	-46	-0	0	-1	174	0.15	0.02	0.00
4	160	-83	-47	-0	0	-1	175	0.15	0.02	0.00
5	160	-83	-46	-0	0	-1	174	0.15	0.02	0.00
6	160	-83	-49	-1	0	-3	176	0.15	0.02	0.00
7	160	-83	-45	0	0	0	172	0.15	0.02	0.00
8	160	-83	-49	-1	0	-2	176	0.15	0.02	0.00
9	160	-83	-45	0	0	0	172	0.15	0.02	0.00
10	160	-83	-47	-1	0	-2	175	0.15	0.02	0.00
11	160	-83	-46	-0	0	-1	174	0.15	0.02	0.00
12	160	-83	-47	-0	0	-1	175	0.15	0.02	0.00
13	160	-83	-46	-0	0	-1	174	0.15	0.02	0.00
14	160	-83	-49	-1	0	-3	176	0.15	0.02	0.00
15	160	-83	-45	0	0	0	172	0.15	0.02	0.00
16	160	-83	-49	-1	0	-2	176	0.15	0.02	0.00
17	160	-83	-45	0	0	0	172	0.15	0.02	0.00

1	187	-377	-628	-2	0	-6	925	0.78	0.23	0.00
2	187	-63	-106	-1	0	-2	155	0.13	0.04	0.00
3	187	-63	-104	-0	0	-1	154	0.13	0.04	0.00
4	187	-63	-106	-0	0	-1	155	0.13	0.04	0.00
5	187	-63	-104	-0	0	-1	154	0.13	0.04	0.00
6	187	-63	-107	-1	0	-2	156	0.13	0.04	0.00
7	187	-63	-103	0	0	0	153	0.13	0.04	0.00
8	187	-63	-107	-1	0	-2	156	0.13	0.04	0.00
9	187	-63	-103	0	0	0	153	0.13	0.04	0.00
10	187	-63	-106	-1	0	-2	155	0.13	0.04	0.00
11	187	-63	-104	-0	0	-1	154	0.13	0.04	0.00
12	187	-63	-106	-0	0	-1	155	0.13	0.04	0.00
13	187	-63	-104	-0	0	-1	154	0.13	0.04	0.00
14	187	-63	-107	-1	0	-2	156	0.13	0.04	0.00
15	187	-63	-103	0	0	0	153	0.13	0.04	0.00
16	187	-63	-107	-1	0	-2	156	0.13	0.04	0.00
17	187	-63	-103	0	0	0	153	0.13	0.04	0.00

1	214	-251	-979	-2	0	-6	710	0.60	0.36	0.00
2	214	-42	-164	-1	0	-1	119	0.10	0.06	0.00
3	214	-42	-163	-0	0	-1	118	0.10	0.06	0.00
4	214	-42	-164	-0	0	-1	119	0.10	0.06	0.00
5	214	-42	-163	-0	0	-1	118	0.10	0.06	0.00
6	214	-42	-165	-1	0	-2	119	0.10	0.06	0.00
7	214	-42	-161	0	0	0	117	0.10	0.06	0.00
8	214	-42	-165	-1	0	-2	119	0.10	0.06	0.00
9	214	-42	-161	0	0	0	117	0.10	0.06	0.00
10	214	-42	-164	-1	0	-1	119	0.10	0.06	0.00
11	214	-42	-163	-0	0	-1	118	0.10	0.06	0.00
12	214	-42	-164	-0	0	-1	119	0.10	0.06	0.00
13	214	-42	-163	-0	0	-1	118	0.10	0.06	0.00
14	214	-42	-165	-1	0	-2	119	0.10	0.06	0.00
15	214	-42	-161	0	0	0	117	0.10	0.06	0.00
16	214	-42	-165	-1	0	-2	119	0.10	0.06	0.00
17	214	-42	-161	0	0	0	117	0.10	0.06	0.00

1	240	-126	-1329	-2	0	-5	402	0.34	0.48	0.00
2	240	-21	-222	-1	0	-1	67	0.06	0.08	0.00
3	240	-21	-221	-0	0	-1	67	0.06	0.08	0.00
4	240	-21	-222	-0	0	-1	67	0.06	0.08	0.00
5	240	-21	-221	-0	0	-1	67	0.06	0.08	0.00
6	240	-21	-223	-1	0	-2	67	0.06	0.08	0.00
7	240	-21	-220	0	0	0	66	0.06	0.08	0.00
8	240	-21	-223	-1	0	-2	67	0.06	0.08	0.00
9	240	-21	-220	0	0	0	66	0.06	0.08	0.00
10	240	-21	-222	-1	0	-1	67	0.06	0.08	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

11	240	-21	-221	-0	0	-1	67	0.06	0.08	0.00
12	240	-21	-222	-0	0	-1	67	0.06	0.08	0.00
13	240	-21	-221	-0	0	-1	67	0.06	0.08	0.00
14	240	-21	-223	-1	0	-2	67	0.06	0.08	0.00
15	240	-21	-220	0	0	0	66	0.06	0.08	0.00
16	240	-21	-223	-1	0	-2	67	0.06	0.08	0.00
17	240	-21	-220	0	0	0	66	0.06	0.08	0.00
1	267	-0	-1680	-2	0	-5	-0	0.00	0.61	0.00
2	267	0	-280	-1	0	-1	-0	0.00	0.10	0.00
3	267	0	-279	-0	0	-1	-0	0.00	0.10	0.00
4	267	0	-280	-0	0	-1	-0	0.00	0.10	0.00
5	267	0	-279	-0	0	-1	-0	0.00	0.10	0.00
6	267	0	-282	-1	0	-2	-0	0.00	0.10	0.00
7	267	0	-278	0	0	0	-0	0.00	0.10	0.00
8	267	0	-282	-1	0	-2	-0	0.00	0.10	0.00
9	267	0	-278	0	0	0	-0	0.00	0.10	0.00
10	267	0	-280	-1	0	-1	-0	0.00	0.10	0.00
11	267	0	-279	-0	0	-1	-0	0.00	0.10	0.00
12	267	0	-280	-0	0	-1	-0	0.00	0.10	0.00
13	267	0	-279	-0	0	-1	-0	0.00	0.10	0.00
14	267	0	-282	-1	0	-2	-0	0.00	0.10	0.00
15	267	0	-278	0	0	0	-0	0.00	0.10	0.00
16	267	0	-282	-1	0	-2	-0	0.00	0.10	0.00
17	267	0	-278	0	0	0	-0	0.00	0.10	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota

1	-1255	10	1074	52	62	0.781	0.655	0.97	Piano 'zx'
2	-209	3	180	52	62	0.781	0.655	0.16	Piano 'zx'
3	-209	1	178	52	62	0.781	0.655	0.16	Piano 'zx'
4	-209	2	180	52	62	0.781	0.655	0.16	Piano 'zx'
5	-209	1	178	52	62	0.781	0.655	0.16	Piano 'zx'
6	-209	4	182	52	62	0.781	0.655	0.16	Piano 'zx'
7	-209	0	177	52	62	0.781	0.655	0.16	Piano 'zx'
8	-209	3	182	52	62	0.781	0.655	0.16	Piano 'zx'
9	-209	0	177	52	62	0.781	0.655	0.16	Piano 'zx'
10	-209	3	180	52	62	0.781	0.655	0.16	Piano 'zx'
11	-209	1	178	52	62	0.781	0.655	0.16	Piano 'zx'
12	-209	2	180	52	62	0.781	0.655	0.16	Piano 'zx'
13	-209	1	178	52	62	0.781	0.655	0.16	Piano 'zx'
14	-209	4	182	52	62	0.781	0.655	0.16	Piano 'zx'
15	-209	0	177	52	62	0.781	0.655	0.16	Piano 'zx'
16	-209	3	182	52	62	0.781	0.655	0.16	Piano 'zx'
17	-209	0	177	52	62	0.781	0.655	0.16	Piano 'zx'

ASTA NUM. 5 NI 21 NF 13 Lungh. 60.0 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
--		-----			-----			-----			
cm		kg			kg*m						

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	0	0	0	-0	0	-0	0	0.00	0.00	0.00
2	0	9	3	31	0	-0	0	0.00	0.01	0.00
3	0	-9	-3	31	0	-0	0	0.00	0.01	0.00
4	0	9	3	-31	0	-0	0	0.00	0.01	0.00
5	0	-9	-3	-31	0	-0	0	0.00	0.01	0.00
6	0	29	10	9	0	-0	0	0.00	0.01	0.00
7	0	-29	-10	9	0	-0	0	0.00	0.01	0.00
8	0	29	10	-9	0	-0	0	0.00	0.01	0.00
9	0	-29	-10	-9	0	-0	0	0.00	0.01	0.00
10	0	9	3	31	0	-0	0	0.00	0.01	0.00
11	0	-9	-3	31	0	-0	0	0.00	0.01	0.00
12	0	9	3	-31	0	-0	0	0.00	0.01	0.00
13	0	-9	-3	-31	0	-0	0	0.00	0.01	0.00
14	0	29	10	9	0	-0	0	0.00	0.01	0.00
15	0	-29	-10	9	0	-0	0	0.00	0.01	0.00
16	0	29	10	-9	0	-0	0	0.00	0.01	0.00
17	0	-29	-10	-9	0	-0	0	0.00	0.01	0.00

1	6	28	-79	-0	0	-0	-2	0.00	0.03	0.00
2	6	13	-10	31	0	-2	-0	0.00	0.01	0.00
3	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00
4	6	13	-10	-31	0	2	-0	0.00	0.01	0.00
5	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00
6	6	34	-3	9	0	-1	0	0.00	0.00	0.00
7	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00
8	6	34	-3	-9	0	1	0	0.00	0.00	0.00
9	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00
10	6	13	-10	31	0	-2	-0	0.00	0.01	0.00
11	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00
12	6	13	-10	-31	0	2	-0	0.00	0.01	0.00
13	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00
14	6	34	-3	9	0	-1	0	0.00	0.00	0.00
15	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00
16	6	34	-3	-9	0	1	0	0.00	0.00	0.00
17	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00

1	12	56	-157	-0	0	-0	-9	0.01	0.06	0.00
2	12	18	-23	31	0	-4	-1	0.01	0.01	0.00
3	12	1	-29	31	0	-4	-2	0.00	0.02	0.00
4	12	18	-23	-31	0	4	-1	0.01	0.01	0.00
5	12	1	-29	-31	0	4	-2	0.00	0.02	0.00
6	12	39	-16	9	0	-1	-0	0.00	0.01	0.00
7	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00
8	12	39	-16	-9	0	1	-0	0.00	0.01	0.00
9	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00
10	12	18	-23	31	0	-4	-1	0.01	0.01	0.00
11	12	1	-29	31	0	-4	-2	0.00	0.02	0.00
12	12	18	-23	-31	0	4	-1	0.01	0.01	0.00
13	12	1	-29	-31	0	4	-2	0.00	0.02	0.00
14	12	39	-16	9	0	-1	-0	0.00	0.01	0.00
15	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00
16	12	39	-16	-9	0	1	-0	0.00	0.01	0.00
17	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00

1	18	85	-236	-0	0	-0	-21	0.02	0.09	0.00
2	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
3	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
4	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
5	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
6	18	43	-29	9	0	-2	-2	0.00	0.01	0.00
7	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
8	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
9	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
10	18	23	-36	31	0	-6	-3	0.01	0.02	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

11	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
12	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
13	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
14	18	43	-29	9	0	-2	-2	0.00	0.01	0.00
15	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
16	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
17	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00

1	24	113	-315	-0	0	-0	-38	0.04	0.11	0.00
2	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
3	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
4	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
5	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
6	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
7	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
8	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
9	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
10	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
11	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
12	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
13	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
14	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
15	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
16	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
17	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00

1	30	141	-394	-0	0	-0	-59	0.06	0.14	0.00
2	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
3	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
4	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
5	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
6	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
7	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
8	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
9	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
10	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
11	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
12	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
13	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
14	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
15	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
16	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
17	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00

1	36	169	-473	-0	0	0	-85	0.08	0.17	0.00
2	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
3	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
4	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
5	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
6	36	57	-68	9	0	-3	-10	0.01	0.02	0.00
7	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
8	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
9	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
10	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
11	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
12	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
13	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
14	36	57	-68	9	0	-3	-10	0.01	0.02	0.00
15	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
16	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
17	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00

1	42	197	-551	-0	0	0	-116	0.11	0.20	0.00
2	42	42	-89	31	0	-13	-18	0.03	0.03	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

3	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
4	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
5	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
6	42	62	-81	9	0	-4	-15	0.02	0.03	0.00
7	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
8	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
9	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
10	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
11	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
12	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
13	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
14	42	62	-81	9	0	-4	-15	0.02	0.03	0.00
15	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
16	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
17	42	4	-102	-9	0	4	-24	0.02	0.04	0.00

1	48	225	-630	-0	0	0	-151	0.14	0.23	0.00
2	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
3	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
4	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
5	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
6	48	67	-94	9	0	-4	-20	0.02	0.03	0.00
7	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
8	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
9	48	8	-115	-9	0	4	-30	0.03	0.04	0.00
10	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
11	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
12	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
13	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
14	48	67	-94	9	0	-4	-20	0.02	0.03	0.00
15	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
16	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
17	48	8	-115	-9	0	4	-30	0.03	0.04	0.00

1	54	254	-709	-0	0	0	-191	0.17	0.26	0.00
2	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
3	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
4	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
5	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
6	54	71	-107	9	0	-5	-26	0.03	0.04	0.00
7	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
8	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
9	54	13	-128	-9	0	5	-37	0.04	0.05	0.00
10	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
11	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
12	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
13	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
14	54	71	-107	9	0	-5	-26	0.03	0.04	0.00
15	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
16	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
17	54	13	-128	-9	0	5	-37	0.04	0.05	0.00

1	60	282	-788	-0	0	0	-236	0.21	0.29	0.00
2	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
3	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
4	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
5	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
6	60	76	-121	9	0	-6	-33	0.03	0.04	0.00
7	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
8	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
9	60	18	-141	-9	0	6	-46	0.04	0.05	0.00
10	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
11	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
12	60	56	-128	-31	0	19	-37	0.05	0.05	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

13	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
14	60	76	-121	9	0	-6	-33	0.03	0.04	0.00
15	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
16	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
17	60	18	-141	-9	0	6	-46	0.04	0.05	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
3	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
5	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
7	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'
9	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'
11	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
13	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
15	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'
17	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'

ASTA NUM. 6 NI 13 NF 5 Lungh. 267.1 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x -- cm	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
1	0	-1255	1844	3	0	5	-242	0.21	0.67	0.00	
2	0	-209	306	1	0	1	-38	0.03	0.11	0.00	
3	0	-209	307	0	0	0	-42	0.04	0.11	0.00	
4	0	-209	306	1	0	1	-38	0.03	0.11	0.00	
5	0	-209	307	1	0	1	-42	0.04	0.11	0.00	
6	0	-209	304	1	0	2	-34	0.03	0.11	0.00	
7	0	-209	309	-0	0	-0	-47	0.04	0.11	0.00	
8	0	-209	304	1	0	2	-34	0.03	0.11	0.00	
9	0	-209	309	-0	0	-0	-47	0.04	0.11	0.00	
10	0	-209	306	1	0	1	-38	0.03	0.11	0.00	
11	0	-209	307	0	0	0	-42	0.04	0.11	0.00	
12	0	-209	306	1	0	1	-38	0.03	0.11	0.00	
13	0	-209	307	1	0	1	-42	0.04	0.11	0.00	
14	0	-209	304	1	0	2	-34	0.03	0.11	0.00	
15	0	-209	309	-0	0	-0	-47	0.04	0.11	0.00	
16	0	-209	304	1	0	2	-34	0.03	0.11	0.00	
17	0	-209	309	-0	0	-0	-47	0.04	0.11	0.00	
1	27	-1130	1493	3	0	4	204	0.18	0.54	0.00	
2	27	-188	248	1	0	1	35	0.03	0.09	0.00	
3	27	-188	249	0	0	0	32	0.03	0.09	0.00	
4	27	-188	248	1	0	1	35	0.03	0.09	0.00	
5	27	-188	249	1	0	1	32	0.03	0.09	0.00	
6	27	-188	246	1	0	1	39	0.03	0.09	0.00	
7	27	-188	251	-0	0	-0	28	0.02	0.09	0.00	
8	27	-188	246	1	0	2	39	0.03	0.09	0.00	
9	27	-188	251	-0	0	-0	28	0.02	0.09	0.00	
10	27	-188	248	1	0	1	35	0.03	0.09	0.00	
11	27	-188	249	0	0	0	32	0.03	0.09	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

12	27	-188	248	1	0	1	35	0.03	0.09	0.00
13	27	-188	249	1	0	1	32	0.03	0.09	0.00
14	27	-188	246	1	0	1	39	0.03	0.09	0.00
15	27	-188	251	-0	0	-0	28	0.02	0.09	0.00
16	27	-188	246	1	0	2	39	0.03	0.09	0.00
17	27	-188	251	-0	0	-0	28	0.02	0.09	0.00
1	53	-1004	1143	3	0	3	556	0.47	0.42	0.00
2	53	-167	189	1	0	1	94	0.08	0.07	0.00
3	53	-167	191	0	0	0	91	0.08	0.07	0.00
4	53	-167	189	1	0	1	94	0.08	0.07	0.00
5	53	-167	191	1	0	1	91	0.08	0.07	0.00
6	53	-167	188	1	0	1	97	0.08	0.07	0.00
7	53	-167	192	-0	0	-0	87	0.07	0.07	0.00
8	53	-167	188	1	0	1	97	0.08	0.07	0.00
9	53	-167	192	-0	0	-0	87	0.07	0.07	0.00
10	53	-167	189	1	0	1	94	0.08	0.07	0.00
11	53	-167	191	0	0	0	91	0.08	0.07	0.00
12	53	-167	189	1	0	1	94	0.08	0.07	0.00
13	53	-167	191	1	0	1	91	0.08	0.07	0.00
14	53	-167	188	1	0	1	97	0.08	0.07	0.00
15	53	-167	192	-0	0	-0	87	0.07	0.07	0.00
16	53	-167	188	1	0	1	97	0.08	0.07	0.00
17	53	-167	192	-0	0	-0	87	0.07	0.07	0.00
1	80	-879	792	3	0	2	814	0.69	0.29	0.00
2	80	-146	131	1	0	0	137	0.12	0.05	0.00
3	80	-146	132	0	0	0	134	0.11	0.05	0.00
4	80	-146	131	1	0	1	137	0.12	0.05	0.00
5	80	-146	132	1	0	0	134	0.11	0.05	0.00
6	80	-146	129	1	0	1	140	0.12	0.05	0.00
7	80	-146	134	-0	0	-0	131	0.11	0.05	0.00
8	80	-146	129	1	0	1	140	0.12	0.05	0.00
9	80	-146	134	-0	0	-0	131	0.11	0.05	0.00
10	80	-146	131	1	0	0	137	0.12	0.05	0.00
11	80	-146	132	0	0	0	134	0.11	0.05	0.00
12	80	-146	131	1	0	1	137	0.12	0.05	0.00
13	80	-146	132	1	0	0	134	0.11	0.05	0.00
14	80	-146	129	1	0	1	140	0.12	0.05	0.00
15	80	-146	134	-0	0	-0	131	0.11	0.05	0.00
16	80	-146	129	1	0	1	140	0.12	0.05	0.00
17	80	-146	134	-0	0	-0	131	0.11	0.05	0.00
1	107	-753	442	3	0	1	979	0.82	0.16	0.00
2	107	-125	73	1	0	0	164	0.14	0.03	0.00
3	107	-125	74	0	0	-0	161	0.14	0.03	0.00
4	107	-125	73	1	0	0	164	0.14	0.03	0.00
5	107	-125	74	1	0	0	161	0.14	0.03	0.00
6	107	-125	71	1	0	0	166	0.14	0.03	0.00
7	107	-125	76	-0	0	-0	159	0.13	0.03	0.00
8	107	-125	71	1	0	0	166	0.14	0.03	0.00
9	107	-125	76	-0	0	-0	159	0.13	0.03	0.00
10	107	-125	73	1	0	0	164	0.14	0.03	0.00
11	107	-125	74	0	0	-0	161	0.14	0.03	0.00
12	107	-125	73	1	0	0	164	0.14	0.03	0.00
13	107	-125	74	1	0	0	161	0.14	0.03	0.00
14	107	-125	71	1	0	0	166	0.14	0.03	0.00
15	107	-125	76	-0	0	-0	159	0.13	0.03	0.00
16	107	-125	71	1	0	0	166	0.14	0.03	0.00
17	107	-125	76	-0	0	-0	159	0.13	0.03	0.00
1	134	-628	91	3	0	0	1050	0.88	0.03	0.00
2	134	-104	14	1	0	-0	175	0.15	0.01	0.00
3	134	-104	16	0	0	-0	173	0.15	0.01	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

4	134	-104	14	1	0	0	175	0.15	0.01	0.00
5	134	-104	16	1	0	0	173	0.15	0.01	0.00
6	134	-104	13	1	0	0	178	0.15	0.00	0.00
7	134	-104	18	-0	0	-0	171	0.14	0.01	0.00
8	134	-104	13	1	0	0	178	0.15	0.00	0.00
9	134	-104	18	-0	0	0	171	0.14	0.01	0.00
10	134	-104	14	1	0	-0	175	0.15	0.01	0.00
11	134	-104	16	0	0	-0	173	0.15	0.01	0.00
12	134	-104	14	1	0	0	175	0.15	0.01	0.00
13	134	-104	16	1	0	0	173	0.15	0.01	0.00
14	134	-104	13	1	0	0	178	0.15	0.00	0.00
15	134	-104	18	-0	0	-0	171	0.14	0.01	0.00
16	134	-104	13	1	0	0	178	0.15	0.00	0.00
17	134	-104	18	-0	0	0	171	0.14	0.01	0.00
1	160	-502	-260	3	0	-1	1027	0.86	0.09	0.00
2	160	-83	-44	1	0	-0	171	0.14	0.02	0.00
3	160	-83	-42	0	0	-0	170	0.14	0.02	0.00
4	160	-83	-44	1	0	-0	171	0.14	0.02	0.00
5	160	-83	-42	1	0	-0	170	0.14	0.02	0.00
6	160	-83	-46	1	0	-0	173	0.15	0.02	0.00
7	160	-83	-41	-0	0	-0	168	0.14	0.01	0.00
8	160	-83	-46	1	0	-0	173	0.15	0.02	0.00
9	160	-83	-41	-0	0	0	168	0.14	0.01	0.00
10	160	-83	-44	1	0	-0	171	0.14	0.02	0.00
11	160	-83	-42	0	0	-0	170	0.14	0.02	0.00
12	160	-83	-44	1	0	-0	171	0.14	0.02	0.00
13	160	-83	-42	1	0	-0	170	0.14	0.02	0.00
14	160	-83	-46	1	0	-0	173	0.15	0.02	0.00
15	160	-83	-41	-0	0	-0	168	0.14	0.01	0.00
16	160	-83	-46	1	0	-0	173	0.15	0.02	0.00
17	160	-83	-41	-0	0	0	168	0.14	0.01	0.00
1	187	-377	-610	3	0	-2	911	0.77	0.22	0.00
2	187	-63	-102	1	0	-0	152	0.13	0.04	0.00
3	187	-63	-101	0	0	-0	151	0.13	0.04	0.00
4	187	-63	-102	1	0	-0	152	0.13	0.04	0.00
5	187	-63	-101	1	0	-0	151	0.13	0.04	0.00
6	187	-63	-104	1	0	-1	153	0.13	0.04	0.00
7	187	-63	-99	-0	0	-0	149	0.13	0.04	0.00
8	187	-63	-104	1	0	-1	153	0.13	0.04	0.00
9	187	-63	-99	-0	0	0	149	0.13	0.04	0.00
10	187	-63	-102	1	0	-0	152	0.13	0.04	0.00
11	187	-63	-101	0	0	-0	151	0.13	0.04	0.00
12	187	-63	-102	1	0	-0	152	0.13	0.04	0.00
13	187	-63	-101	1	0	-0	151	0.13	0.04	0.00
14	187	-63	-104	1	0	-1	153	0.13	0.04	0.00
15	187	-63	-99	-0	0	-0	149	0.13	0.04	0.00
16	187	-63	-104	1	0	-1	153	0.13	0.04	0.00
17	187	-63	-99	-0	0	0	149	0.13	0.04	0.00
1	214	-251	-961	3	0	-3	701	0.59	0.35	0.00
2	214	-42	-160	1	0	-1	117	0.10	0.06	0.00
3	214	-42	-159	0	0	-0	116	0.10	0.06	0.00
4	214	-42	-160	1	0	-1	117	0.10	0.06	0.00
5	214	-42	-159	1	0	-0	116	0.10	0.06	0.00
6	214	-42	-162	1	0	-1	118	0.10	0.06	0.00
7	214	-42	-157	-0	0	0	115	0.10	0.06	0.00
8	214	-42	-162	1	0	-1	118	0.10	0.06	0.00
9	214	-42	-157	-0	0	0	115	0.10	0.06	0.00
10	214	-42	-160	1	0	-1	117	0.10	0.06	0.00
11	214	-42	-159	0	0	-0	116	0.10	0.06	0.00
12	214	-42	-160	1	0	-1	117	0.10	0.06	0.00
13	214	-42	-159	1	0	-0	116	0.10	0.06	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

14	214	-42	-162	1	0	-1	118	0.10	0.06	0.00
15	214	-42	-157	-0	0	0	115	0.10	0.06	0.00
16	214	-42	-162	1	0	-1	118	0.10	0.06	0.00
17	214	-42	-157	-0	0	0	115	0.10	0.06	0.00
1	240	-126	-1311	3	0	-3	397	0.34	0.48	0.00
2	240	-21	-219	1	0	-1	66	0.06	0.08	0.00
3	240	-21	-217	0	0	-0	66	0.06	0.08	0.00
4	240	-21	-219	1	0	-1	66	0.06	0.08	0.00
5	240	-21	-217	1	0	-0	66	0.06	0.08	0.00
6	240	-21	-220	1	0	-1	67	0.06	0.08	0.00
7	240	-21	-216	-0	0	0	65	0.06	0.08	0.00
8	240	-21	-220	1	0	-1	67	0.06	0.08	0.00
9	240	-21	-216	-0	0	0	65	0.06	0.08	0.00
10	240	-21	-219	1	0	-1	66	0.06	0.08	0.00
11	240	-21	-217	0	0	-0	66	0.06	0.08	0.00
12	240	-21	-219	1	0	-1	66	0.06	0.08	0.00
13	240	-21	-217	1	0	-0	66	0.06	0.08	0.00
14	240	-21	-220	1	0	-1	67	0.06	0.08	0.00
15	240	-21	-216	-0	0	0	65	0.06	0.08	0.00
16	240	-21	-220	1	0	-1	67	0.06	0.08	0.00
17	240	-21	-216	-0	0	0	65	0.06	0.08	0.00
1	267	-0	-1662	3	0	-4	-0	0.00	0.60	0.00
2	267	0	-277	1	0	-1	-0	0.00	0.10	0.00
3	267	0	-276	0	0	-1	-0	0.00	0.10	0.00
4	267	0	-277	1	0	-1	-0	0.00	0.10	0.00
5	267	0	-276	1	0	-1	-0	0.00	0.10	0.00
6	267	0	-279	1	0	-2	-0	0.00	0.10	0.00
7	267	0	-274	-0	0	0	-0	0.00	0.10	0.00
8	267	0	-279	1	0	-2	-0	0.00	0.10	0.00
9	267	0	-274	-0	0	0	-0	0.00	0.10	0.00
10	267	0	-277	1	0	-1	-0	0.00	0.10	0.00
11	267	0	-276	0	0	-1	-0	0.00	0.10	0.00
12	267	0	-277	1	0	-1	-0	0.00	0.10	0.00
13	267	0	-276	1	0	-1	-0	0.00	0.10	0.00
14	267	0	-279	1	0	-2	-0	0.00	0.10	0.00
15	267	0	-274	-0	0	0	-0	0.00	0.10	0.00
16	267	0	-279	1	0	-2	-0	0.00	0.10	0.00
17	267	0	-274	-0	0	0	-0	0.00	0.10	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota

1	-1255	5	1050	52	62	0.781	0.655	0.94	Piano 'zx'
2	-209	1	175	52	62	0.781	0.655	0.16	Piano 'zx'
3	-209	1	173	52	62	0.781	0.655	0.16	Piano 'zx'
4	-209	1	175	52	62	0.781	0.655	0.16	Piano 'zx'
5	-209	1	173	52	62	0.781	0.655	0.16	Piano 'zx'
6	-209	2	178	52	62	0.781	0.655	0.16	Piano 'zx'
7	-209	0	171	52	62	0.781	0.655	0.15	Piano 'zx'
8	-209	2	178	52	62	0.781	0.655	0.16	Piano 'zx'
9	-209	0	171	52	62	0.781	0.655	0.15	Piano 'zx'
10	-209	1	175	52	62	0.781	0.655	0.16	Piano 'zx'
11	-209	1	173	52	62	0.781	0.655	0.16	Piano 'zx'
12	-209	1	175	52	62	0.781	0.655	0.16	Piano 'zx'
13	-209	1	173	52	62	0.781	0.655	0.16	Piano 'zx'
14	-209	2	178	52	62	0.781	0.655	0.16	Piano 'zx'

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

15	-209	0	171	52	62	0.781	0.655	0.15	Piano 'zx'
16	-209	2	178	52	62	0.781	0.655	0.16	Piano 'zx'
17	-209	0	171	52	62	0.781	0.655	0.15	Piano 'zx'

ASTA NUM. 7 NI 22 NF 14 Lungh. 60.0 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
--	---	---	---	---	---	---	---	---	---	---	
	cm	kg			kg*m						
1	0	0	0	-0	0	-0	0	0.00	0.00	0.00	
2	0	9	3	31	0	-0	0	0.00	0.01	0.00	
3	0	-9	-3	31	0	-0	0	0.00	0.01	0.00	
4	0	9	3	-31	0	-0	0	0.00	0.01	0.00	
5	0	-9	-3	-31	0	-0	0	0.00	0.01	0.00	
6	0	29	10	9	0	-0	0	0.00	0.01	0.00	
7	0	-29	-10	9	0	-0	0	0.00	0.01	0.00	
8	0	29	10	-9	0	-0	0	0.00	0.01	0.00	
9	0	-29	-10	-9	0	-0	0	0.00	0.01	0.00	
10	0	9	3	31	0	-0	0	0.00	0.01	0.00	
11	0	-9	-3	31	0	-0	0	0.00	0.01	0.00	
12	0	9	3	-31	0	-0	0	0.00	0.01	0.00	
13	0	-9	-3	-31	0	-0	0	0.00	0.01	0.00	
14	0	29	10	9	0	-0	0	0.00	0.01	0.00	
15	0	-29	-10	9	0	-0	0	0.00	0.01	0.00	
16	0	29	10	-9	0	-0	0	0.00	0.01	0.00	
17	0	-29	-10	-9	0	-0	0	0.00	0.01	0.00	
1	6	28	-79	-0	0	-0	-2	0.00	0.03	0.00	
2	6	13	-10	31	0	-2	-0	0.00	0.01	0.00	
3	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00	
4	6	13	-10	-31	0	2	-0	0.00	0.01	0.00	
5	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00	
6	6	34	-3	9	0	-1	0	0.00	0.00	0.00	
7	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00	
8	6	34	-3	-9	0	1	0	0.00	0.00	0.00	
9	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00	
10	6	13	-10	31	0	-2	-0	0.00	0.01	0.00	
11	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00	
12	6	13	-10	-31	0	2	-0	0.00	0.01	0.00	
13	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00	
14	6	34	-3	9	0	-1	0	0.00	0.00	0.00	
15	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00	
16	6	34	-3	-9	0	1	0	0.00	0.00	0.00	
17	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00	
1	12	56	-157	-0	0	-0	-9	0.01	0.06	0.00	
2	12	18	-23	31	0	-4	-1	0.01	0.01	0.00	
3	12	1	-29	31	0	-4	-2	0.00	0.02	0.00	
4	12	18	-23	-31	0	4	-1	0.01	0.01	0.00	
5	12	1	-29	-31	0	4	-2	0.00	0.02	0.00	
6	12	39	-16	9	0	-1	-0	0.00	0.01	0.00	
7	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00	
8	12	39	-16	-9	0	1	-0	0.00	0.01	0.00	
9	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00	
10	12	18	-23	31	0	-4	-1	0.01	0.01	0.00	
11	12	1	-29	31	0	-4	-2	0.00	0.02	0.00	
12	12	18	-23	-31	0	4	-1	0.01	0.01	0.00	
13	12	1	-29	-31	0	4	-2	0.00	0.02	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

14	12	39	-16	9	0	-1	-0	0.00	0.01	0.00
15	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00
16	12	39	-16	-9	0	1	-0	0.00	0.01	0.00
17	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00

1	18	85	-236	-0	0	-0	-21	0.02	0.09	0.00
2	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
3	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
4	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
5	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
6	18	43	-29	9	0	-2	-2	0.00	0.01	0.00
7	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
8	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
9	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
10	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
11	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
12	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
13	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
14	18	43	-29	9	0	-2	-2	0.00	0.01	0.00
15	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
16	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
17	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00

1	24	113	-315	-0	0	-0	-38	0.04	0.11	0.00
2	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
3	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
4	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
5	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
6	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
7	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
8	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
9	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
10	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
11	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
12	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
13	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
14	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
15	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
16	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
17	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00

1	30	141	-394	-0	0	-0	-59	0.06	0.14	0.00
2	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
3	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
4	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
5	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
6	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
7	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
8	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
9	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
10	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
11	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
12	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
13	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
14	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
15	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
16	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
17	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00

1	36	169	-473	-0	0	0	-85	0.08	0.17	0.00
2	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
3	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
4	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
5	36	19	-82	-31	0	11	-15	0.02	0.03	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali
(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

6	36	57	-68	9	0	-3	-10	0.01	0.02	0.00
7	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
8	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
9	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
10	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
11	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
12	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
13	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
14	36	57	-68	9	0	-3	-10	0.01	0.02	0.00
15	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
16	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
17	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
1	42	197	-551	-0	0	0	-116	0.11	0.20	0.00
2	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
3	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
4	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
5	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
6	42	62	-81	9	0	-4	-15	0.02	0.03	0.00
7	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
8	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
9	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
10	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
11	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
12	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
13	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
14	42	62	-81	9	0	-4	-15	0.02	0.03	0.00
15	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
16	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
17	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
1	48	225	-630	-0	0	0	-151	0.14	0.23	0.00
2	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
3	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
4	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
5	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
6	48	67	-94	9	0	-4	-20	0.02	0.03	0.00
7	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
8	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
9	48	8	-115	-9	0	4	-30	0.03	0.04	0.00
10	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
11	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
12	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
13	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
14	48	67	-94	9	0	-4	-20	0.02	0.03	0.00
15	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
16	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
17	48	8	-115	-9	0	4	-30	0.03	0.04	0.00
1	54	254	-709	-0	0	0	-191	0.17	0.26	0.00
2	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
3	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
4	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
5	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
6	54	71	-107	9	0	-5	-26	0.03	0.04	0.00
7	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
8	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
9	54	13	-128	-9	0	5	-37	0.04	0.05	0.00
10	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
11	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
12	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
13	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
14	54	71	-107	9	0	-5	-26	0.03	0.04	0.00
15	54	13	-128	9	0	-5	-37	0.04	0.05	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

16	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
17	54	13	-128	-9	0	5	-37	0.04	0.05	0.00
1	60	282	-788	-0	0	0	-236	0.21	0.29	0.00
2	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
3	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
4	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
5	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
6	60	76	-121	9	0	-6	-33	0.03	0.04	0.00
7	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
8	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
9	60	18	-141	-9	0	6	-46	0.04	0.05	0.00
10	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
11	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
12	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
13	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
14	60	76	-121	9	0	-6	-33	0.03	0.04	0.00
15	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
16	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
17	60	18	-141	-9	0	6	-46	0.04	0.05	0.00

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
--	--	-----	-----						
	kg	kg*m							
3	-9	19	41	12	14	1.000	1.000	0.15	Piano 'zx'
5	-9	19	41	12	14	1.000	1.000	0.15	Piano 'zx'
7	-29	6	46	12	14	1.000	1.000	0.15	Piano 'zx'
9	-29	6	46	12	14	1.000	1.000	0.15	Piano 'zx'
11	-9	19	41	12	14	1.000	1.000	0.15	Piano 'zx'
13	-9	19	41	12	14	1.000	1.000	0.15	Piano 'zx'
15	-29	6	46	12	14	1.000	1.000	0.15	Piano 'zx'
17	-29	6	46	12	14	1.000	1.000	0.15	Piano 'zx'

ASTA NUM. 8 NI 14 NF 6 Lungh. 267.1 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
--	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	cm	kg	kg	kg	kg*m	kg*m	kg*m				
1	0	-1255	1848	1	0	1	-252	0.21	0.67	0.00	
2	0	-209	307	0	0	-0	-40	0.03	0.11	0.00	
3	0	-209	308	0	0	-0	-44	0.04	0.11	0.00	
4	0	-209	307	1	0	1	-40	0.03	0.11	0.00	
5	0	-209	308	0	0	1	-44	0.04	0.11	0.00	
6	0	-209	305	1	0	0	-36	0.03	0.11	0.00	
7	0	-209	310	-0	0	-0	-49	0.04	0.11	0.00	
8	0	-209	305	1	0	0	-36	0.03	0.11	0.00	
9	0	-209	310	0	0	0	-49	0.04	0.11	0.00	
10	0	-209	307	0	0	-0	-40	0.03	0.11	0.00	
11	0	-209	308	0	0	-0	-44	0.04	0.11	0.00	
12	0	-209	307	1	0	1	-40	0.03	0.11	0.00	
13	0	-209	308	0	0	1	-44	0.04	0.11	0.00	
14	0	-209	305	1	0	0	-36	0.03	0.11	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

15	0	-209	310	-0	0	-0	-49	0.04	0.11	0.00
16	0	-209	305	1	0	0	-36	0.03	0.11	0.00
17	0	-209	310	0	0	0	-49	0.04	0.11	0.00
1	27	-1130	1497	1	0	0	194	0.16	0.54	0.00
2	27	-188	248	0	0	-0	34	0.03	0.09	0.00
3	27	-188	250	0	0	-0	30	0.03	0.09	0.00
4	27	-188	248	1	0	1	34	0.03	0.09	0.00
5	27	-188	250	0	0	0	30	0.03	0.09	0.00
6	27	-188	247	1	0	0	38	0.03	0.09	0.00
7	27	-188	252	-0	0	-0	26	0.02	0.09	0.00
8	27	-188	247	1	0	0	38	0.03	0.09	0.00
9	27	-188	252	0	0	0	26	0.02	0.09	0.00
10	27	-188	248	0	0	-0	34	0.03	0.09	0.00
11	27	-188	250	0	0	-0	30	0.03	0.09	0.00
12	27	-188	248	1	0	1	34	0.03	0.09	0.00
13	27	-188	250	0	0	0	30	0.03	0.09	0.00
14	27	-188	247	1	0	0	38	0.03	0.09	0.00
15	27	-188	252	-0	0	-0	26	0.02	0.09	0.00
16	27	-188	247	1	0	0	38	0.03	0.09	0.00
17	27	-188	252	0	0	0	26	0.02	0.09	0.00
1	53	-1004	1147	1	0	0	547	0.46	0.42	0.00
2	53	-167	190	0	0	-0	92	0.08	0.07	0.00
3	53	-167	192	0	0	-0	89	0.08	0.07	0.00
4	53	-167	190	1	0	0	92	0.08	0.07	0.00
5	53	-167	192	0	0	0	89	0.08	0.07	0.00
6	53	-167	188	1	0	-0	96	0.08	0.07	0.00
7	53	-167	193	-0	0	-0	85	0.07	0.07	0.00
8	53	-167	188	1	0	0	96	0.08	0.07	0.00
9	53	-167	193	0	0	0	85	0.07	0.07	0.00
10	53	-167	190	0	0	-0	92	0.08	0.07	0.00
11	53	-167	192	0	0	-0	89	0.08	0.07	0.00
12	53	-167	190	1	0	0	92	0.08	0.07	0.00
13	53	-167	192	0	0	0	89	0.08	0.07	0.00
14	53	-167	188	1	0	-0	96	0.08	0.07	0.00
15	53	-167	193	-0	0	-0	85	0.07	0.07	0.00
16	53	-167	188	1	0	0	96	0.08	0.07	0.00
17	53	-167	193	0	0	0	85	0.07	0.07	0.00
1	80	-879	796	1	0	-0	807	0.68	0.29	0.00
2	80	-146	132	0	0	-0	135	0.11	0.05	0.00
3	80	-146	133	0	0	-0	132	0.11	0.05	0.00
4	80	-146	132	1	0	0	135	0.11	0.05	0.00
5	80	-146	133	0	0	0	132	0.11	0.05	0.00
6	80	-146	130	1	0	-0	138	0.12	0.05	0.00
7	80	-146	135	-0	0	-0	129	0.11	0.05	0.00
8	80	-146	130	1	0	-0	138	0.12	0.05	0.00
9	80	-146	135	0	0	0	129	0.11	0.05	0.00
10	80	-146	132	0	0	-0	135	0.11	0.05	0.00
11	80	-146	133	0	0	-0	132	0.11	0.05	0.00
12	80	-146	132	1	0	0	135	0.11	0.05	0.00
13	80	-146	133	0	0	0	132	0.11	0.05	0.00
14	80	-146	130	1	0	-0	138	0.12	0.05	0.00
15	80	-146	135	-0	0	-0	129	0.11	0.05	0.00
16	80	-146	130	1	0	-0	138	0.12	0.05	0.00
17	80	-146	135	0	0	0	129	0.11	0.05	0.00
1	107	-753	445	1	0	-1	972	0.82	0.16	0.00
2	107	-125	73	0	0	-0	163	0.14	0.03	0.00
3	107	-125	75	0	0	-0	160	0.13	0.03	0.00
4	107	-125	73	1	0	0	163	0.14	0.03	0.00
5	107	-125	75	0	0	0	160	0.13	0.03	0.00
6	107	-125	72	1	0	-0	165	0.14	0.03	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

7	107	-125	77	-0	0	-0	157	0.13	0.03	0.00
8	107	-125	72	1	0	-0	165	0.14	0.03	0.00
9	107	-125	77	0	0	0	157	0.13	0.03	0.00
10	107	-125	73	0	0	-0	163	0.14	0.03	0.00
11	107	-125	75	0	0	-0	160	0.13	0.03	0.00
12	107	-125	73	1	0	0	163	0.14	0.03	0.00
13	107	-125	75	0	0	0	160	0.13	0.03	0.00
14	107	-125	72	1	0	-0	165	0.14	0.03	0.00
15	107	-125	77	-0	0	-0	157	0.13	0.03	0.00
16	107	-125	72	1	0	-0	165	0.14	0.03	0.00
17	107	-125	77	0	0	0	157	0.13	0.03	0.00
1	134	-628	95	1	0	-1	1044	0.88	0.03	0.00
2	134	-104	15	0	0	-0	174	0.15	0.01	0.00
3	134	-104	17	0	0	-0	172	0.15	0.01	0.00
4	134	-104	15	1	0	-0	174	0.15	0.01	0.00
5	134	-104	17	0	0	0	172	0.15	0.01	0.00
6	134	-104	13	1	0	-0	177	0.15	0.00	0.00
7	134	-104	18	-0	0	-0	170	0.14	0.01	0.00
8	134	-104	13	1	0	-0	177	0.15	0.00	0.00
9	134	-104	18	0	0	0	170	0.14	0.01	0.00
10	134	-104	15	0	0	-0	174	0.15	0.01	0.00
11	134	-104	17	0	0	-0	172	0.15	0.01	0.00
12	134	-104	15	1	0	-0	174	0.15	0.01	0.00
13	134	-104	17	0	0	0	172	0.15	0.01	0.00
14	134	-104	13	1	0	-0	177	0.15	0.00	0.00
15	134	-104	18	-0	0	-0	170	0.14	0.01	0.00
16	134	-104	13	1	0	-0	177	0.15	0.00	0.00
17	134	-104	18	0	0	0	170	0.14	0.01	0.00
1	160	-502	-256	1	0	-1	1023	0.86	0.09	0.00
2	160	-83	-43	0	0	-1	171	0.14	0.02	0.00
3	160	-83	-42	0	0	-0	169	0.14	0.02	0.00
4	160	-83	-43	1	0	-0	171	0.14	0.02	0.00
5	160	-83	-42	0	0	-0	169	0.14	0.02	0.00
6	160	-83	-45	1	0	-1	173	0.15	0.02	0.00
7	160	-83	-40	-0	0	-0	167	0.14	0.01	0.00
8	160	-83	-45	1	0	-1	173	0.15	0.02	0.00
9	160	-83	-40	0	0	0	167	0.14	0.01	0.00
10	160	-83	-43	0	0	-1	171	0.14	0.02	0.00
11	160	-83	-42	0	0	-0	169	0.14	0.02	0.00
12	160	-83	-43	1	0	-0	171	0.14	0.02	0.00
13	160	-83	-42	0	0	-0	169	0.14	0.02	0.00
14	160	-83	-45	1	0	-1	173	0.15	0.02	0.00
15	160	-83	-40	-0	0	-0	167	0.14	0.01	0.00
16	160	-83	-45	1	0	-1	173	0.15	0.02	0.00
17	160	-83	-40	0	0	0	167	0.14	0.01	0.00
1	187	-377	-607	1	0	-2	908	0.76	0.22	0.00
2	187	-63	-101	0	0	-1	151	0.13	0.04	0.00
3	187	-63	-100	0	0	-0	150	0.13	0.04	0.00
4	187	-63	-101	1	0	-0	151	0.13	0.04	0.00
5	187	-63	-100	0	0	-0	150	0.13	0.04	0.00
6	187	-63	-103	1	0	-1	153	0.13	0.04	0.00
7	187	-63	-98	-0	0	-0	149	0.13	0.04	0.00
8	187	-63	-103	1	0	-1	153	0.13	0.04	0.00
9	187	-63	-98	0	0	0	149	0.13	0.04	0.00
10	187	-63	-101	0	0	-1	151	0.13	0.04	0.00
11	187	-63	-100	0	0	-0	150	0.13	0.04	0.00
12	187	-63	-101	1	0	-0	151	0.13	0.04	0.00
13	187	-63	-100	0	0	-0	150	0.13	0.04	0.00
14	187	-63	-103	1	0	-1	153	0.13	0.04	0.00
15	187	-63	-98	-0	0	-0	149	0.13	0.04	0.00
16	187	-63	-103	1	0	-1	153	0.13	0.04	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

17	187	-63	-98	0	0	0	149	0.13	0.04	0.00
1	214	-251	-958	1	0	-2	699	0.59	0.35	0.00
2	214	-42	-160	0	0	-1	116	0.10	0.06	0.00
3	214	-42	-158	0	0	-0	116	0.10	0.06	0.00
4	214	-42	-160	1	0	-0	116	0.10	0.06	0.00
5	214	-42	-158	0	0	-0	116	0.10	0.06	0.00
6	214	-42	-162	1	0	-1	117	0.10	0.06	0.00
7	214	-42	-156	-0	0	0	115	0.10	0.06	0.00
8	214	-42	-162	1	0	-1	117	0.10	0.06	0.00
9	214	-42	-156	0	0	0	115	0.10	0.06	0.00
10	214	-42	-160	0	0	-1	116	0.10	0.06	0.00
11	214	-42	-158	0	0	-0	116	0.10	0.06	0.00
12	214	-42	-160	1	0	-0	116	0.10	0.06	0.00
13	214	-42	-158	0	0	-0	116	0.10	0.06	0.00
14	214	-42	-162	1	0	-1	117	0.10	0.06	0.00
15	214	-42	-156	-0	0	0	115	0.10	0.06	0.00
16	214	-42	-162	1	0	-1	117	0.10	0.06	0.00
17	214	-42	-156	0	0	0	115	0.10	0.06	0.00
1	240	-126	-1308	1	0	-3	396	0.34	0.48	0.00
2	240	-21	-218	0	0	-1	66	0.06	0.08	0.00
3	240	-21	-217	0	0	-0	66	0.06	0.08	0.00
4	240	-21	-218	1	0	-1	66	0.06	0.08	0.00
5	240	-21	-217	0	0	-0	66	0.06	0.08	0.00
6	240	-21	-220	1	0	-1	66	0.06	0.08	0.00
7	240	-21	-215	-0	0	0	65	0.05	0.08	0.00
8	240	-21	-220	1	0	-1	66	0.06	0.08	0.00
9	240	-21	-215	0	0	0	65	0.05	0.08	0.00
10	240	-21	-218	0	0	-1	66	0.06	0.08	0.00
11	240	-21	-217	0	0	-0	66	0.06	0.08	0.00
12	240	-21	-218	1	0	-1	66	0.06	0.08	0.00
13	240	-21	-217	0	0	-0	66	0.06	0.08	0.00
14	240	-21	-220	1	0	-1	66	0.06	0.08	0.00
15	240	-21	-215	-0	0	0	65	0.05	0.08	0.00
16	240	-21	-220	1	0	-1	66	0.06	0.08	0.00
17	240	-21	-215	0	0	0	65	0.05	0.08	0.00
1	267	-0	-1659	1	0	-3	-0	0.00	0.60	0.00
2	267	0	-276	0	0	-1	-0	0.00	0.10	0.00
3	267	0	-275	0	0	-0	-0	0.00	0.10	0.00
4	267	0	-276	1	0	-1	-0	0.00	0.10	0.00
5	267	0	-275	0	0	-0	-0	0.00	0.10	0.00
6	267	0	-278	1	0	-1	-0	0.00	0.10	0.00
7	267	0	-273	-0	0	0	-0	0.00	0.10	0.00
8	267	0	-278	1	0	-1	-0	0.00	0.10	0.00
9	267	0	-273	0	0	0	-0	0.00	0.10	0.00
10	267	0	-276	0	0	-1	-0	0.00	0.10	0.00
11	267	0	-275	0	0	-0	-0	0.00	0.10	0.00
12	267	0	-276	1	0	-1	-0	0.00	0.10	0.00
13	267	0	-275	0	0	-0	-0	0.00	0.10	0.00
14	267	0	-278	1	0	-1	-0	0.00	0.10	0.00
15	267	0	-273	-0	0	0	-0	0.00	0.10	0.00
16	267	0	-278	1	0	-1	-0	0.00	0.10	0.00
17	267	0	-273	0	0	0	-0	0.00	0.10	0.00

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
	kg	kg*m							

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	-1255	3	1044	52	62	0.781	0.655	0.94	Piano 'zx'
2	-209	1	174	52	62	0.781	0.655	0.16	Piano 'zx'
3	-209	0	172	52	62	0.781	0.655	0.15	Piano 'zx'
4	-209	1	174	52	62	0.781	0.655	0.16	Piano 'zx'
5	-209	1	172	52	62	0.781	0.655	0.15	Piano 'zx'
6	-209	1	177	52	62	0.781	0.655	0.16	Piano 'zx'
7	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
8	-209	1	177	52	62	0.781	0.655	0.16	Piano 'zx'
9	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
10	-209	1	174	52	62	0.781	0.655	0.16	Piano 'zx'
11	-209	0	172	52	62	0.781	0.655	0.15	Piano 'zx'
12	-209	1	174	52	62	0.781	0.655	0.16	Piano 'zx'
13	-209	1	172	52	62	0.781	0.655	0.15	Piano 'zx'
14	-209	1	177	52	62	0.781	0.655	0.16	Piano 'zx'
15	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
16	-209	1	177	52	62	0.781	0.655	0.16	Piano 'zx'
17	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'

ASTA NUM. 9 NI 23 NF 15 Lungh. 60.0 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	cm	kg			kg*m						
1	0	-0	-0	-0	0	-0	0	0.00	0.00	0.00	
2	0	9	3	31	0	-0	0	0.00	0.01	0.00	
3	0	-9	-3	31	0	-0	0	0.00	0.01	0.00	
4	0	9	3	-31	0	-0	0	0.00	0.01	0.00	
5	0	-9	-3	-31	0	-0	0	0.00	0.01	0.00	
6	0	29	10	9	0	-0	0	0.00	0.01	0.00	
7	0	-29	-10	9	0	-0	0	0.00	0.01	0.00	
8	0	29	10	-9	0	-0	0	0.00	0.01	0.00	
9	0	-29	-10	-9	0	-0	0	0.00	0.01	0.00	
10	0	9	3	31	0	-0	0	0.00	0.01	0.00	
11	0	-9	-3	31	0	-0	0	0.00	0.01	0.00	
12	0	9	3	-31	0	-0	0	0.00	0.01	0.00	
13	0	-9	-3	-31	0	-0	0	0.00	0.01	0.00	
14	0	29	10	9	0	-0	0	0.00	0.01	0.00	
15	0	-29	-10	9	0	-0	0	0.00	0.01	0.00	
16	0	29	10	-9	0	-0	0	0.00	0.01	0.00	
17	0	-29	-10	-9	0	-0	0	0.00	0.01	0.00	
1	6	28	-79	-0	0	-0	-2	0.00	0.03	0.00	
2	6	13	-10	31	0	-2	-0	0.00	0.01	0.00	
3	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00	
4	6	13	-10	-31	0	2	-0	0.00	0.01	0.00	
5	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00	
6	6	34	-3	9	0	-1	0	0.00	0.00	0.00	
7	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00	
8	6	34	-3	-9	0	1	0	0.00	0.00	0.00	
9	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00	
10	6	13	-10	31	0	-2	-0	0.00	0.01	0.00	
11	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00	
12	6	13	-10	-31	0	2	-0	0.00	0.01	0.00	
13	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00	
14	6	34	-3	9	0	-1	0	0.00	0.00	0.00	
15	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00	
16	6	34	-3	-9	0	1	0	0.00	0.00	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

17	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00
1	12	56	-157	0	0	-0	-9	0.01	0.06	0.00
2	12	18	-23	31	0	-4	-1	0.01	0.01	0.00
3	12	1	-29	31	0	-4	-2	0.00	0.02	0.00
4	12	18	-23	-31	0	4	-1	0.01	0.01	0.00
5	12	1	-29	-31	0	4	-2	0.00	0.02	0.00
6	12	39	-16	9	0	-1	-0	0.00	0.01	0.00
7	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00
8	12	39	-16	-9	0	1	-0	0.00	0.01	0.00
9	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00
10	12	18	-23	31	0	-4	-1	0.01	0.01	0.00
11	12	1	-29	31	0	-4	-2	0.00	0.02	0.00
12	12	18	-23	-31	0	4	-1	0.01	0.01	0.00
13	12	1	-29	-31	0	4	-2	0.00	0.02	0.00
14	12	39	-16	9	0	-1	-0	0.00	0.01	0.00
15	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00
16	12	39	-16	-9	0	1	-0	0.00	0.01	0.00
17	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00
1	18	85	-236	-0	0	-0	-21	0.02	0.09	0.00
2	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
3	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
4	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
5	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
6	18	43	-29	9	0	-2	-2	0.00	0.01	0.00
7	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
8	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
9	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
10	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
11	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
12	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
13	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
14	18	43	-29	9	0	-2	-2	0.00	0.01	0.00
15	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
16	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
17	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
1	24	113	-315	0	0	-0	-38	0.04	0.11	0.00
2	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
3	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
4	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
5	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
6	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
7	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
8	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
9	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
10	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
11	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
12	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
13	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
14	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
15	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
16	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
17	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
1	30	141	-394	0	0	-0	-59	0.06	0.14	0.00
2	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
3	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
4	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
5	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
6	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
7	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
8	30	53	-55	-9	0	3	-7	0.01	0.02	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

9	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
10	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
11	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
12	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
13	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
14	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
15	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
16	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
17	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
1	36	169	-473	0	0	-0	-85	0.08	0.17	0.00
2	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
3	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
4	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
5	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
6	36	57	-68	9	0	-3	-10	0.01	0.02	0.00
7	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
8	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
9	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
10	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
11	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
12	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
13	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
14	36	57	-68	9	0	-3	-10	0.01	0.02	0.00
15	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
16	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
17	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
1	42	197	-551	-0	0	-0	-116	0.11	0.20	0.00
2	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
3	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
4	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
5	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
6	42	62	-81	9	0	-4	-15	0.02	0.03	0.00
7	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
8	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
9	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
10	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
11	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
12	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
13	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
14	42	62	-81	9	0	-4	-15	0.02	0.03	0.00
15	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
16	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
17	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
1	48	225	-630	0	0	-0	-151	0.14	0.23	0.00
2	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
3	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
4	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
5	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
6	48	67	-94	9	0	-4	-20	0.02	0.03	0.00
7	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
8	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
9	48	8	-115	-9	0	4	-30	0.03	0.04	0.00
10	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
11	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
12	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
13	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
14	48	67	-94	9	0	-4	-20	0.02	0.03	0.00
15	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
16	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
17	48	8	-115	-9	0	4	-30	0.03	0.04	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

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PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	54	254	-709	-0	0	-0	-191	0.17	0.26	0.00
2	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
3	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
4	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
5	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
6	54	71	-107	9	0	-5	-26	0.03	0.04	0.00
7	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
8	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
9	54	13	-128	-9	0	5	-37	0.04	0.05	0.00
10	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
11	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
12	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
13	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
14	54	71	-107	9	0	-5	-26	0.03	0.04	0.00
15	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
16	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
17	54	13	-128	-9	0	5	-37	0.04	0.05	0.00

1	60	282	-788	0	0	-0	-236	0.21	0.29	0.00
2	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
3	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
4	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
5	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
6	60	76	-121	9	0	-6	-33	0.03	0.04	0.00
7	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
8	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
9	60	18	-141	-9	0	6	-46	0.04	0.05	0.00
10	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
11	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
12	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
13	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
14	60	76	-121	9	0	-6	-33	0.03	0.04	0.00
15	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
16	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
17	60	18	-141	-9	0	6	-46	0.04	0.05	0.00

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
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	kg		kg*m						
1	-0	0	236	12	14	1.000	1.000	0.15	Piano 'zx'
3	-9	19	41	12	14	1.000	1.000	0.15	Piano 'zx'
5	-9	19	41	12	14	1.000	1.000	0.15	Piano 'zx'
7	-29	6	46	12	14	1.000	1.000	0.15	Piano 'zx'
9	-29	6	46	12	14	1.000	1.000	0.15	Piano 'zx'
11	-9	19	41	12	14	1.000	1.000	0.15	Piano 'zx'
13	-9	19	41	12	14	1.000	1.000	0.15	Piano 'zx'
15	-29	6	46	12	14	1.000	1.000	0.15	Piano 'zx'
17	-29	6	46	12	14	1.000	1.000	0.15	Piano 'zx'

ASTA NUM. 10 NI 15 NF 7 Lungh. 267.1 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
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	cm		kg			kg*m					

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

1	0	-1255	1849	1	0	1	-257	0.22	0.67	0.00
2	0	-209	307	-0	0	-0	-41	0.03	0.11	0.00
3	0	-209	308	-0	0	-0	-45	0.04	0.11	0.00
4	0	-209	307	0	0	1	-41	0.04	0.11	0.00
5	0	-209	308	0	0	1	-45	0.04	0.11	0.00
6	0	-209	305	0	0	0	-36	0.03	0.11	0.00
7	0	-209	310	-0	0	-0	-50	0.04	0.11	0.00
8	0	-209	305	0	0	0	-36	0.03	0.11	0.00
9	0	-209	310	0	0	0	-50	0.04	0.11	0.00
10	0	-209	307	-0	0	-0	-41	0.03	0.11	0.00
11	0	-209	308	-0	0	-0	-45	0.04	0.11	0.00
12	0	-209	307	0	0	1	-41	0.04	0.11	0.00
13	0	-209	308	0	0	1	-45	0.04	0.11	0.00
14	0	-209	305	0	0	0	-36	0.03	0.11	0.00
15	0	-209	310	-0	0	-0	-50	0.04	0.11	0.00
16	0	-209	305	0	0	0	-36	0.03	0.11	0.00
17	0	-209	310	0	0	0	-50	0.04	0.11	0.00
1	27	-1130	1498	1	0	1	191	0.16	0.54	0.00
2	27	-188	249	-0	0	-0	33	0.03	0.09	0.00
3	27	-188	250	-0	0	-0	29	0.02	0.09	0.00
4	27	-188	249	0	0	1	33	0.03	0.09	0.00
5	27	-188	250	0	0	1	29	0.03	0.09	0.00
6	27	-188	247	0	0	0	37	0.03	0.09	0.00
7	27	-188	252	-0	0	-0	25	0.02	0.09	0.00
8	27	-188	247	0	0	0	37	0.03	0.09	0.00
9	27	-188	252	0	0	0	25	0.02	0.09	0.00
10	27	-188	249	-0	0	-0	33	0.03	0.09	0.00
11	27	-188	250	-0	0	-0	29	0.02	0.09	0.00
12	27	-188	249	0	0	1	33	0.03	0.09	0.00
13	27	-188	250	0	0	1	29	0.03	0.09	0.00
14	27	-188	247	0	0	0	37	0.03	0.09	0.00
15	27	-188	252	-0	0	-0	25	0.02	0.09	0.00
16	27	-188	247	0	0	0	37	0.03	0.09	0.00
17	27	-188	252	0	0	0	25	0.02	0.09	0.00
1	53	-1004	1148	1	0	0	544	0.46	0.42	0.00
2	53	-167	190	-0	0	-0	92	0.08	0.07	0.00
3	53	-167	192	-0	0	-0	88	0.07	0.07	0.00
4	53	-167	190	0	0	0	92	0.08	0.07	0.00
5	53	-167	192	0	0	0	88	0.07	0.07	0.00
6	53	-167	189	0	0	0	95	0.08	0.07	0.00
7	53	-167	194	-0	0	-0	85	0.07	0.07	0.00
8	53	-167	189	0	0	0	95	0.08	0.07	0.00
9	53	-167	194	0	0	0	85	0.07	0.07	0.00
10	53	-167	190	-0	0	-0	92	0.08	0.07	0.00
11	53	-167	192	-0	0	-0	88	0.07	0.07	0.00
12	53	-167	190	0	0	0	92	0.08	0.07	0.00
13	53	-167	192	0	0	0	88	0.07	0.07	0.00
14	53	-167	189	0	0	0	95	0.08	0.07	0.00
15	53	-167	194	-0	0	-0	85	0.07	0.07	0.00
16	53	-167	189	0	0	0	95	0.08	0.07	0.00
17	53	-167	194	0	0	0	85	0.07	0.07	0.00
1	80	-879	797	1	0	0	804	0.68	0.29	0.00
2	80	-146	132	-0	0	-0	135	0.11	0.05	0.00
3	80	-146	134	-0	0	-0	132	0.11	0.05	0.00
4	80	-146	132	0	0	0	135	0.11	0.05	0.00
5	80	-146	134	0	0	0	132	0.11	0.05	0.00
6	80	-146	130	0	0	-0	138	0.12	0.05	0.00
7	80	-146	135	-0	0	-0	128	0.11	0.05	0.00
8	80	-146	130	0	0	0	138	0.12	0.05	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

9	80	-146	135	0	0	0	128	0.11	0.05	0.00
10	80	-146	132	-0	0	-0	135	0.11	0.05	0.00
11	80	-146	134	-0	0	-0	132	0.11	0.05	0.00
12	80	-146	132	0	0	0	135	0.11	0.05	0.00
13	80	-146	134	0	0	0	132	0.11	0.05	0.00
14	80	-146	130	0	0	-0	138	0.12	0.05	0.00
15	80	-146	135	-0	0	-0	128	0.11	0.05	0.00
16	80	-146	130	0	0	0	138	0.12	0.05	0.00
17	80	-146	135	0	0	0	128	0.11	0.05	0.00
1	107	-753	447	1	0	-0	970	0.82	0.16	0.00
2	107	-125	74	-0	0	-0	162	0.14	0.03	0.00
3	107	-125	75	-0	0	-0	160	0.13	0.03	0.00
4	107	-125	74	0	0	0	162	0.14	0.03	0.00
5	107	-125	75	0	0	0	160	0.13	0.03	0.00
6	107	-125	72	0	0	-0	165	0.14	0.03	0.00
7	107	-125	77	-0	0	-0	157	0.13	0.03	0.00
8	107	-125	72	0	0	0	165	0.14	0.03	0.00
9	107	-125	77	0	0	0	157	0.13	0.03	0.00
10	107	-125	74	-0	0	-0	162	0.14	0.03	0.00
11	107	-125	75	-0	0	-0	160	0.13	0.03	0.00
12	107	-125	74	0	0	0	162	0.14	0.03	0.00
13	107	-125	75	0	0	0	160	0.13	0.03	0.00
14	107	-125	72	0	0	-0	165	0.14	0.03	0.00
15	107	-125	77	-0	0	-0	157	0.13	0.03	0.00
16	107	-125	72	0	0	0	165	0.14	0.03	0.00
17	107	-125	77	0	0	0	157	0.13	0.03	0.00
1	134	-628	96	1	0	-0	1042	0.88	0.03	0.00
2	134	-104	15	-0	0	-0	174	0.15	0.01	0.00
3	134	-104	17	-0	0	-0	172	0.14	0.01	0.00
4	134	-104	15	0	0	0	174	0.15	0.01	0.00
5	134	-104	17	0	0	0	172	0.14	0.01	0.00
6	134	-104	14	0	0	-0	176	0.15	0.00	0.00
7	134	-104	19	-0	0	-0	170	0.14	0.01	0.00
8	134	-104	14	0	0	-0	176	0.15	0.00	0.00
9	134	-104	19	0	0	0	170	0.14	0.01	0.00
10	134	-104	15	-0	0	-0	174	0.15	0.01	0.00
11	134	-104	17	-0	0	-0	172	0.14	0.01	0.00
12	134	-104	15	0	0	0	174	0.15	0.01	0.00
13	134	-104	17	0	0	0	172	0.14	0.01	0.00
14	134	-104	14	0	0	-0	176	0.15	0.00	0.00
15	134	-104	19	-0	0	-0	170	0.14	0.01	0.00
16	134	-104	14	0	0	-0	176	0.15	0.00	0.00
17	134	-104	19	0	0	0	170	0.14	0.01	0.00
1	160	-502	-255	1	0	-0	1021	0.86	0.09	0.00
2	160	-83	-43	-0	0	-0	170	0.14	0.02	0.00
3	160	-83	-41	-0	0	-0	169	0.14	0.02	0.00
4	160	-83	-43	0	0	0	170	0.14	0.02	0.00
5	160	-83	-41	0	0	0	169	0.14	0.02	0.00
6	160	-83	-45	0	0	-0	172	0.15	0.02	0.00
7	160	-83	-40	-0	0	-0	167	0.14	0.01	0.00
8	160	-83	-45	0	0	-0	172	0.14	0.02	0.00
9	160	-83	-40	0	0	0	167	0.14	0.01	0.00
10	160	-83	-43	-0	0	-0	170	0.14	0.02	0.00
11	160	-83	-41	-0	0	-0	169	0.14	0.02	0.00
12	160	-83	-43	0	0	0	170	0.14	0.02	0.00
13	160	-83	-41	0	0	0	169	0.14	0.02	0.00
14	160	-83	-45	0	0	-0	172	0.15	0.02	0.00
15	160	-83	-40	-0	0	-0	167	0.14	0.01	0.00
16	160	-83	-45	0	0	-0	172	0.14	0.02	0.00
17	160	-83	-40	0	0	0	167	0.14	0.01	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	187	-377	-605	1	0	-1	906	0.76	0.22	0.00
2	187	-63	-101	-0	0	-0	151	0.13	0.04	0.00
3	187	-63	-100	-0	0	-0	150	0.13	0.04	0.00
4	187	-63	-101	0	0	0	151	0.13	0.04	0.00
5	187	-63	-100	0	0	0	150	0.13	0.04	0.00
6	187	-63	-103	0	0	-0	153	0.13	0.04	0.00
7	187	-63	-98	-0	0	-0	148	0.12	0.04	0.00
8	187	-63	-103	0	0	-0	153	0.13	0.04	0.00
9	187	-63	-98	0	0	0	148	0.12	0.04	0.00
10	187	-63	-101	-0	0	-0	151	0.13	0.04	0.00
11	187	-63	-100	-0	0	-0	150	0.13	0.04	0.00
12	187	-63	-101	0	0	0	151	0.13	0.04	0.00
13	187	-63	-100	0	0	0	150	0.13	0.04	0.00
14	187	-63	-103	0	0	-0	153	0.13	0.04	0.00
15	187	-63	-98	-0	0	-0	148	0.12	0.04	0.00
16	187	-63	-103	0	0	-0	153	0.13	0.04	0.00
17	187	-63	-98	0	0	0	148	0.12	0.04	0.00

1	214	-251	-956	1	0	-1	698	0.59	0.35	0.00
2	214	-42	-159	-0	0	-0	116	0.10	0.06	0.00
3	214	-42	-158	-0	0	-0	116	0.10	0.06	0.00
4	214	-42	-159	0	0	-0	116	0.10	0.06	0.00
5	214	-42	-158	0	0	-0	116	0.10	0.06	0.00
6	214	-42	-161	0	0	-0	117	0.10	0.06	0.00
7	214	-42	-156	-0	0	-0	115	0.10	0.06	0.00
8	214	-42	-161	0	0	-0	117	0.10	0.06	0.00
9	214	-42	-156	0	0	0	115	0.10	0.06	0.00
10	214	-42	-159	-0	0	-0	116	0.10	0.06	0.00
11	214	-42	-158	-0	0	-0	116	0.10	0.06	0.00
12	214	-42	-159	0	0	-0	116	0.10	0.06	0.00
13	214	-42	-158	0	0	-0	116	0.10	0.06	0.00
14	214	-42	-161	0	0	-0	117	0.10	0.06	0.00
15	214	-42	-156	-0	0	-0	115	0.10	0.06	0.00
16	214	-42	-161	0	0	-0	117	0.10	0.06	0.00
17	214	-42	-156	0	0	0	115	0.10	0.06	0.00

1	240	-126	-1306	1	0	-1	396	0.33	0.47	0.00
2	240	-21	-218	-0	0	-0	66	0.06	0.08	0.00
3	240	-21	-216	-0	0	-0	66	0.06	0.08	0.00
4	240	-21	-218	0	0	-0	66	0.06	0.08	0.00
5	240	-21	-216	0	0	-0	66	0.06	0.08	0.00
6	240	-21	-220	0	0	-0	66	0.06	0.08	0.00
7	240	-21	-214	-0	0	0	65	0.05	0.08	0.00
8	240	-21	-220	0	0	-0	66	0.06	0.08	0.00
9	240	-21	-214	0	0	0	65	0.05	0.08	0.00
10	240	-21	-218	-0	0	-0	66	0.06	0.08	0.00
11	240	-21	-216	-0	0	-0	66	0.06	0.08	0.00
12	240	-21	-218	0	0	-0	66	0.06	0.08	0.00
13	240	-21	-216	0	0	-0	66	0.06	0.08	0.00
14	240	-21	-220	0	0	-0	66	0.06	0.08	0.00
15	240	-21	-214	-0	0	0	65	0.05	0.08	0.00
16	240	-21	-220	0	0	-0	66	0.06	0.08	0.00
17	240	-21	-214	0	0	0	65	0.05	0.08	0.00

1	267	-0	-1657	1	0	-1	-0	0.00	0.60	0.00
2	267	0	-276	-0	0	-0	-0	0.00	0.10	0.00
3	267	0	-275	-0	0	-0	-0	0.00	0.10	0.00
4	267	0	-276	0	0	-0	-0	0.00	0.10	0.00
5	267	0	-275	0	0	-0	-0	0.00	0.10	0.00
6	267	0	-278	0	0	-0	-0	0.00	0.10	0.00
7	267	0	-273	-0	0	0	-0	0.00	0.10	0.00
8	267	0	-278	0	0	-0	-0	0.00	0.10	0.00
9	267	0	-273	0	0	0	-0	0.00	0.10	0.00
10	267	0	-276	-0	0	-0	-0	0.00	0.10	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

11	267	0	-275	-0	0	-0	-0	0.00	0.10	0.00
12	267	0	-276	0	0	-0	-0	0.00	0.10	0.00
13	267	0	-275	0	0	-0	-0	0.00	0.10	0.00
14	267	0	-278	0	0	-0	-0	0.00	0.10	0.00
15	267	0	-273	-0	0	0	-0	0.00	0.10	0.00
16	267	0	-278	0	0	-0	-0	0.00	0.10	0.00
17	267	0	-273	0	0	0	-0	0.00	0.10	0.00

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
	kg	kg*m							
1	-1255	1	1042	52	62	0.781	0.655	0.93	Piano 'zx'
2	-209	0	174	52	62	0.781	0.655	0.16	Piano 'zx'
3	-209	0	172	52	62	0.781	0.655	0.15	Piano 'zx'
4	-209	1	174	52	62	0.781	0.655	0.16	Piano 'zx'
5	-209	1	172	52	62	0.781	0.655	0.15	Piano 'zx'
6	-209	0	176	52	62	0.781	0.655	0.16	Piano 'zx'
7	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
8	-209	0	176	52	62	0.781	0.655	0.16	Piano 'zx'
9	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
10	-209	0	174	52	62	0.781	0.655	0.16	Piano 'zx'
11	-209	0	172	52	62	0.781	0.655	0.15	Piano 'zx'
12	-209	1	174	52	62	0.781	0.655	0.16	Piano 'zx'
13	-209	1	172	52	62	0.781	0.655	0.15	Piano 'zx'
14	-209	0	176	52	62	0.781	0.655	0.16	Piano 'zx'
15	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
16	-209	0	176	52	62	0.781	0.655	0.16	Piano 'zx'
17	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'

ASTA NUM. 11 NI 24 NF 16 Lungh. 60.0 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	cm	kg			kg*m						
1	0	0	0	0	0	-0	0	0.00	0.00	0.00	
2	0	9	3	31	0	-0	0	0.00	0.01	0.00	
3	0	-9	-3	31	0	-0	0	0.00	0.01	0.00	
4	0	9	3	-31	0	-0	0	0.00	0.01	0.00	
5	0	-9	-3	-31	0	-0	0	0.00	0.01	0.00	
6	0	29	10	9	0	-0	0	0.00	0.01	0.00	
7	0	-29	-10	9	0	-0	0	0.00	0.01	0.00	
8	0	29	10	-9	0	-0	0	0.00	0.01	0.00	
9	0	-29	-10	-9	0	-0	0	0.00	0.01	0.00	
10	0	9	3	31	0	-0	0	0.00	0.01	0.00	
11	0	-9	-3	31	0	-0	0	0.00	0.01	0.00	
12	0	9	3	-31	0	-0	0	0.00	0.01	0.00	
13	0	-9	-3	-31	0	-0	0	0.00	0.01	0.00	
14	0	29	10	9	0	-0	0	0.00	0.01	0.00	
15	0	-29	-10	9	0	-0	0	0.00	0.01	0.00	
16	0	29	10	-9	0	-0	0	0.00	0.01	0.00	
17	0	-29	-10	-9	0	-0	0	0.00	0.01	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	6	28	-79	0	0	-0	-2	0.00	0.03	0.00
2	6	13	-10	31	0	-2	-0	0.00	0.01	0.00
3	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00
4	6	13	-10	-31	0	2	-0	0.00	0.01	0.00
5	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00
6	6	34	-3	9	0	-1	0	0.00	0.00	0.00
7	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00
8	6	34	-3	-9	0	1	0	0.00	0.00	0.00
9	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00
10	6	13	-10	31	0	-2	-0	0.00	0.01	0.00
11	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00
12	6	13	-10	-31	0	2	-0	0.00	0.01	0.00
13	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00
14	6	34	-3	9	0	-1	0	0.00	0.00	0.00
15	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00
16	6	34	-3	-9	0	1	0	0.00	0.00	0.00
17	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00
1	12	56	-157	0	0	-0	-9	0.01	0.06	0.00
2	12	18	-23	31	0	-4	-1	0.01	0.01	0.00
3	12	1	-29	31	0	-4	-2	0.00	0.02	0.00
4	12	18	-23	-31	0	4	-1	0.01	0.01	0.00
5	12	1	-29	-31	0	4	-2	0.00	0.02	0.00
6	12	39	-16	9	0	-1	-0	0.00	0.01	0.00
7	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00
8	12	39	-16	-9	0	1	-0	0.00	0.01	0.00
9	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00
10	12	18	-23	31	0	-4	-1	0.01	0.01	0.00
11	12	1	-29	31	0	-4	-2	0.00	0.02	0.00
12	12	18	-23	-31	0	4	-1	0.01	0.01	0.00
13	12	1	-29	-31	0	4	-2	0.00	0.02	0.00
14	12	39	-16	9	0	-1	-0	0.00	0.01	0.00
15	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00
16	12	39	-16	-9	0	1	-0	0.00	0.01	0.00
17	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00
1	18	85	-236	0	0	-0	-21	0.02	0.09	0.00
2	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
3	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
4	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
5	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
6	18	43	-29	9	0	-2	-2	0.00	0.01	0.00
7	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
8	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
9	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
10	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
11	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
12	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
13	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
14	18	43	-29	9	0	-2	-2	0.00	0.01	0.00
15	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
16	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
17	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
1	24	113	-315	0	0	-0	-38	0.04	0.11	0.00
2	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
3	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
4	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
5	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
6	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
7	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
8	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
9	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
10	24	27	-49	31	0	-7	-6	0.01	0.02	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

11	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
12	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
13	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
14	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
15	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
16	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
17	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
1	30	141	-394	0	0	-0	-59	0.06	0.14	0.00
2	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
3	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
4	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
5	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
6	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
7	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
8	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
9	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
10	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
11	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
12	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
13	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
14	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
15	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
16	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
17	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
1	36	169	-473	0	0	-0	-85	0.08	0.17	0.00
2	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
3	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
4	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
5	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
6	36	57	-68	9	0	-3	-10	0.01	0.02	0.00
7	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
8	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
9	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
10	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
11	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
12	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
13	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
14	36	57	-68	9	0	-3	-10	0.01	0.02	0.00
15	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
16	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
17	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
1	42	197	-551	0	0	-0	-116	0.11	0.20	0.00
2	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
3	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
4	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
5	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
6	42	62	-81	9	0	-4	-15	0.02	0.03	0.00
7	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
8	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
9	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
10	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
11	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
12	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
13	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
14	42	62	-81	9	0	-4	-15	0.02	0.03	0.00
15	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
16	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
17	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
1	48	225	-630	0	0	-0	-151	0.14	0.23	0.00
2	48	46	-102	31	0	-15	-24	0.03	0.04	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

3	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
4	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
5	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
6	48	67	-94	9	0	-4	-20	0.02	0.03	0.00
7	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
8	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
9	48	8	-115	-9	0	4	-30	0.03	0.04	0.00
10	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
11	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
12	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
13	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
14	48	67	-94	9	0	-4	-20	0.02	0.03	0.00
15	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
16	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
17	48	8	-115	-9	0	4	-30	0.03	0.04	0.00

1	54	254	-709	-0	0	-0	-191	0.17	0.26	0.00
2	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
3	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
4	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
5	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
6	54	71	-107	9	0	-5	-26	0.03	0.04	0.00
7	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
8	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
9	54	13	-128	-9	0	5	-37	0.04	0.05	0.00
10	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
11	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
12	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
13	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
14	54	71	-107	9	0	-5	-26	0.03	0.04	0.00
15	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
16	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
17	54	13	-128	-9	0	5	-37	0.04	0.05	0.00

1	60	282	-788	0	0	-0	-236	0.21	0.29	0.00
2	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
3	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
4	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
5	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
6	60	76	-121	9	0	-6	-33	0.03	0.04	0.00
7	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
8	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
9	60	18	-141	-9	0	6	-46	0.04	0.05	0.00
10	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
11	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
12	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
13	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
14	60	76	-121	9	0	-6	-33	0.03	0.04	0.00
15	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
16	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
17	60	18	-141	-9	0	6	-46	0.04	0.05	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
3	-9	19	41	12	14	1.000	1.000	0.15	Piano 'zx'
5	-9	19	41	12	14	1.000	1.000	0.15	Piano 'zx'
7	-29	6	46	12	14	1.000	1.000	0.15	Piano 'zx'

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

9	-29	6	46	12	14	1.000	1.000	0.15	Piano 'zx'
11	-9	19	41	12	14	1.000	1.000	0.15	Piano 'zx'
13	-9	19	41	12	14	1.000	1.000	0.15	Piano 'zx'
15	-29	6	46	12	14	1.000	1.000	0.15	Piano 'zx'
17	-29	6	46	12	14	1.000	1.000	0.15	Piano 'zx'

ASTA NUM. 12 NI 16 NF 8 Lungh. 267.1 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
--	cm	kg			kg*m						
1	0	-1255	1849	-1	0	-1	-257	0.22	0.67	0.00	
2	0	-209	307	-0	0	-1	-41	0.04	0.11	0.00	
3	0	-209	308	-0	0	-1	-45	0.04	0.11	0.00	
4	0	-209	307	0	0	0	-41	0.03	0.11	0.00	
5	0	-209	308	0	0	0	-45	0.04	0.11	0.00	
6	0	-209	305	-0	0	-0	-36	0.03	0.11	0.00	
7	0	-209	310	-0	0	-0	-50	0.04	0.11	0.00	
8	0	-209	305	-0	0	-0	-36	0.03	0.11	0.00	
9	0	-209	310	0	0	0	-50	0.04	0.11	0.00	
10	0	-209	307	-0	0	-1	-41	0.04	0.11	0.00	
11	0	-209	308	-0	0	-1	-45	0.04	0.11	0.00	
12	0	-209	307	0	0	0	-41	0.03	0.11	0.00	
13	0	-209	308	0	0	0	-45	0.04	0.11	0.00	
14	0	-209	305	-0	0	-0	-36	0.03	0.11	0.00	
15	0	-209	310	-0	0	-0	-50	0.04	0.11	0.00	
16	0	-209	305	-0	0	-0	-36	0.03	0.11	0.00	
17	0	-209	310	0	0	0	-50	0.04	0.11	0.00	
1	27	-1130	1498	-1	0	-0	190	0.16	0.54	0.00	
2	27	-188	249	-0	0	-1	33	0.03	0.09	0.00	
3	27	-188	250	-0	0	-1	29	0.03	0.09	0.00	
4	27	-188	249	0	0	0	33	0.03	0.09	0.00	
5	27	-188	250	0	0	0	29	0.02	0.09	0.00	
6	27	-188	247	-0	0	-0	37	0.03	0.09	0.00	
7	27	-188	252	-0	0	-0	25	0.02	0.09	0.00	
8	27	-188	247	-0	0	-0	37	0.03	0.09	0.00	
9	27	-188	252	0	0	0	25	0.02	0.09	0.00	
10	27	-188	249	-0	0	-1	33	0.03	0.09	0.00	
11	27	-188	250	-0	0	-1	29	0.03	0.09	0.00	
12	27	-188	249	0	0	0	33	0.03	0.09	0.00	
13	27	-188	250	0	0	0	29	0.02	0.09	0.00	
14	27	-188	247	-0	0	-0	37	0.03	0.09	0.00	
15	27	-188	252	-0	0	-0	25	0.02	0.09	0.00	
16	27	-188	247	-0	0	-0	37	0.03	0.09	0.00	
17	27	-188	252	0	0	0	25	0.02	0.09	0.00	
1	53	-1004	1148	-1	0	-0	544	0.46	0.42	0.00	
2	53	-167	190	-0	0	-0	92	0.08	0.07	0.00	
3	53	-167	192	-0	0	-0	88	0.07	0.07	0.00	
4	53	-167	190	0	0	0	92	0.08	0.07	0.00	
5	53	-167	192	0	0	0	88	0.07	0.07	0.00	
6	53	-167	189	-0	0	-0	95	0.08	0.07	0.00	
7	53	-167	194	-0	0	-0	84	0.07	0.07	0.00	
8	53	-167	189	-0	0	0	95	0.08	0.07	0.00	
9	53	-167	194	0	0	0	84	0.07	0.07	0.00	
10	53	-167	190	-0	0	-0	92	0.08	0.07	0.00	
11	53	-167	192	-0	0	-0	88	0.07	0.07	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

12	53	-167	190	0	0	0	92	0.08	0.07	0.00
13	53	-167	192	0	0	0	88	0.07	0.07	0.00
14	53	-167	189	-0	0	-0	95	0.08	0.07	0.00
15	53	-167	194	-0	0	-0	84	0.07	0.07	0.00
16	53	-167	189	-0	0	0	95	0.08	0.07	0.00
17	53	-167	194	0	0	0	84	0.07	0.07	0.00
1	80	-879	797	-1	0	-0	804	0.68	0.29	0.00
2	80	-146	132	-0	0	-0	135	0.11	0.05	0.00
3	80	-146	134	-0	0	-0	132	0.11	0.05	0.00
4	80	-146	132	0	0	0	135	0.11	0.05	0.00
5	80	-146	134	0	0	0	132	0.11	0.05	0.00
6	80	-146	130	-0	0	-0	138	0.12	0.05	0.00
7	80	-146	135	-0	0	-0	128	0.11	0.05	0.00
8	80	-146	130	-0	0	0	138	0.12	0.05	0.00
9	80	-146	135	0	0	0	128	0.11	0.05	0.00
10	80	-146	132	-0	0	-0	135	0.11	0.05	0.00
11	80	-146	134	-0	0	-0	132	0.11	0.05	0.00
12	80	-146	132	0	0	0	135	0.11	0.05	0.00
13	80	-146	134	0	0	0	132	0.11	0.05	0.00
14	80	-146	130	-0	0	-0	138	0.12	0.05	0.00
15	80	-146	135	-0	0	-0	128	0.11	0.05	0.00
16	80	-146	130	-0	0	0	138	0.12	0.05	0.00
17	80	-146	135	0	0	0	128	0.11	0.05	0.00
1	107	-753	447	-1	0	0	970	0.82	0.16	0.00
2	107	-125	74	-0	0	-0	162	0.14	0.03	0.00
3	107	-125	75	-0	0	-0	160	0.13	0.03	0.00
4	107	-125	74	0	0	0	162	0.14	0.03	0.00
5	107	-125	75	0	0	0	160	0.13	0.03	0.00
6	107	-125	72	-0	0	-0	165	0.14	0.03	0.00
7	107	-125	77	-0	0	-0	157	0.13	0.03	0.00
8	107	-125	72	-0	0	0	165	0.14	0.03	0.00
9	107	-125	77	0	0	0	157	0.13	0.03	0.00
10	107	-125	74	-0	0	-0	162	0.14	0.03	0.00
11	107	-125	75	-0	0	-0	160	0.13	0.03	0.00
12	107	-125	74	0	0	0	162	0.14	0.03	0.00
13	107	-125	75	0	0	0	160	0.13	0.03	0.00
14	107	-125	72	-0	0	-0	165	0.14	0.03	0.00
15	107	-125	77	-0	0	-0	157	0.13	0.03	0.00
16	107	-125	72	-0	0	0	165	0.14	0.03	0.00
17	107	-125	77	0	0	0	157	0.13	0.03	0.00
1	134	-628	96	-1	0	0	1042	0.88	0.03	0.00
2	134	-104	15	-0	0	-0	174	0.15	0.01	0.00
3	134	-104	17	-0	0	-0	172	0.14	0.01	0.00
4	134	-104	15	0	0	0	174	0.15	0.01	0.00
5	134	-104	17	0	0	0	172	0.14	0.01	0.00
6	134	-104	14	-0	0	0	176	0.15	0.00	0.00
7	134	-104	19	-0	0	-0	170	0.14	0.01	0.00
8	134	-104	14	-0	0	0	176	0.15	0.00	0.00
9	134	-104	19	0	0	0	170	0.14	0.01	0.00
10	134	-104	15	-0	0	-0	174	0.15	0.01	0.00
11	134	-104	17	-0	0	-0	172	0.14	0.01	0.00
12	134	-104	15	0	0	0	174	0.15	0.01	0.00
13	134	-104	17	0	0	0	172	0.14	0.01	0.00
14	134	-104	14	-0	0	0	176	0.15	0.00	0.00
15	134	-104	19	-0	0	-0	170	0.14	0.01	0.00
16	134	-104	14	-0	0	0	176	0.15	0.00	0.00
17	134	-104	19	0	0	0	170	0.14	0.01	0.00
1	160	-502	-255	-1	0	0	1021	0.86	0.09	0.00
2	160	-83	-43	-0	0	-0	170	0.14	0.02	0.00
3	160	-83	-41	-0	0	-0	169	0.14	0.02	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

4	160	-83	-43	0	0	0	170	0.14	0.02	0.00
5	160	-83	-41	0	0	0	169	0.14	0.02	0.00
6	160	-83	-45	-0	0	0	172	0.14	0.02	0.00
7	160	-83	-40	-0	0	-0	167	0.14	0.01	0.00
8	160	-83	-45	-0	0	0	172	0.15	0.02	0.00
9	160	-83	-40	0	0	0	167	0.14	0.01	0.00
10	160	-83	-43	-0	0	-0	170	0.14	0.02	0.00
11	160	-83	-41	-0	0	-0	169	0.14	0.02	0.00
12	160	-83	-43	0	0	0	170	0.14	0.02	0.00
13	160	-83	-41	0	0	0	169	0.14	0.02	0.00
14	160	-83	-45	-0	0	0	172	0.14	0.02	0.00
15	160	-83	-40	-0	0	-0	167	0.14	0.01	0.00
16	160	-83	-45	-0	0	0	172	0.15	0.02	0.00
17	160	-83	-40	0	0	0	167	0.14	0.01	0.00
1	187	-377	-605	-1	0	1	906	0.76	0.22	0.00
2	187	-63	-101	-0	0	-0	151	0.13	0.04	0.00
3	187	-63	-100	-0	0	-0	150	0.13	0.04	0.00
4	187	-63	-101	0	0	0	151	0.13	0.04	0.00
5	187	-63	-100	0	0	0	150	0.13	0.04	0.00
6	187	-63	-103	-0	0	0	153	0.13	0.04	0.00
7	187	-63	-98	-0	0	-0	148	0.12	0.04	0.00
8	187	-63	-103	-0	0	0	153	0.13	0.04	0.00
9	187	-63	-98	0	0	0	148	0.12	0.04	0.00
10	187	-63	-101	-0	0	-0	151	0.13	0.04	0.00
11	187	-63	-100	-0	0	-0	150	0.13	0.04	0.00
12	187	-63	-101	0	0	0	151	0.13	0.04	0.00
13	187	-63	-100	0	0	0	150	0.13	0.04	0.00
14	187	-63	-103	-0	0	0	153	0.13	0.04	0.00
15	187	-63	-98	-0	0	-0	148	0.12	0.04	0.00
16	187	-63	-103	-0	0	0	153	0.13	0.04	0.00
17	187	-63	-98	0	0	0	148	0.12	0.04	0.00
1	214	-251	-956	-1	0	1	698	0.59	0.35	0.00
2	214	-42	-159	-0	0	0	116	0.10	0.06	0.00
3	214	-42	-158	-0	0	-0	115	0.10	0.06	0.00
4	214	-42	-159	0	0	0	116	0.10	0.06	0.00
5	214	-42	-158	0	0	0	115	0.10	0.06	0.00
6	214	-42	-161	-0	0	0	117	0.10	0.06	0.00
7	214	-42	-156	-0	0	-0	115	0.10	0.06	0.00
8	214	-42	-161	-0	0	0	117	0.10	0.06	0.00
9	214	-42	-156	0	0	0	115	0.10	0.06	0.00
10	214	-42	-159	-0	0	0	116	0.10	0.06	0.00
11	214	-42	-158	-0	0	-0	115	0.10	0.06	0.00
12	214	-42	-159	0	0	0	116	0.10	0.06	0.00
13	214	-42	-158	0	0	0	115	0.10	0.06	0.00
14	214	-42	-161	-0	0	0	117	0.10	0.06	0.00
15	214	-42	-156	-0	0	-0	115	0.10	0.06	0.00
16	214	-42	-161	-0	0	0	117	0.10	0.06	0.00
17	214	-42	-156	0	0	0	115	0.10	0.06	0.00
1	240	-126	-1306	-1	0	1	396	0.33	0.47	0.00
2	240	-21	-218	-0	0	0	66	0.06	0.08	0.00
3	240	-21	-216	-0	0	0	66	0.06	0.08	0.00
4	240	-21	-218	0	0	0	66	0.06	0.08	0.00
5	240	-21	-216	0	0	0	66	0.06	0.08	0.00
6	240	-21	-220	-0	0	0	66	0.06	0.08	0.00
7	240	-21	-214	-0	0	-0	65	0.05	0.08	0.00
8	240	-21	-220	-0	0	0	66	0.06	0.08	0.00
9	240	-21	-214	0	0	0	65	0.05	0.08	0.00
10	240	-21	-218	-0	0	0	66	0.06	0.08	0.00
11	240	-21	-216	-0	0	0	66	0.06	0.08	0.00
12	240	-21	-218	0	0	0	66	0.06	0.08	0.00
13	240	-21	-216	0	0	0	66	0.06	0.08	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

14	240	-21	-220	-0	0	0	66	0.06	0.08	0.00
15	240	-21	-214	-0	0	-0	65	0.05	0.08	0.00
16	240	-21	-220	-0	0	0	66	0.06	0.08	0.00
17	240	-21	-214	0	0	0	65	0.05	0.08	0.00
1	267	-0	-1657	-1	0	1	-0	0.00	0.60	0.00
2	267	0	-276	-0	0	0	-0	0.00	0.10	0.00
3	267	0	-275	-0	0	0	-0	0.00	0.10	0.00
4	267	0	-276	0	0	0	-0	0.00	0.10	0.00
5	267	0	-275	0	0	0	-0	0.00	0.10	0.00
6	267	0	-278	-0	0	0	-0	0.00	0.10	0.00
7	267	0	-273	-0	0	-0	-0	0.00	0.10	0.00
8	267	0	-278	-0	0	0	-0	0.00	0.10	0.00
9	267	0	-273	0	0	-0	-0	0.00	0.10	0.00
10	267	0	-276	-0	0	0	-0	0.00	0.10	0.00
11	267	0	-275	-0	0	0	-0	0.00	0.10	0.00
12	267	0	-276	0	0	0	-0	0.00	0.10	0.00
13	267	0	-275	0	0	0	-0	0.00	0.10	0.00
14	267	0	-278	-0	0	0	-0	0.00	0.10	0.00
15	267	0	-273	-0	0	-0	-0	0.00	0.10	0.00
16	267	0	-278	-0	0	0	-0	0.00	0.10	0.00
17	267	0	-273	0	0	-0	-0	0.00	0.10	0.00

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc.yx	Kc.zx	I.S.	Nota
	kg		kg*m						

1	-1255	1	1042	52	62	0.781	0.655	0.93	Piano 'zx'
2	-209	1	174	52	62	0.781	0.655	0.16	Piano 'zx'
3	-209	1	172	52	62	0.781	0.655	0.15	Piano 'zx'
4	-209	0	174	52	62	0.781	0.655	0.16	Piano 'zx'
5	-209	0	172	52	62	0.781	0.655	0.15	Piano 'zx'
6	-209	0	176	52	62	0.781	0.655	0.16	Piano 'zx'
7	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
8	-209	0	176	52	62	0.781	0.655	0.16	Piano 'zx'
9	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
10	-209	1	174	52	62	0.781	0.655	0.16	Piano 'zx'
11	-209	1	172	52	62	0.781	0.655	0.15	Piano 'zx'
12	-209	0	174	52	62	0.781	0.655	0.16	Piano 'zx'
13	-209	0	172	52	62	0.781	0.655	0.15	Piano 'zx'
14	-209	0	176	52	62	0.781	0.655	0.16	Piano 'zx'
15	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
16	-209	0	176	52	62	0.781	0.655	0.16	Piano 'zx'
17	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'

ASTA NUM. 13 NI 25 NF 17 Lungh. 60.0 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	cm		kg			kg*m					

1	0	0	0	0	0	-0	0	0.00	0.00	0.00	
2	0	9	3	31	0	-0	0	0.00	0.01	0.00	
3	0	-9	-3	31	0	-0	0	0.00	0.01	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

4	0	9	3	-31	0	-0	0	0.00	0.01	0.00
5	0	-9	-3	-31	0	-0	0	0.00	0.01	0.00
6	0	29	10	9	0	-0	0	0.00	0.01	0.00
7	0	-29	-10	9	0	-0	0	0.00	0.01	0.00
8	0	29	10	-9	0	-0	0	0.00	0.01	0.00
9	0	-29	-10	-9	0	-0	0	0.00	0.01	0.00
10	0	9	3	31	0	-0	0	0.00	0.01	0.00
11	0	-9	-3	31	0	-0	0	0.00	0.01	0.00
12	0	9	3	-31	0	-0	0	0.00	0.01	0.00
13	0	-9	-3	-31	0	-0	0	0.00	0.01	0.00
14	0	29	10	9	0	-0	0	0.00	0.01	0.00
15	0	-29	-10	9	0	-0	0	0.00	0.01	0.00
16	0	29	10	-9	0	-0	0	0.00	0.01	0.00
17	0	-29	-10	-9	0	-0	0	0.00	0.01	0.00
1	6	28	-79	-0	0	-0	-2	0.00	0.03	0.00
2	6	13	-10	31	0	-2	-0	0.00	0.01	0.00
3	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00
4	6	13	-10	-31	0	2	-0	0.00	0.01	0.00
5	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00
6	6	34	-3	9	0	-1	0	0.00	0.00	0.00
7	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00
8	6	34	-3	-9	0	1	0	0.00	0.00	0.00
9	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00
10	6	13	-10	31	0	-2	-0	0.00	0.01	0.00
11	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00
12	6	13	-10	-31	0	2	-0	0.00	0.01	0.00
13	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00
14	6	34	-3	9	0	-1	0	0.00	0.00	0.00
15	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00
16	6	34	-3	-9	0	1	0	0.00	0.00	0.00
17	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00
1	12	56	-157	-0	0	-0	-9	0.01	0.06	0.00
2	12	18	-23	31	0	-4	-1	0.01	0.01	0.00
3	12	1	-29	31	0	-4	-2	0.00	0.02	0.00
4	12	18	-23	-31	0	4	-1	0.01	0.01	0.00
5	12	1	-29	-31	0	4	-2	0.00	0.02	0.00
6	12	39	-16	9	0	-1	-0	0.00	0.01	0.00
7	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00
8	12	39	-16	-9	0	1	-0	0.00	0.01	0.00
9	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00
10	12	18	-23	31	0	-4	-1	0.01	0.01	0.00
11	12	1	-29	31	0	-4	-2	0.00	0.02	0.00
12	12	18	-23	-31	0	4	-1	0.01	0.01	0.00
13	12	1	-29	-31	0	4	-2	0.00	0.02	0.00
14	12	39	-16	9	0	-1	-0	0.00	0.01	0.00
15	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00
16	12	39	-16	-9	0	1	-0	0.00	0.01	0.00
17	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00
1	18	85	-236	-0	0	-0	-21	0.02	0.09	0.00
2	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
3	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
4	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
5	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
6	18	43	-29	9	0	-2	-2	0.00	0.01	0.00
7	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
8	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
9	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
10	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
11	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
12	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
13	18	5	-42	-31	0	6	-4	0.01	0.02	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali
(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

14	18	43	-29	9	0	-2	-2	0.00	0.01	0.00
15	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
16	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
17	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
1	24	113	-315	-0	0	-0	-38	0.04	0.11	0.00
2	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
3	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
4	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
5	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
6	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
7	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
8	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
9	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
10	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
11	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
12	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
13	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
14	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
15	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
16	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
17	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
1	30	141	-394	0	0	-0	-59	0.06	0.14	0.00
2	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
3	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
4	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
5	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
6	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
7	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
8	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
9	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
10	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
11	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
12	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
13	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
14	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
15	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
16	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
17	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
1	36	169	-473	0	0	-0	-85	0.08	0.17	0.00
2	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
3	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
4	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
5	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
6	36	57	-68	9	0	-3	-10	0.01	0.02	0.00
7	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
8	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
9	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
10	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
11	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
12	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
13	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
14	36	57	-68	9	0	-3	-10	0.01	0.02	0.00
15	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
16	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
17	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
1	42	197	-551	0	0	-0	-116	0.11	0.20	0.00
2	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
3	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
4	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
5	42	24	-95	-31	0	13	-21	0.03	0.04	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

6	42	62	-81	9	0	-4	-15	0.02	0.03	0.00
7	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
8	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
9	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
10	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
11	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
12	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
13	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
14	42	62	-81	9	0	-4	-15	0.02	0.03	0.00
15	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
16	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
17	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
1	48	225	-630	0	0	-0	-151	0.14	0.23	0.00
2	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
3	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
4	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
5	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
6	48	67	-94	9	0	-4	-20	0.02	0.03	0.00
7	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
8	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
9	48	8	-115	-9	0	4	-30	0.03	0.04	0.00
10	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
11	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
12	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
13	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
14	48	67	-94	9	0	-4	-20	0.02	0.03	0.00
15	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
16	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
17	48	8	-115	-9	0	4	-30	0.03	0.04	0.00
1	54	254	-709	0	0	-0	-191	0.17	0.26	0.00
2	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
3	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
4	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
5	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
6	54	71	-107	9	0	-5	-26	0.03	0.04	0.00
7	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
8	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
9	54	13	-128	-9	0	5	-37	0.04	0.05	0.00
10	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
11	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
12	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
13	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
14	54	71	-107	9	0	-5	-26	0.03	0.04	0.00
15	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
16	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
17	54	13	-128	-9	0	5	-37	0.04	0.05	0.00
1	60	282	-788	0	0	-0	-236	0.21	0.29	0.00
2	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
3	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
4	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
5	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
6	60	76	-121	9	0	-6	-33	0.03	0.04	0.00
7	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
8	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
9	60	18	-141	-9	0	6	-46	0.04	0.05	0.00
10	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
11	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
12	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
13	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
14	60	76	-121	9	0	-6	-33	0.03	0.04	0.00
15	60	18	-141	9	0	-6	-46	0.04	0.05	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

16	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
17	60	18	-141	-9	0	6	-46	0.04	0.05	0.00

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
	kg	kg*m							
3	-9	19	41	12	14	1.000	1.000	0.15	Piano 'zx'
5	-9	19	41	12	14	1.000	1.000	0.15	Piano 'zx'
7	-29	6	46	12	14	1.000	1.000	0.15	Piano 'zx'
9	-29	6	46	12	14	1.000	1.000	0.15	Piano 'zx'
11	-9	19	41	12	14	1.000	1.000	0.15	Piano 'zx'
13	-9	19	41	12	14	1.000	1.000	0.15	Piano 'zx'
15	-29	6	46	12	14	1.000	1.000	0.15	Piano 'zx'
17	-29	6	46	12	14	1.000	1.000	0.15	Piano 'zx'

ASTA NUM. 14 NI 17 NF 9 Lungh. 267.1 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	cm	kg			kg*m						
1	0	-1255	1849	-2	0	-1	-255	0.22	0.67	0.00	
2	0	-209	307	-1	0	-1	-41	0.04	0.11	0.00	
3	0	-209	308	-0	0	-1	-45	0.04	0.11	0.00	
4	0	-209	307	-0	0	0	-41	0.03	0.11	0.00	
5	0	-209	308	-0	0	0	-45	0.04	0.11	0.00	
6	0	-209	305	-1	0	-1	-36	0.03	0.11	0.00	
7	0	-209	310	-0	0	-0	-50	0.04	0.11	0.00	
8	0	-209	305	-1	0	-0	-36	0.03	0.11	0.00	
9	0	-209	310	0	0	0	-50	0.04	0.11	0.00	
10	0	-209	307	-1	0	-1	-41	0.04	0.11	0.00	
11	0	-209	308	-0	0	-1	-45	0.04	0.11	0.00	
12	0	-209	307	-0	0	0	-41	0.03	0.11	0.00	
13	0	-209	308	-0	0	0	-45	0.04	0.11	0.00	
14	0	-209	305	-1	0	-1	-36	0.03	0.11	0.00	
15	0	-209	310	-0	0	-0	-50	0.04	0.11	0.00	
16	0	-209	305	-1	0	-0	-36	0.03	0.11	0.00	
17	0	-209	310	0	0	0	-50	0.04	0.11	0.00	
1	27	-1130	1498	-2	0	-1	192	0.16	0.54	0.00	
2	27	-188	248	-1	0	-1	33	0.03	0.09	0.00	
3	27	-188	250	-0	0	-1	30	0.03	0.09	0.00	
4	27	-188	248	-0	0	0	33	0.03	0.09	0.00	
5	27	-188	250	-0	0	0	30	0.03	0.09	0.00	
6	27	-188	247	-1	0	-1	37	0.03	0.09	0.00	
7	27	-188	252	-0	0	-0	25	0.02	0.09	0.00	
8	27	-188	247	-1	0	-0	37	0.03	0.09	0.00	
9	27	-188	252	0	0	0	25	0.02	0.09	0.00	
10	27	-188	248	-1	0	-1	33	0.03	0.09	0.00	
11	27	-188	250	-0	0	-1	30	0.03	0.09	0.00	
12	27	-188	248	-0	0	0	33	0.03	0.09	0.00	
13	27	-188	250	-0	0	0	30	0.03	0.09	0.00	
14	27	-188	247	-1	0	-1	37	0.03	0.09	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali
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PROGETTO DEFINITIVO

Relazione di calcolo strutturale

15	27	-188	252	-0	0	-0	25	0.02	0.09	0.00
16	27	-188	247	-1	0	-0	37	0.03	0.09	0.00
17	27	-188	252	0	0	0	25	0.02	0.09	0.00
1	53	-1004	1148	-2	0	-1	545	0.46	0.42	0.00
2	53	-167	190	-1	0	-1	92	0.08	0.07	0.00
3	53	-167	192	-0	0	-0	89	0.07	0.07	0.00
4	53	-167	190	-0	0	0	92	0.08	0.07	0.00
5	53	-167	192	-0	0	0	89	0.07	0.07	0.00
6	53	-167	188	-1	0	-0	96	0.08	0.07	0.00
7	53	-167	193	-0	0	-0	85	0.07	0.07	0.00
8	53	-167	188	-1	0	-0	96	0.08	0.07	0.00
9	53	-167	193	0	0	0	85	0.07	0.07	0.00
10	53	-167	190	-1	0	-1	92	0.08	0.07	0.00
11	53	-167	192	-0	0	-0	89	0.07	0.07	0.00
12	53	-167	190	-0	0	0	92	0.08	0.07	0.00
13	53	-167	192	-0	0	0	89	0.07	0.07	0.00
14	53	-167	188	-1	0	-0	96	0.08	0.07	0.00
15	53	-167	193	-0	0	-0	85	0.07	0.07	0.00
16	53	-167	188	-1	0	-0	96	0.08	0.07	0.00
17	53	-167	193	0	0	0	85	0.07	0.07	0.00
1	80	-879	797	-2	0	-0	805	0.68	0.29	0.00
2	80	-146	132	-1	0	-0	135	0.11	0.05	0.00
3	80	-146	133	-0	0	-0	132	0.11	0.05	0.00
4	80	-146	132	-0	0	0	135	0.11	0.05	0.00
5	80	-146	133	-0	0	0	132	0.11	0.05	0.00
6	80	-146	130	-1	0	-0	138	0.12	0.05	0.00
7	80	-146	135	-0	0	-0	129	0.11	0.05	0.00
8	80	-146	130	-1	0	0	138	0.12	0.05	0.00
9	80	-146	135	0	0	0	129	0.11	0.05	0.00
10	80	-146	132	-1	0	-0	135	0.11	0.05	0.00
11	80	-146	133	-0	0	-0	132	0.11	0.05	0.00
12	80	-146	132	-0	0	0	135	0.11	0.05	0.00
13	80	-146	133	-0	0	0	132	0.11	0.05	0.00
14	80	-146	130	-1	0	-0	138	0.12	0.05	0.00
15	80	-146	135	-0	0	-0	129	0.11	0.05	0.00
16	80	-146	130	-1	0	0	138	0.12	0.05	0.00
17	80	-146	135	0	0	0	129	0.11	0.05	0.00
1	107	-753	447	-2	0	0	971	0.82	0.16	0.00
2	107	-125	74	-1	0	-0	162	0.14	0.03	0.00
3	107	-125	75	-0	0	-0	160	0.13	0.03	0.00
4	107	-125	74	-0	0	0	162	0.14	0.03	0.00
5	107	-125	75	-0	0	0	160	0.13	0.03	0.00
6	107	-125	72	-1	0	0	165	0.14	0.03	0.00
7	107	-125	77	-0	0	-0	157	0.13	0.03	0.00
8	107	-125	72	-1	0	0	165	0.14	0.03	0.00
9	107	-125	77	0	0	0	157	0.13	0.03	0.00
10	107	-125	74	-1	0	-0	162	0.14	0.03	0.00
11	107	-125	75	-0	0	-0	160	0.13	0.03	0.00
12	107	-125	74	-0	0	0	162	0.14	0.03	0.00
13	107	-125	75	-0	0	0	160	0.13	0.03	0.00
14	107	-125	72	-1	0	0	165	0.14	0.03	0.00
15	107	-125	77	-0	0	-0	157	0.13	0.03	0.00
16	107	-125	72	-1	0	0	165	0.14	0.03	0.00
17	107	-125	77	0	0	0	157	0.13	0.03	0.00
1	134	-628	96	-2	0	1	1043	0.88	0.03	0.00
2	134	-104	15	-1	0	-0	174	0.15	0.01	0.00
3	134	-104	17	-0	0	-0	172	0.14	0.01	0.00
4	134	-104	15	-0	0	0	174	0.15	0.01	0.00
5	134	-104	17	-0	0	0	172	0.15	0.01	0.00
6	134	-104	14	-1	0	0	177	0.15	0.00	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

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PROGETTO DEFINITIVO

Relazione di calcolo strutturale

7	134	-104	19	-0	0	-0	170	0.14	0.01	0.00
8	134	-104	14	-1	0	0	177	0.15	0.00	0.00
9	134	-104	19	0	0	0	170	0.14	0.01	0.00
10	134	-104	15	-1	0	-0	174	0.15	0.01	0.00
11	134	-104	17	-0	0	-0	172	0.14	0.01	0.00
12	134	-104	15	-0	0	0	174	0.15	0.01	0.00
13	134	-104	17	-0	0	0	172	0.15	0.01	0.00
14	134	-104	14	-1	0	0	177	0.15	0.00	0.00
15	134	-104	19	-0	0	-0	170	0.14	0.01	0.00
16	134	-104	14	-1	0	0	177	0.15	0.00	0.00
17	134	-104	19	0	0	0	170	0.14	0.01	0.00

1	160	-502	-255	-2	0	1	1022	0.86	0.09	0.00
2	160	-83	-43	-1	0	0	170	0.14	0.02	0.00
3	160	-83	-41	-0	0	-0	169	0.14	0.02	0.00
4	160	-83	-43	-0	0	0	170	0.14	0.02	0.00
5	160	-83	-41	-0	0	0	169	0.14	0.02	0.00
6	160	-83	-45	-1	0	0	172	0.15	0.02	0.00
7	160	-83	-40	-0	0	-0	167	0.14	0.01	0.00
8	160	-83	-45	-1	0	1	172	0.15	0.02	0.00
9	160	-83	-40	0	0	0	167	0.14	0.01	0.00
10	160	-83	-43	-1	0	0	170	0.14	0.02	0.00
11	160	-83	-41	-0	0	-0	169	0.14	0.02	0.00
12	160	-83	-43	-0	0	0	170	0.14	0.02	0.00
13	160	-83	-41	-0	0	0	169	0.14	0.02	0.00
14	160	-83	-45	-1	0	0	172	0.15	0.02	0.00
15	160	-83	-40	-0	0	-0	167	0.14	0.01	0.00
16	160	-83	-45	-1	0	1	172	0.15	0.02	0.00
17	160	-83	-40	0	0	0	167	0.14	0.01	0.00

1	187	-377	-605	-2	0	2	907	0.76	0.22	0.00
2	187	-63	-101	-1	0	0	151	0.13	0.04	0.00
3	187	-63	-100	-0	0	0	150	0.13	0.04	0.00
4	187	-63	-101	-0	0	1	151	0.13	0.04	0.00
5	187	-63	-100	-0	0	0	150	0.13	0.04	0.00
6	187	-63	-103	-1	0	1	153	0.13	0.04	0.00
7	187	-63	-98	-0	0	-0	149	0.13	0.04	0.00
8	187	-63	-103	-1	0	1	153	0.13	0.04	0.00
9	187	-63	-98	0	0	0	149	0.12	0.04	0.00
10	187	-63	-101	-1	0	0	151	0.13	0.04	0.00
11	187	-63	-100	-0	0	0	150	0.13	0.04	0.00
12	187	-63	-101	-0	0	1	151	0.13	0.04	0.00
13	187	-63	-100	-0	0	0	150	0.13	0.04	0.00
14	187	-63	-103	-1	0	1	153	0.13	0.04	0.00
15	187	-63	-98	-0	0	-0	149	0.13	0.04	0.00
16	187	-63	-103	-1	0	1	153	0.13	0.04	0.00
17	187	-63	-98	0	0	0	149	0.12	0.04	0.00

1	214	-251	-956	-2	0	2	698	0.59	0.35	0.00
2	214	-42	-160	-1	0	0	116	0.10	0.06	0.00
3	214	-42	-158	-0	0	0	116	0.10	0.06	0.00
4	214	-42	-160	-0	0	1	116	0.10	0.06	0.00
5	214	-42	-158	-0	0	0	116	0.10	0.06	0.00
6	214	-42	-161	-1	0	1	117	0.10	0.06	0.00
7	214	-42	-156	-0	0	-0	115	0.10	0.06	0.00
8	214	-42	-161	-1	0	1	117	0.10	0.06	0.00
9	214	-42	-156	0	0	-0	115	0.10	0.06	0.00
10	214	-42	-160	-1	0	0	116	0.10	0.06	0.00
11	214	-42	-158	-0	0	0	116	0.10	0.06	0.00
12	214	-42	-160	-0	0	1	116	0.10	0.06	0.00
13	214	-42	-158	-0	0	0	116	0.10	0.06	0.00
14	214	-42	-161	-1	0	1	117	0.10	0.06	0.00
15	214	-42	-156	-0	0	-0	115	0.10	0.06	0.00
16	214	-42	-161	-1	0	1	117	0.10	0.06	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

17	214	-42	-156	0	0	-0	115	0.10	0.06	0.00
1	240	-126	-1306	-2	0	3	396	0.33	0.47	0.00
2	240	-21	-218	-1	0	1	66	0.06	0.08	0.00
3	240	-21	-216	-0	0	0	66	0.06	0.08	0.00
4	240	-21	-218	-0	0	1	66	0.06	0.08	0.00
5	240	-21	-216	-0	0	0	66	0.06	0.08	0.00
6	240	-21	-220	-1	0	1	66	0.06	0.08	0.00
7	240	-21	-215	-0	0	-0	65	0.05	0.08	0.00
8	240	-21	-220	-1	0	1	66	0.06	0.08	0.00
9	240	-21	-215	0	0	-0	65	0.05	0.08	0.00
10	240	-21	-218	-1	0	1	66	0.06	0.08	0.00
11	240	-21	-216	-0	0	0	66	0.06	0.08	0.00
12	240	-21	-218	-0	0	1	66	0.06	0.08	0.00
13	240	-21	-216	-0	0	0	66	0.06	0.08	0.00
14	240	-21	-220	-1	0	1	66	0.06	0.08	0.00
15	240	-21	-215	-0	0	-0	65	0.05	0.08	0.00
16	240	-21	-220	-1	0	1	66	0.06	0.08	0.00
17	240	-21	-215	0	0	-0	65	0.05	0.08	0.00
1	267	-0	-1657	-2	0	3	-0	0.00	0.60	0.00
2	267	0	-276	-1	0	1	-0	0.00	0.10	0.00
3	267	0	-275	-0	0	0	-0	0.00	0.10	0.00
4	267	0	-276	-0	0	1	-0	0.00	0.10	0.00
5	267	0	-275	-0	0	0	-0	0.00	0.10	0.00
6	267	0	-278	-1	0	1	-0	0.00	0.10	0.00
7	267	0	-273	-0	0	-0	-0	0.00	0.10	0.00
8	267	0	-278	-1	0	1	-0	0.00	0.10	0.00
9	267	0	-273	0	0	-0	-0	0.00	0.10	0.00
10	267	0	-276	-1	0	1	-0	0.00	0.10	0.00
11	267	0	-275	-0	0	0	-0	0.00	0.10	0.00
12	267	0	-276	-0	0	1	-0	0.00	0.10	0.00
13	267	0	-275	-0	0	0	-0	0.00	0.10	0.00
14	267	0	-278	-1	0	1	-0	0.00	0.10	0.00
15	267	0	-273	-0	0	-0	-0	0.00	0.10	0.00
16	267	0	-278	-1	0	1	-0	0.00	0.10	0.00
17	267	0	-273	0	0	-0	-0	0.00	0.10	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
1	-1255	3	1043	52	62	0.781	0.655	0.93	Piano 'zx'
2	-209	1	174	52	62	0.781	0.655	0.16	Piano 'zx'
3	-209	1	172	52	62	0.781	0.655	0.15	Piano 'zx'
4	-209	1	174	52	62	0.781	0.655	0.16	Piano 'zx'
5	-209	0	172	52	62	0.781	0.655	0.15	Piano 'zx'
6	-209	1	177	52	62	0.781	0.655	0.16	Piano 'zx'
7	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
8	-209	1	177	52	62	0.781	0.655	0.16	Piano 'zx'
9	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
10	-209	1	174	52	62	0.781	0.655	0.16	Piano 'zx'
11	-209	1	172	52	62	0.781	0.655	0.15	Piano 'zx'
12	-209	1	174	52	62	0.781	0.655	0.16	Piano 'zx'
13	-209	0	172	52	62	0.781	0.655	0.15	Piano 'zx'
14	-209	1	177	52	62	0.781	0.655	0.16	Piano 'zx'
15	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
16	-209	1	177	52	62	0.781	0.655	0.16	Piano 'zx'
17	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

ASTA NUM. 15 NI 26 NF 18 Lungh. 60.0 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	cm	kg			kg*m						
1	0	0	0	0	0	0	0	0.00	0.00	0.00	
2	0	9	3	31	0	0	0	0.00	0.01	0.00	
3	0	-9	-3	31	0	0	0	0.00	0.01	0.00	
4	0	9	3	-31	0	0	0	0.00	0.01	0.00	
5	0	-9	-3	-31	0	0	0	0.00	0.01	0.00	
6	0	29	10	9	0	0	0	0.00	0.01	0.00	
7	0	-29	-10	9	0	0	0	0.00	0.01	0.00	
8	0	29	10	-9	0	0	0	0.00	0.01	0.00	
9	0	-29	-10	-9	0	0	0	0.00	0.01	0.00	
10	0	9	3	31	0	0	0	0.00	0.01	0.00	
11	0	-9	-3	31	0	0	0	0.00	0.01	0.00	
12	0	9	3	-31	0	0	0	0.00	0.01	0.00	
13	0	-9	-3	-31	0	0	0	0.00	0.01	0.00	
14	0	29	10	9	0	0	0	0.00	0.01	0.00	
15	0	-29	-10	9	0	0	0	0.00	0.01	0.00	
16	0	29	10	-9	0	0	0	0.00	0.01	0.00	
17	0	-29	-10	-9	0	0	0	0.00	0.01	0.00	
1	6	28	-79	0	0	-0	-2	0.00	0.03	0.00	
2	6	13	-10	31	0	-2	-0	0.00	0.01	0.00	
3	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00	
4	6	13	-10	-31	0	2	-0	0.00	0.01	0.00	
5	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00	
6	6	34	-3	9	0	-1	0	0.00	0.00	0.00	
7	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00	
8	6	34	-3	-9	0	1	0	0.00	0.00	0.00	
9	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00	
10	6	13	-10	31	0	-2	-0	0.00	0.01	0.00	
11	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00	
12	6	13	-10	-31	0	2	-0	0.00	0.01	0.00	
13	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00	
14	6	34	-3	9	0	-1	0	0.00	0.00	0.00	
15	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00	
16	6	34	-3	-9	0	1	0	0.00	0.00	0.00	
17	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00	
1	12	56	-157	0	0	-0	-9	0.01	0.06	0.00	
2	12	18	-23	31	0	-4	-1	0.01	0.01	0.00	
3	12	1	-29	31	0	-4	-2	0.00	0.02	0.00	
4	12	18	-23	-31	0	4	-1	0.01	0.01	0.00	
5	12	1	-29	-31	0	4	-2	0.00	0.02	0.00	
6	12	39	-16	9	0	-1	-0	0.00	0.01	0.00	
7	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00	
8	12	39	-16	-9	0	1	-0	0.00	0.01	0.00	
9	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00	
10	12	18	-23	31	0	-4	-1	0.01	0.01	0.00	
11	12	1	-29	31	0	-4	-2	0.00	0.02	0.00	
12	12	18	-23	-31	0	4	-1	0.01	0.01	0.00	
13	12	1	-29	-31	0	4	-2	0.00	0.02	0.00	
14	12	39	-16	9	0	-1	-0	0.00	0.01	0.00	
15	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00	
16	12	39	-16	-9	0	1	-0	0.00	0.01	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

17	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00
1	18	85	-236	0	0	-0	-21	0.02	0.09	0.00
2	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
3	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
4	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
5	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
6	18	43	-29	9	0	-2	-2	0.00	0.01	0.00
7	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
8	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
9	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
10	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
11	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
12	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
13	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
14	18	43	-29	9	0	-2	-2	0.00	0.01	0.00
15	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
16	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
17	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
1	24	113	-315	0	0	-0	-38	0.04	0.11	0.00
2	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
3	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
4	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
5	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
6	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
7	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
8	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
9	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
10	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
11	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
12	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
13	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
14	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
15	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
16	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
17	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
1	30	141	-394	0	0	-0	-59	0.06	0.14	0.00
2	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
3	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
4	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
5	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
6	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
7	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
8	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
9	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
10	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
11	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
12	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
13	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
14	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
15	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
16	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
17	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
1	36	169	-473	0	0	-0	-85	0.08	0.17	0.00
2	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
3	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
4	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
5	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
6	36	57	-68	9	0	-3	-10	0.01	0.02	0.00
7	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
8	36	57	-68	-9	0	3	-10	0.01	0.02	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

9	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
10	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
11	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
12	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
13	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
14	36	57	-68	9	0	-3	-10	0.01	0.02	0.00
15	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
16	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
17	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
1	42	197	-551	-0	0	-0	-116	0.11	0.20	0.00
2	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
3	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
4	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
5	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
6	42	62	-81	9	0	-4	-15	0.02	0.03	0.00
7	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
8	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
9	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
10	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
11	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
12	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
13	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
14	42	62	-81	9	0	-4	-15	0.02	0.03	0.00
15	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
16	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
17	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
1	48	225	-630	0	0	-0	-151	0.14	0.23	0.00
2	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
3	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
4	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
5	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
6	48	67	-94	9	0	-4	-20	0.02	0.03	0.00
7	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
8	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
9	48	8	-115	-9	0	4	-30	0.03	0.04	0.00
10	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
11	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
12	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
13	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
14	48	67	-94	9	0	-4	-20	0.02	0.03	0.00
15	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
16	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
17	48	8	-115	-9	0	4	-30	0.03	0.04	0.00
1	54	254	-709	0	0	-0	-191	0.17	0.26	0.00
2	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
3	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
4	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
5	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
6	54	71	-107	9	0	-5	-26	0.03	0.04	0.00
7	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
8	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
9	54	13	-128	-9	0	5	-37	0.04	0.05	0.00
10	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
11	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
12	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
13	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
14	54	71	-107	9	0	-5	-26	0.03	0.04	0.00
15	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
16	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
17	54	13	-128	-9	0	5	-37	0.04	0.05	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	60	282	-788	0	0	0	-236	0.21	0.29	0.00
2	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
3	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
4	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
5	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
6	60	76	-121	9	0	-6	-33	0.03	0.04	0.00
7	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
8	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
9	60	18	-141	-9	0	6	-46	0.04	0.05	0.00
10	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
11	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
12	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
13	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
14	60	76	-121	9	0	-6	-33	0.03	0.04	0.00
15	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
16	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
17	60	18	-141	-9	0	6	-46	0.04	0.05	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
3	-9	19	41	12	14	1.000	1.000	0.15	Piano 'zx'
5	-9	19	41	12	14	1.000	1.000	0.15	Piano 'zx'
7	-29	6	46	12	14	1.000	1.000	0.15	Piano 'zx'
9	-29	6	46	12	14	1.000	1.000	0.15	Piano 'zx'
11	-9	19	41	12	14	1.000	1.000	0.15	Piano 'zx'
13	-9	19	41	12	14	1.000	1.000	0.15	Piano 'zx'
15	-29	6	46	12	14	1.000	1.000	0.15	Piano 'zx'
17	-29	6	46	12	14	1.000	1.000	0.15	Piano 'zx'

ASTA NUM. 16 NI 18 NF 10 Lungh. 267.1 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x -- cm	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
1	0	-1255	1856	-2	0	-2	-275	0.23	0.67	0.00	
2	0	-209	308	-1	0	-1	-44	0.04	0.11	0.00	
3	0	-209	309	-0	0	-1	-47	0.04	0.11	0.00	
4	0	-209	308	-1	0	-0	-44	0.04	0.11	0.00	
5	0	-209	309	-0	0	0	-47	0.04	0.11	0.00	
6	0	-209	306	-1	0	-1	-39	0.03	0.11	0.00	
7	0	-209	311	0	0	-0	-52	0.04	0.11	0.00	
8	0	-209	306	-1	0	-1	-39	0.03	0.11	0.00	
9	0	-209	311	0	0	0	-52	0.04	0.11	0.00	
10	0	-209	308	-1	0	-1	-44	0.04	0.11	0.00	
11	0	-209	309	-0	0	-1	-47	0.04	0.11	0.00	
12	0	-209	308	-1	0	-0	-44	0.04	0.11	0.00	
13	0	-209	309	-0	0	0	-47	0.04	0.11	0.00	
14	0	-209	306	-1	0	-1	-39	0.03	0.11	0.00	
15	0	-209	311	0	0	-0	-52	0.04	0.11	0.00	
16	0	-209	306	-1	0	-1	-39	0.03	0.11	0.00	
17	0	-209	311	0	0	0	-52	0.04	0.11	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	27	-1130	1505	-2	0	-1	174	0.15	0.55	0.00
2	27	-188	250	-1	0	-1	31	0.03	0.09	0.00
3	27	-188	251	-0	0	-0	27	0.02	0.09	0.00
4	27	-188	250	-1	0	-0	31	0.03	0.09	0.00
5	27	-188	251	-0	0	0	27	0.02	0.09	0.00
6	27	-188	248	-1	0	-1	35	0.03	0.09	0.00
7	27	-188	253	0	0	-0	23	0.02	0.09	0.00
8	27	-188	248	-1	0	-1	35	0.03	0.09	0.00
9	27	-188	253	0	0	0	23	0.02	0.09	0.00
10	27	-188	250	-1	0	-1	31	0.03	0.09	0.00
11	27	-188	251	-0	0	-0	27	0.02	0.09	0.00
12	27	-188	250	-1	0	-0	31	0.03	0.09	0.00
13	27	-188	251	-0	0	0	27	0.02	0.09	0.00
14	27	-188	248	-1	0	-1	35	0.03	0.09	0.00
15	27	-188	253	0	0	-0	23	0.02	0.09	0.00
16	27	-188	248	-1	0	-1	35	0.03	0.09	0.00
17	27	-188	253	0	0	0	23	0.02	0.09	0.00

1	53	-1004	1155	-2	0	-1	530	0.45	0.42	0.00
2	53	-167	191	-1	0	-0	90	0.08	0.07	0.00
3	53	-167	193	-0	0	-0	87	0.07	0.07	0.00
4	53	-167	191	-1	0	0	90	0.08	0.07	0.00
5	53	-167	193	-0	0	0	87	0.07	0.07	0.00
6	53	-167	190	-1	0	-0	93	0.08	0.07	0.00
7	53	-167	194	0	0	-0	83	0.07	0.07	0.00
8	53	-167	190	-1	0	-0	93	0.08	0.07	0.00
9	53	-167	194	0	0	0	83	0.07	0.07	0.00
10	53	-167	191	-1	0	-0	90	0.08	0.07	0.00
11	53	-167	193	-0	0	-0	87	0.07	0.07	0.00
12	53	-167	191	-1	0	0	90	0.08	0.07	0.00
13	53	-167	193	-0	0	0	87	0.07	0.07	0.00
14	53	-167	190	-1	0	-0	93	0.08	0.07	0.00
15	53	-167	194	0	0	-0	83	0.07	0.07	0.00
16	53	-167	190	-1	0	-0	93	0.08	0.07	0.00
17	53	-167	194	0	0	0	83	0.07	0.07	0.00

1	80	-879	804	-2	0	-0	791	0.67	0.29	0.00
2	80	-146	133	-1	0	-0	133	0.11	0.05	0.00
3	80	-146	134	-0	0	-0	130	0.11	0.05	0.00
4	80	-146	133	-1	0	0	133	0.11	0.05	0.00
5	80	-146	134	-0	0	0	130	0.11	0.05	0.00
6	80	-146	131	-1	0	-0	136	0.11	0.05	0.00
7	80	-146	136	0	0	-0	127	0.11	0.05	0.00
8	80	-146	131	-1	0	-0	136	0.11	0.05	0.00
9	80	-146	136	0	0	0	127	0.11	0.05	0.00
10	80	-146	133	-1	0	-0	133	0.11	0.05	0.00
11	80	-146	134	-0	0	-0	130	0.11	0.05	0.00
12	80	-146	133	-1	0	0	133	0.11	0.05	0.00
13	80	-146	134	-0	0	0	130	0.11	0.05	0.00
14	80	-146	131	-1	0	-0	136	0.11	0.05	0.00
15	80	-146	136	0	0	-0	127	0.11	0.05	0.00
16	80	-146	131	-1	0	-0	136	0.11	0.05	0.00
17	80	-146	136	0	0	0	127	0.11	0.05	0.00

1	107	-753	454	-2	0	0	959	0.81	0.16	0.00
2	107	-125	75	-1	0	-0	161	0.14	0.03	0.00
3	107	-125	76	-0	0	-0	158	0.13	0.03	0.00
4	107	-125	75	-1	0	0	161	0.14	0.03	0.00
5	107	-125	76	-0	0	0	158	0.13	0.03	0.00
6	107	-125	73	-1	0	0	163	0.14	0.03	0.00
7	107	-125	78	0	0	-0	156	0.13	0.03	0.00
8	107	-125	73	-1	0	0	163	0.14	0.03	0.00
9	107	-125	78	0	0	0	156	0.13	0.03	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

10	107	-125	75	-1	0	-0	161	0.14	0.03	0.00
11	107	-125	76	-0	0	-0	158	0.13	0.03	0.00
12	107	-125	75	-1	0	0	161	0.14	0.03	0.00
13	107	-125	76	-0	0	0	158	0.13	0.03	0.00
14	107	-125	73	-1	0	0	163	0.14	0.03	0.00
15	107	-125	78	0	0	-0	156	0.13	0.03	0.00
16	107	-125	73	-1	0	0	163	0.14	0.03	0.00
17	107	-125	78	0	0	0	156	0.13	0.03	0.00

1	134	-628	103	-2	0	1	1033	0.87	0.04	0.00
2	134	-104	16	-1	0	0	173	0.15	0.01	0.00
3	134	-104	18	-0	0	0	171	0.14	0.01	0.00
4	134	-104	16	-1	0	0	173	0.15	0.01	0.00
5	134	-104	18	-0	0	0	171	0.14	0.01	0.00
6	134	-104	15	-1	0	0	175	0.15	0.01	0.00
7	134	-104	19	0	0	-0	169	0.14	0.01	0.00
8	134	-104	15	-1	0	1	175	0.15	0.01	0.00
9	134	-104	19	0	0	0	169	0.14	0.01	0.00
10	134	-104	16	-1	0	0	173	0.15	0.01	0.00
11	134	-104	18	-0	0	0	171	0.14	0.01	0.00
12	134	-104	16	-1	0	0	173	0.15	0.01	0.00
13	134	-104	18	-0	0	0	171	0.14	0.01	0.00
14	134	-104	15	-1	0	0	175	0.15	0.01	0.00
15	134	-104	19	0	0	-0	169	0.14	0.01	0.00
16	134	-104	15	-1	0	1	175	0.15	0.01	0.00
17	134	-104	19	0	0	0	169	0.14	0.01	0.00

1	160	-502	-248	-2	0	2	1014	0.85	0.09	0.00
2	160	-83	-42	-1	0	0	169	0.14	0.02	0.00
3	160	-83	-41	-0	0	0	168	0.14	0.01	0.00
4	160	-83	-42	-1	0	1	169	0.14	0.02	0.00
5	160	-83	-41	-0	0	0	168	0.14	0.01	0.00
6	160	-83	-44	-1	0	1	171	0.14	0.02	0.00
7	160	-83	-39	0	0	-0	166	0.14	0.01	0.00
8	160	-83	-44	-1	0	1	171	0.14	0.02	0.00
9	160	-83	-39	0	0	0	166	0.14	0.01	0.00
10	160	-83	-42	-1	0	0	169	0.14	0.02	0.00
11	160	-83	-41	-0	0	0	168	0.14	0.01	0.00
12	160	-83	-42	-1	0	1	169	0.14	0.02	0.00
13	160	-83	-41	-0	0	0	168	0.14	0.01	0.00
14	160	-83	-44	-1	0	1	171	0.14	0.02	0.00
15	160	-83	-39	0	0	-0	166	0.14	0.01	0.00
16	160	-83	-44	-1	0	1	171	0.14	0.02	0.00
17	160	-83	-39	0	0	0	166	0.14	0.01	0.00

1	187	-377	-598	-2	0	2	901	0.76	0.22	0.00
2	187	-63	-100	-1	0	1	150	0.13	0.04	0.00
3	187	-63	-99	-0	0	0	149	0.13	0.04	0.00
4	187	-63	-100	-1	0	1	150	0.13	0.04	0.00
5	187	-63	-99	-0	0	0	149	0.13	0.04	0.00
6	187	-63	-102	-1	0	1	152	0.13	0.04	0.00
7	187	-63	-97	0	0	-0	148	0.12	0.04	0.00
8	187	-63	-102	-1	0	1	152	0.13	0.04	0.00
9	187	-63	-97	0	0	-0	148	0.12	0.04	0.00
10	187	-63	-100	-1	0	1	150	0.13	0.04	0.00
11	187	-63	-99	-0	0	0	149	0.13	0.04	0.00
12	187	-63	-100	-1	0	1	150	0.13	0.04	0.00
13	187	-63	-99	-0	0	0	149	0.13	0.04	0.00
14	187	-63	-102	-1	0	1	152	0.13	0.04	0.00
15	187	-63	-97	0	0	-0	148	0.12	0.04	0.00
16	187	-63	-102	-1	0	1	152	0.13	0.04	0.00
17	187	-63	-97	0	0	-0	148	0.12	0.04	0.00

1	214	-251	-949	-2	0	3	694	0.59	0.34	0.00
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Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

2	214	-42	-159	-1	0	1	116	0.10	0.06	0.00
3	214	-42	-157	-0	0	0	115	0.10	0.06	0.00
4	214	-42	-159	-1	0	1	116	0.10	0.06	0.00
5	214	-42	-157	-0	0	0	115	0.10	0.06	0.00
6	214	-42	-160	-1	0	1	117	0.10	0.06	0.00
7	214	-42	-155	0	0	-0	114	0.10	0.06	0.00
8	214	-42	-160	-1	0	1	117	0.10	0.06	0.00
9	214	-42	-155	0	0	-0	114	0.10	0.06	0.00
10	214	-42	-159	-1	0	1	116	0.10	0.06	0.00
11	214	-42	-157	-0	0	0	115	0.10	0.06	0.00
12	214	-42	-159	-1	0	1	116	0.10	0.06	0.00
13	214	-42	-157	-0	0	0	115	0.10	0.06	0.00
14	214	-42	-160	-1	0	1	117	0.10	0.06	0.00
15	214	-42	-155	0	0	-0	114	0.10	0.06	0.00
16	214	-42	-160	-1	0	1	117	0.10	0.06	0.00
17	214	-42	-155	0	0	-0	114	0.10	0.06	0.00

1	240	-126	-1299	-2	0	4	394	0.33	0.47	0.00
2	240	-21	-217	-1	0	1	66	0.06	0.08	0.00
3	240	-21	-215	-0	0	0	65	0.06	0.08	0.00
4	240	-21	-217	-1	0	1	66	0.06	0.08	0.00
5	240	-21	-215	-0	0	1	65	0.06	0.08	0.00
6	240	-21	-218	-1	0	2	66	0.06	0.08	0.00
7	240	-21	-214	0	0	-0	65	0.05	0.08	0.00
8	240	-21	-218	-1	0	2	66	0.06	0.08	0.00
9	240	-21	-214	0	0	-0	65	0.05	0.08	0.00
10	240	-21	-217	-1	0	1	66	0.06	0.08	0.00
11	240	-21	-215	-0	0	0	65	0.06	0.08	0.00
12	240	-21	-217	-1	0	1	66	0.06	0.08	0.00
13	240	-21	-215	-0	0	1	65	0.06	0.08	0.00
14	240	-21	-218	-1	0	2	66	0.06	0.08	0.00
15	240	-21	-214	0	0	-0	65	0.05	0.08	0.00
16	240	-21	-218	-1	0	2	66	0.06	0.08	0.00
17	240	-21	-214	0	0	-0	65	0.05	0.08	0.00

1	267	-0	-1650	-2	0	4	-0	0.00	0.60	0.00
2	267	0	-275	-1	0	1	-0	0.00	0.10	0.00
3	267	0	-274	-0	0	1	-0	0.00	0.10	0.00
4	267	0	-275	-1	0	1	-0	0.00	0.10	0.00
5	267	0	-274	-0	0	1	-0	0.00	0.10	0.00
6	267	0	-277	-1	0	2	-0	0.00	0.10	0.00
7	267	0	-272	0	0	-0	-0	0.00	0.10	0.00
8	267	0	-277	-1	0	2	-0	0.00	0.10	0.00
9	267	0	-272	0	0	-0	-0	0.00	0.10	0.00
10	267	0	-275	-1	0	1	-0	0.00	0.10	0.00
11	267	0	-274	-0	0	1	-0	0.00	0.10	0.00
12	267	0	-275	-1	0	1	-0	0.00	0.10	0.00
13	267	0	-274	-0	0	1	-0	0.00	0.10	0.00
14	267	0	-277	-1	0	2	-0	0.00	0.10	0.00
15	267	0	-272	0	0	-0	-0	0.00	0.10	0.00
16	267	0	-277	-1	0	2	-0	0.00	0.10	0.00
17	267	0	-272	0	0	-0	-0	0.00	0.10	0.00

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
	--								
	kg		kg*m						
<hr/>									
1	-1255	4	1033	52	62	0.781	0.655	0.93	Piano 'zx'
2	-209	1	173	52	62	0.781	0.655	0.16	Piano 'zx'

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

3	-209	1	171	52	62	0.781	0.655	0.15	Piano	'zx'
4	-209	1	173	52	62	0.781	0.655	0.16	Piano	'zx'
5	-209	1	171	52	62	0.781	0.655	0.15	Piano	'zx'
6	-209	2	175	52	62	0.781	0.655	0.16	Piano	'zx'
7	-209	0	169	52	62	0.781	0.655	0.15	Piano	'zx'
8	-209	2	175	52	62	0.781	0.655	0.16	Piano	'zx'
9	-209	0	169	52	62	0.781	0.655	0.15	Piano	'zx'
10	-209	1	173	52	62	0.781	0.655	0.16	Piano	'zx'
11	-209	1	171	52	62	0.781	0.655	0.15	Piano	'zx'
12	-209	1	173	52	62	0.781	0.655	0.16	Piano	'zx'
13	-209	1	171	52	62	0.781	0.655	0.15	Piano	'zx'
14	-209	2	175	52	62	0.781	0.655	0.16	Piano	'zx'
15	-209	0	169	52	62	0.781	0.655	0.15	Piano	'zx'
16	-209	2	175	52	62	0.781	0.655	0.16	Piano	'zx'
17	-209	0	169	52	62	0.781	0.655	0.15	Piano	'zx'

ASTA NUM. 17 NI 27 NF 19 Lungh. 60.0 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.1977 4.1487 4.4735 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
--	--	--	--	--	--	--	--	--	--	--	
	cm		kg			kg*m					
1	0	-0	-0	-0	0	0	0	0.00	0.00	0.00	
2	0	5	2	16	0	0	0	0.00	0.01	0.00	
3	0	-5	-2	16	0	0	0	0.00	0.01	0.00	
4	0	5	2	-16	0	0	0	0.00	0.01	0.00	
5	0	-5	-2	-16	0	0	0	0.00	0.01	0.00	
6	0	15	6	5	0	0	0	0.00	0.00	0.00	
7	0	-15	-6	5	0	0	0	0.00	0.00	0.00	
8	0	15	6	-5	0	0	0	0.00	0.00	0.00	
9	0	-15	-6	-5	0	0	0	0.00	0.00	0.00	
10	0	5	2	16	0	0	0	0.00	0.01	0.00	
11	0	-5	-2	16	0	0	0	0.00	0.01	0.00	
12	0	5	2	-16	0	0	0	0.00	0.01	0.00	
13	0	-5	-2	-16	0	0	0	0.00	0.01	0.00	
14	0	15	6	5	0	0	0	0.00	0.00	0.00	
15	0	-15	-6	5	0	0	0	0.00	0.00	0.00	
16	0	15	6	-5	0	0	0	0.00	0.00	0.00	
17	0	-15	-6	-5	0	0	0	0.00	0.00	0.00	
1	6	14	-40	0	0	-0	-1	0.00	0.01	0.00	
2	6	7	-5	16	0	-1	-0	0.00	0.01	0.00	
3	6	-2	-9	16	0	-1	-0	0.00	0.01	0.00	
4	6	7	-5	-16	0	1	-0	0.00	0.01	0.00	
5	6	-2	-9	-16	0	1	-0	0.00	0.01	0.00	
6	6	18	-1	5	0	-0	0	0.00	0.00	0.00	
7	6	-13	-12	5	0	-0	-1	0.00	0.00	0.00	
8	6	18	-1	-5	0	0	0	0.00	0.00	0.00	
9	6	-13	-12	-5	0	0	-1	0.00	0.00	0.00	
10	6	7	-5	16	0	-1	-0	0.00	0.01	0.00	
11	6	-2	-9	16	0	-1	-0	0.00	0.01	0.00	
12	6	7	-5	-16	0	1	-0	0.00	0.01	0.00	
13	6	-2	-9	-16	0	1	-0	0.00	0.01	0.00	
14	6	18	-1	5	0	-0	0	0.00	0.00	0.00	
15	6	-13	-12	5	0	-0	-1	0.00	0.00	0.00	
16	6	18	-1	-5	0	0	0	0.00	0.00	0.00	
17	6	-13	-12	-5	0	0	-1	0.00	0.00	0.00	
1	12	29	-80	0	0	-0	-5	0.01	0.03	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

2	12	10	-12	16	0	-2	-1	0.00	0.01	0.00
3	12	0	-16	16	0	-2	-1	0.00	0.01	0.00
4	12	10	-12	-16	0	2	-1	0.00	0.01	0.00
5	12	0	-16	-16	0	2	-1	0.00	0.01	0.00
6	12	20	-8	5	0	-1	-0	0.00	0.00	0.00
7	12	-10	-19	5	0	-1	-1	0.00	0.01	0.00
8	12	20	-8	-5	0	1	-0	0.00	0.00	0.00
9	12	-10	-19	-5	0	1	-1	0.00	0.01	0.00
10	12	10	-12	16	0	-2	-1	0.00	0.01	0.00
11	12	0	-16	16	0	-2	-1	0.00	0.01	0.00
12	12	10	-12	-16	0	2	-1	0.00	0.01	0.00
13	12	0	-16	-16	0	2	-1	0.00	0.01	0.00
14	12	20	-8	5	0	-1	-0	0.00	0.00	0.00
15	12	-10	-19	5	0	-1	-1	0.00	0.01	0.00
16	12	20	-8	-5	0	1	-0	0.00	0.00	0.00
17	12	-10	-19	-5	0	1	-1	0.00	0.01	0.00
1	18	43	-120	0	0	-0	-11	0.01	0.04	0.00
2	18	12	-19	16	0	-3	-2	0.00	0.01	0.00
3	18	3	-22	16	0	-3	-2	0.00	0.01	0.00
4	18	12	-19	-16	0	3	-2	0.00	0.01	0.00
5	18	3	-22	-16	0	3	-2	0.00	0.01	0.00
6	18	23	-15	5	0	-1	-1	0.00	0.01	0.00
7	18	-8	-26	5	0	-1	-3	0.00	0.01	0.00
8	18	23	-15	-5	0	1	-1	0.00	0.01	0.00
9	18	-8	-26	-5	0	1	-3	0.00	0.01	0.00
10	18	12	-19	16	0	-3	-2	0.00	0.01	0.00
11	18	3	-22	16	0	-3	-2	0.00	0.01	0.00
12	18	12	-19	-16	0	3	-2	0.00	0.01	0.00
13	18	3	-22	-16	0	3	-2	0.00	0.01	0.00
14	18	23	-15	5	0	-1	-1	0.00	0.01	0.00
15	18	-8	-26	5	0	-1	-3	0.00	0.01	0.00
16	18	23	-15	-5	0	1	-1	0.00	0.01	0.00
17	18	-8	-26	-5	0	1	-3	0.00	0.01	0.00
1	24	57	-159	0	0	-0	-19	0.02	0.06	0.00
2	24	15	-26	16	0	-4	-3	0.01	0.01	0.00
3	24	5	-29	16	0	-4	-4	0.01	0.01	0.00
4	24	15	-26	-16	0	4	-3	0.01	0.01	0.00
5	24	5	-29	-16	0	4	-4	0.01	0.01	0.00
6	24	25	-22	5	0	-1	-2	0.00	0.01	0.00
7	24	-5	-33	5	0	-1	-5	0.00	0.01	0.00
8	24	25	-22	-5	0	1	-2	0.00	0.01	0.00
9	24	-5	-33	-5	0	1	-5	0.00	0.01	0.00
10	24	15	-26	16	0	-4	-3	0.01	0.01	0.00
11	24	5	-29	16	0	-4	-4	0.01	0.01	0.00
12	24	15	-26	-16	0	4	-3	0.01	0.01	0.00
13	24	5	-29	-16	0	4	-4	0.01	0.01	0.00
14	24	25	-22	5	0	-1	-2	0.00	0.01	0.00
15	24	-5	-33	5	0	-1	-5	0.00	0.01	0.00
16	24	25	-22	-5	0	1	-2	0.00	0.01	0.00
17	24	-5	-33	-5	0	1	-5	0.00	0.01	0.00
1	30	71	-199	0	0	-0	-30	0.03	0.07	0.00
2	30	17	-33	16	0	-5	-5	0.01	0.01	0.00
3	30	8	-36	16	0	-5	-6	0.01	0.01	0.00
4	30	17	-33	-16	0	5	-5	0.01	0.01	0.00
5	30	8	-36	-16	0	5	-6	0.01	0.01	0.00
6	30	28	-29	5	0	-1	-4	0.01	0.01	0.00
7	30	-3	-40	5	0	-1	-7	0.01	0.01	0.00
8	30	28	-29	-5	0	1	-4	0.01	0.01	0.00
9	30	-3	-40	-5	0	1	-7	0.01	0.01	0.00
10	30	17	-33	16	0	-5	-5	0.01	0.01	0.00
11	30	8	-36	16	0	-5	-6	0.01	0.01	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

12	30	17	-33	-16	0	5	-5	0.01	0.01	0.00
13	30	8	-36	-16	0	5	-6	0.01	0.01	0.00
14	30	28	-29	5	0	-1	-4	0.01	0.01	0.00
15	30	-3	-40	5	0	-1	-7	0.01	0.01	0.00
16	30	28	-29	-5	0	1	-4	0.01	0.01	0.00
17	30	-3	-40	-5	0	1	-7	0.01	0.01	0.00
1	36	86	-239	0	0	-0	-43	0.04	0.09	0.00
2	36	19	-40	16	0	-6	-7	0.01	0.02	0.00
3	36	10	-43	16	0	-6	-8	0.01	0.02	0.00
4	36	19	-40	-16	0	6	-7	0.01	0.02	0.00
5	36	10	-43	-16	0	6	-8	0.01	0.02	0.00
6	36	30	-36	5	0	-2	-6	0.01	0.01	0.00
7	36	-1	-47	5	0	-2	-9	0.01	0.02	0.00
8	36	30	-36	-5	0	2	-6	0.01	0.01	0.00
9	36	-1	-47	-5	0	2	-9	0.01	0.02	0.00
10	36	19	-40	16	0	-6	-7	0.01	0.02	0.00
11	36	10	-43	16	0	-6	-8	0.01	0.02	0.00
12	36	19	-40	-16	0	6	-7	0.01	0.02	0.00
13	36	10	-43	-16	0	6	-8	0.01	0.02	0.00
14	36	30	-36	5	0	-2	-6	0.01	0.01	0.00
15	36	-1	-47	5	0	-2	-9	0.01	0.02	0.00
16	36	30	-36	-5	0	2	-6	0.01	0.01	0.00
17	36	-1	-47	-5	0	2	-9	0.01	0.02	0.00
1	42	100	-279	0	0	-0	-59	0.05	0.10	0.00
2	42	22	-47	16	0	-7	-9	0.01	0.02	0.00
3	42	13	-50	16	0	-7	-11	0.01	0.02	0.00
4	42	22	-47	-16	0	7	-9	0.01	0.02	0.00
5	42	13	-50	-16	0	7	-11	0.01	0.02	0.00
6	42	33	-43	5	0	-2	-8	0.01	0.02	0.00
7	42	2	-54	5	0	-2	-12	0.01	0.02	0.00
8	42	33	-43	-5	0	2	-8	0.01	0.02	0.00
9	42	2	-54	-5	0	2	-12	0.01	0.02	0.00
10	42	22	-47	16	0	-7	-9	0.01	0.02	0.00
11	42	13	-50	16	0	-7	-11	0.01	0.02	0.00
12	42	22	-47	-16	0	7	-9	0.01	0.02	0.00
13	42	13	-50	-16	0	7	-11	0.01	0.02	0.00
14	42	33	-43	5	0	-2	-8	0.01	0.02	0.00
15	42	2	-54	5	0	-2	-12	0.01	0.02	0.00
16	42	33	-43	-5	0	2	-8	0.01	0.02	0.00
17	42	2	-54	-5	0	2	-12	0.01	0.02	0.00
1	48	114	-319	0	0	-0	-77	0.07	0.12	0.00
2	48	24	-54	16	0	-8	-13	0.02	0.02	0.00
3	48	15	-57	16	0	-8	-14	0.02	0.02	0.00
4	48	24	-54	-16	0	8	-13	0.02	0.02	0.00
5	48	15	-57	-16	0	8	-14	0.02	0.02	0.00
6	48	35	-50	5	0	-2	-11	0.01	0.02	0.00
7	48	4	-61	5	0	-2	-16	0.02	0.02	0.00
8	48	35	-50	-5	0	2	-11	0.01	0.02	0.00
9	48	4	-61	-5	0	2	-16	0.02	0.02	0.00
10	48	24	-54	16	0	-8	-13	0.02	0.02	0.00
11	48	15	-57	16	0	-8	-14	0.02	0.02	0.00
12	48	24	-54	-16	0	8	-13	0.02	0.02	0.00
13	48	15	-57	-16	0	8	-14	0.02	0.02	0.00
14	48	35	-50	5	0	-2	-11	0.01	0.02	0.00
15	48	4	-61	5	0	-2	-16	0.02	0.02	0.00
16	48	35	-50	-5	0	2	-11	0.01	0.02	0.00
17	48	4	-61	-5	0	2	-16	0.02	0.02	0.00
1	54	128	-359	-0	0	-0	-97	0.09	0.13	0.00
2	54	27	-61	16	0	-9	-16	0.02	0.02	0.00
3	54	18	-64	16	0	-9	-18	0.02	0.02	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

4	54	27	-61	-16	0	9	-16	0.02	0.02	0.00
5	54	18	-64	-16	0	9	-18	0.02	0.02	0.00
6	54	38	-57	5	0	-3	-14	0.02	0.02	0.00
7	54	7	-68	5	0	-3	-20	0.02	0.02	0.00
8	54	38	-57	-5	0	3	-14	0.02	0.02	0.00
9	54	7	-68	-5	0	3	-20	0.02	0.02	0.00
10	54	27	-61	16	0	-9	-16	0.02	0.02	0.00
11	54	18	-64	16	0	-9	-18	0.02	0.02	0.00
12	54	27	-61	-16	0	9	-16	0.02	0.02	0.00
13	54	18	-64	-16	0	9	-18	0.02	0.02	0.00
14	54	38	-57	5	0	-3	-14	0.02	0.02	0.00
15	54	7	-68	5	0	-3	-20	0.02	0.02	0.00
16	54	38	-57	-5	0	3	-14	0.02	0.02	0.00
17	54	7	-68	-5	0	3	-20	0.02	0.02	0.00
1	60	143	-399	0	0	0	-120	0.11	0.14	0.00
2	60	29	-68	16	0	-10	-20	0.02	0.03	0.00
3	60	20	-71	16	0	-10	-22	0.03	0.03	0.00
4	60	29	-68	-16	0	10	-20	0.02	0.03	0.00
5	60	20	-71	-16	0	10	-22	0.03	0.03	0.00
6	60	40	-64	5	0	-3	-17	0.02	0.02	0.00
7	60	9	-75	5	0	-3	-24	0.02	0.03	0.00
8	60	40	-64	-5	0	3	-17	0.02	0.02	0.00
9	60	9	-75	-5	0	3	-24	0.02	0.03	0.00
10	60	29	-68	16	0	-10	-20	0.02	0.03	0.00
11	60	20	-71	16	0	-10	-22	0.03	0.03	0.00
12	60	29	-68	-16	0	10	-20	0.02	0.03	0.00
13	60	20	-71	-16	0	10	-22	0.03	0.03	0.00
14	60	40	-64	5	0	-3	-17	0.02	0.02	0.00
15	60	9	-75	5	0	-3	-24	0.02	0.03	0.00
16	60	40	-64	-5	0	3	-17	0.02	0.02	0.00
17	60	9	-75	-5	0	3	-24	0.02	0.03	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota

1	-0	0	120	12	14	1.000	1.000	0.15	Piano 'zx'
3	-5	10	22	12	14	1.000	1.000	0.15	Piano 'zx'
5	-5	10	22	12	14	1.000	1.000	0.15	Piano 'zx'
7	-15	3	24	12	14	1.000	1.000	0.15	Piano 'zx'
9	-15	3	24	12	14	1.000	1.000	0.15	Piano 'zx'
11	-5	10	22	12	14	1.000	1.000	0.15	Piano 'zx'
13	-5	10	22	12	14	1.000	1.000	0.15	Piano 'zx'
15	-15	3	24	12	14	1.000	1.000	0.15	Piano 'zx'
17	-15	3	24	12	14	1.000	1.000	0.15	Piano 'zx'

ASTA NUM. 18 NI 19 NF 11 Lungh. 267.1 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.1977 4.1487 4.4735 kg/cm

NC	x -- cm	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota

1	0	-635	903	-3	0	-2	-42	0.04	0.33	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

2	0	-110	157	-1	0	-1	-6	0.01	0.06	0.00
3	0	-110	157	-0	0	-1	-8	0.01	0.06	0.00
4	0	-110	157	-1	0	-1	-6	0.01	0.06	0.00
5	0	-110	157	-0	0	-0	-8	0.01	0.06	0.00
6	0	-110	156	-1	0	-1	-5	0.00	0.06	0.00
7	0	-110	158	0	0	-0	-9	0.01	0.06	0.00
8	0	-110	156	-1	0	-1	-5	0.00	0.06	0.00
9	0	-110	158	0	0	-0	-9	0.01	0.06	0.00
10	0	-110	157	-1	0	-1	-6	0.01	0.06	0.00
11	0	-110	157	-0	0	-1	-8	0.01	0.06	0.00
12	0	-110	157	-1	0	-1	-6	0.01	0.06	0.00
13	0	-110	157	-0	0	-0	-8	0.01	0.06	0.00
14	0	-110	156	-1	0	-1	-5	0.00	0.06	0.00
15	0	-110	158	0	0	-0	-9	0.01	0.06	0.00
16	0	-110	156	-1	0	-1	-5	0.00	0.06	0.00
17	0	-110	158	0	0	-0	-9	0.01	0.06	0.00

1	27	-572	726	-3	0	-2	175	0.15	0.26	0.00
2	27	-99	126	-1	0	-1	31	0.03	0.05	0.00
3	27	-99	126	-0	0	-0	30	0.03	0.05	0.00
4	27	-99	126	-1	0	-0	31	0.03	0.05	0.00
5	27	-99	126	-0	0	-0	30	0.03	0.05	0.00
6	27	-99	125	-1	0	-1	33	0.03	0.05	0.00
7	27	-99	127	0	0	-0	29	0.02	0.05	0.00
8	27	-99	125	-1	0	-1	33	0.03	0.05	0.00
9	27	-99	127	0	0	-0	29	0.02	0.05	0.00
10	27	-99	126	-1	0	-1	31	0.03	0.05	0.00
11	27	-99	126	-0	0	-0	30	0.03	0.05	0.00
12	27	-99	126	-1	0	-0	31	0.03	0.05	0.00
13	27	-99	126	-0	0	-0	30	0.03	0.05	0.00
14	27	-99	125	-1	0	-1	33	0.03	0.05	0.00
15	27	-99	127	0	0	-0	29	0.02	0.05	0.00
16	27	-99	125	-1	0	-1	33	0.03	0.05	0.00
17	27	-99	127	0	0	-0	29	0.02	0.05	0.00

1	53	-508	548	-3	0	-1	346	0.29	0.20	0.00
2	53	-88	95	-1	0	-0	61	0.05	0.03	0.00
3	53	-88	95	-0	0	-0	60	0.05	0.03	0.00
4	53	-88	95	-1	0	-0	61	0.05	0.03	0.00
5	53	-88	95	-0	0	-0	60	0.05	0.03	0.00
6	53	-88	94	-1	0	-0	62	0.05	0.03	0.00
7	53	-88	96	0	0	-0	58	0.05	0.03	0.00
8	53	-88	94	-1	0	-0	62	0.05	0.03	0.00
9	53	-88	96	0	0	-0	58	0.05	0.03	0.00
10	53	-88	95	-1	0	-0	61	0.05	0.03	0.00
11	53	-88	95	-0	0	-0	60	0.05	0.03	0.00
12	53	-88	95	-1	0	-0	61	0.05	0.03	0.00
13	53	-88	95	-0	0	-0	60	0.05	0.03	0.00
14	53	-88	94	-1	0	-0	62	0.05	0.03	0.00
15	53	-88	96	0	0	-0	58	0.05	0.03	0.00
16	53	-88	94	-1	0	-0	62	0.05	0.03	0.00
17	53	-88	96	0	0	-0	58	0.05	0.03	0.00

1	80	-445	371	-3	0	-0	468	0.39	0.13	0.00
2	80	-77	64	-1	0	-0	82	0.07	0.02	0.00
3	80	-77	65	-0	0	-0	81	0.07	0.02	0.00
4	80	-77	64	-1	0	-0	82	0.07	0.02	0.00
5	80	-77	65	-0	0	0	81	0.07	0.02	0.00
6	80	-77	63	-1	0	-0	83	0.07	0.02	0.00
7	80	-77	65	0	0	-0	80	0.07	0.02	0.00
8	80	-77	63	-1	0	-0	83	0.07	0.02	0.00
9	80	-77	65	0	0	-0	80	0.07	0.02	0.00
10	80	-77	64	-1	0	-0	82	0.07	0.02	0.00
11	80	-77	65	-0	0	-0	81	0.07	0.02	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

12	80	-77	64	-1	0	-0	82	0.07	0.02	0.00
13	80	-77	65	-0	0	0	81	0.07	0.02	0.00
14	80	-77	63	-1	0	-0	83	0.07	0.02	0.00
15	80	-77	65	0	0	-0	80	0.07	0.02	0.00
16	80	-77	63	-1	0	-0	83	0.07	0.02	0.00
17	80	-77	65	0	0	-0	80	0.07	0.02	0.00
1	107	-381	193	-3	0	0	544	0.46	0.07	0.00
2	107	-66	33	-1	0	0	95	0.08	0.01	0.00
3	107	-66	34	-0	0	-0	94	0.08	0.01	0.00
4	107	-66	33	-1	0	0	95	0.08	0.01	0.00
5	107	-66	34	-0	0	0	94	0.08	0.01	0.00
6	107	-66	33	-1	0	0	96	0.08	0.01	0.00
7	107	-66	34	0	0	-0	93	0.08	0.01	0.00
8	107	-66	33	-1	0	0	96	0.08	0.01	0.00
9	107	-66	34	0	0	-0	93	0.08	0.01	0.00
10	107	-66	33	-1	0	0	95	0.08	0.01	0.00
11	107	-66	34	-0	0	-0	94	0.08	0.01	0.00
12	107	-66	33	-1	0	0	95	0.08	0.01	0.00
13	107	-66	34	-0	0	0	94	0.08	0.01	0.00
14	107	-66	33	-1	0	0	96	0.08	0.01	0.00
15	107	-66	34	0	0	-0	93	0.08	0.01	0.00
16	107	-66	33	-1	0	0	96	0.08	0.01	0.00
17	107	-66	34	0	0	-0	93	0.08	0.01	0.00
1	134	-318	16	-3	0	1	572	0.48	0.01	0.00
2	134	-55	2	-1	0	0	100	0.08	0.00	0.00
3	134	-55	3	-0	0	0	99	0.08	0.00	0.00
4	134	-55	2	-1	0	0	100	0.08	0.00	0.00
5	134	-55	3	-0	0	0	99	0.08	0.00	0.00
6	134	-55	2	-1	0	0	101	0.09	0.00	0.00
7	134	-55	3	0	0	-0	98	0.08	0.00	0.00
8	134	-55	2	-1	0	0	101	0.09	0.00	0.00
9	134	-55	3	0	0	-0	98	0.08	0.00	0.00
10	134	-55	2	-1	0	0	100	0.08	0.00	0.00
11	134	-55	3	-0	0	0	99	0.08	0.00	0.00
12	134	-55	2	-1	0	0	100	0.08	0.00	0.00
13	134	-55	3	-0	0	0	99	0.08	0.00	0.00
14	134	-55	2	-1	0	0	101	0.09	0.00	0.00
15	134	-55	3	0	0	-0	98	0.08	0.00	0.00
16	134	-55	2	-1	0	0	101	0.09	0.00	0.00
17	134	-55	3	0	0	-0	98	0.08	0.00	0.00
1	160	-254	-162	-3	0	2	552	0.47	0.06	0.00
2	160	-44	-29	-1	0	0	96	0.08	0.01	0.00
3	160	-44	-28	-0	0	0	96	0.08	0.01	0.00
4	160	-44	-29	-1	0	1	96	0.08	0.01	0.00
5	160	-44	-28	-0	0	0	96	0.08	0.01	0.00
6	160	-44	-29	-1	0	1	97	0.08	0.01	0.00
7	160	-44	-27	0	0	-0	95	0.08	0.01	0.00
8	160	-44	-29	-1	0	1	97	0.08	0.01	0.00
9	160	-44	-27	0	0	-0	95	0.08	0.01	0.00
10	160	-44	-29	-1	0	0	96	0.08	0.01	0.00
11	160	-44	-28	-0	0	0	96	0.08	0.01	0.00
12	160	-44	-29	-1	0	1	96	0.08	0.01	0.00
13	160	-44	-28	-0	0	0	96	0.08	0.01	0.00
14	160	-44	-29	-1	0	1	97	0.08	0.01	0.00
15	160	-44	-27	0	0	-0	95	0.08	0.01	0.00
16	160	-44	-29	-1	0	1	97	0.08	0.01	0.00
17	160	-44	-27	0	0	-0	95	0.08	0.01	0.00
1	187	-191	-339	-3	0	3	485	0.41	0.12	0.00
2	187	-33	-59	-1	0	1	85	0.07	0.02	0.00
3	187	-33	-59	-0	0	0	84	0.07	0.02	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

4	187	-33	-59	-1	0	1	85	0.07	0.02	0.00
5	187	-33	-59	-0	0	0	84	0.07	0.02	0.00
6	187	-33	-60	-1	0	1	85	0.07	0.02	0.00
7	187	-33	-58	0	0	-0	84	0.07	0.02	0.00
8	187	-33	-60	-1	0	1	85	0.07	0.02	0.00
9	187	-33	-58	0	0	-0	84	0.07	0.02	0.00
10	187	-33	-59	-1	0	1	85	0.07	0.02	0.00
11	187	-33	-59	-0	0	0	84	0.07	0.02	0.00
12	187	-33	-59	-1	0	1	85	0.07	0.02	0.00
13	187	-33	-59	-0	0	0	84	0.07	0.02	0.00
14	187	-33	-60	-1	0	1	85	0.07	0.02	0.00
15	187	-33	-58	0	0	-0	84	0.07	0.02	0.00
16	187	-33	-60	-1	0	1	85	0.07	0.02	0.00
17	187	-33	-58	0	0	-0	84	0.07	0.02	0.00
1	214	-127	-517	-3	0	3	371	0.31	0.19	0.00
2	214	-22	-90	-1	0	1	65	0.05	0.03	0.00
3	214	-22	-90	-0	0	0	64	0.05	0.03	0.00
4	214	-22	-90	-1	0	1	65	0.06	0.03	0.00
5	214	-22	-90	-0	0	0	64	0.05	0.03	0.00
6	214	-22	-91	-1	0	1	65	0.06	0.03	0.00
7	214	-22	-89	0	0	-0	64	0.05	0.03	0.00
8	214	-22	-91	-1	0	1	65	0.06	0.03	0.00
9	214	-22	-89	0	0	-0	64	0.05	0.03	0.00
10	214	-22	-90	-1	0	1	65	0.05	0.03	0.00
11	214	-22	-90	-0	0	0	64	0.05	0.03	0.00
12	214	-22	-90	-1	0	1	65	0.06	0.03	0.00
13	214	-22	-90	-0	0	0	64	0.05	0.03	0.00
14	214	-22	-91	-1	0	1	65	0.06	0.03	0.00
15	214	-22	-89	0	0	-0	64	0.05	0.03	0.00
16	214	-22	-91	-1	0	1	65	0.06	0.03	0.00
17	214	-22	-89	0	0	-0	64	0.05	0.03	0.00
1	240	-64	-694	-3	0	4	209	0.18	0.25	0.00
2	240	-11	-121	-1	0	1	36	0.03	0.04	0.00
3	240	-11	-120	-0	0	1	36	0.03	0.04	0.00
4	240	-11	-121	-1	0	1	36	0.03	0.04	0.00
5	240	-11	-120	-0	0	1	36	0.03	0.04	0.00
6	240	-11	-122	-1	0	2	37	0.03	0.04	0.00
7	240	-11	-120	0	0	-0	36	0.03	0.04	0.00
8	240	-11	-122	-1	0	2	37	0.03	0.04	0.00
9	240	-11	-120	0	0	-0	36	0.03	0.04	0.00
10	240	-11	-121	-1	0	1	36	0.03	0.04	0.00
11	240	-11	-120	-0	0	1	36	0.03	0.04	0.00
12	240	-11	-121	-1	0	1	36	0.03	0.04	0.00
13	240	-11	-120	-0	0	1	36	0.03	0.04	0.00
14	240	-11	-122	-1	0	2	37	0.03	0.04	0.00
15	240	-11	-120	0	0	-0	36	0.03	0.04	0.00
16	240	-11	-122	-1	0	2	37	0.03	0.04	0.00
17	240	-11	-120	0	0	-0	36	0.03	0.04	0.00
1	267	-0	-872	-3	0	5	-0	0.00	0.32	0.00
2	267	0	-152	-1	0	1	-0	0.00	0.06	0.00
3	267	0	-151	-0	0	1	-0	0.00	0.05	0.00
4	267	0	-152	-1	0	1	-0	0.00	0.06	0.00
5	267	0	-151	-0	0	1	-0	0.00	0.05	0.00
6	267	0	-153	-1	0	2	-0	0.00	0.06	0.00
7	267	0	-151	0	0	-0	-0	0.00	0.05	0.00
8	267	0	-153	-1	0	2	-0	0.00	0.06	0.00
9	267	0	-151	0	0	-0	-0	0.00	0.05	0.00
10	267	0	-152	-1	0	1	-0	0.00	0.06	0.00
11	267	0	-151	-0	0	1	-0	0.00	0.05	0.00
12	267	0	-152	-1	0	1	-0	0.00	0.06	0.00
13	267	0	-151	-0	0	1	-0	0.00	0.05	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

14	267	0	-153	-1	0	2	-0	0.00	0.06	0.00
15	267	0	-151	0	0	-0	-0	0.00	0.05	0.00
16	267	0	-153	-1	0	2	-0	0.00	0.06	0.00
17	267	0	-151	0	0	-0	-0	0.00	0.05	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
1	-635	5	572	52	62	0.781	0.655	0.51	Piano 'zx'
2	-110	1	100	52	62	0.781	0.655	0.09	Piano 'zx'
3	-110	1	99	52	62	0.781	0.655	0.09	Piano 'zx'
4	-110	1	100	52	62	0.781	0.655	0.09	Piano 'zx'
5	-110	1	99	52	62	0.781	0.655	0.09	Piano 'zx'
6	-110	2	101	52	62	0.781	0.655	0.09	Piano 'zx'
7	-110	0	98	52	62	0.781	0.655	0.09	Piano 'zx'
8	-110	2	101	52	62	0.781	0.655	0.09	Piano 'zx'
9	-110	0	98	52	62	0.781	0.655	0.09	Piano 'zx'
10	-110	1	100	52	62	0.781	0.655	0.09	Piano 'zx'
11	-110	1	99	52	62	0.781	0.655	0.09	Piano 'zx'
12	-110	1	100	52	62	0.781	0.655	0.09	Piano 'zx'
13	-110	1	99	52	62	0.781	0.655	0.09	Piano 'zx'
14	-110	2	101	52	62	0.781	0.655	0.09	Piano 'zx'
15	-110	0	98	52	62	0.781	0.655	0.09	Piano 'zx'
16	-110	2	101	52	62	0.781	0.655	0.09	Piano 'zx'
17	-110	0	98	52	62	0.781	0.655	0.09	Piano 'zx'

ASTA NUM. 19 NI 28 NF 29 Lungh. 60.0 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.1977 4.1487 4.4735 kg/cm

NC	x -- cm	Fx ----- kg	Fy	Fz	Mx ----- kg*m	My	Mz	I.R.	I.V.	I.Tor.	Nota
1	0	0	-0	-0	0	0	0	0.00	0.00	0.00	
2	0	-5	-2	-16	0	0	0	0.00	0.01	0.00	
3	0	5	2	-16	0	0	0	0.00	0.01	0.00	
4	0	-5	-2	16	0	0	0	0.00	0.01	0.00	
5	0	5	2	16	0	0	0	0.00	0.01	0.00	
6	0	-15	-6	-5	0	0	0	0.00	0.00	0.00	
7	0	15	6	-5	0	0	0	0.00	0.00	0.00	
8	0	-15	-6	5	0	0	0	0.00	0.00	0.00	
9	0	15	6	5	0	0	0	0.00	0.00	0.00	
10	0	-5	-2	-16	0	0	0	0.00	0.01	0.00	
11	0	5	2	-16	0	0	0	0.00	0.01	0.00	
12	0	-5	-2	16	0	0	0	0.00	0.01	0.00	
13	0	5	2	16	0	0	0	0.00	0.01	0.00	
14	0	-15	-6	-5	0	0	0	0.00	0.00	0.00	
15	0	15	6	-5	0	0	0	0.00	0.00	0.00	
16	0	-15	-6	5	0	0	0	0.00	0.00	0.00	
17	0	15	6	5	0	0	0	0.00	0.00	0.00	
1	6	14	-40	-0	0	-0	-1	0.00	0.01	0.00	
2	6	-2	-9	-16	0	1	-0	0.00	0.01	0.00	
3	6	7	-5	-16	0	1	-0	0.00	0.01	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

4	6	-2	-9	16	0	-1	-0	0.00	0.01	0.00
5	6	7	-5	16	0	-1	-0	0.00	0.01	0.00
6	6	-13	-12	-5	0	0	-1	0.00	0.00	0.00
7	6	18	-1	-5	0	0	0	0.00	0.00	0.00
8	6	-13	-12	5	0	-0	-1	0.00	0.00	0.00
9	6	18	-1	5	0	-0	0	0.00	0.00	0.00
10	6	-2	-9	-16	0	1	-0	0.00	0.01	0.00
11	6	7	-5	-16	0	1	-0	0.00	0.01	0.00
12	6	-2	-9	16	0	-1	-0	0.00	0.01	0.00
13	6	7	-5	16	0	-1	-0	0.00	0.01	0.00
14	6	-13	-12	-5	0	0	-1	0.00	0.00	0.00
15	6	18	-1	-5	0	0	0	0.00	0.00	0.00
16	6	-13	-12	5	0	-0	-1	0.00	0.00	0.00
17	6	18	-1	5	0	-0	0	0.00	0.00	0.00

1	12	29	-80	-0	0	-0	-5	0.01	0.03	0.00
2	12	0	-16	-16	0	2	-1	0.00	0.01	0.00
3	12	10	-12	-16	0	2	-1	0.00	0.01	0.00
4	12	0	-16	16	0	-2	-1	0.00	0.01	0.00
5	12	10	-12	16	0	-2	-1	0.00	0.01	0.00
6	12	-10	-19	-5	0	1	-1	0.00	0.01	0.00
7	12	20	-8	-5	0	1	-0	0.00	0.00	0.00
8	12	-10	-19	5	0	-1	-1	0.00	0.01	0.00
9	12	20	-8	5	0	-1	-0	0.00	0.00	0.00
10	12	0	-16	-16	0	2	-1	0.00	0.01	0.00
11	12	10	-12	-16	0	2	-1	0.00	0.01	0.00
12	12	0	-16	16	0	-2	-1	0.00	0.01	0.00
13	12	10	-12	16	0	-2	-1	0.00	0.01	0.00
14	12	-10	-19	-5	0	1	-1	0.00	0.01	0.00
15	12	20	-8	-5	0	1	-0	0.00	0.00	0.00
16	12	-10	-19	5	0	-1	-1	0.00	0.01	0.00
17	12	20	-8	5	0	-1	-0	0.00	0.00	0.00

1	18	43	-120	-0	0	-0	-11	0.01	0.04	0.00
2	18	3	-22	-16	0	3	-2	0.00	0.01	0.00
3	18	12	-19	-16	0	3	-2	0.00	0.01	0.00
4	18	3	-22	16	0	-3	-2	0.00	0.01	0.00
5	18	12	-19	16	0	-3	-2	0.00	0.01	0.00
6	18	-8	-26	-5	0	1	-3	0.00	0.01	0.00
7	18	23	-15	-5	0	1	-1	0.00	0.01	0.00
8	18	-8	-26	5	0	-1	-3	0.00	0.01	0.00
9	18	23	-15	5	0	-1	-1	0.00	0.01	0.00
10	18	3	-22	-16	0	3	-2	0.00	0.01	0.00
11	18	12	-19	-16	0	3	-2	0.00	0.01	0.00
12	18	3	-22	16	0	-3	-2	0.00	0.01	0.00
13	18	12	-19	16	0	-3	-2	0.00	0.01	0.00
14	18	-8	-26	-5	0	1	-3	0.00	0.01	0.00
15	18	23	-15	-5	0	1	-1	0.00	0.01	0.00
16	18	-8	-26	5	0	-1	-3	0.00	0.01	0.00
17	18	23	-15	5	0	-1	-1	0.00	0.01	0.00

1	24	57	-159	-0	0	-0	-19	0.02	0.06	0.00
2	24	5	-29	-16	0	4	-4	0.01	0.01	0.00
3	24	15	-26	-16	0	4	-3	0.01	0.01	0.00
4	24	5	-29	16	0	-4	-4	0.01	0.01	0.00
5	24	15	-26	16	0	-4	-3	0.01	0.01	0.00
6	24	-5	-33	-5	0	1	-5	0.00	0.01	0.00
7	24	25	-22	-5	0	1	-2	0.00	0.01	0.00
8	24	-5	-33	5	0	-1	-5	0.00	0.01	0.00
9	24	25	-22	5	0	-1	-2	0.00	0.01	0.00
10	24	5	-29	-16	0	4	-4	0.01	0.01	0.00
11	24	15	-26	-16	0	4	-3	0.01	0.01	0.00
12	24	5	-29	16	0	-4	-4	0.01	0.01	0.00
13	24	15	-26	16	0	-4	-3	0.01	0.01	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

14	24	-5	-33	-5	0	1	-5	0.00	0.01	0.00
15	24	25	-22	-5	0	1	-2	0.00	0.01	0.00
16	24	-5	-33	5	0	-1	-5	0.00	0.01	0.00
17	24	25	-22	5	0	-1	-2	0.00	0.01	0.00
1	30	71	-199	-0	0	0	-30	0.03	0.07	0.00
2	30	8	-36	-16	0	5	-6	0.01	0.01	0.00
3	30	17	-33	-16	0	5	-5	0.01	0.01	0.00
4	30	8	-36	16	0	-5	-6	0.01	0.01	0.00
5	30	17	-33	16	0	-5	-5	0.01	0.01	0.00
6	30	-3	-40	-5	0	1	-7	0.01	0.01	0.00
7	30	28	-29	-5	0	1	-4	0.01	0.01	0.00
8	30	-3	-40	5	0	-1	-7	0.01	0.01	0.00
9	30	28	-29	5	0	-1	-4	0.01	0.01	0.00
10	30	8	-36	-16	0	5	-6	0.01	0.01	0.00
11	30	17	-33	-16	0	5	-5	0.01	0.01	0.00
12	30	8	-36	16	0	-5	-6	0.01	0.01	0.00
13	30	17	-33	16	0	-5	-5	0.01	0.01	0.00
14	30	-3	-40	-5	0	1	-7	0.01	0.01	0.00
15	30	28	-29	-5	0	1	-4	0.01	0.01	0.00
16	30	-3	-40	5	0	-1	-7	0.01	0.01	0.00
17	30	28	-29	5	0	-1	-4	0.01	0.01	0.00
1	36	86	-239	-0	0	-0	-43	0.04	0.09	0.00
2	36	10	-43	-16	0	6	-8	0.01	0.02	0.00
3	36	19	-40	-16	0	6	-7	0.01	0.02	0.00
4	36	10	-43	16	0	-6	-8	0.01	0.02	0.00
5	36	19	-40	16	0	-6	-7	0.01	0.02	0.00
6	36	-1	-47	-5	0	2	-9	0.01	0.02	0.00
7	36	30	-36	-5	0	2	-6	0.01	0.01	0.00
8	36	-1	-47	5	0	-2	-9	0.01	0.02	0.00
9	36	30	-36	5	0	-2	-6	0.01	0.01	0.00
10	36	10	-43	-16	0	6	-8	0.01	0.02	0.00
11	36	19	-40	-16	0	6	-7	0.01	0.02	0.00
12	36	10	-43	16	0	-6	-8	0.01	0.02	0.00
13	36	19	-40	16	0	-6	-7	0.01	0.02	0.00
14	36	-1	-47	-5	0	2	-9	0.01	0.02	0.00
15	36	30	-36	-5	0	2	-6	0.01	0.01	0.00
16	36	-1	-47	5	0	-2	-9	0.01	0.02	0.00
17	36	30	-36	5	0	-2	-6	0.01	0.01	0.00
1	42	100	-279	-0	0	-0	-59	0.05	0.10	0.00
2	42	13	-50	-16	0	7	-11	0.01	0.02	0.00
3	42	22	-47	-16	0	7	-9	0.01	0.02	0.00
4	42	13	-50	16	0	-7	-11	0.01	0.02	0.00
5	42	22	-47	16	0	-7	-9	0.01	0.02	0.00
6	42	2	-54	-5	0	2	-12	0.01	0.02	0.00
7	42	33	-43	-5	0	2	-8	0.01	0.02	0.00
8	42	2	-54	5	0	-2	-12	0.01	0.02	0.00
9	42	33	-43	5	0	-2	-8	0.01	0.02	0.00
10	42	13	-50	-16	0	7	-11	0.01	0.02	0.00
11	42	22	-47	-16	0	7	-9	0.01	0.02	0.00
12	42	13	-50	16	0	-7	-11	0.01	0.02	0.00
13	42	22	-47	16	0	-7	-9	0.01	0.02	0.00
14	42	2	-54	-5	0	2	-12	0.01	0.02	0.00
15	42	33	-43	-5	0	2	-8	0.01	0.02	0.00
16	42	2	-54	5	0	-2	-12	0.01	0.02	0.00
17	42	33	-43	5	0	-2	-8	0.01	0.02	0.00
1	48	114	-319	-0	0	-0	-77	0.07	0.12	0.00
2	48	15	-57	-16	0	8	-14	0.02	0.02	0.00
3	48	24	-54	-16	0	8	-13	0.02	0.02	0.00
4	48	15	-57	16	0	-8	-14	0.02	0.02	0.00
5	48	24	-54	16	0	-8	-13	0.02	0.02	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

6	48	4	-61	-5	0	2	-16	0.02	0.02	0.00
7	48	35	-50	-5	0	2	-11	0.01	0.02	0.00
8	48	4	-61	5	0	-2	-16	0.02	0.02	0.00
9	48	35	-50	5	0	-2	-11	0.01	0.02	0.00
10	48	15	-57	-16	0	8	-14	0.02	0.02	0.00
11	48	24	-54	-16	0	8	-13	0.02	0.02	0.00
12	48	15	-57	16	0	-8	-14	0.02	0.02	0.00
13	48	24	-54	16	0	-8	-13	0.02	0.02	0.00
14	48	4	-61	-5	0	2	-16	0.02	0.02	0.00
15	48	35	-50	-5	0	2	-11	0.01	0.02	0.00
16	48	4	-61	5	0	-2	-16	0.02	0.02	0.00
17	48	35	-50	5	0	-2	-11	0.01	0.02	0.00
1	54	128	-359	-0	0	-0	-97	0.09	0.13	0.00
2	54	18	-64	-16	0	9	-18	0.02	0.02	0.00
3	54	27	-61	-16	0	9	-16	0.02	0.02	0.00
4	54	18	-64	16	0	-9	-18	0.02	0.02	0.00
5	54	27	-61	16	0	-9	-16	0.02	0.02	0.00
6	54	7	-68	-5	0	3	-20	0.02	0.02	0.00
7	54	38	-57	-5	0	3	-14	0.02	0.02	0.00
8	54	7	-68	5	0	-3	-20	0.02	0.02	0.00
9	54	38	-57	5	0	-3	-14	0.02	0.02	0.00
10	54	18	-64	-16	0	9	-18	0.02	0.02	0.00
11	54	27	-61	-16	0	9	-16	0.02	0.02	0.00
12	54	18	-64	16	0	-9	-18	0.02	0.02	0.00
13	54	27	-61	16	0	-9	-16	0.02	0.02	0.00
14	54	7	-68	-5	0	3	-20	0.02	0.02	0.00
15	54	38	-57	-5	0	3	-14	0.02	0.02	0.00
16	54	7	-68	5	0	-3	-20	0.02	0.02	0.00
17	54	38	-57	5	0	-3	-14	0.02	0.02	0.00
1	60	143	-399	-0	0	0	-120	0.11	0.14	0.00
2	60	20	-71	-16	0	10	-22	0.03	0.03	0.00
3	60	29	-68	-16	0	10	-20	0.02	0.03	0.00
4	60	20	-71	16	0	-10	-22	0.03	0.03	0.00
5	60	29	-68	16	0	-10	-20	0.02	0.03	0.00
6	60	9	-75	-5	0	3	-24	0.02	0.03	0.00
7	60	40	-64	-5	0	3	-17	0.02	0.02	0.00
8	60	9	-75	5	0	-3	-24	0.02	0.03	0.00
9	60	40	-64	5	0	-3	-17	0.02	0.02	0.00
10	60	20	-71	-16	0	10	-22	0.03	0.03	0.00
11	60	29	-68	-16	0	10	-20	0.02	0.03	0.00
12	60	20	-71	16	0	-10	-22	0.03	0.03	0.00
13	60	29	-68	16	0	-10	-20	0.02	0.03	0.00
14	60	9	-75	-5	0	3	-24	0.02	0.03	0.00
15	60	40	-64	-5	0	3	-17	0.02	0.02	0.00
16	60	9	-75	5	0	-3	-24	0.02	0.03	0.00
17	60	40	-64	5	0	-3	-17	0.02	0.02	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota

2	-5	10	22	12	14	1.000	1.000	0.09	Piano 'zx'
4	-5	10	22	12	14	1.000	1.000	0.09	Piano 'zx'
6	-15	3	24	12	14	1.000	1.000	0.09	Piano 'zx'
8	-15	3	24	12	14	1.000	1.000	0.09	Piano 'zx'
10	-5	10	22	12	14	1.000	1.000	0.09	Piano 'zx'
12	-5	10	22	12	14	1.000	1.000	0.09	Piano 'zx'

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

14 -15 3 24 12 14 1.000 1.000 0.09 Piano 'zx'
16 -15 3 24 12 14 1.000 1.000 0.09 Piano 'zx'

ASTA NUM. 20 NI 29 NF 3 Lungh. 267.1 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.1977 4.1487 4.4735 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
--	cm	kg			kg*m						
1	0	-635	932	55	0	150	-120	0.22	0.34	0.00	
2	0	-110	162	6	0	17	-22	0.03	0.06	0.00	
3	0	-110	162	17	0	46	-20	0.06	0.06	0.00	
4	0	-110	162	2	0	6	-22	0.02	0.06	0.00	
5	0	-110	162	13	0	36	-20	0.05	0.06	0.00	
6	0	-110	163	-8	0	-21	-24	0.04	0.06	0.00	
7	0	-110	161	28	0	77	-17	0.09	0.06	0.00	
8	0	-110	163	-9	0	-24	-24	0.04	0.06	0.00	
9	0	-110	161	27	0	74	-17	0.08	0.06	0.00	
10	0	-110	162	6	0	17	-22	0.03	0.06	0.00	
11	0	-110	162	17	0	46	-20	0.06	0.06	0.00	
12	0	-110	162	2	0	6	-22	0.02	0.06	0.00	
13	0	-110	162	13	0	36	-20	0.05	0.06	0.00	
14	0	-110	163	-8	0	-21	-24	0.04	0.06	0.00	
15	0	-110	161	28	0	77	-17	0.09	0.06	0.00	
16	0	-110	163	-9	0	-24	-24	0.04	0.06	0.00	
17	0	-110	161	27	0	74	-17	0.08	0.06	0.00	
1	27	-572	755	55	0	136	106	0.20	0.27	0.00	
2	27	-99	131	6	0	15	17	0.03	0.05	0.00	
3	27	-99	131	17	0	42	19	0.05	0.05	0.00	
4	27	-99	131	2	0	6	17	0.02	0.05	0.00	
5	27	-99	131	13	0	32	19	0.04	0.05	0.00	
6	27	-99	132	-8	0	-19	15	0.03	0.05	0.00	
7	27	-99	130	28	0	69	21	0.08	0.05	0.00	
8	27	-99	132	-9	0	-22	15	0.03	0.05	0.00	
9	27	-99	130	27	0	66	21	0.08	0.05	0.00	
10	27	-99	131	6	0	15	17	0.03	0.05	0.00	
11	27	-99	131	17	0	42	19	0.05	0.05	0.00	
12	27	-99	131	2	0	6	17	0.02	0.05	0.00	
13	27	-99	131	13	0	32	19	0.04	0.05	0.00	
14	27	-99	132	-8	0	-19	15	0.03	0.05	0.00	
15	27	-99	130	28	0	69	21	0.08	0.05	0.00	
16	27	-99	132	-9	0	-22	15	0.03	0.05	0.00	
17	27	-99	130	27	0	66	21	0.08	0.05	0.00	
1	53	-508	577	55	0	121	284	0.32	0.21	0.00	
2	53	-88	101	6	0	14	48	0.05	0.04	0.00	
3	53	-88	100	17	0	37	50	0.07	0.04	0.00	
4	53	-88	101	2	0	5	48	0.04	0.04	0.00	
5	53	-88	100	13	0	29	50	0.06	0.04	0.00	
6	53	-88	102	-8	0	-17	47	0.05	0.04	0.00	
7	53	-88	99	28	0	62	52	0.09	0.04	0.00	
8	53	-88	102	-9	0	-19	47	0.05	0.04	0.00	
9	53	-88	99	27	0	59	52	0.09	0.04	0.00	
10	53	-88	101	6	0	14	48	0.05	0.04	0.00	
11	53	-88	100	17	0	37	50	0.07	0.04	0.00	
12	53	-88	101	2	0	5	48	0.04	0.04	0.00	
13	53	-88	100	13	0	29	50	0.06	0.04	0.00	
14	53	-88	102	-8	0	-17	47	0.05	0.04	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

15	53	-88	99	28	0	62	52	0.09	0.04	0.00
16	53	-88	102	-9	0	-19	47	0.05	0.04	0.00
17	53	-88	99	27	0	59	52	0.09	0.04	0.00
1	80	-445	400	55	0	106	414	0.42	0.15	0.00
2	80	-77	70	6	0	12	71	0.07	0.03	0.00
3	80	-77	69	17	0	33	73	0.08	0.03	0.00
4	80	-77	70	2	0	5	71	0.06	0.03	0.00
5	80	-77	69	13	0	25	73	0.08	0.03	0.00
6	80	-77	71	-8	0	-15	70	0.07	0.03	0.00
7	80	-77	68	28	0	54	74	0.10	0.03	0.00
8	80	-77	71	-9	0	-17	70	0.07	0.03	0.00
9	80	-77	68	27	0	52	74	0.10	0.03	0.00
10	80	-77	70	6	0	12	71	0.07	0.03	0.00
11	80	-77	69	17	0	33	73	0.08	0.03	0.00
12	80	-77	70	2	0	5	71	0.06	0.03	0.00
13	80	-77	69	13	0	25	73	0.08	0.03	0.00
14	80	-77	71	-8	0	-15	70	0.07	0.03	0.00
15	80	-77	68	28	0	54	74	0.10	0.03	0.00
16	80	-77	71	-9	0	-17	70	0.07	0.03	0.00
17	80	-77	68	27	0	52	74	0.10	0.03	0.00
1	107	-381	222	55	0	92	497	0.48	0.08	0.00
2	107	-66	39	6	0	10	86	0.08	0.01	0.00
3	107	-66	38	17	0	28	87	0.09	0.02	0.00
4	107	-66	39	2	0	4	86	0.07	0.01	0.00
5	107	-66	38	13	0	22	87	0.09	0.01	0.00
6	107	-66	40	-8	0	-13	84	0.08	0.01	0.00
7	107	-66	37	28	0	47	88	0.11	0.02	0.00
8	107	-66	40	-9	0	-14	84	0.08	0.01	0.00
9	107	-66	37	27	0	45	88	0.11	0.02	0.00
10	107	-66	39	6	0	10	86	0.08	0.01	0.00
11	107	-66	38	17	0	28	87	0.09	0.02	0.00
12	107	-66	39	2	0	4	86	0.07	0.01	0.00
13	107	-66	38	13	0	22	87	0.09	0.01	0.00
14	107	-66	40	-8	0	-13	84	0.08	0.01	0.00
15	107	-66	37	28	0	47	88	0.11	0.02	0.00
16	107	-66	40	-9	0	-14	84	0.08	0.01	0.00
17	107	-66	37	27	0	45	88	0.11	0.02	0.00
1	134	-318	45	55	0	77	533	0.50	0.03	0.00
2	134	-55	8	6	0	9	92	0.08	0.00	0.00
3	134	-55	7	17	0	24	93	0.09	0.01	0.00
4	134	-55	8	2	0	3	92	0.08	0.00	0.00
5	134	-55	7	13	0	18	93	0.09	0.01	0.00
6	134	-55	9	-8	0	-10	91	0.08	0.00	0.00
7	134	-55	6	28	0	39	94	0.11	0.01	0.00
8	134	-55	9	-9	0	-12	91	0.08	0.00	0.00
9	134	-55	6	27	0	37	94	0.11	0.01	0.00
10	134	-55	8	6	0	9	92	0.08	0.00	0.00
11	134	-55	7	17	0	24	93	0.09	0.01	0.00
12	134	-55	8	2	0	3	92	0.08	0.00	0.00
13	134	-55	7	13	0	18	93	0.09	0.01	0.00
14	134	-55	9	-8	0	-10	91	0.08	0.00	0.00
15	134	-55	6	28	0	39	94	0.11	0.01	0.00
16	134	-55	9	-9	0	-12	91	0.08	0.00	0.00
17	134	-55	6	27	0	37	94	0.11	0.01	0.00
1	160	-254	-133	55	0	62	521	0.48	0.05	0.00
2	160	-44	-23	6	0	7	90	0.08	0.01	0.00
3	160	-44	-23	17	0	19	91	0.09	0.01	0.00
4	160	-44	-23	2	0	3	90	0.08	0.01	0.00
5	160	-44	-23	13	0	15	91	0.09	0.01	0.00
6	160	-44	-22	-8	0	-8	89	0.08	0.01	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

7	160	-44	-24	28	0	32	92	0.10	0.01	0.00
8	160	-44	-22	-9	0	-10	89	0.08	0.01	0.00
9	160	-44	-24	27	0	30	92	0.10	0.01	0.00
10	160	-44	-23	6	0	7	90	0.08	0.01	0.00
11	160	-44	-23	17	0	19	91	0.09	0.01	0.00
12	160	-44	-23	2	0	3	90	0.08	0.01	0.00
13	160	-44	-23	13	0	15	91	0.09	0.01	0.00
14	160	-44	-22	-8	0	-8	89	0.08	0.01	0.00
15	160	-44	-24	28	0	32	92	0.10	0.01	0.00
16	160	-44	-22	-9	0	-10	89	0.08	0.01	0.00
17	160	-44	-24	27	0	30	92	0.10	0.01	0.00

1	187	-191	-310	55	0	48	462	0.42	0.11	0.00
2	187	-33	-54	6	0	5	80	0.07	0.02	0.00
3	187	-33	-54	17	0	15	81	0.08	0.02	0.00
4	187	-33	-54	2	0	2	80	0.07	0.02	0.00
5	187	-33	-54	13	0	11	81	0.08	0.02	0.00
6	187	-33	-53	-8	0	-6	79	0.07	0.02	0.00
7	187	-33	-55	28	0	24	81	0.09	0.02	0.00
8	187	-33	-53	-9	0	-7	79	0.07	0.02	0.00
9	187	-33	-55	27	0	23	81	0.08	0.02	0.00
10	187	-33	-54	6	0	5	80	0.07	0.02	0.00
11	187	-33	-54	17	0	15	81	0.08	0.02	0.00
12	187	-33	-54	2	0	2	80	0.07	0.02	0.00
13	187	-33	-54	13	0	11	81	0.08	0.02	0.00
14	187	-33	-53	-8	0	-6	79	0.07	0.02	0.00
15	187	-33	-55	28	0	24	81	0.09	0.02	0.00
16	187	-33	-53	-9	0	-7	79	0.07	0.02	0.00
17	187	-33	-55	27	0	23	81	0.08	0.02	0.00

1	214	-127	-488	55	0	33	355	0.32	0.18	0.00
2	214	-22	-84	6	0	4	62	0.05	0.03	0.00
3	214	-22	-85	17	0	10	62	0.06	0.03	0.00
4	214	-22	-84	2	0	2	62	0.05	0.03	0.00
5	214	-22	-85	13	0	8	62	0.06	0.03	0.00
6	214	-22	-84	-8	0	-4	61	0.05	0.03	0.00
7	214	-22	-86	28	0	16	62	0.06	0.03	0.00
8	214	-22	-84	-9	0	-5	61	0.05	0.03	0.00
9	214	-22	-86	27	0	16	62	0.06	0.03	0.00
10	214	-22	-84	6	0	4	62	0.05	0.03	0.00
11	214	-22	-85	17	0	10	62	0.06	0.03	0.00
12	214	-22	-84	2	0	2	62	0.05	0.03	0.00
13	214	-22	-85	13	0	8	62	0.06	0.03	0.00
14	214	-22	-84	-8	0	-4	61	0.05	0.03	0.00
15	214	-22	-86	28	0	16	62	0.06	0.03	0.00
16	214	-22	-84	-9	0	-5	61	0.05	0.03	0.00
17	214	-22	-86	27	0	16	62	0.06	0.03	0.00

1	240	-64	-665	55	0	18	201	0.18	0.24	0.00
2	240	-11	-115	6	0	2	35	0.03	0.04	0.00
3	240	-11	-116	17	0	5	35	0.03	0.04	0.00
4	240	-11	-115	2	0	1	35	0.03	0.04	0.00
5	240	-11	-116	13	0	4	35	0.03	0.04	0.00
6	240	-11	-114	-8	0	-2	35	0.03	0.04	0.00
7	240	-11	-117	28	0	9	35	0.04	0.04	0.00
8	240	-11	-114	-9	0	-2	35	0.03	0.04	0.00
9	240	-11	-117	27	0	9	35	0.04	0.04	0.00
10	240	-11	-115	6	0	2	35	0.03	0.04	0.00
11	240	-11	-116	17	0	5	35	0.03	0.04	0.00
12	240	-11	-115	2	0	1	35	0.03	0.04	0.00
13	240	-11	-116	13	0	4	35	0.03	0.04	0.00
14	240	-11	-114	-8	0	-2	35	0.03	0.04	0.00
15	240	-11	-117	28	0	9	35	0.04	0.04	0.00
16	240	-11	-114	-9	0	-2	35	0.03	0.04	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

17	240	-11	-117	27	0	9	35	0.04	0.04	0.00
1	267	-0	-843	55	0	3	-0	0.00	0.31	0.00
2	267	0	-146	6	0	0	-0	0.00	0.05	0.00
3	267	0	-147	17	0	1	-0	0.00	0.05	0.00
4	267	0	-146	2	0	1	-0	0.00	0.05	0.00
5	267	0	-147	13	0	1	-0	0.00	0.05	0.00
6	267	0	-145	-8	0	0	-0	0.00	0.05	0.00
7	267	0	-148	28	0	1	-0	0.00	0.05	0.00
8	267	0	-145	-9	0	0	-0	0.00	0.05	0.00
9	267	0	-148	27	0	1	-0	0.00	0.05	0.00
10	267	0	-146	6	0	0	-0	0.00	0.05	0.00
11	267	0	-147	17	0	1	-0	0.00	0.05	0.00
12	267	0	-146	2	0	1	-0	0.00	0.05	0.00
13	267	0	-147	13	0	1	-0	0.00	0.05	0.00
14	267	0	-145	-8	0	0	-0	0.00	0.05	0.00
15	267	0	-148	28	0	1	-0	0.00	0.05	0.00
16	267	0	-145	-9	0	0	-0	0.00	0.05	0.00
17	267	0	-148	27	0	1	-0	0.00	0.05	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
1	-635	150	533	52	62	0.781	0.655	0.58	Piano 'zx'
2	-110	17	92	52	62	0.781	0.655	0.09	Piano 'zx'
3	-110	46	93	52	62	0.781	0.655	0.12	Piano 'zx'
4	-110	6	92	52	62	0.781	0.655	0.09	Piano 'zx'
5	-110	36	93	52	62	0.781	0.655	0.11	Piano 'zx'
6	-110	21	91	52	62	0.781	0.655	0.10	Piano 'zx'
7	-110	77	94	52	62	0.781	0.655	0.14	Piano 'zx'
8	-110	24	91	52	62	0.781	0.655	0.10	Piano 'zx'
9	-110	74	94	52	62	0.781	0.655	0.14	Piano 'zx'
10	-110	17	92	52	62	0.781	0.655	0.09	Piano 'zx'
11	-110	46	93	52	62	0.781	0.655	0.12	Piano 'zx'
12	-110	6	92	52	62	0.781	0.655	0.09	Piano 'zx'
13	-110	36	93	52	62	0.781	0.655	0.11	Piano 'zx'
14	-110	21	91	52	62	0.781	0.655	0.10	Piano 'zx'
15	-110	77	94	52	62	0.781	0.655	0.14	Piano 'zx'
16	-110	24	91	52	62	0.781	0.655	0.10	Piano 'zx'
17	-110	74	94	52	62	0.781	0.655	0.14	Piano 'zx'

ASTA NUM. 21 NI 38 NF 30 Lungh. 60.0 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x -- cm	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
1	0	-0	0	0	0	0	0	0.00	0.00	0.00	
2	0	-9	-3	-31	0	0	0	0.00	0.01	0.00	
3	0	9	3	-31	0	0	0	0.00	0.01	0.00	
4	0	-9	-3	31	0	0	0	0.00	0.01	0.00	
5	0	9	3	31	0	0	0	0.00	0.01	0.00	
6	0	-29	-10	-9	0	0	0	0.00	0.01	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

7	0	29	10	-9	0	0	0	0.00	0.01	0.00
8	0	-29	-10	9	0	0	0	0.00	0.01	0.00
9	0	29	10	9	0	0	0	0.00	0.01	0.00
10	0	-9	-3	-31	0	0	0	0.00	0.01	0.00
11	0	9	3	-31	0	0	0	0.00	0.01	0.00
12	0	-9	-3	31	0	0	0	0.00	0.01	0.00
13	0	9	3	31	0	0	0	0.00	0.01	0.00
14	0	-29	-10	-9	0	0	0	0.00	0.01	0.00
15	0	29	10	-9	0	0	0	0.00	0.01	0.00
16	0	-29	-10	9	0	0	0	0.00	0.01	0.00
17	0	29	10	9	0	0	0	0.00	0.01	0.00

1	6	28	-79	0	0	0	-2	0.00	0.03	0.00
2	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00
3	6	13	-10	-31	0	2	-0	0.00	0.01	0.00
4	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00
5	6	13	-10	31	0	-2	-0	0.00	0.01	0.00
6	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00
7	6	34	-3	-9	0	1	0	0.00	0.00	0.00
8	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00
9	6	34	-3	9	0	-1	0	0.00	0.00	0.00
10	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00
11	6	13	-10	-31	0	2	-0	0.00	0.01	0.00
12	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00
13	6	13	-10	31	0	-2	-0	0.00	0.01	0.00
14	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00
15	6	34	-3	-9	0	1	0	0.00	0.00	0.00
16	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00
17	6	34	-3	9	0	-1	0	0.00	0.00	0.00

1	12	56	-157	0	0	0	-9	0.01	0.06	0.00
2	12	1	-29	-31	0	4	-2	0.00	0.02	0.00
3	12	18	-23	-31	0	4	-1	0.01	0.01	0.00
4	12	1	-29	31	0	-4	-2	0.00	0.02	0.00
5	12	18	-23	31	0	-4	-1	0.01	0.01	0.00
6	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00
7	12	39	-16	-9	0	1	-0	0.00	0.01	0.00
8	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00
9	12	39	-16	9	0	-1	-0	0.00	0.01	0.00
10	12	1	-29	-31	0	4	-2	0.00	0.02	0.00
11	12	18	-23	-31	0	4	-1	0.01	0.01	0.00
12	12	1	-29	31	0	-4	-2	0.00	0.02	0.00
13	12	18	-23	31	0	-4	-1	0.01	0.01	0.00
14	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00
15	12	39	-16	-9	0	1	-0	0.00	0.01	0.00
16	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00
17	12	39	-16	9	0	-1	-0	0.00	0.01	0.00

1	18	85	-236	0	0	0	-21	0.02	0.09	0.00
2	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
3	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
4	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
5	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
6	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
7	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
8	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
9	18	43	-29	9	0	-2	-2	0.00	0.01	0.00
10	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
11	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
12	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
13	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
14	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
15	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
16	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

17	18	43	-29	9	0	-2	-2	0.00	0.01	0.00
1	24	113	-315	0	0	0	-38	0.04	0.11	0.00
2	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
3	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
4	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
5	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
6	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
7	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
8	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
9	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
10	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
11	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
12	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
13	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
14	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
15	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
16	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
17	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
1	30	141	-394	0	0	0	-59	0.06	0.14	0.00
2	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
3	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
4	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
5	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
6	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
7	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
8	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
9	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
10	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
11	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
12	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
13	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
14	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
15	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
16	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
17	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
1	36	169	-473	0	0	0	-85	0.08	0.17	0.00
2	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
3	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
4	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
5	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
6	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
7	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
8	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
9	36	57	-68	9	0	-3	-10	0.01	0.02	0.00
10	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
11	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
12	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
13	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
14	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
15	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
16	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
17	36	57	-68	9	0	-3	-10	0.01	0.02	0.00
1	42	197	-551	0	0	0	-116	0.11	0.20	0.00
2	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
3	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
4	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
5	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
6	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
7	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
8	42	4	-102	9	0	-4	-24	0.02	0.04	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

9	42	62	-81	9	0	-4	-15	0.02	0.03	0.00
10	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
11	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
12	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
13	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
14	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
15	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
16	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
17	42	62	-81	9	0	-4	-15	0.02	0.03	0.00
1	48	225	-630	0	0	0	-151	0.14	0.23	0.00
2	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
3	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
4	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
5	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
6	48	8	-115	-9	0	4	-30	0.03	0.04	0.00
7	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
8	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
9	48	67	-94	9	0	-4	-20	0.02	0.03	0.00
10	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
11	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
12	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
13	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
14	48	8	-115	-9	0	4	-30	0.03	0.04	0.00
15	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
16	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
17	48	67	-94	9	0	-4	-20	0.02	0.03	0.00
1	54	254	-709	0	0	-0	-191	0.17	0.26	0.00
2	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
3	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
4	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
5	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
6	54	13	-128	-9	0	5	-37	0.04	0.05	0.00
7	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
8	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
9	54	71	-107	9	0	-5	-26	0.03	0.04	0.00
10	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
11	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
12	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
13	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
14	54	13	-128	-9	0	5	-37	0.04	0.05	0.00
15	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
16	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
17	54	71	-107	9	0	-5	-26	0.03	0.04	0.00
1	60	282	-788	0	0	-0	-236	0.21	0.29	0.00
2	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
3	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
4	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
5	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
6	60	18	-141	-9	0	6	-46	0.04	0.05	0.00
7	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
8	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
9	60	76	-121	9	0	-6	-33	0.03	0.04	0.00
10	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
11	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
12	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
13	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
14	60	18	-141	-9	0	6	-46	0.04	0.05	0.00
15	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
16	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
17	60	76	-121	9	0	-6	-33	0.03	0.04	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
--	--	-----							
	kg	kg*m							
1	-0	0	236	12	14	1.000	1.000	0.14	Piano 'zx'
2	-9	19	41	12	14	1.000	1.000	0.14	Piano 'zx'
4	-9	19	41	12	14	1.000	1.000	0.14	Piano 'zx'
6	-29	6	46	12	14	1.000	1.000	0.14	Piano 'zx'
8	-29	6	46	12	14	1.000	1.000	0.14	Piano 'zx'
10	-9	19	41	12	14	1.000	1.000	0.14	Piano 'zx'
12	-9	19	41	12	14	1.000	1.000	0.14	Piano 'zx'
14	-29	6	46	12	14	1.000	1.000	0.14	Piano 'zx'
16	-29	6	46	12	14	1.000	1.000	0.14	Piano 'zx'

ASTA NUM. 22 NI 30 NF 4 Lungh. 267.1 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
--	--	-----			-----			-----			
	cm	kg			kg*m						
1	0	-1255	1826	2	0	10	-194	0.17	0.66	0.00	
2	0	-209	304	0	0	1	-33	0.03	0.11	0.00	
3	0	-209	303	1	0	3	-29	0.03	0.11	0.00	
4	0	-209	304	0	0	1	-33	0.03	0.11	0.00	
5	0	-209	303	0	0	2	-29	0.03	0.11	0.00	
6	0	-209	305	-0	0	-0	-36	0.03	0.11	0.00	
7	0	-209	301	1	0	4	-26	0.02	0.11	0.00	
8	0	-209	305	-0	0	-0	-36	0.03	0.11	0.00	
9	0	-209	301	1	0	3	-26	0.02	0.11	0.00	
10	0	-209	304	0	0	1	-33	0.03	0.11	0.00	
11	0	-209	303	1	0	3	-29	0.03	0.11	0.00	
12	0	-209	304	0	0	1	-33	0.03	0.11	0.00	
13	0	-209	303	0	0	2	-29	0.03	0.11	0.00	
14	0	-209	305	-0	0	-0	-36	0.03	0.11	0.00	
15	0	-209	301	1	0	4	-26	0.02	0.11	0.00	
16	0	-209	305	-0	0	-0	-36	0.03	0.11	0.00	
17	0	-209	301	1	0	3	-26	0.02	0.11	0.00	
1	27	-1130	1475	2	0	9	247	0.22	0.54	0.00	
2	27	-188	245	0	0	1	41	0.04	0.09	0.00	
3	27	-188	244	1	0	2	44	0.04	0.09	0.00	
4	27	-188	245	0	0	1	41	0.03	0.09	0.00	
5	27	-188	244	0	0	2	44	0.04	0.09	0.00	
6	27	-188	247	-0	0	-0	38	0.03	0.09	0.00	
7	27	-188	243	1	0	3	47	0.04	0.09	0.00	
8	27	-188	247	-0	0	-0	38	0.03	0.09	0.00	
9	27	-188	243	1	0	3	47	0.04	0.09	0.00	
10	27	-188	245	0	0	1	41	0.04	0.09	0.00	
11	27	-188	244	1	0	2	44	0.04	0.09	0.00	
12	27	-188	245	0	0	1	41	0.03	0.09	0.00	
13	27	-188	244	0	0	2	44	0.04	0.09	0.00	
14	27	-188	247	-0	0	-0	38	0.03	0.09	0.00	
15	27	-188	243	1	0	3	47	0.04	0.09	0.00	
16	27	-188	247	-0	0	-0	38	0.03	0.09	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

17	27	-188	243	1	0	3	47	0.04	0.09	0.00
1	53	-1004	1125	2	0	9	594	0.51	0.41	0.00
2	53	-167	187	0	0	1	99	0.08	0.07	0.00
3	53	-167	186	1	0	2	101	0.09	0.07	0.00
4	53	-167	187	0	0	1	99	0.08	0.07	0.00
5	53	-167	186	0	0	2	101	0.09	0.07	0.00
6	53	-167	188	-0	0	-0	96	0.08	0.07	0.00
7	53	-167	185	1	0	3	104	0.09	0.07	0.00
8	53	-167	188	-0	0	-0	96	0.08	0.07	0.00
9	53	-167	185	1	0	3	104	0.09	0.07	0.00
10	53	-167	187	0	0	1	99	0.08	0.07	0.00
11	53	-167	186	1	0	2	101	0.09	0.07	0.00
12	53	-167	187	0	0	1	99	0.08	0.07	0.00
13	53	-167	186	0	0	2	101	0.09	0.07	0.00
14	53	-167	188	-0	0	-0	96	0.08	0.07	0.00
15	53	-167	185	1	0	3	104	0.09	0.07	0.00
16	53	-167	188	-0	0	-0	96	0.08	0.07	0.00
17	53	-167	185	1	0	3	104	0.09	0.07	0.00
1	80	-879	774	2	0	8	848	0.72	0.28	0.00
2	80	-146	129	0	0	1	141	0.12	0.05	0.00
3	80	-146	128	1	0	2	143	0.12	0.05	0.00
4	80	-146	129	0	0	1	141	0.12	0.05	0.00
5	80	-146	128	0	0	2	143	0.12	0.05	0.00
6	80	-146	130	-0	0	-0	138	0.12	0.05	0.00
7	80	-146	126	1	0	3	145	0.12	0.05	0.00
8	80	-146	130	-0	0	-0	138	0.12	0.05	0.00
9	80	-146	126	1	0	3	145	0.12	0.05	0.00
10	80	-146	129	0	0	1	141	0.12	0.05	0.00
11	80	-146	128	1	0	2	143	0.12	0.05	0.00
12	80	-146	129	0	0	1	141	0.12	0.05	0.00
13	80	-146	128	0	0	2	143	0.12	0.05	0.00
14	80	-146	130	-0	0	-0	138	0.12	0.05	0.00
15	80	-146	126	1	0	3	145	0.12	0.05	0.00
16	80	-146	130	-0	0	-0	138	0.12	0.05	0.00
17	80	-146	126	1	0	3	145	0.12	0.05	0.00
1	107	-753	424	2	0	8	1007	0.85	0.15	0.00
2	107	-125	70	0	0	1	167	0.14	0.03	0.00
3	107	-125	69	1	0	2	169	0.14	0.03	0.00
4	107	-125	70	0	0	1	167	0.14	0.03	0.00
5	107	-125	69	0	0	2	169	0.14	0.03	0.00
6	107	-125	72	-0	0	-0	165	0.14	0.03	0.00
7	107	-125	68	1	0	3	171	0.15	0.02	0.00
8	107	-125	72	-0	0	-0	165	0.14	0.03	0.00
9	107	-125	68	1	0	3	171	0.15	0.02	0.00
10	107	-125	70	0	0	1	167	0.14	0.03	0.00
11	107	-125	69	1	0	2	169	0.14	0.03	0.00
12	107	-125	70	0	0	1	167	0.14	0.03	0.00
13	107	-125	69	0	0	2	169	0.14	0.03	0.00
14	107	-125	72	-0	0	-0	165	0.14	0.03	0.00
15	107	-125	68	1	0	3	171	0.15	0.02	0.00
16	107	-125	72	-0	0	-0	165	0.14	0.03	0.00
17	107	-125	68	1	0	3	171	0.15	0.02	0.00
1	134	-628	73	2	0	7	1074	0.91	0.03	0.00
2	134	-104	12	0	0	1	178	0.15	0.00	0.00
3	134	-104	11	1	0	2	180	0.15	0.00	0.00
4	134	-104	12	0	0	1	178	0.15	0.00	0.00
5	134	-104	11	0	0	1	180	0.15	0.00	0.00
6	134	-104	14	-0	0	-0	177	0.15	0.00	0.00
7	134	-104	10	1	0	3	182	0.15	0.00	0.00
8	134	-104	14	-0	0	-0	177	0.15	0.00	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

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PROGETTO DEFINITIVO

Relazione di calcolo strutturale

9	134	-104	10	1	0	3	182	0.15	0.00	0.00
10	134	-104	12	0	0	1	178	0.15	0.00	0.00
11	134	-104	11	1	0	2	180	0.15	0.00	0.00
12	134	-104	12	0	0	1	178	0.15	0.00	0.00
13	134	-104	11	0	0	1	180	0.15	0.00	0.00
14	134	-104	14	-0	0	-0	177	0.15	0.00	0.00
15	134	-104	10	1	0	3	182	0.15	0.00	0.00
16	134	-104	14	-0	0	-0	177	0.15	0.00	0.00
17	134	-104	10	1	0	3	182	0.15	0.00	0.00
1	160	-502	-278	2	0	7	1046	0.88	0.10	0.00
2	160	-83	-46	0	0	1	174	0.15	0.02	0.00
3	160	-83	-47	1	0	2	175	0.15	0.02	0.00
4	160	-83	-46	0	0	1	174	0.15	0.02	0.00
5	160	-83	-47	0	0	1	175	0.15	0.02	0.00
6	160	-83	-45	-0	0	-0	172	0.15	0.02	0.00
7	160	-83	-49	1	0	3	176	0.15	0.02	0.00
8	160	-83	-45	-0	0	-0	172	0.15	0.02	0.00
9	160	-83	-49	1	0	2	176	0.15	0.02	0.00
10	160	-83	-46	0	0	1	174	0.15	0.02	0.00
11	160	-83	-47	1	0	2	175	0.15	0.02	0.00
12	160	-83	-46	0	0	1	174	0.15	0.02	0.00
13	160	-83	-47	0	0	1	175	0.15	0.02	0.00
14	160	-83	-45	-0	0	-0	172	0.15	0.02	0.00
15	160	-83	-49	1	0	3	176	0.15	0.02	0.00
16	160	-83	-45	-0	0	-0	172	0.15	0.02	0.00
17	160	-83	-49	1	0	2	176	0.15	0.02	0.00
1	187	-377	-628	2	0	6	925	0.78	0.23	0.00
2	187	-63	-104	0	0	1	154	0.13	0.04	0.00
3	187	-63	-106	1	0	2	155	0.13	0.04	0.00
4	187	-63	-104	0	0	1	154	0.13	0.04	0.00
5	187	-63	-106	0	0	1	155	0.13	0.04	0.00
6	187	-63	-103	-0	0	-0	153	0.13	0.04	0.00
7	187	-63	-107	1	0	2	156	0.13	0.04	0.00
8	187	-63	-103	-0	0	-0	153	0.13	0.04	0.00
9	187	-63	-107	1	0	2	156	0.13	0.04	0.00
10	187	-63	-104	0	0	1	154	0.13	0.04	0.00
11	187	-63	-106	1	0	2	155	0.13	0.04	0.00
12	187	-63	-104	0	0	1	154	0.13	0.04	0.00
13	187	-63	-106	0	0	1	155	0.13	0.04	0.00
14	187	-63	-103	-0	0	-0	153	0.13	0.04	0.00
15	187	-63	-107	1	0	2	156	0.13	0.04	0.00
16	187	-63	-103	-0	0	-0	153	0.13	0.04	0.00
17	187	-63	-107	1	0	2	156	0.13	0.04	0.00
1	214	-251	-979	2	0	6	710	0.60	0.36	0.00
2	214	-42	-163	0	0	1	118	0.10	0.06	0.00
3	214	-42	-164	1	0	1	119	0.10	0.06	0.00
4	214	-42	-163	0	0	1	118	0.10	0.06	0.00
5	214	-42	-164	0	0	1	119	0.10	0.06	0.00
6	214	-42	-161	-0	0	-0	117	0.10	0.06	0.00
7	214	-42	-165	1	0	2	119	0.10	0.06	0.00
8	214	-42	-161	-0	0	-0	117	0.10	0.06	0.00
9	214	-42	-165	1	0	2	119	0.10	0.06	0.00
10	214	-42	-163	0	0	1	118	0.10	0.06	0.00
11	214	-42	-164	1	0	1	119	0.10	0.06	0.00
12	214	-42	-163	0	0	1	118	0.10	0.06	0.00
13	214	-42	-164	0	0	1	119	0.10	0.06	0.00
14	214	-42	-161	-0	0	-0	117	0.10	0.06	0.00
15	214	-42	-165	1	0	2	119	0.10	0.06	0.00
16	214	-42	-161	-0	0	-0	117	0.10	0.06	0.00
17	214	-42	-165	1	0	2	119	0.10	0.06	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

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PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	240	-126	-1329	2	0	5	402	0.34	0.48	0.00
2	240	-21	-221	0	0	1	67	0.06	0.08	0.00
3	240	-21	-222	1	0	1	67	0.06	0.08	0.00
4	240	-21	-221	0	0	1	67	0.06	0.08	0.00
5	240	-21	-222	0	0	1	67	0.06	0.08	0.00
6	240	-21	-220	-0	0	-0	66	0.06	0.08	0.00
7	240	-21	-223	1	0	2	67	0.06	0.08	0.00
8	240	-21	-220	-0	0	-0	66	0.06	0.08	0.00
9	240	-21	-223	1	0	2	67	0.06	0.08	0.00
10	240	-21	-221	0	0	1	67	0.06	0.08	0.00
11	240	-21	-222	1	0	1	67	0.06	0.08	0.00
12	240	-21	-221	0	0	1	67	0.06	0.08	0.00
13	240	-21	-222	0	0	1	67	0.06	0.08	0.00
14	240	-21	-220	-0	0	-0	66	0.06	0.08	0.00
15	240	-21	-223	1	0	2	67	0.06	0.08	0.00
16	240	-21	-220	-0	0	-0	66	0.06	0.08	0.00
17	240	-21	-223	1	0	2	67	0.06	0.08	0.00

1	267	-0	-1680	2	0	5	-0	0.00	0.61	0.00
2	267	0	-279	0	0	1	-0	0.00	0.10	0.00
3	267	0	-280	1	0	1	-0	0.00	0.10	0.00
4	267	0	-279	0	0	1	-0	0.00	0.10	0.00
5	267	0	-280	0	0	1	-0	0.00	0.10	0.00
6	267	0	-278	-0	0	-0	-0	0.00	0.10	0.00
7	267	0	-282	1	0	2	-0	0.00	0.10	0.00
8	267	0	-278	-0	0	-0	-0	0.00	0.10	0.00
9	267	0	-282	1	0	2	-0	0.00	0.10	0.00
10	267	0	-279	0	0	1	-0	0.00	0.10	0.00
11	267	0	-280	1	0	1	-0	0.00	0.10	0.00
12	267	0	-279	0	0	1	-0	0.00	0.10	0.00
13	267	0	-280	0	0	1	-0	0.00	0.10	0.00
14	267	0	-278	-0	0	-0	-0	0.00	0.10	0.00
15	267	0	-282	1	0	2	-0	0.00	0.10	0.00
16	267	0	-278	-0	0	-0	-0	0.00	0.10	0.00
17	267	0	-282	1	0	2	-0	0.00	0.10	0.00

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
	kg	kg*m							
1	-1255	10	1074	52	62	0.781	0.655	0.97	Piano 'zx'
2	-209	1	178	52	62	0.781	0.655	0.16	Piano 'zx'
3	-209	3	180	52	62	0.781	0.655	0.16	Piano 'zx'
4	-209	1	178	52	62	0.781	0.655	0.16	Piano 'zx'
5	-209	2	180	52	62	0.781	0.655	0.16	Piano 'zx'
6	-209	0	177	52	62	0.781	0.655	0.16	Piano 'zx'
7	-209	4	182	52	62	0.781	0.655	0.16	Piano 'zx'
8	-209	0	177	52	62	0.781	0.655	0.16	Piano 'zx'
9	-209	3	182	52	62	0.781	0.655	0.16	Piano 'zx'
10	-209	1	178	52	62	0.781	0.655	0.16	Piano 'zx'
11	-209	3	180	52	62	0.781	0.655	0.16	Piano 'zx'
12	-209	1	178	52	62	0.781	0.655	0.16	Piano 'zx'
13	-209	2	180	52	62	0.781	0.655	0.16	Piano 'zx'
14	-209	0	177	52	62	0.781	0.655	0.16	Piano 'zx'
15	-209	4	182	52	62	0.781	0.655	0.16	Piano 'zx'
16	-209	0	177	52	62	0.781	0.655	0.16	Piano 'zx'
17	-209	3	182	52	62	0.781	0.655	0.16	Piano 'zx'

ASTA NUM. 23 NI 39 NF 31 Lungh. 60.0 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	cm	kg			kg*m						
1	0	-0	0	0	0	0	0	0.00	0.00	0.00	
2	0	-9	-3	-31	0	0	0	0.00	0.01	0.00	
3	0	9	3	-31	0	0	0	0.00	0.01	0.00	
4	0	-9	-3	31	0	0	0	0.00	0.01	0.00	
5	0	9	3	31	0	0	0	0.00	0.01	0.00	
6	0	-29	-10	-9	0	0	0	0.00	0.01	0.00	
7	0	29	10	-9	0	0	0	0.00	0.01	0.00	
8	0	-29	-10	9	0	0	0	0.00	0.01	0.00	
9	0	29	10	9	0	0	0	0.00	0.01	0.00	
10	0	-9	-3	-31	0	0	0	0.00	0.01	0.00	
11	0	9	3	-31	0	0	0	0.00	0.01	0.00	
12	0	-9	-3	31	0	0	0	0.00	0.01	0.00	
13	0	9	3	31	0	0	0	0.00	0.01	0.00	
14	0	-29	-10	-9	0	0	0	0.00	0.01	0.00	
15	0	29	10	-9	0	0	0	0.00	0.01	0.00	
16	0	-29	-10	9	0	0	0	0.00	0.01	0.00	
17	0	29	10	9	0	0	0	0.00	0.01	0.00	
1	6	28	-79	0	0	0	-2	0.00	0.03	0.00	
2	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00	
3	6	13	-10	-31	0	2	-0	0.00	0.01	0.00	
4	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00	
5	6	13	-10	31	0	-2	-0	0.00	0.01	0.00	
6	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00	
7	6	34	-3	-9	0	1	0	0.00	0.00	0.00	
8	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00	
9	6	34	-3	9	0	-1	0	0.00	0.00	0.00	
10	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00	
11	6	13	-10	-31	0	2	-0	0.00	0.01	0.00	
12	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00	
13	6	13	-10	31	0	-2	-0	0.00	0.01	0.00	
14	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00	
15	6	34	-3	-9	0	1	0	0.00	0.00	0.00	
16	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00	
17	6	34	-3	9	0	-1	0	0.00	0.00	0.00	
1	12	56	-157	0	0	0	-9	0.01	0.06	0.00	
2	12	1	-29	-31	0	4	-2	0.00	0.02	0.00	
3	12	18	-23	-31	0	4	-1	0.01	0.01	0.00	
4	12	1	-29	31	0	-4	-2	0.00	0.02	0.00	
5	12	18	-23	31	0	-4	-1	0.01	0.01	0.00	
6	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00	
7	12	39	-16	-9	0	1	-0	0.00	0.01	0.00	
8	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00	
9	12	39	-16	9	0	-1	-0	0.00	0.01	0.00	
10	12	1	-29	-31	0	4	-2	0.00	0.02	0.00	
11	12	18	-23	-31	0	4	-1	0.01	0.01	0.00	
12	12	1	-29	31	0	-4	-2	0.00	0.02	0.00	
13	12	18	-23	31	0	-4	-1	0.01	0.01	0.00	
14	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00	
15	12	39	-16	-9	0	1	-0	0.00	0.01	0.00	
16	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00	
17	12	39	-16	9	0	-1	-0	0.00	0.01	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	18	85	-236	0	0	0	-21	0.02	0.09	0.00
2	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
3	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
4	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
5	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
6	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
7	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
8	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
9	18	43	-29	9	0	-2	-2	0.00	0.01	0.00
10	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
11	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
12	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
13	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
14	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
15	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
16	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
17	18	43	-29	9	0	-2	-2	0.00	0.01	0.00

1	24	113	-315	0	0	0	-38	0.04	0.11	0.00
2	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
3	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
4	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
5	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
6	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
7	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
8	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
9	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
10	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
11	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
12	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
13	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
14	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
15	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
16	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
17	24	48	-42	9	0	-2	-4	0.01	0.02	0.00

1	30	141	-394	0	0	0	-59	0.06	0.14	0.00
2	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
3	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
4	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
5	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
6	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
7	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
8	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
9	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
10	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
11	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
12	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
13	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
14	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
15	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
16	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
17	30	53	-55	9	0	-3	-7	0.01	0.02	0.00

1	36	169	-473	0	0	-0	-85	0.08	0.17	0.00
2	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
3	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
4	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
5	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
6	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
7	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
8	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
9	36	57	-68	9	0	-3	-10	0.01	0.02	0.00
10	36	19	-82	-31	0	11	-15	0.02	0.03	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

11	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
12	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
13	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
14	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
15	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
16	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
17	36	57	-68	9	0	-3	-10	0.01	0.02	0.00

1	42	197	-551	0	0	-0	-116	0.11	0.20	0.00
2	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
3	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
4	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
5	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
6	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
7	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
8	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
9	42	62	-81	9	0	-4	-15	0.02	0.03	0.00
10	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
11	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
12	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
13	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
14	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
15	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
16	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
17	42	62	-81	9	0	-4	-15	0.02	0.03	0.00

1	48	225	-630	0	0	-0	-151	0.14	0.23	0.00
2	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
3	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
4	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
5	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
6	48	8	-115	-9	0	4	-30	0.03	0.04	0.00
7	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
8	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
9	48	67	-94	9	0	-4	-20	0.02	0.03	0.00
10	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
11	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
12	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
13	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
14	48	8	-115	-9	0	4	-30	0.03	0.04	0.00
15	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
16	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
17	48	67	-94	9	0	-4	-20	0.02	0.03	0.00

1	54	254	-709	0	0	-0	-191	0.17	0.26	0.00
2	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
3	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
4	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
5	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
6	54	13	-128	-9	0	5	-37	0.04	0.05	0.00
7	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
8	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
9	54	71	-107	9	0	-5	-26	0.03	0.04	0.00
10	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
11	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
12	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
13	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
14	54	13	-128	-9	0	5	-37	0.04	0.05	0.00
15	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
16	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
17	54	71	-107	9	0	-5	-26	0.03	0.04	0.00

1	60	282	-788	0	0	-0	-236	0.21	0.29	0.00
2	60	38	-134	-31	0	19	-41	0.05	0.05	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

3	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
4	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
5	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
6	60	18	-141	-9	0	6	-46	0.04	0.05	0.00
7	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
8	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
9	60	76	-121	9	0	-6	-33	0.03	0.04	0.00
10	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
11	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
12	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
13	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
14	60	18	-141	-9	0	6	-46	0.04	0.05	0.00
15	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
16	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
17	60	76	-121	9	0	-6	-33	0.03	0.04	0.00

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
	kg	kg*m							
1	-0	0	236	12	14	1.000	1.000	0.16	Piano 'zx'
2	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
4	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
6	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'
8	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'
10	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
12	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
14	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'
16	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'

ASTA NUM. 24 NI 31 NF 5 Lungh. 267.1 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	cm	kg			kg*m						
1	0	-1255	1844	-3	0	-5	-242	0.21	0.67	0.00	
2	0	-209	307	-0	0	-0	-42	0.04	0.11	0.00	
3	0	-209	306	-1	0	-1	-38	0.03	0.11	0.00	
4	0	-209	307	-1	0	-1	-42	0.04	0.11	0.00	
5	0	-209	306	-1	0	-1	-38	0.03	0.11	0.00	
6	0	-209	309	0	0	0	-47	0.04	0.11	0.00	
7	0	-209	304	-1	0	-2	-34	0.03	0.11	0.00	
8	0	-209	309	0	0	0	-47	0.04	0.11	0.00	
9	0	-209	304	-1	0	-2	-34	0.03	0.11	0.00	
10	0	-209	307	-0	0	-0	-42	0.04	0.11	0.00	
11	0	-209	306	-1	0	-1	-38	0.03	0.11	0.00	
12	0	-209	307	-1	0	-1	-42	0.04	0.11	0.00	
13	0	-209	306	-1	0	-1	-38	0.03	0.11	0.00	
14	0	-209	309	0	0	0	-47	0.04	0.11	0.00	
15	0	-209	304	-1	0	-2	-34	0.03	0.11	0.00	
16	0	-209	309	0	0	0	-47	0.04	0.11	0.00	
17	0	-209	304	-1	0	-2	-34	0.03	0.11	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	27	-1130	1493	-3	0	-4	204	0.18	0.54	0.00
2	27	-188	249	-0	0	-0	32	0.03	0.09	0.00
3	27	-188	248	-1	0	-1	35	0.03	0.09	0.00
4	27	-188	249	-1	0	-1	32	0.03	0.09	0.00
5	27	-188	248	-1	0	-1	35	0.03	0.09	0.00
6	27	-188	251	0	0	0	28	0.02	0.09	0.00
7	27	-188	246	-1	0	-1	39	0.03	0.09	0.00
8	27	-188	251	0	0	0	28	0.02	0.09	0.00
9	27	-188	246	-1	0	-2	39	0.03	0.09	0.00
10	27	-188	249	-0	0	-0	32	0.03	0.09	0.00
11	27	-188	248	-1	0	-1	35	0.03	0.09	0.00
12	27	-188	249	-1	0	-1	32	0.03	0.09	0.00
13	27	-188	248	-1	0	-1	35	0.03	0.09	0.00
14	27	-188	251	0	0	0	28	0.02	0.09	0.00
15	27	-188	246	-1	0	-1	39	0.03	0.09	0.00
16	27	-188	251	0	0	0	28	0.02	0.09	0.00
17	27	-188	246	-1	0	-2	39	0.03	0.09	0.00

1	53	-1004	1143	-3	0	-3	556	0.47	0.42	0.00
2	53	-167	191	-0	0	-0	91	0.08	0.07	0.00
3	53	-167	189	-1	0	-1	94	0.08	0.07	0.00
4	53	-167	191	-1	0	-1	91	0.08	0.07	0.00
5	53	-167	189	-1	0	-1	94	0.08	0.07	0.00
6	53	-167	192	0	0	0	87	0.07	0.07	0.00
7	53	-167	188	-1	0	-1	97	0.08	0.07	0.00
8	53	-167	192	0	0	0	87	0.07	0.07	0.00
9	53	-167	188	-1	0	-1	97	0.08	0.07	0.00
10	53	-167	191	-0	0	-0	91	0.08	0.07	0.00
11	53	-167	189	-1	0	-1	94	0.08	0.07	0.00
12	53	-167	191	-1	0	-1	91	0.08	0.07	0.00
13	53	-167	189	-1	0	-1	94	0.08	0.07	0.00
14	53	-167	192	0	0	0	87	0.07	0.07	0.00
15	53	-167	188	-1	0	-1	97	0.08	0.07	0.00
16	53	-167	192	0	0	0	87	0.07	0.07	0.00
17	53	-167	188	-1	0	-1	97	0.08	0.07	0.00

1	80	-879	792	-3	0	-2	814	0.69	0.29	0.00
2	80	-146	132	-0	0	-0	134	0.11	0.05	0.00
3	80	-146	131	-1	0	-0	137	0.12	0.05	0.00
4	80	-146	132	-1	0	-0	134	0.11	0.05	0.00
5	80	-146	131	-1	0	-1	137	0.12	0.05	0.00
6	80	-146	134	0	0	0	131	0.11	0.05	0.00
7	80	-146	129	-1	0	-1	140	0.12	0.05	0.00
8	80	-146	134	0	0	0	131	0.11	0.05	0.00
9	80	-146	129	-1	0	-1	140	0.12	0.05	0.00
10	80	-146	132	-0	0	-0	134	0.11	0.05	0.00
11	80	-146	131	-1	0	-0	137	0.12	0.05	0.00
12	80	-146	132	-1	0	-0	134	0.11	0.05	0.00
13	80	-146	131	-1	0	-1	137	0.12	0.05	0.00
14	80	-146	134	0	0	0	131	0.11	0.05	0.00
15	80	-146	129	-1	0	-1	140	0.12	0.05	0.00
16	80	-146	134	0	0	0	131	0.11	0.05	0.00
17	80	-146	129	-1	0	-1	140	0.12	0.05	0.00

1	107	-753	442	-3	0	-1	979	0.82	0.16	0.00
2	107	-125	74	-0	0	0	161	0.14	0.03	0.00
3	107	-125	73	-1	0	-0	164	0.14	0.03	0.00
4	107	-125	74	-1	0	-0	161	0.14	0.03	0.00
5	107	-125	73	-1	0	-0	164	0.14	0.03	0.00
6	107	-125	76	0	0	0	159	0.13	0.03	0.00
7	107	-125	71	-1	0	-0	166	0.14	0.03	0.00
8	107	-125	76	0	0	0	159	0.13	0.03	0.00
9	107	-125	71	-1	0	-0	166	0.14	0.03	0.00
10	107	-125	74	-0	0	0	161	0.14	0.03	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

11	107	-125	73	-1	0	-0	164	0.14	0.03	0.00
12	107	-125	74	-1	0	-0	161	0.14	0.03	0.00
13	107	-125	73	-1	0	-0	164	0.14	0.03	0.00
14	107	-125	76	0	0	0	159	0.13	0.03	0.00
15	107	-125	71	-1	0	-0	166	0.14	0.03	0.00
16	107	-125	76	0	0	0	159	0.13	0.03	0.00
17	107	-125	71	-1	0	-0	166	0.14	0.03	0.00

1	134	-628	91	-3	0	-0	1050	0.88	0.03	0.00
2	134	-104	16	-0	0	0	173	0.15	0.01	0.00
3	134	-104	14	-1	0	0	175	0.15	0.01	0.00
4	134	-104	16	-1	0	-0	173	0.15	0.01	0.00
5	134	-104	14	-1	0	-0	175	0.15	0.01	0.00
6	134	-104	18	0	0	0	171	0.14	0.01	0.00
7	134	-104	13	-1	0	-0	178	0.15	0.00	0.00
8	134	-104	18	0	0	-0	171	0.14	0.01	0.00
9	134	-104	13	-1	0	-0	178	0.15	0.00	0.00
10	134	-104	16	-0	0	0	173	0.15	0.01	0.00
11	134	-104	14	-1	0	0	175	0.15	0.01	0.00
12	134	-104	16	-1	0	-0	173	0.15	0.01	0.00
13	134	-104	14	-1	0	-0	175	0.15	0.01	0.00
14	134	-104	18	0	0	0	171	0.14	0.01	0.00
15	134	-104	13	-1	0	-0	178	0.15	0.00	0.00
16	134	-104	18	0	0	-0	171	0.14	0.01	0.00
17	134	-104	13	-1	0	-0	178	0.15	0.00	0.00

1	160	-502	-260	-3	0	1	1027	0.86	0.09	0.00
2	160	-83	-42	-0	0	0	170	0.14	0.02	0.00
3	160	-83	-44	-1	0	0	171	0.14	0.02	0.00
4	160	-83	-42	-1	0	0	170	0.14	0.02	0.00
5	160	-83	-44	-1	0	0	171	0.14	0.02	0.00
6	160	-83	-41	0	0	0	168	0.14	0.01	0.00
7	160	-83	-46	-1	0	0	173	0.15	0.02	0.00
8	160	-83	-41	0	0	-0	168	0.14	0.01	0.00
9	160	-83	-46	-1	0	0	173	0.15	0.02	0.00
10	160	-83	-42	-0	0	0	170	0.14	0.02	0.00
11	160	-83	-44	-1	0	0	171	0.14	0.02	0.00
12	160	-83	-42	-1	0	0	170	0.14	0.02	0.00
13	160	-83	-44	-1	0	0	171	0.14	0.02	0.00
14	160	-83	-41	0	0	0	168	0.14	0.01	0.00
15	160	-83	-46	-1	0	0	173	0.15	0.02	0.00
16	160	-83	-41	0	0	-0	168	0.14	0.01	0.00
17	160	-83	-46	-1	0	0	173	0.15	0.02	0.00

1	187	-377	-610	-3	0	2	911	0.77	0.22	0.00
2	187	-63	-101	-0	0	0	151	0.13	0.04	0.00
3	187	-63	-102	-1	0	0	152	0.13	0.04	0.00
4	187	-63	-101	-1	0	0	151	0.13	0.04	0.00
5	187	-63	-102	-1	0	0	152	0.13	0.04	0.00
6	187	-63	-99	0	0	0	149	0.13	0.04	0.00
7	187	-63	-104	-1	0	1	153	0.13	0.04	0.00
8	187	-63	-99	0	0	-0	149	0.13	0.04	0.00
9	187	-63	-104	-1	0	1	153	0.13	0.04	0.00
10	187	-63	-101	-0	0	0	151	0.13	0.04	0.00
11	187	-63	-102	-1	0	0	152	0.13	0.04	0.00
12	187	-63	-101	-1	0	0	151	0.13	0.04	0.00
13	187	-63	-102	-1	0	0	152	0.13	0.04	0.00
14	187	-63	-99	0	0	0	149	0.13	0.04	0.00
15	187	-63	-104	-1	0	1	153	0.13	0.04	0.00
16	187	-63	-99	0	0	-0	149	0.13	0.04	0.00
17	187	-63	-104	-1	0	1	153	0.13	0.04	0.00

1	214	-251	-961	-3	0	3	701	0.59	0.35	0.00
2	214	-42	-159	-0	0	0	116	0.10	0.06	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

3	214	-42	-160	-1	0	1	117	0.10	0.06	0.00
4	214	-42	-159	-1	0	0	116	0.10	0.06	0.00
5	214	-42	-160	-1	0	1	117	0.10	0.06	0.00
6	214	-42	-157	0	0	-0	115	0.10	0.06	0.00
7	214	-42	-162	-1	0	1	118	0.10	0.06	0.00
8	214	-42	-157	0	0	-0	115	0.10	0.06	0.00
9	214	-42	-162	-1	0	1	118	0.10	0.06	0.00
10	214	-42	-159	-0	0	0	116	0.10	0.06	0.00
11	214	-42	-160	-1	0	1	117	0.10	0.06	0.00
12	214	-42	-159	-1	0	0	116	0.10	0.06	0.00
13	214	-42	-160	-1	0	1	117	0.10	0.06	0.00
14	214	-42	-157	0	0	-0	115	0.10	0.06	0.00
15	214	-42	-162	-1	0	1	118	0.10	0.06	0.00
16	214	-42	-157	0	0	-0	115	0.10	0.06	0.00
17	214	-42	-162	-1	0	1	118	0.10	0.06	0.00
1	240	-126	-1311	-3	0	3	397	0.34	0.48	0.00
2	240	-21	-217	-0	0	0	66	0.06	0.08	0.00
3	240	-21	-219	-1	0	1	66	0.06	0.08	0.00
4	240	-21	-217	-1	0	0	66	0.06	0.08	0.00
5	240	-21	-219	-1	0	1	66	0.06	0.08	0.00
6	240	-21	-216	0	0	-0	65	0.06	0.08	0.00
7	240	-21	-220	-1	0	1	67	0.06	0.08	0.00
8	240	-21	-216	0	0	-0	65	0.06	0.08	0.00
9	240	-21	-220	-1	0	1	67	0.06	0.08	0.00
10	240	-21	-217	-0	0	0	66	0.06	0.08	0.00
11	240	-21	-219	-1	0	1	66	0.06	0.08	0.00
12	240	-21	-217	-1	0	0	66	0.06	0.08	0.00
13	240	-21	-219	-1	0	1	66	0.06	0.08	0.00
14	240	-21	-216	0	0	-0	65	0.06	0.08	0.00
15	240	-21	-220	-1	0	1	67	0.06	0.08	0.00
16	240	-21	-216	0	0	-0	65	0.06	0.08	0.00
17	240	-21	-220	-1	0	1	67	0.06	0.08	0.00
1	267	-0	-1662	-3	0	4	-0	0.00	0.60	0.00
2	267	0	-276	-0	0	1	-0	0.00	0.10	0.00
3	267	0	-277	-1	0	1	-0	0.00	0.10	0.00
4	267	0	-276	-1	0	1	-0	0.00	0.10	0.00
5	267	0	-277	-1	0	1	-0	0.00	0.10	0.00
6	267	0	-274	0	0	-0	-0	0.00	0.10	0.00
7	267	0	-279	-1	0	2	-0	0.00	0.10	0.00
8	267	0	-274	0	0	-0	-0	0.00	0.10	0.00
9	267	0	-279	-1	0	2	-0	0.00	0.10	0.00
10	267	0	-276	-0	0	1	-0	0.00	0.10	0.00
11	267	0	-277	-1	0	1	-0	0.00	0.10	0.00
12	267	0	-276	-1	0	1	-0	0.00	0.10	0.00
13	267	0	-277	-1	0	1	-0	0.00	0.10	0.00
14	267	0	-274	0	0	-0	-0	0.00	0.10	0.00
15	267	0	-279	-1	0	2	-0	0.00	0.10	0.00
16	267	0	-274	0	0	-0	-0	0.00	0.10	0.00
17	267	0	-279	-1	0	2	-0	0.00	0.10	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
1	-1255	5	1050	52	62	0.781	0.655	0.94	Piano 'zx'
2	-209	1	173	52	62	0.781	0.655	0.16	Piano 'zx'
3	-209	1	175	52	62	0.781	0.655	0.16	Piano 'zx'

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

4	-209	1	173	52	62	0.781	0.655	0.16	Piano 'zx'
5	-209	1	175	52	62	0.781	0.655	0.16	Piano 'zx'
6	-209	0	171	52	62	0.781	0.655	0.15	Piano 'zx'
7	-209	2	178	52	62	0.781	0.655	0.16	Piano 'zx'
8	-209	0	171	52	62	0.781	0.655	0.15	Piano 'zx'
9	-209	2	178	52	62	0.781	0.655	0.16	Piano 'zx'
10	-209	1	173	52	62	0.781	0.655	0.16	Piano 'zx'
11	-209	1	175	52	62	0.781	0.655	0.16	Piano 'zx'
12	-209	1	173	52	62	0.781	0.655	0.16	Piano 'zx'
13	-209	1	175	52	62	0.781	0.655	0.16	Piano 'zx'
14	-209	0	171	52	62	0.781	0.655	0.15	Piano 'zx'
15	-209	2	178	52	62	0.781	0.655	0.16	Piano 'zx'
16	-209	0	171	52	62	0.781	0.655	0.15	Piano 'zx'
17	-209	2	178	52	62	0.781	0.655	0.16	Piano 'zx'

ASTA NUM. 25 NI 40 NF 32 Lungh. 60.0 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	cm	kg			kg*m						
1	0	0	0	0	0	0	0	0.00	0.00	0.00	
2	0	-9	-3	-31	0	0	0	0.00	0.01	0.00	
3	0	9	3	-31	0	0	0	0.00	0.01	0.00	
4	0	-9	-3	31	0	0	0	0.00	0.01	0.00	
5	0	9	3	31	0	0	0	0.00	0.01	0.00	
6	0	-29	-10	-9	0	0	0	0.00	0.01	0.00	
7	0	29	10	-9	0	0	0	0.00	0.01	0.00	
8	0	-29	-10	9	0	0	0	0.00	0.01	0.00	
9	0	29	10	9	0	0	0	0.00	0.01	0.00	
10	0	-9	-3	-31	0	0	0	0.00	0.01	0.00	
11	0	9	3	-31	0	0	0	0.00	0.01	0.00	
12	0	-9	-3	31	0	0	0	0.00	0.01	0.00	
13	0	9	3	31	0	0	0	0.00	0.01	0.00	
14	0	-29	-10	-9	0	0	0	0.00	0.01	0.00	
15	0	29	10	-9	0	0	0	0.00	0.01	0.00	
16	0	-29	-10	9	0	0	0	0.00	0.01	0.00	
17	0	29	10	9	0	0	0	0.00	0.01	0.00	
1	6	28	-79	0	0	0	-2	0.00	0.03	0.00	
2	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00	
3	6	13	-10	-31	0	2	-0	0.00	0.01	0.00	
4	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00	
5	6	13	-10	31	0	-2	-0	0.00	0.01	0.00	
6	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00	
7	6	34	-3	-9	0	1	0	0.00	0.00	0.00	
8	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00	
9	6	34	-3	9	0	-1	0	0.00	0.00	0.00	
10	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00	
11	6	13	-10	-31	0	2	-0	0.00	0.01	0.00	
12	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00	
13	6	13	-10	31	0	-2	-0	0.00	0.01	0.00	
14	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00	
15	6	34	-3	-9	0	1	0	0.00	0.00	0.00	
16	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00	
17	6	34	-3	9	0	-1	0	0.00	0.00	0.00	
1	12	56	-157	0	0	0	-9	0.01	0.06	0.00	
2	12	1	-29	-31	0	4	-2	0.00	0.02	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

3	12	18	-23	-31	0	4	-1	0.01	0.01	0.00
4	12	1	-29	31	0	-4	-2	0.00	0.02	0.00
5	12	18	-23	31	0	-4	-1	0.01	0.01	0.00
6	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00
7	12	39	-16	-9	0	1	-0	0.00	0.01	0.00
8	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00
9	12	39	-16	9	0	-1	-0	0.00	0.01	0.00
10	12	1	-29	-31	0	4	-2	0.00	0.02	0.00
11	12	18	-23	-31	0	4	-1	0.01	0.01	0.00
12	12	1	-29	31	0	-4	-2	0.00	0.02	0.00
13	12	18	-23	31	0	-4	-1	0.01	0.01	0.00
14	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00
15	12	39	-16	-9	0	1	-0	0.00	0.01	0.00
16	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00
17	12	39	-16	9	0	-1	-0	0.00	0.01	0.00

1	18	85	-236	0	0	0	-21	0.02	0.09	0.00
2	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
3	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
4	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
5	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
6	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
7	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
8	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
9	18	43	-29	9	0	-2	-2	0.00	0.01	0.00
10	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
11	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
12	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
13	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
14	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
15	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
16	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
17	18	43	-29	9	0	-2	-2	0.00	0.01	0.00

1	24	113	-315	0	0	0	-38	0.04	0.11	0.00
2	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
3	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
4	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
5	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
6	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
7	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
8	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
9	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
10	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
11	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
12	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
13	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
14	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
15	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
16	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
17	24	48	-42	9	0	-2	-4	0.01	0.02	0.00

1	30	141	-394	0	0	0	-59	0.06	0.14	0.00
2	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
3	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
4	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
5	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
6	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
7	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
8	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
9	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
10	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
11	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
12	30	15	-69	31	0	-9	-11	0.02	0.03	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

13	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
14	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
15	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
16	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
17	30	53	-55	9	0	-3	-7	0.01	0.02	0.00

1	36	169	-473	0	0	-0	-85	0.08	0.17	0.00
2	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
3	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
4	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
5	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
6	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
7	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
8	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
9	36	57	-68	9	0	-3	-10	0.01	0.02	0.00
10	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
11	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
12	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
13	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
14	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
15	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
16	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
17	36	57	-68	9	0	-3	-10	0.01	0.02	0.00

1	42	197	-551	0	0	-0	-116	0.11	0.20	0.00
2	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
3	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
4	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
5	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
6	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
7	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
8	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
9	42	62	-81	9	0	-4	-15	0.02	0.03	0.00
10	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
11	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
12	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
13	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
14	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
15	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
16	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
17	42	62	-81	9	0	-4	-15	0.02	0.03	0.00

1	48	225	-630	0	0	-0	-151	0.14	0.23	0.00
2	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
3	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
4	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
5	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
6	48	8	-115	-9	0	4	-30	0.03	0.04	0.00
7	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
8	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
9	48	67	-94	9	0	-4	-20	0.02	0.03	0.00
10	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
11	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
12	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
13	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
14	48	8	-115	-9	0	4	-30	0.03	0.04	0.00
15	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
16	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
17	48	67	-94	9	0	-4	-20	0.02	0.03	0.00

1	54	254	-709	0	0	-0	-191	0.17	0.26	0.00
2	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
3	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
4	54	33	-121	31	0	-17	-34	0.04	0.05	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

5	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
6	54	13	-128	-9	0	5	-37	0.04	0.05	0.00
7	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
8	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
9	54	71	-107	9	0	-5	-26	0.03	0.04	0.00
10	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
11	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
12	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
13	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
14	54	13	-128	-9	0	5	-37	0.04	0.05	0.00
15	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
16	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
17	54	71	-107	9	0	-5	-26	0.03	0.04	0.00

1	60	282	-788	0	0	-0	-236	0.21	0.29	0.00
2	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
3	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
4	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
5	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
6	60	18	-141	-9	0	6	-46	0.04	0.05	0.00
7	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
8	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
9	60	76	-121	9	0	-6	-33	0.03	0.04	0.00
10	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
11	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
12	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
13	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
14	60	18	-141	-9	0	6	-46	0.04	0.05	0.00
15	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
16	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
17	60	76	-121	9	0	-6	-33	0.03	0.04	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
2	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
4	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
6	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'
8	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'
10	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
12	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
14	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'
16	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'

ASTA NUM. 26 NI 32 NF 6 Lungh. 267.1 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x -- cm	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
1	0	-1255	1848	-1	0	-1	-252	0.21	0.67	0.00	
2	0	-209	308	-0	0	0	-44	0.04	0.11	0.00	
3	0	-209	307	-0	0	0	-40	0.03	0.11	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

4	0	-209	308	-0	0	-1	-44	0.04	0.11	0.00
5	0	-209	307	-1	0	-1	-40	0.03	0.11	0.00
6	0	-209	310	0	0	0	-49	0.04	0.11	0.00
7	0	-209	305	-1	0	-0	-36	0.03	0.11	0.00
8	0	-209	310	-0	0	-0	-49	0.04	0.11	0.00
9	0	-209	305	-1	0	-0	-36	0.03	0.11	0.00
10	0	-209	308	-0	0	0	-44	0.04	0.11	0.00
11	0	-209	307	-0	0	0	-40	0.03	0.11	0.00
12	0	-209	308	-0	0	-1	-44	0.04	0.11	0.00
13	0	-209	307	-1	0	-1	-40	0.03	0.11	0.00
14	0	-209	310	0	0	0	-49	0.04	0.11	0.00
15	0	-209	305	-1	0	-0	-36	0.03	0.11	0.00
16	0	-209	310	-0	0	-0	-49	0.04	0.11	0.00
17	0	-209	305	-1	0	-0	-36	0.03	0.11	0.00

1	27	-1130	1497	-1	0	-0	194	0.16	0.54	0.00
2	27	-188	250	-0	0	0	30	0.03	0.09	0.00
3	27	-188	248	-0	0	0	34	0.03	0.09	0.00
4	27	-188	250	-0	0	-0	30	0.03	0.09	0.00
5	27	-188	248	-1	0	-1	34	0.03	0.09	0.00
6	27	-188	252	0	0	0	26	0.02	0.09	0.00
7	27	-188	247	-1	0	-0	38	0.03	0.09	0.00
8	27	-188	252	-0	0	-0	26	0.02	0.09	0.00
9	27	-188	247	-1	0	-0	38	0.03	0.09	0.00
10	27	-188	250	-0	0	0	30	0.03	0.09	0.00
11	27	-188	248	-0	0	0	34	0.03	0.09	0.00
12	27	-188	250	-0	0	-0	30	0.03	0.09	0.00
13	27	-188	248	-1	0	-1	34	0.03	0.09	0.00
14	27	-188	252	0	0	0	26	0.02	0.09	0.00
15	27	-188	247	-1	0	-0	38	0.03	0.09	0.00
16	27	-188	252	-0	0	-0	26	0.02	0.09	0.00
17	27	-188	247	-1	0	-0	38	0.03	0.09	0.00

1	53	-1004	1147	-1	0	-0	547	0.46	0.42	0.00
2	53	-167	192	-0	0	0	89	0.08	0.07	0.00
3	53	-167	190	-0	0	0	92	0.08	0.07	0.00
4	53	-167	192	-0	0	-0	89	0.08	0.07	0.00
5	53	-167	190	-1	0	-0	92	0.08	0.07	0.00
6	53	-167	193	0	0	0	85	0.07	0.07	0.00
7	53	-167	188	-1	0	0	96	0.08	0.07	0.00
8	53	-167	193	-0	0	-0	85	0.07	0.07	0.00
9	53	-167	188	-1	0	-0	96	0.08	0.07	0.00
10	53	-167	192	-0	0	0	89	0.08	0.07	0.00
11	53	-167	190	-0	0	0	92	0.08	0.07	0.00
12	53	-167	192	-0	0	-0	89	0.08	0.07	0.00
13	53	-167	190	-1	0	-0	92	0.08	0.07	0.00
14	53	-167	193	0	0	0	85	0.07	0.07	0.00
15	53	-167	188	-1	0	0	96	0.08	0.07	0.00
16	53	-167	193	-0	0	-0	85	0.07	0.07	0.00
17	53	-167	188	-1	0	-0	96	0.08	0.07	0.00

1	80	-879	796	-1	0	0	807	0.68	0.29	0.00
2	80	-146	133	-0	0	0	132	0.11	0.05	0.00
3	80	-146	132	-0	0	0	135	0.11	0.05	0.00
4	80	-146	133	-0	0	-0	132	0.11	0.05	0.00
5	80	-146	132	-1	0	-0	135	0.11	0.05	0.00
6	80	-146	135	0	0	0	129	0.11	0.05	0.00
7	80	-146	130	-1	0	0	138	0.12	0.05	0.00
8	80	-146	135	-0	0	-0	129	0.11	0.05	0.00
9	80	-146	130	-1	0	0	138	0.12	0.05	0.00
10	80	-146	133	-0	0	0	132	0.11	0.05	0.00
11	80	-146	132	-0	0	0	135	0.11	0.05	0.00
12	80	-146	133	-0	0	-0	132	0.11	0.05	0.00
13	80	-146	132	-1	0	-0	135	0.11	0.05	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

14	80	-146	135	0	0	0	129	0.11	0.05	0.00
15	80	-146	130	-1	0	0	138	0.12	0.05	0.00
16	80	-146	135	-0	0	-0	129	0.11	0.05	0.00
17	80	-146	130	-1	0	0	138	0.12	0.05	0.00

1	107	-753	445	-1	0	1	972	0.82	0.16	0.00
2	107	-125	75	-0	0	0	160	0.13	0.03	0.00
3	107	-125	73	-0	0	0	163	0.14	0.03	0.00
4	107	-125	75	-0	0	-0	160	0.13	0.03	0.00
5	107	-125	73	-1	0	-0	163	0.14	0.03	0.00
6	107	-125	77	0	0	0	157	0.13	0.03	0.00
7	107	-125	72	-1	0	0	165	0.14	0.03	0.00
8	107	-125	77	-0	0	-0	157	0.13	0.03	0.00
9	107	-125	72	-1	0	0	165	0.14	0.03	0.00
10	107	-125	75	-0	0	0	160	0.13	0.03	0.00
11	107	-125	73	-0	0	0	163	0.14	0.03	0.00
12	107	-125	75	-0	0	-0	160	0.13	0.03	0.00
13	107	-125	73	-1	0	-0	163	0.14	0.03	0.00
14	107	-125	77	0	0	0	157	0.13	0.03	0.00
15	107	-125	72	-1	0	0	165	0.14	0.03	0.00
16	107	-125	77	-0	0	-0	157	0.13	0.03	0.00
17	107	-125	72	-1	0	0	165	0.14	0.03	0.00

1	134	-628	95	-1	0	1	1044	0.88	0.03	0.00
2	134	-104	17	-0	0	0	172	0.15	0.01	0.00
3	134	-104	15	-0	0	0	174	0.15	0.01	0.00
4	134	-104	17	-0	0	-0	172	0.15	0.01	0.00
5	134	-104	15	-1	0	0	174	0.15	0.01	0.00
6	134	-104	18	0	0	0	170	0.14	0.01	0.00
7	134	-104	13	-1	0	0	177	0.15	0.00	0.00
8	134	-104	18	-0	0	-0	170	0.14	0.01	0.00
9	134	-104	13	-1	0	0	177	0.15	0.00	0.00
10	134	-104	17	-0	0	0	172	0.15	0.01	0.00
11	134	-104	15	-0	0	0	174	0.15	0.01	0.00
12	134	-104	17	-0	0	-0	172	0.15	0.01	0.00
13	134	-104	15	-1	0	0	174	0.15	0.01	0.00
14	134	-104	18	0	0	0	170	0.14	0.01	0.00
15	134	-104	13	-1	0	0	177	0.15	0.00	0.00
16	134	-104	18	-0	0	-0	170	0.14	0.01	0.00
17	134	-104	13	-1	0	0	177	0.15	0.00	0.00

1	160	-502	-256	-1	0	1	1023	0.86	0.09	0.00
2	160	-83	-42	-0	0	0	169	0.14	0.02	0.00
3	160	-83	-43	-0	0	1	171	0.14	0.02	0.00
4	160	-83	-42	-0	0	0	169	0.14	0.02	0.00
5	160	-83	-43	-1	0	0	171	0.14	0.02	0.00
6	160	-83	-40	0	0	0	167	0.14	0.01	0.00
7	160	-83	-45	-1	0	1	173	0.15	0.02	0.00
8	160	-83	-40	-0	0	-0	167	0.14	0.01	0.00
9	160	-83	-45	-1	0	1	173	0.15	0.02	0.00
10	160	-83	-42	-0	0	0	169	0.14	0.02	0.00
11	160	-83	-43	-0	0	1	171	0.14	0.02	0.00
12	160	-83	-42	-0	0	0	169	0.14	0.02	0.00
13	160	-83	-43	-1	0	0	171	0.14	0.02	0.00
14	160	-83	-40	0	0	0	167	0.14	0.01	0.00
15	160	-83	-45	-1	0	1	173	0.15	0.02	0.00
16	160	-83	-40	-0	0	-0	167	0.14	0.01	0.00
17	160	-83	-45	-1	0	1	173	0.15	0.02	0.00

1	187	-377	-607	-1	0	2	908	0.76	0.22	0.00
2	187	-63	-100	-0	0	0	150	0.13	0.04	0.00
3	187	-63	-101	-0	0	1	151	0.13	0.04	0.00
4	187	-63	-100	-0	0	0	150	0.13	0.04	0.00
5	187	-63	-101	-1	0	0	151	0.13	0.04	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

6	187	-63	-98	0	0	0	149	0.13	0.04	0.00
7	187	-63	-103	-1	0	1	153	0.13	0.04	0.00
8	187	-63	-98	-0	0	-0	149	0.13	0.04	0.00
9	187	-63	-103	-1	0	1	153	0.13	0.04	0.00
10	187	-63	-100	-0	0	0	150	0.13	0.04	0.00
11	187	-63	-101	-0	0	1	151	0.13	0.04	0.00
12	187	-63	-100	-0	0	0	150	0.13	0.04	0.00
13	187	-63	-101	-1	0	0	151	0.13	0.04	0.00
14	187	-63	-98	0	0	0	149	0.13	0.04	0.00
15	187	-63	-103	-1	0	1	153	0.13	0.04	0.00
16	187	-63	-98	-0	0	-0	149	0.13	0.04	0.00
17	187	-63	-103	-1	0	1	153	0.13	0.04	0.00
1	214	-251	-958	-1	0	2	699	0.59	0.35	0.00
2	214	-42	-158	-0	0	0	116	0.10	0.06	0.00
3	214	-42	-160	-0	0	1	116	0.10	0.06	0.00
4	214	-42	-158	-0	0	0	116	0.10	0.06	0.00
5	214	-42	-160	-1	0	0	116	0.10	0.06	0.00
6	214	-42	-156	0	0	-0	115	0.10	0.06	0.00
7	214	-42	-162	-1	0	1	117	0.10	0.06	0.00
8	214	-42	-156	-0	0	-0	115	0.10	0.06	0.00
9	214	-42	-162	-1	0	1	117	0.10	0.06	0.00
10	214	-42	-158	-0	0	0	116	0.10	0.06	0.00
11	214	-42	-160	-0	0	1	116	0.10	0.06	0.00
12	214	-42	-158	-0	0	0	116	0.10	0.06	0.00
13	214	-42	-160	-1	0	0	116	0.10	0.06	0.00
14	214	-42	-156	0	0	-0	115	0.10	0.06	0.00
15	214	-42	-162	-1	0	1	117	0.10	0.06	0.00
16	214	-42	-156	-0	0	-0	115	0.10	0.06	0.00
17	214	-42	-162	-1	0	1	117	0.10	0.06	0.00
1	240	-126	-1308	-1	0	3	396	0.34	0.48	0.00
2	240	-21	-217	-0	0	0	66	0.06	0.08	0.00
3	240	-21	-218	-0	0	1	66	0.06	0.08	0.00
4	240	-21	-217	-0	0	0	66	0.06	0.08	0.00
5	240	-21	-218	-1	0	1	66	0.06	0.08	0.00
6	240	-21	-215	0	0	-0	65	0.05	0.08	0.00
7	240	-21	-220	-1	0	1	66	0.06	0.08	0.00
8	240	-21	-215	-0	0	-0	65	0.05	0.08	0.00
9	240	-21	-220	-1	0	1	66	0.06	0.08	0.00
10	240	-21	-217	-0	0	0	66	0.06	0.08	0.00
11	240	-21	-218	-0	0	1	66	0.06	0.08	0.00
12	240	-21	-217	-0	0	0	66	0.06	0.08	0.00
13	240	-21	-218	-1	0	1	66	0.06	0.08	0.00
14	240	-21	-215	0	0	-0	65	0.05	0.08	0.00
15	240	-21	-220	-1	0	1	66	0.06	0.08	0.00
16	240	-21	-215	-0	0	-0	65	0.05	0.08	0.00
17	240	-21	-220	-1	0	1	66	0.06	0.08	0.00
1	267	-0	-1659	-1	0	3	-0	0.00	0.60	0.00
2	267	0	-275	-0	0	0	-0	0.00	0.10	0.00
3	267	0	-276	-0	0	1	-0	0.00	0.10	0.00
4	267	0	-275	-0	0	0	-0	0.00	0.10	0.00
5	267	0	-276	-1	0	1	-0	0.00	0.10	0.00
6	267	0	-273	0	0	-0	-0	0.00	0.10	0.00
7	267	0	-278	-1	0	1	-0	0.00	0.10	0.00
8	267	0	-273	-0	0	-0	-0	0.00	0.10	0.00
9	267	0	-278	-1	0	1	-0	0.00	0.10	0.00
10	267	0	-275	-0	0	0	-0	0.00	0.10	0.00
11	267	0	-276	-0	0	1	-0	0.00	0.10	0.00
12	267	0	-275	-0	0	0	-0	0.00	0.10	0.00
13	267	0	-276	-1	0	1	-0	0.00	0.10	0.00
14	267	0	-273	0	0	-0	-0	0.00	0.10	0.00
15	267	0	-278	-1	0	1	-0	0.00	0.10	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

16	267	0	-273	-0	0	-0	-0	0.00	0.10	0.00
17	267	0	-278	-1	0	1	-0	0.00	0.10	0.00

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
	kg	kg*m							
1	-1255	3	1044	52	62	0.781	0.655	0.94	Piano 'zx'
2	-209	0	172	52	62	0.781	0.655	0.15	Piano 'zx'
3	-209	1	174	52	62	0.781	0.655	0.16	Piano 'zx'
4	-209	1	172	52	62	0.781	0.655	0.15	Piano 'zx'
5	-209	1	174	52	62	0.781	0.655	0.16	Piano 'zx'
6	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
7	-209	1	177	52	62	0.781	0.655	0.16	Piano 'zx'
8	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
9	-209	1	177	52	62	0.781	0.655	0.16	Piano 'zx'
10	-209	0	172	52	62	0.781	0.655	0.15	Piano 'zx'
11	-209	1	174	52	62	0.781	0.655	0.16	Piano 'zx'
12	-209	1	172	52	62	0.781	0.655	0.15	Piano 'zx'
13	-209	1	174	52	62	0.781	0.655	0.16	Piano 'zx'
14	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
15	-209	1	177	52	62	0.781	0.655	0.16	Piano 'zx'
16	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
17	-209	1	177	52	62	0.781	0.655	0.16	Piano 'zx'

ASTA NUM. 27 NI 41 NF 33 Lungh. 60.0 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	cm	kg			kg*m						
1	0	-0	-0	0	0	0	0	0.00	0.00	0.00	
2	0	-9	-3	-31	0	0	0	0.00	0.01	0.00	
3	0	9	3	-31	0	0	0	0.00	0.01	0.00	
4	0	-9	-3	31	0	0	0	0.00	0.01	0.00	
5	0	9	3	31	0	0	0	0.00	0.01	0.00	
6	0	-29	-10	-9	0	0	0	0.00	0.01	0.00	
7	0	29	10	-9	0	0	0	0.00	0.01	0.00	
8	0	-29	-10	9	0	0	0	0.00	0.01	0.00	
9	0	29	10	9	0	0	0	0.00	0.01	0.00	
10	0	-9	-3	-31	0	0	0	0.00	0.01	0.00	
11	0	9	3	-31	0	0	0	0.00	0.01	0.00	
12	0	-9	-3	31	0	0	0	0.00	0.01	0.00	
13	0	9	3	31	0	0	0	0.00	0.01	0.00	
14	0	-29	-10	-9	0	0	0	0.00	0.01	0.00	
15	0	29	10	-9	0	0	0	0.00	0.01	0.00	
16	0	-29	-10	9	0	0	0	0.00	0.01	0.00	
17	0	29	10	9	0	0	0	0.00	0.01	0.00	
1	6	28	-79	0	0	0	-2	0.00	0.03	0.00	
2	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00	
3	6	13	-10	-31	0	2	-0	0.00	0.01	0.00	
4	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00	
5	6	13	-10	31	0	-2	-0	0.00	0.01	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

6	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00
7	6	34	-3	-9	0	1	0	0.00	0.00	0.00
8	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00
9	6	34	-3	9	0	-1	0	0.00	0.00	0.00
10	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00
11	6	13	-10	-31	0	2	-0	0.00	0.01	0.00
12	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00
13	6	13	-10	31	0	-2	-0	0.00	0.01	0.00
14	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00
15	6	34	-3	-9	0	1	0	0.00	0.00	0.00
16	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00
17	6	34	-3	9	0	-1	0	0.00	0.00	0.00
1	12	56	-157	-0	0	0	-9	0.01	0.06	0.00
2	12	1	-29	-31	0	4	-2	0.00	0.02	0.00
3	12	18	-23	-31	0	4	-1	0.01	0.01	0.00
4	12	1	-29	31	0	-4	-2	0.00	0.02	0.00
5	12	18	-23	31	0	-4	-1	0.01	0.01	0.00
6	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00
7	12	39	-16	-9	0	1	-0	0.00	0.01	0.00
8	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00
9	12	39	-16	9	0	-1	-0	0.00	0.01	0.00
10	12	1	-29	-31	0	4	-2	0.00	0.02	0.00
11	12	18	-23	-31	0	4	-1	0.01	0.01	0.00
12	12	1	-29	31	0	-4	-2	0.00	0.02	0.00
13	12	18	-23	31	0	-4	-1	0.01	0.01	0.00
14	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00
15	12	39	-16	-9	0	1	-0	0.00	0.01	0.00
16	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00
17	12	39	-16	9	0	-1	-0	0.00	0.01	0.00
1	18	85	-236	0	0	0	-21	0.02	0.09	0.00
2	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
3	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
4	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
5	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
6	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
7	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
8	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
9	18	43	-29	9	0	-2	-2	0.00	0.01	0.00
10	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
11	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
12	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
13	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
14	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
15	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
16	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
17	18	43	-29	9	0	-2	-2	0.00	0.01	0.00
1	24	113	-315	-0	0	0	-38	0.04	0.11	0.00
2	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
3	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
4	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
5	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
6	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
7	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
8	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
9	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
10	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
11	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
12	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
13	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
14	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
15	24	48	-42	-9	0	2	-4	0.01	0.02	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

16	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
17	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
1	30	141	-394	0	0	0	-59	0.06	0.14	0.00
2	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
3	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
4	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
5	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
6	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
7	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
8	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
9	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
10	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
11	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
12	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
13	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
14	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
15	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
16	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
17	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
1	36	169	-473	-0	0	0	-85	0.08	0.17	0.00
2	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
3	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
4	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
5	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
6	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
7	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
8	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
9	36	57	-68	9	0	-3	-10	0.01	0.02	0.00
10	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
11	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
12	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
13	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
14	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
15	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
16	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
17	36	57	-68	9	0	-3	-10	0.01	0.02	0.00
1	42	197	-551	0	0	0	-116	0.11	0.20	0.00
2	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
3	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
4	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
5	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
6	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
7	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
8	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
9	42	62	-81	9	0	-4	-15	0.02	0.03	0.00
10	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
11	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
12	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
13	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
14	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
15	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
16	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
17	42	62	-81	9	0	-4	-15	0.02	0.03	0.00
1	48	225	-630	-0	0	0	-151	0.14	0.23	0.00
2	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
3	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
4	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
5	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
6	48	8	-115	-9	0	4	-30	0.03	0.04	0.00
7	48	67	-94	-9	0	4	-20	0.02	0.03	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

8	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
9	48	67	-94	9	0	-4	-20	0.02	0.03	0.00
10	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
11	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
12	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
13	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
14	48	8	-115	-9	0	4	-30	0.03	0.04	0.00
15	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
16	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
17	48	67	-94	9	0	-4	-20	0.02	0.03	0.00

1	54	254	-709	0	0	0	-191	0.17	0.26	0.00
2	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
3	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
4	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
5	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
6	54	13	-128	-9	0	5	-37	0.04	0.05	0.00
7	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
8	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
9	54	71	-107	9	0	-5	-26	0.03	0.04	0.00
10	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
11	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
12	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
13	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
14	54	13	-128	-9	0	5	-37	0.04	0.05	0.00
15	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
16	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
17	54	71	-107	9	0	-5	-26	0.03	0.04	0.00

1	60	282	-788	0	0	0	-236	0.21	0.29	0.00
2	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
3	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
4	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
5	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
6	60	18	-141	-9	0	6	-46	0.04	0.05	0.00
7	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
8	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
9	60	76	-121	9	0	-6	-33	0.03	0.04	0.00
10	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
11	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
12	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
13	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
14	60	18	-141	-9	0	6	-46	0.04	0.05	0.00
15	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
16	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
17	60	76	-121	9	0	-6	-33	0.03	0.04	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc.yx	Kc.zx	I.S.	Nota
1	-0	0	236	12	14	1.000	1.000	0.16	Piano 'zx'
2	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
4	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
6	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'
8	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'
10	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
12	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
14	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

16 -29 6 46 12 14 1.000 1.000 0.16 Piano 'zx'

ASTA NUM. 28 NI 33 NF 7 Lungh. 267.1 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	cm	kg			kg*m						
1	0	-1255	1849	-1	0	-1	-257	0.22	0.67	0.00	
2	0	-209	308	0	0	0	-45	0.04	0.11	0.00	
3	0	-209	307	0	0	0	-41	0.03	0.11	0.00	
4	0	-209	308	-0	0	-1	-45	0.04	0.11	0.00	
5	0	-209	307	-0	0	-1	-41	0.04	0.11	0.00	
6	0	-209	310	0	0	0	-50	0.04	0.11	0.00	
7	0	-209	305	-0	0	-0	-36	0.03	0.11	0.00	
8	0	-209	310	-0	0	-0	-50	0.04	0.11	0.00	
9	0	-209	305	-0	0	-0	-36	0.03	0.11	0.00	
10	0	-209	308	0	0	0	-45	0.04	0.11	0.00	
11	0	-209	307	0	0	0	-41	0.03	0.11	0.00	
12	0	-209	308	-0	0	-1	-45	0.04	0.11	0.00	
13	0	-209	307	-0	0	-1	-41	0.04	0.11	0.00	
14	0	-209	310	0	0	0	-50	0.04	0.11	0.00	
15	0	-209	305	-0	0	-0	-36	0.03	0.11	0.00	
16	0	-209	310	-0	0	-0	-50	0.04	0.11	0.00	
17	0	-209	305	-0	0	-0	-36	0.03	0.11	0.00	
1	27	-1130	1498	-1	0	-1	191	0.16	0.54	0.00	
2	27	-188	250	0	0	0	29	0.02	0.09	0.00	
3	27	-188	249	0	0	0	33	0.03	0.09	0.00	
4	27	-188	250	-0	0	-1	29	0.03	0.09	0.00	
5	27	-188	249	-0	0	-1	33	0.03	0.09	0.00	
6	27	-188	252	0	0	0	25	0.02	0.09	0.00	
7	27	-188	247	-0	0	-0	37	0.03	0.09	0.00	
8	27	-188	252	-0	0	-0	25	0.02	0.09	0.00	
9	27	-188	247	-0	0	-0	37	0.03	0.09	0.00	
10	27	-188	250	0	0	0	29	0.02	0.09	0.00	
11	27	-188	249	0	0	0	33	0.03	0.09	0.00	
12	27	-188	250	-0	0	-1	29	0.03	0.09	0.00	
13	27	-188	249	-0	0	-1	33	0.03	0.09	0.00	
14	27	-188	252	0	0	0	25	0.02	0.09	0.00	
15	27	-188	247	-0	0	-0	37	0.03	0.09	0.00	
16	27	-188	252	-0	0	-0	25	0.02	0.09	0.00	
17	27	-188	247	-0	0	-0	37	0.03	0.09	0.00	
1	53	-1004	1148	-1	0	-0	544	0.46	0.42	0.00	
2	53	-167	192	0	0	0	88	0.07	0.07	0.00	
3	53	-167	190	0	0	0	92	0.08	0.07	0.00	
4	53	-167	192	-0	0	-0	88	0.07	0.07	0.00	
5	53	-167	190	-0	0	-0	92	0.08	0.07	0.00	
6	53	-167	194	0	0	0	85	0.07	0.07	0.00	
7	53	-167	189	-0	0	-0	95	0.08	0.07	0.00	
8	53	-167	194	-0	0	-0	85	0.07	0.07	0.00	
9	53	-167	189	-0	0	-0	95	0.08	0.07	0.00	
10	53	-167	192	0	0	0	88	0.07	0.07	0.00	
11	53	-167	190	0	0	0	92	0.08	0.07	0.00	
12	53	-167	192	-0	0	-0	88	0.07	0.07	0.00	
13	53	-167	190	-0	0	-0	92	0.08	0.07	0.00	
14	53	-167	194	0	0	0	85	0.07	0.07	0.00	
15	53	-167	189	-0	0	-0	95	0.08	0.07	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

16	53	-167	194	-0	0	-0	85	0.07	0.07	0.00
17	53	-167	189	-0	0	-0	95	0.08	0.07	0.00
1	80	-879	797	-1	0	-0	804	0.68	0.29	0.00
2	80	-146	134	0	0	0	132	0.11	0.05	0.00
3	80	-146	132	0	0	0	135	0.11	0.05	0.00
4	80	-146	134	-0	0	-0	132	0.11	0.05	0.00
5	80	-146	132	-0	0	-0	135	0.11	0.05	0.00
6	80	-146	135	0	0	0	128	0.11	0.05	0.00
7	80	-146	130	-0	0	0	138	0.12	0.05	0.00
8	80	-146	135	-0	0	-0	128	0.11	0.05	0.00
9	80	-146	130	-0	0	-0	138	0.12	0.05	0.00
10	80	-146	134	0	0	0	132	0.11	0.05	0.00
11	80	-146	132	0	0	0	135	0.11	0.05	0.00
12	80	-146	134	-0	0	-0	132	0.11	0.05	0.00
13	80	-146	132	-0	0	-0	135	0.11	0.05	0.00
14	80	-146	135	0	0	0	128	0.11	0.05	0.00
15	80	-146	130	-0	0	0	138	0.12	0.05	0.00
16	80	-146	135	-0	0	-0	128	0.11	0.05	0.00
17	80	-146	130	-0	0	-0	138	0.12	0.05	0.00
1	107	-753	447	-1	0	0	970	0.82	0.16	0.00
2	107	-125	75	0	0	0	160	0.13	0.03	0.00
3	107	-125	74	0	0	0	162	0.14	0.03	0.00
4	107	-125	75	-0	0	-0	160	0.13	0.03	0.00
5	107	-125	74	-0	0	-0	162	0.14	0.03	0.00
6	107	-125	77	0	0	0	157	0.13	0.03	0.00
7	107	-125	72	-0	0	0	165	0.14	0.03	0.00
8	107	-125	77	-0	0	-0	157	0.13	0.03	0.00
9	107	-125	72	-0	0	-0	165	0.14	0.03	0.00
10	107	-125	75	0	0	0	160	0.13	0.03	0.00
11	107	-125	74	0	0	0	162	0.14	0.03	0.00
12	107	-125	75	-0	0	-0	160	0.13	0.03	0.00
13	107	-125	74	-0	0	-0	162	0.14	0.03	0.00
14	107	-125	77	0	0	0	157	0.13	0.03	0.00
15	107	-125	72	-0	0	0	165	0.14	0.03	0.00
16	107	-125	77	-0	0	-0	157	0.13	0.03	0.00
17	107	-125	72	-0	0	-0	165	0.14	0.03	0.00
1	134	-628	96	-1	0	0	1042	0.88	0.03	0.00
2	134	-104	17	0	0	0	172	0.14	0.01	0.00
3	134	-104	15	0	0	0	174	0.15	0.01	0.00
4	134	-104	17	-0	0	-0	172	0.14	0.01	0.00
5	134	-104	15	-0	0	-0	174	0.15	0.01	0.00
6	134	-104	19	0	0	0	170	0.14	0.01	0.00
7	134	-104	14	-0	0	0	176	0.15	0.00	0.00
8	134	-104	19	-0	0	-0	170	0.14	0.01	0.00
9	134	-104	14	-0	0	0	176	0.15	0.00	0.00
10	134	-104	17	0	0	0	172	0.14	0.01	0.00
11	134	-104	15	0	0	0	174	0.15	0.01	0.00
12	134	-104	17	-0	0	-0	172	0.14	0.01	0.00
13	134	-104	15	-0	0	-0	174	0.15	0.01	0.00
14	134	-104	19	0	0	0	170	0.14	0.01	0.00
15	134	-104	14	-0	0	0	176	0.15	0.00	0.00
16	134	-104	19	-0	0	-0	170	0.14	0.01	0.00
17	134	-104	14	-0	0	0	176	0.15	0.00	0.00
1	160	-502	-255	-1	0	0	1021	0.86	0.09	0.00
2	160	-83	-41	0	0	0	169	0.14	0.02	0.00
3	160	-83	-43	0	0	0	170	0.14	0.02	0.00
4	160	-83	-41	-0	0	-0	169	0.14	0.02	0.00
5	160	-83	-43	-0	0	-0	170	0.14	0.02	0.00
6	160	-83	-40	0	0	0	167	0.14	0.01	0.00
7	160	-83	-45	-0	0	0	172	0.15	0.02	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

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PROGETTO DEFINITIVO

Relazione di calcolo strutturale

8	160	-83	-40	-0	0	-0	167	0.14	0.01	0.00
9	160	-83	-45	-0	0	0	172	0.14	0.02	0.00
10	160	-83	-41	0	0	0	169	0.14	0.02	0.00
11	160	-83	-43	0	0	0	170	0.14	0.02	0.00
12	160	-83	-41	-0	0	-0	169	0.14	0.02	0.00
13	160	-83	-43	-0	0	-0	170	0.14	0.02	0.00
14	160	-83	-40	0	0	0	167	0.14	0.01	0.00
15	160	-83	-45	-0	0	0	172	0.15	0.02	0.00
16	160	-83	-40	-0	0	-0	167	0.14	0.01	0.00
17	160	-83	-45	-0	0	0	172	0.14	0.02	0.00
1	187	-377	-605	-1	0	1	906	0.76	0.22	0.00
2	187	-63	-100	0	0	0	150	0.13	0.04	0.00
3	187	-63	-101	0	0	0	151	0.13	0.04	0.00
4	187	-63	-100	-0	0	-0	150	0.13	0.04	0.00
5	187	-63	-101	-0	0	-0	151	0.13	0.04	0.00
6	187	-63	-98	0	0	0	148	0.12	0.04	0.00
7	187	-63	-103	-0	0	0	153	0.13	0.04	0.00
8	187	-63	-98	-0	0	-0	148	0.12	0.04	0.00
9	187	-63	-103	-0	0	0	153	0.13	0.04	0.00
10	187	-63	-100	0	0	0	150	0.13	0.04	0.00
11	187	-63	-101	0	0	0	151	0.13	0.04	0.00
12	187	-63	-100	-0	0	-0	150	0.13	0.04	0.00
13	187	-63	-101	-0	0	-0	151	0.13	0.04	0.00
14	187	-63	-98	0	0	0	148	0.12	0.04	0.00
15	187	-63	-103	-0	0	0	153	0.13	0.04	0.00
16	187	-63	-98	-0	0	-0	148	0.12	0.04	0.00
17	187	-63	-103	-0	0	0	153	0.13	0.04	0.00
1	214	-251	-956	-1	0	1	698	0.59	0.35	0.00
2	214	-42	-158	0	0	0	116	0.10	0.06	0.00
3	214	-42	-159	0	0	0	116	0.10	0.06	0.00
4	214	-42	-158	-0	0	0	116	0.10	0.06	0.00
5	214	-42	-159	-0	0	0	116	0.10	0.06	0.00
6	214	-42	-156	0	0	0	115	0.10	0.06	0.00
7	214	-42	-161	-0	0	0	117	0.10	0.06	0.00
8	214	-42	-156	-0	0	-0	115	0.10	0.06	0.00
9	214	-42	-161	-0	0	0	117	0.10	0.06	0.00
10	214	-42	-158	0	0	0	116	0.10	0.06	0.00
11	214	-42	-159	0	0	0	116	0.10	0.06	0.00
12	214	-42	-158	-0	0	0	116	0.10	0.06	0.00
13	214	-42	-159	-0	0	0	116	0.10	0.06	0.00
14	214	-42	-156	0	0	0	115	0.10	0.06	0.00
15	214	-42	-161	-0	0	0	117	0.10	0.06	0.00
16	214	-42	-156	-0	0	-0	115	0.10	0.06	0.00
17	214	-42	-161	-0	0	0	117	0.10	0.06	0.00
1	240	-126	-1306	-1	0	1	396	0.33	0.47	0.00
2	240	-21	-216	0	0	0	66	0.06	0.08	0.00
3	240	-21	-218	0	0	0	66	0.06	0.08	0.00
4	240	-21	-216	-0	0	0	66	0.06	0.08	0.00
5	240	-21	-218	-0	0	0	66	0.06	0.08	0.00
6	240	-21	-214	0	0	-0	65	0.05	0.08	0.00
7	240	-21	-220	-0	0	0	66	0.06	0.08	0.00
8	240	-21	-214	-0	0	-0	65	0.05	0.08	0.00
9	240	-21	-220	-0	0	0	66	0.06	0.08	0.00
10	240	-21	-216	0	0	0	66	0.06	0.08	0.00
11	240	-21	-218	0	0	0	66	0.06	0.08	0.00
12	240	-21	-216	-0	0	0	66	0.06	0.08	0.00
13	240	-21	-218	-0	0	0	66	0.06	0.08	0.00
14	240	-21	-214	0	0	-0	65	0.05	0.08	0.00
15	240	-21	-220	-0	0	0	66	0.06	0.08	0.00
16	240	-21	-214	-0	0	-0	65	0.05	0.08	0.00
17	240	-21	-220	-0	0	0	66	0.06	0.08	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	267	-0	-1657	-1	0	1	-0	0.00	0.60	0.00
2	267	0	-275	0	0	0	-0	0.00	0.10	0.00
3	267	0	-276	0	0	0	-0	0.00	0.10	0.00
4	267	0	-275	-0	0	0	-0	0.00	0.10	0.00
5	267	0	-276	-0	0	0	-0	0.00	0.10	0.00
6	267	0	-273	0	0	-0	-0	0.00	0.10	0.00
7	267	0	-278	-0	0	0	-0	0.00	0.10	0.00
8	267	0	-273	-0	0	-0	-0	0.00	0.10	0.00
9	267	0	-278	-0	0	0	-0	0.00	0.10	0.00
10	267	0	-275	0	0	0	-0	0.00	0.10	0.00
11	267	0	-276	0	0	0	-0	0.00	0.10	0.00
12	267	0	-275	-0	0	0	-0	0.00	0.10	0.00
13	267	0	-276	-0	0	0	-0	0.00	0.10	0.00
14	267	0	-273	0	0	-0	-0	0.00	0.10	0.00
15	267	0	-278	-0	0	0	-0	0.00	0.10	0.00
16	267	0	-273	-0	0	-0	-0	0.00	0.10	0.00
17	267	0	-278	-0	0	0	-0	0.00	0.10	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
1	-1255	1	1042	52	62	0.781	0.655	0.93	Piano 'zx'
2	-209	0	172	52	62	0.781	0.655	0.15	Piano 'zx'
3	-209	0	174	52	62	0.781	0.655	0.16	Piano 'zx'
4	-209	1	172	52	62	0.781	0.655	0.15	Piano 'zx'
5	-209	1	174	52	62	0.781	0.655	0.16	Piano 'zx'
6	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
7	-209	0	176	52	62	0.781	0.655	0.16	Piano 'zx'
8	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
9	-209	0	176	52	62	0.781	0.655	0.16	Piano 'zx'
10	-209	0	172	52	62	0.781	0.655	0.15	Piano 'zx'
11	-209	0	174	52	62	0.781	0.655	0.16	Piano 'zx'
12	-209	1	172	52	62	0.781	0.655	0.15	Piano 'zx'
13	-209	1	174	52	62	0.781	0.655	0.16	Piano 'zx'
14	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
15	-209	0	176	52	62	0.781	0.655	0.16	Piano 'zx'
16	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
17	-209	0	176	52	62	0.781	0.655	0.16	Piano 'zx'

ASTA NUM. 29 NI 42 NF 34 Lungh. 60.0 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x -- cm	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
		kg			kg*m						
1	0	0	0	-0	0	0	0	0.00	0.00	0.00	
2	0	-9	-3	-31	0	0	0	0.00	0.01	0.00	
3	0	9	3	-31	0	0	0	0.00	0.01	0.00	
4	0	-9	-3	31	0	0	0	0.00	0.01	0.00	
5	0	9	3	31	0	0	0	0.00	0.01	0.00	
6	0	-29	-10	-9	0	0	0	0.00	0.01	0.00	
7	0	29	10	-9	0	0	0	0.00	0.01	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

8	0	-29	-10	9	0	0	0	0.00	0.01	0.00
9	0	29	10	9	0	0	0	0.00	0.01	0.00
10	0	-9	-3	-31	0	0	0	0.00	0.01	0.00
11	0	9	3	-31	0	0	0	0.00	0.01	0.00
12	0	-9	-3	31	0	0	0	0.00	0.01	0.00
13	0	9	3	31	0	0	0	0.00	0.01	0.00
14	0	-29	-10	-9	0	0	0	0.00	0.01	0.00
15	0	29	10	-9	0	0	0	0.00	0.01	0.00
16	0	-29	-10	9	0	0	0	0.00	0.01	0.00
17	0	29	10	9	0	0	0	0.00	0.01	0.00

1	6	28	-79	-0	0	0	-2	0.00	0.03	0.00
2	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00
3	6	13	-10	-31	0	2	-0	0.00	0.01	0.00
4	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00
5	6	13	-10	31	0	-2	-0	0.00	0.01	0.00
6	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00
7	6	34	-3	-9	0	1	0	0.00	0.00	0.00
8	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00
9	6	34	-3	9	0	-1	0	0.00	0.00	0.00
10	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00
11	6	13	-10	-31	0	2	-0	0.00	0.01	0.00
12	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00
13	6	13	-10	31	0	-2	-0	0.00	0.01	0.00
14	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00
15	6	34	-3	-9	0	1	0	0.00	0.00	0.00
16	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00
17	6	34	-3	9	0	-1	0	0.00	0.00	0.00

1	12	56	-157	-0	0	0	-9	0.01	0.06	0.00
2	12	1	-29	-31	0	4	-2	0.00	0.02	0.00
3	12	18	-23	-31	0	4	-1	0.01	0.01	0.00
4	12	1	-29	31	0	-4	-2	0.00	0.02	0.00
5	12	18	-23	31	0	-4	-1	0.01	0.01	0.00
6	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00
7	12	39	-16	-9	0	1	-0	0.00	0.01	0.00
8	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00
9	12	39	-16	9	0	-1	-0	0.00	0.01	0.00
10	12	1	-29	-31	0	4	-2	0.00	0.02	0.00
11	12	18	-23	-31	0	4	-1	0.01	0.01	0.00
12	12	1	-29	31	0	-4	-2	0.00	0.02	0.00
13	12	18	-23	31	0	-4	-1	0.01	0.01	0.00
14	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00
15	12	39	-16	-9	0	1	-0	0.00	0.01	0.00
16	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00
17	12	39	-16	9	0	-1	-0	0.00	0.01	0.00

1	18	85	-236	-0	0	0	-21	0.02	0.09	0.00
2	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
3	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
4	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
5	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
6	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
7	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
8	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
9	18	43	-29	9	0	-2	-2	0.00	0.01	0.00
10	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
11	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
12	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
13	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
14	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
15	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
16	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
17	18	43	-29	9	0	-2	-2	0.00	0.01	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	24	113	-315	-0	0	0	-38	0.04	0.11	0.00
2	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
3	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
4	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
5	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
6	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
7	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
8	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
9	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
10	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
11	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
12	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
13	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
14	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
15	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
16	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
17	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
1	30	141	-394	0	0	0	-59	0.06	0.14	0.00
2	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
3	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
4	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
5	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
6	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
7	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
8	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
9	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
10	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
11	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
12	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
13	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
14	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
15	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
16	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
17	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
1	36	169	-473	-0	0	0	-85	0.08	0.17	0.00
2	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
3	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
4	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
5	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
6	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
7	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
8	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
9	36	57	-68	9	0	-3	-10	0.01	0.02	0.00
10	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
11	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
12	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
13	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
14	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
15	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
16	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
17	36	57	-68	9	0	-3	-10	0.01	0.02	0.00
1	42	197	-551	-0	0	0	-116	0.11	0.20	0.00
2	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
3	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
4	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
5	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
6	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
7	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
8	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
9	42	62	-81	9	0	-4	-15	0.02	0.03	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

10	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
11	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
12	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
13	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
14	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
15	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
16	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
17	42	62	-81	9	0	-4	-15	0.02	0.03	0.00

1	48	225	-630	-0	0	0	-151	0.14	0.23	0.00
2	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
3	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
4	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
5	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
6	48	8	-115	-9	0	4	-30	0.03	0.04	0.00
7	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
8	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
9	48	67	-94	9	0	-4	-20	0.02	0.03	0.00
10	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
11	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
12	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
13	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
14	48	8	-115	-9	0	4	-30	0.03	0.04	0.00
15	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
16	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
17	48	67	-94	9	0	-4	-20	0.02	0.03	0.00

1	54	254	-709	0	0	0	-191	0.17	0.26	0.00
2	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
3	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
4	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
5	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
6	54	13	-128	-9	0	5	-37	0.04	0.05	0.00
7	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
8	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
9	54	71	-107	9	0	-5	-26	0.03	0.04	0.00
10	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
11	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
12	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
13	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
14	54	13	-128	-9	0	5	-37	0.04	0.05	0.00
15	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
16	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
17	54	71	-107	9	0	-5	-26	0.03	0.04	0.00

1	60	282	-788	0	0	0	-236	0.21	0.29	0.00
2	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
3	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
4	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
5	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
6	60	18	-141	-9	0	6	-46	0.04	0.05	0.00
7	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
8	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
9	60	76	-121	9	0	-6	-33	0.03	0.04	0.00
10	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
11	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
12	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
13	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
14	60	18	-141	-9	0	6	-46	0.04	0.05	0.00
15	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
16	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
17	60	76	-121	9	0	-6	-33	0.03	0.04	0.00

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
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	kg	kg*m							
2	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
4	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
6	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'
8	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'
10	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
12	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
14	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'
16	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'

ASTA NUM. 30 NI 34 NF 8 Lungh. 267.1 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
 qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
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	cm	kg	kg	kg	kg*m	kg*m	kg*m				
1	0	-1255	1849	1	0	1	-257	0.22	0.67	0.00	
2	0	-209	308	0	0	1	-45	0.04	0.11	0.00	
3	0	-209	307	0	0	1	-41	0.04	0.11	0.00	
4	0	-209	308	-0	0	-0	-45	0.04	0.11	0.00	
5	0	-209	307	-0	0	-0	-41	0.03	0.11	0.00	
6	0	-209	310	0	0	0	-50	0.04	0.11	0.00	
7	0	-209	305	0	0	0	-36	0.03	0.11	0.00	
8	0	-209	310	-0	0	-0	-50	0.04	0.11	0.00	
9	0	-209	305	0	0	0	-36	0.03	0.11	0.00	
10	0	-209	308	0	0	1	-45	0.04	0.11	0.00	
11	0	-209	307	0	0	1	-41	0.04	0.11	0.00	
12	0	-209	308	-0	0	-0	-45	0.04	0.11	0.00	
13	0	-209	307	-0	0	-0	-41	0.03	0.11	0.00	
14	0	-209	310	0	0	0	-50	0.04	0.11	0.00	
15	0	-209	305	0	0	0	-36	0.03	0.11	0.00	
16	0	-209	310	-0	0	-0	-50	0.04	0.11	0.00	
17	0	-209	305	0	0	0	-36	0.03	0.11	0.00	
1	27	-1130	1498	1	0	0	190	0.16	0.54	0.00	
2	27	-188	250	0	0	1	29	0.03	0.09	0.00	
3	27	-188	249	0	0	1	33	0.03	0.09	0.00	
4	27	-188	250	-0	0	-0	29	0.02	0.09	0.00	
5	27	-188	249	-0	0	-0	33	0.03	0.09	0.00	
6	27	-188	252	0	0	0	25	0.02	0.09	0.00	
7	27	-188	247	0	0	0	37	0.03	0.09	0.00	
8	27	-188	252	-0	0	-0	25	0.02	0.09	0.00	
9	27	-188	247	0	0	0	37	0.03	0.09	0.00	
10	27	-188	250	0	0	1	29	0.03	0.09	0.00	
11	27	-188	249	0	0	1	33	0.03	0.09	0.00	
12	27	-188	250	-0	0	-0	29	0.02	0.09	0.00	
13	27	-188	249	-0	0	-0	33	0.03	0.09	0.00	
14	27	-188	252	0	0	0	25	0.02	0.09	0.00	
15	27	-188	247	0	0	0	37	0.03	0.09	0.00	
16	27	-188	252	-0	0	-0	25	0.02	0.09	0.00	
17	27	-188	247	0	0	0	37	0.03	0.09	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	53	-1004	1148	1	0	0	544	0.46	0.42	0.00
2	53	-167	192	0	0	0	88	0.07	0.07	0.00
3	53	-167	190	0	0	0	92	0.08	0.07	0.00
4	53	-167	192	-0	0	-0	88	0.07	0.07	0.00
5	53	-167	190	-0	0	-0	92	0.08	0.07	0.00
6	53	-167	194	0	0	0	84	0.07	0.07	0.00
7	53	-167	189	0	0	0	95	0.08	0.07	0.00
8	53	-167	194	-0	0	-0	84	0.07	0.07	0.00
9	53	-167	189	0	0	-0	95	0.08	0.07	0.00
10	53	-167	192	0	0	0	88	0.07	0.07	0.00
11	53	-167	190	0	0	0	92	0.08	0.07	0.00
12	53	-167	192	-0	0	-0	88	0.07	0.07	0.00
13	53	-167	190	-0	0	-0	92	0.08	0.07	0.00
14	53	-167	194	0	0	0	84	0.07	0.07	0.00
15	53	-167	189	0	0	0	95	0.08	0.07	0.00
16	53	-167	194	-0	0	-0	84	0.07	0.07	0.00
17	53	-167	189	0	0	-0	95	0.08	0.07	0.00

1	80	-879	797	1	0	0	804	0.68	0.29	0.00
2	80	-146	134	0	0	0	132	0.11	0.05	0.00
3	80	-146	132	0	0	0	135	0.11	0.05	0.00
4	80	-146	134	-0	0	-0	132	0.11	0.05	0.00
5	80	-146	132	-0	0	-0	135	0.11	0.05	0.00
6	80	-146	135	0	0	0	128	0.11	0.05	0.00
7	80	-146	130	0	0	0	138	0.12	0.05	0.00
8	80	-146	135	-0	0	-0	128	0.11	0.05	0.00
9	80	-146	130	0	0	-0	138	0.12	0.05	0.00
10	80	-146	134	0	0	0	132	0.11	0.05	0.00
11	80	-146	132	0	0	0	135	0.11	0.05	0.00
12	80	-146	134	-0	0	-0	132	0.11	0.05	0.00
13	80	-146	132	-0	0	-0	135	0.11	0.05	0.00
14	80	-146	135	0	0	0	128	0.11	0.05	0.00
15	80	-146	130	0	0	0	138	0.12	0.05	0.00
16	80	-146	135	-0	0	-0	128	0.11	0.05	0.00
17	80	-146	130	0	0	-0	138	0.12	0.05	0.00

1	107	-753	447	1	0	-0	970	0.82	0.16	0.00
2	107	-125	75	0	0	0	160	0.13	0.03	0.00
3	107	-125	74	0	0	0	162	0.14	0.03	0.00
4	107	-125	75	-0	0	-0	160	0.13	0.03	0.00
5	107	-125	74	-0	0	-0	162	0.14	0.03	0.00
6	107	-125	77	0	0	0	157	0.13	0.03	0.00
7	107	-125	72	0	0	0	165	0.14	0.03	0.00
8	107	-125	77	-0	0	-0	157	0.13	0.03	0.00
9	107	-125	72	0	0	-0	165	0.14	0.03	0.00
10	107	-125	75	0	0	0	160	0.13	0.03	0.00
11	107	-125	74	0	0	0	162	0.14	0.03	0.00
12	107	-125	75	-0	0	-0	160	0.13	0.03	0.00
13	107	-125	74	-0	0	-0	162	0.14	0.03	0.00
14	107	-125	77	0	0	0	157	0.13	0.03	0.00
15	107	-125	72	0	0	0	165	0.14	0.03	0.00
16	107	-125	77	-0	0	-0	157	0.13	0.03	0.00
17	107	-125	72	0	0	-0	165	0.14	0.03	0.00

1	134	-628	96	1	0	-0	1042	0.88	0.03	0.00
2	134	-104	17	0	0	0	172	0.14	0.01	0.00
3	134	-104	15	0	0	0	174	0.15	0.01	0.00
4	134	-104	17	-0	0	-0	172	0.14	0.01	0.00
5	134	-104	15	-0	0	-0	174	0.15	0.01	0.00
6	134	-104	19	0	0	0	170	0.14	0.01	0.00
7	134	-104	14	0	0	-0	176	0.15	0.00	0.00
8	134	-104	19	-0	0	-0	170	0.14	0.01	0.00
9	134	-104	14	0	0	-0	176	0.15	0.00	0.00
10	134	-104	17	0	0	0	172	0.14	0.01	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

11	134	-104	15	0	0	0	174	0.15	0.01	0.00
12	134	-104	17	-0	0	-0	172	0.14	0.01	0.00
13	134	-104	15	-0	0	-0	174	0.15	0.01	0.00
14	134	-104	19	0	0	0	170	0.14	0.01	0.00
15	134	-104	14	0	0	-0	176	0.15	0.00	0.00
16	134	-104	19	-0	0	-0	170	0.14	0.01	0.00
17	134	-104	14	0	0	-0	176	0.15	0.00	0.00

1	160	-502	-255	1	0	-0	1021	0.86	0.09	0.00
2	160	-83	-41	0	0	0	169	0.14	0.02	0.00
3	160	-83	-43	0	0	0	170	0.14	0.02	0.00
4	160	-83	-41	-0	0	-0	169	0.14	0.02	0.00
5	160	-83	-43	-0	0	-0	170	0.14	0.02	0.00
6	160	-83	-40	0	0	0	167	0.14	0.01	0.00
7	160	-83	-45	0	0	-0	172	0.14	0.02	0.00
8	160	-83	-40	-0	0	-0	167	0.14	0.01	0.00
9	160	-83	-45	0	0	-0	172	0.15	0.02	0.00
10	160	-83	-41	0	0	0	169	0.14	0.02	0.00
11	160	-83	-43	0	0	0	170	0.14	0.02	0.00
12	160	-83	-41	-0	0	-0	169	0.14	0.02	0.00
13	160	-83	-43	-0	0	-0	170	0.14	0.02	0.00
14	160	-83	-40	0	0	0	167	0.14	0.01	0.00
15	160	-83	-45	0	0	-0	172	0.14	0.02	0.00
16	160	-83	-40	-0	0	-0	167	0.14	0.01	0.00
17	160	-83	-45	0	0	-0	172	0.15	0.02	0.00

1	187	-377	-605	1	0	-1	906	0.76	0.22	0.00
2	187	-63	-100	0	0	0	150	0.13	0.04	0.00
3	187	-63	-101	0	0	0	151	0.13	0.04	0.00
4	187	-63	-100	-0	0	-0	150	0.13	0.04	0.00
5	187	-63	-101	-0	0	-0	151	0.13	0.04	0.00
6	187	-63	-98	0	0	0	148	0.12	0.04	0.00
7	187	-63	-103	0	0	-0	153	0.13	0.04	0.00
8	187	-63	-98	-0	0	-0	148	0.12	0.04	0.00
9	187	-63	-103	0	0	-0	153	0.13	0.04	0.00
10	187	-63	-100	0	0	0	150	0.13	0.04	0.00
11	187	-63	-101	0	0	0	151	0.13	0.04	0.00
12	187	-63	-100	-0	0	-0	150	0.13	0.04	0.00
13	187	-63	-101	-0	0	-0	151	0.13	0.04	0.00
14	187	-63	-98	0	0	0	148	0.12	0.04	0.00
15	187	-63	-103	0	0	-0	153	0.13	0.04	0.00
16	187	-63	-98	-0	0	-0	148	0.12	0.04	0.00
17	187	-63	-103	0	0	-0	153	0.13	0.04	0.00

1	214	-251	-956	1	0	-1	698	0.59	0.35	0.00
2	214	-42	-158	0	0	0	115	0.10	0.06	0.00
3	214	-42	-159	0	0	-0	116	0.10	0.06	0.00
4	214	-42	-158	-0	0	-0	115	0.10	0.06	0.00
5	214	-42	-159	-0	0	-0	116	0.10	0.06	0.00
6	214	-42	-156	0	0	0	115	0.10	0.06	0.00
7	214	-42	-161	0	0	-0	117	0.10	0.06	0.00
8	214	-42	-156	-0	0	-0	115	0.10	0.06	0.00
9	214	-42	-161	0	0	-0	117	0.10	0.06	0.00
10	214	-42	-158	0	0	0	115	0.10	0.06	0.00
11	214	-42	-159	0	0	-0	116	0.10	0.06	0.00
12	214	-42	-158	-0	0	-0	115	0.10	0.06	0.00
13	214	-42	-159	-0	0	-0	116	0.10	0.06	0.00
14	214	-42	-156	0	0	0	115	0.10	0.06	0.00
15	214	-42	-161	0	0	-0	117	0.10	0.06	0.00
16	214	-42	-156	-0	0	-0	115	0.10	0.06	0.00
17	214	-42	-161	0	0	-0	117	0.10	0.06	0.00

1	240	-126	-1306	1	0	-1	396	0.33	0.47	0.00
2	240	-21	-216	0	0	-0	66	0.06	0.08	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

3	240	-21	-218	0	0	-0	66	0.06	0.08	0.00
4	240	-21	-216	-0	0	-0	66	0.06	0.08	0.00
5	240	-21	-218	-0	0	-0	66	0.06	0.08	0.00
6	240	-21	-214	0	0	0	65	0.05	0.08	0.00
7	240	-21	-220	0	0	-0	66	0.06	0.08	0.00
8	240	-21	-214	-0	0	-0	65	0.05	0.08	0.00
9	240	-21	-220	0	0	-0	66	0.06	0.08	0.00
10	240	-21	-216	0	0	-0	66	0.06	0.08	0.00
11	240	-21	-218	0	0	-0	66	0.06	0.08	0.00
12	240	-21	-216	-0	0	-0	66	0.06	0.08	0.00
13	240	-21	-218	-0	0	-0	66	0.06	0.08	0.00
14	240	-21	-214	0	0	0	65	0.05	0.08	0.00
15	240	-21	-220	0	0	-0	66	0.06	0.08	0.00
16	240	-21	-214	-0	0	-0	65	0.05	0.08	0.00
17	240	-21	-220	0	0	-0	66	0.06	0.08	0.00
1	267	-0	-1657	1	0	-1	-0	0.00	0.60	0.00
2	267	0	-275	0	0	-0	-0	0.00	0.10	0.00
3	267	0	-276	0	0	-0	-0	0.00	0.10	0.00
4	267	0	-275	-0	0	-0	-0	0.00	0.10	0.00
5	267	0	-276	-0	0	-0	-0	0.00	0.10	0.00
6	267	0	-273	0	0	0	-0	0.00	0.10	0.00
7	267	0	-278	0	0	-0	-0	0.00	0.10	0.00
8	267	0	-273	-0	0	0	-0	0.00	0.10	0.00
9	267	0	-278	0	0	-0	-0	0.00	0.10	0.00
10	267	0	-275	0	0	-0	-0	0.00	0.10	0.00
11	267	0	-276	0	0	-0	-0	0.00	0.10	0.00
12	267	0	-275	-0	0	-0	-0	0.00	0.10	0.00
13	267	0	-276	-0	0	-0	-0	0.00	0.10	0.00
14	267	0	-273	0	0	0	-0	0.00	0.10	0.00
15	267	0	-278	0	0	-0	-0	0.00	0.10	0.00
16	267	0	-273	-0	0	0	-0	0.00	0.10	0.00
17	267	0	-278	0	0	-0	-0	0.00	0.10	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
1	-1255	1	1042	52	62	0.781	0.655	0.93	Piano 'zx'
2	-209	1	172	52	62	0.781	0.655	0.15	Piano 'zx'
3	-209	1	174	52	62	0.781	0.655	0.16	Piano 'zx'
4	-209	0	172	52	62	0.781	0.655	0.15	Piano 'zx'
5	-209	0	174	52	62	0.781	0.655	0.16	Piano 'zx'
6	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
7	-209	0	176	52	62	0.781	0.655	0.16	Piano 'zx'
8	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
9	-209	0	176	52	62	0.781	0.655	0.16	Piano 'zx'
10	-209	1	172	52	62	0.781	0.655	0.15	Piano 'zx'
11	-209	1	174	52	62	0.781	0.655	0.16	Piano 'zx'
12	-209	0	172	52	62	0.781	0.655	0.15	Piano 'zx'
13	-209	0	174	52	62	0.781	0.655	0.16	Piano 'zx'
14	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
15	-209	0	176	52	62	0.781	0.655	0.16	Piano 'zx'
16	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
17	-209	0	176	52	62	0.781	0.655	0.16	Piano 'zx'

ASTA NUM. 31 NI 43 NF 35 Lungh. 60.0 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	cm	kg			kg*m						
<hr/>											
1	0	0	0	-0	0	0	0	0.00	0.00	0.00	
2	0	-9	-3	-31	0	0	0	0.00	0.01	0.00	
3	0	9	3	-31	0	0	0	0.00	0.01	0.00	
4	0	-9	-3	31	0	0	0	0.00	0.01	0.00	
5	0	9	3	31	0	0	0	0.00	0.01	0.00	
6	0	-29	-10	-9	0	0	0	0.00	0.01	0.00	
7	0	29	10	-9	0	0	0	0.00	0.01	0.00	
8	0	-29	-10	9	0	0	0	0.00	0.01	0.00	
9	0	29	10	9	0	0	0	0.00	0.01	0.00	
10	0	-9	-3	-31	0	0	0	0.00	0.01	0.00	
11	0	9	3	-31	0	0	0	0.00	0.01	0.00	
12	0	-9	-3	31	0	0	0	0.00	0.01	0.00	
13	0	9	3	31	0	0	0	0.00	0.01	0.00	
14	0	-29	-10	-9	0	0	0	0.00	0.01	0.00	
15	0	29	10	-9	0	0	0	0.00	0.01	0.00	
16	0	-29	-10	9	0	0	0	0.00	0.01	0.00	
17	0	29	10	9	0	0	0	0.00	0.01	0.00	
<hr/>											
1	6	28	-79	0	0	0	-2	0.00	0.03	0.00	
2	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00	
3	6	13	-10	-31	0	2	-0	0.00	0.01	0.00	
4	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00	
5	6	13	-10	31	0	-2	-0	0.00	0.01	0.00	
6	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00	
7	6	34	-3	-9	0	1	0	0.00	0.00	0.00	
8	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00	
9	6	34	-3	9	0	-1	0	0.00	0.00	0.00	
10	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00	
11	6	13	-10	-31	0	2	-0	0.00	0.01	0.00	
12	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00	
13	6	13	-10	31	0	-2	-0	0.00	0.01	0.00	
14	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00	
15	6	34	-3	-9	0	1	0	0.00	0.00	0.00	
16	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00	
17	6	34	-3	9	0	-1	0	0.00	0.00	0.00	
<hr/>											
1	12	56	-157	0	0	0	-9	0.01	0.06	0.00	
2	12	1	-29	-31	0	4	-2	0.00	0.02	0.00	
3	12	18	-23	-31	0	4	-1	0.01	0.01	0.00	
4	12	1	-29	31	0	-4	-2	0.00	0.02	0.00	
5	12	18	-23	31	0	-4	-1	0.01	0.01	0.00	
6	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00	
7	12	39	-16	-9	0	1	-0	0.00	0.01	0.00	
8	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00	
9	12	39	-16	9	0	-1	-0	0.00	0.01	0.00	
10	12	1	-29	-31	0	4	-2	0.00	0.02	0.00	
11	12	18	-23	-31	0	4	-1	0.01	0.01	0.00	
12	12	1	-29	31	0	-4	-2	0.00	0.02	0.00	
13	12	18	-23	31	0	-4	-1	0.01	0.01	0.00	
14	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00	
15	12	39	-16	-9	0	1	-0	0.00	0.01	0.00	
16	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00	
17	12	39	-16	9	0	-1	-0	0.00	0.01	0.00	
<hr/>											
1	18	85	-236	0	0	0	-21	0.02	0.09	0.00	
2	18	5	-42	-31	0	6	-4	0.01	0.02	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

3	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
4	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
5	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
6	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
7	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
8	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
9	18	43	-29	9	0	-2	-2	0.00	0.01	0.00
10	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
11	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
12	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
13	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
14	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
15	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
16	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
17	18	43	-29	9	0	-2	-2	0.00	0.01	0.00
1	24	113	-315	0	0	0	-38	0.04	0.11	0.00
2	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
3	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
4	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
5	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
6	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
7	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
8	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
9	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
10	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
11	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
12	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
13	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
14	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
15	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
16	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
17	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
1	30	141	-394	0	0	0	-59	0.06	0.14	0.00
2	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
3	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
4	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
5	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
6	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
7	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
8	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
9	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
10	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
11	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
12	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
13	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
14	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
15	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
16	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
17	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
1	36	169	-473	-0	0	0	-85	0.08	0.17	0.00
2	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
3	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
4	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
5	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
6	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
7	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
8	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
9	36	57	-68	9	0	-3	-10	0.01	0.02	0.00
10	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
11	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
12	36	19	-82	31	0	-11	-15	0.02	0.03	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

13	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
14	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
15	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
16	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
17	36	57	-68	9	0	-3	-10	0.01	0.02	0.00

1	42	197	-551	-0	0	0	-116	0.11	0.20	0.00
2	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
3	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
4	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
5	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
6	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
7	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
8	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
9	42	62	-81	9	0	-4	-15	0.02	0.03	0.00
10	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
11	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
12	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
13	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
14	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
15	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
16	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
17	42	62	-81	9	0	-4	-15	0.02	0.03	0.00

1	48	225	-630	-0	0	0	-151	0.14	0.23	0.00
2	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
3	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
4	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
5	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
6	48	8	-115	-9	0	4	-30	0.03	0.04	0.00
7	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
8	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
9	48	67	-94	9	0	-4	-20	0.02	0.03	0.00
10	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
11	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
12	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
13	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
14	48	8	-115	-9	0	4	-30	0.03	0.04	0.00
15	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
16	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
17	48	67	-94	9	0	-4	-20	0.02	0.03	0.00

1	54	254	-709	-0	0	0	-191	0.17	0.26	0.00
2	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
3	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
4	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
5	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
6	54	13	-128	-9	0	5	-37	0.04	0.05	0.00
7	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
8	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
9	54	71	-107	9	0	-5	-26	0.03	0.04	0.00
10	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
11	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
12	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
13	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
14	54	13	-128	-9	0	5	-37	0.04	0.05	0.00
15	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
16	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
17	54	71	-107	9	0	-5	-26	0.03	0.04	0.00

1	60	282	-788	0	0	0	-236	0.21	0.29	0.00
2	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
3	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
4	60	38	-134	31	0	-19	-41	0.05	0.05	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

5	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
6	60	18	-141	-9	0	6	-46	0.04	0.05	0.00
7	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
8	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
9	60	76	-121	9	0	-6	-33	0.03	0.04	0.00
10	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
11	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
12	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
13	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
14	60	18	-141	-9	0	6	-46	0.04	0.05	0.00
15	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
16	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
17	60	76	-121	9	0	-6	-33	0.03	0.04	0.00

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
--	kg	kg*m							
2	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
4	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
6	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'
8	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'
10	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
12	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
14	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'
16	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'

ASTA NUM. 32 NI 35 NF 9 Lungh. 267.1 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
--	cm	kg				kg*m					
1	0	-1255	1849	2	0	1	-255	0.22	0.67	0.00	
2	0	-209	308	0	0	1	-45	0.04	0.11	0.00	
3	0	-209	307	1	0	1	-41	0.04	0.11	0.00	
4	0	-209	308	0	0	-0	-45	0.04	0.11	0.00	
5	0	-209	307	0	0	-0	-41	0.03	0.11	0.00	
6	0	-209	310	0	0	0	-50	0.04	0.11	0.00	
7	0	-209	305	1	0	1	-36	0.03	0.11	0.00	
8	0	-209	310	-0	0	-0	-50	0.04	0.11	0.00	
9	0	-209	305	1	0	0	-36	0.03	0.11	0.00	
10	0	-209	308	0	0	1	-45	0.04	0.11	0.00	
11	0	-209	307	1	0	1	-41	0.04	0.11	0.00	
12	0	-209	308	0	0	-0	-45	0.04	0.11	0.00	
13	0	-209	307	0	0	-0	-41	0.03	0.11	0.00	
14	0	-209	310	0	0	0	-50	0.04	0.11	0.00	
15	0	-209	305	1	0	1	-36	0.03	0.11	0.00	
16	0	-209	310	-0	0	-0	-50	0.04	0.11	0.00	
17	0	-209	305	1	0	0	-36	0.03	0.11	0.00	
1	27	-1130	1498	2	0	1	192	0.16	0.54	0.00	
2	27	-188	250	0	0	1	30	0.03	0.09	0.00	
3	27	-188	248	1	0	1	33	0.03	0.09	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

4	27	-188	250	0	0	-0	30	0.03	0.09	0.00
5	27	-188	248	0	0	-0	33	0.03	0.09	0.00
6	27	-188	252	0	0	0	25	0.02	0.09	0.00
7	27	-188	247	1	0	1	37	0.03	0.09	0.00
8	27	-188	252	-0	0	-0	25	0.02	0.09	0.00
9	27	-188	247	1	0	0	37	0.03	0.09	0.00
10	27	-188	250	0	0	1	30	0.03	0.09	0.00
11	27	-188	248	1	0	1	33	0.03	0.09	0.00
12	27	-188	250	0	0	-0	30	0.03	0.09	0.00
13	27	-188	248	0	0	-0	33	0.03	0.09	0.00
14	27	-188	252	0	0	0	25	0.02	0.09	0.00
15	27	-188	247	1	0	1	37	0.03	0.09	0.00
16	27	-188	252	-0	0	-0	25	0.02	0.09	0.00
17	27	-188	247	1	0	0	37	0.03	0.09	0.00
1	53	-1004	1148	2	0	1	545	0.46	0.42	0.00
2	53	-167	192	0	0	0	89	0.07	0.07	0.00
3	53	-167	190	1	0	1	92	0.08	0.07	0.00
4	53	-167	192	0	0	-0	89	0.07	0.07	0.00
5	53	-167	190	0	0	-0	92	0.08	0.07	0.00
6	53	-167	193	0	0	0	85	0.07	0.07	0.00
7	53	-167	188	1	0	0	96	0.08	0.07	0.00
8	53	-167	193	-0	0	-0	85	0.07	0.07	0.00
9	53	-167	188	1	0	0	96	0.08	0.07	0.00
10	53	-167	192	0	0	0	89	0.07	0.07	0.00
11	53	-167	190	1	0	1	92	0.08	0.07	0.00
12	53	-167	192	0	0	-0	89	0.07	0.07	0.00
13	53	-167	190	0	0	-0	92	0.08	0.07	0.00
14	53	-167	193	0	0	0	85	0.07	0.07	0.00
15	53	-167	188	1	0	0	96	0.08	0.07	0.00
16	53	-167	193	-0	0	-0	85	0.07	0.07	0.00
17	53	-167	188	1	0	0	96	0.08	0.07	0.00
1	80	-879	797	2	0	0	805	0.68	0.29	0.00
2	80	-146	133	0	0	0	132	0.11	0.05	0.00
3	80	-146	132	1	0	0	135	0.11	0.05	0.00
4	80	-146	133	0	0	-0	132	0.11	0.05	0.00
5	80	-146	132	0	0	-0	135	0.11	0.05	0.00
6	80	-146	135	0	0	0	129	0.11	0.05	0.00
7	80	-146	130	1	0	0	138	0.12	0.05	0.00
8	80	-146	135	-0	0	-0	129	0.11	0.05	0.00
9	80	-146	130	1	0	-0	138	0.12	0.05	0.00
10	80	-146	133	0	0	0	132	0.11	0.05	0.00
11	80	-146	132	1	0	0	135	0.11	0.05	0.00
12	80	-146	133	0	0	-0	132	0.11	0.05	0.00
13	80	-146	132	0	0	-0	135	0.11	0.05	0.00
14	80	-146	135	0	0	0	129	0.11	0.05	0.00
15	80	-146	130	1	0	0	138	0.12	0.05	0.00
16	80	-146	135	-0	0	-0	129	0.11	0.05	0.00
17	80	-146	130	1	0	-0	138	0.12	0.05	0.00
1	107	-753	447	2	0	-0	971	0.82	0.16	0.00
2	107	-125	75	0	0	0	160	0.13	0.03	0.00
3	107	-125	74	1	0	0	162	0.14	0.03	0.00
4	107	-125	75	0	0	-0	160	0.13	0.03	0.00
5	107	-125	74	0	0	-0	162	0.14	0.03	0.00
6	107	-125	77	0	0	0	157	0.13	0.03	0.00
7	107	-125	72	1	0	-0	165	0.14	0.03	0.00
8	107	-125	77	-0	0	-0	157	0.13	0.03	0.00
9	107	-125	72	1	0	-0	165	0.14	0.03	0.00
10	107	-125	75	0	0	0	160	0.13	0.03	0.00
11	107	-125	74	1	0	0	162	0.14	0.03	0.00
12	107	-125	75	0	0	-0	160	0.13	0.03	0.00
13	107	-125	74	0	0	-0	162	0.14	0.03	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

14	107	-125	77	0	0	0	157	0.13	0.03	0.00
15	107	-125	72	1	0	-0	165	0.14	0.03	0.00
16	107	-125	77	-0	0	-0	157	0.13	0.03	0.00
17	107	-125	72	1	0	-0	165	0.14	0.03	0.00
1	134	-628	96	2	0	-1	1043	0.88	0.03	0.00
2	134	-104	17	0	0	0	172	0.14	0.01	0.00
3	134	-104	15	1	0	0	174	0.15	0.01	0.00
4	134	-104	17	0	0	-0	172	0.15	0.01	0.00
5	134	-104	15	0	0	-0	174	0.15	0.01	0.00
6	134	-104	19	0	0	0	170	0.14	0.01	0.00
7	134	-104	14	1	0	-0	177	0.15	0.00	0.00
8	134	-104	19	-0	0	-0	170	0.14	0.01	0.00
9	134	-104	14	1	0	-0	177	0.15	0.00	0.00
10	134	-104	17	0	0	0	172	0.14	0.01	0.00
11	134	-104	15	1	0	0	174	0.15	0.01	0.00
12	134	-104	17	0	0	-0	172	0.15	0.01	0.00
13	134	-104	15	0	0	-0	174	0.15	0.01	0.00
14	134	-104	19	0	0	0	170	0.14	0.01	0.00
15	134	-104	14	1	0	-0	177	0.15	0.00	0.00
16	134	-104	19	-0	0	-0	170	0.14	0.01	0.00
17	134	-104	14	1	0	-0	177	0.15	0.00	0.00
1	160	-502	-255	2	0	-1	1022	0.86	0.09	0.00
2	160	-83	-41	0	0	0	169	0.14	0.02	0.00
3	160	-83	-43	1	0	-0	170	0.14	0.02	0.00
4	160	-83	-41	0	0	-0	169	0.14	0.02	0.00
5	160	-83	-43	0	0	-0	170	0.14	0.02	0.00
6	160	-83	-40	0	0	0	167	0.14	0.01	0.00
7	160	-83	-45	1	0	-0	172	0.15	0.02	0.00
8	160	-83	-40	-0	0	-0	167	0.14	0.01	0.00
9	160	-83	-45	1	0	-1	172	0.15	0.02	0.00
10	160	-83	-41	0	0	0	169	0.14	0.02	0.00
11	160	-83	-43	1	0	-0	170	0.14	0.02	0.00
12	160	-83	-41	0	0	-0	169	0.14	0.02	0.00
13	160	-83	-43	0	0	-0	170	0.14	0.02	0.00
14	160	-83	-40	0	0	0	167	0.14	0.01	0.00
15	160	-83	-45	1	0	-0	172	0.15	0.02	0.00
16	160	-83	-40	-0	0	-0	167	0.14	0.01	0.00
17	160	-83	-45	1	0	-1	172	0.15	0.02	0.00
1	187	-377	-605	2	0	-2	907	0.76	0.22	0.00
2	187	-63	-100	0	0	-0	150	0.13	0.04	0.00
3	187	-63	-101	1	0	-0	151	0.13	0.04	0.00
4	187	-63	-100	0	0	-0	150	0.13	0.04	0.00
5	187	-63	-101	0	0	-1	151	0.13	0.04	0.00
6	187	-63	-98	0	0	0	149	0.13	0.04	0.00
7	187	-63	-103	1	0	-1	153	0.13	0.04	0.00
8	187	-63	-98	-0	0	-0	149	0.12	0.04	0.00
9	187	-63	-103	1	0	-1	153	0.13	0.04	0.00
10	187	-63	-100	0	0	-0	150	0.13	0.04	0.00
11	187	-63	-101	1	0	-0	151	0.13	0.04	0.00
12	187	-63	-100	0	0	-0	150	0.13	0.04	0.00
13	187	-63	-101	0	0	-1	151	0.13	0.04	0.00
14	187	-63	-98	0	0	0	149	0.13	0.04	0.00
15	187	-63	-103	1	0	-1	153	0.13	0.04	0.00
16	187	-63	-98	-0	0	-0	149	0.12	0.04	0.00
17	187	-63	-103	1	0	-1	153	0.13	0.04	0.00
1	214	-251	-956	2	0	-2	698	0.59	0.35	0.00
2	214	-42	-158	0	0	-0	116	0.10	0.06	0.00
3	214	-42	-160	1	0	-0	116	0.10	0.06	0.00
4	214	-42	-158	0	0	-0	116	0.10	0.06	0.00
5	214	-42	-160	0	0	-1	116	0.10	0.06	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

6	214	-42	-156	0	0	0	115	0.10	0.06	0.00
7	214	-42	-161	1	0	-1	117	0.10	0.06	0.00
8	214	-42	-156	-0	0	0	115	0.10	0.06	0.00
9	214	-42	-161	1	0	-1	117	0.10	0.06	0.00
10	214	-42	-158	0	0	-0	116	0.10	0.06	0.00
11	214	-42	-160	1	0	-0	116	0.10	0.06	0.00
12	214	-42	-158	0	0	-0	116	0.10	0.06	0.00
13	214	-42	-160	0	0	-1	116	0.10	0.06	0.00
14	214	-42	-156	0	0	0	115	0.10	0.06	0.00
15	214	-42	-161	1	0	-1	117	0.10	0.06	0.00
16	214	-42	-156	-0	0	0	115	0.10	0.06	0.00
17	214	-42	-161	1	0	-1	117	0.10	0.06	0.00
1	240	-126	-1306	2	0	-3	396	0.33	0.47	0.00
2	240	-21	-216	0	0	-0	66	0.06	0.08	0.00
3	240	-21	-218	1	0	-1	66	0.06	0.08	0.00
4	240	-21	-216	0	0	-0	66	0.06	0.08	0.00
5	240	-21	-218	0	0	-1	66	0.06	0.08	0.00
6	240	-21	-215	0	0	0	65	0.05	0.08	0.00
7	240	-21	-220	1	0	-1	66	0.06	0.08	0.00
8	240	-21	-215	-0	0	0	65	0.05	0.08	0.00
9	240	-21	-220	1	0	-1	66	0.06	0.08	0.00
10	240	-21	-216	0	0	-0	66	0.06	0.08	0.00
11	240	-21	-218	1	0	-1	66	0.06	0.08	0.00
12	240	-21	-216	0	0	-0	66	0.06	0.08	0.00
13	240	-21	-218	0	0	-1	66	0.06	0.08	0.00
14	240	-21	-215	0	0	0	65	0.05	0.08	0.00
15	240	-21	-220	1	0	-1	66	0.06	0.08	0.00
16	240	-21	-215	-0	0	0	65	0.05	0.08	0.00
17	240	-21	-220	1	0	-1	66	0.06	0.08	0.00
1	267	-0	-1657	2	0	-3	-0	0.00	0.60	0.00
2	267	0	-275	0	0	-0	-0	0.00	0.10	0.00
3	267	0	-276	1	0	-1	-0	0.00	0.10	0.00
4	267	0	-275	0	0	-0	-0	0.00	0.10	0.00
5	267	0	-276	0	0	-1	-0	0.00	0.10	0.00
6	267	0	-273	0	0	0	-0	0.00	0.10	0.00
7	267	0	-278	1	0	-1	-0	0.00	0.10	0.00
8	267	0	-273	-0	0	0	-0	0.00	0.10	0.00
9	267	0	-278	1	0	-1	-0	0.00	0.10	0.00
10	267	0	-275	0	0	-0	-0	0.00	0.10	0.00
11	267	0	-276	1	0	-1	-0	0.00	0.10	0.00
12	267	0	-275	0	0	-0	-0	0.00	0.10	0.00
13	267	0	-276	0	0	-1	-0	0.00	0.10	0.00
14	267	0	-273	0	0	0	-0	0.00	0.10	0.00
15	267	0	-278	1	0	-1	-0	0.00	0.10	0.00
16	267	0	-273	-0	0	0	-0	0.00	0.10	0.00
17	267	0	-278	1	0	-1	-0	0.00	0.10	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota

1	-1255	3	1043	52	62	0.781	0.655	0.93	Piano 'zx'
2	-209	1	172	52	62	0.781	0.655	0.15	Piano 'zx'
3	-209	1	174	52	62	0.781	0.655	0.16	Piano 'zx'
4	-209	0	172	52	62	0.781	0.655	0.15	Piano 'zx'
5	-209	1	174	52	62	0.781	0.655	0.16	Piano 'zx'
6	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

7	-209	1	177	52	62	0.781	0.655	0.16	Piano 'zx'
8	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
9	-209	1	177	52	62	0.781	0.655	0.16	Piano 'zx'
10	-209	1	172	52	62	0.781	0.655	0.15	Piano 'zx'
11	-209	1	174	52	62	0.781	0.655	0.16	Piano 'zx'
12	-209	0	172	52	62	0.781	0.655	0.15	Piano 'zx'
13	-209	1	174	52	62	0.781	0.655	0.16	Piano 'zx'
14	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
15	-209	1	177	52	62	0.781	0.655	0.16	Piano 'zx'
16	-209	0	170	52	62	0.781	0.655	0.15	Piano 'zx'
17	-209	1	177	52	62	0.781	0.655	0.16	Piano 'zx'

ASTA NUM. 33 NI 44 NF 36 Lungh. 60.0 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
--	cm	kg			kg*m						
1	0	0	0	-0	0	0	0	0.00	0.00	0.00	
2	0	-9	-3	-31	0	0	0	0.00	0.01	0.00	
3	0	9	3	-31	0	0	0	0.00	0.01	0.00	
4	0	-9	-3	31	0	0	0	0.00	0.01	0.00	
5	0	9	3	31	0	0	0	0.00	0.01	0.00	
6	0	-29	-10	-9	0	0	0	0.00	0.01	0.00	
7	0	29	10	-9	0	0	0	0.00	0.01	0.00	
8	0	-29	-10	9	0	0	0	0.00	0.01	0.00	
9	0	29	10	9	0	0	0	0.00	0.01	0.00	
10	0	-9	-3	-31	0	0	0	0.00	0.01	0.00	
11	0	9	3	-31	0	0	0	0.00	0.01	0.00	
12	0	-9	-3	31	0	0	0	0.00	0.01	0.00	
13	0	9	3	31	0	0	0	0.00	0.01	0.00	
14	0	-29	-10	-9	0	0	0	0.00	0.01	0.00	
15	0	29	10	-9	0	0	0	0.00	0.01	0.00	
16	0	-29	-10	9	0	0	0	0.00	0.01	0.00	
17	0	29	10	9	0	0	0	0.00	0.01	0.00	
1	6	28	-79	-0	0	0	-2	0.00	0.03	0.00	
2	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00	
3	6	13	-10	-31	0	2	-0	0.00	0.01	0.00	
4	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00	
5	6	13	-10	31	0	-2	-0	0.00	0.01	0.00	
6	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00	
7	6	34	-3	-9	0	1	0	0.00	0.00	0.00	
8	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00	
9	6	34	-3	9	0	-1	0	0.00	0.00	0.00	
10	6	-4	-16	-31	0	2	-1	0.00	0.01	0.00	
11	6	13	-10	-31	0	2	-0	0.00	0.01	0.00	
12	6	-4	-16	31	0	-2	-1	0.00	0.01	0.00	
13	6	13	-10	31	0	-2	-0	0.00	0.01	0.00	
14	6	-24	-24	-9	0	1	-1	0.00	0.01	0.00	
15	6	34	-3	-9	0	1	0	0.00	0.00	0.00	
16	6	-24	-24	9	0	-1	-1	0.00	0.01	0.00	
17	6	34	-3	9	0	-1	0	0.00	0.00	0.00	
1	12	56	-157	-0	0	0	-9	0.01	0.06	0.00	
2	12	1	-29	-31	0	4	-2	0.00	0.02	0.00	
3	12	18	-23	-31	0	4	-1	0.01	0.01	0.00	
4	12	1	-29	31	0	-4	-2	0.00	0.02	0.00	
5	12	18	-23	31	0	-4	-1	0.01	0.01	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

6	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00
7	12	39	-16	-9	0	1	-0	0.00	0.01	0.00
8	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00
9	12	39	-16	9	0	-1	-0	0.00	0.01	0.00
10	12	1	-29	-31	0	4	-2	0.00	0.02	0.00
11	12	18	-23	-31	0	4	-1	0.01	0.01	0.00
12	12	1	-29	31	0	-4	-2	0.00	0.02	0.00
13	12	18	-23	31	0	-4	-1	0.01	0.01	0.00
14	12	-20	-37	-9	0	1	-3	0.00	0.01	0.00
15	12	39	-16	-9	0	1	-0	0.00	0.01	0.00
16	12	-20	-37	9	0	-1	-3	0.00	0.01	0.00
17	12	39	-16	9	0	-1	-0	0.00	0.01	0.00
1	18	85	-236	-0	0	0	-21	0.02	0.09	0.00
2	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
3	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
4	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
5	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
6	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
7	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
8	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
9	18	43	-29	9	0	-2	-2	0.00	0.01	0.00
10	18	5	-42	-31	0	6	-4	0.01	0.02	0.00
11	18	23	-36	-31	0	6	-3	0.01	0.02	0.00
12	18	5	-42	31	0	-6	-4	0.01	0.02	0.00
13	18	23	-36	31	0	-6	-3	0.01	0.02	0.00
14	18	-15	-50	-9	0	2	-5	0.01	0.02	0.00
15	18	43	-29	-9	0	2	-2	0.00	0.01	0.00
16	18	-15	-50	9	0	-2	-5	0.01	0.02	0.00
17	18	43	-29	9	0	-2	-2	0.00	0.01	0.00
1	24	113	-315	-0	0	0	-38	0.04	0.11	0.00
2	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
3	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
4	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
5	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
6	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
7	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
8	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
9	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
10	24	10	-56	-31	0	7	-7	0.01	0.02	0.00
11	24	27	-49	-31	0	7	-6	0.01	0.02	0.00
12	24	10	-56	31	0	-7	-7	0.01	0.02	0.00
13	24	27	-49	31	0	-7	-6	0.01	0.02	0.00
14	24	-10	-63	-9	0	2	-9	0.01	0.02	0.00
15	24	48	-42	-9	0	2	-4	0.01	0.02	0.00
16	24	-10	-63	9	0	-2	-9	0.01	0.02	0.00
17	24	48	-42	9	0	-2	-4	0.01	0.02	0.00
1	30	141	-394	0	0	0	-59	0.06	0.14	0.00
2	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
3	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
4	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
5	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
6	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
7	30	53	-55	-9	0	3	-7	0.01	0.02	0.00
8	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
9	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
10	30	15	-69	-31	0	9	-11	0.02	0.03	0.00
11	30	32	-62	-31	0	9	-9	0.02	0.03	0.00
12	30	15	-69	31	0	-9	-11	0.02	0.03	0.00
13	30	32	-62	31	0	-9	-9	0.02	0.03	0.00
14	30	-6	-76	-9	0	3	-13	0.01	0.03	0.00
15	30	53	-55	-9	0	3	-7	0.01	0.02	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

16	30	-6	-76	9	0	-3	-13	0.01	0.03	0.00
17	30	53	-55	9	0	-3	-7	0.01	0.02	0.00
1	36	169	-473	-0	0	0	-85	0.08	0.17	0.00
2	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
3	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
4	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
5	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
6	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
7	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
8	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
9	36	57	-68	9	0	-3	-10	0.01	0.02	0.00
10	36	19	-82	-31	0	11	-15	0.02	0.03	0.00
11	36	37	-75	-31	0	11	-13	0.02	0.03	0.00
12	36	19	-82	31	0	-11	-15	0.02	0.03	0.00
13	36	37	-75	31	0	-11	-13	0.02	0.03	0.00
14	36	-1	-89	-9	0	3	-18	0.02	0.03	0.00
15	36	57	-68	-9	0	3	-10	0.01	0.02	0.00
16	36	-1	-89	9	0	-3	-18	0.02	0.03	0.00
17	36	57	-68	9	0	-3	-10	0.01	0.02	0.00
1	42	197	-551	0	0	0	-116	0.11	0.20	0.00
2	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
3	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
4	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
5	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
6	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
7	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
8	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
9	42	62	-81	9	0	-4	-15	0.02	0.03	0.00
10	42	24	-95	-31	0	13	-21	0.03	0.04	0.00
11	42	42	-89	-31	0	13	-18	0.03	0.03	0.00
12	42	24	-95	31	0	-13	-21	0.03	0.04	0.00
13	42	42	-89	31	0	-13	-18	0.03	0.03	0.00
14	42	4	-102	-9	0	4	-24	0.02	0.04	0.00
15	42	62	-81	-9	0	4	-15	0.02	0.03	0.00
16	42	4	-102	9	0	-4	-24	0.02	0.04	0.00
17	42	62	-81	9	0	-4	-15	0.02	0.03	0.00
1	48	225	-630	-0	0	0	-151	0.14	0.23	0.00
2	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
3	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
4	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
5	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
6	48	8	-115	-9	0	4	-30	0.03	0.04	0.00
7	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
8	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
9	48	67	-94	9	0	-4	-20	0.02	0.03	0.00
10	48	29	-108	-31	0	15	-27	0.03	0.04	0.00
11	48	46	-102	-31	0	15	-24	0.03	0.04	0.00
12	48	29	-108	31	0	-15	-27	0.03	0.04	0.00
13	48	46	-102	31	0	-15	-24	0.03	0.04	0.00
14	48	8	-115	-9	0	4	-30	0.03	0.04	0.00
15	48	67	-94	-9	0	4	-20	0.02	0.03	0.00
16	48	8	-115	9	0	-4	-30	0.03	0.04	0.00
17	48	67	-94	9	0	-4	-20	0.02	0.03	0.00
1	54	254	-709	-0	0	0	-191	0.17	0.26	0.00
2	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
3	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
4	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
5	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
6	54	13	-128	-9	0	5	-37	0.04	0.05	0.00
7	54	71	-107	-9	0	5	-26	0.03	0.04	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

8	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
9	54	71	-107	9	0	-5	-26	0.03	0.04	0.00
10	54	33	-121	-31	0	17	-34	0.04	0.05	0.00
11	54	51	-115	-31	0	17	-30	0.04	0.04	0.00
12	54	33	-121	31	0	-17	-34	0.04	0.05	0.00
13	54	51	-115	31	0	-17	-30	0.04	0.04	0.00
14	54	13	-128	-9	0	5	-37	0.04	0.05	0.00
15	54	71	-107	-9	0	5	-26	0.03	0.04	0.00
16	54	13	-128	9	0	-5	-37	0.04	0.05	0.00
17	54	71	-107	9	0	-5	-26	0.03	0.04	0.00

1	60	282	-788	0	0	0	-236	0.21	0.29	0.00
2	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
3	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
4	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
5	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
6	60	18	-141	-9	0	6	-46	0.04	0.05	0.00
7	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
8	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
9	60	76	-121	9	0	-6	-33	0.03	0.04	0.00
10	60	38	-134	-31	0	19	-41	0.05	0.05	0.00
11	60	56	-128	-31	0	19	-37	0.05	0.05	0.00
12	60	38	-134	31	0	-19	-41	0.05	0.05	0.00
13	60	56	-128	31	0	-19	-37	0.05	0.05	0.00
14	60	18	-141	-9	0	6	-46	0.04	0.05	0.00
15	60	76	-121	-9	0	6	-33	0.03	0.04	0.00
16	60	18	-141	9	0	-6	-46	0.04	0.05	0.00
17	60	76	-121	9	0	-6	-33	0.03	0.04	0.00

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
--	--	kg*m							
	kg								
2	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
4	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
6	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'
8	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'
10	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
12	-9	19	41	12	14	1.000	1.000	0.16	Piano 'zx'
14	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'
16	-29	6	46	12	14	1.000	1.000	0.16	Piano 'zx'

ASTA NUM. 34 NI 36 NF 10 Lungh. 267.1 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.3954 8.2974 8.8200 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
--	--	kg			kg*m						
	cm										
1	0	-1255	1856	2	0	2	-275	0.23	0.67	0.00	
2	0	-209	309	0	0	1	-47	0.04	0.11	0.00	
3	0	-209	308	1	0	1	-44	0.04	0.11	0.00	
4	0	-209	309	0	0	-0	-47	0.04	0.11	0.00	
5	0	-209	308	1	0	0	-44	0.04	0.11	0.00	
6	0	-209	311	-0	0	0	-52	0.04	0.11	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

7	0	-209	306	1	0	1	-39	0.03	0.11	0.00
8	0	-209	311	-0	0	-0	-52	0.04	0.11	0.00
9	0	-209	306	1	0	1	-39	0.03	0.11	0.00
10	0	-209	309	0	0	1	-47	0.04	0.11	0.00
11	0	-209	308	1	0	1	-44	0.04	0.11	0.00
12	0	-209	309	0	0	-0	-47	0.04	0.11	0.00
13	0	-209	308	1	0	0	-44	0.04	0.11	0.00
14	0	-209	311	-0	0	0	-52	0.04	0.11	0.00
15	0	-209	306	1	0	1	-39	0.03	0.11	0.00
16	0	-209	311	-0	0	-0	-52	0.04	0.11	0.00
17	0	-209	306	1	0	1	-39	0.03	0.11	0.00

1	27	-1130	1505	2	0	1	174	0.15	0.55	0.00
2	27	-188	251	0	0	0	27	0.02	0.09	0.00
3	27	-188	250	1	0	1	31	0.03	0.09	0.00
4	27	-188	251	0	0	-0	27	0.02	0.09	0.00
5	27	-188	250	1	0	0	31	0.03	0.09	0.00
6	27	-188	253	-0	0	0	23	0.02	0.09	0.00
7	27	-188	248	1	0	1	35	0.03	0.09	0.00
8	27	-188	253	-0	0	-0	23	0.02	0.09	0.00
9	27	-188	248	1	0	1	35	0.03	0.09	0.00
10	27	-188	251	0	0	0	27	0.02	0.09	0.00
11	27	-188	250	1	0	1	31	0.03	0.09	0.00
12	27	-188	251	0	0	-0	27	0.02	0.09	0.00
13	27	-188	250	1	0	0	31	0.03	0.09	0.00
14	27	-188	253	-0	0	0	23	0.02	0.09	0.00
15	27	-188	248	1	0	1	35	0.03	0.09	0.00
16	27	-188	253	-0	0	-0	23	0.02	0.09	0.00
17	27	-188	248	1	0	1	35	0.03	0.09	0.00

1	53	-1004	1155	2	0	1	530	0.45	0.42	0.00
2	53	-167	193	0	0	0	87	0.07	0.07	0.00
3	53	-167	191	1	0	0	90	0.08	0.07	0.00
4	53	-167	193	0	0	-0	87	0.07	0.07	0.00
5	53	-167	191	1	0	-0	90	0.08	0.07	0.00
6	53	-167	194	-0	0	0	83	0.07	0.07	0.00
7	53	-167	190	1	0	0	93	0.08	0.07	0.00
8	53	-167	194	-0	0	-0	83	0.07	0.07	0.00
9	53	-167	190	1	0	0	93	0.08	0.07	0.00
10	53	-167	193	0	0	0	87	0.07	0.07	0.00
11	53	-167	191	1	0	0	90	0.08	0.07	0.00
12	53	-167	193	0	0	-0	87	0.07	0.07	0.00
13	53	-167	191	1	0	-0	90	0.08	0.07	0.00
14	53	-167	194	-0	0	0	83	0.07	0.07	0.00
15	53	-167	190	1	0	0	93	0.08	0.07	0.00
16	53	-167	194	-0	0	-0	83	0.07	0.07	0.00
17	53	-167	190	1	0	0	93	0.08	0.07	0.00

1	80	-879	804	2	0	0	791	0.67	0.29	0.00
2	80	-146	134	0	0	0	130	0.11	0.05	0.00
3	80	-146	133	1	0	0	133	0.11	0.05	0.00
4	80	-146	134	0	0	-0	130	0.11	0.05	0.00
5	80	-146	133	1	0	-0	133	0.11	0.05	0.00
6	80	-146	136	-0	0	0	127	0.11	0.05	0.00
7	80	-146	131	1	0	0	136	0.11	0.05	0.00
8	80	-146	136	-0	0	-0	127	0.11	0.05	0.00
9	80	-146	131	1	0	0	136	0.11	0.05	0.00
10	80	-146	134	0	0	0	130	0.11	0.05	0.00
11	80	-146	133	1	0	0	133	0.11	0.05	0.00
12	80	-146	134	0	0	-0	130	0.11	0.05	0.00
13	80	-146	133	1	0	-0	133	0.11	0.05	0.00
14	80	-146	136	-0	0	0	127	0.11	0.05	0.00
15	80	-146	131	1	0	0	136	0.11	0.05	0.00
16	80	-146	136	-0	0	-0	127	0.11	0.05	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

17	80	-146	131	1	0	0	136	0.11	0.05	0.00
1	107	-753	454	2	0	-0	959	0.81	0.16	0.00
2	107	-125	76	0	0	0	158	0.13	0.03	0.00
3	107	-125	75	1	0	0	161	0.14	0.03	0.00
4	107	-125	76	0	0	-0	158	0.13	0.03	0.00
5	107	-125	75	1	0	-0	161	0.14	0.03	0.00
6	107	-125	78	-0	0	0	156	0.13	0.03	0.00
7	107	-125	73	1	0	-0	163	0.14	0.03	0.00
8	107	-125	78	-0	0	-0	156	0.13	0.03	0.00
9	107	-125	73	1	0	-0	163	0.14	0.03	0.00
10	107	-125	76	0	0	0	158	0.13	0.03	0.00
11	107	-125	75	1	0	0	161	0.14	0.03	0.00
12	107	-125	76	0	0	-0	158	0.13	0.03	0.00
13	107	-125	75	1	0	-0	161	0.14	0.03	0.00
14	107	-125	78	-0	0	0	156	0.13	0.03	0.00
15	107	-125	73	1	0	-0	163	0.14	0.03	0.00
16	107	-125	78	-0	0	-0	156	0.13	0.03	0.00
17	107	-125	73	1	0	-0	163	0.14	0.03	0.00
1	134	-628	103	2	0	-1	1033	0.87	0.04	0.00
2	134	-104	18	0	0	-0	171	0.14	0.01	0.00
3	134	-104	16	1	0	-0	173	0.15	0.01	0.00
4	134	-104	18	0	0	-0	171	0.14	0.01	0.00
5	134	-104	16	1	0	-0	173	0.15	0.01	0.00
6	134	-104	19	-0	0	0	169	0.14	0.01	0.00
7	134	-104	15	1	0	-0	175	0.15	0.01	0.00
8	134	-104	19	-0	0	-0	169	0.14	0.01	0.00
9	134	-104	15	1	0	-1	175	0.15	0.01	0.00
10	134	-104	18	0	0	-0	171	0.14	0.01	0.00
11	134	-104	16	1	0	-0	173	0.15	0.01	0.00
12	134	-104	18	0	0	-0	171	0.14	0.01	0.00
13	134	-104	16	1	0	-0	173	0.15	0.01	0.00
14	134	-104	19	-0	0	0	169	0.14	0.01	0.00
15	134	-104	15	1	0	-0	175	0.15	0.01	0.00
16	134	-104	19	-0	0	-0	169	0.14	0.01	0.00
17	134	-104	15	1	0	-1	175	0.15	0.01	0.00
1	160	-502	-248	2	0	-2	1014	0.85	0.09	0.00
2	160	-83	-41	0	0	-0	168	0.14	0.01	0.00
3	160	-83	-42	1	0	-0	169	0.14	0.02	0.00
4	160	-83	-41	0	0	-0	168	0.14	0.01	0.00
5	160	-83	-42	1	0	-1	169	0.14	0.02	0.00
6	160	-83	-39	-0	0	0	166	0.14	0.01	0.00
7	160	-83	-44	1	0	-1	171	0.14	0.02	0.00
8	160	-83	-39	-0	0	-0	166	0.14	0.01	0.00
9	160	-83	-44	1	0	-1	171	0.14	0.02	0.00
10	160	-83	-41	0	0	-0	168	0.14	0.01	0.00
11	160	-83	-42	1	0	-0	169	0.14	0.02	0.00
12	160	-83	-41	0	0	-0	168	0.14	0.01	0.00
13	160	-83	-42	1	0	-1	169	0.14	0.02	0.00
14	160	-83	-39	-0	0	0	166	0.14	0.01	0.00
15	160	-83	-44	1	0	-1	171	0.14	0.02	0.00
16	160	-83	-39	-0	0	-0	166	0.14	0.01	0.00
17	160	-83	-44	1	0	-1	171	0.14	0.02	0.00
1	187	-377	-598	2	0	-2	901	0.76	0.22	0.00
2	187	-63	-99	0	0	-0	149	0.13	0.04	0.00
3	187	-63	-100	1	0	-1	150	0.13	0.04	0.00
4	187	-63	-99	0	0	-0	149	0.13	0.04	0.00
5	187	-63	-100	1	0	-1	150	0.13	0.04	0.00
6	187	-63	-97	-0	0	0	148	0.12	0.04	0.00
7	187	-63	-102	1	0	-1	152	0.13	0.04	0.00
8	187	-63	-97	-0	0	0	148	0.12	0.04	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

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PROGETTO DEFINITIVO

Relazione di calcolo strutturale

9	187	-63	-102	1	0	-1	152	0.13	0.04	0.00
10	187	-63	-99	0	0	-0	149	0.13	0.04	0.00
11	187	-63	-100	1	0	-1	150	0.13	0.04	0.00
12	187	-63	-99	0	0	-0	149	0.13	0.04	0.00
13	187	-63	-100	1	0	-1	150	0.13	0.04	0.00
14	187	-63	-97	-0	0	0	148	0.12	0.04	0.00
15	187	-63	-102	1	0	-1	152	0.13	0.04	0.00
16	187	-63	-97	-0	0	0	148	0.12	0.04	0.00
17	187	-63	-102	1	0	-1	152	0.13	0.04	0.00
1	214	-251	-949	2	0	-3	694	0.59	0.34	0.00
2	214	-42	-157	0	0	-0	115	0.10	0.06	0.00
3	214	-42	-159	1	0	-1	116	0.10	0.06	0.00
4	214	-42	-157	0	0	-0	115	0.10	0.06	0.00
5	214	-42	-159	1	0	-1	116	0.10	0.06	0.00
6	214	-42	-155	-0	0	0	114	0.10	0.06	0.00
7	214	-42	-160	1	0	-1	117	0.10	0.06	0.00
8	214	-42	-155	-0	0	0	114	0.10	0.06	0.00
9	214	-42	-160	1	0	-1	117	0.10	0.06	0.00
10	214	-42	-157	0	0	-0	115	0.10	0.06	0.00
11	214	-42	-159	1	0	-1	116	0.10	0.06	0.00
12	214	-42	-157	0	0	-0	115	0.10	0.06	0.00
13	214	-42	-159	1	0	-1	116	0.10	0.06	0.00
14	214	-42	-155	-0	0	0	114	0.10	0.06	0.00
15	214	-42	-160	1	0	-1	117	0.10	0.06	0.00
16	214	-42	-155	-0	0	0	114	0.10	0.06	0.00
17	214	-42	-160	1	0	-1	117	0.10	0.06	0.00
1	240	-126	-1299	2	0	-4	394	0.33	0.47	0.00
2	240	-21	-215	0	0	-0	65	0.06	0.08	0.00
3	240	-21	-217	1	0	-1	66	0.06	0.08	0.00
4	240	-21	-215	0	0	-1	65	0.06	0.08	0.00
5	240	-21	-217	1	0	-1	66	0.06	0.08	0.00
6	240	-21	-214	-0	0	0	65	0.05	0.08	0.00
7	240	-21	-218	1	0	-2	66	0.06	0.08	0.00
8	240	-21	-214	-0	0	0	65	0.05	0.08	0.00
9	240	-21	-218	1	0	-2	66	0.06	0.08	0.00
10	240	-21	-215	0	0	-0	65	0.06	0.08	0.00
11	240	-21	-217	1	0	-1	66	0.06	0.08	0.00
12	240	-21	-215	0	0	-1	65	0.06	0.08	0.00
13	240	-21	-217	1	0	-1	66	0.06	0.08	0.00
14	240	-21	-214	-0	0	0	65	0.05	0.08	0.00
15	240	-21	-218	1	0	-2	66	0.06	0.08	0.00
16	240	-21	-214	-0	0	0	65	0.05	0.08	0.00
17	240	-21	-218	1	0	-2	66	0.06	0.08	0.00
1	267	-0	-1650	2	0	-4	-0	0.00	0.60	0.00
2	267	0	-274	0	0	-1	-0	0.00	0.10	0.00
3	267	0	-275	1	0	-1	-0	0.00	0.10	0.00
4	267	0	-274	0	0	-1	-0	0.00	0.10	0.00
5	267	0	-275	1	0	-1	-0	0.00	0.10	0.00
6	267	0	-272	-0	0	0	-0	0.00	0.10	0.00
7	267	0	-277	1	0	-2	-0	0.00	0.10	0.00
8	267	0	-272	-0	0	0	-0	0.00	0.10	0.00
9	267	0	-277	1	0	-2	-0	0.00	0.10	0.00
10	267	0	-274	0	0	-1	-0	0.00	0.10	0.00
11	267	0	-275	1	0	-1	-0	0.00	0.10	0.00
12	267	0	-274	0	0	-1	-0	0.00	0.10	0.00
13	267	0	-275	1	0	-1	-0	0.00	0.10	0.00
14	267	0	-272	-0	0	0	-0	0.00	0.10	0.00
15	267	0	-277	1	0	-2	-0	0.00	0.10	0.00
16	267	0	-272	-0	0	0	-0	0.00	0.10	0.00
17	267	0	-277	1	0	-2	-0	0.00	0.10	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
--	kg	kg*m							
1	-1255	4	1033	52	62	0.781	0.655	0.93	Piano 'zx'
2	-209	1	171	52	62	0.781	0.655	0.15	Piano 'zx'
3	-209	1	173	52	62	0.781	0.655	0.16	Piano 'zx'
4	-209	1	171	52	62	0.781	0.655	0.15	Piano 'zx'
5	-209	1	173	52	62	0.781	0.655	0.16	Piano 'zx'
6	-209	0	169	52	62	0.781	0.655	0.15	Piano 'zx'
7	-209	2	175	52	62	0.781	0.655	0.16	Piano 'zx'
8	-209	0	169	52	62	0.781	0.655	0.15	Piano 'zx'
9	-209	2	175	52	62	0.781	0.655	0.16	Piano 'zx'
10	-209	1	171	52	62	0.781	0.655	0.15	Piano 'zx'
11	-209	1	173	52	62	0.781	0.655	0.16	Piano 'zx'
12	-209	1	171	52	62	0.781	0.655	0.15	Piano 'zx'
13	-209	1	173	52	62	0.781	0.655	0.16	Piano 'zx'
14	-209	0	169	52	62	0.781	0.655	0.15	Piano 'zx'
15	-209	2	175	52	62	0.781	0.655	0.16	Piano 'zx'
16	-209	0	169	52	62	0.781	0.655	0.15	Piano 'zx'
17	-209	2	175	52	62	0.781	0.655	0.16	Piano 'zx'

ASTA NUM. 35 NI 45 NF 37 Lungh. 60.0 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.1977 4.1487 4.4735 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
--	cm	kg	kg	kg	kg*m	kg*m	kg*m				
1	0	0	-0	0	0	0	0	0.00	0.00	0.00	
2	0	-5	-2	-16	0	0	0	0.00	0.01	0.00	
3	0	5	2	-16	0	0	0	0.00	0.01	0.00	
4	0	-5	-2	16	0	0	0	0.00	0.01	0.00	
5	0	5	2	16	0	0	0	0.00	0.01	0.00	
6	0	-15	-6	-5	0	0	0	0.00	0.00	0.00	
7	0	15	6	-5	0	0	0	0.00	0.00	0.00	
8	0	-15	-6	5	0	0	0	0.00	0.00	0.00	
9	0	15	6	5	0	0	0	0.00	0.00	0.00	
10	0	-5	-2	-16	0	0	0	0.00	0.01	0.00	
11	0	5	2	-16	0	0	0	0.00	0.01	0.00	
12	0	-5	-2	16	0	0	0	0.00	0.01	0.00	
13	0	5	2	16	0	0	0	0.00	0.01	0.00	
14	0	-15	-6	-5	0	0	0	0.00	0.00	0.00	
15	0	15	6	-5	0	0	0	0.00	0.00	0.00	
16	0	-15	-6	5	0	0	0	0.00	0.00	0.00	
17	0	15	6	5	0	0	0	0.00	0.00	0.00	
1	6	14	-40	-0	0	0	-1	0.00	0.01	0.00	
2	6	-2	-9	-16	0	1	-0	0.00	0.01	0.00	
3	6	7	-5	-16	0	1	-0	0.00	0.01	0.00	
4	6	-2	-9	16	0	-1	-0	0.00	0.01	0.00	
5	6	7	-5	16	0	-1	-0	0.00	0.01	0.00	
6	6	-13	-12	-5	0	0	-1	0.00	0.00	0.00	
7	6	18	-1	-5	0	0	0	0.00	0.00	0.00	
8	6	-13	-12	5	0	-0	-1	0.00	0.00	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

9	6	18	-1	5	0	-0	0	0.00	0.00	0.00
10	6	-2	-9	-16	0	1	-0	0.00	0.01	0.00
11	6	7	-5	-16	0	1	-0	0.00	0.01	0.00
12	6	-2	-9	16	0	-1	-0	0.00	0.01	0.00
13	6	7	-5	16	0	-1	-0	0.00	0.01	0.00
14	6	-13	-12	-5	0	0	-1	0.00	0.00	0.00
15	6	18	-1	-5	0	0	0	0.00	0.00	0.00
16	6	-13	-12	5	0	-0	-1	0.00	0.00	0.00
17	6	18	-1	5	0	-0	0	0.00	0.00	0.00
1	12	29	-80	-0	0	0	-5	0.01	0.03	0.00
2	12	0	-16	-16	0	2	-1	0.00	0.01	0.00
3	12	10	-12	-16	0	2	-1	0.00	0.01	0.00
4	12	0	-16	16	0	-2	-1	0.00	0.01	0.00
5	12	10	-12	16	0	-2	-1	0.00	0.01	0.00
6	12	-10	-19	-5	0	1	-1	0.00	0.01	0.00
7	12	20	-8	-5	0	1	-0	0.00	0.00	0.00
8	12	-10	-19	5	0	-1	-1	0.00	0.01	0.00
9	12	20	-8	5	0	-1	-0	0.00	0.00	0.00
10	12	0	-16	-16	0	2	-1	0.00	0.01	0.00
11	12	10	-12	-16	0	2	-1	0.00	0.01	0.00
12	12	0	-16	16	0	-2	-1	0.00	0.01	0.00
13	12	10	-12	16	0	-2	-1	0.00	0.01	0.00
14	12	-10	-19	-5	0	1	-1	0.00	0.01	0.00
15	12	20	-8	-5	0	1	-0	0.00	0.00	0.00
16	12	-10	-19	5	0	-1	-1	0.00	0.01	0.00
17	12	20	-8	5	0	-1	-0	0.00	0.00	0.00
1	18	43	-120	-0	0	0	-11	0.01	0.04	0.00
2	18	3	-22	-16	0	3	-2	0.00	0.01	0.00
3	18	12	-19	-16	0	3	-2	0.00	0.01	0.00
4	18	3	-22	16	0	-3	-2	0.00	0.01	0.00
5	18	12	-19	16	0	-3	-2	0.00	0.01	0.00
6	18	-8	-26	-5	0	1	-3	0.00	0.01	0.00
7	18	23	-15	-5	0	1	-1	0.00	0.01	0.00
8	18	-8	-26	5	0	-1	-3	0.00	0.01	0.00
9	18	23	-15	5	0	-1	-1	0.00	0.01	0.00
10	18	3	-22	-16	0	3	-2	0.00	0.01	0.00
11	18	12	-19	-16	0	3	-2	0.00	0.01	0.00
12	18	3	-22	16	0	-3	-2	0.00	0.01	0.00
13	18	12	-19	16	0	-3	-2	0.00	0.01	0.00
14	18	-8	-26	-5	0	1	-3	0.00	0.01	0.00
15	18	23	-15	-5	0	1	-1	0.00	0.01	0.00
16	18	-8	-26	5	0	-1	-3	0.00	0.01	0.00
17	18	23	-15	5	0	-1	-1	0.00	0.01	0.00
1	24	57	-159	-0	0	0	-19	0.02	0.06	0.00
2	24	5	-29	-16	0	4	-4	0.01	0.01	0.00
3	24	15	-26	-16	0	4	-3	0.01	0.01	0.00
4	24	5	-29	16	0	-4	-4	0.01	0.01	0.00
5	24	15	-26	16	0	-4	-3	0.01	0.01	0.00
6	24	-5	-33	-5	0	1	-5	0.00	0.01	0.00
7	24	25	-22	-5	0	1	-2	0.00	0.01	0.00
8	24	-5	-33	5	0	-1	-5	0.00	0.01	0.00
9	24	25	-22	5	0	-1	-2	0.00	0.01	0.00
10	24	5	-29	-16	0	4	-4	0.01	0.01	0.00
11	24	15	-26	-16	0	4	-3	0.01	0.01	0.00
12	24	5	-29	16	0	-4	-4	0.01	0.01	0.00
13	24	15	-26	16	0	-4	-3	0.01	0.01	0.00
14	24	-5	-33	-5	0	1	-5	0.00	0.01	0.00
15	24	25	-22	-5	0	1	-2	0.00	0.01	0.00
16	24	-5	-33	5	0	-1	-5	0.00	0.01	0.00
17	24	25	-22	5	0	-1	-2	0.00	0.01	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	30	71	-199	0	0	0	-30	0.03	0.07	0.00
2	30	8	-36	-16	0	5	-6	0.01	0.01	0.00
3	30	17	-33	-16	0	5	-5	0.01	0.01	0.00
4	30	8	-36	16	0	-5	-6	0.01	0.01	0.00
5	30	17	-33	16	0	-5	-5	0.01	0.01	0.00
6	30	-3	-40	-5	0	1	-7	0.01	0.01	0.00
7	30	28	-29	-5	0	1	-4	0.01	0.01	0.00
8	30	-3	-40	5	0	-1	-7	0.01	0.01	0.00
9	30	28	-29	5	0	-1	-4	0.01	0.01	0.00
10	30	8	-36	-16	0	5	-6	0.01	0.01	0.00
11	30	17	-33	-16	0	5	-5	0.01	0.01	0.00
12	30	8	-36	16	0	-5	-6	0.01	0.01	0.00
13	30	17	-33	16	0	-5	-5	0.01	0.01	0.00
14	30	-3	-40	-5	0	1	-7	0.01	0.01	0.00
15	30	28	-29	-5	0	1	-4	0.01	0.01	0.00
16	30	-3	-40	5	0	-1	-7	0.01	0.01	0.00
17	30	28	-29	5	0	-1	-4	0.01	0.01	0.00

1	36	86	-239	-0	0	0	-43	0.04	0.09	0.00
2	36	10	-43	-16	0	6	-8	0.01	0.02	0.00
3	36	19	-40	-16	0	6	-7	0.01	0.02	0.00
4	36	10	-43	16	0	-6	-8	0.01	0.02	0.00
5	36	19	-40	16	0	-6	-7	0.01	0.02	0.00
6	36	-1	-47	-5	0	2	-9	0.01	0.02	0.00
7	36	30	-36	-5	0	2	-6	0.01	0.01	0.00
8	36	-1	-47	5	0	-2	-9	0.01	0.02	0.00
9	36	30	-36	5	0	-2	-6	0.01	0.01	0.00
10	36	10	-43	-16	0	6	-8	0.01	0.02	0.00
11	36	19	-40	-16	0	6	-7	0.01	0.02	0.00
12	36	10	-43	16	0	-6	-8	0.01	0.02	0.00
13	36	19	-40	16	0	-6	-7	0.01	0.02	0.00
14	36	-1	-47	-5	0	2	-9	0.01	0.02	0.00
15	36	30	-36	-5	0	2	-6	0.01	0.01	0.00
16	36	-1	-47	5	0	-2	-9	0.01	0.02	0.00
17	36	30	-36	5	0	-2	-6	0.01	0.01	0.00

1	42	100	-279	-0	0	0	-59	0.05	0.10	0.00
2	42	13	-50	-16	0	7	-11	0.01	0.02	0.00
3	42	22	-47	-16	0	7	-9	0.01	0.02	0.00
4	42	13	-50	16	0	-7	-11	0.01	0.02	0.00
5	42	22	-47	16	0	-7	-9	0.01	0.02	0.00
6	42	2	-54	-5	0	2	-12	0.01	0.02	0.00
7	42	33	-43	-5	0	2	-8	0.01	0.02	0.00
8	42	2	-54	5	0	-2	-12	0.01	0.02	0.00
9	42	33	-43	5	0	-2	-8	0.01	0.02	0.00
10	42	13	-50	-16	0	7	-11	0.01	0.02	0.00
11	42	22	-47	-16	0	7	-9	0.01	0.02	0.00
12	42	13	-50	16	0	-7	-11	0.01	0.02	0.00
13	42	22	-47	16	0	-7	-9	0.01	0.02	0.00
14	42	2	-54	-5	0	2	-12	0.01	0.02	0.00
15	42	33	-43	-5	0	2	-8	0.01	0.02	0.00
16	42	2	-54	5	0	-2	-12	0.01	0.02	0.00
17	42	33	-43	5	0	-2	-8	0.01	0.02	0.00

1	48	114	-319	-0	0	0	-77	0.07	0.12	0.00
2	48	15	-57	-16	0	8	-14	0.02	0.02	0.00
3	48	24	-54	-16	0	8	-13	0.02	0.02	0.00
4	48	15	-57	16	0	-8	-14	0.02	0.02	0.00
5	48	24	-54	16	0	-8	-13	0.02	0.02	0.00
6	48	4	-61	-5	0	2	-16	0.02	0.02	0.00
7	48	35	-50	-5	0	2	-11	0.01	0.02	0.00
8	48	4	-61	5	0	-2	-16	0.02	0.02	0.00
9	48	35	-50	5	0	-2	-11	0.01	0.02	0.00
10	48	15	-57	-16	0	8	-14	0.02	0.02	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

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PROGETTO DEFINITIVO

Relazione di calcolo strutturale

11	48	24	-54	-16	0	8	-13	0.02	0.02	0.00
12	48	15	-57	16	0	-8	-14	0.02	0.02	0.00
13	48	24	-54	16	0	-8	-13	0.02	0.02	0.00
14	48	4	-61	-5	0	2	-16	0.02	0.02	0.00
15	48	35	-50	-5	0	2	-11	0.01	0.02	0.00
16	48	4	-61	5	0	-2	-16	0.02	0.02	0.00
17	48	35	-50	5	0	-2	-11	0.01	0.02	0.00

1	54	128	-359	0	0	0	-97	0.09	0.13	0.00
2	54	18	-64	-16	0	9	-18	0.02	0.02	0.00
3	54	27	-61	-16	0	9	-16	0.02	0.02	0.00
4	54	18	-64	16	0	-9	-18	0.02	0.02	0.00
5	54	27	-61	16	0	-9	-16	0.02	0.02	0.00
6	54	7	-68	-5	0	3	-20	0.02	0.02	0.00
7	54	38	-57	-5	0	3	-14	0.02	0.02	0.00
8	54	7	-68	5	0	-3	-20	0.02	0.02	0.00
9	54	38	-57	5	0	-3	-14	0.02	0.02	0.00
10	54	18	-64	-16	0	9	-18	0.02	0.02	0.00
11	54	27	-61	-16	0	9	-16	0.02	0.02	0.00
12	54	18	-64	16	0	-9	-18	0.02	0.02	0.00
13	54	27	-61	16	0	-9	-16	0.02	0.02	0.00
14	54	7	-68	-5	0	3	-20	0.02	0.02	0.00
15	54	38	-57	-5	0	3	-14	0.02	0.02	0.00
16	54	7	-68	5	0	-3	-20	0.02	0.02	0.00
17	54	38	-57	5	0	-3	-14	0.02	0.02	0.00

1	60	143	-399	0	0	0	-120	0.11	0.14	0.00
2	60	20	-71	-16	0	10	-22	0.03	0.03	0.00
3	60	29	-68	-16	0	10	-20	0.02	0.03	0.00
4	60	20	-71	16	0	-10	-22	0.03	0.03	0.00
5	60	29	-68	16	0	-10	-20	0.02	0.03	0.00
6	60	9	-75	-5	0	3	-24	0.02	0.03	0.00
7	60	40	-64	-5	0	3	-17	0.02	0.02	0.00
8	60	9	-75	5	0	-3	-24	0.02	0.03	0.00
9	60	40	-64	5	0	-3	-17	0.02	0.02	0.00
10	60	20	-71	-16	0	10	-22	0.03	0.03	0.00
11	60	29	-68	-16	0	10	-20	0.02	0.03	0.00
12	60	20	-71	16	0	-10	-22	0.03	0.03	0.00
13	60	29	-68	16	0	-10	-20	0.02	0.03	0.00
14	60	9	-75	-5	0	3	-24	0.02	0.03	0.00
15	60	40	-64	-5	0	3	-17	0.02	0.02	0.00
16	60	9	-75	5	0	-3	-24	0.02	0.03	0.00
17	60	40	-64	5	0	-3	-17	0.02	0.02	0.00

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc.yx	Kc.zx	I.S.	Nota
	kg		kg*m						
2	-5	10	22	12	14	1.000	1.000	0.16	Piano 'zx'
4	-5	10	22	12	14	1.000	1.000	0.16	Piano 'zx'
6	-15	3	24	12	14	1.000	1.000	0.16	Piano 'zx'
8	-15	3	24	12	14	1.000	1.000	0.16	Piano 'zx'
10	-5	10	22	12	14	1.000	1.000	0.16	Piano 'zx'
12	-5	10	22	12	14	1.000	1.000	0.16	Piano 'zx'
14	-15	3	24	12	14	1.000	1.000	0.16	Piano 'zx'
16	-15	3	24	12	14	1.000	1.000	0.16	Piano 'zx'

ASTA NUM. 36 NI 37 NF 11 Lungh. 267.1 cm SEZ. 2 Rp B= 15.0 H= 18.0 cm

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

categoria: p.p. y Permanente Neve qy tot.
qy medio: 0.1271 0.1977 4.1487 4.4735 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
--	cm	kg			kg*m						
1	0	-635	903	3	0	2	-42	0.04	0.33	0.00	
2	0	-110	157	0	0	1	-8	0.01	0.06	0.00	
3	0	-110	157	1	0	1	-6	0.01	0.06	0.00	
4	0	-110	157	0	0	0	-8	0.01	0.06	0.00	
5	0	-110	157	1	0	1	-6	0.01	0.06	0.00	
6	0	-110	158	-0	0	0	-9	0.01	0.06	0.00	
7	0	-110	156	1	0	1	-5	0.00	0.06	0.00	
8	0	-110	158	-0	0	0	-9	0.01	0.06	0.00	
9	0	-110	156	1	0	1	-5	0.00	0.06	0.00	
10	0	-110	157	0	0	1	-8	0.01	0.06	0.00	
11	0	-110	157	1	0	1	-6	0.01	0.06	0.00	
12	0	-110	157	0	0	0	-8	0.01	0.06	0.00	
13	0	-110	157	1	0	1	-6	0.01	0.06	0.00	
14	0	-110	158	-0	0	0	-9	0.01	0.06	0.00	
15	0	-110	156	1	0	1	-5	0.00	0.06	0.00	
16	0	-110	158	-0	0	0	-9	0.01	0.06	0.00	
17	0	-110	156	1	0	1	-5	0.00	0.06	0.00	
1	27	-572	726	3	0	2	175	0.15	0.26	0.00	
2	27	-99	126	0	0	0	30	0.03	0.05	0.00	
3	27	-99	126	1	0	1	31	0.03	0.05	0.00	
4	27	-99	126	0	0	0	30	0.03	0.05	0.00	
5	27	-99	126	1	0	0	31	0.03	0.05	0.00	
6	27	-99	127	-0	0	0	29	0.02	0.05	0.00	
7	27	-99	125	1	0	1	33	0.03	0.05	0.00	
8	27	-99	127	-0	0	0	29	0.02	0.05	0.00	
9	27	-99	125	1	0	1	33	0.03	0.05	0.00	
10	27	-99	126	0	0	0	30	0.03	0.05	0.00	
11	27	-99	126	1	0	1	31	0.03	0.05	0.00	
12	27	-99	126	0	0	0	30	0.03	0.05	0.00	
13	27	-99	126	1	0	0	31	0.03	0.05	0.00	
14	27	-99	127	-0	0	0	29	0.02	0.05	0.00	
15	27	-99	125	1	0	1	33	0.03	0.05	0.00	
16	27	-99	127	-0	0	0	29	0.02	0.05	0.00	
17	27	-99	125	1	0	1	33	0.03	0.05	0.00	
1	53	-508	548	3	0	1	346	0.29	0.20	0.00	
2	53	-88	95	0	0	0	60	0.05	0.03	0.00	
3	53	-88	95	1	0	0	61	0.05	0.03	0.00	
4	53	-88	95	0	0	0	60	0.05	0.03	0.00	
5	53	-88	95	1	0	0	61	0.05	0.03	0.00	
6	53	-88	96	-0	0	0	58	0.05	0.03	0.00	
7	53	-88	94	1	0	0	62	0.05	0.03	0.00	
8	53	-88	96	-0	0	0	58	0.05	0.03	0.00	
9	53	-88	94	1	0	0	62	0.05	0.03	0.00	
10	53	-88	95	0	0	0	60	0.05	0.03	0.00	
11	53	-88	95	1	0	0	61	0.05	0.03	0.00	
12	53	-88	95	0	0	0	60	0.05	0.03	0.00	
13	53	-88	95	1	0	0	61	0.05	0.03	0.00	
14	53	-88	96	-0	0	0	58	0.05	0.03	0.00	
15	53	-88	94	1	0	0	62	0.05	0.03	0.00	
16	53	-88	96	-0	0	0	58	0.05	0.03	0.00	
17	53	-88	94	1	0	0	62	0.05	0.03	0.00	
1	80	-445	371	3	0	0	468	0.39	0.13	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

2	80	-77	65	0	0	0	81	0.07	0.02	0.00
3	80	-77	64	1	0	0	82	0.07	0.02	0.00
4	80	-77	65	0	0	-0	81	0.07	0.02	0.00
5	80	-77	64	1	0	0	82	0.07	0.02	0.00
6	80	-77	65	-0	0	0	80	0.07	0.02	0.00
7	80	-77	63	1	0	0	83	0.07	0.02	0.00
8	80	-77	65	-0	0	0	80	0.07	0.02	0.00
9	80	-77	63	1	0	0	83	0.07	0.02	0.00
10	80	-77	65	0	0	0	81	0.07	0.02	0.00
11	80	-77	64	1	0	0	82	0.07	0.02	0.00
12	80	-77	65	0	0	-0	81	0.07	0.02	0.00
13	80	-77	64	1	0	0	82	0.07	0.02	0.00
14	80	-77	65	-0	0	0	80	0.07	0.02	0.00
15	80	-77	63	1	0	0	83	0.07	0.02	0.00
16	80	-77	65	-0	0	0	80	0.07	0.02	0.00
17	80	-77	63	1	0	0	83	0.07	0.02	0.00

1	107	-381	193	3	0	-0	544	0.46	0.07	0.00
2	107	-66	34	0	0	0	94	0.08	0.01	0.00
3	107	-66	33	1	0	-0	95	0.08	0.01	0.00
4	107	-66	34	0	0	-0	94	0.08	0.01	0.00
5	107	-66	33	1	0	-0	95	0.08	0.01	0.00
6	107	-66	34	-0	0	0	93	0.08	0.01	0.00
7	107	-66	33	1	0	-0	96	0.08	0.01	0.00
8	107	-66	34	-0	0	0	93	0.08	0.01	0.00
9	107	-66	33	1	0	-0	96	0.08	0.01	0.00
10	107	-66	34	0	0	0	94	0.08	0.01	0.00
11	107	-66	33	1	0	-0	95	0.08	0.01	0.00
12	107	-66	34	0	0	-0	94	0.08	0.01	0.00
13	107	-66	33	1	0	-0	95	0.08	0.01	0.00
14	107	-66	34	-0	0	0	93	0.08	0.01	0.00
15	107	-66	33	1	0	-0	96	0.08	0.01	0.00
16	107	-66	34	-0	0	0	93	0.08	0.01	0.00
17	107	-66	33	1	0	-0	96	0.08	0.01	0.00

1	134	-318	16	3	0	-1	572	0.48	0.01	0.00
2	134	-55	3	0	0	-0	99	0.08	0.00	0.00
3	134	-55	2	1	0	-0	100	0.08	0.00	0.00
4	134	-55	3	0	0	-0	99	0.08	0.00	0.00
5	134	-55	2	1	0	-0	100	0.08	0.00	0.00
6	134	-55	3	-0	0	0	98	0.08	0.00	0.00
7	134	-55	2	1	0	-0	101	0.09	0.00	0.00
8	134	-55	3	-0	0	0	98	0.08	0.00	0.00
9	134	-55	2	1	0	-0	101	0.09	0.00	0.00
10	134	-55	3	0	0	-0	99	0.08	0.00	0.00
11	134	-55	2	1	0	-0	100	0.08	0.00	0.00
12	134	-55	3	0	0	-0	99	0.08	0.00	0.00
13	134	-55	2	1	0	-0	100	0.08	0.00	0.00
14	134	-55	3	-0	0	0	98	0.08	0.00	0.00
15	134	-55	2	1	0	-0	101	0.09	0.00	0.00
16	134	-55	3	-0	0	0	98	0.08	0.00	0.00
17	134	-55	2	1	0	-0	101	0.09	0.00	0.00

1	160	-254	-162	3	0	-2	552	0.47	0.06	0.00
2	160	-44	-28	0	0	-0	96	0.08	0.01	0.00
3	160	-44	-29	1	0	-0	96	0.08	0.01	0.00
4	160	-44	-28	0	0	-0	96	0.08	0.01	0.00
5	160	-44	-29	1	0	-1	96	0.08	0.01	0.00
6	160	-44	-27	-0	0	0	95	0.08	0.01	0.00
7	160	-44	-29	1	0	-1	97	0.08	0.01	0.00
8	160	-44	-27	-0	0	0	95	0.08	0.01	0.00
9	160	-44	-29	1	0	-1	97	0.08	0.01	0.00
10	160	-44	-28	0	0	-0	96	0.08	0.01	0.00
11	160	-44	-29	1	0	-0	96	0.08	0.01	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

12	160	-44	-28	0	0	-0	96	0.08	0.01	0.00
13	160	-44	-29	1	0	-1	96	0.08	0.01	0.00
14	160	-44	-27	-0	0	0	95	0.08	0.01	0.00
15	160	-44	-29	1	0	-1	97	0.08	0.01	0.00
16	160	-44	-27	-0	0	0	95	0.08	0.01	0.00
17	160	-44	-29	1	0	-1	97	0.08	0.01	0.00
1	187	-191	-339	3	0	-3	485	0.41	0.12	0.00
2	187	-33	-59	0	0	-0	84	0.07	0.02	0.00
3	187	-33	-59	1	0	-1	85	0.07	0.02	0.00
4	187	-33	-59	0	0	-0	84	0.07	0.02	0.00
5	187	-33	-59	1	0	-1	85	0.07	0.02	0.00
6	187	-33	-58	-0	0	0	84	0.07	0.02	0.00
7	187	-33	-60	1	0	-1	85	0.07	0.02	0.00
8	187	-33	-58	-0	0	0	84	0.07	0.02	0.00
9	187	-33	-60	1	0	-1	85	0.07	0.02	0.00
10	187	-33	-59	0	0	-0	84	0.07	0.02	0.00
11	187	-33	-59	1	0	-1	85	0.07	0.02	0.00
12	187	-33	-59	0	0	-0	84	0.07	0.02	0.00
13	187	-33	-59	1	0	-1	85	0.07	0.02	0.00
14	187	-33	-58	-0	0	0	84	0.07	0.02	0.00
15	187	-33	-60	1	0	-1	85	0.07	0.02	0.00
16	187	-33	-58	-0	0	0	84	0.07	0.02	0.00
17	187	-33	-60	1	0	-1	85	0.07	0.02	0.00
1	214	-127	-517	3	0	-3	371	0.31	0.19	0.00
2	214	-22	-90	0	0	-0	64	0.05	0.03	0.00
3	214	-22	-90	1	0	-1	65	0.05	0.03	0.00
4	214	-22	-90	0	0	-0	64	0.05	0.03	0.00
5	214	-22	-90	1	0	-1	65	0.06	0.03	0.00
6	214	-22	-89	-0	0	0	64	0.05	0.03	0.00
7	214	-22	-91	1	0	-1	65	0.06	0.03	0.00
8	214	-22	-89	-0	0	0	64	0.05	0.03	0.00
9	214	-22	-91	1	0	-1	65	0.06	0.03	0.00
10	214	-22	-90	0	0	-0	64	0.05	0.03	0.00
11	214	-22	-90	1	0	-1	65	0.05	0.03	0.00
12	214	-22	-90	0	0	-0	64	0.05	0.03	0.00
13	214	-22	-90	1	0	-1	65	0.06	0.03	0.00
14	214	-22	-89	-0	0	0	64	0.05	0.03	0.00
15	214	-22	-91	1	0	-1	65	0.06	0.03	0.00
16	214	-22	-89	-0	0	0	64	0.05	0.03	0.00
17	214	-22	-91	1	0	-1	65	0.06	0.03	0.00
1	240	-64	-694	3	0	-4	209	0.18	0.25	0.00
2	240	-11	-120	0	0	-1	36	0.03	0.04	0.00
3	240	-11	-121	1	0	-1	36	0.03	0.04	0.00
4	240	-11	-120	0	0	-1	36	0.03	0.04	0.00
5	240	-11	-121	1	0	-1	36	0.03	0.04	0.00
6	240	-11	-120	-0	0	0	36	0.03	0.04	0.00
7	240	-11	-122	1	0	-2	37	0.03	0.04	0.00
8	240	-11	-120	-0	0	0	36	0.03	0.04	0.00
9	240	-11	-122	1	0	-2	37	0.03	0.04	0.00
10	240	-11	-120	0	0	-1	36	0.03	0.04	0.00
11	240	-11	-121	1	0	-1	36	0.03	0.04	0.00
12	240	-11	-120	0	0	-1	36	0.03	0.04	0.00
13	240	-11	-121	1	0	-1	36	0.03	0.04	0.00
14	240	-11	-120	-0	0	0	36	0.03	0.04	0.00
15	240	-11	-122	1	0	-2	37	0.03	0.04	0.00
16	240	-11	-120	-0	0	0	36	0.03	0.04	0.00
17	240	-11	-122	1	0	-2	37	0.03	0.04	0.00
1	267	-0	-872	3	0	-5	-0	0.00	0.32	0.00
2	267	0	-151	0	0	-1	-0	0.00	0.05	0.00
3	267	0	-152	1	0	-1	-0	0.00	0.06	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

4	267	0	-151	0	0	-1	-0	0.00	0.05	0.00
5	267	0	-152	1	0	-1	-0	0.00	0.06	0.00
6	267	0	-151	-0	0	0	-0	0.00	0.05	0.00
7	267	0	-153	1	0	-2	-0	0.00	0.06	0.00
8	267	0	-151	-0	0	0	-0	0.00	0.05	0.00
9	267	0	-153	1	0	-2	-0	0.00	0.06	0.00
10	267	0	-151	0	0	-1	-0	0.00	0.05	0.00
11	267	0	-152	1	0	-1	-0	0.00	0.06	0.00
12	267	0	-151	0	0	-1	-0	0.00	0.05	0.00
13	267	0	-152	1	0	-1	-0	0.00	0.06	0.00
14	267	0	-151	-0	0	0	-0	0.00	0.05	0.00
15	267	0	-153	1	0	-2	-0	0.00	0.06	0.00
16	267	0	-151	-0	0	0	-0	0.00	0.05	0.00
17	267	0	-153	1	0	-2	-0	0.00	0.06	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
1	-635	5	572	52	62	0.781	0.655	0.51	Piano 'zx'
2	-110	1	99	52	62	0.781	0.655	0.09	Piano 'zx'
3	-110	1	100	52	62	0.781	0.655	0.09	Piano 'zx'
4	-110	1	99	52	62	0.781	0.655	0.09	Piano 'zx'
5	-110	1	100	52	62	0.781	0.655	0.09	Piano 'zx'
6	-110	0	98	52	62	0.781	0.655	0.09	Piano 'zx'
7	-110	2	101	52	62	0.781	0.655	0.09	Piano 'zx'
8	-110	0	98	52	62	0.781	0.655	0.09	Piano 'zx'
9	-110	2	101	52	62	0.781	0.655	0.09	Piano 'zx'
10	-110	1	99	52	62	0.781	0.655	0.09	Piano 'zx'
11	-110	1	100	52	62	0.781	0.655	0.09	Piano 'zx'
12	-110	1	99	52	62	0.781	0.655	0.09	Piano 'zx'
13	-110	1	100	52	62	0.781	0.655	0.09	Piano 'zx'
14	-110	0	98	52	62	0.781	0.655	0.09	Piano 'zx'
15	-110	2	101	52	62	0.781	0.655	0.09	Piano 'zx'
16	-110	0	98	52	62	0.781	0.655	0.09	Piano 'zx'
17	-110	2	101	52	62	0.781	0.655	0.09	Piano 'zx'

AMV s.r.l.
Via San Lorenzo, 106 Tel. 0481/779903
34077 Ronchi dei Legionari (GO)

Lavoro: B655-15_v_10 Intestazione lavoro: B655-15_v_10_Tetto
Elemento: TRAVE Metodo di verifica: NTC 2008 - Eurocodice 5
Gruppo: 2 Descrizione: FP_COLMO
Tabella: Tabella travi
Tipo legno: Legno massiccio C24 Beta piano 'yx': 1.000 Beta piano 'zx': 1.000
k mod: 0.900

ASTA NUM. 1 NI 3 NF 4 Lungh. 103.1 cm SEZ. 1 Rp B= 31.0 H= 36.0 cm

categoria: p.p. y qy tot.
qy medio: 0.5580 0.5580 kg/cm

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	cm	kg			kg*m						
1	0	110	-1587	0	0	0	-8	0.00	0.14	0.00	
2	0	-154	-276	14	0	-0	-2	0.00	0.02	0.00	
3	0	-154	-276	-14	0	0	-2	0.00	0.02	0.00	
4	0	192	-276	14	0	-0	-2	0.00	0.02	0.00	
5	0	192	-276	-14	0	0	-2	0.00	0.02	0.00	
6	0	-33	-276	47	0	-1	-2	0.00	0.02	0.00	
7	0	-33	-276	-47	0	1	-2	0.00	0.02	0.00	
8	0	71	-276	47	0	-1	-2	0.00	0.02	0.00	
9	0	71	-276	-47	0	1	-2	0.00	0.02	0.00	
10	0	-154	-276	14	0	-0	-2	0.00	0.02	0.00	
11	0	-154	-276	-14	0	0	-2	0.00	0.02	0.00	
12	0	192	-276	14	0	-0	-2	0.00	0.02	0.00	
13	0	192	-276	-14	0	0	-2	0.00	0.02	0.00	
14	0	-33	-276	47	0	-1	-2	0.00	0.02	0.00	
15	0	-33	-276	-47	0	1	-2	0.00	0.02	0.00	
16	0	71	-276	47	0	-1	-2	0.00	0.02	0.00	
17	0	71	-276	-47	0	1	-2	0.00	0.02	0.00	
1	10	110	-1595	0	0	-0	-172	0.02	0.14	0.00	
2	10	-154	-281	14	0	-2	-30	0.00	0.02	0.00	
3	10	-154	-281	-14	0	2	-30	0.00	0.02	0.00	
4	10	192	-281	14	0	-2	-30	0.01	0.02	0.00	
5	10	192	-281	-14	0	2	-30	0.01	0.02	0.00	
6	10	-33	-281	47	0	-6	-30	0.00	0.03	0.00	
7	10	-33	-281	-47	0	6	-30	0.00	0.03	0.00	
8	10	71	-281	47	0	-6	-30	0.00	0.03	0.00	
9	10	71	-281	-47	0	6	-30	0.00	0.03	0.00	
10	10	-154	-281	14	0	-2	-30	0.00	0.02	0.00	
11	10	-154	-281	-14	0	2	-30	0.00	0.02	0.00	
12	10	192	-281	14	0	-2	-30	0.01	0.02	0.00	
13	10	192	-281	-14	0	2	-30	0.01	0.02	0.00	
14	10	-33	-281	47	0	-6	-30	0.00	0.03	0.00	
15	10	-33	-281	-47	0	6	-30	0.00	0.03	0.00	
16	10	71	-281	47	0	-6	-30	0.00	0.03	0.00	
17	10	71	-281	-47	0	6	-30	0.00	0.03	0.00	
1	21	110	-1602	0	0	-0	-337	0.04	0.14	0.00	
2	21	-154	-287	14	0	-3	-60	0.01	0.03	0.00	
3	21	-154	-287	-14	0	3	-60	0.01	0.03	0.00	
4	21	192	-287	14	0	-3	-60	0.01	0.03	0.00	
5	21	192	-287	-14	0	3	-60	0.01	0.03	0.00	
6	21	-33	-287	47	0	-11	-60	0.01	0.03	0.00	
7	21	-33	-287	-47	0	11	-60	0.01	0.03	0.00	
8	21	71	-287	47	0	-11	-60	0.01	0.03	0.00	
9	21	71	-287	-47	0	11	-60	0.01	0.03	0.00	
10	21	-154	-287	14	0	-3	-60	0.01	0.03	0.00	
11	21	-154	-287	-14	0	3	-60	0.01	0.03	0.00	
12	21	192	-287	14	0	-3	-60	0.01	0.03	0.00	
13	21	192	-287	-14	0	3	-60	0.01	0.03	0.00	
14	21	-33	-287	47	0	-11	-60	0.01	0.03	0.00	
15	21	-33	-287	-47	0	11	-60	0.01	0.03	0.00	
16	21	71	-287	47	0	-11	-60	0.01	0.03	0.00	
17	21	71	-287	-47	0	11	-60	0.01	0.03	0.00	
1	31	110	-1610	0	0	-0	-502	0.05	0.14	0.00	
2	31	-154	-293	14	0	-5	-90	0.01	0.03	0.00	
3	31	-154	-293	-14	0	5	-90	0.01	0.03	0.00	
4	31	192	-293	14	0	-5	-90	0.01	0.03	0.00	
5	31	192	-293	-14	0	5	-90	0.01	0.03	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

6	31	-33	-293	47	0	-16	-90	0.01	0.03	0.00
7	31	-33	-293	-47	0	16	-90	0.01	0.03	0.00
8	31	71	-293	47	0	-16	-90	0.01	0.03	0.00
9	31	71	-293	-47	0	16	-90	0.01	0.03	0.00
10	31	-154	-293	14	0	-5	-90	0.01	0.03	0.00
11	31	-154	-293	-14	0	5	-90	0.01	0.03	0.00
12	31	192	-293	14	0	-5	-90	0.01	0.03	0.00
13	31	192	-293	-14	0	5	-90	0.01	0.03	0.00
14	31	-33	-293	47	0	-16	-90	0.01	0.03	0.00
15	31	-33	-293	-47	0	16	-90	0.01	0.03	0.00
16	31	71	-293	47	0	-16	-90	0.01	0.03	0.00
17	31	71	-293	-47	0	16	-90	0.01	0.03	0.00
1	41	110	-1617	0	0	-0	-669	0.07	0.14	0.00
2	41	-154	-299	14	0	-6	-120	0.01	0.03	0.00
3	41	-154	-299	-14	0	6	-120	0.01	0.03	0.00
4	41	192	-299	14	0	-6	-120	0.01	0.03	0.00
5	41	192	-299	-14	0	6	-120	0.01	0.03	0.00
6	41	-33	-299	47	0	-21	-120	0.01	0.03	0.00
7	41	-33	-299	-47	0	21	-120	0.01	0.03	0.00
8	41	71	-299	47	0	-21	-120	0.01	0.03	0.00
9	41	71	-299	-47	0	21	-120	0.01	0.03	0.00
10	41	-154	-299	14	0	-6	-120	0.01	0.03	0.00
11	41	-154	-299	-14	0	6	-120	0.01	0.03	0.00
12	41	192	-299	14	0	-6	-120	0.01	0.03	0.00
13	41	192	-299	-14	0	6	-120	0.01	0.03	0.00
14	41	-33	-299	47	0	-21	-120	0.01	0.03	0.00
15	41	-33	-299	-47	0	21	-120	0.01	0.03	0.00
16	41	71	-299	47	0	-21	-120	0.01	0.03	0.00
17	41	71	-299	-47	0	21	-120	0.01	0.03	0.00
1	52	110	-1625	0	0	0	-836	0.09	0.14	0.00
2	52	-154	-305	14	0	-8	-151	0.02	0.03	0.00
3	52	-154	-305	-14	0	8	-151	0.02	0.03	0.00
4	52	192	-305	14	0	-8	-151	0.02	0.03	0.00
5	52	192	-305	-14	0	8	-151	0.02	0.03	0.00
6	52	-33	-305	47	0	-26	-151	0.02	0.03	0.00
7	52	-33	-305	-47	0	26	-151	0.02	0.03	0.00
8	52	71	-305	47	0	-26	-151	0.02	0.03	0.00
9	52	71	-305	-47	0	26	-151	0.02	0.03	0.00
10	52	-154	-305	14	0	-8	-151	0.02	0.03	0.00
11	52	-154	-305	-14	0	8	-151	0.02	0.03	0.00
12	52	192	-305	14	0	-8	-151	0.02	0.03	0.00
13	52	192	-305	-14	0	8	-151	0.02	0.03	0.00
14	52	-33	-305	47	0	-26	-151	0.02	0.03	0.00
15	52	-33	-305	-47	0	26	-151	0.02	0.03	0.00
16	52	71	-305	47	0	-26	-151	0.02	0.03	0.00
17	52	71	-305	-47	0	26	-151	0.02	0.03	0.00
1	62	110	-1632	0	0	-0	-1004	0.10	0.14	0.00
2	62	-154	-310	14	0	-9	-183	0.02	0.03	0.00
3	62	-154	-310	-14	0	9	-183	0.02	0.03	0.00
4	62	192	-310	14	0	-9	-183	0.02	0.03	0.00
5	62	192	-310	-14	0	9	-183	0.02	0.03	0.00
6	62	-33	-310	47	0	-31	-183	0.02	0.03	0.00
7	62	-33	-310	-47	0	31	-183	0.02	0.03	0.00
8	62	71	-310	47	0	-31	-183	0.02	0.03	0.00
9	62	71	-310	-47	0	31	-183	0.02	0.03	0.00
10	62	-154	-310	14	0	-9	-183	0.02	0.03	0.00
11	62	-154	-310	-14	0	9	-183	0.02	0.03	0.00
12	62	192	-310	14	0	-9	-183	0.02	0.03	0.00
13	62	192	-310	-14	0	9	-183	0.02	0.03	0.00
14	62	-33	-310	47	0	-31	-183	0.02	0.03	0.00
15	62	-33	-310	-47	0	31	-183	0.02	0.03	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

16	62	71	-310	47	0	-31	-183	0.02	0.03	0.00
17	62	71	-310	-47	0	31	-183	0.02	0.03	0.00
1	72	110	-1640	0	0	-0	-1172	0.12	0.14	0.00
2	72	-154	-316	14	0	-11	-215	0.02	0.03	0.00
3	72	-154	-316	-14	0	11	-215	0.02	0.03	0.00
4	72	192	-316	14	0	-11	-215	0.02	0.03	0.00
5	72	192	-316	-14	0	11	-215	0.02	0.03	0.00
6	72	-33	-316	47	0	-35	-215	0.02	0.03	0.00
7	72	-33	-316	-47	0	35	-215	0.02	0.03	0.00
8	72	71	-316	47	0	-35	-215	0.03	0.03	0.00
9	72	71	-316	-47	0	35	-215	0.03	0.03	0.00
10	72	-154	-316	14	0	-11	-215	0.02	0.03	0.00
11	72	-154	-316	-14	0	11	-215	0.02	0.03	0.00
12	72	192	-316	14	0	-11	-215	0.02	0.03	0.00
13	72	192	-316	-14	0	11	-215	0.02	0.03	0.00
14	72	-33	-316	47	0	-35	-215	0.02	0.03	0.00
15	72	-33	-316	-47	0	35	-215	0.02	0.03	0.00
16	72	71	-316	47	0	-35	-215	0.03	0.03	0.00
17	72	71	-316	-47	0	35	-215	0.03	0.03	0.00
1	83	110	-1647	0	0	-0	-1342	0.14	0.14	0.00
2	83	-154	-322	14	0	-12	-248	0.03	0.03	0.00
3	83	-154	-322	-14	0	12	-248	0.03	0.03	0.00
4	83	192	-322	14	0	-12	-248	0.03	0.03	0.00
5	83	192	-322	-14	0	12	-248	0.03	0.03	0.00
6	83	-33	-322	47	0	-40	-248	0.03	0.03	0.00
7	83	-33	-322	-47	0	40	-248	0.03	0.03	0.00
8	83	71	-322	47	0	-40	-248	0.03	0.03	0.00
9	83	71	-322	-47	0	40	-248	0.03	0.03	0.00
10	83	-154	-322	14	0	-12	-248	0.03	0.03	0.00
11	83	-154	-322	-14	0	12	-248	0.03	0.03	0.00
12	83	192	-322	14	0	-12	-248	0.03	0.03	0.00
13	83	192	-322	-14	0	12	-248	0.03	0.03	0.00
14	83	-33	-322	47	0	-40	-248	0.03	0.03	0.00
15	83	-33	-322	-47	0	40	-248	0.03	0.03	0.00
16	83	71	-322	47	0	-40	-248	0.03	0.03	0.00
17	83	71	-322	-47	0	40	-248	0.03	0.03	0.00
1	93	110	-1655	0	0	-0	-1512	0.15	0.15	0.00
2	93	-154	-328	14	0	-14	-282	0.03	0.03	0.00
3	93	-154	-328	-14	0	14	-282	0.03	0.03	0.00
4	93	192	-328	14	0	-14	-282	0.03	0.03	0.00
5	93	192	-328	-14	0	14	-282	0.03	0.03	0.00
6	93	-33	-328	47	0	-45	-282	0.03	0.03	0.00
7	93	-33	-328	-47	0	45	-282	0.03	0.03	0.00
8	93	71	-328	47	0	-45	-282	0.03	0.03	0.00
9	93	71	-328	-47	0	45	-282	0.03	0.03	0.00
10	93	-154	-328	14	0	-14	-282	0.03	0.03	0.00
11	93	-154	-328	-14	0	14	-282	0.03	0.03	0.00
12	93	192	-328	14	0	-14	-282	0.03	0.03	0.00
13	93	192	-328	-14	0	14	-282	0.03	0.03	0.00
14	93	-33	-328	47	0	-45	-282	0.03	0.03	0.00
15	93	-33	-328	-47	0	45	-282	0.03	0.03	0.00
16	93	71	-328	47	0	-45	-282	0.03	0.03	0.00
17	93	71	-328	-47	0	45	-282	0.03	0.03	0.00
1	103	110	-1662	0	0	0	-1683	0.17	0.15	0.00
2	103	-154	-333	14	0	-15	-316	0.03	0.03	0.00
3	103	-154	-333	-14	0	15	-316	0.03	0.03	0.00
4	103	192	-333	14	0	-15	-316	0.04	0.03	0.00
5	103	192	-333	-14	0	15	-316	0.04	0.03	0.00
6	103	-33	-333	47	0	-50	-316	0.04	0.03	0.00
7	103	-33	-333	-47	0	50	-316	0.04	0.03	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

8	103	71	-333	47	0	-50	-316	0.04	0.03	0.00
9	103	71	-333	-47	0	50	-316	0.04	0.03	0.00
10	103	-154	-333	14	0	-15	-316	0.03	0.03	0.00
11	103	-154	-333	-14	0	15	-316	0.03	0.03	0.00
12	103	192	-333	14	0	-15	-316	0.04	0.03	0.00
13	103	192	-333	-14	0	15	-316	0.04	0.03	0.00
14	103	-33	-333	47	0	-50	-316	0.04	0.03	0.00
15	103	-33	-333	-47	0	50	-316	0.04	0.03	0.00
16	103	71	-333	47	0	-50	-316	0.04	0.03	0.00
17	103	71	-333	-47	0	50	-316	0.04	0.03	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota

2	-154	15	316	10	12	1.000	1.000	0.09	Piano 'zx'
3	-154	15	316	10	12	1.000	1.000	0.09	Piano 'zx'
6	-33	50	316	10	12	1.000	1.000	0.09	Piano 'zx'
7	-33	50	316	10	12	1.000	1.000	0.09	Piano 'zx'
10	-154	15	316	10	12	1.000	1.000	0.09	Piano 'zx'
11	-154	15	316	10	12	1.000	1.000	0.09	Piano 'zx'
14	-33	50	316	10	12	1.000	1.000	0.09	Piano 'zx'
15	-33	50	316	10	12	1.000	1.000	0.09	Piano 'zx'

ASTA NUM. 2 NI 4 NF 5 Lungh. 103.1 cm SEZ. 1 Rp B= 31.0 H= 36.0 cm

categoria: p.p. y qy tot.

qy medio: 0.5580 0.5580 kg/cm

NC	x -- cm	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota

1	0	50	6018	-0	0	0	-1691	0.17	0.53	0.00	
2	0	1028	1182	-86	0	-16	-317	0.04	0.10	0.00	
3	0	1028	1182	86	0	16	-317	0.04	0.10	0.00	
4	0	-1008	1182	-86	0	-16	-317	0.03	0.10	0.00	
5	0	-1008	1182	86	0	16	-317	0.03	0.10	0.00	
6	0	315	1182	-288	0	-52	-317	0.04	0.11	0.00	
7	0	315	1182	288	0	52	-317	0.04	0.11	0.00	
8	0	-296	1182	-288	0	-52	-317	0.04	0.11	0.00	
9	0	-296	1182	288	0	52	-317	0.04	0.11	0.00	
10	0	1028	1182	-86	0	-16	-317	0.04	0.10	0.00	
11	0	1028	1182	86	0	16	-317	0.04	0.10	0.00	
12	0	-1008	1182	-86	0	-16	-317	0.03	0.10	0.00	
13	0	-1008	1182	86	0	16	-317	0.03	0.10	0.00	
14	0	315	1182	-288	0	-52	-317	0.04	0.11	0.00	
15	0	315	1182	288	0	52	-317	0.04	0.11	0.00	
16	0	-296	1182	-288	0	-52	-317	0.04	0.11	0.00	
17	0	-296	1182	288	0	52	-317	0.04	0.11	0.00	

1	10	50	6011	-0	0	0	-1071	0.11	0.53	0.00	
2	10	1028	1176	-86	0	-7	-195	0.03	0.10	0.00	
3	10	1028	1176	86	0	7	-195	0.03	0.10	0.00	
4	10	-1008	1176	-86	0	-7	-196	0.02	0.10	0.00	
5	10	-1008	1176	86	0	7	-196	0.02	0.10	0.00	
6	10	315	1176	-288	0	-22	-195	0.03	0.11	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

7	10	315	1176	288	0	22	-195	0.03	0.11	0.00
8	10	-296	1176	-288	0	-22	-196	0.02	0.11	0.00
9	10	-296	1176	288	0	22	-196	0.02	0.11	0.00
10	10	1028	1176	-86	0	-7	-195	0.03	0.10	0.00
11	10	1028	1176	86	0	7	-195	0.03	0.10	0.00
12	10	-1008	1176	-86	0	-7	-196	0.02	0.10	0.00
13	10	-1008	1176	86	0	7	-196	0.02	0.10	0.00
14	10	315	1176	-288	0	-22	-195	0.03	0.11	0.00
15	10	315	1176	288	0	22	-195	0.03	0.11	0.00
16	10	-296	1176	-288	0	-22	-196	0.02	0.11	0.00
17	10	-296	1176	288	0	22	-196	0.02	0.11	0.00

1	21	50	6003	-0	0	0	-451	0.05	0.53	0.00
2	21	1028	1170	-86	0	2	-74	0.02	0.10	0.00
3	21	1028	1170	86	0	-2	-74	0.02	0.10	0.00
4	21	-1008	1170	-86	0	2	-75	0.01	0.10	0.00
5	21	-1008	1170	86	0	-2	-75	0.01	0.10	0.00
6	21	315	1170	-288	0	7	-74	0.01	0.11	0.00
7	21	315	1170	288	0	-7	-74	0.01	0.11	0.00
8	21	-296	1170	-288	0	7	-75	0.01	0.11	0.00
9	21	-296	1170	288	0	-7	-75	0.01	0.11	0.00
10	21	1028	1170	-86	0	2	-74	0.02	0.10	0.00
11	21	1028	1170	86	0	-2	-74	0.02	0.10	0.00
12	21	-1008	1170	-86	0	2	-75	0.01	0.10	0.00
13	21	-1008	1170	86	0	-2	-75	0.01	0.10	0.00
14	21	315	1170	-288	0	7	-74	0.01	0.11	0.00
15	21	315	1170	288	0	-7	-74	0.01	0.11	0.00
16	21	-296	1170	-288	0	7	-75	0.01	0.11	0.00
17	21	-296	1170	288	0	-7	-75	0.01	0.11	0.00

1	31	50	5996	-0	0	0	167	0.02	0.53	0.00
2	31	1028	1165	-86	0	11	46	0.02	0.10	0.00
3	31	1028	1165	86	0	-11	46	0.02	0.10	0.00
4	31	-1008	1165	-86	0	11	46	0.01	0.10	0.00
5	31	-1008	1165	86	0	-11	46	0.01	0.10	0.00
6	31	315	1165	-288	0	37	46	0.01	0.11	0.00
7	31	315	1165	288	0	-37	46	0.01	0.11	0.00
8	31	-296	1165	-288	0	37	46	0.01	0.11	0.00
9	31	-296	1165	288	0	-37	46	0.01	0.11	0.00
10	31	1028	1165	-86	0	11	46	0.02	0.10	0.00
11	31	1028	1165	86	0	-11	46	0.02	0.10	0.00
12	31	-1008	1165	-86	0	11	46	0.01	0.10	0.00
13	31	-1008	1165	86	0	-11	46	0.01	0.10	0.00
14	31	315	1165	-288	0	37	46	0.01	0.11	0.00
15	31	315	1165	288	0	-37	46	0.01	0.11	0.00
16	31	-296	1165	-288	0	37	46	0.01	0.11	0.00
17	31	-296	1165	288	0	-37	46	0.01	0.11	0.00

1	41	50	5988	-0	0	0	785	0.08	0.53	0.00
2	41	1028	1159	-86	0	20	166	0.03	0.10	0.00
3	41	1028	1159	86	0	-20	166	0.03	0.10	0.00
4	41	-1008	1159	-86	0	20	166	0.02	0.10	0.00
5	41	-1008	1159	86	0	-20	166	0.02	0.10	0.00
6	41	315	1159	-288	0	67	166	0.03	0.10	0.00
7	41	315	1159	288	0	-67	166	0.03	0.10	0.00
8	41	-296	1159	-288	0	67	166	0.02	0.10	0.00
9	41	-296	1159	288	0	-67	166	0.02	0.10	0.00
10	41	1028	1159	-86	0	20	166	0.03	0.10	0.00
11	41	1028	1159	86	0	-20	166	0.03	0.10	0.00
12	41	-1008	1159	-86	0	20	166	0.02	0.10	0.00
13	41	-1008	1159	86	0	-20	166	0.02	0.10	0.00
14	41	315	1159	-288	0	67	166	0.03	0.10	0.00
15	41	315	1159	288	0	-67	166	0.03	0.10	0.00
16	41	-296	1159	-288	0	67	166	0.02	0.10	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali
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PROGETTO DEFINITIVO

Relazione di calcolo strutturale

17	41	-296	1159	288	0	-67	166	0.02	0.10	0.00
1	52	50	5981	-0	0	0	1402	0.14	0.53	0.00
2	52	1028	1153	-86	0	29	285	0.04	0.10	0.00
3	52	1028	1153	86	0	-29	285	0.04	0.10	0.00
4	52	-1008	1153	-86	0	29	285	0.03	0.10	0.00
5	52	-1008	1153	86	0	-29	285	0.03	0.10	0.00
6	52	315	1153	-288	0	96	285	0.04	0.10	0.00
7	52	315	1153	288	0	-96	285	0.04	0.10	0.00
8	52	-296	1153	-288	0	96	285	0.04	0.10	0.00
9	52	-296	1153	288	0	-96	285	0.04	0.10	0.00
10	52	1028	1153	-86	0	29	285	0.04	0.10	0.00
11	52	1028	1153	86	0	-29	285	0.04	0.10	0.00
12	52	-1008	1153	-86	0	29	285	0.03	0.10	0.00
13	52	-1008	1153	86	0	-29	285	0.03	0.10	0.00
14	52	315	1153	-288	0	96	285	0.04	0.10	0.00
15	52	315	1153	288	0	-96	285	0.04	0.10	0.00
16	52	-296	1153	-288	0	96	285	0.04	0.10	0.00
17	52	-296	1153	288	0	-96	285	0.04	0.10	0.00
1	62	50	5973	-0	0	0	2018	0.21	0.53	0.00
2	62	1028	1147	-86	0	38	403	0.05	0.10	0.00
3	62	1028	1147	86	0	-38	403	0.05	0.10	0.00
4	62	-1008	1147	-86	0	38	403	0.04	0.10	0.00
5	62	-1008	1147	86	0	-38	403	0.04	0.10	0.00
6	62	315	1147	-288	0	126	403	0.05	0.10	0.00
7	62	315	1147	288	0	-126	403	0.05	0.10	0.00
8	62	-296	1147	-288	0	126	403	0.05	0.10	0.00
9	62	-296	1147	288	0	-126	403	0.05	0.10	0.00
10	62	1028	1147	-86	0	38	403	0.05	0.10	0.00
11	62	1028	1147	86	0	-38	403	0.05	0.10	0.00
12	62	-1008	1147	-86	0	38	403	0.04	0.10	0.00
13	62	-1008	1147	86	0	-38	403	0.04	0.10	0.00
14	62	315	1147	-288	0	126	403	0.05	0.10	0.00
15	62	315	1147	288	0	-126	403	0.05	0.10	0.00
16	62	-296	1147	-288	0	126	403	0.05	0.10	0.00
17	62	-296	1147	288	0	-126	403	0.05	0.10	0.00
1	72	50	5966	-0	0	0	2634	0.27	0.52	0.00
2	72	1028	1141	-86	0	47	521	0.07	0.10	0.00
3	72	1028	1141	86	0	-47	521	0.07	0.10	0.00
4	72	-1008	1141	-86	0	47	521	0.06	0.10	0.00
5	72	-1008	1141	86	0	-47	521	0.06	0.10	0.00
6	72	315	1141	-288	0	156	521	0.07	0.10	0.00
7	72	315	1141	288	0	-156	521	0.07	0.10	0.00
8	72	-296	1141	-288	0	156	521	0.07	0.10	0.00
9	72	-296	1141	288	0	-156	521	0.07	0.10	0.00
10	72	1028	1141	-86	0	47	521	0.07	0.10	0.00
11	72	1028	1141	86	0	-47	521	0.07	0.10	0.00
12	72	-1008	1141	-86	0	47	521	0.06	0.10	0.00
13	72	-1008	1141	86	0	-47	521	0.06	0.10	0.00
14	72	315	1141	-288	0	156	521	0.07	0.10	0.00
15	72	315	1141	288	0	-156	521	0.07	0.10	0.00
16	72	-296	1141	-288	0	156	521	0.07	0.10	0.00
17	72	-296	1141	288	0	-156	521	0.07	0.10	0.00
1	83	50	5958	-0	0	0	3249	0.33	0.52	0.00
2	83	1028	1136	-86	0	56	639	0.08	0.10	0.00
3	83	1028	1136	86	0	-56	639	0.08	0.10	0.00
4	83	-1008	1136	-86	0	56	639	0.07	0.10	0.00
5	83	-1008	1136	86	0	-56	639	0.07	0.10	0.00
6	83	315	1136	-288	0	185	639	0.08	0.10	0.00
7	83	315	1136	288	0	-185	639	0.08	0.10	0.00
8	83	-296	1136	-288	0	185	639	0.08	0.10	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

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PROGETTO DEFINITIVO

Relazione di calcolo strutturale

9	83	-296	1136	288	0	-185	639	0.08	0.10	0.00
10	83	1028	1136	-86	0	56	639	0.08	0.10	0.00
11	83	1028	1136	86	0	-56	639	0.08	0.10	0.00
12	83	-1008	1136	-86	0	56	639	0.07	0.10	0.00
13	83	-1008	1136	86	0	-56	639	0.07	0.10	0.00
14	83	315	1136	-288	0	185	639	0.08	0.10	0.00
15	83	315	1136	288	0	-185	639	0.08	0.10	0.00
16	83	-296	1136	-288	0	185	639	0.08	0.10	0.00
17	83	-296	1136	288	0	-185	639	0.08	0.10	0.00
1	93	50	5951	-0	0	0	3863	0.39	0.52	0.00
2	93	1028	1130	-86	0	64	756	0.09	0.10	0.00
3	93	1028	1130	86	0	-64	756	0.09	0.10	0.00
4	93	-1008	1130	-86	0	64	756	0.08	0.10	0.00
5	93	-1008	1130	86	0	-64	756	0.08	0.10	0.00
6	93	315	1130	-288	0	215	756	0.10	0.10	0.00
7	93	315	1130	288	0	-215	756	0.10	0.10	0.00
8	93	-296	1130	-288	0	215	756	0.09	0.10	0.00
9	93	-296	1130	288	0	-215	756	0.09	0.10	0.00
10	93	1028	1130	-86	0	64	756	0.09	0.10	0.00
11	93	1028	1130	86	0	-64	756	0.09	0.10	0.00
12	93	-1008	1130	-86	0	64	756	0.08	0.10	0.00
13	93	-1008	1130	86	0	-64	756	0.08	0.10	0.00
14	93	315	1130	-288	0	215	756	0.10	0.10	0.00
15	93	315	1130	288	0	-215	756	0.10	0.10	0.00
16	93	-296	1130	-288	0	215	756	0.09	0.10	0.00
17	93	-296	1130	288	0	-215	756	0.09	0.10	0.00
1	103	50	5943	-0	0	0	4476	0.46	0.52	0.00
2	103	1028	1124	-86	0	73	872	0.11	0.10	0.00
3	103	1028	1124	86	0	-73	872	0.11	0.10	0.00
4	103	-1008	1124	-86	0	73	872	0.09	0.10	0.00
5	103	-1008	1124	86	0	-73	872	0.09	0.10	0.00
6	103	315	1124	-288	0	245	872	0.11	0.10	0.00
7	103	315	1124	288	0	-245	872	0.11	0.10	0.00
8	103	-296	1124	-288	0	245	872	0.11	0.10	0.00
9	103	-296	1124	288	0	-245	872	0.11	0.10	0.00
10	103	1028	1124	-86	0	73	872	0.11	0.10	0.00
11	103	1028	1124	86	0	-73	872	0.11	0.10	0.00
12	103	-1008	1124	-86	0	73	872	0.09	0.10	0.00
13	103	-1008	1124	86	0	-73	872	0.09	0.10	0.00
14	103	315	1124	-288	0	245	872	0.11	0.10	0.00
15	103	315	1124	288	0	-245	872	0.11	0.10	0.00
16	103	-296	1124	-288	0	245	872	0.11	0.10	0.00
17	103	-296	1124	288	0	-245	872	0.11	0.10	0.00

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
	--	-----							
	kg	kg*m							
4	-1008	73	872	10	12	1.000	1.000	0.09	Piano 'zx'
5	-1008	73	872	10	12	1.000	1.000	0.09	Piano 'zx'
8	-296	245	872	10	12	1.000	1.000	0.09	Piano 'zx'
9	-296	245	872	10	12	1.000	1.000	0.09	Piano 'zx'
12	-1008	73	872	10	12	1.000	1.000	0.09	Piano 'zx'
13	-1008	73	872	10	12	1.000	1.000	0.09	Piano 'zx'
16	-296	245	872	10	12	1.000	1.000	0.09	Piano 'zx'
17	-296	245	872	10	12	1.000	1.000	0.09	Piano 'zx'

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

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PROGETTO DEFINITIVO

Relazione di calcolo strutturale

ASTA NUM. 3 NI 5 NF 6 Lungh. 103.1 cm SEZ. 1 Rp B= 31.0 H= 36.0 cm

categoria: p.p. y qy tot.
qy medio: 0.5580 0.5580 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	cm	kg			kg*m						
1	0	2	3304	-0	0	0	4463	0.45	0.29	0.00	
2	0	679	664	-57	0	73	869	0.10	0.06	0.00	
3	0	679	664	57	0	-73	869	0.10	0.06	0.00	
4	0	-678	664	-57	0	73	869	0.09	0.06	0.00	
5	0	-678	664	57	0	-73	869	0.09	0.06	0.00	
6	0	204	664	-190	0	243	869	0.11	0.06	0.00	
7	0	204	664	190	0	-243	869	0.11	0.06	0.00	
8	0	-203	664	-190	0	243	869	0.11	0.06	0.00	
9	0	-203	664	190	0	-243	869	0.11	0.06	0.00	
10	0	679	664	-57	0	73	869	0.10	0.06	0.00	
11	0	679	664	57	0	-73	869	0.10	0.06	0.00	
12	0	-678	664	-57	0	73	869	0.09	0.06	0.00	
13	0	-678	664	57	0	-73	869	0.09	0.06	0.00	
14	0	204	664	-190	0	243	869	0.11	0.06	0.00	
15	0	204	664	190	0	-243	869	0.11	0.06	0.00	
16	0	-203	664	-190	0	243	869	0.11	0.06	0.00	
17	0	-203	664	190	0	-243	869	0.11	0.06	0.00	
1	10	2	3297	-0	0	0	4803	0.49	0.29	0.00	
2	10	679	658	-57	0	79	938	0.11	0.06	0.00	
3	10	679	658	57	0	-79	938	0.11	0.06	0.00	
4	10	-678	658	-57	0	79	937	0.10	0.06	0.00	
5	10	-678	658	57	0	-79	937	0.10	0.06	0.00	
6	10	204	658	-190	0	262	937	0.12	0.06	0.00	
7	10	204	658	190	0	-262	937	0.12	0.06	0.00	
8	10	-203	658	-190	0	262	937	0.12	0.06	0.00	
9	10	-203	658	190	0	-262	937	0.12	0.06	0.00	
10	10	679	658	-57	0	79	938	0.11	0.06	0.00	
11	10	679	658	57	0	-79	938	0.11	0.06	0.00	
12	10	-678	658	-57	0	79	937	0.10	0.06	0.00	
13	10	-678	658	57	0	-79	937	0.10	0.06	0.00	
14	10	204	658	-190	0	262	937	0.12	0.06	0.00	
15	10	204	658	190	0	-262	937	0.12	0.06	0.00	
16	10	-203	658	-190	0	262	937	0.12	0.06	0.00	
17	10	-203	658	190	0	-262	937	0.12	0.06	0.00	
1	21	2	3289	-0	0	0	5143	0.52	0.29	0.00	
2	21	679	652	-57	0	85	1005	0.12	0.06	0.00	
3	21	679	652	57	0	-85	1005	0.12	0.06	0.00	
4	21	-678	652	-57	0	85	1005	0.11	0.06	0.00	
5	21	-678	652	57	0	-85	1005	0.11	0.06	0.00	
6	21	204	652	-190	0	282	1005	0.13	0.06	0.00	
7	21	204	652	190	0	-282	1005	0.13	0.06	0.00	
8	21	-203	652	-190	0	282	1005	0.13	0.06	0.00	
9	21	-203	652	190	0	-282	1005	0.13	0.06	0.00	
10	21	679	652	-57	0	85	1005	0.12	0.06	0.00	
11	21	679	652	57	0	-85	1005	0.12	0.06	0.00	
12	21	-678	652	-57	0	85	1005	0.11	0.06	0.00	
13	21	-678	652	57	0	-85	1005	0.11	0.06	0.00	
14	21	204	652	-190	0	282	1005	0.13	0.06	0.00	
15	21	204	652	190	0	-282	1005	0.13	0.06	0.00	
16	21	-203	652	-190	0	282	1005	0.13	0.06	0.00	
17	21	-203	652	190	0	-282	1005	0.13	0.06	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	31	2	3282	-0	0	0	5482	0.56	0.29	0.00
2	31	679	646	-57	0	91	1072	0.12	0.06	0.00
3	31	679	646	57	0	-91	1072	0.12	0.06	0.00
4	31	-678	646	-57	0	91	1072	0.12	0.06	0.00
5	31	-678	646	57	0	-91	1072	0.12	0.06	0.00
6	31	204	646	-190	0	302	1072	0.14	0.06	0.00
7	31	204	646	190	0	-302	1072	0.14	0.06	0.00
8	31	-203	646	-190	0	302	1072	0.13	0.06	0.00
9	31	-203	646	190	0	-302	1072	0.13	0.06	0.00
10	31	679	646	-57	0	91	1072	0.12	0.06	0.00
11	31	679	646	57	0	-91	1072	0.12	0.06	0.00
12	31	-678	646	-57	0	91	1072	0.12	0.06	0.00
13	31	-678	646	57	0	-91	1072	0.12	0.06	0.00
14	31	204	646	-190	0	302	1072	0.14	0.06	0.00
15	31	204	646	190	0	-302	1072	0.14	0.06	0.00
16	31	-203	646	-190	0	302	1072	0.13	0.06	0.00
17	31	-203	646	190	0	-302	1072	0.13	0.06	0.00

1	41	2	3274	-0	0	0	5820	0.59	0.29	0.00
2	41	679	641	-57	0	96	1138	0.13	0.06	0.00
3	41	679	641	57	0	-96	1138	0.13	0.06	0.00
4	41	-678	641	-57	0	96	1138	0.12	0.06	0.00
5	41	-678	641	57	0	-96	1138	0.12	0.06	0.00
6	41	204	641	-190	0	321	1138	0.14	0.06	0.00
7	41	204	641	190	0	-321	1138	0.14	0.06	0.00
8	41	-203	641	-190	0	321	1138	0.14	0.06	0.00
9	41	-203	641	190	0	-321	1138	0.14	0.06	0.00
10	41	679	641	-57	0	96	1138	0.13	0.06	0.00
11	41	679	641	57	0	-96	1138	0.13	0.06	0.00
12	41	-678	641	-57	0	96	1138	0.12	0.06	0.00
13	41	-678	641	57	0	-96	1138	0.12	0.06	0.00
14	41	204	641	-190	0	321	1138	0.14	0.06	0.00
15	41	204	641	190	0	-321	1138	0.14	0.06	0.00
16	41	-203	641	-190	0	321	1138	0.14	0.06	0.00
17	41	-203	641	190	0	-321	1138	0.14	0.06	0.00

1	52	2	3267	-0	0	0	6157	0.63	0.29	0.00
2	52	679	635	-57	0	102	1204	0.14	0.06	0.00
3	52	679	635	57	0	-102	1204	0.14	0.06	0.00
4	52	-678	635	-57	0	102	1204	0.13	0.06	0.00
5	52	-678	635	57	0	-102	1204	0.13	0.06	0.00
6	52	204	635	-190	0	341	1204	0.15	0.06	0.00
7	52	204	635	190	0	-341	1204	0.15	0.06	0.00
8	52	-203	635	-190	0	341	1204	0.15	0.06	0.00
9	52	-203	635	190	0	-341	1204	0.15	0.06	0.00
10	52	679	635	-57	0	102	1204	0.14	0.06	0.00
11	52	679	635	57	0	-102	1204	0.14	0.06	0.00
12	52	-678	635	-57	0	102	1204	0.13	0.06	0.00
13	52	-678	635	57	0	-102	1204	0.13	0.06	0.00
14	52	204	635	-190	0	341	1204	0.15	0.06	0.00
15	52	204	635	190	0	-341	1204	0.15	0.06	0.00
16	52	-203	635	-190	0	341	1204	0.15	0.06	0.00
17	52	-203	635	190	0	-341	1204	0.15	0.06	0.00

1	62	2	3260	-0	0	0	6494	0.66	0.29	0.00
2	62	679	629	-57	0	108	1269	0.15	0.06	0.00
3	62	679	629	57	0	-108	1269	0.15	0.06	0.00
4	62	-678	629	-57	0	108	1269	0.14	0.06	0.00
5	62	-678	629	57	0	-108	1269	0.14	0.06	0.00
6	62	204	629	-190	0	361	1269	0.16	0.06	0.00
7	62	204	629	190	0	-361	1269	0.16	0.06	0.00
8	62	-203	629	-190	0	361	1269	0.16	0.06	0.00
9	62	-203	629	190	0	-361	1269	0.16	0.06	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

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PROGETTO DEFINITIVO

Relazione di calcolo strutturale

10	62	679	629	-57	0	108	1269	0.15	0.06	0.00
11	62	679	629	57	0	-108	1269	0.15	0.06	0.00
12	62	-678	629	-57	0	108	1269	0.14	0.06	0.00
13	62	-678	629	57	0	-108	1269	0.14	0.06	0.00
14	62	204	629	-190	0	361	1269	0.16	0.06	0.00
15	62	204	629	190	0	-361	1269	0.16	0.06	0.00
16	62	-203	629	-190	0	361	1269	0.16	0.06	0.00
17	62	-203	629	190	0	-361	1269	0.16	0.06	0.00

1	72	2	3252	-0	0	-0	6829	0.69	0.29	0.00
2	72	679	623	-57	0	114	1334	0.15	0.06	0.00
3	72	679	623	57	0	-114	1334	0.15	0.06	0.00
4	72	-678	623	-57	0	114	1334	0.15	0.06	0.00
5	72	-678	623	57	0	-114	1334	0.15	0.06	0.00
6	72	204	623	-190	0	380	1334	0.17	0.06	0.00
7	72	204	623	190	0	-380	1334	0.17	0.06	0.00
8	72	-203	623	-190	0	380	1334	0.17	0.06	0.00
9	72	-203	623	190	0	-380	1334	0.17	0.06	0.00
10	72	679	623	-57	0	114	1334	0.15	0.06	0.00
11	72	679	623	57	0	-114	1334	0.15	0.06	0.00
12	72	-678	623	-57	0	114	1334	0.15	0.06	0.00
13	72	-678	623	57	0	-114	1334	0.15	0.06	0.00
14	72	204	623	-190	0	380	1334	0.17	0.06	0.00
15	72	204	623	190	0	-380	1334	0.17	0.06	0.00
16	72	-203	623	-190	0	380	1334	0.17	0.06	0.00
17	72	-203	623	190	0	-380	1334	0.17	0.06	0.00

1	83	2	3245	-0	0	0	7164	0.73	0.29	0.00
2	83	679	618	-57	0	120	1398	0.16	0.05	0.00
3	83	679	618	57	0	-120	1398	0.16	0.05	0.00
4	83	-678	618	-57	0	120	1398	0.15	0.05	0.00
5	83	-678	618	57	0	-120	1398	0.15	0.05	0.00
6	83	204	618	-190	0	400	1398	0.18	0.06	0.00
7	83	204	618	190	0	-400	1398	0.18	0.06	0.00
8	83	-203	618	-190	0	400	1398	0.18	0.06	0.00
9	83	-203	618	190	0	-400	1398	0.18	0.06	0.00
10	83	679	618	-57	0	120	1398	0.16	0.05	0.00
11	83	679	618	57	0	-120	1398	0.16	0.05	0.00
12	83	-678	618	-57	0	120	1398	0.15	0.05	0.00
13	83	-678	618	57	0	-120	1398	0.15	0.05	0.00
14	83	204	618	-190	0	400	1398	0.18	0.06	0.00
15	83	204	618	190	0	-400	1398	0.18	0.06	0.00
16	83	-203	618	-190	0	400	1398	0.18	0.06	0.00
17	83	-203	618	190	0	-400	1398	0.18	0.06	0.00

1	93	2	3237	-0	0	0	7499	0.76	0.28	0.00
2	93	679	612	-57	0	126	1461	0.17	0.05	0.00
3	93	679	612	57	0	-126	1461	0.17	0.05	0.00
4	93	-678	612	-57	0	126	1461	0.16	0.05	0.00
5	93	-678	612	57	0	-126	1461	0.16	0.05	0.00
6	93	204	612	-190	0	419	1461	0.19	0.06	0.00
7	93	204	612	190	0	-419	1461	0.19	0.06	0.00
8	93	-203	612	-190	0	419	1461	0.18	0.06	0.00
9	93	-203	612	190	0	-419	1461	0.18	0.06	0.00
10	93	679	612	-57	0	126	1461	0.17	0.05	0.00
11	93	679	612	57	0	-126	1461	0.17	0.05	0.00
12	93	-678	612	-57	0	126	1461	0.16	0.05	0.00
13	93	-678	612	57	0	-126	1461	0.16	0.05	0.00
14	93	204	612	-190	0	419	1461	0.19	0.06	0.00
15	93	204	612	190	0	-419	1461	0.19	0.06	0.00
16	93	-203	612	-190	0	419	1461	0.18	0.06	0.00
17	93	-203	612	190	0	-419	1461	0.18	0.06	0.00

1	103	2	3230	-0	0	0	7832	0.80	0.28	0.00
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Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

2	103	679	606	-57	0	132	1524	0.17	0.05	0.00
3	103	679	606	57	0	-132	1524	0.17	0.05	0.00
4	103	-678	606	-57	0	132	1524	0.17	0.05	0.00
5	103	-678	606	57	0	-132	1524	0.17	0.05	0.00
6	103	204	606	-190	0	439	1524	0.19	0.06	0.00
7	103	204	606	190	0	-439	1524	0.19	0.06	0.00
8	103	-203	606	-190	0	439	1524	0.19	0.06	0.00
9	103	-203	606	190	0	-439	1524	0.19	0.06	0.00
10	103	679	606	-57	0	132	1524	0.17	0.05	0.00
11	103	679	606	57	0	-132	1524	0.17	0.05	0.00
12	103	-678	606	-57	0	132	1524	0.17	0.05	0.00
13	103	-678	606	57	0	-132	1524	0.17	0.05	0.00
14	103	204	606	-190	0	439	1524	0.19	0.06	0.00
15	103	204	606	190	0	-439	1524	0.19	0.06	0.00
16	103	-203	606	-190	0	439	1524	0.19	0.06	0.00
17	103	-203	606	190	0	-439	1524	0.19	0.06	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
4	-678	132	1524	10	12	1.000	1.000	0.09	Piano 'zx'
5	-678	132	1524	10	12	1.000	1.000	0.09	Piano 'zx'
8	-203	439	1524	10	12	1.000	1.000	0.09	Piano 'zx'
9	-203	439	1524	10	12	1.000	1.000	0.09	Piano 'zx'
12	-678	132	1524	10	12	1.000	1.000	0.09	Piano 'zx'
13	-678	132	1524	10	12	1.000	1.000	0.09	Piano 'zx'
16	-203	439	1524	10	12	1.000	1.000	0.09	Piano 'zx'
17	-203	439	1524	10	12	1.000	1.000	0.09	Piano 'zx'

ASTA NUM. 4 NI 6 NF 7 Lungh. 103.1 cm SEZ. 1 Rp B= 31.0 H= 36.0 cm

categoria: p.p. y qy tot.
qy medio: 0.5580 0.5580 kg/cm

NC	x -- cm	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
		kg			kg*m						
1	0	-29	1780	-0	0	0	7823	0.80	0.16	0.00	
2	0	334	366	-29	0	131	1522	0.17	0.03	0.00	
3	0	334	366	29	0	-131	1522	0.17	0.03	0.00	
4	0	-345	366	-29	0	131	1522	0.17	0.03	0.00	
5	0	-345	366	29	0	-131	1522	0.17	0.03	0.00	
6	0	96	366	-97	0	438	1522	0.19	0.03	0.00	
7	0	96	366	97	0	-438	1522	0.19	0.03	0.00	
8	0	-107	366	-97	0	438	1522	0.19	0.03	0.00	
9	0	-107	366	97	0	-438	1522	0.19	0.03	0.00	
10	0	334	366	-29	0	131	1522	0.17	0.03	0.00	
11	0	334	366	29	0	-131	1522	0.17	0.03	0.00	
12	0	-345	366	-29	0	131	1522	0.17	0.03	0.00	
13	0	-345	366	29	0	-131	1522	0.17	0.03	0.00	
14	0	96	366	-97	0	438	1522	0.19	0.03	0.00	
15	0	96	366	97	0	-438	1522	0.19	0.03	0.00	
16	0	-107	366	-97	0	438	1522	0.19	0.03	0.00	
17	0	-107	366	97	0	-438	1522	0.19	0.03	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

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PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	10	-29	1773	-0	0	0	8006	0.81	0.16	0.00
2	10	334	361	-29	0	134	1559	0.17	0.03	0.00
3	10	334	361	29	0	-134	1559	0.17	0.03	0.00
4	10	-345	361	-29	0	134	1559	0.17	0.03	0.00
5	10	-345	361	29	0	-134	1559	0.17	0.03	0.00
6	10	96	361	-97	0	448	1559	0.20	0.03	0.00
7	10	96	361	97	0	-448	1559	0.20	0.03	0.00
8	10	-107	361	-97	0	448	1559	0.20	0.03	0.00
9	10	-107	361	97	0	-448	1559	0.20	0.03	0.00
10	10	334	361	-29	0	134	1559	0.17	0.03	0.00
11	10	334	361	29	0	-134	1559	0.17	0.03	0.00
12	10	-345	361	-29	0	134	1559	0.17	0.03	0.00
13	10	-345	361	29	0	-134	1559	0.17	0.03	0.00
14	10	96	361	-97	0	448	1559	0.20	0.03	0.00
15	10	96	361	97	0	-448	1559	0.20	0.03	0.00
16	10	-107	361	-97	0	448	1559	0.20	0.03	0.00
17	10	-107	361	97	0	-448	1559	0.20	0.03	0.00

1	21	-29	1765	-0	0	0	8189	0.83	0.16	0.00
2	21	334	355	-29	0	137	1596	0.18	0.03	0.00
3	21	334	355	29	0	-137	1596	0.18	0.03	0.00
4	21	-345	355	-29	0	137	1596	0.17	0.03	0.00
5	21	-345	355	29	0	-137	1596	0.17	0.03	0.00
6	21	96	355	-97	0	458	1596	0.20	0.03	0.00
7	21	96	355	97	0	-458	1596	0.20	0.03	0.00
8	21	-107	355	-97	0	458	1596	0.20	0.03	0.00
9	21	-107	355	97	0	-458	1596	0.20	0.03	0.00
10	21	334	355	-29	0	137	1596	0.18	0.03	0.00
11	21	334	355	29	0	-137	1596	0.18	0.03	0.00
12	21	-345	355	-29	0	137	1596	0.17	0.03	0.00
13	21	-345	355	29	0	-137	1596	0.17	0.03	0.00
14	21	96	355	-97	0	458	1596	0.20	0.03	0.00
15	21	96	355	97	0	-458	1596	0.20	0.03	0.00
16	21	-107	355	-97	0	458	1596	0.20	0.03	0.00
17	21	-107	355	97	0	-458	1596	0.20	0.03	0.00

1	31	-29	1758	-0	0	0	8371	0.85	0.15	0.00
2	31	334	349	-29	0	140	1633	0.18	0.03	0.00
3	31	334	349	29	0	-140	1633	0.18	0.03	0.00
4	31	-345	349	-29	0	140	1633	0.18	0.03	0.00
5	31	-345	349	29	0	-140	1633	0.18	0.03	0.00
6	31	96	349	-97	0	468	1633	0.21	0.03	0.00
7	31	96	349	97	0	-468	1633	0.21	0.03	0.00
8	31	-107	349	-97	0	468	1633	0.20	0.03	0.00
9	31	-107	349	97	0	-468	1633	0.20	0.03	0.00
10	31	334	349	-29	0	140	1633	0.18	0.03	0.00
11	31	334	349	29	0	-140	1633	0.18	0.03	0.00
12	31	-345	349	-29	0	140	1633	0.18	0.03	0.00
13	31	-345	349	29	0	-140	1633	0.18	0.03	0.00
14	31	96	349	-97	0	468	1633	0.21	0.03	0.00
15	31	96	349	97	0	-468	1633	0.21	0.03	0.00
16	31	-107	349	-97	0	468	1633	0.20	0.03	0.00
17	31	-107	349	97	0	-468	1633	0.20	0.03	0.00

1	41	-29	1750	-0	0	0	8551	0.87	0.15	0.00
2	41	334	343	-29	0	143	1668	0.19	0.03	0.00
3	41	334	343	29	0	-143	1668	0.19	0.03	0.00
4	41	-345	343	-29	0	143	1668	0.18	0.03	0.00
5	41	-345	343	29	0	-143	1668	0.18	0.03	0.00
6	41	96	343	-97	0	478	1668	0.21	0.03	0.00
7	41	96	343	97	0	-478	1668	0.21	0.03	0.00
8	41	-107	343	-97	0	478	1668	0.21	0.03	0.00
9	41	-107	343	97	0	-478	1668	0.21	0.03	0.00
10	41	334	343	-29	0	143	1668	0.19	0.03	0.00

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PROGETTO DEFINITIVO

Relazione di calcolo strutturale

11	41	334	343	29	0	-143	1668	0.19	0.03	0.00
12	41	-345	343	-29	0	143	1668	0.18	0.03	0.00
13	41	-345	343	29	0	-143	1668	0.18	0.03	0.00
14	41	96	343	-97	0	478	1668	0.21	0.03	0.00
15	41	96	343	97	0	-478	1668	0.21	0.03	0.00
16	41	-107	343	-97	0	478	1668	0.21	0.03	0.00
17	41	-107	343	97	0	-478	1668	0.21	0.03	0.00

1	52	-29	1743	-0	0	0	8732	0.89	0.15	0.00
2	52	334	338	-29	0	146	1703	0.19	0.03	0.00
3	52	334	338	29	0	-146	1703	0.19	0.03	0.00
4	52	-345	338	-29	0	146	1703	0.19	0.03	0.00
5	52	-345	338	29	0	-146	1703	0.19	0.03	0.00
6	52	96	338	-97	0	488	1703	0.21	0.03	0.00
7	52	96	338	97	0	-488	1703	0.21	0.03	0.00
8	52	-107	338	-97	0	488	1703	0.21	0.03	0.00
9	52	-107	338	97	0	-488	1703	0.21	0.03	0.00
10	52	334	338	-29	0	146	1703	0.19	0.03	0.00
11	52	334	338	29	0	-146	1703	0.19	0.03	0.00
12	52	-345	338	-29	0	146	1703	0.19	0.03	0.00
13	52	-345	338	29	0	-146	1703	0.19	0.03	0.00
14	52	96	338	-97	0	488	1703	0.21	0.03	0.00
15	52	96	338	97	0	-488	1703	0.21	0.03	0.00
16	52	-107	338	-97	0	488	1703	0.21	0.03	0.00
17	52	-107	338	97	0	-488	1703	0.21	0.03	0.00

1	62	-29	1736	-0	0	0	8911	0.91	0.15	0.00
2	62	334	332	-29	0	149	1738	0.19	0.03	0.00
3	62	334	332	29	0	-149	1738	0.19	0.03	0.00
4	62	-345	332	-29	0	149	1738	0.19	0.03	0.00
5	62	-345	332	29	0	-149	1738	0.19	0.03	0.00
6	62	96	332	-97	0	498	1738	0.22	0.03	0.00
7	62	96	332	97	0	-498	1738	0.22	0.03	0.00
8	62	-107	332	-97	0	498	1738	0.22	0.03	0.00
9	62	-107	332	97	0	-498	1738	0.22	0.03	0.00
10	62	334	332	-29	0	149	1738	0.19	0.03	0.00
11	62	334	332	29	0	-149	1738	0.19	0.03	0.00
12	62	-345	332	-29	0	149	1738	0.19	0.03	0.00
13	62	-345	332	29	0	-149	1738	0.19	0.03	0.00
14	62	96	332	-97	0	498	1738	0.22	0.03	0.00
15	62	96	332	97	0	-498	1738	0.22	0.03	0.00
16	62	-107	332	-97	0	498	1738	0.22	0.03	0.00
17	62	-107	332	97	0	-498	1738	0.22	0.03	0.00

1	72	-29	1728	-0	0	0	9090	0.92	0.15	0.00
2	72	334	326	-29	0	152	1772	0.20	0.03	0.00
3	72	334	326	29	0	-152	1772	0.20	0.03	0.00
4	72	-345	326	-29	0	152	1772	0.19	0.03	0.00
5	72	-345	326	29	0	-152	1772	0.19	0.03	0.00
6	72	96	326	-97	0	508	1772	0.22	0.03	0.00
7	72	96	326	97	0	-508	1772	0.22	0.03	0.00
8	72	-107	326	-97	0	508	1772	0.22	0.03	0.00
9	72	-107	326	97	0	-508	1772	0.22	0.03	0.00
10	72	334	326	-29	0	152	1772	0.20	0.03	0.00
11	72	334	326	29	0	-152	1772	0.20	0.03	0.00
12	72	-345	326	-29	0	152	1772	0.19	0.03	0.00
13	72	-345	326	29	0	-152	1772	0.19	0.03	0.00
14	72	96	326	-97	0	508	1772	0.22	0.03	0.00
15	72	96	326	97	0	-508	1772	0.22	0.03	0.00
16	72	-107	326	-97	0	508	1772	0.22	0.03	0.00
17	72	-107	326	97	0	-508	1772	0.22	0.03	0.00

1	83	-29	1721	-0	0	0	9268	0.94	0.15	0.00
2	83	334	320	-29	0	155	1805	0.20	0.03	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

3	83	334	320	29	0	-155	1805	0.20	0.03	0.00
4	83	-345	320	-29	0	155	1805	0.20	0.03	0.00
5	83	-345	320	29	0	-155	1805	0.20	0.03	0.00
6	83	96	320	-97	0	518	1805	0.23	0.03	0.00
7	83	96	320	97	0	-518	1805	0.23	0.03	0.00
8	83	-107	320	-97	0	518	1805	0.23	0.03	0.00
9	83	-107	320	97	0	-518	1805	0.23	0.03	0.00
10	83	334	320	-29	0	155	1805	0.20	0.03	0.00
11	83	334	320	29	0	-155	1805	0.20	0.03	0.00
12	83	-345	320	-29	0	155	1805	0.20	0.03	0.00
13	83	-345	320	29	0	-155	1805	0.20	0.03	0.00
14	83	96	320	-97	0	518	1805	0.23	0.03	0.00
15	83	96	320	97	0	-518	1805	0.23	0.03	0.00
16	83	-107	320	-97	0	518	1805	0.23	0.03	0.00
17	83	-107	320	97	0	-518	1805	0.23	0.03	0.00

1	93	-29	1713	-0	0	0	9445	0.96	0.15	0.00
2	93	334	315	-29	0	158	1838	0.20	0.03	0.00
3	93	334	315	29	0	-158	1838	0.20	0.03	0.00
4	93	-345	315	-29	0	158	1838	0.20	0.03	0.00
5	93	-345	315	29	0	-158	1838	0.20	0.03	0.00
6	93	96	315	-97	0	528	1838	0.23	0.03	0.00
7	93	96	315	97	0	-528	1838	0.23	0.03	0.00
8	93	-107	315	-97	0	528	1838	0.23	0.03	0.00
9	93	-107	315	97	0	-528	1838	0.23	0.03	0.00
10	93	334	315	-29	0	158	1838	0.20	0.03	0.00
11	93	334	315	29	0	-158	1838	0.20	0.03	0.00
12	93	-345	315	-29	0	158	1838	0.20	0.03	0.00
13	93	-345	315	29	0	-158	1838	0.20	0.03	0.00
14	93	96	315	-97	0	528	1838	0.23	0.03	0.00
15	93	96	315	97	0	-528	1838	0.23	0.03	0.00
16	93	-107	315	-97	0	528	1838	0.23	0.03	0.00
17	93	-107	315	97	0	-528	1838	0.23	0.03	0.00

1	103	-29	1706	-0	0	0	9621	0.98	0.15	0.00
2	103	334	309	-29	0	161	1870	0.21	0.03	0.00
3	103	334	309	29	0	-161	1870	0.21	0.03	0.00
4	103	-345	309	-29	0	161	1870	0.20	0.03	0.00
5	103	-345	309	29	0	-161	1870	0.20	0.03	0.00
6	103	96	309	-97	0	538	1870	0.24	0.03	0.00
7	103	96	309	97	0	-538	1870	0.24	0.03	0.00
8	103	-107	309	-97	0	538	1870	0.23	0.03	0.00
9	103	-107	309	97	0	-538	1870	0.23	0.03	0.00
10	103	334	309	-29	0	161	1870	0.21	0.03	0.00
11	103	334	309	29	0	-161	1870	0.21	0.03	0.00
12	103	-345	309	-29	0	161	1870	0.20	0.03	0.00
13	103	-345	309	29	0	-161	1870	0.20	0.03	0.00
14	103	96	309	-97	0	538	1870	0.24	0.03	0.00
15	103	96	309	97	0	-538	1870	0.24	0.03	0.00
16	103	-107	309	-97	0	538	1870	0.23	0.03	0.00
17	103	-107	309	97	0	-538	1870	0.23	0.03	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
1	-29	0	9621	10	12	1.000	1.000	0.09	Piano 'zx'
4	-345	161	1870	10	12	1.000	1.000	0.09	Piano 'zx'
5	-345	161	1870	10	12	1.000	1.000	0.09	Piano 'zx'

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

8	-107	538	1870	10	12	1.000	1.000	0.09	Piano	'zx'
9	-107	538	1870	10	12	1.000	1.000	0.09	Piano	'zx'
12	-345	161	1870	10	12	1.000	1.000	0.09	Piano	'zx'
13	-345	161	1870	10	12	1.000	1.000	0.09	Piano	'zx'
16	-107	538	1870	10	12	1.000	1.000	0.09	Piano	'zx'
17	-107	538	1870	10	12	1.000	1.000	0.09	Piano	'zx'

ASTA NUM. 5 NI 7 NF 8 Lungh. 103.1 cm SEZ. 1 Rp B= 31.0 H= 36.0 cm

categoria: p.p. y qy tot.
qy medio: 0.5580 0.5580 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	cm	kg			kg*m						
1	0	-41	155	-0	0	0	9618	0.98	0.01	0.00	
2	0	-8	51	-2	0	161	1870	0.20	0.00	0.00	
3	0	-8	51	2	0	-161	1870	0.20	0.00	0.00	
4	0	-8	51	-2	0	161	1870	0.20	0.00	0.00	
5	0	-8	51	2	0	-161	1870	0.20	0.00	0.00	
6	0	-8	51	-7	0	538	1870	0.23	0.00	0.00	
7	0	-8	51	7	0	-538	1870	0.23	0.00	0.00	
8	0	-8	51	-7	0	538	1870	0.23	0.00	0.00	
9	0	-8	51	7	0	-538	1870	0.23	0.00	0.00	
10	0	-8	51	-2	0	161	1870	0.20	0.00	0.00	
11	0	-8	51	2	0	-161	1870	0.20	0.00	0.00	
12	0	-8	51	-2	0	161	1870	0.20	0.00	0.00	
13	0	-8	51	2	0	-161	1870	0.20	0.00	0.00	
14	0	-8	51	-7	0	538	1870	0.23	0.00	0.00	
15	0	-8	51	7	0	-538	1870	0.23	0.00	0.00	
16	0	-8	51	-7	0	538	1870	0.23	0.00	0.00	
17	0	-8	51	7	0	-538	1870	0.23	0.00	0.00	
1	10	-41	147	-0	0	0	9634	0.98	0.01	0.00	
2	10	-8	45	-2	0	162	1875	0.20	0.00	0.00	
3	10	-8	45	2	0	-162	1875	0.20	0.00	0.00	
4	10	-8	45	-2	0	162	1875	0.20	0.00	0.00	
5	10	-8	45	2	0	-162	1875	0.20	0.00	0.00	
6	10	-8	45	-7	0	538	1875	0.24	0.00	0.00	
7	10	-8	45	7	0	-538	1875	0.24	0.00	0.00	
8	10	-8	45	-7	0	538	1875	0.24	0.00	0.00	
9	10	-8	45	7	0	-538	1875	0.24	0.00	0.00	
10	10	-8	45	-2	0	162	1875	0.20	0.00	0.00	
11	10	-8	45	2	0	-162	1875	0.20	0.00	0.00	
12	10	-8	45	-2	0	162	1875	0.20	0.00	0.00	
13	10	-8	45	2	0	-162	1875	0.20	0.00	0.00	
14	10	-8	45	-7	0	538	1875	0.24	0.00	0.00	
15	10	-8	45	7	0	-538	1875	0.24	0.00	0.00	
16	10	-8	45	-7	0	538	1875	0.24	0.00	0.00	
17	10	-8	45	7	0	-538	1875	0.24	0.00	0.00	
1	21	-41	140	-0	0	0	9648	0.98	0.01	0.00	
2	21	-8	39	-2	0	162	1879	0.20	0.00	0.00	
3	21	-8	39	2	0	-162	1879	0.20	0.00	0.00	
4	21	-8	39	-2	0	162	1879	0.20	0.00	0.00	
5	21	-8	39	2	0	-162	1879	0.20	0.00	0.00	
6	21	-8	39	-7	0	539	1879	0.24	0.00	0.00	
7	21	-8	39	7	0	-539	1879	0.24	0.00	0.00	
8	21	-8	39	-7	0	539	1879	0.24	0.00	0.00	
9	21	-8	39	7	0	-539	1879	0.24	0.00	0.00	
10	21	-8	39	-2	0	162	1879	0.20	0.00	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

11	21	-8	39	2	0	-162	1879	0.20	0.00	0.00
12	21	-8	39	-2	0	162	1879	0.20	0.00	0.00
13	21	-8	39	2	0	-162	1879	0.20	0.00	0.00
14	21	-8	39	-7	0	539	1879	0.24	0.00	0.00
15	21	-8	39	7	0	-539	1879	0.24	0.00	0.00
16	21	-8	39	-7	0	539	1879	0.24	0.00	0.00
17	21	-8	39	7	0	-539	1879	0.24	0.00	0.00

1	31	-41	132	-0	0	0	9662	0.98	0.01	0.00
2	31	-8	34	-2	0	162	1883	0.20	0.00	0.00
3	31	-8	34	2	0	-162	1883	0.20	0.00	0.00
4	31	-8	34	-2	0	162	1883	0.20	0.00	0.00
5	31	-8	34	2	0	-162	1883	0.20	0.00	0.00
6	31	-8	34	-7	0	540	1883	0.24	0.00	0.00
7	31	-8	34	7	0	-540	1883	0.24	0.00	0.00
8	31	-8	34	-7	0	540	1883	0.24	0.00	0.00
9	31	-8	34	7	0	-540	1883	0.24	0.00	0.00
10	31	-8	34	-2	0	162	1883	0.20	0.00	0.00
11	31	-8	34	2	0	-162	1883	0.20	0.00	0.00
12	31	-8	34	-2	0	162	1883	0.20	0.00	0.00
13	31	-8	34	2	0	-162	1883	0.20	0.00	0.00
14	31	-8	34	-7	0	540	1883	0.24	0.00	0.00
15	31	-8	34	7	0	-540	1883	0.24	0.00	0.00
16	31	-8	34	-7	0	540	1883	0.24	0.00	0.00
17	31	-8	34	7	0	-540	1883	0.24	0.00	0.00

1	41	-41	125	-0	0	0	9676	0.98	0.01	0.00
2	41	-8	28	-2	0	162	1886	0.21	0.00	0.00
3	41	-8	28	2	0	-162	1886	0.21	0.00	0.00
4	41	-8	28	-2	0	162	1886	0.21	0.00	0.00
5	41	-8	28	2	0	-162	1886	0.21	0.00	0.00
6	41	-8	28	-7	0	540	1886	0.24	0.00	0.00
7	41	-8	28	7	0	-540	1886	0.24	0.00	0.00
8	41	-8	28	-7	0	540	1886	0.24	0.00	0.00
9	41	-8	28	7	0	-540	1886	0.24	0.00	0.00
10	41	-8	28	-2	0	162	1886	0.21	0.00	0.00
11	41	-8	28	2	0	-162	1886	0.21	0.00	0.00
12	41	-8	28	-2	0	162	1886	0.21	0.00	0.00
13	41	-8	28	2	0	-162	1886	0.21	0.00	0.00
14	41	-8	28	-7	0	540	1886	0.24	0.00	0.00
15	41	-8	28	7	0	-540	1886	0.24	0.00	0.00
16	41	-8	28	-7	0	540	1886	0.24	0.00	0.00
17	41	-8	28	7	0	-540	1886	0.24	0.00	0.00

1	52	-41	117	-0	0	0	9688	0.99	0.01	0.00
2	52	-8	22	-2	0	162	1888	0.21	0.00	0.00
3	52	-8	22	2	0	-162	1888	0.21	0.00	0.00
4	52	-8	22	-2	0	162	1888	0.21	0.00	0.00
5	52	-8	22	2	0	-162	1888	0.21	0.00	0.00
6	52	-8	22	-7	0	541	1888	0.24	0.00	0.00
7	52	-8	22	7	0	-541	1888	0.24	0.00	0.00
8	52	-8	22	-7	0	541	1888	0.24	0.00	0.00
9	52	-8	22	7	0	-541	1888	0.24	0.00	0.00
10	52	-8	22	-2	0	162	1888	0.21	0.00	0.00
11	52	-8	22	2	0	-162	1888	0.21	0.00	0.00
12	52	-8	22	-2	0	162	1888	0.21	0.00	0.00
13	52	-8	22	2	0	-162	1888	0.21	0.00	0.00
14	52	-8	22	-7	0	541	1888	0.24	0.00	0.00
15	52	-8	22	7	0	-541	1888	0.24	0.00	0.00
16	52	-8	22	-7	0	541	1888	0.24	0.00	0.00
17	52	-8	22	7	0	-541	1888	0.24	0.00	0.00

1	62	-41	110	-0	0	0	9700	0.99	0.01	0.00
2	62	-8	16	-2	0	163	1890	0.21	0.00	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

3	62	-8	16	2	0	-163	1890	0.21	0.00	0.00
4	62	-8	16	-2	0	163	1890	0.21	0.00	0.00
5	62	-8	16	2	0	-163	1890	0.21	0.00	0.00
6	62	-8	16	-7	0	542	1890	0.24	0.00	0.00
7	62	-8	16	7	0	-542	1890	0.24	0.00	0.00
8	62	-8	16	-7	0	542	1890	0.24	0.00	0.00
9	62	-8	16	7	0	-542	1890	0.24	0.00	0.00
10	62	-8	16	-2	0	163	1890	0.21	0.00	0.00
11	62	-8	16	2	0	-163	1890	0.21	0.00	0.00
12	62	-8	16	-2	0	163	1890	0.21	0.00	0.00
13	62	-8	16	2	0	-163	1890	0.21	0.00	0.00
14	62	-8	16	-7	0	542	1890	0.24	0.00	0.00
15	62	-8	16	7	0	-542	1890	0.24	0.00	0.00
16	62	-8	16	-7	0	542	1890	0.24	0.00	0.00
17	62	-8	16	7	0	-542	1890	0.24	0.00	0.00
1	72	-41	102	-0	0	0	9711	0.99	0.01	0.00
2	72	-8	11	-2	0	163	1892	0.21	0.00	0.00
3	72	-8	11	2	0	-163	1892	0.21	0.00	0.00
4	72	-8	11	-2	0	163	1892	0.21	0.00	0.00
5	72	-8	11	2	0	-163	1892	0.21	0.00	0.00
6	72	-8	11	-7	0	542	1892	0.24	0.00	0.00
7	72	-8	11	7	0	-542	1892	0.24	0.00	0.00
8	72	-8	11	-7	0	542	1892	0.24	0.00	0.00
9	72	-8	11	7	0	-542	1892	0.24	0.00	0.00
10	72	-8	11	-2	0	163	1892	0.21	0.00	0.00
11	72	-8	11	2	0	-163	1892	0.21	0.00	0.00
12	72	-8	11	-2	0	163	1892	0.21	0.00	0.00
13	72	-8	11	2	0	-163	1892	0.21	0.00	0.00
14	72	-8	11	-7	0	542	1892	0.24	0.00	0.00
15	72	-8	11	7	0	-542	1892	0.24	0.00	0.00
16	72	-8	11	-7	0	542	1892	0.24	0.00	0.00
17	72	-8	11	7	0	-542	1892	0.24	0.00	0.00
1	83	-41	95	-0	0	0	9721	0.99	0.01	0.00
2	83	-8	5	-2	0	163	1892	0.21	0.00	0.00
3	83	-8	5	2	0	-163	1892	0.21	0.00	0.00
4	83	-8	5	-2	0	163	1892	0.21	0.00	0.00
5	83	-8	5	2	0	-163	1892	0.21	0.00	0.00
6	83	-8	5	-7	0	543	1892	0.24	0.00	0.00
7	83	-8	5	7	0	-543	1892	0.24	0.00	0.00
8	83	-8	5	-7	0	543	1892	0.24	0.00	0.00
9	83	-8	5	7	0	-543	1892	0.24	0.00	0.00
10	83	-8	5	-2	0	163	1892	0.21	0.00	0.00
11	83	-8	5	2	0	-163	1892	0.21	0.00	0.00
12	83	-8	5	-2	0	163	1892	0.21	0.00	0.00
13	83	-8	5	2	0	-163	1892	0.21	0.00	0.00
14	83	-8	5	-7	0	543	1892	0.24	0.00	0.00
15	83	-8	5	7	0	-543	1892	0.24	0.00	0.00
16	83	-8	5	-7	0	543	1892	0.24	0.00	0.00
17	83	-8	5	7	0	-543	1892	0.24	0.00	0.00
1	93	-41	87	-0	0	0	9730	0.99	0.01	0.00
2	93	-8	-1	-2	0	163	1892	0.21	0.00	0.00
3	93	-8	-1	2	0	-163	1892	0.21	0.00	0.00
4	93	-8	-1	-2	0	163	1892	0.21	0.00	0.00
5	93	-8	-1	2	0	-163	1892	0.21	0.00	0.00
6	93	-8	-1	-7	0	544	1892	0.24	0.00	0.00
7	93	-8	-1	7	0	-544	1892	0.24	0.00	0.00
8	93	-8	-1	-7	0	544	1892	0.24	0.00	0.00
9	93	-8	-1	7	0	-544	1892	0.24	0.00	0.00
10	93	-8	-1	-2	0	163	1892	0.21	0.00	0.00
11	93	-8	-1	2	0	-163	1892	0.21	0.00	0.00
12	93	-8	-1	-2	0	163	1892	0.21	0.00	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

13	93	-8	-1	2	0	-163	1892	0.21	0.00	0.00
14	93	-8	-1	-7	0	544	1892	0.24	0.00	0.00
15	93	-8	-1	7	0	-544	1892	0.24	0.00	0.00
16	93	-8	-1	-7	0	544	1892	0.24	0.00	0.00
17	93	-8	-1	7	0	-544	1892	0.24	0.00	0.00
1	103	-41	80	-0	0	0	9739	0.99	0.01	0.00
2	103	-8	-7	-2	0	163	1892	0.21	0.00	0.00
3	103	-8	-7	2	0	-163	1892	0.21	0.00	0.00
4	103	-8	-7	-2	0	163	1892	0.21	0.00	0.00
5	103	-8	-7	2	0	-163	1892	0.21	0.00	0.00
6	103	-8	-7	-7	0	545	1892	0.24	0.00	0.00
7	103	-8	-7	7	0	-545	1892	0.24	0.00	0.00
8	103	-8	-7	-7	0	545	1892	0.24	0.00	0.00
9	103	-8	-7	7	0	-545	1892	0.24	0.00	0.00
10	103	-8	-7	-2	0	163	1892	0.21	0.00	0.00
11	103	-8	-7	2	0	-163	1892	0.21	0.00	0.00
12	103	-8	-7	-2	0	163	1892	0.21	0.00	0.00
13	103	-8	-7	2	0	-163	1892	0.21	0.00	0.00
14	103	-8	-7	-7	0	545	1892	0.24	0.00	0.00
15	103	-8	-7	7	0	-545	1892	0.24	0.00	0.00
16	103	-8	-7	-7	0	545	1892	0.24	0.00	0.00
17	103	-8	-7	7	0	-545	1892	0.24	0.00	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota

1	-41	0	9739	10	12	1.000	1.000	0.09	Piano 'zx'
2	-8	163	1892	10	12	1.000	1.000	0.09	Piano 'zx'
3	-8	163	1892	10	12	1.000	1.000	0.09	Piano 'zx'
4	-8	163	1892	10	12	1.000	1.000	0.09	Piano 'zx'
5	-8	163	1892	10	12	1.000	1.000	0.09	Piano 'zx'
6	-8	545	1892	10	12	1.000	1.000	0.09	Piano 'zx'
7	-8	545	1892	10	12	1.000	1.000	0.09	Piano 'zx'
8	-8	545	1892	10	12	1.000	1.000	0.09	Piano 'zx'
9	-8	545	1892	10	12	1.000	1.000	0.09	Piano 'zx'
10	-8	163	1892	10	12	1.000	1.000	0.09	Piano 'zx'
11	-8	163	1892	10	12	1.000	1.000	0.09	Piano 'zx'
12	-8	163	1892	10	12	1.000	1.000	0.09	Piano 'zx'
13	-8	163	1892	10	12	1.000	1.000	0.09	Piano 'zx'
14	-8	545	1892	10	12	1.000	1.000	0.09	Piano 'zx'
15	-8	545	1892	10	12	1.000	1.000	0.09	Piano 'zx'
16	-8	545	1892	10	12	1.000	1.000	0.09	Piano 'zx'
17	-8	545	1892	10	12	1.000	1.000	0.09	Piano 'zx'

ASTA NUM. 6 NI 8 NF 9 Lungh. 103.1 cm SEZ. 1 Rp B= 31.0 H= 36.0 cm

categoria: p.p. y qy tot.
qy medio: 0.5580 0.5580 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	cm	kg			kg*m						
1	0	-30	-1487	0	0	0	9742	0.99	0.13	0.00	
2	0	-345	-268	25	0	164	1893	0.21	0.02	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

3	0	-345	-268	-25	0	-164	1893	0.21	0.02	0.00
4	0	333	-268	25	0	164	1893	0.21	0.02	0.00
5	0	333	-268	-25	0	-164	1893	0.21	0.02	0.00
6	0	-108	-268	84	0	545	1893	0.24	0.02	0.00
7	0	-108	-268	-84	0	-545	1893	0.24	0.02	0.00
8	0	96	-268	84	0	545	1893	0.24	0.02	0.00
9	0	96	-268	-84	0	-545	1893	0.24	0.02	0.00
10	0	-345	-268	25	0	164	1893	0.21	0.02	0.00
11	0	-345	-268	-25	0	-164	1893	0.21	0.02	0.00
12	0	333	-268	25	0	164	1893	0.21	0.02	0.00
13	0	333	-268	-25	0	-164	1893	0.21	0.02	0.00
14	0	-108	-268	84	0	545	1893	0.24	0.02	0.00
15	0	-108	-268	-84	0	-545	1893	0.24	0.02	0.00
16	0	96	-268	84	0	545	1893	0.24	0.02	0.00
17	0	96	-268	-84	0	-545	1893	0.24	0.02	0.00

1	10	-30	-1495	0	0	0	9588	0.98	0.13	0.00
2	10	-345	-274	25	0	161	1865	0.20	0.02	0.00
3	10	-345	-274	-25	0	-161	1865	0.20	0.02	0.00
4	10	333	-273	25	0	161	1865	0.21	0.02	0.00
5	10	333	-273	-25	0	-161	1865	0.21	0.02	0.00
6	10	-108	-273	84	0	536	1865	0.23	0.03	0.00
7	10	-108	-273	-84	0	-536	1865	0.23	0.03	0.00
8	10	96	-273	84	0	536	1865	0.24	0.03	0.00
9	10	96	-273	-84	0	-536	1865	0.24	0.03	0.00
10	10	-345	-274	25	0	161	1865	0.20	0.02	0.00
11	10	-345	-274	-25	0	-161	1865	0.20	0.02	0.00
12	10	333	-273	25	0	161	1865	0.21	0.02	0.00
13	10	333	-273	-25	0	-161	1865	0.21	0.02	0.00
14	10	-108	-273	84	0	536	1865	0.23	0.03	0.00
15	10	-108	-273	-84	0	-536	1865	0.23	0.03	0.00
16	10	96	-273	84	0	536	1865	0.24	0.03	0.00
17	10	96	-273	-84	0	-536	1865	0.24	0.03	0.00

1	21	-30	-1502	0	0	0	9434	0.96	0.13	0.00
2	21	-345	-279	25	0	158	1837	0.20	0.02	0.00
3	21	-345	-279	-25	0	-158	1837	0.20	0.02	0.00
4	21	333	-279	25	0	158	1837	0.20	0.02	0.00
5	21	333	-279	-25	0	-158	1837	0.20	0.02	0.00
6	21	-108	-279	84	0	528	1837	0.23	0.03	0.00
7	21	-108	-279	-84	0	-528	1837	0.23	0.03	0.00
8	21	96	-279	84	0	528	1837	0.23	0.03	0.00
9	21	96	-279	-84	0	-528	1837	0.23	0.03	0.00
10	21	-345	-279	25	0	158	1837	0.20	0.02	0.00
11	21	-345	-279	-25	0	-158	1837	0.20	0.02	0.00
12	21	333	-279	25	0	158	1837	0.20	0.02	0.00
13	21	333	-279	-25	0	-158	1837	0.20	0.02	0.00
14	21	-108	-279	84	0	528	1837	0.23	0.03	0.00
15	21	-108	-279	-84	0	-528	1837	0.23	0.03	0.00
16	21	96	-279	84	0	528	1837	0.23	0.03	0.00
17	21	96	-279	-84	0	-528	1837	0.23	0.03	0.00

1	31	-30	-1510	0	0	0	9278	0.94	0.13	0.00
2	31	-345	-285	25	0	156	1807	0.20	0.03	0.00
3	31	-345	-285	-25	0	-156	1807	0.20	0.03	0.00
4	31	333	-285	25	0	156	1807	0.20	0.03	0.00
5	31	333	-285	-25	0	-156	1807	0.20	0.03	0.00
6	31	-108	-285	84	0	519	1807	0.23	0.03	0.00
7	31	-108	-285	-84	0	-519	1807	0.23	0.03	0.00
8	31	96	-285	84	0	519	1807	0.23	0.03	0.00
9	31	96	-285	-84	0	-519	1807	0.23	0.03	0.00
10	31	-345	-285	25	0	156	1807	0.20	0.03	0.00
11	31	-345	-285	-25	0	-156	1807	0.20	0.03	0.00
12	31	333	-285	25	0	156	1807	0.20	0.03	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

13	31	333	-285	-25	0	-156	1807	0.20	0.03	0.00
14	31	-108	-285	84	0	519	1807	0.23	0.03	0.00
15	31	-108	-285	-84	0	-519	1807	0.23	0.03	0.00
16	31	96	-285	84	0	519	1807	0.23	0.03	0.00
17	31	96	-285	-84	0	-519	1807	0.23	0.03	0.00

1	41	-30	-1517	0	0	0	9122	0.93	0.13	0.00
2	41	-345	-291	25	0	153	1778	0.19	0.03	0.00
3	41	-345	-291	-25	0	-153	1778	0.19	0.03	0.00
4	41	333	-291	25	0	153	1778	0.20	0.03	0.00
5	41	333	-291	-25	0	-153	1778	0.20	0.03	0.00
6	41	-108	-291	84	0	510	1778	0.22	0.03	0.00
7	41	-108	-291	-84	0	-510	1778	0.22	0.03	0.00
8	41	96	-291	84	0	510	1778	0.22	0.03	0.00
9	41	96	-291	-84	0	-510	1778	0.22	0.03	0.00
10	41	-345	-291	25	0	153	1778	0.19	0.03	0.00
11	41	-345	-291	-25	0	-153	1778	0.19	0.03	0.00
12	41	333	-291	25	0	153	1778	0.20	0.03	0.00
13	41	333	-291	-25	0	-153	1778	0.20	0.03	0.00
14	41	-108	-291	84	0	510	1778	0.22	0.03	0.00
15	41	-108	-291	-84	0	-510	1778	0.22	0.03	0.00
16	41	96	-291	84	0	510	1778	0.22	0.03	0.00
17	41	96	-291	-84	0	-510	1778	0.22	0.03	0.00

1	52	-30	-1525	0	0	0	8965	0.91	0.13	0.00
2	52	-345	-297	25	0	151	1747	0.19	0.03	0.00
3	52	-345	-297	-25	0	-151	1747	0.19	0.03	0.00
4	52	333	-297	25	0	151	1747	0.19	0.03	0.00
5	52	333	-297	-25	0	-151	1747	0.19	0.03	0.00
6	52	-108	-297	84	0	502	1747	0.22	0.03	0.00
7	52	-108	-297	-84	0	-502	1747	0.22	0.03	0.00
8	52	96	-297	84	0	502	1747	0.22	0.03	0.00
9	52	96	-297	-84	0	-502	1747	0.22	0.03	0.00
10	52	-345	-297	25	0	151	1747	0.19	0.03	0.00
11	52	-345	-297	-25	0	-151	1747	0.19	0.03	0.00
12	52	333	-297	25	0	151	1747	0.19	0.03	0.00
13	52	333	-297	-25	0	-151	1747	0.19	0.03	0.00
14	52	-108	-297	84	0	502	1747	0.22	0.03	0.00
15	52	-108	-297	-84	0	-502	1747	0.22	0.03	0.00
16	52	96	-297	84	0	502	1747	0.22	0.03	0.00
17	52	96	-297	-84	0	-502	1747	0.22	0.03	0.00

1	62	-30	-1532	0	0	-0	8807	0.90	0.13	0.00
2	62	-345	-302	25	0	148	1717	0.19	0.03	0.00
3	62	-345	-302	-25	0	-148	1717	0.19	0.03	0.00
4	62	333	-302	25	0	148	1717	0.19	0.03	0.00
5	62	333	-302	-25	0	-148	1717	0.19	0.03	0.00
6	62	-108	-302	84	0	493	1717	0.22	0.03	0.00
7	62	-108	-302	-84	0	-493	1717	0.22	0.03	0.00
8	62	96	-302	84	0	493	1717	0.22	0.03	0.00
9	62	96	-302	-84	0	-493	1717	0.22	0.03	0.00
10	62	-345	-302	25	0	148	1717	0.19	0.03	0.00
11	62	-345	-302	-25	0	-148	1717	0.19	0.03	0.00
12	62	333	-302	25	0	148	1717	0.19	0.03	0.00
13	62	333	-302	-25	0	-148	1717	0.19	0.03	0.00
14	62	-108	-302	84	0	493	1717	0.22	0.03	0.00
15	62	-108	-302	-84	0	-493	1717	0.22	0.03	0.00
16	62	96	-302	84	0	493	1717	0.22	0.03	0.00
17	62	96	-302	-84	0	-493	1717	0.22	0.03	0.00

1	72	-30	-1540	0	0	0	8649	0.88	0.14	0.00
2	72	-345	-308	25	0	145	1685	0.18	0.03	0.00
3	72	-345	-308	-25	0	-145	1685	0.18	0.03	0.00
4	72	333	-308	25	0	145	1685	0.19	0.03	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

5	72	333	-308	-25	0	-145	1685	0.19	0.03	0.00
6	72	-108	-308	84	0	485	1685	0.21	0.03	0.00
7	72	-108	-308	-84	0	-485	1685	0.21	0.03	0.00
8	72	96	-308	84	0	485	1685	0.21	0.03	0.00
9	72	96	-308	-84	0	-485	1685	0.21	0.03	0.00
10	72	-345	-308	25	0	145	1685	0.18	0.03	0.00
11	72	-345	-308	-25	0	-145	1685	0.18	0.03	0.00
12	72	333	-308	25	0	145	1685	0.19	0.03	0.00
13	72	333	-308	-25	0	-145	1685	0.19	0.03	0.00
14	72	-108	-308	84	0	485	1685	0.21	0.03	0.00
15	72	-108	-308	-84	0	-485	1685	0.21	0.03	0.00
16	72	96	-308	84	0	485	1685	0.21	0.03	0.00
17	72	96	-308	-84	0	-485	1685	0.21	0.03	0.00

1	83	-30	-1547	0	0	0	8490	0.86	0.14	0.00
2	83	-345	-314	25	0	143	1653	0.18	0.03	0.00
3	83	-345	-314	-25	0	-143	1653	0.18	0.03	0.00
4	83	333	-314	25	0	143	1653	0.18	0.03	0.00
5	83	333	-314	-25	0	-143	1653	0.18	0.03	0.00
6	83	-108	-314	84	0	476	1653	0.21	0.03	0.00
7	83	-108	-314	-84	0	-476	1653	0.21	0.03	0.00
8	83	96	-314	84	0	476	1653	0.21	0.03	0.00
9	83	96	-314	-84	0	-476	1653	0.21	0.03	0.00
10	83	-345	-314	25	0	143	1653	0.18	0.03	0.00
11	83	-345	-314	-25	0	-143	1653	0.18	0.03	0.00
12	83	333	-314	25	0	143	1653	0.18	0.03	0.00
13	83	333	-314	-25	0	-143	1653	0.18	0.03	0.00
14	83	-108	-314	84	0	476	1653	0.21	0.03	0.00
15	83	-108	-314	-84	0	-476	1653	0.21	0.03	0.00
16	83	96	-314	84	0	476	1653	0.21	0.03	0.00
17	83	96	-314	-84	0	-476	1653	0.21	0.03	0.00

1	93	-30	-1555	0	0	0	8330	0.85	0.14	0.00
2	93	-345	-320	25	0	140	1620	0.18	0.03	0.00
3	93	-345	-320	-25	0	-140	1620	0.18	0.03	0.00
4	93	333	-320	25	0	140	1620	0.18	0.03	0.00
5	93	333	-320	-25	0	-140	1620	0.18	0.03	0.00
6	93	-108	-320	84	0	467	1620	0.20	0.03	0.00
7	93	-108	-320	-84	0	-467	1620	0.20	0.03	0.00
8	93	96	-320	84	0	467	1620	0.20	0.03	0.00
9	93	96	-320	-84	0	-467	1620	0.20	0.03	0.00
10	93	-345	-320	25	0	140	1620	0.18	0.03	0.00
11	93	-345	-320	-25	0	-140	1620	0.18	0.03	0.00
12	93	333	-320	25	0	140	1620	0.18	0.03	0.00
13	93	333	-320	-25	0	-140	1620	0.18	0.03	0.00
14	93	-108	-320	84	0	467	1620	0.20	0.03	0.00
15	93	-108	-320	-84	0	-467	1620	0.20	0.03	0.00
16	93	96	-320	84	0	467	1620	0.20	0.03	0.00
17	93	96	-320	-84	0	-467	1620	0.20	0.03	0.00

1	103	-30	-1562	0	0	0	8169	0.83	0.14	0.00
2	103	-345	-325	25	0	138	1587	0.17	0.03	0.00
3	103	-345	-325	-25	0	-138	1587	0.17	0.03	0.00
4	103	333	-325	25	0	138	1587	0.18	0.03	0.00
5	103	333	-325	-25	0	-138	1587	0.18	0.03	0.00
6	103	-108	-325	84	0	459	1587	0.20	0.03	0.00
7	103	-108	-325	-84	0	-459	1587	0.20	0.03	0.00
8	103	96	-325	84	0	459	1587	0.20	0.03	0.00
9	103	96	-325	-84	0	-459	1587	0.20	0.03	0.00
10	103	-345	-325	25	0	138	1587	0.17	0.03	0.00
11	103	-345	-325	-25	0	-138	1587	0.17	0.03	0.00
12	103	333	-325	25	0	138	1587	0.18	0.03	0.00
13	103	333	-325	-25	0	-138	1587	0.18	0.03	0.00
14	103	-108	-325	84	0	459	1587	0.20	0.03	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

15	103	-108	-325	-84	0	-459	1587	0.20	0.03	0.00
16	103	96	-325	84	0	459	1587	0.20	0.03	0.00
17	103	96	-325	-84	0	-459	1587	0.20	0.03	0.00

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
	--								
	kg		kg*m						
1	-30	0	9742	10	12	1.000	1.000	0.09	Piano 'zx'
2	-345	164	1893	10	12	1.000	1.000	0.09	Piano 'zx'
3	-345	164	1893	10	12	1.000	1.000	0.09	Piano 'zx'
6	-108	545	1893	10	12	1.000	1.000	0.09	Piano 'zx'
7	-108	545	1893	10	12	1.000	1.000	0.09	Piano 'zx'
10	-345	164	1893	10	12	1.000	1.000	0.09	Piano 'zx'
11	-345	164	1893	10	12	1.000	1.000	0.09	Piano 'zx'
14	-108	545	1893	10	12	1.000	1.000	0.09	Piano 'zx'
15	-108	545	1893	10	12	1.000	1.000	0.09	Piano 'zx'

ASTA NUM. 7 NI 9 NF 10 Lungh. 103.1 cm SEZ. 1 Rp B= 31.0 H= 36.0 cm

categoria: p.p. y qy tot.
qy medio: 0.5580 0.5580 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	--										
	cm		kg			kg*m					
1	0	1	-3089	0	0	0	8178	0.83	0.27	0.00	
2	0	-678	-580	53	0	138	1589	0.17	0.05	0.00	
3	0	-678	-580	-53	0	-138	1589	0.17	0.05	0.00	
4	0	679	-580	53	0	138	1589	0.18	0.05	0.00	
5	0	679	-580	-53	0	-138	1589	0.18	0.05	0.00	
6	0	-203	-580	176	0	460	1589	0.20	0.05	0.00	
7	0	-203	-580	-176	0	-460	1589	0.20	0.05	0.00	
8	0	204	-580	176	0	460	1589	0.20	0.05	0.00	
9	0	204	-580	-176	0	-460	1589	0.20	0.05	0.00	
10	0	-678	-580	53	0	138	1589	0.17	0.05	0.00	
11	0	-678	-580	-53	0	-138	1589	0.17	0.05	0.00	
12	0	679	-580	53	0	138	1589	0.18	0.05	0.00	
13	0	679	-580	-53	0	-138	1589	0.18	0.05	0.00	
14	0	-203	-580	176	0	460	1589	0.20	0.05	0.00	
15	0	-203	-580	-176	0	-460	1589	0.20	0.05	0.00	
16	0	204	-580	176	0	460	1589	0.20	0.05	0.00	
17	0	204	-580	-176	0	-460	1589	0.20	0.05	0.00	
1	10	1	-3097	0	0	0	7859	0.80	0.27	0.00	
2	10	-678	-585	53	0	133	1529	0.17	0.05	0.00	
3	10	-678	-585	-53	0	-133	1529	0.17	0.05	0.00	
4	10	679	-585	53	0	133	1529	0.17	0.05	0.00	
5	10	679	-585	-53	0	-133	1529	0.17	0.05	0.00	
6	10	-203	-585	176	0	442	1529	0.19	0.05	0.00	
7	10	-203	-585	-176	0	-442	1529	0.19	0.05	0.00	
8	10	204	-585	176	0	442	1529	0.19	0.05	0.00	
9	10	204	-585	-176	0	-442	1529	0.19	0.05	0.00	
10	10	-678	-585	53	0	133	1529	0.17	0.05	0.00	
11	10	-678	-585	-53	0	-133	1529	0.17	0.05	0.00	
12	10	679	-585	53	0	133	1529	0.17	0.05	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

13	10	679	-585	-53	0	-133	1529	0.17	0.05	0.00
14	10	-203	-585	176	0	442	1529	0.19	0.05	0.00
15	10	-203	-585	-176	0	-442	1529	0.19	0.05	0.00
16	10	204	-585	176	0	442	1529	0.19	0.05	0.00
17	10	204	-585	-176	0	-442	1529	0.19	0.05	0.00

1	21	1	-3104	0	0	0	7539	0.77	0.27	0.00
2	21	-678	-591	53	0	127	1468	0.16	0.05	0.00
3	21	-678	-591	-53	0	-127	1468	0.16	0.05	0.00
4	21	679	-591	53	0	127	1468	0.17	0.05	0.00
5	21	679	-591	-53	0	-127	1468	0.17	0.05	0.00
6	21	-203	-591	176	0	424	1468	0.18	0.05	0.00
7	21	-203	-591	-176	0	-424	1468	0.18	0.05	0.00
8	21	204	-591	176	0	424	1468	0.19	0.05	0.00
9	21	204	-591	-176	0	-424	1468	0.19	0.05	0.00
10	21	-678	-591	53	0	127	1468	0.16	0.05	0.00
11	21	-678	-591	-53	0	-127	1468	0.16	0.05	0.00
12	21	679	-591	53	0	127	1468	0.17	0.05	0.00
13	21	679	-591	-53	0	-127	1468	0.17	0.05	0.00
14	21	-203	-591	176	0	424	1468	0.18	0.05	0.00
15	21	-203	-591	-176	0	-424	1468	0.18	0.05	0.00
16	21	204	-591	176	0	424	1468	0.19	0.05	0.00
17	21	204	-591	-176	0	-424	1468	0.19	0.05	0.00

1	31	1	-3112	0	0	0	7219	0.73	0.27	0.00
2	31	-678	-597	53	0	122	1407	0.15	0.05	0.00
3	31	-678	-597	-53	0	-122	1407	0.15	0.05	0.00
4	31	679	-597	53	0	122	1407	0.16	0.05	0.00
5	31	679	-597	-53	0	-122	1407	0.16	0.05	0.00
6	31	-203	-597	176	0	405	1407	0.18	0.05	0.00
7	31	-203	-597	-176	0	-405	1407	0.18	0.05	0.00
8	31	204	-597	176	0	405	1407	0.18	0.05	0.00
9	31	204	-597	-176	0	-405	1407	0.18	0.05	0.00
10	31	-678	-597	53	0	122	1407	0.15	0.05	0.00
11	31	-678	-597	-53	0	-122	1407	0.15	0.05	0.00
12	31	679	-597	53	0	122	1407	0.16	0.05	0.00
13	31	679	-597	-53	0	-122	1407	0.16	0.05	0.00
14	31	-203	-597	176	0	405	1407	0.18	0.05	0.00
15	31	-203	-597	-176	0	-405	1407	0.18	0.05	0.00
16	31	204	-597	176	0	405	1407	0.18	0.05	0.00
17	31	204	-597	-176	0	-405	1407	0.18	0.05	0.00

1	41	1	-3119	0	0	0	6898	0.70	0.27	0.00
2	41	-678	-603	53	0	116	1345	0.15	0.05	0.00
3	41	-678	-603	-53	0	-116	1345	0.15	0.05	0.00
4	41	679	-603	53	0	116	1345	0.15	0.05	0.00
5	41	679	-603	-53	0	-116	1345	0.15	0.05	0.00
6	41	-203	-603	176	0	387	1345	0.17	0.06	0.00
7	41	-203	-603	-176	0	-387	1345	0.17	0.06	0.00
8	41	204	-603	176	0	387	1345	0.17	0.06	0.00
9	41	204	-603	-176	0	-387	1345	0.17	0.06	0.00
10	41	-678	-603	53	0	116	1345	0.15	0.05	0.00
11	41	-678	-603	-53	0	-116	1345	0.15	0.05	0.00
12	41	679	-603	53	0	116	1345	0.15	0.05	0.00
13	41	679	-603	-53	0	-116	1345	0.15	0.05	0.00
14	41	-203	-603	176	0	387	1345	0.17	0.06	0.00
15	41	-203	-603	-176	0	-387	1345	0.17	0.06	0.00
16	41	204	-603	176	0	387	1345	0.17	0.06	0.00
17	41	204	-603	-176	0	-387	1345	0.17	0.06	0.00

1	52	1	-3127	0	0	0	6576	0.67	0.27	0.00
2	52	-678	-608	53	0	111	1283	0.14	0.05	0.00
3	52	-678	-608	-53	0	-111	1283	0.14	0.05	0.00
4	52	679	-608	53	0	111	1283	0.15	0.05	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

5	52	679	-608	-53	0	-111	1283	0.15	0.05	0.00
6	52	-203	-608	176	0	369	1283	0.16	0.06	0.00
7	52	-203	-608	-176	0	-369	1283	0.16	0.06	0.00
8	52	204	-608	176	0	369	1283	0.16	0.06	0.00
9	52	204	-608	-176	0	-369	1283	0.16	0.06	0.00
10	52	-678	-608	53	0	111	1283	0.14	0.05	0.00
11	52	-678	-608	-53	0	-111	1283	0.14	0.05	0.00
12	52	679	-608	53	0	111	1283	0.15	0.05	0.00
13	52	679	-608	-53	0	-111	1283	0.15	0.05	0.00
14	52	-203	-608	176	0	369	1283	0.16	0.06	0.00
15	52	-203	-608	-176	0	-369	1283	0.16	0.06	0.00
16	52	204	-608	176	0	369	1283	0.16	0.06	0.00
17	52	204	-608	-176	0	-369	1283	0.16	0.06	0.00

1	62	1	-3134	0	0	0	6253	0.64	0.28	0.00
2	62	-678	-614	53	0	105	1220	0.13	0.05	0.00
3	62	-678	-614	-53	0	-105	1220	0.13	0.05	0.00
4	62	679	-614	53	0	105	1220	0.14	0.05	0.00
5	62	679	-614	-53	0	-105	1220	0.14	0.05	0.00
6	62	-203	-614	176	0	351	1220	0.15	0.06	0.00
7	62	-203	-614	-176	0	-351	1220	0.15	0.06	0.00
8	62	204	-614	176	0	351	1220	0.16	0.06	0.00
9	62	204	-614	-176	0	-351	1220	0.16	0.06	0.00
10	62	-678	-614	53	0	105	1220	0.13	0.05	0.00
11	62	-678	-614	-53	0	-105	1220	0.13	0.05	0.00
12	62	679	-614	53	0	105	1220	0.14	0.05	0.00
13	62	679	-614	-53	0	-105	1220	0.14	0.05	0.00
14	62	-203	-614	176	0	351	1220	0.15	0.06	0.00
15	62	-203	-614	-176	0	-351	1220	0.15	0.06	0.00
16	62	204	-614	176	0	351	1220	0.16	0.06	0.00
17	62	204	-614	-176	0	-351	1220	0.16	0.06	0.00

1	72	1	-3142	0	0	0	5929	0.60	0.28	0.00
2	72	-678	-620	53	0	100	1156	0.13	0.05	0.00
3	72	-678	-620	-53	0	-100	1156	0.13	0.05	0.00
4	72	679	-620	53	0	100	1156	0.13	0.05	0.00
5	72	679	-620	-53	0	-100	1156	0.13	0.05	0.00
6	72	-203	-620	176	0	333	1156	0.15	0.06	0.00
7	72	-203	-620	-176	0	-333	1156	0.15	0.06	0.00
8	72	204	-620	176	0	333	1156	0.15	0.06	0.00
9	72	204	-620	-176	0	-333	1156	0.15	0.06	0.00
10	72	-678	-620	53	0	100	1156	0.13	0.05	0.00
11	72	-678	-620	-53	0	-100	1156	0.13	0.05	0.00
12	72	679	-620	53	0	100	1156	0.13	0.05	0.00
13	72	679	-620	-53	0	-100	1156	0.13	0.05	0.00
14	72	-203	-620	176	0	333	1156	0.15	0.06	0.00
15	72	-203	-620	-176	0	-333	1156	0.15	0.06	0.00
16	72	204	-620	176	0	333	1156	0.15	0.06	0.00
17	72	204	-620	-176	0	-333	1156	0.15	0.06	0.00

1	83	1	-3149	0	0	0	5605	0.57	0.28	0.00
2	83	-678	-626	53	0	94	1092	0.12	0.06	0.00
3	83	-678	-626	-53	0	-94	1092	0.12	0.06	0.00
4	83	679	-626	53	0	94	1092	0.13	0.06	0.00
5	83	679	-626	-53	0	-94	1092	0.13	0.06	0.00
6	83	-203	-626	176	0	314	1092	0.14	0.06	0.00
7	83	-203	-626	-176	0	-314	1092	0.14	0.06	0.00
8	83	204	-626	176	0	314	1092	0.14	0.06	0.00
9	83	204	-626	-176	0	-314	1092	0.14	0.06	0.00
10	83	-678	-626	53	0	94	1092	0.12	0.06	0.00
11	83	-678	-626	-53	0	-94	1092	0.12	0.06	0.00
12	83	679	-626	53	0	94	1092	0.13	0.06	0.00
13	83	679	-626	-53	0	-94	1092	0.13	0.06	0.00
14	83	-203	-626	176	0	314	1092	0.14	0.06	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

15	83	-203	-626	-176	0	-314	1092	0.14	0.06	0.00
16	83	204	-626	176	0	314	1092	0.14	0.06	0.00
17	83	204	-626	-176	0	-314	1092	0.14	0.06	0.00
1	93	1	-3157	0	0	0	5280	0.54	0.28	0.00
2	93	-678	-631	53	0	89	1027	0.11	0.06	0.00
3	93	-678	-631	-53	0	-89	1027	0.11	0.06	0.00
4	93	679	-631	53	0	89	1027	0.12	0.06	0.00
5	93	679	-631	-53	0	-89	1027	0.12	0.06	0.00
6	93	-203	-631	176	0	296	1027	0.13	0.06	0.00
7	93	-203	-631	-176	0	-296	1027	0.13	0.06	0.00
8	93	204	-631	176	0	296	1027	0.13	0.06	0.00
9	93	204	-631	-176	0	-296	1027	0.13	0.06	0.00
10	93	-678	-631	53	0	89	1027	0.11	0.06	0.00
11	93	-678	-631	-53	0	-89	1027	0.11	0.06	0.00
12	93	679	-631	53	0	89	1027	0.12	0.06	0.00
13	93	679	-631	-53	0	-89	1027	0.12	0.06	0.00
14	93	-203	-631	176	0	296	1027	0.13	0.06	0.00
15	93	-203	-631	-176	0	-296	1027	0.13	0.06	0.00
16	93	204	-631	176	0	296	1027	0.13	0.06	0.00
17	93	204	-631	-176	0	-296	1027	0.13	0.06	0.00
1	103	1	-3164	0	0	0	4954	0.50	0.28	0.00
2	103	-678	-637	53	0	83	962	0.10	0.06	0.00
3	103	-678	-637	-53	0	-83	962	0.10	0.06	0.00
4	103	679	-637	53	0	83	962	0.11	0.06	0.00
5	103	679	-637	-53	0	-83	962	0.11	0.06	0.00
6	103	-203	-637	176	0	278	962	0.12	0.06	0.00
7	103	-203	-637	-176	0	-278	962	0.12	0.06	0.00
8	103	204	-637	176	0	278	962	0.12	0.06	0.00
9	103	204	-637	-176	0	-278	962	0.12	0.06	0.00
10	103	-678	-637	53	0	83	962	0.10	0.06	0.00
11	103	-678	-637	-53	0	-83	962	0.10	0.06	0.00
12	103	679	-637	53	0	83	962	0.11	0.06	0.00
13	103	679	-637	-53	0	-83	962	0.11	0.06	0.00
14	103	-203	-637	176	0	278	962	0.12	0.06	0.00
15	103	-203	-637	-176	0	-278	962	0.12	0.06	0.00
16	103	204	-637	176	0	278	962	0.12	0.06	0.00
17	103	204	-637	-176	0	-278	962	0.12	0.06	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
2	-678	138	1589	10	12	1.000	1.000	0.09	Piano 'zx'
3	-678	138	1589	10	12	1.000	1.000	0.09	Piano 'zx'
6	-203	460	1589	10	12	1.000	1.000	0.09	Piano 'zx'
7	-203	460	1589	10	12	1.000	1.000	0.09	Piano 'zx'
10	-678	138	1589	10	12	1.000	1.000	0.09	Piano 'zx'
11	-678	138	1589	10	12	1.000	1.000	0.09	Piano 'zx'
14	-203	460	1589	10	12	1.000	1.000	0.09	Piano 'zx'
15	-203	460	1589	10	12	1.000	1.000	0.09	Piano 'zx'

ASTA NUM. 8 NI 10 NF 11 Lungh. 103.1 cm SEZ. 1 Rp B= 31.0 H= 36.0 cm

categoria: p.p. y qy tot.
qy medio: 0.5580 0.5580 kg/cm

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	cm	kg			kg*m						
1	0	47	-4787	0	0	0	4967	0.51	0.42	0.00	
2	0	-1009	-908	82	0	84	964	0.11	0.08	0.00	
3	0	-1009	-908	-82	0	-84	964	0.11	0.08	0.00	
4	0	1027	-908	82	0	84	964	0.12	0.08	0.00	
5	0	1027	-908	-82	0	-84	964	0.12	0.08	0.00	
6	0	-296	-908	273	0	280	964	0.12	0.08	0.00	
7	0	-296	-908	-273	0	-280	964	0.12	0.08	0.00	
8	0	315	-908	273	0	280	964	0.12	0.08	0.00	
9	0	315	-908	-273	0	-280	964	0.12	0.08	0.00	
10	0	-1009	-908	82	0	84	964	0.11	0.08	0.00	
11	0	-1009	-908	-82	0	-84	964	0.11	0.08	0.00	
12	0	1027	-908	82	0	84	964	0.12	0.08	0.00	
13	0	1027	-908	-82	0	-84	964	0.12	0.08	0.00	
14	0	-296	-908	273	0	280	964	0.12	0.08	0.00	
15	0	-296	-908	-273	0	-280	964	0.12	0.08	0.00	
16	0	315	-908	273	0	280	964	0.12	0.08	0.00	
17	0	315	-908	-273	0	-280	964	0.12	0.08	0.00	
1	10	47	-4795	0	0	0	4473	0.46	0.42	0.00	
2	10	-1009	-913	82	0	76	870	0.09	0.08	0.00	
3	10	-1009	-913	-82	0	-76	870	0.09	0.08	0.00	
4	10	1027	-913	82	0	76	870	0.11	0.08	0.00	
5	10	1027	-913	-82	0	-76	870	0.11	0.08	0.00	
6	10	-296	-913	273	0	252	870	0.11	0.08	0.00	
7	10	-296	-913	-273	0	-252	870	0.11	0.08	0.00	
8	10	315	-913	273	0	252	870	0.11	0.08	0.00	
9	10	315	-913	-273	0	-252	870	0.11	0.08	0.00	
10	10	-1009	-913	82	0	76	870	0.09	0.08	0.00	
11	10	-1009	-913	-82	0	-76	870	0.09	0.08	0.00	
12	10	1027	-913	82	0	76	870	0.11	0.08	0.00	
13	10	1027	-913	-82	0	-76	870	0.11	0.08	0.00	
14	10	-296	-913	273	0	252	870	0.11	0.08	0.00	
15	10	-296	-913	-273	0	-252	870	0.11	0.08	0.00	
16	10	315	-913	273	0	252	870	0.11	0.08	0.00	
17	10	315	-913	-273	0	-252	870	0.11	0.08	0.00	
1	21	47	-4802	0	0	0	3978	0.41	0.42	0.00	
2	21	-1009	-919	82	0	67	776	0.08	0.08	0.00	
3	21	-1009	-919	-82	0	-67	776	0.08	0.08	0.00	
4	21	1027	-919	82	0	67	776	0.10	0.08	0.00	
5	21	1027	-919	-82	0	-67	776	0.10	0.08	0.00	
6	21	-296	-919	273	0	224	776	0.10	0.08	0.00	
7	21	-296	-919	-273	0	-224	776	0.10	0.08	0.00	
8	21	315	-919	273	0	224	776	0.10	0.08	0.00	
9	21	315	-919	-273	0	-224	776	0.10	0.08	0.00	
10	21	-1009	-919	82	0	67	776	0.08	0.08	0.00	
11	21	-1009	-919	-82	0	-67	776	0.08	0.08	0.00	
12	21	1027	-919	82	0	67	776	0.10	0.08	0.00	
13	21	1027	-919	-82	0	-67	776	0.10	0.08	0.00	
14	21	-296	-919	273	0	224	776	0.10	0.08	0.00	
15	21	-296	-919	-273	0	-224	776	0.10	0.08	0.00	
16	21	315	-919	273	0	224	776	0.10	0.08	0.00	
17	21	315	-919	-273	0	-224	776	0.10	0.08	0.00	
1	31	47	-4810	0	0	0	3483	0.35	0.42	0.00	
2	31	-1009	-925	82	0	59	681	0.07	0.08	0.00	
3	31	-1009	-925	-82	0	-59	681	0.07	0.08	0.00	
4	31	1027	-925	82	0	59	681	0.08	0.08	0.00	
5	31	1027	-925	-82	0	-59	681	0.08	0.08	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

6	31	-296	-925	273	0	195	681	0.09	0.08	0.00
7	31	-296	-925	-273	0	-195	681	0.09	0.08	0.00
8	31	315	-925	273	0	195	681	0.09	0.08	0.00
9	31	315	-925	-273	0	-195	681	0.09	0.08	0.00
10	31	-1009	-925	82	0	59	681	0.07	0.08	0.00
11	31	-1009	-925	-82	0	-59	681	0.07	0.08	0.00
12	31	1027	-925	82	0	59	681	0.08	0.08	0.00
13	31	1027	-925	-82	0	-59	681	0.08	0.08	0.00
14	31	-296	-925	273	0	195	681	0.09	0.08	0.00
15	31	-296	-925	-273	0	-195	681	0.09	0.08	0.00
16	31	315	-925	273	0	195	681	0.09	0.08	0.00
17	31	315	-925	-273	0	-195	681	0.09	0.08	0.00
1	41	47	-4817	0	0	0	2986	0.30	0.42	0.00
2	41	-1009	-931	82	0	50	585	0.06	0.08	0.00
3	41	-1009	-931	-82	0	-50	585	0.06	0.08	0.00
4	41	1027	-931	82	0	50	585	0.07	0.08	0.00
5	41	1027	-931	-82	0	-50	585	0.07	0.08	0.00
6	41	-296	-931	273	0	167	585	0.07	0.09	0.00
7	41	-296	-931	-273	0	-167	585	0.07	0.09	0.00
8	41	315	-931	273	0	167	585	0.08	0.09	0.00
9	41	315	-931	-273	0	-167	585	0.08	0.09	0.00
10	41	-1009	-931	82	0	50	585	0.06	0.08	0.00
11	41	-1009	-931	-82	0	-50	585	0.06	0.08	0.00
12	41	1027	-931	82	0	50	585	0.07	0.08	0.00
13	41	1027	-931	-82	0	-50	585	0.07	0.08	0.00
14	41	-296	-931	273	0	167	585	0.07	0.09	0.00
15	41	-296	-931	-273	0	-167	585	0.07	0.09	0.00
16	41	315	-931	273	0	167	585	0.08	0.09	0.00
17	41	315	-931	-273	0	-167	585	0.08	0.09	0.00
1	52	47	-4825	0	0	0	2489	0.25	0.42	0.00
2	52	-1009	-936	82	0	42	489	0.05	0.08	0.00
3	52	-1009	-936	-82	0	-42	489	0.05	0.08	0.00
4	52	1027	-936	82	0	42	489	0.06	0.08	0.00
5	52	1027	-936	-82	0	-42	489	0.06	0.08	0.00
6	52	-296	-936	273	0	139	489	0.06	0.09	0.00
7	52	-296	-936	-273	0	-139	489	0.06	0.09	0.00
8	52	315	-936	273	0	139	489	0.06	0.09	0.00
9	52	315	-936	-273	0	-139	489	0.06	0.09	0.00
10	52	-1009	-936	82	0	42	489	0.05	0.08	0.00
11	52	-1009	-936	-82	0	-42	489	0.05	0.08	0.00
12	52	1027	-936	82	0	42	489	0.06	0.08	0.00
13	52	1027	-936	-82	0	-42	489	0.06	0.08	0.00
14	52	-296	-936	273	0	139	489	0.06	0.09	0.00
15	52	-296	-936	-273	0	-139	489	0.06	0.09	0.00
16	52	315	-936	273	0	139	489	0.06	0.09	0.00
17	52	315	-936	-273	0	-139	489	0.06	0.09	0.00
1	62	47	-4832	0	0	-0	1991	0.20	0.42	0.00
2	62	-1009	-942	82	0	33	392	0.04	0.08	0.00
3	62	-1009	-942	-82	0	-33	392	0.04	0.08	0.00
4	62	1027	-942	82	0	33	392	0.05	0.08	0.00
5	62	1027	-942	-82	0	-33	392	0.05	0.08	0.00
6	62	-296	-942	273	0	111	392	0.05	0.09	0.00
7	62	-296	-942	-273	0	-111	392	0.05	0.09	0.00
8	62	315	-942	273	0	111	392	0.05	0.09	0.00
9	62	315	-942	-273	0	-111	392	0.05	0.09	0.00
10	62	-1009	-942	82	0	33	392	0.04	0.08	0.00
11	62	-1009	-942	-82	0	-33	392	0.04	0.08	0.00
12	62	1027	-942	82	0	33	392	0.05	0.08	0.00
13	62	1027	-942	-82	0	-33	392	0.05	0.08	0.00
14	62	-296	-942	273	0	111	392	0.05	0.09	0.00
15	62	-296	-942	-273	0	-111	392	0.05	0.09	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

16	62	315	-942	273	0	111	392	0.05	0.09	0.00
17	62	315	-942	-273	0	-111	392	0.05	0.09	0.00
1	72	47	-4840	0	0	-0	1493	0.15	0.43	0.00
2	72	-1009	-948	82	0	25	294	0.03	0.08	0.00
3	72	-1009	-948	-82	0	-25	294	0.03	0.08	0.00
4	72	1027	-948	82	0	25	294	0.04	0.08	0.00
5	72	1027	-948	-82	0	-25	294	0.04	0.08	0.00
6	72	-296	-948	273	0	83	294	0.04	0.09	0.00
7	72	-296	-948	-273	0	-83	294	0.04	0.09	0.00
8	72	315	-948	273	0	83	294	0.04	0.09	0.00
9	72	315	-948	-273	0	-83	294	0.04	0.09	0.00
10	72	-1009	-948	82	0	25	294	0.03	0.08	0.00
11	72	-1009	-948	-82	0	-25	294	0.03	0.08	0.00
12	72	1027	-948	82	0	25	294	0.04	0.08	0.00
13	72	1027	-948	-82	0	-25	294	0.04	0.08	0.00
14	72	-296	-948	273	0	83	294	0.04	0.09	0.00
15	72	-296	-948	-273	0	-83	294	0.04	0.09	0.00
16	72	315	-948	273	0	83	294	0.04	0.09	0.00
17	72	315	-948	-273	0	-83	294	0.04	0.09	0.00
1	83	47	-4847	0	0	0	993	0.10	0.43	0.00
2	83	-1009	-954	82	0	16	196	0.02	0.08	0.00
3	83	-1009	-954	-82	0	-16	196	0.02	0.08	0.00
4	83	1027	-954	82	0	16	196	0.03	0.08	0.00
5	83	1027	-954	-82	0	-16	196	0.03	0.08	0.00
6	83	-296	-954	273	0	54	196	0.02	0.09	0.00
7	83	-296	-954	-273	0	-54	196	0.02	0.09	0.00
8	83	315	-954	273	0	54	196	0.03	0.09	0.00
9	83	315	-954	-273	0	-54	196	0.03	0.09	0.00
10	83	-1009	-954	82	0	16	196	0.02	0.08	0.00
11	83	-1009	-954	-82	0	-16	196	0.02	0.08	0.00
12	83	1027	-954	82	0	16	196	0.03	0.08	0.00
13	83	1027	-954	-82	0	-16	196	0.03	0.08	0.00
14	83	-296	-954	273	0	54	196	0.02	0.09	0.00
15	83	-296	-954	-273	0	-54	196	0.02	0.09	0.00
16	83	315	-954	273	0	54	196	0.03	0.09	0.00
17	83	315	-954	-273	0	-54	196	0.03	0.09	0.00
1	93	47	-4855	0	0	0	493	0.05	0.43	0.00
2	93	-1009	-959	82	0	8	98	0.01	0.08	0.00
3	93	-1009	-959	-82	0	-8	98	0.01	0.08	0.00
4	93	1027	-959	82	0	8	98	0.02	0.08	0.00
5	93	1027	-959	-82	0	-8	98	0.02	0.08	0.00
6	93	-296	-959	273	0	26	98	0.01	0.09	0.00
7	93	-296	-959	-273	0	-26	98	0.01	0.09	0.00
8	93	315	-959	273	0	26	98	0.02	0.09	0.00
9	93	315	-959	-273	0	-26	98	0.02	0.09	0.00
10	93	-1009	-959	82	0	8	98	0.01	0.08	0.00
11	93	-1009	-959	-82	0	-8	98	0.01	0.08	0.00
12	93	1027	-959	82	0	8	98	0.02	0.08	0.00
13	93	1027	-959	-82	0	-8	98	0.02	0.08	0.00
14	93	-296	-959	273	0	26	98	0.01	0.09	0.00
15	93	-296	-959	-273	0	-26	98	0.01	0.09	0.00
16	93	315	-959	273	0	26	98	0.02	0.09	0.00
17	93	315	-959	-273	0	-26	98	0.02	0.09	0.00
1	103	47	-4862	0	0	0	-8	0.00	0.43	0.00
2	103	-1009	-965	82	0	-1	-2	0.00	0.09	0.00
3	103	-1009	-965	-82	0	1	-2	0.00	0.09	0.00
4	103	1027	-965	82	0	-1	-2	0.01	0.09	0.00
5	103	1027	-965	-82	0	1	-2	0.01	0.09	0.00
6	103	-296	-965	273	0	-2	-2	0.00	0.09	0.00
7	103	-296	-965	-273	0	2	-2	0.00	0.09	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

8	103	315	-965	273	0	-2	-2	0.00	0.09	0.00
9	103	315	-965	-273	0	2	-2	0.00	0.09	0.00
10	103	-1009	-965	82	0	-1	-2	0.00	0.09	0.00
11	103	-1009	-965	-82	0	1	-2	0.00	0.09	0.00
12	103	1027	-965	82	0	-1	-2	0.01	0.09	0.00
13	103	1027	-965	-82	0	1	-2	0.01	0.09	0.00
14	103	-296	-965	273	0	-2	-2	0.00	0.09	0.00
15	103	-296	-965	-273	0	2	-2	0.00	0.09	0.00
16	103	315	-965	273	0	-2	-2	0.00	0.09	0.00
17	103	315	-965	-273	0	2	-2	0.00	0.09	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
2	-1009	84	964	10	12	1.000	1.000	0.09	Piano 'zx'
3	-1009	84	964	10	12	1.000	1.000	0.09	Piano 'zx'
6	-296	280	964	10	12	1.000	1.000	0.09	Piano 'zx'
7	-296	280	964	10	12	1.000	1.000	0.09	Piano 'zx'
10	-1009	84	964	10	12	1.000	1.000	0.09	Piano 'zx'
11	-1009	84	964	10	12	1.000	1.000	0.09	Piano 'zx'
14	-296	280	964	10	12	1.000	1.000	0.09	Piano 'zx'
15	-296	280	964	10	12	1.000	1.000	0.09	Piano 'zx'

AMV s.r.l.
Via San Lorenzo, 106 Tel. 0481/779903
34077 Ronchi dei Legionari (GO)

Lavoro: B655-15_v_10 Intestazione lavoro: B655-15_v_10_Tetto
Elemento: TRAVE Metodo di verifica: NTC 2008 - Eurocodice 5
Gruppo: 4 Descrizione: FP_CORDOLI
Tabella: Tabella travi
Tipo legno: Legno massiccio C24 Beta piano 'yx': 1.000 Beta piano 'zx': 1.000
k mod: 0.900

ASTA NUM. 1 NI 12 NF 13 Lungh. 103.1 cm SEZ. 3 Rp B= 24.0 H= 25.0 cm

categoria: p.p. y qy tot.
qy medio: 1.5000 1.5000 kg/cm

NC	x -- cm	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
		kg			kg*m						
1	0	-0	1896	-175	0	-144	-1518	0.44	0.31	0.00	
2	0	-0	401	-108	0	-85	-282	0.09	0.07	0.00	
3	0	-0	397	-16	0	-8	-278	0.08	0.06	0.00	
4	0	0	378	-44	0	-42	-266	0.08	0.06	0.00	
5	0	0	374	48	0	35	-263	0.08	0.06	0.00	
6	0	-0	398	-194	0	-159	-280	0.11	0.07	0.00	
7	0	-0	384	114	0	97	-269	0.09	0.07	0.00	
8	0	0	391	-174	0	-147	-276	0.10	0.07	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

9	0	0	377	133	0	109	-264	0.09	0.07	0.00
10	0	-0	401	-108	0	-85	-282	0.09	0.07	0.00
11	0	-0	397	-16	0	-8	-278	0.08	0.06	0.00
12	0	0	378	-44	0	-42	-266	0.08	0.06	0.00
13	0	0	374	48	0	35	-263	0.08	0.06	0.00
14	0	-0	398	-194	0	-159	-280	0.11	0.07	0.00
15	0	-0	384	114	0	97	-269	0.09	0.07	0.00
16	0	0	391	-174	0	-147	-276	0.10	0.07	0.00
17	0	0	377	133	0	109	-264	0.09	0.07	0.00
1	10	-0	1876	-175	0	-126	-1324	0.39	0.31	0.00
2	10	-0	385	-108	0	-73	-241	0.08	0.07	0.00
3	10	-0	381	-16	0	-6	-238	0.07	0.06	0.00
4	10	0	362	-44	0	-37	-228	0.07	0.06	0.00
5	10	0	358	48	0	30	-225	0.07	0.06	0.00
6	10	-0	382	-194	0	-139	-240	0.09	0.07	0.00
7	10	-0	368	114	0	85	-230	0.08	0.06	0.00
8	10	0	375	-174	0	-129	-236	0.09	0.07	0.00
9	10	0	361	133	0	96	-226	0.08	0.06	0.00
10	10	-0	385	-108	0	-73	-241	0.08	0.07	0.00
11	10	-0	381	-16	0	-6	-238	0.07	0.06	0.00
12	10	0	362	-44	0	-37	-228	0.07	0.06	0.00
13	10	0	358	48	0	30	-225	0.07	0.06	0.00
14	10	-0	382	-194	0	-139	-240	0.09	0.07	0.00
15	10	-0	368	114	0	85	-230	0.08	0.06	0.00
16	10	0	375	-174	0	-129	-236	0.09	0.07	0.00
17	10	0	361	133	0	96	-226	0.08	0.06	0.00
1	21	-0	1856	-175	0	-108	-1131	0.33	0.30	0.00
2	21	-0	370	-108	0	-62	-202	0.07	0.06	0.00
3	21	-0	366	-16	0	-5	-200	0.06	0.06	0.00
4	21	0	347	-44	0	-33	-192	0.06	0.06	0.00
5	21	0	343	48	0	25	-189	0.06	0.06	0.00
6	21	-0	367	-194	0	-119	-201	0.08	0.07	0.00
7	21	-0	353	114	0	73	-193	0.07	0.06	0.00
8	21	0	360	-174	0	-111	-198	0.08	0.07	0.00
9	21	0	346	133	0	82	-190	0.07	0.06	0.00
10	21	-0	370	-108	0	-62	-202	0.07	0.06	0.00
11	21	-0	366	-16	0	-5	-200	0.06	0.06	0.00
12	21	0	347	-44	0	-33	-192	0.06	0.06	0.00
13	21	0	343	48	0	25	-189	0.06	0.06	0.00
14	21	-0	367	-194	0	-119	-201	0.08	0.07	0.00
15	21	-0	353	114	0	73	-193	0.07	0.06	0.00
16	21	0	360	-174	0	-111	-198	0.08	0.07	0.00
17	21	0	346	133	0	82	-190	0.07	0.06	0.00
1	31	-0	1836	-175	0	-90	-941	0.27	0.30	0.00
2	31	-0	354	-108	0	-51	-165	0.06	0.06	0.00
3	31	-0	350	-16	0	-3	-163	0.04	0.06	0.00
4	31	0	331	-44	0	-28	-157	0.05	0.05	0.00
5	31	0	327	48	0	20	-155	0.05	0.05	0.00
6	31	-0	351	-194	0	-99	-164	0.06	0.07	0.00
7	31	-0	337	114	0	61	-157	0.06	0.06	0.00
8	31	0	344	-174	0	-93	-162	0.06	0.06	0.00
9	31	0	330	133	0	68	-155	0.06	0.06	0.00
10	31	-0	354	-108	0	-51	-165	0.06	0.06	0.00
11	31	-0	350	-16	0	-3	-163	0.04	0.06	0.00
12	31	0	331	-44	0	-28	-157	0.05	0.05	0.00
13	31	0	327	48	0	20	-155	0.05	0.05	0.00
14	31	-0	351	-194	0	-99	-164	0.06	0.07	0.00
15	31	-0	337	114	0	61	-157	0.06	0.06	0.00
16	31	0	344	-174	0	-93	-162	0.06	0.06	0.00
17	31	0	330	133	0	68	-155	0.06	0.06	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	41	-0	1816	-175	0	-72	-753	0.22	0.30	0.00
2	41	-0	339	-108	0	-40	-129	0.04	0.06	0.00
3	41	-0	335	-16	0	-1	-127	0.03	0.05	0.00
4	41	0	316	-44	0	-24	-123	0.04	0.05	0.00
5	41	0	312	48	0	15	-122	0.04	0.05	0.00
6	41	-0	336	-194	0	-79	-129	0.05	0.06	0.00
7	41	-0	322	114	0	50	-123	0.04	0.06	0.00
8	41	0	329	-174	0	-75	-127	0.05	0.06	0.00
9	41	0	315	133	0	55	-122	0.04	0.06	0.00
10	41	-0	339	-108	0	-40	-129	0.04	0.06	0.00
11	41	-0	335	-16	0	-1	-127	0.03	0.05	0.00
12	41	0	316	-44	0	-24	-123	0.04	0.05	0.00
13	41	0	312	48	0	15	-122	0.04	0.05	0.00
14	41	-0	336	-194	0	-79	-129	0.05	0.06	0.00
15	41	-0	322	114	0	50	-123	0.04	0.06	0.00
16	41	0	329	-174	0	-75	-127	0.05	0.06	0.00
17	41	0	315	133	0	55	-122	0.04	0.06	0.00

1	52	-0	1796	-175	0	-54	-566	0.17	0.29	0.00
2	52	-0	323	-108	0	-29	-95	0.03	0.06	0.00
3	52	-0	319	-16	0	0	-94	0.03	0.05	0.00
4	52	0	301	-44	0	-19	-92	0.03	0.05	0.00
5	52	0	296	48	0	10	-90	0.03	0.05	0.00
6	52	-0	320	-194	0	-59	-95	0.04	0.06	0.00
7	52	-0	306	114	0	38	-91	0.03	0.05	0.00
8	52	0	313	-174	0	-57	-94	0.04	0.06	0.00
9	52	0	299	133	0	41	-90	0.03	0.05	0.00
10	52	-0	323	-108	0	-29	-95	0.03	0.06	0.00
11	52	-0	319	-16	0	0	-94	0.03	0.05	0.00
12	52	0	301	-44	0	-19	-92	0.03	0.05	0.00
13	52	0	296	48	0	10	-90	0.03	0.05	0.00
14	52	-0	320	-194	0	-59	-95	0.04	0.06	0.00
15	52	-0	306	114	0	38	-91	0.03	0.05	0.00
16	52	0	313	-174	0	-57	-94	0.04	0.06	0.00
17	52	0	299	133	0	41	-90	0.03	0.05	0.00

1	62	-0	1775	-175	0	-36	-382	0.11	0.29	0.00
2	62	-0	308	-108	0	-18	-62	0.02	0.05	0.00
3	62	-0	304	-16	0	2	-62	0.02	0.05	0.00
4	62	0	285	-44	0	-14	-61	0.02	0.05	0.00
5	62	0	281	48	0	5	-61	0.02	0.05	0.00
6	62	-0	305	-194	0	-39	-63	0.03	0.06	0.00
7	62	-0	291	114	0	26	-60	0.02	0.05	0.00
8	62	0	298	-174	0	-39	-63	0.02	0.06	0.00
9	62	0	284	133	0	27	-60	0.02	0.05	0.00
10	62	-0	308	-108	0	-18	-62	0.02	0.05	0.00
11	62	-0	304	-16	0	2	-62	0.02	0.05	0.00
12	62	0	285	-44	0	-14	-61	0.02	0.05	0.00
13	62	0	281	48	0	5	-61	0.02	0.05	0.00
14	62	-0	305	-194	0	-39	-63	0.03	0.06	0.00
15	62	-0	291	114	0	26	-60	0.02	0.05	0.00
16	62	0	298	-174	0	-39	-63	0.02	0.06	0.00
17	62	0	284	133	0	27	-60	0.02	0.05	0.00

1	72	-0	1755	-175	0	-18	-200	0.06	0.29	0.00
2	72	-0	292	-108	0	-6	-32	0.01	0.05	0.00
3	72	-0	288	-16	0	4	-31	0.01	0.05	0.00
4	72	0	270	-44	0	-10	-33	0.01	0.04	0.00
5	72	0	265	48	0	0	-32	0.01	0.04	0.00
6	72	-0	289	-194	0	-19	-32	0.01	0.06	0.00
7	72	-0	275	114	0	14	-31	0.01	0.05	0.00
8	72	0	282	-174	0	-21	-33	0.01	0.05	0.00
9	72	0	269	133	0	13	-31	0.01	0.05	0.00
10	72	-0	292	-108	0	-6	-32	0.01	0.05	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

11	72	-0	288	-16	0	4	-31	0.01	0.05	0.00
12	72	0	270	-44	0	-10	-33	0.01	0.04	0.00
13	72	0	265	48	0	0	-32	0.01	0.04	0.00
14	72	-0	289	-194	0	-19	-32	0.01	0.06	0.00
15	72	-0	275	114	0	14	-31	0.01	0.05	0.00
16	72	0	282	-174	0	-21	-33	0.01	0.05	0.00
17	72	0	269	133	0	13	-31	0.01	0.05	0.00

1	83	-0	1735	-175	0	0	-20	0.01	0.29	0.00
2	83	-0	277	-108	0	5	-2	0.00	0.05	0.00
3	83	-0	273	-16	0	5	-2	0.00	0.04	0.00
4	83	0	254	-44	0	-5	-6	0.00	0.04	0.00
5	83	0	250	48	0	-5	-6	0.00	0.04	0.00
6	83	-0	274	-194	0	1	-3	0.00	0.05	0.00
7	83	-0	260	114	0	3	-3	0.00	0.05	0.00
8	83	0	267	-174	0	-3	-4	0.00	0.05	0.00
9	83	0	253	133	0	-0	-5	0.00	0.05	0.00
10	83	-0	277	-108	0	5	-2	0.00	0.05	0.00
11	83	-0	273	-16	0	5	-2	0.00	0.04	0.00
12	83	0	254	-44	0	-5	-6	0.00	0.04	0.00
13	83	0	250	48	0	-5	-6	0.00	0.04	0.00
14	83	-0	274	-194	0	1	-3	0.00	0.05	0.00
15	83	-0	260	114	0	3	-3	0.00	0.05	0.00
16	83	0	267	-174	0	-3	-4	0.00	0.05	0.00
17	83	0	253	133	0	-0	-5	0.00	0.05	0.00

1	93	-0	1715	-175	0	18	157	0.05	0.28	0.00
2	93	-0	261	-108	0	16	26	0.01	0.05	0.00
3	93	-0	257	-16	0	7	25	0.01	0.04	0.00
4	93	0	239	-44	0	-1	20	0.01	0.04	0.00
5	93	0	234	48	0	-10	19	0.01	0.04	0.00
6	93	-0	258	-194	0	20	24	0.01	0.05	0.00
7	93	-0	244	114	0	-9	23	0.01	0.04	0.00
8	93	0	251	-174	0	15	22	0.01	0.05	0.00
9	93	0	238	133	0	-14	21	0.01	0.04	0.00
10	93	-0	261	-108	0	16	26	0.01	0.05	0.00
11	93	-0	257	-16	0	7	25	0.01	0.04	0.00
12	93	0	239	-44	0	-1	20	0.01	0.04	0.00
13	93	0	234	48	0	-10	19	0.01	0.04	0.00
14	93	-0	258	-194	0	20	24	0.01	0.05	0.00
15	93	-0	244	114	0	-9	23	0.01	0.04	0.00
16	93	0	251	-174	0	15	22	0.01	0.05	0.00
17	93	0	238	133	0	-14	21	0.01	0.04	0.00

1	103	-0	1695	-175	0	36	333	0.10	0.28	0.00
2	103	-0	246	-108	0	27	52	0.02	0.04	0.00
3	103	-0	242	-16	0	9	51	0.02	0.04	0.00
4	103	0	223	-44	0	4	43	0.01	0.04	0.00
5	103	0	219	48	0	-15	43	0.01	0.04	0.00
6	103	-0	243	-194	0	40	50	0.02	0.05	0.00
7	103	-0	229	114	0	-21	47	0.02	0.04	0.00
8	103	0	236	-174	0	33	47	0.02	0.05	0.00
9	103	0	222	133	0	-28	44	0.02	0.04	0.00
10	103	-0	246	-108	0	27	52	0.02	0.04	0.00
11	103	-0	242	-16	0	9	51	0.02	0.04	0.00
12	103	0	223	-44	0	4	43	0.01	0.04	0.00
13	103	0	219	48	0	-15	43	0.01	0.04	0.00
14	103	-0	243	-194	0	40	50	0.02	0.05	0.00
15	103	-0	229	114	0	-21	47	0.02	0.04	0.00
16	103	0	236	-174	0	33	47	0.02	0.05	0.00
17	103	0	222	133	0	-28	44	0.02	0.04	0.00

Verifica di STABILITA'

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
	--	-----							
	kg	kg*m							
1	-0	144	1518	15	15	1.000	1.000	0.09	Piano 'zx'
2	-0	85	282	15	15	1.000	1.000	0.09	Piano 'zx'
3	-0	9	278	15	15	1.000	1.000	0.09	Piano 'zx'
6	-0	159	280	15	15	1.000	1.000	0.09	Piano 'zx'
7	-0	97	269	15	15	1.000	1.000	0.09	Piano 'zx'
10	-0	85	282	15	15	1.000	1.000	0.09	Piano 'zx'
11	-0	9	278	15	15	1.000	1.000	0.09	Piano 'zx'
14	-0	159	280	15	15	1.000	1.000	0.09	Piano 'zx'
15	-0	97	269	15	15	1.000	1.000	0.09	Piano 'zx'

ASTA NUM. 2 NI 13 NF 14 Lungh. 103.1 cm SEZ. 3 Rp B= 24.0 H= 25.0 cm

categoria: p.p. y qy tot.

qy medio: 1.5000 1.5000 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
--	cm	kg			kg*m						
<hr/>											
1	0	0	-320	37	0	31	334	0.10	0.05	0.00	
2	0	0	9	4	0	9	46	0.01	0.00	0.00	
3	0	0	10	-17	0	-9	45	0.01	0.00	0.00	
4	0	0	-0	30	0	20	50	0.02	0.00	0.00	
5	0	0	0	9	0	2	49	0.01	0.00	0.00	
6	0	0	5	38	0	33	48	0.02	0.01	0.00	
7	0	-0	7	-33	0	-26	46	0.02	0.01	0.00	
8	0	0	2	46	0	37	49	0.02	0.01	0.00	
9	0	0	5	-25	0	-23	47	0.02	0.00	0.00	
10	0	0	9	4	0	9	46	0.01	0.00	0.00	
11	0	0	10	-17	0	-9	45	0.01	0.00	0.00	
12	0	0	-0	30	0	20	50	0.02	0.00	0.00	
13	0	0	0	9	0	2	49	0.01	0.00	0.00	
14	0	0	5	38	0	33	48	0.02	0.01	0.00	
15	0	-0	7	-33	0	-26	46	0.02	0.01	0.00	
16	0	0	2	46	0	37	49	0.02	0.01	0.00	
17	0	0	5	-25	0	-23	47	0.02	0.00	0.00	
<hr/>											
1	10	0	-340	37	0	27	300	0.09	0.06	0.00	
2	10	0	-6	4	0	8	46	0.01	0.00	0.00	
3	10	0	-6	-17	0	-7	45	0.01	0.00	0.00	
4	10	0	-16	30	0	17	49	0.02	0.01	0.00	
5	10	0	-15	9	0	1	48	0.01	0.00	0.00	
6	10	0	-11	38	0	29	47	0.02	0.01	0.00	
7	10	-0	-8	-33	0	-23	46	0.02	0.01	0.00	
8	10	0	-13	46	0	32	48	0.02	0.01	0.00	
9	10	0	-11	-25	0	-20	46	0.02	0.00	0.00	
10	10	0	-6	4	0	8	46	0.01	0.00	0.00	
11	10	0	-6	-17	0	-7	45	0.01	0.00	0.00	
12	10	0	-16	30	0	17	49	0.02	0.01	0.00	
13	10	0	-15	9	0	1	48	0.01	0.00	0.00	
14	10	0	-11	38	0	29	47	0.02	0.01	0.00	
15	10	-0	-8	-33	0	-23	46	0.02	0.01	0.00	
16	10	0	-13	46	0	32	48	0.02	0.01	0.00	
17	10	0	-11	-25	0	-20	46	0.02	0.00	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	21	0	-360	37	0	24	263	0.08	0.06	0.00
2	21	0	-22	4	0	8	44	0.01	0.00	0.00
3	21	0	-21	-17	0	-6	44	0.01	0.00	0.00
4	21	0	-31	30	0	14	46	0.02	0.01	0.00
5	21	0	-30	9	0	0	46	0.01	0.01	0.00
6	21	0	-26	38	0	26	46	0.02	0.01	0.00
7	21	-0	-23	-33	0	-19	44	0.02	0.01	0.00
8	21	0	-29	46	0	27	46	0.02	0.01	0.00
9	21	0	-26	-25	0	-17	45	0.02	0.01	0.00
10	21	0	-22	4	0	8	44	0.01	0.00	0.00
11	21	0	-21	-17	0	-6	44	0.01	0.00	0.00
12	21	0	-31	30	0	14	46	0.02	0.01	0.00
13	21	0	-30	9	0	0	46	0.01	0.01	0.00
14	21	0	-26	38	0	26	46	0.02	0.01	0.00
15	21	-0	-23	-33	0	-19	44	0.02	0.01	0.00
16	21	0	-29	46	0	27	46	0.02	0.01	0.00
17	21	0	-26	-25	0	-17	45	0.02	0.01	0.00

1	31	0	-380	37	0	20	225	0.07	0.06	0.00
2	31	0	-37	4	0	7	41	0.01	0.01	0.00
3	31	0	-37	-17	0	-4	41	0.01	0.01	0.00
4	31	0	-47	30	0	11	42	0.01	0.01	0.00
5	31	0	-46	9	0	-1	42	0.01	0.01	0.00
6	31	0	-41	38	0	22	42	0.02	0.01	0.00
7	31	-0	-39	-33	0	-16	41	0.01	0.01	0.00
8	31	0	-44	46	0	23	42	0.02	0.01	0.00
9	31	0	-42	-25	0	-15	41	0.01	0.01	0.00
10	31	0	-37	4	0	7	41	0.01	0.01	0.00
11	31	0	-37	-17	0	-4	41	0.01	0.01	0.00
12	31	0	-47	30	0	11	42	0.01	0.01	0.00
13	31	0	-46	9	0	-1	42	0.01	0.01	0.00
14	31	0	-41	38	0	22	42	0.02	0.01	0.00
15	31	-0	-39	-33	0	-16	41	0.01	0.01	0.00
16	31	0	-44	46	0	23	42	0.02	0.01	0.00
17	31	0	-42	-25	0	-15	41	0.01	0.01	0.00

1	41	0	-400	37	0	16	185	0.05	0.07	0.00
2	41	0	-53	4	0	7	37	0.01	0.01	0.00
3	41	0	-52	-17	0	-2	36	0.01	0.01	0.00
4	41	0	-62	30	0	7	37	0.01	0.01	0.00
5	41	0	-61	9	0	-2	36	0.01	0.01	0.00
6	41	0	-57	38	0	18	37	0.01	0.01	0.00
7	41	-0	-54	-33	0	-12	36	0.01	0.01	0.00
8	41	0	-60	46	0	18	37	0.01	0.01	0.00
9	41	0	-57	-25	0	-12	36	0.01	0.01	0.00
10	41	0	-53	4	0	7	37	0.01	0.01	0.00
11	41	0	-52	-17	0	-2	36	0.01	0.01	0.00
12	41	0	-62	30	0	7	37	0.01	0.01	0.00
13	41	0	-61	9	0	-2	36	0.01	0.01	0.00
14	41	0	-57	38	0	18	37	0.01	0.01	0.00
15	41	-0	-54	-33	0	-12	36	0.01	0.01	0.00
16	41	0	-60	46	0	18	37	0.01	0.01	0.00
17	41	0	-57	-25	0	-12	36	0.01	0.01	0.00

1	52	0	-420	37	0	12	143	0.04	0.07	0.00
2	52	0	-68	4	0	7	30	0.01	0.01	0.00
3	52	0	-67	-17	0	-0	30	0.01	0.01	0.00
4	52	0	-78	30	0	4	30	0.01	0.01	0.00
5	52	0	-77	9	0	-2	29	0.01	0.01	0.00
6	52	0	-72	38	0	14	30	0.01	0.01	0.00
7	52	-0	-70	-33	0	-9	29	0.01	0.01	0.00
8	52	0	-75	46	0	13	30	0.01	0.01	0.00
9	52	0	-73	-25	0	-10	29	0.01	0.01	0.00
10	52	0	-68	4	0	7	30	0.01	0.01	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

11	52	0	-67	-17	0	-0	30	0.01	0.01	0.00
12	52	0	-78	30	0	4	30	0.01	0.01	0.00
13	52	0	-77	9	0	-2	29	0.01	0.01	0.00
14	52	0	-72	38	0	14	30	0.01	0.01	0.00
15	52	-0	-70	-33	0	-9	29	0.01	0.01	0.00
16	52	0	-75	46	0	13	30	0.01	0.01	0.00
17	52	0	-73	-25	0	-10	29	0.01	0.01	0.00
1	62	0	-440	37	0	8	98	0.03	0.07	0.00
2	62	0	-84	4	0	6	23	0.01	0.01	0.00
3	62	0	-83	-17	0	2	22	0.01	0.01	0.00
4	62	0	-93	30	0	1	21	0.01	0.02	0.00
5	62	0	-92	9	0	-3	21	0.01	0.02	0.00
6	62	0	-88	38	0	10	22	0.01	0.02	0.00
7	62	-0	-85	-33	0	-6	21	0.01	0.01	0.00
8	62	0	-91	46	0	8	22	0.01	0.02	0.00
9	62	0	-88	-25	0	-7	21	0.01	0.01	0.00
10	62	0	-84	4	0	6	23	0.01	0.01	0.00
11	62	0	-83	-17	0	2	22	0.01	0.01	0.00
12	62	0	-93	30	0	1	21	0.01	0.02	0.00
13	62	0	-92	9	0	-3	21	0.01	0.02	0.00
14	62	0	-88	38	0	10	22	0.01	0.02	0.00
15	62	-0	-85	-33	0	-6	21	0.01	0.01	0.00
16	62	0	-91	46	0	8	22	0.01	0.02	0.00
17	62	0	-88	-25	0	-7	21	0.01	0.01	0.00
1	72	0	-460	37	0	5	52	0.02	0.08	0.00
2	72	0	-99	4	0	6	13	0.00	0.02	0.00
3	72	0	-98	-17	0	3	13	0.00	0.02	0.00
4	72	0	-109	30	0	-2	10	0.00	0.02	0.00
5	72	0	-108	9	0	-4	10	0.00	0.02	0.00
6	72	0	-103	38	0	6	12	0.00	0.02	0.00
7	72	-0	-101	-33	0	-2	12	0.00	0.02	0.00
8	72	0	-106	46	0	4	11	0.00	0.02	0.00
9	72	0	-104	-25	0	-4	11	0.00	0.02	0.00
10	72	0	-99	4	0	6	13	0.00	0.02	0.00
11	72	0	-98	-17	0	3	13	0.00	0.02	0.00
12	72	0	-109	30	0	-2	10	0.00	0.02	0.00
13	72	0	-108	9	0	-4	10	0.00	0.02	0.00
14	72	0	-103	38	0	6	12	0.00	0.02	0.00
15	72	-0	-101	-33	0	-2	12	0.00	0.02	0.00
16	72	0	-106	46	0	4	11	0.00	0.02	0.00
17	72	0	-104	-25	0	-4	11	0.00	0.02	0.00
1	83	0	-480	37	0	1	4	0.00	0.08	0.00
2	83	0	-115	4	0	5	2	0.00	0.02	0.00
3	83	0	-114	-17	0	5	2	0.00	0.02	0.00
4	83	0	-124	30	0	-5	-2	0.00	0.02	0.00
5	83	0	-123	9	0	-5	-2	0.00	0.02	0.00
6	83	0	-119	38	0	2	1	0.00	0.02	0.00
7	83	-0	-116	-33	0	1	1	0.00	0.02	0.00
8	83	0	-122	46	0	-1	-0	0.00	0.02	0.00
9	83	0	-119	-25	0	-2	-0	0.00	0.02	0.00
10	83	0	-115	4	0	5	2	0.00	0.02	0.00
11	83	0	-114	-17	0	5	2	0.00	0.02	0.00
12	83	0	-124	30	0	-5	-2	0.00	0.02	0.00
13	83	0	-123	9	0	-5	-2	0.00	0.02	0.00
14	83	0	-119	38	0	2	1	0.00	0.02	0.00
15	83	-0	-116	-33	0	1	1	0.00	0.02	0.00
16	83	0	-122	46	0	-1	-0	0.00	0.02	0.00
17	83	0	-119	-25	0	-2	-0	0.00	0.02	0.00
1	93	0	-500	37	0	-3	-47	0.01	0.08	0.00
2	93	0	-130	4	0	5	-11	0.00	0.02	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

3	93	0	-129	-17	0	7	-11	0.00	0.02	0.00
4	93	0	-140	30	0	-8	-15	0.01	0.02	0.00
5	93	0	-139	9	0	-6	-15	0.01	0.02	0.00
6	93	0	-134	38	0	-2	-12	0.00	0.02	0.00
7	93	-0	-132	-33	0	5	-12	0.00	0.02	0.00
8	93	0	-137	46	0	-6	-14	0.00	0.02	0.00
9	93	0	-135	-25	0	1	-13	0.00	0.02	0.00
10	93	0	-130	4	0	5	-11	0.00	0.02	0.00
11	93	0	-129	-17	0	7	-11	0.00	0.02	0.00
12	93	0	-140	30	0	-8	-15	0.01	0.02	0.00
13	93	0	-139	9	0	-6	-15	0.01	0.02	0.00
14	93	0	-134	38	0	-2	-12	0.00	0.02	0.00
15	93	-0	-132	-33	0	5	-12	0.00	0.02	0.00
16	93	0	-137	46	0	-6	-14	0.00	0.02	0.00
17	93	0	-135	-25	0	1	-13	0.00	0.02	0.00
1	103	0	-521	37	0	-7	-100	0.03	0.09	0.00
2	103	0	-146	4	0	5	-25	0.01	0.02	0.00
3	103	0	-145	-17	0	9	-25	0.01	0.02	0.00
4	103	0	-155	30	0	-11	-30	0.01	0.03	0.00
5	103	0	-154	9	0	-7	-30	0.01	0.03	0.00
6	103	0	-150	38	0	-6	-27	0.01	0.03	0.00
7	103	-0	-147	-33	0	8	-26	0.01	0.02	0.00
8	103	0	-153	46	0	-10	-29	0.01	0.03	0.00
9	103	0	-150	-25	0	3	-28	0.01	0.02	0.00
10	103	0	-146	4	0	5	-25	0.01	0.02	0.00
11	103	0	-145	-17	0	9	-25	0.01	0.02	0.00
12	103	0	-155	30	0	-11	-30	0.01	0.03	0.00
13	103	0	-154	9	0	-7	-30	0.01	0.03	0.00
14	103	0	-150	38	0	-6	-27	0.01	0.03	0.00
15	103	-0	-147	-33	0	8	-26	0.01	0.02	0.00
16	103	0	-153	46	0	-10	-29	0.01	0.03	0.00
17	103	0	-150	-25	0	3	-28	0.01	0.02	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota

7	-0	26	46	15	15	1.000	1.000	0.09	Piano 'zx'
15	-0	26	46	15	15	1.000	1.000	0.09	Piano 'zx'

ASTA NUM. 3 NI 14 NF 15 Lungh. 103.1 cm SEZ. 3 Rp B= 24.0 H= 25.0 cm

categoria: p.p. y qy tot.
qy medio: 1.5000 1.5000 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	cm	kg			kg*m						
1	0	0	198	-10	0	-8	-99	0.03	0.03	0.00	
2	0	0	101	-22	0	-13	-31	0.01	0.02	0.00	
3	0	0	100	-17	0	-9	-31	0.01	0.02	0.00	
4	0	0	88	13	0	6	-24	0.01	0.01	0.00	
5	0	0	88	18	0	10	-24	0.01	0.01	0.00	
6	0	0	96	-16	0	-11	-29	0.01	0.02	0.00	
7	0	-0	96	2	0	3	-28	0.01	0.02	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

8	0	0	93	-5	0	-6	-27	0.01	0.02	0.00
9	0	-0	92	12	0	8	-26	0.01	0.02	0.00
10	0	0	101	-22	0	-13	-31	0.01	0.02	0.00
11	0	0	100	-17	0	-9	-31	0.01	0.02	0.00
12	0	0	88	13	0	6	-24	0.01	0.01	0.00
13	0	0	88	18	0	10	-24	0.01	0.01	0.00
14	0	0	96	-16	0	-11	-29	0.01	0.02	0.00
15	0	-0	96	2	0	3	-28	0.01	0.02	0.00
16	0	0	93	-5	0	-6	-27	0.01	0.02	0.00
17	0	-0	92	12	0	8	-26	0.01	0.02	0.00

1	10	0	178	-10	0	-7	-79	0.02	0.03	0.00
2	10	0	85	-22	0	-11	-21	0.01	0.01	0.00
3	10	0	85	-17	0	-7	-21	0.01	0.01	0.00
4	10	0	73	13	0	4	-16	0.01	0.01	0.00
5	10	0	72	18	0	8	-16	0.01	0.01	0.00
6	10	0	81	-16	0	-10	-19	0.01	0.01	0.00
7	10	-0	80	2	0	3	-19	0.01	0.01	0.00
8	10	0	77	-5	0	-5	-18	0.01	0.01	0.00
9	10	-0	76	12	0	7	-17	0.01	0.01	0.00
10	10	0	85	-22	0	-11	-21	0.01	0.01	0.00
11	10	0	85	-17	0	-7	-21	0.01	0.01	0.00
12	10	0	73	13	0	4	-16	0.01	0.01	0.00
13	10	0	72	18	0	8	-16	0.01	0.01	0.00
14	10	0	81	-16	0	-10	-19	0.01	0.01	0.00
15	10	-0	80	2	0	3	-19	0.01	0.01	0.00
16	10	0	77	-5	0	-5	-18	0.01	0.01	0.00
17	10	-0	76	12	0	7	-17	0.01	0.01	0.00

1	21	0	157	-10	0	-6	-62	0.02	0.03	0.00
2	21	0	70	-22	0	-8	-13	0.01	0.01	0.00
3	21	0	69	-17	0	-5	-13	0.00	0.01	0.00
4	21	0	57	13	0	3	-9	0.00	0.01	0.00
5	21	0	57	18	0	6	-9	0.00	0.01	0.00
6	21	0	65	-16	0	-8	-12	0.00	0.01	0.00
7	21	-0	65	2	0	3	-11	0.00	0.01	0.00
8	21	0	62	-5	0	-5	-11	0.00	0.01	0.00
9	21	-0	61	12	0	6	-10	0.00	0.01	0.00
10	21	0	70	-22	0	-8	-13	0.01	0.01	0.00
11	21	0	69	-17	0	-5	-13	0.00	0.01	0.00
12	21	0	57	13	0	3	-9	0.00	0.01	0.00
13	21	0	57	18	0	6	-9	0.00	0.01	0.00
14	21	0	65	-16	0	-8	-12	0.00	0.01	0.00
15	21	-0	65	2	0	3	-11	0.00	0.01	0.00
16	21	0	62	-5	0	-5	-11	0.00	0.01	0.00
17	21	-0	61	12	0	6	-10	0.00	0.01	0.00

1	31	0	137	-10	0	-5	-47	0.01	0.02	0.00
2	31	0	54	-22	0	-6	-7	0.00	0.01	0.00
3	31	0	54	-17	0	-3	-7	0.00	0.01	0.00
4	31	0	42	13	0	2	-4	0.00	0.01	0.00
5	31	0	41	18	0	4	-4	0.00	0.01	0.00
6	31	0	50	-16	0	-6	-6	0.00	0.01	0.00
7	31	-0	49	2	0	2	-6	0.00	0.01	0.00
8	31	0	46	-5	0	-4	-5	0.00	0.01	0.00
9	31	-0	45	12	0	5	-5	0.00	0.01	0.00
10	31	0	54	-22	0	-6	-7	0.00	0.01	0.00
11	31	0	54	-17	0	-3	-7	0.00	0.01	0.00
12	31	0	42	13	0	2	-4	0.00	0.01	0.00
13	31	0	41	18	0	4	-4	0.00	0.01	0.00
14	31	0	50	-16	0	-6	-6	0.00	0.01	0.00
15	31	-0	49	2	0	2	-6	0.00	0.01	0.00
16	31	0	46	-5	0	-4	-5	0.00	0.01	0.00
17	31	-0	45	12	0	5	-5	0.00	0.01	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	41	0	117	-10	0	-4	-34	0.01	0.02	0.00
2	41	0	39	-22	0	-4	-2	0.00	0.01	0.00
3	41	0	38	-17	0	-2	-2	0.00	0.01	0.00
4	41	0	26	13	0	0	-1	0.00	0.00	0.00
5	41	0	26	18	0	2	-0	0.00	0.01	0.00
6	41	0	35	-16	0	-5	-2	0.00	0.01	0.00
7	41	-0	34	2	0	2	-1	0.00	0.01	0.00
8	41	0	31	-5	0	-4	-1	0.00	0.01	0.00
9	41	-0	30	12	0	3	-1	0.00	0.01	0.00
10	41	0	39	-22	0	-4	-2	0.00	0.01	0.00
11	41	0	38	-17	0	-2	-2	0.00	0.01	0.00
12	41	0	26	13	0	0	-1	0.00	0.00	0.00
13	41	0	26	18	0	2	-0	0.00	0.01	0.00
14	41	0	35	-16	0	-5	-2	0.00	0.01	0.00
15	41	-0	34	2	0	2	-1	0.00	0.01	0.00
16	41	0	31	-5	0	-4	-1	0.00	0.01	0.00
17	41	-0	30	12	0	3	-1	0.00	0.01	0.00

1	52	0	97	-10	0	-3	-23	0.01	0.02	0.00
2	52	0	23	-22	0	-2	1	0.00	0.01	0.00
3	52	0	23	-17	0	0	1	0.00	0.00	0.00
4	52	0	11	13	0	-1	1	0.00	0.00	0.00
5	52	0	10	18	0	1	1	0.00	0.00	0.00
6	52	0	19	-16	0	-3	1	0.00	0.00	0.00
7	52	-0	18	2	0	2	1	0.00	0.00	0.00
8	52	0	15	-5	0	-3	1	0.00	0.00	0.00
9	52	-0	15	12	0	2	1	0.00	0.00	0.00
10	52	0	23	-22	0	-2	1	0.00	0.01	0.00
11	52	0	23	-17	0	0	1	0.00	0.00	0.00
12	52	0	11	13	0	-1	1	0.00	0.00	0.00
13	52	0	10	18	0	1	1	0.00	0.00	0.00
14	52	0	19	-16	0	-3	1	0.00	0.00	0.00
15	52	-0	18	2	0	2	1	0.00	0.00	0.00
16	52	0	15	-5	0	-3	1	0.00	0.00	0.00
17	52	-0	15	12	0	2	1	0.00	0.00	0.00

1	62	0	77	-10	0	-2	-14	0.00	0.01	0.00
2	62	0	8	-22	0	1	3	0.00	0.00	0.00
3	62	0	7	-17	0	2	3	0.00	0.00	0.00
4	62	0	-5	13	0	-2	2	0.00	0.00	0.00
5	62	0	-5	18	0	-1	2	0.00	0.00	0.00
6	62	0	4	-16	0	-2	2	0.00	0.00	0.00
7	62	-0	3	2	0	2	2	0.00	0.00	0.00
8	62	0	-0	-5	0	-3	2	0.00	0.00	0.00
9	62	-0	-1	12	0	1	2	0.00	0.00	0.00
10	62	0	8	-22	0	1	3	0.00	0.00	0.00
11	62	0	7	-17	0	2	3	0.00	0.00	0.00
12	62	0	-5	13	0	-2	2	0.00	0.00	0.00
13	62	0	-5	18	0	-1	2	0.00	0.00	0.00
14	62	0	4	-16	0	-2	2	0.00	0.00	0.00
15	62	-0	3	2	0	2	2	0.00	0.00	0.00
16	62	0	-0	-5	0	-3	2	0.00	0.00	0.00
17	62	-0	-1	12	0	1	2	0.00	0.00	0.00

1	72	0	57	-10	0	-1	-7	0.00	0.01	0.00
2	72	0	-8	-22	0	3	3	0.00	0.00	0.00
3	72	0	-8	-17	0	3	3	0.00	0.00	0.00
4	72	0	-20	13	0	-4	0	0.00	0.00	0.00
5	72	0	-20	18	0	-3	0	0.00	0.00	0.00
6	72	0	-12	-16	0	-0	2	0.00	0.00	0.00
7	72	-0	-13	2	0	2	2	0.00	0.00	0.00
8	72	0	-16	-5	0	-2	1	0.00	0.00	0.00
9	72	-0	-16	12	0	-0	1	0.00	0.00	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

10	72	0	-8	-22	0	3	3	0.00	0.00	0.00
11	72	0	-8	-17	0	3	3	0.00	0.00	0.00
12	72	0	-20	13	0	-4	0	0.00	0.00	0.00
13	72	0	-20	18	0	-3	0	0.00	0.00	0.00
14	72	0	-12	-16	0	-0	2	0.00	0.00	0.00
15	72	-0	-13	2	0	2	2	0.00	0.00	0.00
16	72	0	-16	-5	0	-2	1	0.00	0.00	0.00
17	72	-0	-16	12	0	-0	1	0.00	0.00	0.00

1	83	0	37	-10	0	0	-2	0.00	0.01	0.00
2	83	0	-23	-22	0	5	1	0.00	0.01	0.00
3	83	0	-24	-17	0	5	1	0.00	0.00	0.00
4	83	0	-36	13	0	-5	-3	0.00	0.01	0.00
5	83	0	-36	18	0	-5	-3	0.00	0.01	0.00
6	83	0	-27	-16	0	2	-0	0.00	0.01	0.00
7	83	-0	-28	2	0	2	-0	0.00	0.00	0.00
8	83	0	-31	-5	0	-2	-1	0.00	0.01	0.00
9	83	-0	-32	12	0	-1	-1	0.00	0.01	0.00
10	83	0	-23	-22	0	5	1	0.00	0.01	0.00
11	83	0	-24	-17	0	5	1	0.00	0.00	0.00
12	83	0	-36	13	0	-5	-3	0.00	0.01	0.00
13	83	0	-36	18	0	-5	-3	0.00	0.01	0.00
14	83	0	-27	-16	0	2	-0	0.00	0.01	0.00
15	83	-0	-28	2	0	2	-0	0.00	0.00	0.00
16	83	0	-31	-5	0	-2	-1	0.00	0.01	0.00
17	83	-0	-32	12	0	-1	-1	0.00	0.01	0.00

1	93	0	17	-10	0	1	1	0.00	0.00	0.00
2	93	0	-39	-22	0	7	-2	0.00	0.01	0.00
3	93	0	-39	-17	0	7	-2	0.00	0.01	0.00
4	93	0	-51	13	0	-6	-7	0.00	0.01	0.00
5	93	0	-51	18	0	-7	-7	0.00	0.01	0.00
6	93	0	-43	-16	0	3	-4	0.00	0.01	0.00
7	93	-0	-44	2	0	1	-4	0.00	0.01	0.00
8	93	0	-47	-5	0	-1	-5	0.00	0.01	0.00
9	93	-0	-47	12	0	-3	-5	0.00	0.01	0.00
10	93	0	-39	-22	0	7	-2	0.00	0.01	0.00
11	93	0	-39	-17	0	7	-2	0.00	0.01	0.00
12	93	0	-51	13	0	-6	-7	0.00	0.01	0.00
13	93	0	-51	18	0	-7	-7	0.00	0.01	0.00
14	93	0	-43	-16	0	3	-4	0.00	0.01	0.00
15	93	-0	-44	2	0	1	-4	0.00	0.01	0.00
16	93	0	-47	-5	0	-1	-5	0.00	0.01	0.00
17	93	-0	-47	12	0	-3	-5	0.00	0.01	0.00

1	103	0	-3	-10	0	2	2	0.00	0.00	0.00
2	103	0	-54	-22	0	10	-7	0.00	0.01	0.00
3	103	0	-54	-17	0	9	-7	0.00	0.01	0.00
4	103	0	-67	13	0	-8	-13	0.01	0.01	0.00
5	103	0	-67	18	0	-9	-13	0.01	0.01	0.00
6	103	0	-58	-16	0	5	-9	0.00	0.01	0.00
7	103	-0	-59	2	0	1	-9	0.00	0.01	0.00
8	103	0	-62	-5	0	-0	-11	0.00	0.01	0.00
9	103	-0	-63	12	0	-4	-11	0.00	0.01	0.00
10	103	0	-54	-22	0	10	-7	0.00	0.01	0.00
11	103	0	-54	-17	0	9	-7	0.00	0.01	0.00
12	103	0	-67	13	0	-8	-13	0.01	0.01	0.00
13	103	0	-67	18	0	-9	-13	0.01	0.01	0.00
14	103	0	-58	-16	0	5	-9	0.00	0.01	0.00
15	103	-0	-59	2	0	1	-9	0.00	0.01	0.00
16	103	0	-62	-5	0	-0	-11	0.00	0.01	0.00
17	103	-0	-63	12	0	-4	-11	0.00	0.01	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
--	--								
	kg	kg*m							
7	-0	3	28	15	15	1.000	1.000	0.09	Piano 'zx'
9	-0	8	26	15	15	1.000	1.000	0.09	Piano 'zx'
15	-0	3	28	15	15	1.000	1.000	0.09	Piano 'zx'
17	-0	8	26	15	15	1.000	1.000	0.09	Piano 'zx'

ASTA NUM. 4 NI 15 NF 16 Lungh. 103.1 cm SEZ. 3 Rp B= 24.0 H= 25.0 cm

categoria: p.p. y qy tot.

qy medio: 1.5000 1.5000 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
--	--										
	cm	kg			kg*m						
1	0	0	77	2	0	2	2	0.00	0.01	0.00	
2	0	0	79	-15	0	-8	-13	0.01	0.01	0.00	
3	0	0	79	-17	0	-9	-13	0.01	0.01	0.00	
4	0	0	67	17	0	9	-7	0.00	0.01	0.00	
5	0	0	67	16	0	8	-7	0.00	0.01	0.00	
6	0	0	75	-3	0	-1	-11	0.00	0.01	0.00	
7	0	-0	75	-7	0	-4	-11	0.00	0.01	0.00	
8	0	0	71	7	0	4	-9	0.00	0.01	0.00	
9	0	-0	72	3	0	1	-9	0.00	0.01	0.00	
10	0	0	79	-15	0	-8	-13	0.01	0.01	0.00	
11	0	0	79	-17	0	-9	-13	0.01	0.01	0.00	
12	0	0	67	17	0	9	-7	0.00	0.01	0.00	
13	0	0	67	16	0	8	-7	0.00	0.01	0.00	
14	0	0	75	-3	0	-1	-11	0.00	0.01	0.00	
15	0	-0	75	-7	0	-4	-11	0.00	0.01	0.00	
16	0	0	71	7	0	4	-9	0.00	0.01	0.00	
17	0	-0	72	3	0	1	-9	0.00	0.01	0.00	
1	10	0	57	2	0	1	9	0.00	0.01	0.00	
2	10	0	64	-15	0	-6	-6	0.00	0.01	0.00	
3	10	0	64	-17	0	-7	-6	0.00	0.01	0.00	
4	10	0	52	17	0	7	-1	0.00	0.01	0.00	
5	10	0	52	16	0	6	-1	0.00	0.01	0.00	
6	10	0	59	-3	0	-0	-4	0.00	0.01	0.00	
7	10	-0	60	-7	0	-3	-4	0.00	0.01	0.00	
8	10	0	56	7	0	4	-2	0.00	0.01	0.00	
9	10	-0	56	3	0	1	-3	0.00	0.01	0.00	
10	10	0	64	-15	0	-6	-6	0.00	0.01	0.00	
11	10	0	64	-17	0	-7	-6	0.00	0.01	0.00	
12	10	0	52	17	0	7	-1	0.00	0.01	0.00	
13	10	0	52	16	0	6	-1	0.00	0.01	0.00	
14	10	0	59	-3	0	-0	-4	0.00	0.01	0.00	
15	10	-0	60	-7	0	-3	-4	0.00	0.01	0.00	
16	10	0	56	7	0	4	-2	0.00	0.01	0.00	
17	10	-0	56	3	0	1	-3	0.00	0.01	0.00	
1	21	0	37	2	0	1	14	0.00	0.01	0.00	
2	21	0	48	-15	0	-4	0	0.00	0.01	0.00	
3	21	0	48	-17	0	-5	0	0.00	0.01	0.00	
4	21	0	36	17	0	6	4	0.00	0.01	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

5	21	0	36	16	0	5	4	0.00	0.01	0.00
6	21	0	44	-3	0	-0	1	0.00	0.01	0.00
7	21	-0	44	-7	0	-3	1	0.00	0.01	0.00
8	21	0	40	7	0	3	3	0.00	0.01	0.00
9	21	-0	41	3	0	0	2	0.00	0.01	0.00
10	21	0	48	-15	0	-4	0	0.00	0.01	0.00
11	21	0	48	-17	0	-5	0	0.00	0.01	0.00
12	21	0	36	17	0	6	4	0.00	0.01	0.00
13	21	0	36	16	0	5	4	0.00	0.01	0.00
14	21	0	44	-3	0	-0	1	0.00	0.01	0.00
15	21	-0	44	-7	0	-3	1	0.00	0.01	0.00
16	21	0	40	7	0	3	3	0.00	0.01	0.00
17	21	-0	41	3	0	0	2	0.00	0.01	0.00
1	31	0	17	2	0	1	17	0.00	0.00	0.00
2	31	0	33	-15	0	-3	4	0.00	0.01	0.00
3	31	0	33	-17	0	-3	4	0.00	0.01	0.00
4	31	0	21	17	0	4	7	0.00	0.00	0.00
5	31	0	21	16	0	3	7	0.00	0.00	0.00
6	31	0	28	-3	0	0	5	0.00	0.00	0.00
7	31	-0	29	-7	0	-2	5	0.00	0.00	0.00
8	31	0	25	7	0	2	6	0.00	0.00	0.00
9	31	-0	25	3	0	0	6	0.00	0.00	0.00
10	31	0	33	-15	0	-3	4	0.00	0.01	0.00
11	31	0	33	-17	0	-3	4	0.00	0.01	0.00
12	31	0	21	17	0	4	7	0.00	0.00	0.00
13	31	0	21	16	0	3	7	0.00	0.00	0.00
14	31	0	28	-3	0	0	5	0.00	0.00	0.00
15	31	-0	29	-7	0	-2	5	0.00	0.00	0.00
16	31	0	25	7	0	2	6	0.00	0.00	0.00
17	31	-0	25	3	0	0	6	0.00	0.00	0.00
1	41	0	-3	2	0	1	17	0.00	0.00	0.00
2	41	0	17	-15	0	-1	7	0.00	0.00	0.00
3	41	0	17	-17	0	-2	7	0.00	0.00	0.00
4	41	0	5	17	0	2	8	0.00	0.00	0.00
5	41	0	6	16	0	1	8	0.00	0.00	0.00
6	41	0	13	-3	0	0	7	0.00	0.00	0.00
7	41	-0	13	-7	0	-1	7	0.00	0.00	0.00
8	41	0	10	7	0	1	8	0.00	0.00	0.00
9	41	-0	10	3	0	-0	8	0.00	0.00	0.00
10	41	0	17	-15	0	-1	7	0.00	0.00	0.00
11	41	0	17	-17	0	-2	7	0.00	0.00	0.00
12	41	0	5	17	0	2	8	0.00	0.00	0.00
13	41	0	6	16	0	1	8	0.00	0.00	0.00
14	41	0	13	-3	0	0	7	0.00	0.00	0.00
15	41	-0	13	-7	0	-1	7	0.00	0.00	0.00
16	41	0	10	7	0	1	8	0.00	0.00	0.00
17	41	-0	10	3	0	-0	8	0.00	0.00	0.00
1	52	0	-23	2	0	1	16	0.00	0.00	0.00
2	52	0	2	-15	0	0	8	0.00	0.00	0.00
3	52	0	2	-17	0	-0	8	0.00	0.00	0.00
4	52	0	-10	17	0	0	8	0.00	0.00	0.00
5	52	0	-10	16	0	-0	8	0.00	0.00	0.00
6	52	0	-2	-3	0	1	8	0.00	0.00	0.00
7	52	-0	-2	-7	0	-1	8	0.00	0.00	0.00
8	52	0	-6	7	0	1	8	0.00	0.00	0.00
9	52	-0	-6	3	0	-1	8	0.00	0.00	0.00
10	52	0	2	-15	0	0	8	0.00	0.00	0.00
11	52	0	2	-17	0	-0	8	0.00	0.00	0.00
12	52	0	-10	17	0	0	8	0.00	0.00	0.00
13	52	0	-10	16	0	-0	8	0.00	0.00	0.00
14	52	0	-2	-3	0	1	8	0.00	0.00	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

15	52	-0	-2	-7	0	-1	8	0.00	0.00	0.00
16	52	0	-6	7	0	1	8	0.00	0.00	0.00
17	52	-0	-6	3	0	-1	8	0.00	0.00	0.00
1	62	0	-43	2	0	0	12	0.00	0.01	0.00
2	62	0	-14	-15	0	2	7	0.00	0.00	0.00
3	62	0	-14	-17	0	2	7	0.00	0.00	0.00
4	62	0	-25	17	0	-2	6	0.00	0.01	0.00
5	62	0	-25	16	0	-2	6	0.00	0.00	0.00
6	62	0	-18	-3	0	1	7	0.00	0.00	0.00
7	62	-0	-18	-7	0	0	7	0.00	0.00	0.00
8	62	0	-21	7	0	-0	6	0.00	0.00	0.00
9	62	-0	-21	3	0	-1	6	0.00	0.00	0.00
10	62	0	-14	-15	0	2	7	0.00	0.00	0.00
11	62	0	-14	-17	0	2	7	0.00	0.00	0.00
12	62	0	-25	17	0	-2	6	0.00	0.01	0.00
13	62	0	-25	16	0	-2	6	0.00	0.00	0.00
14	62	0	-18	-3	0	1	7	0.00	0.00	0.00
15	62	-0	-18	-7	0	0	7	0.00	0.00	0.00
16	62	0	-21	7	0	-0	6	0.00	0.00	0.00
17	62	-0	-21	3	0	-1	6	0.00	0.00	0.00
1	72	0	-63	2	0	0	7	0.00	0.01	0.00
2	72	0	-29	-15	0	3	5	0.00	0.01	0.00
3	72	0	-29	-17	0	3	5	0.00	0.01	0.00
4	72	0	-41	17	0	-3	3	0.00	0.01	0.00
5	72	0	-41	16	0	-3	3	0.00	0.01	0.00
6	72	0	-33	-3	0	1	4	0.00	0.01	0.00
7	72	-0	-33	-7	0	1	4	0.00	0.01	0.00
8	72	0	-37	7	0	-1	3	0.00	0.01	0.00
9	72	-0	-37	3	0	-1	3	0.00	0.01	0.00
10	72	0	-29	-15	0	3	5	0.00	0.01	0.00
11	72	0	-29	-17	0	3	5	0.00	0.01	0.00
12	72	0	-41	17	0	-3	3	0.00	0.01	0.00
13	72	0	-41	16	0	-3	3	0.00	0.01	0.00
14	72	0	-33	-3	0	1	4	0.00	0.01	0.00
15	72	-0	-33	-7	0	1	4	0.00	0.01	0.00
16	72	0	-37	7	0	-1	3	0.00	0.01	0.00
17	72	-0	-37	3	0	-1	3	0.00	0.01	0.00
1	83	0	-83	2	0	-0	-1	0.00	0.01	0.00
2	83	0	-45	-15	0	5	1	0.00	0.01	0.00
3	83	0	-45	-17	0	5	1	0.00	0.01	0.00
4	83	0	-56	17	0	-5	-2	0.00	0.01	0.00
5	83	0	-56	16	0	-5	-2	0.00	0.01	0.00
6	83	0	-49	-3	0	2	-0	0.00	0.01	0.00
7	83	-0	-49	-7	0	2	-0	0.00	0.01	0.00
8	83	0	-52	7	0	-2	-1	0.00	0.01	0.00
9	83	-0	-52	3	0	-2	-1	0.00	0.01	0.00
10	83	0	-45	-15	0	5	1	0.00	0.01	0.00
11	83	0	-45	-17	0	5	1	0.00	0.01	0.00
12	83	0	-56	17	0	-5	-2	0.00	0.01	0.00
13	83	0	-56	16	0	-5	-2	0.00	0.01	0.00
14	83	0	-49	-3	0	2	-0	0.00	0.01	0.00
15	83	-0	-49	-7	0	2	-0	0.00	0.01	0.00
16	83	0	-52	7	0	-2	-1	0.00	0.01	0.00
17	83	-0	-52	3	0	-2	-1	0.00	0.01	0.00
1	93	0	-103	2	0	-0	-10	0.00	0.02	0.00
2	93	0	-60	-15	0	7	-4	0.00	0.01	0.00
3	93	0	-60	-17	0	7	-4	0.00	0.01	0.00
4	93	0	-72	17	0	-7	-9	0.00	0.01	0.00
5	93	0	-72	16	0	-7	-9	0.00	0.01	0.00
6	93	0	-64	-3	0	2	-6	0.00	0.01	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

7	93	-0	-64	-7	0	2	-6	0.00	0.01	0.00
8	93	0	-68	7	0	-2	-7	0.00	0.01	0.00
9	93	-0	-68	3	0	-2	-7	0.00	0.01	0.00
10	93	0	-60	-15	0	7	-4	0.00	0.01	0.00
11	93	0	-60	-17	0	7	-4	0.00	0.01	0.00
12	93	0	-72	17	0	-7	-9	0.00	0.01	0.00
13	93	0	-72	16	0	-7	-9	0.00	0.01	0.00
14	93	0	-64	-3	0	2	-6	0.00	0.01	0.00
15	93	-0	-64	-7	0	2	-6	0.00	0.01	0.00
16	93	0	-68	7	0	-2	-7	0.00	0.01	0.00
17	93	-0	-68	3	0	-2	-7	0.00	0.01	0.00

1	103	0	-124	2	0	-0	-22	0.01	0.02	0.00
2	103	0	-76	-15	0	8	-11	0.00	0.01	0.00
3	103	0	-76	-17	0	8	-11	0.00	0.01	0.00
4	103	0	-87	17	0	-9	-17	0.01	0.01	0.00
5	103	0	-87	16	0	-8	-17	0.01	0.01	0.00
6	103	0	-80	-3	0	2	-13	0.00	0.01	0.00
7	103	-0	-80	-7	0	3	-13	0.00	0.01	0.00
8	103	0	-83	7	0	-3	-15	0.00	0.01	0.00
9	103	-0	-83	3	0	-2	-15	0.00	0.01	0.00
10	103	0	-76	-15	0	8	-11	0.00	0.01	0.00
11	103	0	-76	-17	0	8	-11	0.00	0.01	0.00
12	103	0	-87	17	0	-9	-17	0.01	0.01	0.00
13	103	0	-87	16	0	-8	-17	0.01	0.01	0.00
14	103	0	-80	-3	0	2	-13	0.00	0.01	0.00
15	103	-0	-80	-7	0	3	-13	0.00	0.01	0.00
16	103	0	-83	7	0	-3	-15	0.00	0.01	0.00
17	103	-0	-83	3	0	-2	-15	0.00	0.01	0.00

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
	kg	kg*m							
7	-0	4	13	15	15	1.000	1.000	0.09	Piano 'zx'
9	-0	2	15	15	15	1.000	1.000	0.09	Piano 'zx'
15	-0	4	13	15	15	1.000	1.000	0.09	Piano 'zx'
17	-0	2	15	15	15	1.000	1.000	0.09	Piano 'zx'

ASTA NUM. 5 NI 16 NF 17 Lungh. 103.1 cm SEZ. 3 Rp B= 24.0 H= 25.0 cm

categoria: p.p. y qy tot.
qy medio: 1.5000 1.5000 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	cm	kg			kg*m						
1	0	0	108	1	0	0	-22	0.01	0.02	0.00	
2	0	0	85	-16	0	-9	-17	0.01	0.01	0.00	
3	0	0	85	-16	0	-8	-17	0.01	0.01	0.00	
4	0	0	73	17	0	9	-11	0.00	0.01	0.00	
5	0	0	73	17	0	9	-11	0.00	0.01	0.00	
6	0	0	81	-5	0	-3	-15	0.00	0.01	0.00	
7	0	-0	81	-5	0	-2	-15	0.00	0.01	0.00	
8	0	0	77	5	0	2	-13	0.00	0.01	0.00	
9	0	-0	78	5	0	3	-13	0.00	0.01	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

10	0	0	85	-16	0	-9	-17	0.01	0.01	0.00
11	0	0	85	-16	0	-8	-17	0.01	0.01	0.00
12	0	0	73	17	0	9	-11	0.00	0.01	0.00
13	0	0	73	17	0	9	-11	0.00	0.01	0.00
14	0	0	81	-5	0	-3	-15	0.00	0.01	0.00
15	0	-0	81	-5	0	-2	-15	0.00	0.01	0.00
16	0	0	77	5	0	2	-13	0.00	0.01	0.00
17	0	-0	78	5	0	3	-13	0.00	0.01	0.00

1	10	0	87	1	0	0	-12	0.00	0.01	0.00
2	10	0	70	-16	0	-7	-9	0.00	0.01	0.00
3	10	0	70	-16	0	-7	-9	0.00	0.01	0.00
4	10	0	58	17	0	7	-4	0.00	0.01	0.00
5	10	0	58	17	0	7	-4	0.00	0.01	0.00
6	10	0	65	-5	0	-2	-8	0.00	0.01	0.00
7	10	-0	66	-5	0	-2	-8	0.00	0.01	0.00
8	10	0	62	5	0	2	-6	0.00	0.01	0.00
9	10	-0	62	5	0	2	-6	0.00	0.01	0.00
10	10	0	70	-16	0	-7	-9	0.00	0.01	0.00
11	10	0	70	-16	0	-7	-9	0.00	0.01	0.00
12	10	0	58	17	0	7	-4	0.00	0.01	0.00
13	10	0	58	17	0	7	-4	0.00	0.01	0.00
14	10	0	65	-5	0	-2	-8	0.00	0.01	0.00
15	10	-0	66	-5	0	-2	-8	0.00	0.01	0.00
16	10	0	62	5	0	2	-6	0.00	0.01	0.00
17	10	-0	62	5	0	2	-6	0.00	0.01	0.00

1	21	0	67	1	0	-0	-4	0.00	0.01	0.00
2	21	0	54	-16	0	-5	-3	0.00	0.01	0.00
3	21	0	54	-16	0	-5	-3	0.00	0.01	0.00
4	21	0	42	17	0	5	1	0.00	0.01	0.00
5	21	0	42	17	0	5	1	0.00	0.01	0.00
6	21	0	50	-5	0	-2	-2	0.00	0.01	0.00
7	21	-0	50	-5	0	-1	-2	0.00	0.01	0.00
8	21	0	46	5	0	1	-1	0.00	0.01	0.00
9	21	-0	47	5	0	2	-1	0.00	0.01	0.00
10	21	0	54	-16	0	-5	-3	0.00	0.01	0.00
11	21	0	54	-16	0	-5	-3	0.00	0.01	0.00
12	21	0	42	17	0	5	1	0.00	0.01	0.00
13	21	0	42	17	0	5	1	0.00	0.01	0.00
14	21	0	50	-5	0	-2	-2	0.00	0.01	0.00
15	21	-0	50	-5	0	-1	-2	0.00	0.01	0.00
16	21	0	46	5	0	1	-1	0.00	0.01	0.00
17	21	-0	47	5	0	2	-1	0.00	0.01	0.00

1	31	0	47	1	0	-0	2	0.00	0.01	0.00
2	31	0	39	-16	0	-4	2	0.00	0.01	0.00
3	31	0	39	-16	0	-3	2	0.00	0.01	0.00
4	31	0	27	17	0	3	4	0.00	0.01	0.00
5	31	0	27	17	0	3	4	0.00	0.01	0.00
6	31	0	35	-5	0	-1	3	0.00	0.01	0.00
7	31	-0	35	-5	0	-1	3	0.00	0.01	0.00
8	31	0	31	5	0	1	3	0.00	0.01	0.00
9	31	-0	31	5	0	1	3	0.00	0.01	0.00
10	31	0	39	-16	0	-4	2	0.00	0.01	0.00
11	31	0	39	-16	0	-3	2	0.00	0.01	0.00
12	31	0	27	17	0	3	4	0.00	0.01	0.00
13	31	0	27	17	0	3	4	0.00	0.01	0.00
14	31	0	35	-5	0	-1	3	0.00	0.01	0.00
15	31	-0	35	-5	0	-1	3	0.00	0.01	0.00
16	31	0	31	5	0	1	3	0.00	0.01	0.00
17	31	-0	31	5	0	1	3	0.00	0.01	0.00

1	41	0	27	1	0	-0	6	0.00	0.00	0.00
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Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

2	41	0	23	-16	0	-2	5	0.00	0.00	0.00
3	41	0	23	-16	0	-2	5	0.00	0.00	0.00
4	41	0	11	17	0	2	6	0.00	0.00	0.00
5	41	0	11	17	0	2	6	0.00	0.00	0.00
6	41	0	19	-5	0	-1	5	0.00	0.00	0.00
7	41	-0	19	-5	0	-0	5	0.00	0.00	0.00
8	41	0	16	5	0	0	6	0.00	0.00	0.00
9	41	-0	16	5	0	1	6	0.00	0.00	0.00
10	41	0	23	-16	0	-2	5	0.00	0.00	0.00
11	41	0	23	-16	0	-2	5	0.00	0.00	0.00
12	41	0	11	17	0	2	6	0.00	0.00	0.00
13	41	0	11	17	0	2	6	0.00	0.00	0.00
14	41	0	19	-5	0	-1	5	0.00	0.00	0.00
15	41	-0	19	-5	0	-0	5	0.00	0.00	0.00
16	41	0	16	5	0	0	6	0.00	0.00	0.00
17	41	-0	16	5	0	1	6	0.00	0.00	0.00

1	52	0	7	1	0	-0	7	0.00	0.00	0.00
2	52	0	8	-16	0	-0	7	0.00	0.00	0.00
3	52	0	8	-16	0	-0	7	0.00	0.00	0.00
4	52	0	-4	17	0	-0	7	0.00	0.00	0.00
5	52	0	-4	17	0	-0	7	0.00	0.00	0.00
6	52	0	4	-5	0	-0	7	0.00	0.00	0.00
7	52	-0	4	-5	0	0	7	0.00	0.00	0.00
8	52	0	0	5	0	-0	7	0.00	0.00	0.00
9	52	-0	0	5	0	0	7	0.00	0.00	0.00
10	52	0	8	-16	0	-0	7	0.00	0.00	0.00
11	52	0	8	-16	0	-0	7	0.00	0.00	0.00
12	52	0	-4	17	0	-0	7	0.00	0.00	0.00
13	52	0	-4	17	0	-0	7	0.00	0.00	0.00
14	52	0	4	-5	0	-0	7	0.00	0.00	0.00
15	52	-0	4	-5	0	0	7	0.00	0.00	0.00
16	52	0	0	5	0	-0	7	0.00	0.00	0.00
17	52	-0	0	5	0	0	7	0.00	0.00	0.00

1	62	0	-13	1	0	-0	7	0.00	0.00	0.00
2	62	0	-8	-16	0	2	7	0.00	0.00	0.00
3	62	0	-8	-16	0	2	7	0.00	0.00	0.00
4	62	0	-20	17	0	-2	5	0.00	0.00	0.00
5	62	0	-19	17	0	-2	5	0.00	0.00	0.00
6	62	0	-12	-5	0	0	6	0.00	0.00	0.00
7	62	-0	-12	-5	0	1	6	0.00	0.00	0.00
8	62	0	-15	5	0	-1	6	0.00	0.00	0.00
9	62	-0	-15	5	0	-0	6	0.00	0.00	0.00
10	62	0	-8	-16	0	2	7	0.00	0.00	0.00
11	62	0	-8	-16	0	2	7	0.00	0.00	0.00
12	62	0	-20	17	0	-2	5	0.00	0.00	0.00
13	62	0	-19	17	0	-2	5	0.00	0.00	0.00
14	62	0	-12	-5	0	0	6	0.00	0.00	0.00
15	62	-0	-12	-5	0	1	6	0.00	0.00	0.00
16	62	0	-15	5	0	-1	6	0.00	0.00	0.00
17	62	-0	-15	5	0	-0	6	0.00	0.00	0.00

1	72	0	-33	1	0	-0	5	0.00	0.01	0.00
2	72	0	-23	-16	0	3	5	0.00	0.00	0.00
3	72	0	-23	-16	0	3	5	0.00	0.00	0.00
4	72	0	-35	17	0	-4	3	0.00	0.01	0.00
5	72	0	-35	17	0	-3	3	0.00	0.01	0.00
6	72	0	-27	-5	0	1	4	0.00	0.00	0.00
7	72	-0	-27	-5	0	1	4	0.00	0.00	0.00
8	72	0	-31	5	0	-1	3	0.00	0.01	0.00
9	72	-0	-31	5	0	-1	4	0.00	0.01	0.00
10	72	0	-23	-16	0	3	5	0.00	0.00	0.00
11	72	0	-23	-16	0	3	5	0.00	0.00	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

12	72	0	-35	17	0	-4	3	0.00	0.01	0.00
13	72	0	-35	17	0	-3	3	0.00	0.01	0.00
14	72	0	-27	-5	0	1	4	0.00	0.00	0.00
15	72	-0	-27	-5	0	1	4	0.00	0.00	0.00
16	72	0	-31	5	0	-1	3	0.00	0.01	0.00
17	72	-0	-31	5	0	-1	4	0.00	0.01	0.00

1	83	0	-53	1	0	-1	0	0.00	0.01	0.00
2	83	0	-39	-16	0	5	2	0.00	0.01	0.00
3	83	0	-39	-16	0	5	2	0.00	0.01	0.00
4	83	0	-50	17	0	-5	-2	0.00	0.01	0.00
5	83	0	-50	17	0	-5	-2	0.00	0.01	0.00
6	83	0	-43	-5	0	1	1	0.00	0.01	0.00
7	83	-0	-43	-5	0	2	1	0.00	0.01	0.00
8	83	0	-46	5	0	-2	-1	0.00	0.01	0.00
9	83	-0	-46	5	0	-2	-0	0.00	0.01	0.00
10	83	0	-39	-16	0	5	2	0.00	0.01	0.00
11	83	0	-39	-16	0	5	2	0.00	0.01	0.00
12	83	0	-50	17	0	-5	-2	0.00	0.01	0.00
13	83	0	-50	17	0	-5	-2	0.00	0.01	0.00
14	83	0	-43	-5	0	1	1	0.00	0.01	0.00
15	83	-0	-43	-5	0	2	1	0.00	0.01	0.00
16	83	0	-46	5	0	-2	-1	0.00	0.01	0.00
17	83	-0	-46	5	0	-2	-0	0.00	0.01	0.00

1	93	0	-73	1	0	-1	-6	0.00	0.01	0.00
2	93	0	-54	-16	0	7	-3	0.00	0.01	0.00
3	93	0	-54	-16	0	7	-3	0.00	0.01	0.00
4	93	0	-66	17	0	-7	-8	0.00	0.01	0.00
5	93	0	-66	17	0	-7	-8	0.00	0.01	0.00
6	93	0	-58	-5	0	2	-5	0.00	0.01	0.00
7	93	-0	-58	-5	0	2	-5	0.00	0.01	0.00
8	93	0	-62	5	0	-2	-6	0.00	0.01	0.00
9	93	-0	-62	5	0	-2	-6	0.00	0.01	0.00
10	93	0	-54	-16	0	7	-3	0.00	0.01	0.00
11	93	0	-54	-16	0	7	-3	0.00	0.01	0.00
12	93	0	-66	17	0	-7	-8	0.00	0.01	0.00
13	93	0	-66	17	0	-7	-8	0.00	0.01	0.00
14	93	0	-58	-5	0	2	-5	0.00	0.01	0.00
15	93	-0	-58	-5	0	2	-5	0.00	0.01	0.00
16	93	0	-62	5	0	-2	-6	0.00	0.01	0.00
17	93	-0	-62	5	0	-2	-6	0.00	0.01	0.00

1	103	0	-94	1	0	-1	-15	0.00	0.02	0.00
2	103	0	-70	-16	0	8	-9	0.00	0.01	0.00
3	103	0	-69	-16	0	8	-9	0.00	0.01	0.00
4	103	0	-81	17	0	-9	-15	0.01	0.01	0.00
5	103	0	-81	17	0	-9	-15	0.01	0.01	0.00
6	103	0	-74	-5	0	2	-11	0.00	0.01	0.00
7	103	-0	-74	-5	0	2	-11	0.00	0.01	0.00
8	103	0	-77	5	0	-3	-13	0.00	0.01	0.00
9	103	-0	-77	5	0	-3	-13	0.00	0.01	0.00
10	103	0	-70	-16	0	8	-9	0.00	0.01	0.00
11	103	0	-69	-16	0	8	-9	0.00	0.01	0.00
12	103	0	-81	17	0	-9	-15	0.01	0.01	0.00
13	103	0	-81	17	0	-9	-15	0.01	0.01	0.00
14	103	0	-74	-5	0	2	-11	0.00	0.01	0.00
15	103	-0	-74	-5	0	2	-11	0.00	0.01	0.00
16	103	0	-77	5	0	-3	-13	0.00	0.01	0.00
17	103	-0	-77	5	0	-3	-13	0.00	0.01	0.00

Verifica di STABILITA'

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
--	--	-----	-----						
	kg	kg*m							
7	-0	2	15	15	15	1.000	1.000	0.09	Piano 'zx'
9	-0	3	13	15	15	1.000	1.000	0.09	Piano 'zx'
15	-0	2	15	15	15	1.000	1.000	0.09	Piano 'zx'
17	-0	3	13	15	15	1.000	1.000	0.09	Piano 'zx'

ASTA NUM. 6 NI 17 NF 18 Lungh. 103.1 cm SEZ. 3 Rp B= 24.0 H= 25.0 cm

categoria: p.p. y qy tot.

qy medio: 1.5000 1.5000 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
--	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	cm	kg	kg	kg	kg*m	kg*m	kg*m				
1	0	0	95	2	0	1	-16	0.00	0.02	0.00	
2	0	-0	79	-16	0	-8	-16	0.01	0.01	0.00	
3	0	-0	80	-16	0	-8	-16	0.01	0.01	0.00	
4	0	0	68	17	0	9	-9	0.00	0.01	0.00	
5	0	0	68	17	0	9	-9	0.00	0.01	0.00	
6	0	0	75	-4	0	-2	-13	0.00	0.01	0.00	
7	0	-0	76	-5	0	-3	-13	0.00	0.01	0.00	
8	0	0	72	6	0	3	-11	0.00	0.01	0.00	
9	0	0	72	5	0	3	-12	0.00	0.01	0.00	
10	0	-0	79	-16	0	-8	-16	0.01	0.01	0.00	
11	0	-0	80	-16	0	-8	-16	0.01	0.01	0.00	
12	0	0	68	17	0	9	-9	0.00	0.01	0.00	
13	0	0	68	17	0	9	-9	0.00	0.01	0.00	
14	0	0	75	-4	0	-2	-13	0.00	0.01	0.00	
15	0	-0	76	-5	0	-3	-13	0.00	0.01	0.00	
16	0	0	72	6	0	3	-11	0.00	0.01	0.00	
17	0	0	72	5	0	3	-12	0.00	0.01	0.00	
1	10	0	75	2	0	1	-7	0.00	0.01	0.00	
2	10	-0	64	-16	0	-7	-8	0.00	0.01	0.00	
3	10	-0	64	-16	0	-7	-8	0.00	0.01	0.00	
4	10	0	52	17	0	7	-3	0.00	0.01	0.00	
5	10	0	52	17	0	7	-3	0.00	0.01	0.00	
6	10	0	60	-4	0	-2	-6	0.00	0.01	0.00	
7	10	-0	60	-5	0	-2	-6	0.00	0.01	0.00	
8	10	0	56	6	0	2	-5	0.00	0.01	0.00	
9	10	0	57	5	0	2	-5	0.00	0.01	0.00	
10	10	-0	64	-16	0	-7	-8	0.00	0.01	0.00	
11	10	-0	64	-16	0	-7	-8	0.00	0.01	0.00	
12	10	0	52	17	0	7	-3	0.00	0.01	0.00	
13	10	0	52	17	0	7	-3	0.00	0.01	0.00	
14	10	0	60	-4	0	-2	-6	0.00	0.01	0.00	
15	10	-0	60	-5	0	-2	-6	0.00	0.01	0.00	
16	10	0	56	6	0	2	-5	0.00	0.01	0.00	
17	10	0	57	5	0	2	-5	0.00	0.01	0.00	
1	21	0	55	2	0	1	-0	0.00	0.01	0.00	
2	21	-0	49	-16	0	-5	-2	0.00	0.01	0.00	
3	21	-0	49	-16	0	-5	-2	0.00	0.01	0.00	
4	21	0	37	17	0	5	1	0.00	0.01	0.00	
5	21	0	37	17	0	5	1	0.00	0.01	0.00	
6	21	0	44	-4	0	-1	-1	0.00	0.01	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

7	21	-0	45	-5	0	-2	-1	0.00	0.01	0.00
8	21	0	41	6	0	2	0	0.00	0.01	0.00
9	21	0	41	5	0	2	0	0.00	0.01	0.00
10	21	-0	49	-16	0	-5	-2	0.00	0.01	0.00
11	21	-0	49	-16	0	-5	-2	0.00	0.01	0.00
12	21	0	37	17	0	5	1	0.00	0.01	0.00
13	21	0	37	17	0	5	1	0.00	0.01	0.00
14	21	0	44	-4	0	-1	-1	0.00	0.01	0.00
15	21	-0	45	-5	0	-2	-1	0.00	0.01	0.00
16	21	0	41	6	0	2	0	0.00	0.01	0.00
17	21	0	41	5	0	2	0	0.00	0.01	0.00

1	31	0	35	2	0	0	4	0.00	0.01	0.00
2	31	-0	33	-16	0	-3	2	0.00	0.01	0.00
3	31	-0	33	-16	0	-3	2	0.00	0.01	0.00
4	31	0	21	17	0	4	4	0.00	0.00	0.00
5	31	0	21	17	0	3	4	0.00	0.00	0.00
6	31	0	29	-4	0	-1	3	0.00	0.00	0.00
7	31	-0	29	-5	0	-1	3	0.00	0.00	0.00
8	31	0	25	6	0	1	4	0.00	0.00	0.00
9	31	0	26	5	0	1	3	0.00	0.00	0.00
10	31	-0	33	-16	0	-3	2	0.00	0.01	0.00
11	31	-0	33	-16	0	-3	2	0.00	0.01	0.00
12	31	0	21	17	0	4	4	0.00	0.00	0.00
13	31	0	21	17	0	3	4	0.00	0.00	0.00
14	31	0	29	-4	0	-1	3	0.00	0.00	0.00
15	31	-0	29	-5	0	-1	3	0.00	0.00	0.00
16	31	0	25	6	0	1	4	0.00	0.00	0.00
17	31	0	26	5	0	1	3	0.00	0.00	0.00

1	41	0	15	2	0	0	7	0.00	0.00	0.00
2	41	-0	18	-16	0	-2	5	0.00	0.00	0.00
3	41	-0	18	-16	0	-2	4	0.00	0.00	0.00
4	41	0	6	17	0	2	6	0.00	0.00	0.00
5	41	0	6	17	0	2	6	0.00	0.00	0.00
6	41	0	13	-4	0	-0	5	0.00	0.00	0.00
7	41	-0	14	-5	0	-1	5	0.00	0.00	0.00
8	41	0	10	6	0	1	5	0.00	0.00	0.00
9	41	0	10	5	0	0	5	0.00	0.00	0.00
10	41	-0	18	-16	0	-2	5	0.00	0.00	0.00
11	41	-0	18	-16	0	-2	4	0.00	0.00	0.00
12	41	0	6	17	0	2	6	0.00	0.00	0.00
13	41	0	6	17	0	2	6	0.00	0.00	0.00
14	41	0	13	-4	0	-0	5	0.00	0.00	0.00
15	41	-0	14	-5	0	-1	5	0.00	0.00	0.00
16	41	0	10	6	0	1	5	0.00	0.00	0.00
17	41	0	10	5	0	0	5	0.00	0.00	0.00

1	52	0	-5	2	0	0	7	0.00	0.00	0.00
2	52	-0	2	-16	0	0	6	0.00	0.00	0.00
3	52	-0	2	-16	0	-0	6	0.00	0.00	0.00
4	52	0	-10	17	0	0	6	0.00	0.00	0.00
5	52	0	-10	17	0	0	6	0.00	0.00	0.00
6	52	0	-2	-4	0	0	6	0.00	0.00	0.00
7	52	-0	-2	-5	0	-0	6	0.00	0.00	0.00
8	52	0	-6	6	0	0	6	0.00	0.00	0.00
9	52	0	-5	5	0	-0	6	0.00	0.00	0.00
10	52	-0	2	-16	0	0	6	0.00	0.00	0.00
11	52	-0	2	-16	0	-0	6	0.00	0.00	0.00
12	52	0	-10	17	0	0	6	0.00	0.00	0.00
13	52	0	-10	17	0	0	6	0.00	0.00	0.00
14	52	0	-2	-4	0	0	6	0.00	0.00	0.00
15	52	-0	-2	-5	0	-0	6	0.00	0.00	0.00
16	52	0	-6	6	0	0	6	0.00	0.00	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

17	52	0	-5	5	0	-0	6	0.00	0.00	0.00
1	62	0	-25	2	0	-0	6	0.00	0.00	0.00
2	62	-0	-13	-16	0	2	5	0.00	0.00	0.00
3	62	-0	-13	-16	0	2	5	0.00	0.00	0.00
4	62	0	-25	17	0	-2	4	0.00	0.00	0.00
5	62	0	-25	17	0	-2	4	0.00	0.00	0.00
6	62	0	-18	-4	0	0	5	0.00	0.00	0.00
7	62	-0	-17	-5	0	0	5	0.00	0.00	0.00
8	62	0	-21	6	0	-1	4	0.00	0.00	0.00
9	62	0	-21	5	0	-1	4	0.00	0.00	0.00
10	62	-0	-13	-16	0	2	5	0.00	0.00	0.00
11	62	-0	-13	-16	0	2	5	0.00	0.00	0.00
12	62	0	-25	17	0	-2	4	0.00	0.00	0.00
13	62	0	-25	17	0	-2	4	0.00	0.00	0.00
14	62	0	-18	-4	0	0	5	0.00	0.00	0.00
15	62	-0	-17	-5	0	0	5	0.00	0.00	0.00
16	62	0	-21	6	0	-1	4	0.00	0.00	0.00
17	62	0	-21	5	0	-1	4	0.00	0.00	0.00
1	72	0	-45	2	0	-0	2	0.00	0.01	0.00
2	72	-0	-29	-16	0	3	3	0.00	0.01	0.00
3	72	-0	-29	-16	0	3	3	0.00	0.01	0.00
4	72	0	-41	17	0	-3	0	0.00	0.01	0.00
5	72	0	-41	17	0	-3	0	0.00	0.01	0.00
6	72	0	-33	-4	0	1	2	0.00	0.01	0.00
7	72	-0	-33	-5	0	1	2	0.00	0.01	0.00
8	72	0	-37	6	0	-1	1	0.00	0.01	0.00
9	72	0	-36	5	0	-1	1	0.00	0.01	0.00
10	72	-0	-29	-16	0	3	3	0.00	0.01	0.00
11	72	-0	-29	-16	0	3	3	0.00	0.01	0.00
12	72	0	-41	17	0	-3	0	0.00	0.01	0.00
13	72	0	-41	17	0	-3	0	0.00	0.01	0.00
14	72	0	-33	-4	0	1	2	0.00	0.01	0.00
15	72	-0	-33	-5	0	1	2	0.00	0.01	0.00
16	72	0	-37	6	0	-1	1	0.00	0.01	0.00
17	72	0	-36	5	0	-1	1	0.00	0.01	0.00
1	83	0	-65	2	0	-0	-3	0.00	0.01	0.00
2	83	-0	-44	-16	0	5	-1	0.00	0.01	0.00
3	83	-0	-44	-16	0	5	-1	0.00	0.01	0.00
4	83	0	-56	17	0	-5	-5	0.00	0.01	0.00
5	83	0	-56	17	0	-5	-5	0.00	0.01	0.00
6	83	0	-49	-4	0	1	-2	0.00	0.01	0.00
7	83	-0	-48	-5	0	2	-2	0.00	0.01	0.00
8	83	0	-52	6	0	-2	-3	0.00	0.01	0.00
9	83	0	-52	5	0	-2	-3	0.00	0.01	0.00
10	83	-0	-44	-16	0	5	-1	0.00	0.01	0.00
11	83	-0	-44	-16	0	5	-1	0.00	0.01	0.00
12	83	0	-56	17	0	-5	-5	0.00	0.01	0.00
13	83	0	-56	17	0	-5	-5	0.00	0.01	0.00
14	83	0	-49	-4	0	1	-2	0.00	0.01	0.00
15	83	-0	-48	-5	0	2	-2	0.00	0.01	0.00
16	83	0	-52	6	0	-2	-3	0.00	0.01	0.00
17	83	0	-52	5	0	-2	-3	0.00	0.01	0.00
1	93	0	-86	2	0	-1	-11	0.00	0.01	0.00
2	93	-0	-60	-16	0	7	-6	0.00	0.01	0.00
3	93	-0	-60	-16	0	7	-6	0.00	0.01	0.00
4	93	0	-72	17	0	-7	-11	0.00	0.01	0.00
5	93	0	-71	17	0	-7	-11	0.00	0.01	0.00
6	93	0	-64	-4	0	2	-8	0.00	0.01	0.00
7	93	-0	-64	-5	0	2	-8	0.00	0.01	0.00
8	93	0	-68	6	0	-2	-10	0.00	0.01	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

9	93	0	-67	5	0	-2	-9	0.00	0.01	0.00
10	93	-0	-60	-16	0	7	-6	0.00	0.01	0.00
11	93	-0	-60	-16	0	7	-6	0.00	0.01	0.00
12	93	0	-72	17	0	-7	-11	0.00	0.01	0.00
13	93	0	-71	17	0	-7	-11	0.00	0.01	0.00
14	93	0	-64	-4	0	2	-8	0.00	0.01	0.00
15	93	-0	-64	-5	0	2	-8	0.00	0.01	0.00
16	93	0	-68	6	0	-2	-10	0.00	0.01	0.00
17	93	0	-67	5	0	-2	-9	0.00	0.01	0.00

1	103	0	-106	2	0	-1	-21	0.01	0.02	0.00
2	103	-0	-75	-16	0	8	-13	0.01	0.01	0.00
3	103	-0	-75	-16	0	8	-13	0.01	0.01	0.00
4	103	0	-87	17	0	-9	-19	0.01	0.01	0.00
5	103	0	-87	17	0	-9	-19	0.01	0.01	0.00
6	103	0	-79	-4	0	2	-16	0.00	0.01	0.00
7	103	-0	-79	-5	0	3	-15	0.00	0.01	0.00
8	103	0	-83	6	0	-3	-17	0.01	0.01	0.00
9	103	0	-83	5	0	-3	-17	0.01	0.01	0.00
10	103	-0	-75	-16	0	8	-13	0.01	0.01	0.00
11	103	-0	-75	-16	0	8	-13	0.01	0.01	0.00
12	103	0	-87	17	0	-9	-19	0.01	0.01	0.00
13	103	0	-87	17	0	-9	-19	0.01	0.01	0.00
14	103	0	-79	-4	0	2	-16	0.00	0.01	0.00
15	103	-0	-79	-5	0	3	-15	0.00	0.01	0.00
16	103	0	-83	6	0	-3	-17	0.01	0.01	0.00
17	103	0	-83	5	0	-3	-17	0.01	0.01	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
2	-0	8	16	15	15	1.000	1.000	0.09	Piano 'zx'
3	-0	8	16	15	15	1.000	1.000	0.09	Piano 'zx'
7	-0	3	15	15	15	1.000	1.000	0.09	Piano 'zx'
10	-0	8	16	15	15	1.000	1.000	0.09	Piano 'zx'
11	-0	8	16	15	15	1.000	1.000	0.09	Piano 'zx'
15	-0	3	15	15	15	1.000	1.000	0.09	Piano 'zx'

ASTA NUM. 7 NI 18 NF 19 Lungh. 103.1 cm SEZ. 3 Rp B= 24.0 H= 25.0 cm

categoria: p.p. y qy tot.
qy medio: 1.5000 1.5000 kg/cm

NC	x -- cm	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
			kg			kg*m					
1	0	0	124	5	0	2	-22	0.01	0.02	0.00	
2	0	-0	100	-16	0	-8	-20	0.01	0.02	0.00	
3	0	-0	100	-17	0	-8	-20	0.01	0.02	0.00	
4	0	0	87	19	0	9	-13	0.01	0.01	0.00	
5	0	0	88	18	0	9	-14	0.01	0.01	0.00	
6	0	-0	95	-4	0	-2	-17	0.01	0.02	0.00	
7	0	-0	96	-5	0	-3	-18	0.01	0.02	0.00	
8	0	0	91	7	0	3	-16	0.00	0.01	0.00	
9	0	0	92	6	0	3	-16	0.00	0.02	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

10	0	-0	100	-16	0	-8	-20	0.01	0.02	0.00
11	0	-0	100	-17	0	-8	-20	0.01	0.02	0.00
12	0	0	87	19	0	9	-13	0.01	0.01	0.00
13	0	0	88	18	0	9	-14	0.01	0.01	0.00
14	0	-0	95	-4	0	-2	-17	0.01	0.02	0.00
15	0	-0	96	-5	0	-3	-18	0.01	0.02	0.00
16	0	0	91	7	0	3	-16	0.00	0.01	0.00
17	0	0	92	6	0	3	-16	0.00	0.02	0.00

1	10	0	103	5	0	1	-11	0.00	0.02	0.00
2	10	-0	84	-16	0	-7	-10	0.00	0.01	0.00
3	10	-0	85	-17	0	-7	-10	0.00	0.01	0.00
4	10	0	72	19	0	7	-5	0.00	0.01	0.00
5	10	0	72	18	0	7	-5	0.00	0.01	0.00
6	10	-0	80	-4	0	-2	-8	0.00	0.01	0.00
7	10	-0	80	-5	0	-2	-9	0.00	0.01	0.00
8	10	0	76	7	0	3	-7	0.00	0.01	0.00
9	10	0	77	6	0	2	-7	0.00	0.01	0.00
10	10	-0	84	-16	0	-7	-10	0.00	0.01	0.00
11	10	-0	85	-17	0	-7	-10	0.00	0.01	0.00
12	10	0	72	19	0	7	-5	0.00	0.01	0.00
13	10	0	72	18	0	7	-5	0.00	0.01	0.00
14	10	-0	80	-4	0	-2	-8	0.00	0.01	0.00
15	10	-0	80	-5	0	-2	-9	0.00	0.01	0.00
16	10	0	76	7	0	3	-7	0.00	0.01	0.00
17	10	0	77	6	0	2	-7	0.00	0.01	0.00

1	21	0	83	5	0	1	-1	0.00	0.01	0.00
2	21	-0	69	-16	0	-5	-2	0.00	0.01	0.00
3	21	-0	69	-17	0	-5	-2	0.00	0.01	0.00
4	21	0	56	19	0	5	1	0.00	0.01	0.00
5	21	0	57	18	0	5	1	0.00	0.01	0.00
6	21	-0	64	-4	0	-1	-1	0.00	0.01	0.00
7	21	-0	65	-5	0	-2	-1	0.00	0.01	0.00
8	21	0	61	7	0	2	0	0.00	0.01	0.00
9	21	0	61	6	0	2	0	0.00	0.01	0.00
10	21	-0	69	-16	0	-5	-2	0.00	0.01	0.00
11	21	-0	69	-17	0	-5	-2	0.00	0.01	0.00
12	21	0	56	19	0	5	1	0.00	0.01	0.00
13	21	0	57	18	0	5	1	0.00	0.01	0.00
14	21	-0	64	-4	0	-1	-1	0.00	0.01	0.00
15	21	-0	65	-5	0	-2	-1	0.00	0.01	0.00
16	21	0	61	7	0	2	0	0.00	0.01	0.00
17	21	0	61	6	0	2	0	0.00	0.01	0.00

1	31	0	63	5	0	0	7	0.00	0.01	0.00
2	31	-0	53	-16	0	-3	4	0.00	0.01	0.00
3	31	-0	54	-17	0	-3	4	0.00	0.01	0.00
4	31	0	41	19	0	3	6	0.00	0.01	0.00
5	31	0	41	18	0	3	6	0.00	0.01	0.00
6	31	-0	49	-4	0	-1	5	0.00	0.01	0.00
7	31	-0	49	-5	0	-1	5	0.00	0.01	0.00
8	31	0	45	7	0	1	6	0.00	0.01	0.00
9	31	0	46	6	0	1	6	0.00	0.01	0.00
10	31	-0	53	-16	0	-3	4	0.00	0.01	0.00
11	31	-0	54	-17	0	-3	4	0.00	0.01	0.00
12	31	0	41	19	0	3	6	0.00	0.01	0.00
13	31	0	41	18	0	3	6	0.00	0.01	0.00
14	31	-0	49	-4	0	-1	5	0.00	0.01	0.00
15	31	-0	49	-5	0	-1	5	0.00	0.01	0.00
16	31	0	45	7	0	1	6	0.00	0.01	0.00
17	31	0	46	6	0	1	6	0.00	0.01	0.00

1	41	0	43	5	0	-0	12	0.00	0.01	0.00
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Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

2	41	-0	38	-16	0	-2	9	0.00	0.01	0.00
3	41	-0	38	-17	0	-2	9	0.00	0.01	0.00
4	41	0	26	19	0	2	10	0.00	0.01	0.00
5	41	0	26	18	0	2	10	0.00	0.01	0.00
6	41	-0	33	-4	0	-1	9	0.00	0.01	0.00
7	41	-0	34	-5	0	-1	9	0.00	0.01	0.00
8	41	0	30	7	0	0	9	0.00	0.00	0.00
9	41	0	30	6	0	0	9	0.00	0.01	0.00
10	41	-0	38	-16	0	-2	9	0.00	0.01	0.00
11	41	-0	38	-17	0	-2	9	0.00	0.01	0.00
12	41	0	26	19	0	2	10	0.00	0.01	0.00
13	41	0	26	18	0	2	10	0.00	0.01	0.00
14	41	-0	33	-4	0	-1	9	0.00	0.01	0.00
15	41	-0	34	-5	0	-1	9	0.00	0.01	0.00
16	41	0	30	7	0	0	9	0.00	0.00	0.00
17	41	0	30	6	0	0	9	0.00	0.01	0.00
1	52	0	23	5	0	-1	15	0.00	0.00	0.00
2	52	-0	22	-16	0	0	12	0.00	0.00	0.00
3	52	-0	23	-17	0	0	12	0.00	0.00	0.00
4	52	0	10	19	0	-0	12	0.00	0.00	0.00
5	52	0	10	18	0	-0	12	0.00	0.00	0.00
6	52	-0	18	-4	0	-0	12	0.00	0.00	0.00
7	52	-0	19	-5	0	0	12	0.00	0.00	0.00
8	52	0	14	7	0	-0	12	0.00	0.00	0.00
9	52	0	15	6	0	-0	12	0.00	0.00	0.00
10	52	-0	22	-16	0	0	12	0.00	0.00	0.00
11	52	-0	23	-17	0	0	12	0.00	0.00	0.00
12	52	0	10	19	0	-0	12	0.00	0.00	0.00
13	52	0	10	18	0	-0	12	0.00	0.00	0.00
14	52	-0	18	-4	0	-0	12	0.00	0.00	0.00
15	52	-0	19	-5	0	0	12	0.00	0.00	0.00
16	52	0	14	7	0	-0	12	0.00	0.00	0.00
17	52	0	15	6	0	-0	12	0.00	0.00	0.00
1	62	0	3	5	0	-1	17	0.00	0.00	0.00
2	62	-0	7	-16	0	2	13	0.00	0.00	0.00
3	62	-0	7	-17	0	2	13	0.00	0.00	0.00
4	62	0	-5	19	0	-2	12	0.00	0.00	0.00
5	62	0	-5	18	0	-2	12	0.00	0.00	0.00
6	62	-0	2	-4	0	0	13	0.00	0.00	0.00
7	62	-0	3	-5	0	1	13	0.00	0.00	0.00
8	62	0	-1	7	0	-1	12	0.00	0.00	0.00
9	62	0	-1	6	0	-1	13	0.00	0.00	0.00
10	62	-0	7	-16	0	2	13	0.00	0.00	0.00
11	62	-0	7	-17	0	2	13	0.00	0.00	0.00
12	62	0	-5	19	0	-2	12	0.00	0.00	0.00
13	62	0	-5	18	0	-2	12	0.00	0.00	0.00
14	62	-0	2	-4	0	0	13	0.00	0.00	0.00
15	62	-0	3	-5	0	1	13	0.00	0.00	0.00
16	62	0	-1	7	0	-1	12	0.00	0.00	0.00
17	62	0	-1	6	0	-1	13	0.00	0.00	0.00
1	72	0	-17	5	0	-2	16	0.00	0.00	0.00
2	72	-0	-9	-16	0	3	13	0.00	0.00	0.00
3	72	-0	-8	-17	0	3	13	0.00	0.00	0.00
4	72	0	-21	19	0	-4	11	0.00	0.00	0.00
5	72	0	-21	18	0	-4	11	0.00	0.00	0.00
6	72	-0	-13	-4	0	1	12	0.00	0.00	0.00
7	72	-0	-12	-5	0	1	12	0.00	0.00	0.00
8	72	0	-17	7	0	-2	11	0.00	0.00	0.00
9	72	0	-16	6	0	-1	12	0.00	0.00	0.00
10	72	-0	-9	-16	0	3	13	0.00	0.00	0.00
11	72	-0	-8	-17	0	3	13	0.00	0.00	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

12	72	0	-21	19	0	-4	11	0.00	0.00	0.00
13	72	0	-21	18	0	-4	11	0.00	0.00	0.00
14	72	-0	-13	-4	0	1	12	0.00	0.00	0.00
15	72	-0	-12	-5	0	1	12	0.00	0.00	0.00
16	72	0	-17	7	0	-2	11	0.00	0.00	0.00
17	72	0	-16	6	0	-1	12	0.00	0.00	0.00
1	83	0	-37	5	0	-2	13	0.00	0.01	0.00
2	83	-0	-24	-16	0	5	12	0.00	0.00	0.00
3	83	-0	-24	-17	0	5	12	0.00	0.00	0.00
4	83	0	-36	19	0	-6	8	0.00	0.01	0.00
5	83	0	-36	18	0	-6	8	0.00	0.01	0.00
6	83	-0	-29	-4	0	1	10	0.00	0.00	0.00
7	83	-0	-28	-5	0	2	10	0.00	0.00	0.00
8	83	0	-32	7	0	-2	9	0.00	0.01	0.00
9	83	0	-32	6	0	-2	9	0.00	0.01	0.00
10	83	-0	-24	-16	0	5	12	0.00	0.00	0.00
11	83	-0	-24	-17	0	5	12	0.00	0.00	0.00
12	83	0	-36	19	0	-6	8	0.00	0.01	0.00
13	83	0	-36	18	0	-6	8	0.00	0.01	0.00
14	83	-0	-29	-4	0	1	10	0.00	0.00	0.00
15	83	-0	-28	-5	0	2	10	0.00	0.00	0.00
16	83	0	-32	7	0	-2	9	0.00	0.01	0.00
17	83	0	-32	6	0	-2	9	0.00	0.01	0.00
1	93	0	-57	5	0	-3	8	0.00	0.01	0.00
2	93	-0	-39	-16	0	7	8	0.00	0.01	0.00
3	93	-0	-39	-17	0	7	8	0.00	0.01	0.00
4	93	0	-52	19	0	-8	3	0.00	0.01	0.00
5	93	0	-52	18	0	-8	3	0.00	0.01	0.00
6	93	-0	-44	-4	0	1	6	0.00	0.01	0.00
7	93	-0	-43	-5	0	2	7	0.00	0.01	0.00
8	93	0	-48	7	0	-3	5	0.00	0.01	0.00
9	93	0	-47	6	0	-2	5	0.00	0.01	0.00
10	93	-0	-39	-16	0	7	8	0.00	0.01	0.00
11	93	-0	-39	-17	0	7	8	0.00	0.01	0.00
12	93	0	-52	19	0	-8	3	0.00	0.01	0.00
13	93	0	-52	18	0	-8	3	0.00	0.01	0.00
14	93	-0	-44	-4	0	1	6	0.00	0.01	0.00
15	93	-0	-43	-5	0	2	7	0.00	0.01	0.00
16	93	0	-48	7	0	-3	5	0.00	0.01	0.00
17	93	0	-47	6	0	-2	5	0.00	0.01	0.00
1	103	0	-77	5	0	-3	1	0.00	0.01	0.00
2	103	-0	-55	-16	0	8	3	0.00	0.01	0.00
3	103	-0	-55	-17	0	9	4	0.00	0.01	0.00
4	103	0	-67	19	0	-10	-3	0.00	0.01	0.00
5	103	0	-67	18	0	-10	-3	0.00	0.01	0.00
6	103	-0	-60	-4	0	2	1	0.00	0.01	0.00
7	103	-0	-59	-5	0	3	1	0.00	0.01	0.00
8	103	0	-63	7	0	-4	-1	0.00	0.01	0.00
9	103	0	-63	6	0	-3	-0	0.00	0.01	0.00
10	103	-0	-55	-16	0	8	3	0.00	0.01	0.00
11	103	-0	-55	-17	0	9	4	0.00	0.01	0.00
12	103	0	-67	19	0	-10	-3	0.00	0.01	0.00
13	103	0	-67	18	0	-10	-3	0.00	0.01	0.00
14	103	-0	-60	-4	0	2	1	0.00	0.01	0.00
15	103	-0	-59	-5	0	3	1	0.00	0.01	0.00
16	103	0	-63	7	0	-4	-1	0.00	0.01	0.00
17	103	0	-63	6	0	-3	-0	0.00	0.01	0.00

Verifica di STABILITA'

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
	--	-----	-----						
	kg	kg*m							
2	-0	8	20	15	15	1.000	1.000	0.09	Piano 'zx'
3	-0	9	20	15	15	1.000	1.000	0.09	Piano 'zx'
6	-0	2	17	15	15	1.000	1.000	0.09	Piano 'zx'
7	-0	3	18	15	15	1.000	1.000	0.09	Piano 'zx'
10	-0	8	20	15	15	1.000	1.000	0.09	Piano 'zx'
11	-0	9	20	15	15	1.000	1.000	0.09	Piano 'zx'
14	-0	2	17	15	15	1.000	1.000	0.09	Piano 'zx'
15	-0	3	18	15	15	1.000	1.000	0.09	Piano 'zx'

ASTA NUM. 8 NI 30 NF 31 Lungh. 103.1 cm SEZ. 3 Rp B= 24.0 H= 25.0 cm

categoria: p.p. y qy tot.

qy medio: 1.5000 1.5000 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	--										
	cm	kg			kg*m						
<hr/>											
1	0	-0	1896	175	0	144	-1518	0.44	0.31	0.00	
2	0	-0	397	16	0	8	-278	0.08	0.06	0.00	
3	0	-0	401	108	0	85	-282	0.09	0.07	0.00	
4	0	0	374	-48	0	-35	-263	0.08	0.06	0.00	
5	0	0	378	44	0	42	-266	0.08	0.06	0.00	
6	0	-0	384	-114	0	-97	-269	0.09	0.07	0.00	
7	0	-0	398	194	0	159	-280	0.11	0.07	0.00	
8	0	0	377	-133	0	-109	-264	0.09	0.07	0.00	
9	0	0	391	174	0	147	-276	0.10	0.07	0.00	
10	0	-0	397	16	0	8	-278	0.08	0.06	0.00	
11	0	-0	401	108	0	85	-282	0.09	0.07	0.00	
12	0	0	374	-48	0	-35	-263	0.08	0.06	0.00	
13	0	0	378	44	0	42	-266	0.08	0.06	0.00	
14	0	-0	384	-114	0	-97	-269	0.09	0.07	0.00	
15	0	-0	398	194	0	159	-280	0.11	0.07	0.00	
16	0	0	377	-133	0	-109	-264	0.09	0.07	0.00	
17	0	0	391	174	0	147	-276	0.10	0.07	0.00	
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1	10	-0	1876	175	0	126	-1324	0.39	0.31	0.00	
2	10	-0	381	16	0	6	-238	0.07	0.06	0.00	
3	10	-0	385	108	0	73	-241	0.08	0.07	0.00	
4	10	0	358	-48	0	-30	-225	0.07	0.06	0.00	
5	10	0	362	44	0	37	-228	0.07	0.06	0.00	
6	10	-0	368	-114	0	-85	-230	0.08	0.06	0.00	
7	10	-0	382	194	0	139	-240	0.09	0.07	0.00	
8	10	0	361	-133	0	-96	-226	0.08	0.06	0.00	
9	10	0	375	174	0	129	-236	0.09	0.07	0.00	
10	10	-0	381	16	0	6	-238	0.07	0.06	0.00	
11	10	-0	385	108	0	73	-241	0.08	0.07	0.00	
12	10	0	358	-48	0	-30	-225	0.07	0.06	0.00	
13	10	0	362	44	0	37	-228	0.07	0.06	0.00	
14	10	-0	368	-114	0	-85	-230	0.08	0.06	0.00	
15	10	-0	382	194	0	139	-240	0.09	0.07	0.00	
16	10	0	361	-133	0	-96	-226	0.08	0.06	0.00	
17	10	0	375	174	0	129	-236	0.09	0.07	0.00	
<hr/>											
1	21	-0	1856	175	0	108	-1131	0.33	0.30	0.00	
2	21	-0	366	16	0	5	-200	0.06	0.06	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

3	21	-0	370	108	0	62	-202	0.07	0.06	0.00
4	21	0	343	-48	0	-25	-189	0.06	0.06	0.00
5	21	0	347	44	0	33	-192	0.06	0.06	0.00
6	21	-0	353	-114	0	-73	-193	0.07	0.06	0.00
7	21	-0	367	194	0	119	-201	0.08	0.07	0.00
8	21	0	346	-133	0	-82	-190	0.07	0.06	0.00
9	21	0	360	174	0	111	-198	0.08	0.07	0.00
10	21	-0	366	16	0	5	-200	0.06	0.06	0.00
11	21	-0	370	108	0	62	-202	0.07	0.06	0.00
12	21	0	343	-48	0	-25	-189	0.06	0.06	0.00
13	21	0	347	44	0	33	-192	0.06	0.06	0.00
14	21	-0	353	-114	0	-73	-193	0.07	0.06	0.00
15	21	-0	367	194	0	119	-201	0.08	0.07	0.00
16	21	0	346	-133	0	-82	-190	0.07	0.06	0.00
17	21	0	360	174	0	111	-198	0.08	0.07	0.00
1	31	-0	1836	175	0	90	-941	0.27	0.30	0.00
2	31	-0	350	16	0	3	-163	0.04	0.06	0.00
3	31	-0	354	108	0	51	-165	0.06	0.06	0.00
4	31	0	327	-48	0	-20	-155	0.05	0.05	0.00
5	31	0	331	44	0	28	-157	0.05	0.05	0.00
6	31	-0	337	-114	0	-61	-157	0.06	0.06	0.00
7	31	-0	351	194	0	99	-164	0.06	0.07	0.00
8	31	0	330	-133	0	-68	-155	0.06	0.06	0.00
9	31	0	344	174	0	93	-162	0.06	0.06	0.00
10	31	-0	350	16	0	3	-163	0.04	0.06	0.00
11	31	-0	354	108	0	51	-165	0.06	0.06	0.00
12	31	0	327	-48	0	-20	-155	0.05	0.05	0.00
13	31	0	331	44	0	28	-157	0.05	0.05	0.00
14	31	-0	337	-114	0	-61	-157	0.06	0.06	0.00
15	31	-0	351	194	0	99	-164	0.06	0.07	0.00
16	31	0	330	-133	0	-68	-155	0.06	0.06	0.00
17	31	0	344	174	0	93	-162	0.06	0.06	0.00
1	41	-0	1816	175	0	72	-753	0.22	0.30	0.00
2	41	-0	335	16	0	1	-127	0.03	0.05	0.00
3	41	-0	339	108	0	40	-129	0.04	0.06	0.00
4	41	0	312	-48	0	-15	-122	0.04	0.05	0.00
5	41	0	316	44	0	24	-123	0.04	0.05	0.00
6	41	-0	322	-114	0	-50	-123	0.04	0.06	0.00
7	41	-0	336	194	0	79	-129	0.05	0.06	0.00
8	41	0	315	-133	0	-55	-122	0.04	0.06	0.00
9	41	0	329	174	0	75	-127	0.05	0.06	0.00
10	41	-0	335	16	0	1	-127	0.03	0.05	0.00
11	41	-0	339	108	0	40	-129	0.04	0.06	0.00
12	41	0	312	-48	0	-15	-122	0.04	0.05	0.00
13	41	0	316	44	0	24	-123	0.04	0.05	0.00
14	41	-0	322	-114	0	-50	-123	0.04	0.06	0.00
15	41	-0	336	194	0	79	-129	0.05	0.06	0.00
16	41	0	315	-133	0	-55	-122	0.04	0.06	0.00
17	41	0	329	174	0	75	-127	0.05	0.06	0.00
1	52	-0	1796	175	0	54	-566	0.17	0.29	0.00
2	52	-0	319	16	0	-0	-94	0.03	0.05	0.00
3	52	-0	323	108	0	29	-95	0.03	0.06	0.00
4	52	0	296	-48	0	-10	-90	0.03	0.05	0.00
5	52	0	301	44	0	19	-92	0.03	0.05	0.00
6	52	-0	306	-114	0	-38	-91	0.03	0.05	0.00
7	52	-0	320	194	0	59	-95	0.04	0.06	0.00
8	52	0	299	-133	0	-41	-90	0.03	0.05	0.00
9	52	0	313	174	0	57	-94	0.04	0.06	0.00
10	52	-0	319	16	0	-0	-94	0.03	0.05	0.00
11	52	-0	323	108	0	29	-95	0.03	0.06	0.00
12	52	0	296	-48	0	-10	-90	0.03	0.05	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

13	52	0	301	44	0	19	-92	0.03	0.05	0.00
14	52	-0	306	-114	0	-38	-91	0.03	0.05	0.00
15	52	-0	320	194	0	59	-95	0.04	0.06	0.00
16	52	0	299	-133	0	-41	-90	0.03	0.05	0.00
17	52	0	313	174	0	57	-94	0.04	0.06	0.00

1	62	-0	1775	175	0	36	-382	0.11	0.29	0.00
2	62	-0	304	16	0	-2	-62	0.02	0.05	0.00
3	62	-0	308	108	0	18	-62	0.02	0.05	0.00
4	62	0	281	-48	0	-5	-61	0.02	0.05	0.00
5	62	0	285	44	0	14	-61	0.02	0.05	0.00
6	62	-0	291	-114	0	-26	-60	0.02	0.05	0.00
7	62	-0	305	194	0	39	-63	0.03	0.06	0.00
8	62	0	284	-133	0	-27	-60	0.02	0.05	0.00
9	62	0	298	174	0	39	-63	0.02	0.06	0.00
10	62	-0	304	16	0	-2	-62	0.02	0.05	0.00
11	62	-0	308	108	0	18	-62	0.02	0.05	0.00
12	62	0	281	-48	0	-5	-61	0.02	0.05	0.00
13	62	0	285	44	0	14	-61	0.02	0.05	0.00
14	62	-0	291	-114	0	-26	-60	0.02	0.05	0.00
15	62	-0	305	194	0	39	-63	0.03	0.06	0.00
16	62	0	284	-133	0	-27	-60	0.02	0.05	0.00
17	62	0	298	174	0	39	-63	0.02	0.06	0.00

1	72	-0	1755	175	0	18	-200	0.06	0.29	0.00
2	72	-0	288	16	0	-4	-31	0.01	0.05	0.00
3	72	-0	292	108	0	6	-32	0.01	0.05	0.00
4	72	0	265	-48	0	-0	-32	0.01	0.04	0.00
5	72	0	270	44	0	10	-33	0.01	0.04	0.00
6	72	-0	275	-114	0	-14	-31	0.01	0.05	0.00
7	72	-0	289	194	0	19	-32	0.01	0.06	0.00
8	72	0	269	-133	0	-13	-31	0.01	0.05	0.00
9	72	0	282	174	0	21	-33	0.01	0.05	0.00
10	72	-0	288	16	0	-4	-31	0.01	0.05	0.00
11	72	-0	292	108	0	6	-32	0.01	0.05	0.00
12	72	0	265	-48	0	-0	-32	0.01	0.04	0.00
13	72	0	270	44	0	10	-33	0.01	0.04	0.00
14	72	-0	275	-114	0	-14	-31	0.01	0.05	0.00
15	72	-0	289	194	0	19	-32	0.01	0.06	0.00
16	72	0	269	-133	0	-13	-31	0.01	0.05	0.00
17	72	0	282	174	0	21	-33	0.01	0.05	0.00

1	83	-0	1735	175	0	-0	-20	0.01	0.29	0.00
2	83	-0	273	16	0	-5	-2	0.00	0.04	0.00
3	83	-0	277	108	0	-5	-2	0.00	0.05	0.00
4	83	0	250	-48	0	5	-6	0.00	0.04	0.00
5	83	0	254	44	0	5	-6	0.00	0.04	0.00
6	83	-0	260	-114	0	-3	-3	0.00	0.05	0.00
7	83	-0	274	194	0	-1	-3	0.00	0.05	0.00
8	83	0	253	-133	0	0	-5	0.00	0.05	0.00
9	83	0	267	174	0	3	-4	0.00	0.05	0.00
10	83	-0	273	16	0	-5	-2	0.00	0.04	0.00
11	83	-0	277	108	0	-5	-2	0.00	0.05	0.00
12	83	0	250	-48	0	5	-6	0.00	0.04	0.00
13	83	0	254	44	0	5	-6	0.00	0.04	0.00
14	83	-0	260	-114	0	-3	-3	0.00	0.05	0.00
15	83	-0	274	194	0	-1	-3	0.00	0.05	0.00
16	83	0	253	-133	0	0	-5	0.00	0.05	0.00
17	83	0	267	174	0	3	-4	0.00	0.05	0.00

1	93	-0	1715	175	0	-18	157	0.05	0.28	0.00
2	93	-0	257	16	0	-7	25	0.01	0.04	0.00
3	93	-0	261	108	0	-16	26	0.01	0.05	0.00
4	93	0	234	-48	0	10	19	0.01	0.04	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

5	93	0	239	44	0	1	20	0.01	0.04	0.00
6	93	-0	244	-114	0	9	23	0.01	0.04	0.00
7	93	-0	258	194	0	-20	24	0.01	0.05	0.00
8	93	0	238	-133	0	14	21	0.01	0.04	0.00
9	93	0	251	174	0	-15	22	0.01	0.05	0.00
10	93	-0	257	16	0	-7	25	0.01	0.04	0.00
11	93	-0	261	108	0	-16	26	0.01	0.05	0.00
12	93	0	234	-48	0	10	19	0.01	0.04	0.00
13	93	0	239	44	0	1	20	0.01	0.04	0.00
14	93	-0	244	-114	0	9	23	0.01	0.04	0.00
15	93	-0	258	194	0	-20	24	0.01	0.05	0.00
16	93	0	238	-133	0	14	21	0.01	0.04	0.00
17	93	0	251	174	0	-15	22	0.01	0.05	0.00

1	103	-0	1695	175	0	-36	333	0.10	0.28	0.00
2	103	-0	242	16	0	-9	51	0.02	0.04	0.00
3	103	-0	246	108	0	-27	52	0.02	0.04	0.00
4	103	0	219	-48	0	15	43	0.01	0.04	0.00
5	103	0	223	44	0	-4	43	0.01	0.04	0.00
6	103	-0	229	-114	0	21	47	0.02	0.04	0.00
7	103	-0	243	194	0	-40	50	0.02	0.05	0.00
8	103	0	222	-133	0	28	44	0.02	0.04	0.00
9	103	0	236	174	0	-33	47	0.02	0.05	0.00
10	103	-0	242	16	0	-9	51	0.02	0.04	0.00
11	103	-0	246	108	0	-27	52	0.02	0.04	0.00
12	103	0	219	-48	0	15	43	0.01	0.04	0.00
13	103	0	223	44	0	-4	43	0.01	0.04	0.00
14	103	-0	229	-114	0	21	47	0.02	0.04	0.00
15	103	-0	243	194	0	-40	50	0.02	0.05	0.00
16	103	0	222	-133	0	28	44	0.02	0.04	0.00
17	103	0	236	174	0	-33	47	0.02	0.05	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
1	-0	144	1518	15	15	1.000	1.000	0.09	Piano 'zx'
2	-0	9	278	15	15	1.000	1.000	0.09	Piano 'zx'
3	-0	85	282	15	15	1.000	1.000	0.09	Piano 'zx'
6	-0	97	269	15	15	1.000	1.000	0.09	Piano 'zx'
7	-0	159	280	15	15	1.000	1.000	0.09	Piano 'zx'
10	-0	9	278	15	15	1.000	1.000	0.09	Piano 'zx'
11	-0	85	282	15	15	1.000	1.000	0.09	Piano 'zx'
14	-0	97	269	15	15	1.000	1.000	0.09	Piano 'zx'
15	-0	159	280	15	15	1.000	1.000	0.09	Piano 'zx'

ASTA NUM. 9 NI 31 NF 32 Lungh. 103.1 cm SEZ. 3 Rp B= 24.0 H= 25.0 cm

categoria: p.p. y qy tot.
qy medio: 1.5000 1.5000 kg/cm

NC	x -- cm	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
			kg			kg*m					
1	0	0	-320	-37	0	-31	334	0.10	0.05	0.00	
2	0	0	10	17	0	9	45	0.01	0.00	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

3	0	0	9	-4	0	-9	46	0.01	0.00	0.00
4	0	0	0	-9	0	-2	49	0.01	0.00	0.00
5	0	0	-0	-30	0	-20	50	0.02	0.00	0.00
6	0	-0	7	33	0	26	46	0.02	0.01	0.00
7	0	0	5	-38	0	-33	48	0.02	0.01	0.00
8	0	0	5	25	0	23	47	0.02	0.00	0.00
9	0	0	2	-46	0	-37	49	0.02	0.01	0.00
10	0	0	10	17	0	9	45	0.01	0.00	0.00
11	0	0	9	-4	0	-9	46	0.01	0.00	0.00
12	0	0	0	-9	0	-2	49	0.01	0.00	0.00
13	0	0	-0	-30	0	-20	50	0.02	0.00	0.00
14	0	-0	7	33	0	26	46	0.02	0.01	0.00
15	0	0	5	-38	0	-33	48	0.02	0.01	0.00
16	0	0	5	25	0	23	47	0.02	0.00	0.00
17	0	0	2	-46	0	-37	49	0.02	0.01	0.00
1	10	0	-340	-37	0	-27	300	0.09	0.06	0.00
2	10	0	-6	17	0	7	45	0.01	0.00	0.00
3	10	0	-6	-4	0	-8	46	0.01	0.00	0.00
4	10	0	-15	-9	0	-1	48	0.01	0.00	0.00
5	10	0	-16	-30	0	-17	49	0.02	0.01	0.00
6	10	-0	-8	33	0	23	46	0.02	0.01	0.00
7	10	0	-11	-38	0	-29	47	0.02	0.01	0.00
8	10	0	-11	25	0	20	46	0.02	0.00	0.00
9	10	0	-13	-46	0	-32	48	0.02	0.01	0.00
10	10	0	-6	17	0	7	45	0.01	0.00	0.00
11	10	0	-6	-4	0	-8	46	0.01	0.00	0.00
12	10	0	-15	-9	0	-1	48	0.01	0.00	0.00
13	10	0	-16	-30	0	-17	49	0.02	0.01	0.00
14	10	-0	-8	33	0	23	46	0.02	0.01	0.00
15	10	0	-11	-38	0	-29	47	0.02	0.01	0.00
16	10	0	-11	25	0	20	46	0.02	0.00	0.00
17	10	0	-13	-46	0	-32	48	0.02	0.01	0.00
1	21	0	-360	-37	0	-24	263	0.08	0.06	0.00
2	21	0	-21	17	0	6	44	0.01	0.00	0.00
3	21	0	-22	-4	0	-8	44	0.01	0.00	0.00
4	21	0	-30	-9	0	-0	46	0.01	0.01	0.00
5	21	0	-31	-30	0	-14	46	0.02	0.01	0.00
6	21	-0	-23	33	0	19	44	0.02	0.01	0.00
7	21	0	-26	-38	0	-26	46	0.02	0.01	0.00
8	21	0	-26	25	0	17	45	0.02	0.01	0.00
9	21	0	-29	-46	0	-27	46	0.02	0.01	0.00
10	21	0	-21	17	0	6	44	0.01	0.00	0.00
11	21	0	-22	-4	0	-8	44	0.01	0.00	0.00
12	21	0	-30	-9	0	-0	46	0.01	0.01	0.00
13	21	0	-31	-30	0	-14	46	0.02	0.01	0.00
14	21	-0	-23	33	0	19	44	0.02	0.01	0.00
15	21	0	-26	-38	0	-26	46	0.02	0.01	0.00
16	21	0	-26	25	0	17	45	0.02	0.01	0.00
17	21	0	-29	-46	0	-27	46	0.02	0.01	0.00
1	31	0	-380	-37	0	-20	225	0.07	0.06	0.00
2	31	0	-37	17	0	4	41	0.01	0.01	0.00
3	31	0	-37	-4	0	-7	41	0.01	0.01	0.00
4	31	0	-46	-9	0	1	42	0.01	0.01	0.00
5	31	0	-47	-30	0	-11	42	0.01	0.01	0.00
6	31	-0	-39	33	0	16	41	0.01	0.01	0.00
7	31	0	-41	-38	0	-22	42	0.02	0.01	0.00
8	31	0	-42	25	0	15	41	0.01	0.01	0.00
9	31	0	-44	-46	0	-23	42	0.02	0.01	0.00
10	31	0	-37	17	0	4	41	0.01	0.01	0.00
11	31	0	-37	-4	0	-7	41	0.01	0.01	0.00
12	31	0	-46	-9	0	1	42	0.01	0.01	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

13	31	0	-47	-30	0	-11	42	0.01	0.01	0.00
14	31	-0	-39	33	0	16	41	0.01	0.01	0.00
15	31	0	-41	-38	0	-22	42	0.02	0.01	0.00
16	31	0	-42	25	0	15	41	0.01	0.01	0.00
17	31	0	-44	-46	0	-23	42	0.02	0.01	0.00

1	41	0	-400	-37	0	-16	185	0.05	0.07	0.00
2	41	0	-52	17	0	2	36	0.01	0.01	0.00
3	41	0	-53	-4	0	-7	37	0.01	0.01	0.00
4	41	0	-61	-9	0	2	36	0.01	0.01	0.00
5	41	0	-62	-30	0	-7	37	0.01	0.01	0.00
6	41	-0	-54	33	0	12	36	0.01	0.01	0.00
7	41	0	-57	-38	0	-18	37	0.01	0.01	0.00
8	41	0	-57	25	0	12	36	0.01	0.01	0.00
9	41	0	-60	-46	0	-18	37	0.01	0.01	0.00
10	41	0	-52	17	0	2	36	0.01	0.01	0.00
11	41	0	-53	-4	0	-7	37	0.01	0.01	0.00
12	41	0	-61	-9	0	2	36	0.01	0.01	0.00
13	41	0	-62	-30	0	-7	37	0.01	0.01	0.00
14	41	-0	-54	33	0	12	36	0.01	0.01	0.00
15	41	0	-57	-38	0	-18	37	0.01	0.01	0.00
16	41	0	-57	25	0	12	36	0.01	0.01	0.00
17	41	0	-60	-46	0	-18	37	0.01	0.01	0.00

1	52	0	-420	-37	0	-12	143	0.04	0.07	0.00
2	52	0	-67	17	0	0	30	0.01	0.01	0.00
3	52	0	-68	-4	0	-7	30	0.01	0.01	0.00
4	52	0	-77	-9	0	2	29	0.01	0.01	0.00
5	52	0	-78	-30	0	-4	30	0.01	0.01	0.00
6	52	-0	-70	33	0	9	29	0.01	0.01	0.00
7	52	0	-72	-38	0	-14	30	0.01	0.01	0.00
8	52	0	-73	25	0	10	29	0.01	0.01	0.00
9	52	0	-75	-46	0	-13	30	0.01	0.01	0.00
10	52	0	-67	17	0	0	30	0.01	0.01	0.00
11	52	0	-68	-4	0	-7	30	0.01	0.01	0.00
12	52	0	-77	-9	0	2	29	0.01	0.01	0.00
13	52	0	-78	-30	0	-4	30	0.01	0.01	0.00
14	52	-0	-70	33	0	9	29	0.01	0.01	0.00
15	52	0	-72	-38	0	-14	30	0.01	0.01	0.00
16	52	0	-73	25	0	10	29	0.01	0.01	0.00
17	52	0	-75	-46	0	-13	30	0.01	0.01	0.00

1	62	0	-440	-37	0	-8	98	0.03	0.07	0.00
2	62	0	-83	17	0	-2	22	0.01	0.01	0.00
3	62	0	-84	-4	0	-6	23	0.01	0.01	0.00
4	62	0	-92	-9	0	3	21	0.01	0.02	0.00
5	62	0	-93	-30	0	-1	21	0.01	0.02	0.00
6	62	-0	-85	33	0	6	21	0.01	0.01	0.00
7	62	0	-88	-38	0	-10	22	0.01	0.02	0.00
8	62	0	-88	25	0	7	21	0.01	0.01	0.00
9	62	0	-91	-46	0	-8	22	0.01	0.02	0.00
10	62	0	-83	17	0	-2	22	0.01	0.01	0.00
11	62	0	-84	-4	0	-6	23	0.01	0.01	0.00
12	62	0	-92	-9	0	3	21	0.01	0.02	0.00
13	62	0	-93	-30	0	-1	21	0.01	0.02	0.00
14	62	-0	-85	33	0	6	21	0.01	0.01	0.00
15	62	0	-88	-38	0	-10	22	0.01	0.02	0.00
16	62	0	-88	25	0	7	21	0.01	0.01	0.00
17	62	0	-91	-46	0	-8	22	0.01	0.02	0.00

1	72	0	-460	-37	0	-5	52	0.02	0.08	0.00
2	72	0	-98	17	0	-3	13	0.00	0.02	0.00
3	72	0	-99	-4	0	-6	13	0.00	0.02	0.00
4	72	0	-108	-9	0	4	10	0.00	0.02	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

5	72	0	-109	-30	0	2	10	0.00	0.02	0.00
6	72	-0	-101	33	0	2	12	0.00	0.02	0.00
7	72	0	-103	-38	0	-6	12	0.00	0.02	0.00
8	72	0	-104	25	0	4	11	0.00	0.02	0.00
9	72	0	-106	-46	0	-4	11	0.00	0.02	0.00
10	72	0	-98	17	0	-3	13	0.00	0.02	0.00
11	72	0	-99	-4	0	-6	13	0.00	0.02	0.00
12	72	0	-108	-9	0	4	10	0.00	0.02	0.00
13	72	0	-109	-30	0	2	10	0.00	0.02	0.00
14	72	-0	-101	33	0	2	12	0.00	0.02	0.00
15	72	0	-103	-38	0	-6	12	0.00	0.02	0.00
16	72	0	-104	25	0	4	11	0.00	0.02	0.00
17	72	0	-106	-46	0	-4	11	0.00	0.02	0.00

1	83	0	-480	-37	0	-1	4	0.00	0.08	0.00
2	83	0	-114	17	0	-5	2	0.00	0.02	0.00
3	83	0	-115	-4	0	-5	2	0.00	0.02	0.00
4	83	0	-123	-9	0	5	-2	0.00	0.02	0.00
5	83	0	-124	-30	0	5	-2	0.00	0.02	0.00
6	83	-0	-116	33	0	-1	1	0.00	0.02	0.00
7	83	0	-119	-38	0	-2	1	0.00	0.02	0.00
8	83	0	-119	25	0	2	-0	0.00	0.02	0.00
9	83	0	-122	-46	0	1	-0	0.00	0.02	0.00
10	83	0	-114	17	0	-5	2	0.00	0.02	0.00
11	83	0	-115	-4	0	-5	2	0.00	0.02	0.00
12	83	0	-123	-9	0	5	-2	0.00	0.02	0.00
13	83	0	-124	-30	0	5	-2	0.00	0.02	0.00
14	83	-0	-116	33	0	-1	1	0.00	0.02	0.00
15	83	0	-119	-38	0	-2	1	0.00	0.02	0.00
16	83	0	-119	25	0	2	-0	0.00	0.02	0.00
17	83	0	-122	-46	0	1	-0	0.00	0.02	0.00

1	93	0	-500	-37	0	3	-47	0.01	0.08	0.00
2	93	0	-129	17	0	-7	-11	0.00	0.02	0.00
3	93	0	-130	-4	0	-5	-11	0.00	0.02	0.00
4	93	0	-139	-9	0	6	-15	0.01	0.02	0.00
5	93	0	-140	-30	0	8	-15	0.01	0.02	0.00
6	93	-0	-132	33	0	-5	-12	0.00	0.02	0.00
7	93	0	-134	-38	0	2	-12	0.00	0.02	0.00
8	93	0	-135	25	0	-1	-13	0.00	0.02	0.00
9	93	0	-137	-46	0	6	-14	0.00	0.02	0.00
10	93	0	-129	17	0	-7	-11	0.00	0.02	0.00
11	93	0	-130	-4	0	-5	-11	0.00	0.02	0.00
12	93	0	-139	-9	0	6	-15	0.01	0.02	0.00
13	93	0	-140	-30	0	8	-15	0.01	0.02	0.00
14	93	-0	-132	33	0	-5	-12	0.00	0.02	0.00
15	93	0	-134	-38	0	2	-12	0.00	0.02	0.00
16	93	0	-135	25	0	-1	-13	0.00	0.02	0.00
17	93	0	-137	-46	0	6	-14	0.00	0.02	0.00

1	103	0	-521	-37	0	7	-100	0.03	0.09	0.00
2	103	0	-145	17	0	-9	-25	0.01	0.02	0.00
3	103	0	-146	-4	0	-5	-25	0.01	0.02	0.00
4	103	0	-154	-9	0	7	-30	0.01	0.03	0.00
5	103	0	-155	-30	0	11	-30	0.01	0.03	0.00
6	103	-0	-147	33	0	-8	-26	0.01	0.02	0.00
7	103	0	-150	-38	0	6	-27	0.01	0.03	0.00
8	103	0	-150	25	0	-3	-28	0.01	0.02	0.00
9	103	0	-153	-46	0	10	-29	0.01	0.03	0.00
10	103	0	-145	17	0	-9	-25	0.01	0.02	0.00
11	103	0	-146	-4	0	-5	-25	0.01	0.02	0.00
12	103	0	-154	-9	0	7	-30	0.01	0.03	0.00
13	103	0	-155	-30	0	11	-30	0.01	0.03	0.00
14	103	-0	-147	33	0	-8	-26	0.01	0.02	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

15	103	0	-150	-38	0	6	-27	0.01	0.03	0.00
16	103	0	-150	25	0	-3	-28	0.01	0.02	0.00
17	103	0	-153	-46	0	10	-29	0.01	0.03	0.00

Verifica di STABILITA'

NC	Fx -- kg	My -- kg*m	Mz -- kg*m	Sn.yx	Sn.zx	Kc.yx	Kc.zx	I.S.	Nota
6	-0	26	46	15	15	1.000	1.000	0.09	Piano 'zx'
14	-0	26	46	15	15	1.000	1.000	0.09	Piano 'zx'

ASTA NUM. 10 NI 32 NF 33 Lungh. 103.1 cm SEZ. 3 Rp B= 24.0 H= 25.0 cm

categoria: p.p. y qy tot.
qy medio: 1.5000 1.5000 kg/cm

NC	x -- cm	Fx -- kg	Fy -- kg	Fz -- kg	Mx -- kg*m	My -- kg*m	Mz -- kg*m	I.R.	I.V.	I.Tor.	Nota
1	0	0	198	10	0	8	-99	0.03	0.03	0.00	
2	0	0	100	17	0	9	-31	0.01	0.02	0.00	
3	0	0	101	22	0	13	-31	0.01	0.02	0.00	
4	0	0	88	-18	0	-10	-24	0.01	0.01	0.00	
5	0	0	88	-13	0	-6	-24	0.01	0.01	0.00	
6	0	-0	96	-2	0	-3	-28	0.01	0.02	0.00	
7	0	0	96	16	0	11	-29	0.01	0.02	0.00	
8	0	-0	92	-12	0	-8	-26	0.01	0.02	0.00	
9	0	0	93	5	0	6	-27	0.01	0.02	0.00	
10	0	0	100	17	0	9	-31	0.01	0.02	0.00	
11	0	0	101	22	0	13	-31	0.01	0.02	0.00	
12	0	0	88	-18	0	-10	-24	0.01	0.01	0.00	
13	0	0	88	-13	0	-6	-24	0.01	0.01	0.00	
14	0	-0	96	-2	0	-3	-28	0.01	0.02	0.00	
15	0	0	96	16	0	11	-29	0.01	0.02	0.00	
16	0	-0	92	-12	0	-8	-26	0.01	0.02	0.00	
17	0	0	93	5	0	6	-27	0.01	0.02	0.00	
1	10	0	178	10	0	7	-79	0.02	0.03	0.00	
2	10	0	85	17	0	7	-21	0.01	0.01	0.00	
3	10	0	85	22	0	11	-21	0.01	0.01	0.00	
4	10	0	72	-18	0	-8	-16	0.01	0.01	0.00	
5	10	0	73	-13	0	-4	-16	0.01	0.01	0.00	
6	10	-0	80	-2	0	-3	-19	0.01	0.01	0.00	
7	10	0	81	16	0	10	-19	0.01	0.01	0.00	
8	10	-0	76	-12	0	-7	-17	0.01	0.01	0.00	
9	10	0	77	5	0	5	-18	0.01	0.01	0.00	
10	10	0	85	17	0	7	-21	0.01	0.01	0.00	
11	10	0	85	22	0	11	-21	0.01	0.01	0.00	
12	10	0	72	-18	0	-8	-16	0.01	0.01	0.00	
13	10	0	73	-13	0	-4	-16	0.01	0.01	0.00	
14	10	-0	80	-2	0	-3	-19	0.01	0.01	0.00	
15	10	0	81	16	0	10	-19	0.01	0.01	0.00	
16	10	-0	76	-12	0	-7	-17	0.01	0.01	0.00	
17	10	0	77	5	0	5	-18	0.01	0.01	0.00	
1	21	0	157	10	0	6	-62	0.02	0.03	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

2	21	0	69	17	0	5	-13	0.00	0.01	0.00
3	21	0	70	22	0	8	-13	0.01	0.01	0.00
4	21	0	57	-18	0	-6	-9	0.00	0.01	0.00
5	21	0	57	-13	0	-3	-9	0.00	0.01	0.00
6	21	-0	65	-2	0	-3	-11	0.00	0.01	0.00
7	21	0	65	16	0	8	-12	0.00	0.01	0.00
8	21	-0	61	-12	0	-6	-10	0.00	0.01	0.00
9	21	0	62	5	0	5	-11	0.00	0.01	0.00
10	21	0	69	17	0	5	-13	0.00	0.01	0.00
11	21	0	70	22	0	8	-13	0.01	0.01	0.00
12	21	0	57	-18	0	-6	-9	0.00	0.01	0.00
13	21	0	57	-13	0	-3	-9	0.00	0.01	0.00
14	21	-0	65	-2	0	-3	-11	0.00	0.01	0.00
15	21	0	65	16	0	8	-12	0.00	0.01	0.00
16	21	-0	61	-12	0	-6	-10	0.00	0.01	0.00
17	21	0	62	5	0	5	-11	0.00	0.01	0.00
1	31	0	137	10	0	5	-47	0.01	0.02	0.00
2	31	0	54	17	0	3	-7	0.00	0.01	0.00
3	31	0	54	22	0	6	-7	0.00	0.01	0.00
4	31	0	41	-18	0	-4	-4	0.00	0.01	0.00
5	31	0	42	-13	0	-2	-4	0.00	0.01	0.00
6	31	-0	49	-2	0	-2	-6	0.00	0.01	0.00
7	31	0	50	16	0	6	-6	0.00	0.01	0.00
8	31	-0	45	-12	0	-5	-5	0.00	0.01	0.00
9	31	0	46	5	0	4	-5	0.00	0.01	0.00
10	31	0	54	17	0	3	-7	0.00	0.01	0.00
11	31	0	54	22	0	6	-7	0.00	0.01	0.00
12	31	0	41	-18	0	-4	-4	0.00	0.01	0.00
13	31	0	42	-13	0	-2	-4	0.00	0.01	0.00
14	31	-0	49	-2	0	-2	-6	0.00	0.01	0.00
15	31	0	50	16	0	6	-6	0.00	0.01	0.00
16	31	-0	45	-12	0	-5	-5	0.00	0.01	0.00
17	31	0	46	5	0	4	-5	0.00	0.01	0.00
1	41	0	117	10	0	4	-34	0.01	0.02	0.00
2	41	0	38	17	0	2	-2	0.00	0.01	0.00
3	41	0	39	22	0	4	-2	0.00	0.01	0.00
4	41	0	26	-18	0	-2	-0	0.00	0.01	0.00
5	41	0	26	-13	0	-0	-1	0.00	0.00	0.00
6	41	-0	34	-2	0	-2	-1	0.00	0.01	0.00
7	41	0	35	16	0	5	-2	0.00	0.01	0.00
8	41	-0	30	-12	0	-3	-1	0.00	0.01	0.00
9	41	0	31	5	0	4	-1	0.00	0.01	0.00
10	41	0	38	17	0	2	-2	0.00	0.01	0.00
11	41	0	39	22	0	4	-2	0.00	0.01	0.00
12	41	0	26	-18	0	-2	-0	0.00	0.01	0.00
13	41	0	26	-13	0	-0	-1	0.00	0.00	0.00
14	41	-0	34	-2	0	-2	-1	0.00	0.01	0.00
15	41	0	35	16	0	5	-2	0.00	0.01	0.00
16	41	-0	30	-12	0	-3	-1	0.00	0.01	0.00
17	41	0	31	5	0	4	-1	0.00	0.01	0.00
1	52	0	97	10	0	3	-23	0.01	0.02	0.00
2	52	0	23	17	0	-0	1	0.00	0.00	0.00
3	52	0	23	22	0	2	1	0.00	0.01	0.00
4	52	0	10	-18	0	-1	1	0.00	0.00	0.00
5	52	0	11	-13	0	1	1	0.00	0.00	0.00
6	52	-0	18	-2	0	-2	1	0.00	0.00	0.00
7	52	0	19	16	0	3	1	0.00	0.00	0.00
8	52	-0	15	-12	0	-2	1	0.00	0.00	0.00
9	52	0	15	5	0	3	1	0.00	0.00	0.00
10	52	0	23	17	0	-0	1	0.00	0.00	0.00
11	52	0	23	22	0	2	1	0.00	0.01	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

12	52	0	10	-18	0	-1	1	0.00	0.00	0.00
13	52	0	11	-13	0	1	1	0.00	0.00	0.00
14	52	-0	18	-2	0	-2	1	0.00	0.00	0.00
15	52	0	19	16	0	3	1	0.00	0.00	0.00
16	52	-0	15	-12	0	-2	1	0.00	0.00	0.00
17	52	0	15	5	0	3	1	0.00	0.00	0.00
1	62	0	77	10	0	2	-14	0.00	0.01	0.00
2	62	0	7	17	0	-2	3	0.00	0.00	0.00
3	62	0	8	22	0	-1	3	0.00	0.00	0.00
4	62	0	-5	-18	0	1	2	0.00	0.00	0.00
5	62	0	-5	-13	0	2	2	0.00	0.00	0.00
6	62	-0	3	-2	0	-2	2	0.00	0.00	0.00
7	62	0	4	16	0	2	2	0.00	0.00	0.00
8	62	-0	-1	-12	0	-1	2	0.00	0.00	0.00
9	62	0	-0	5	0	3	2	0.00	0.00	0.00
10	62	0	7	17	0	-2	3	0.00	0.00	0.00
11	62	0	8	22	0	-1	3	0.00	0.00	0.00
12	62	0	-5	-18	0	1	2	0.00	0.00	0.00
13	62	0	-5	-13	0	2	2	0.00	0.00	0.00
14	62	-0	3	-2	0	-2	2	0.00	0.00	0.00
15	62	0	4	16	0	2	2	0.00	0.00	0.00
16	62	-0	-1	-12	0	-1	2	0.00	0.00	0.00
17	62	0	-0	5	0	3	2	0.00	0.00	0.00
1	72	0	57	10	0	1	-7	0.00	0.01	0.00
2	72	0	-8	17	0	-3	3	0.00	0.00	0.00
3	72	0	-8	22	0	-3	3	0.00	0.00	0.00
4	72	0	-20	-18	0	3	0	0.00	0.00	0.00
5	72	0	-20	-13	0	4	0	0.00	0.00	0.00
6	72	-0	-13	-2	0	-2	2	0.00	0.00	0.00
7	72	0	-12	16	0	0	2	0.00	0.00	0.00
8	72	-0	-16	-12	0	0	1	0.00	0.00	0.00
9	72	0	-16	5	0	2	1	0.00	0.00	0.00
10	72	0	-8	17	0	-3	3	0.00	0.00	0.00
11	72	0	-8	22	0	-3	3	0.00	0.00	0.00
12	72	0	-20	-18	0	3	0	0.00	0.00	0.00
13	72	0	-20	-13	0	4	0	0.00	0.00	0.00
14	72	-0	-13	-2	0	-2	2	0.00	0.00	0.00
15	72	0	-12	16	0	0	2	0.00	0.00	0.00
16	72	-0	-16	-12	0	0	1	0.00	0.00	0.00
17	72	0	-16	5	0	2	1	0.00	0.00	0.00
1	83	0	37	10	0	-0	-2	0.00	0.01	0.00
2	83	0	-24	17	0	-5	1	0.00	0.00	0.00
3	83	0	-23	22	0	-5	1	0.00	0.01	0.00
4	83	0	-36	-18	0	5	-3	0.00	0.01	0.00
5	83	0	-36	-13	0	5	-3	0.00	0.01	0.00
6	83	-0	-28	-2	0	-2	-0	0.00	0.00	0.00
7	83	0	-27	16	0	-2	-0	0.00	0.01	0.00
8	83	-0	-32	-12	0	1	-1	0.00	0.01	0.00
9	83	0	-31	5	0	2	-1	0.00	0.01	0.00
10	83	0	-24	17	0	-5	1	0.00	0.00	0.00
11	83	0	-23	22	0	-5	1	0.00	0.01	0.00
12	83	0	-36	-18	0	5	-3	0.00	0.01	0.00
13	83	0	-36	-13	0	5	-3	0.00	0.01	0.00
14	83	-0	-28	-2	0	-2	-0	0.00	0.00	0.00
15	83	0	-27	16	0	-2	-0	0.00	0.01	0.00
16	83	-0	-32	-12	0	1	-1	0.00	0.01	0.00
17	83	0	-31	5	0	2	-1	0.00	0.01	0.00
1	93	0	17	10	0	-1	1	0.00	0.00	0.00
2	93	0	-39	17	0	-7	-2	0.00	0.01	0.00
3	93	0	-39	22	0	-7	-2	0.00	0.01	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

4	93	0	-51	-18	0	7	-7	0.00	0.01	0.00
5	93	0	-51	-13	0	6	-7	0.00	0.01	0.00
6	93	-0	-44	-2	0	-1	-4	0.00	0.01	0.00
7	93	0	-43	16	0	-3	-4	0.00	0.01	0.00
8	93	-0	-47	-12	0	3	-5	0.00	0.01	0.00
9	93	0	-47	5	0	1	-5	0.00	0.01	0.00
10	93	0	-39	17	0	-7	-2	0.00	0.01	0.00
11	93	0	-39	22	0	-7	-2	0.00	0.01	0.00
12	93	0	-51	-18	0	7	-7	0.00	0.01	0.00
13	93	0	-51	-13	0	6	-7	0.00	0.01	0.00
14	93	-0	-44	-2	0	-1	-4	0.00	0.01	0.00
15	93	0	-43	16	0	-3	-4	0.00	0.01	0.00
16	93	-0	-47	-12	0	3	-5	0.00	0.01	0.00
17	93	0	-47	5	0	1	-5	0.00	0.01	0.00
1	103	0	-3	10	0	-2	2	0.00	0.00	0.00
2	103	0	-54	17	0	-9	-7	0.00	0.01	0.00
3	103	0	-54	22	0	-10	-7	0.00	0.01	0.00
4	103	0	-67	-18	0	9	-13	0.01	0.01	0.00
5	103	0	-67	-13	0	8	-13	0.01	0.01	0.00
6	103	-0	-59	-2	0	-1	-9	0.00	0.01	0.00
7	103	0	-58	16	0	-5	-9	0.00	0.01	0.00
8	103	-0	-63	-12	0	4	-11	0.00	0.01	0.00
9	103	0	-62	5	0	0	-11	0.00	0.01	0.00
10	103	0	-54	17	0	-9	-7	0.00	0.01	0.00
11	103	0	-54	22	0	-10	-7	0.00	0.01	0.00
12	103	0	-67	-18	0	9	-13	0.01	0.01	0.00
13	103	0	-67	-13	0	8	-13	0.01	0.01	0.00
14	103	-0	-59	-2	0	-1	-9	0.00	0.01	0.00
15	103	0	-58	16	0	-5	-9	0.00	0.01	0.00
16	103	-0	-63	-12	0	4	-11	0.00	0.01	0.00
17	103	0	-62	5	0	0	-11	0.00	0.01	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota

6	-0	3	28	15	15	1.000	1.000	0.09	Piano 'zx'
8	-0	8	26	15	15	1.000	1.000	0.09	Piano 'zx'
14	-0	3	28	15	15	1.000	1.000	0.09	Piano 'zx'
16	-0	8	26	15	15	1.000	1.000	0.09	Piano 'zx'

ASTA NUM. 11 NI 33 NF 34 Lungh. 103.1 cm SEZ. 3 Rp B= 24.0 H= 25.0 cm

categoria: p.p. y qy tot.
qy medio: 1.5000 1.5000 kg/cm

NC	x -- cm	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota

1	0	0	77	-2	0	-2	2	0.00	0.01	0.00	
2	0	0	79	17	0	9	-13	0.01	0.01	0.00	
3	0	0	79	15	0	8	-13	0.01	0.01	0.00	
4	0	0	67	-16	0	-8	-7	0.00	0.01	0.00	
5	0	0	67	-17	0	-9	-7	0.00	0.01	0.00	
6	0	-0	75	7	0	4	-11	0.00	0.01	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

7	0	0	75	3	0	1	-11	0.00	0.01	0.00
8	0	-0	72	-3	0	-1	-9	0.00	0.01	0.00
9	0	0	71	-7	0	-4	-9	0.00	0.01	0.00
10	0	0	79	17	0	9	-13	0.01	0.01	0.00
11	0	0	79	15	0	8	-13	0.01	0.01	0.00
12	0	0	67	-16	0	-8	-7	0.00	0.01	0.00
13	0	0	67	-17	0	-9	-7	0.00	0.01	0.00
14	0	-0	75	7	0	4	-11	0.00	0.01	0.00
15	0	0	75	3	0	1	-11	0.00	0.01	0.00
16	0	-0	72	-3	0	-1	-9	0.00	0.01	0.00
17	0	0	71	-7	0	-4	-9	0.00	0.01	0.00
1	10	0	57	-2	0	-1	9	0.00	0.01	0.00
2	10	0	64	17	0	7	-6	0.00	0.01	0.00
3	10	0	64	15	0	6	-6	0.00	0.01	0.00
4	10	0	52	-16	0	-6	-1	0.00	0.01	0.00
5	10	0	52	-17	0	-7	-1	0.00	0.01	0.00
6	10	-0	60	7	0	3	-4	0.00	0.01	0.00
7	10	0	59	3	0	0	-4	0.00	0.01	0.00
8	10	-0	56	-3	0	-1	-3	0.00	0.01	0.00
9	10	0	56	-7	0	-4	-2	0.00	0.01	0.00
10	10	0	64	17	0	7	-6	0.00	0.01	0.00
11	10	0	64	15	0	6	-6	0.00	0.01	0.00
12	10	0	52	-16	0	-6	-1	0.00	0.01	0.00
13	10	0	52	-17	0	-7	-1	0.00	0.01	0.00
14	10	-0	60	7	0	3	-4	0.00	0.01	0.00
15	10	0	59	3	0	0	-4	0.00	0.01	0.00
16	10	-0	56	-3	0	-1	-3	0.00	0.01	0.00
17	10	0	56	-7	0	-4	-2	0.00	0.01	0.00
1	21	0	37	-2	0	-1	14	0.00	0.01	0.00
2	21	0	48	17	0	5	0	0.00	0.01	0.00
3	21	0	48	15	0	4	0	0.00	0.01	0.00
4	21	0	36	-16	0	-5	4	0.00	0.01	0.00
5	21	0	36	-17	0	-6	4	0.00	0.01	0.00
6	21	-0	44	7	0	3	1	0.00	0.01	0.00
7	21	0	44	3	0	0	1	0.00	0.01	0.00
8	21	-0	41	-3	0	-0	2	0.00	0.01	0.00
9	21	0	40	-7	0	-3	3	0.00	0.01	0.00
10	21	0	48	17	0	5	0	0.00	0.01	0.00
11	21	0	48	15	0	4	0	0.00	0.01	0.00
12	21	0	36	-16	0	-5	4	0.00	0.01	0.00
13	21	0	36	-17	0	-6	4	0.00	0.01	0.00
14	21	-0	44	7	0	3	1	0.00	0.01	0.00
15	21	0	44	3	0	0	1	0.00	0.01	0.00
16	21	-0	41	-3	0	-0	2	0.00	0.01	0.00
17	21	0	40	-7	0	-3	3	0.00	0.01	0.00
1	31	0	17	-2	0	-1	17	0.00	0.00	0.00
2	31	0	33	17	0	3	4	0.00	0.01	0.00
3	31	0	33	15	0	3	4	0.00	0.01	0.00
4	31	0	21	-16	0	-3	7	0.00	0.00	0.00
5	31	0	21	-17	0	-4	7	0.00	0.00	0.00
6	31	-0	29	7	0	2	5	0.00	0.00	0.00
7	31	0	28	3	0	-0	5	0.00	0.00	0.00
8	31	-0	25	-3	0	-0	6	0.00	0.00	0.00
9	31	0	25	-7	0	-2	6	0.00	0.00	0.00
10	31	0	33	17	0	3	4	0.00	0.01	0.00
11	31	0	33	15	0	3	4	0.00	0.01	0.00
12	31	0	21	-16	0	-3	7	0.00	0.00	0.00
13	31	0	21	-17	0	-4	7	0.00	0.00	0.00
14	31	-0	29	7	0	2	5	0.00	0.00	0.00
15	31	0	28	3	0	-0	5	0.00	0.00	0.00
16	31	-0	25	-3	0	-0	6	0.00	0.00	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

17	31	0	25	-7	0	-2	6	0.00	0.00	0.00
1	41	0	-3	-2	0	-1	17	0.00	0.00	0.00
2	41	0	17	17	0	2	7	0.00	0.00	0.00
3	41	0	17	15	0	1	7	0.00	0.00	0.00
4	41	0	6	-16	0	-1	8	0.00	0.00	0.00
5	41	0	5	-17	0	-2	8	0.00	0.00	0.00
6	41	-0	13	7	0	1	7	0.00	0.00	0.00
7	41	0	13	3	0	-0	7	0.00	0.00	0.00
8	41	-0	10	-3	0	0	8	0.00	0.00	0.00
9	41	0	10	-7	0	-1	8	0.00	0.00	0.00
10	41	0	17	17	0	2	7	0.00	0.00	0.00
11	41	0	17	15	0	1	7	0.00	0.00	0.00
12	41	0	6	-16	0	-1	8	0.00	0.00	0.00
13	41	0	5	-17	0	-2	8	0.00	0.00	0.00
14	41	-0	13	7	0	1	7	0.00	0.00	0.00
15	41	0	13	3	0	-0	7	0.00	0.00	0.00
16	41	-0	10	-3	0	0	8	0.00	0.00	0.00
17	41	0	10	-7	0	-1	8	0.00	0.00	0.00
1	52	0	-23	-2	0	-1	16	0.00	0.00	0.00
2	52	0	2	17	0	0	8	0.00	0.00	0.00
3	52	0	2	15	0	-0	8	0.00	0.00	0.00
4	52	0	-10	-16	0	0	8	0.00	0.00	0.00
5	52	0	-10	-17	0	-0	8	0.00	0.00	0.00
6	52	-0	-2	7	0	1	8	0.00	0.00	0.00
7	52	0	-2	3	0	-1	8	0.00	0.00	0.00
8	52	-0	-6	-3	0	1	8	0.00	0.00	0.00
9	52	0	-6	-7	0	-1	8	0.00	0.00	0.00
10	52	0	2	17	0	0	8	0.00	0.00	0.00
11	52	0	2	15	0	-0	8	0.00	0.00	0.00
12	52	0	-10	-16	0	0	8	0.00	0.00	0.00
13	52	0	-10	-17	0	-0	8	0.00	0.00	0.00
14	52	-0	-2	7	0	1	8	0.00	0.00	0.00
15	52	0	-2	3	0	-1	8	0.00	0.00	0.00
16	52	-0	-6	-3	0	1	8	0.00	0.00	0.00
17	52	0	-6	-7	0	-1	8	0.00	0.00	0.00
1	62	0	-43	-2	0	-0	12	0.00	0.01	0.00
2	62	0	-14	17	0	-2	7	0.00	0.00	0.00
3	62	0	-14	15	0	-2	7	0.00	0.00	0.00
4	62	0	-25	-16	0	2	6	0.00	0.00	0.00
5	62	0	-25	-17	0	2	6	0.00	0.01	0.00
6	62	-0	-18	7	0	-0	7	0.00	0.00	0.00
7	62	0	-18	3	0	-1	7	0.00	0.00	0.00
8	62	-0	-21	-3	0	1	6	0.00	0.00	0.00
9	62	0	-21	-7	0	0	6	0.00	0.00	0.00
10	62	0	-14	17	0	-2	7	0.00	0.00	0.00
11	62	0	-14	15	0	-2	7	0.00	0.00	0.00
12	62	0	-25	-16	0	2	6	0.00	0.00	0.00
13	62	0	-25	-17	0	2	6	0.00	0.01	0.00
14	62	-0	-18	7	0	-0	7	0.00	0.00	0.00
15	62	0	-18	3	0	-1	7	0.00	0.00	0.00
16	62	-0	-21	-3	0	1	6	0.00	0.00	0.00
17	62	0	-21	-7	0	0	6	0.00	0.00	0.00
1	72	0	-63	-2	0	-0	7	0.00	0.01	0.00
2	72	0	-29	17	0	-3	5	0.00	0.01	0.00
3	72	0	-29	15	0	-3	5	0.00	0.01	0.00
4	72	0	-41	-16	0	3	3	0.00	0.01	0.00
5	72	0	-41	-17	0	3	3	0.00	0.01	0.00
6	72	-0	-33	7	0	-1	4	0.00	0.01	0.00
7	72	0	-33	3	0	-1	4	0.00	0.01	0.00
8	72	-0	-37	-3	0	1	3	0.00	0.01	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

9	72	0	-37	-7	0	1	3	0.00	0.01	0.00
10	72	0	-29	17	0	-3	5	0.00	0.01	0.00
11	72	0	-29	15	0	-3	5	0.00	0.01	0.00
12	72	0	-41	-16	0	3	3	0.00	0.01	0.00
13	72	0	-41	-17	0	3	3	0.00	0.01	0.00
14	72	-0	-33	7	0	-1	4	0.00	0.01	0.00
15	72	0	-33	3	0	-1	4	0.00	0.01	0.00
16	72	-0	-37	-3	0	1	3	0.00	0.01	0.00
17	72	0	-37	-7	0	1	3	0.00	0.01	0.00
1	83	0	-83	-2	0	0	-1	0.00	0.01	0.00
2	83	0	-45	17	0	-5	1	0.00	0.01	0.00
3	83	0	-45	15	0	-5	1	0.00	0.01	0.00
4	83	0	-56	-16	0	5	-2	0.00	0.01	0.00
5	83	0	-56	-17	0	5	-2	0.00	0.01	0.00
6	83	-0	-49	7	0	-2	-0	0.00	0.01	0.00
7	83	0	-49	3	0	-2	-0	0.00	0.01	0.00
8	83	-0	-52	-3	0	2	-1	0.00	0.01	0.00
9	83	0	-52	-7	0	2	-1	0.00	0.01	0.00
10	83	0	-45	17	0	-5	1	0.00	0.01	0.00
11	83	0	-45	15	0	-5	1	0.00	0.01	0.00
12	83	0	-56	-16	0	5	-2	0.00	0.01	0.00
13	83	0	-56	-17	0	5	-2	0.00	0.01	0.00
14	83	-0	-49	7	0	-2	-0	0.00	0.01	0.00
15	83	0	-49	3	0	-2	-0	0.00	0.01	0.00
16	83	-0	-52	-3	0	2	-1	0.00	0.01	0.00
17	83	0	-52	-7	0	2	-1	0.00	0.01	0.00
1	93	0	-103	-2	0	0	-10	0.00	0.02	0.00
2	93	0	-60	17	0	-7	-4	0.00	0.01	0.00
3	93	0	-60	15	0	-7	-4	0.00	0.01	0.00
4	93	0	-72	-16	0	7	-9	0.00	0.01	0.00
5	93	0	-72	-17	0	7	-9	0.00	0.01	0.00
6	93	-0	-64	7	0	-2	-6	0.00	0.01	0.00
7	93	0	-64	3	0	-2	-6	0.00	0.01	0.00
8	93	-0	-68	-3	0	2	-7	0.00	0.01	0.00
9	93	0	-68	-7	0	2	-7	0.00	0.01	0.00
10	93	0	-60	17	0	-7	-4	0.00	0.01	0.00
11	93	0	-60	15	0	-7	-4	0.00	0.01	0.00
12	93	0	-72	-16	0	7	-9	0.00	0.01	0.00
13	93	0	-72	-17	0	7	-9	0.00	0.01	0.00
14	93	-0	-64	7	0	-2	-6	0.00	0.01	0.00
15	93	0	-64	3	0	-2	-6	0.00	0.01	0.00
16	93	-0	-68	-3	0	2	-7	0.00	0.01	0.00
17	93	0	-68	-7	0	2	-7	0.00	0.01	0.00
1	103	0	-124	-2	0	0	-22	0.01	0.02	0.00
2	103	0	-76	17	0	-8	-11	0.00	0.01	0.00
3	103	0	-76	15	0	-8	-11	0.00	0.01	0.00
4	103	0	-87	-16	0	8	-17	0.01	0.01	0.00
5	103	0	-87	-17	0	9	-17	0.01	0.01	0.00
6	103	-0	-80	7	0	-3	-13	0.00	0.01	0.00
7	103	0	-80	3	0	-2	-13	0.00	0.01	0.00
8	103	-0	-83	-3	0	2	-15	0.00	0.01	0.00
9	103	0	-83	-7	0	3	-15	0.00	0.01	0.00
10	103	0	-76	17	0	-8	-11	0.00	0.01	0.00
11	103	0	-76	15	0	-8	-11	0.00	0.01	0.00
12	103	0	-87	-16	0	8	-17	0.01	0.01	0.00
13	103	0	-87	-17	0	9	-17	0.01	0.01	0.00
14	103	-0	-80	7	0	-3	-13	0.00	0.01	0.00
15	103	0	-80	3	0	-2	-13	0.00	0.01	0.00
16	103	-0	-83	-3	0	2	-15	0.00	0.01	0.00
17	103	0	-83	-7	0	3	-15	0.00	0.01	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
	kg	kg*m							
6	-0	4	13	15	15	1.000	1.000	0.09	Piano 'zx'
8	-0	2	15	15	15	1.000	1.000	0.09	Piano 'zx'
14	-0	4	13	15	15	1.000	1.000	0.09	Piano 'zx'
16	-0	2	15	15	15	1.000	1.000	0.09	Piano 'zx'

ASTA NUM. 12 NI 34 NF 35 Lungh. 103.1 cm SEZ. 3 Rp B= 24.0 H= 25.0 cm

categoria: p.p. y qy tot.
qy medio: 1.5000 1.5000 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	cm	kg			kg*m						
1	0	0	108	-1	0	-0	-22	0.01	0.02	0.00	
2	0	0	85	16	0	8	-17	0.01	0.01	0.00	
3	0	0	85	16	0	9	-17	0.01	0.01	0.00	
4	0	0	73	-17	0	-9	-11	0.00	0.01	0.00	
5	0	0	73	-17	0	-9	-11	0.00	0.01	0.00	
6	0	-0	81	5	0	2	-15	0.00	0.01	0.00	
7	0	0	81	5	0	3	-15	0.00	0.01	0.00	
8	0	-0	78	-5	0	-3	-13	0.00	0.01	0.00	
9	0	0	77	-5	0	-2	-13	0.00	0.01	0.00	
10	0	0	85	16	0	8	-17	0.01	0.01	0.00	
11	0	0	85	16	0	9	-17	0.01	0.01	0.00	
12	0	0	73	-17	0	-9	-11	0.00	0.01	0.00	
13	0	0	73	-17	0	-9	-11	0.00	0.01	0.00	
14	0	-0	81	5	0	2	-15	0.00	0.01	0.00	
15	0	0	81	5	0	3	-15	0.00	0.01	0.00	
16	0	-0	78	-5	0	-3	-13	0.00	0.01	0.00	
17	0	0	77	-5	0	-2	-13	0.00	0.01	0.00	
1	10	0	87	-1	0	-0	-12	0.00	0.01	0.00	
2	10	0	70	16	0	7	-9	0.00	0.01	0.00	
3	10	0	70	16	0	7	-9	0.00	0.01	0.00	
4	10	0	58	-17	0	-7	-4	0.00	0.01	0.00	
5	10	0	58	-17	0	-7	-4	0.00	0.01	0.00	
6	10	-0	66	5	0	2	-8	0.00	0.01	0.00	
7	10	0	65	5	0	2	-8	0.00	0.01	0.00	
8	10	-0	62	-5	0	-2	-6	0.00	0.01	0.00	
9	10	0	62	-5	0	-2	-6	0.00	0.01	0.00	
10	10	0	70	16	0	7	-9	0.00	0.01	0.00	
11	10	0	70	16	0	7	-9	0.00	0.01	0.00	
12	10	0	58	-17	0	-7	-4	0.00	0.01	0.00	
13	10	0	58	-17	0	-7	-4	0.00	0.01	0.00	
14	10	-0	66	5	0	2	-8	0.00	0.01	0.00	
15	10	0	65	5	0	2	-8	0.00	0.01	0.00	
16	10	-0	62	-5	0	-2	-6	0.00	0.01	0.00	
17	10	0	62	-5	0	-2	-6	0.00	0.01	0.00	
1	21	0	67	-1	0	0	-4	0.00	0.01	0.00	
2	21	0	54	16	0	5	-3	0.00	0.01	0.00	
3	21	0	54	16	0	5	-3	0.00	0.01	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

4	21	0	42	-17	0	-5	1	0.00	0.01	0.00
5	21	0	42	-17	0	-5	1	0.00	0.01	0.00
6	21	-0	50	5	0	1	-2	0.00	0.01	0.00
7	21	0	50	5	0	2	-2	0.00	0.01	0.00
8	21	-0	47	-5	0	-2	-1	0.00	0.01	0.00
9	21	0	46	-5	0	-1	-1	0.00	0.01	0.00
10	21	0	54	16	0	5	-3	0.00	0.01	0.00
11	21	0	54	16	0	5	-3	0.00	0.01	0.00
12	21	0	42	-17	0	-5	1	0.00	0.01	0.00
13	21	0	42	-17	0	-5	1	0.00	0.01	0.00
14	21	-0	50	5	0	1	-2	0.00	0.01	0.00
15	21	0	50	5	0	2	-2	0.00	0.01	0.00
16	21	-0	47	-5	0	-2	-1	0.00	0.01	0.00
17	21	0	46	-5	0	-1	-1	0.00	0.01	0.00
1	31	0	47	-1	0	0	2	0.00	0.01	0.00
2	31	0	39	16	0	3	2	0.00	0.01	0.00
3	31	0	39	16	0	4	2	0.00	0.01	0.00
4	31	0	27	-17	0	-3	4	0.00	0.01	0.00
5	31	0	27	-17	0	-3	4	0.00	0.01	0.00
6	31	-0	35	5	0	1	3	0.00	0.01	0.00
7	31	0	35	5	0	1	3	0.00	0.01	0.00
8	31	-0	31	-5	0	-1	3	0.00	0.01	0.00
9	31	0	31	-5	0	-1	3	0.00	0.01	0.00
10	31	0	39	16	0	3	2	0.00	0.01	0.00
11	31	0	39	16	0	4	2	0.00	0.01	0.00
12	31	0	27	-17	0	-3	4	0.00	0.01	0.00
13	31	0	27	-17	0	-3	4	0.00	0.01	0.00
14	31	-0	35	5	0	1	3	0.00	0.01	0.00
15	31	0	35	5	0	1	3	0.00	0.01	0.00
16	31	-0	31	-5	0	-1	3	0.00	0.01	0.00
17	31	0	31	-5	0	-1	3	0.00	0.01	0.00
1	41	0	27	-1	0	0	6	0.00	0.00	0.00
2	41	0	23	16	0	2	5	0.00	0.00	0.00
3	41	0	23	16	0	2	5	0.00	0.00	0.00
4	41	0	11	-17	0	-2	6	0.00	0.00	0.00
5	41	0	11	-17	0	-2	6	0.00	0.00	0.00
6	41	-0	19	5	0	0	5	0.00	0.00	0.00
7	41	0	19	5	0	1	5	0.00	0.00	0.00
8	41	-0	16	-5	0	-1	6	0.00	0.00	0.00
9	41	0	16	-5	0	-0	6	0.00	0.00	0.00
10	41	0	23	16	0	2	5	0.00	0.00	0.00
11	41	0	23	16	0	2	5	0.00	0.00	0.00
12	41	0	11	-17	0	-2	6	0.00	0.00	0.00
13	41	0	11	-17	0	-2	6	0.00	0.00	0.00
14	41	-0	19	5	0	0	5	0.00	0.00	0.00
15	41	0	19	5	0	1	5	0.00	0.00	0.00
16	41	-0	16	-5	0	-1	6	0.00	0.00	0.00
17	41	0	16	-5	0	-0	6	0.00	0.00	0.00
1	52	0	7	-1	0	0	7	0.00	0.00	0.00
2	52	0	8	16	0	0	7	0.00	0.00	0.00
3	52	0	8	16	0	0	7	0.00	0.00	0.00
4	52	0	-4	-17	0	0	7	0.00	0.00	0.00
5	52	0	-4	-17	0	0	7	0.00	0.00	0.00
6	52	-0	4	5	0	-0	7	0.00	0.00	0.00
7	52	0	4	5	0	0	7	0.00	0.00	0.00
8	52	-0	0	-5	0	-0	7	0.00	0.00	0.00
9	52	0	0	-5	0	0	7	0.00	0.00	0.00
10	52	0	8	16	0	0	7	0.00	0.00	0.00
11	52	0	8	16	0	0	7	0.00	0.00	0.00
12	52	0	-4	-17	0	0	7	0.00	0.00	0.00
13	52	0	-4	-17	0	0	7	0.00	0.00	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

14	52	-0	4	5	0	-0	7	0.00	0.00	0.00
15	52	0	4	5	0	0	7	0.00	0.00	0.00
16	52	-0	0	-5	0	-0	7	0.00	0.00	0.00
17	52	0	0	-5	0	0	7	0.00	0.00	0.00

1	62	0	-13	-1	0	0	7	0.00	0.00	0.00
2	62	0	-8	16	0	-2	7	0.00	0.00	0.00
3	62	0	-8	16	0	-2	7	0.00	0.00	0.00
4	62	0	-19	-17	0	2	5	0.00	0.00	0.00
5	62	0	-20	-17	0	2	5	0.00	0.00	0.00
6	62	-0	-12	5	0	-1	6	0.00	0.00	0.00
7	62	0	-12	5	0	-0	6	0.00	0.00	0.00
8	62	-0	-15	-5	0	0	6	0.00	0.00	0.00
9	62	0	-15	-5	0	1	6	0.00	0.00	0.00
10	62	0	-8	16	0	-2	7	0.00	0.00	0.00
11	62	0	-8	16	0	-2	7	0.00	0.00	0.00
12	62	0	-19	-17	0	2	5	0.00	0.00	0.00
13	62	0	-20	-17	0	2	5	0.00	0.00	0.00
14	62	-0	-12	5	0	-1	6	0.00	0.00	0.00
15	62	0	-12	5	0	-0	6	0.00	0.00	0.00
16	62	-0	-15	-5	0	0	6	0.00	0.00	0.00
17	62	0	-15	-5	0	1	6	0.00	0.00	0.00

1	72	0	-33	-1	0	0	5	0.00	0.01	0.00
2	72	0	-23	16	0	-3	5	0.00	0.00	0.00
3	72	0	-23	16	0	-3	5	0.00	0.00	0.00
4	72	0	-35	-17	0	3	3	0.00	0.01	0.00
5	72	0	-35	-17	0	4	3	0.00	0.01	0.00
6	72	-0	-27	5	0	-1	4	0.00	0.00	0.00
7	72	0	-27	5	0	-1	4	0.00	0.00	0.00
8	72	-0	-31	-5	0	1	4	0.00	0.01	0.00
9	72	0	-31	-5	0	1	3	0.00	0.01	0.00
10	72	0	-23	16	0	-3	5	0.00	0.00	0.00
11	72	0	-23	16	0	-3	5	0.00	0.00	0.00
12	72	0	-35	-17	0	3	3	0.00	0.01	0.00
13	72	0	-35	-17	0	4	3	0.00	0.01	0.00
14	72	-0	-27	5	0	-1	4	0.00	0.00	0.00
15	72	0	-27	5	0	-1	4	0.00	0.00	0.00
16	72	-0	-31	-5	0	1	4	0.00	0.01	0.00
17	72	0	-31	-5	0	1	3	0.00	0.01	0.00

1	83	0	-53	-1	0	1	0	0.00	0.01	0.00
2	83	0	-39	16	0	-5	2	0.00	0.01	0.00
3	83	0	-39	16	0	-5	2	0.00	0.01	0.00
4	83	0	-50	-17	0	5	-2	0.00	0.01	0.00
5	83	0	-50	-17	0	5	-2	0.00	0.01	0.00
6	83	-0	-43	5	0	-2	1	0.00	0.01	0.00
7	83	0	-43	5	0	-1	1	0.00	0.01	0.00
8	83	-0	-46	-5	0	2	-0	0.00	0.01	0.00
9	83	0	-46	-5	0	2	-1	0.00	0.01	0.00
10	83	0	-39	16	0	-5	2	0.00	0.01	0.00
11	83	0	-39	16	0	-5	2	0.00	0.01	0.00
12	83	0	-50	-17	0	5	-2	0.00	0.01	0.00
13	83	0	-50	-17	0	5	-2	0.00	0.01	0.00
14	83	-0	-43	5	0	-2	1	0.00	0.01	0.00
15	83	0	-43	5	0	-1	1	0.00	0.01	0.00
16	83	-0	-46	-5	0	2	-0	0.00	0.01	0.00
17	83	0	-46	-5	0	2	-1	0.00	0.01	0.00

1	93	0	-73	-1	0	1	-6	0.00	0.01	0.00
2	93	0	-54	16	0	-7	-3	0.00	0.01	0.00
3	93	0	-54	16	0	-7	-3	0.00	0.01	0.00
4	93	0	-66	-17	0	7	-8	0.00	0.01	0.00
5	93	0	-66	-17	0	7	-8	0.00	0.01	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

6	93	-0	-58	5	0	-2	-5	0.00	0.01	0.00
7	93	0	-58	5	0	-2	-5	0.00	0.01	0.00
8	93	-0	-62	-5	0	2	-6	0.00	0.01	0.00
9	93	0	-62	-5	0	2	-6	0.00	0.01	0.00
10	93	0	-54	16	0	-7	-3	0.00	0.01	0.00
11	93	0	-54	16	0	-7	-3	0.00	0.01	0.00
12	93	0	-66	-17	0	7	-8	0.00	0.01	0.00
13	93	0	-66	-17	0	7	-8	0.00	0.01	0.00
14	93	-0	-58	5	0	-2	-5	0.00	0.01	0.00
15	93	0	-58	5	0	-2	-5	0.00	0.01	0.00
16	93	-0	-62	-5	0	2	-6	0.00	0.01	0.00
17	93	0	-62	-5	0	2	-6	0.00	0.01	0.00
1	103	0	-94	-1	0	1	-15	0.00	0.02	0.00
2	103	0	-69	16	0	-8	-9	0.00	0.01	0.00
3	103	0	-70	16	0	-8	-9	0.00	0.01	0.00
4	103	0	-81	-17	0	9	-15	0.01	0.01	0.00
5	103	0	-81	-17	0	9	-15	0.01	0.01	0.00
6	103	-0	-74	5	0	-2	-11	0.00	0.01	0.00
7	103	0	-74	5	0	-2	-11	0.00	0.01	0.00
8	103	-0	-77	-5	0	3	-13	0.00	0.01	0.00
9	103	0	-77	-5	0	3	-13	0.00	0.01	0.00
10	103	0	-69	16	0	-8	-9	0.00	0.01	0.00
11	103	0	-70	16	0	-8	-9	0.00	0.01	0.00
12	103	0	-81	-17	0	9	-15	0.01	0.01	0.00
13	103	0	-81	-17	0	9	-15	0.01	0.01	0.00
14	103	-0	-74	5	0	-2	-11	0.00	0.01	0.00
15	103	0	-74	5	0	-2	-11	0.00	0.01	0.00
16	103	-0	-77	-5	0	3	-13	0.00	0.01	0.00
17	103	0	-77	-5	0	3	-13	0.00	0.01	0.00

Verifica di STABILITA'

NC	Fx -- kg	My -- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota

6	-0	2	15	15	15	1.000	1.000	0.09	Piano 'zx'
8	-0	3	13	15	15	1.000	1.000	0.09	Piano 'zx'
14	-0	2	15	15	15	1.000	1.000	0.09	Piano 'zx'
16	-0	3	13	15	15	1.000	1.000	0.09	Piano 'zx'

ASTA NUM. 13 NI 35 NF 36 Lungh. 103.1 cm SEZ. 3 Rp B= 24.0 H= 25.0 cm

categoria: p.p. y qy tot.
qy medio: 1.5000 1.5000 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	cm	kg			kg*m						
1	0	0	95	-2	0	-1	-16	0.00	0.02	0.00	
2	0	-0	80	16	0	8	-16	0.01	0.01	0.00	
3	0	-0	79	16	0	8	-16	0.01	0.01	0.00	
4	0	0	68	-17	0	-9	-9	0.00	0.01	0.00	
5	0	0	68	-17	0	-9	-9	0.00	0.01	0.00	
6	0	-0	76	5	0	3	-13	0.00	0.01	0.00	
7	0	0	75	4	0	2	-13	0.00	0.01	0.00	
8	0	0	72	-5	0	-3	-12	0.00	0.01	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

9	0	0	72	-6	0	-3	-11	0.00	0.01	0.00
10	0	-0	80	16	0	8	-16	0.01	0.01	0.00
11	0	-0	79	16	0	8	-16	0.01	0.01	0.00
12	0	0	68	-17	0	-9	-9	0.00	0.01	0.00
13	0	0	68	-17	0	-9	-9	0.00	0.01	0.00
14	0	-0	76	5	0	3	-13	0.00	0.01	0.00
15	0	0	75	4	0	2	-13	0.00	0.01	0.00
16	0	0	72	-5	0	-3	-12	0.00	0.01	0.00
17	0	0	72	-6	0	-3	-11	0.00	0.01	0.00
1	10	0	75	-2	0	-1	-7	0.00	0.01	0.00
2	10	-0	64	16	0	7	-8	0.00	0.01	0.00
3	10	-0	64	16	0	7	-8	0.00	0.01	0.00
4	10	0	52	-17	0	-7	-3	0.00	0.01	0.00
5	10	0	52	-17	0	-7	-3	0.00	0.01	0.00
6	10	-0	60	5	0	2	-6	0.00	0.01	0.00
7	10	0	60	4	0	2	-6	0.00	0.01	0.00
8	10	0	57	-5	0	-2	-5	0.00	0.01	0.00
9	10	0	56	-6	0	-2	-5	0.00	0.01	0.00
10	10	-0	64	16	0	7	-8	0.00	0.01	0.00
11	10	-0	64	16	0	7	-8	0.00	0.01	0.00
12	10	0	52	-17	0	-7	-3	0.00	0.01	0.00
13	10	0	52	-17	0	-7	-3	0.00	0.01	0.00
14	10	-0	60	5	0	2	-6	0.00	0.01	0.00
15	10	0	60	4	0	2	-6	0.00	0.01	0.00
16	10	0	57	-5	0	-2	-5	0.00	0.01	0.00
17	10	0	56	-6	0	-2	-5	0.00	0.01	0.00
1	21	0	55	-2	0	-1	-0	0.00	0.01	0.00
2	21	-0	49	16	0	5	-2	0.00	0.01	0.00
3	21	-0	49	16	0	5	-2	0.00	0.01	0.00
4	21	0	37	-17	0	-5	1	0.00	0.01	0.00
5	21	0	37	-17	0	-5	1	0.00	0.01	0.00
6	21	-0	45	5	0	2	-1	0.00	0.01	0.00
7	21	0	44	4	0	1	-1	0.00	0.01	0.00
8	21	0	41	-5	0	-2	0	0.00	0.01	0.00
9	21	0	41	-6	0	-2	0	0.00	0.01	0.00
10	21	-0	49	16	0	5	-2	0.00	0.01	0.00
11	21	-0	49	16	0	5	-2	0.00	0.01	0.00
12	21	0	37	-17	0	-5	1	0.00	0.01	0.00
13	21	0	37	-17	0	-5	1	0.00	0.01	0.00
14	21	-0	45	5	0	2	-1	0.00	0.01	0.00
15	21	0	44	4	0	1	-1	0.00	0.01	0.00
16	21	0	41	-5	0	-2	0	0.00	0.01	0.00
17	21	0	41	-6	0	-2	0	0.00	0.01	0.00
1	31	0	35	-2	0	-0	4	0.00	0.01	0.00
2	31	-0	33	16	0	3	2	0.00	0.01	0.00
3	31	-0	33	16	0	3	2	0.00	0.01	0.00
4	31	0	21	-17	0	-3	4	0.00	0.00	0.00
5	31	0	21	-17	0	-4	4	0.00	0.00	0.00
6	31	-0	29	5	0	1	3	0.00	0.00	0.00
7	31	0	29	4	0	1	3	0.00	0.00	0.00
8	31	0	26	-5	0	-1	3	0.00	0.00	0.00
9	31	0	25	-6	0	-1	4	0.00	0.00	0.00
10	31	-0	33	16	0	3	2	0.00	0.01	0.00
11	31	-0	33	16	0	3	2	0.00	0.01	0.00
12	31	0	21	-17	0	-3	4	0.00	0.00	0.00
13	31	0	21	-17	0	-4	4	0.00	0.00	0.00
14	31	-0	29	5	0	1	3	0.00	0.00	0.00
15	31	0	29	4	0	1	3	0.00	0.00	0.00
16	31	0	26	-5	0	-1	3	0.00	0.00	0.00
17	31	0	25	-6	0	-1	4	0.00	0.00	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	41	0	15	-2	0	-0	7	0.00	0.00	0.00
2	41	-0	18	16	0	2	4	0.00	0.00	0.00
3	41	-0	18	16	0	2	5	0.00	0.00	0.00
4	41	0	6	-17	0	-2	6	0.00	0.00	0.00
5	41	0	6	-17	0	-2	6	0.00	0.00	0.00
6	41	-0	14	5	0	1	5	0.00	0.00	0.00
7	41	0	13	4	0	0	5	0.00	0.00	0.00
8	41	0	10	-5	0	-0	5	0.00	0.00	0.00
9	41	0	10	-6	0	-1	5	0.00	0.00	0.00
10	41	-0	18	16	0	2	4	0.00	0.00	0.00
11	41	-0	18	16	0	2	5	0.00	0.00	0.00
12	41	0	6	-17	0	-2	6	0.00	0.00	0.00
13	41	0	6	-17	0	-2	6	0.00	0.00	0.00
14	41	-0	14	5	0	1	5	0.00	0.00	0.00
15	41	0	13	4	0	0	5	0.00	0.00	0.00
16	41	0	10	-5	0	-0	5	0.00	0.00	0.00
17	41	0	10	-6	0	-1	5	0.00	0.00	0.00

1	52	0	-5	-2	0	-0	7	0.00	0.00	0.00
2	52	-0	2	16	0	0	6	0.00	0.00	0.00
3	52	-0	2	16	0	-0	6	0.00	0.00	0.00
4	52	0	-10	-17	0	-0	6	0.00	0.00	0.00
5	52	0	-10	-17	0	-0	6	0.00	0.00	0.00
6	52	-0	-2	5	0	0	6	0.00	0.00	0.00
7	52	0	-2	4	0	-0	6	0.00	0.00	0.00
8	52	0	-5	-5	0	0	6	0.00	0.00	0.00
9	52	0	-6	-6	0	-0	6	0.00	0.00	0.00
10	52	-0	2	16	0	0	6	0.00	0.00	0.00
11	52	-0	2	16	0	-0	6	0.00	0.00	0.00
12	52	0	-10	-17	0	-0	6	0.00	0.00	0.00
13	52	0	-10	-17	0	-0	6	0.00	0.00	0.00
14	52	-0	-2	5	0	0	6	0.00	0.00	0.00
15	52	0	-2	4	0	-0	6	0.00	0.00	0.00
16	52	0	-5	-5	0	0	6	0.00	0.00	0.00
17	52	0	-6	-6	0	-0	6	0.00	0.00	0.00

1	62	0	-25	-2	0	0	6	0.00	0.00	0.00
2	62	-0	-13	16	0	-2	5	0.00	0.00	0.00
3	62	-0	-13	16	0	-2	5	0.00	0.00	0.00
4	62	0	-25	-17	0	2	4	0.00	0.00	0.00
5	62	0	-25	-17	0	2	4	0.00	0.00	0.00
6	62	-0	-17	5	0	-0	5	0.00	0.00	0.00
7	62	0	-18	4	0	-0	5	0.00	0.00	0.00
8	62	0	-21	-5	0	1	4	0.00	0.00	0.00
9	62	0	-21	-6	0	1	4	0.00	0.00	0.00
10	62	-0	-13	16	0	-2	5	0.00	0.00	0.00
11	62	-0	-13	16	0	-2	5	0.00	0.00	0.00
12	62	0	-25	-17	0	2	4	0.00	0.00	0.00
13	62	0	-25	-17	0	2	4	0.00	0.00	0.00
14	62	-0	-17	5	0	-0	5	0.00	0.00	0.00
15	62	0	-18	4	0	-0	5	0.00	0.00	0.00
16	62	0	-21	-5	0	1	4	0.00	0.00	0.00
17	62	0	-21	-6	0	1	4	0.00	0.00	0.00

1	72	0	-45	-2	0	0	2	0.00	0.01	0.00
2	72	-0	-29	16	0	-3	3	0.00	0.01	0.00
3	72	-0	-29	16	0	-3	3	0.00	0.01	0.00
4	72	0	-41	-17	0	3	0	0.00	0.01	0.00
5	72	0	-41	-17	0	3	0	0.00	0.01	0.00
6	72	-0	-33	5	0	-1	2	0.00	0.01	0.00
7	72	0	-33	4	0	-1	2	0.00	0.01	0.00
8	72	0	-36	-5	0	1	1	0.00	0.01	0.00
9	72	0	-37	-6	0	1	1	0.00	0.01	0.00
10	72	-0	-29	16	0	-3	3	0.00	0.01	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

11	72	-0	-29	16	0	-3	3	0.00	0.01	0.00
12	72	0	-41	-17	0	3	0	0.00	0.01	0.00
13	72	0	-41	-17	0	3	0	0.00	0.01	0.00
14	72	-0	-33	5	0	-1	2	0.00	0.01	0.00
15	72	0	-33	4	0	-1	2	0.00	0.01	0.00
16	72	0	-36	-5	0	1	1	0.00	0.01	0.00
17	72	0	-37	-6	0	1	1	0.00	0.01	0.00

1	83	0	-65	-2	0	0	-3	0.00	0.01	0.00
2	83	-0	-44	16	0	-5	-1	0.00	0.01	0.00
3	83	-0	-44	16	0	-5	-1	0.00	0.01	0.00
4	83	0	-56	-17	0	5	-5	0.00	0.01	0.00
5	83	0	-56	-17	0	5	-5	0.00	0.01	0.00
6	83	-0	-48	5	0	-2	-2	0.00	0.01	0.00
7	83	0	-49	4	0	-1	-2	0.00	0.01	0.00
8	83	0	-52	-5	0	2	-3	0.00	0.01	0.00
9	83	0	-52	-6	0	2	-3	0.00	0.01	0.00
10	83	-0	-44	16	0	-5	-1	0.00	0.01	0.00
11	83	-0	-44	16	0	-5	-1	0.00	0.01	0.00
12	83	0	-56	-17	0	5	-5	0.00	0.01	0.00
13	83	0	-56	-17	0	5	-5	0.00	0.01	0.00
14	83	-0	-48	5	0	-2	-2	0.00	0.01	0.00
15	83	0	-49	4	0	-1	-2	0.00	0.01	0.00
16	83	0	-52	-5	0	2	-3	0.00	0.01	0.00
17	83	0	-52	-6	0	2	-3	0.00	0.01	0.00

1	93	0	-86	-2	0	1	-11	0.00	0.01	0.00
2	93	-0	-60	16	0	-7	-6	0.00	0.01	0.00
3	93	-0	-60	16	0	-7	-6	0.00	0.01	0.00
4	93	0	-71	-17	0	7	-11	0.00	0.01	0.00
5	93	0	-72	-17	0	7	-11	0.00	0.01	0.00
6	93	-0	-64	5	0	-2	-8	0.00	0.01	0.00
7	93	0	-64	4	0	-2	-8	0.00	0.01	0.00
8	93	0	-67	-5	0	2	-9	0.00	0.01	0.00
9	93	0	-68	-6	0	2	-10	0.00	0.01	0.00
10	93	-0	-60	16	0	-7	-6	0.00	0.01	0.00
11	93	-0	-60	16	0	-7	-6	0.00	0.01	0.00
12	93	0	-71	-17	0	7	-11	0.00	0.01	0.00
13	93	0	-72	-17	0	7	-11	0.00	0.01	0.00
14	93	-0	-64	5	0	-2	-8	0.00	0.01	0.00
15	93	0	-64	4	0	-2	-8	0.00	0.01	0.00
16	93	0	-67	-5	0	2	-9	0.00	0.01	0.00
17	93	0	-68	-6	0	2	-10	0.00	0.01	0.00

1	103	0	-106	-2	0	1	-21	0.01	0.02	0.00
2	103	-0	-75	16	0	-8	-13	0.01	0.01	0.00
3	103	-0	-75	16	0	-8	-13	0.01	0.01	0.00
4	103	0	-87	-17	0	9	-19	0.01	0.01	0.00
5	103	0	-87	-17	0	9	-19	0.01	0.01	0.00
6	103	-0	-79	5	0	-3	-15	0.00	0.01	0.00
7	103	0	-79	4	0	-2	-16	0.00	0.01	0.00
8	103	0	-83	-5	0	3	-17	0.01	0.01	0.00
9	103	0	-83	-6	0	3	-17	0.01	0.01	0.00
10	103	-0	-75	16	0	-8	-13	0.01	0.01	0.00
11	103	-0	-75	16	0	-8	-13	0.01	0.01	0.00
12	103	0	-87	-17	0	9	-19	0.01	0.01	0.00
13	103	0	-87	-17	0	9	-19	0.01	0.01	0.00
14	103	-0	-79	5	0	-3	-15	0.00	0.01	0.00
15	103	0	-79	4	0	-2	-16	0.00	0.01	0.00
16	103	0	-83	-5	0	3	-17	0.01	0.01	0.00
17	103	0	-83	-6	0	3	-17	0.01	0.01	0.00

Verifica di STABILITA'

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
--	--	-----							
	kg	kg*m							
2	-0	8	16	15	15	1.000	1.000	0.09	Piano 'zx'
3	-0	8	16	15	15	1.000	1.000	0.09	Piano 'zx'
6	-0	3	15	15	15	1.000	1.000	0.09	Piano 'zx'
10	-0	8	16	15	15	1.000	1.000	0.09	Piano 'zx'
11	-0	8	16	15	15	1.000	1.000	0.09	Piano 'zx'
14	-0	3	15	15	15	1.000	1.000	0.09	Piano 'zx'

ASTA NUM. 14 NI 36 NF 37 Lungh. 103.1 cm SEZ. 3 Rp B= 24.0 H= 25.0 cm

categoria: p.p. y qy tot.
qy medio: 1.5000 1.5000 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
--	--	-----			-----			-----			
	cm	kg			kg*m						
1	0	0	124	-5	0	-2	-22	0.01	0.02	0.00	
2	0	-0	100	17	0	8	-20	0.01	0.02	0.00	
3	0	-0	100	16	0	8	-20	0.01	0.02	0.00	
4	0	0	88	-18	0	-9	-14	0.01	0.01	0.00	
5	0	0	87	-19	0	-9	-13	0.01	0.01	0.00	
6	0	-0	96	5	0	3	-18	0.01	0.02	0.00	
7	0	-0	95	4	0	2	-17	0.01	0.02	0.00	
8	0	0	92	-6	0	-3	-16	0.00	0.02	0.00	
9	0	0	91	-7	0	-3	-16	0.00	0.01	0.00	
10	0	-0	100	17	0	8	-20	0.01	0.02	0.00	
11	0	-0	100	16	0	8	-20	0.01	0.02	0.00	
12	0	0	88	-18	0	-9	-14	0.01	0.01	0.00	
13	0	0	87	-19	0	-9	-13	0.01	0.01	0.00	
14	0	-0	96	5	0	3	-18	0.01	0.02	0.00	
15	0	-0	95	4	0	2	-17	0.01	0.02	0.00	
16	0	0	92	-6	0	-3	-16	0.00	0.02	0.00	
17	0	0	91	-7	0	-3	-16	0.00	0.01	0.00	
1	10	0	103	-5	0	-1	-11	0.00	0.02	0.00	
2	10	-0	85	17	0	7	-10	0.00	0.01	0.00	
3	10	-0	84	16	0	7	-10	0.00	0.01	0.00	
4	10	0	72	-18	0	-7	-5	0.00	0.01	0.00	
5	10	0	72	-19	0	-7	-5	0.00	0.01	0.00	
6	10	-0	80	5	0	2	-9	0.00	0.01	0.00	
7	10	-0	80	4	0	2	-8	0.00	0.01	0.00	
8	10	0	77	-6	0	-2	-7	0.00	0.01	0.00	
9	10	0	76	-7	0	-3	-7	0.00	0.01	0.00	
10	10	-0	85	17	0	7	-10	0.00	0.01	0.00	
11	10	-0	84	16	0	7	-10	0.00	0.01	0.00	
12	10	0	72	-18	0	-7	-5	0.00	0.01	0.00	
13	10	0	72	-19	0	-7	-5	0.00	0.01	0.00	
14	10	-0	80	5	0	2	-9	0.00	0.01	0.00	
15	10	-0	80	4	0	2	-8	0.00	0.01	0.00	
16	10	0	77	-6	0	-2	-7	0.00	0.01	0.00	
17	10	0	76	-7	0	-3	-7	0.00	0.01	0.00	
1	21	0	83	-5	0	-1	-1	0.00	0.01	0.00	
2	21	-0	69	17	0	5	-2	0.00	0.01	0.00	
3	21	-0	69	16	0	5	-2	0.00	0.01	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

4	21	0	57	-18	0	-5	1	0.00	0.01	0.00
5	21	0	56	-19	0	-5	1	0.00	0.01	0.00
6	21	-0	65	5	0	2	-1	0.00	0.01	0.00
7	21	-0	64	4	0	1	-1	0.00	0.01	0.00
8	21	0	61	-6	0	-2	0	0.00	0.01	0.00
9	21	0	61	-7	0	-2	0	0.00	0.01	0.00
10	21	-0	69	17	0	5	-2	0.00	0.01	0.00
11	21	-0	69	16	0	5	-2	0.00	0.01	0.00
12	21	0	57	-18	0	-5	1	0.00	0.01	0.00
13	21	0	56	-19	0	-5	1	0.00	0.01	0.00
14	21	-0	65	5	0	2	-1	0.00	0.01	0.00
15	21	-0	64	4	0	1	-1	0.00	0.01	0.00
16	21	0	61	-6	0	-2	0	0.00	0.01	0.00
17	21	0	61	-7	0	-2	0	0.00	0.01	0.00

1	31	0	63	-5	0	-0	7	0.00	0.01	0.00
2	31	-0	54	17	0	3	4	0.00	0.01	0.00
3	31	-0	53	16	0	3	4	0.00	0.01	0.00
4	31	0	41	-18	0	-3	6	0.00	0.01	0.00
5	31	0	41	-19	0	-3	6	0.00	0.01	0.00
6	31	-0	49	5	0	1	5	0.00	0.01	0.00
7	31	-0	49	4	0	1	5	0.00	0.01	0.00
8	31	0	46	-6	0	-1	6	0.00	0.01	0.00
9	31	0	45	-7	0	-1	6	0.00	0.01	0.00
10	31	-0	54	17	0	3	4	0.00	0.01	0.00
11	31	-0	53	16	0	3	4	0.00	0.01	0.00
12	31	0	41	-18	0	-3	6	0.00	0.01	0.00
13	31	0	41	-19	0	-3	6	0.00	0.01	0.00
14	31	-0	49	5	0	1	5	0.00	0.01	0.00
15	31	-0	49	4	0	1	5	0.00	0.01	0.00
16	31	0	46	-6	0	-1	6	0.00	0.01	0.00
17	31	0	45	-7	0	-1	6	0.00	0.01	0.00

1	41	0	43	-5	0	0	12	0.00	0.01	0.00
2	41	-0	38	17	0	2	9	0.00	0.01	0.00
3	41	-0	38	16	0	2	9	0.00	0.01	0.00
4	41	0	26	-18	0	-2	10	0.00	0.01	0.00
5	41	0	26	-19	0	-2	10	0.00	0.01	0.00
6	41	-0	34	5	0	1	9	0.00	0.01	0.00
7	41	-0	33	4	0	1	9	0.00	0.01	0.00
8	41	0	30	-6	0	-0	9	0.00	0.01	0.00
9	41	0	30	-7	0	-0	9	0.00	0.00	0.00
10	41	-0	38	17	0	2	9	0.00	0.01	0.00
11	41	-0	38	16	0	2	9	0.00	0.01	0.00
12	41	0	26	-18	0	-2	10	0.00	0.01	0.00
13	41	0	26	-19	0	-2	10	0.00	0.01	0.00
14	41	-0	34	5	0	1	9	0.00	0.01	0.00
15	41	-0	33	4	0	1	9	0.00	0.01	0.00
16	41	0	30	-6	0	-0	9	0.00	0.01	0.00
17	41	0	30	-7	0	-0	9	0.00	0.00	0.00

1	52	0	23	-5	0	1	15	0.00	0.00	0.00
2	52	-0	23	17	0	-0	12	0.00	0.00	0.00
3	52	-0	22	16	0	-0	12	0.00	0.00	0.00
4	52	0	10	-18	0	0	12	0.00	0.00	0.00
5	52	0	10	-19	0	0	12	0.00	0.00	0.00
6	52	-0	19	5	0	-0	12	0.00	0.00	0.00
7	52	-0	18	4	0	0	12	0.00	0.00	0.00
8	52	0	15	-6	0	0	12	0.00	0.00	0.00
9	52	0	14	-7	0	0	12	0.00	0.00	0.00
10	52	-0	23	17	0	-0	12	0.00	0.00	0.00
11	52	-0	22	16	0	-0	12	0.00	0.00	0.00
12	52	0	10	-18	0	0	12	0.00	0.00	0.00
13	52	0	10	-19	0	0	12	0.00	0.00	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

14	52	-0	19	5	0	-0	12	0.00	0.00	0.00
15	52	-0	18	4	0	0	12	0.00	0.00	0.00
16	52	0	15	-6	0	0	12	0.00	0.00	0.00
17	52	0	14	-7	0	0	12	0.00	0.00	0.00

1	62	0	3	-5	0	1	17	0.00	0.00	0.00
2	62	-0	7	17	0	-2	13	0.00	0.00	0.00
3	62	-0	7	16	0	-2	13	0.00	0.00	0.00
4	62	0	-5	-18	0	2	12	0.00	0.00	0.00
5	62	0	-5	-19	0	2	12	0.00	0.00	0.00
6	62	-0	3	5	0	-1	13	0.00	0.00	0.00
7	62	-0	2	4	0	-0	13	0.00	0.00	0.00
8	62	0	-1	-6	0	1	13	0.00	0.00	0.00
9	62	0	-1	-7	0	1	12	0.00	0.00	0.00
10	62	-0	7	17	0	-2	13	0.00	0.00	0.00
11	62	-0	7	16	0	-2	13	0.00	0.00	0.00
12	62	0	-5	-18	0	2	12	0.00	0.00	0.00
13	62	0	-5	-19	0	2	12	0.00	0.00	0.00
14	62	-0	3	5	0	-1	13	0.00	0.00	0.00
15	62	-0	2	4	0	-0	13	0.00	0.00	0.00
16	62	0	-1	-6	0	1	13	0.00	0.00	0.00
17	62	0	-1	-7	0	1	12	0.00	0.00	0.00

1	72	0	-17	-5	0	2	16	0.00	0.00	0.00
2	72	-0	-8	17	0	-3	13	0.00	0.00	0.00
3	72	-0	-9	16	0	-3	13	0.00	0.00	0.00
4	72	0	-21	-18	0	4	11	0.00	0.00	0.00
5	72	0	-21	-19	0	4	11	0.00	0.00	0.00
6	72	-0	-12	5	0	-1	12	0.00	0.00	0.00
7	72	-0	-13	4	0	-1	12	0.00	0.00	0.00
8	72	0	-16	-6	0	1	12	0.00	0.00	0.00
9	72	0	-17	-7	0	2	11	0.00	0.00	0.00
10	72	-0	-8	17	0	-3	13	0.00	0.00	0.00
11	72	-0	-9	16	0	-3	13	0.00	0.00	0.00
12	72	0	-21	-18	0	4	11	0.00	0.00	0.00
13	72	0	-21	-19	0	4	11	0.00	0.00	0.00
14	72	-0	-12	5	0	-1	12	0.00	0.00	0.00
15	72	-0	-13	4	0	-1	12	0.00	0.00	0.00
16	72	0	-16	-6	0	1	12	0.00	0.00	0.00
17	72	0	-17	-7	0	2	11	0.00	0.00	0.00

1	83	0	-37	-5	0	2	13	0.00	0.01	0.00
2	83	-0	-24	17	0	-5	12	0.00	0.00	0.00
3	83	-0	-24	16	0	-5	12	0.00	0.00	0.00
4	83	0	-36	-18	0	6	8	0.00	0.01	0.00
5	83	0	-36	-19	0	6	8	0.00	0.01	0.00
6	83	-0	-28	5	0	-2	10	0.00	0.00	0.00
7	83	-0	-29	4	0	-1	10	0.00	0.00	0.00
8	83	0	-32	-6	0	2	9	0.00	0.01	0.00
9	83	0	-32	-7	0	2	9	0.00	0.01	0.00
10	83	-0	-24	17	0	-5	12	0.00	0.00	0.00
11	83	-0	-24	16	0	-5	12	0.00	0.00	0.00
12	83	0	-36	-18	0	6	8	0.00	0.01	0.00
13	83	0	-36	-19	0	6	8	0.00	0.01	0.00
14	83	-0	-28	5	0	-2	10	0.00	0.00	0.00
15	83	-0	-29	4	0	-1	10	0.00	0.00	0.00
16	83	0	-32	-6	0	2	9	0.00	0.01	0.00
17	83	0	-32	-7	0	2	9	0.00	0.01	0.00

1	93	0	-57	-5	0	3	8	0.00	0.01	0.00
2	93	-0	-39	17	0	-7	8	0.00	0.01	0.00
3	93	-0	-39	16	0	-7	8	0.00	0.01	0.00
4	93	0	-52	-18	0	8	3	0.00	0.01	0.00
5	93	0	-52	-19	0	8	3	0.00	0.01	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

6	93	-0	-43	5	0	-2	7	0.00	0.01	0.00
7	93	-0	-44	4	0	-1	6	0.00	0.01	0.00
8	93	0	-47	-6	0	2	5	0.00	0.01	0.00
9	93	0	-48	-7	0	3	5	0.00	0.01	0.00
10	93	-0	-39	17	0	-7	8	0.00	0.01	0.00
11	93	-0	-39	16	0	-7	8	0.00	0.01	0.00
12	93	0	-52	-18	0	8	3	0.00	0.01	0.00
13	93	0	-52	-19	0	8	3	0.00	0.01	0.00
14	93	-0	-43	5	0	-2	7	0.00	0.01	0.00
15	93	-0	-44	4	0	-1	6	0.00	0.01	0.00
16	93	0	-47	-6	0	2	5	0.00	0.01	0.00
17	93	0	-48	-7	0	3	5	0.00	0.01	0.00
1	103	0	-77	-5	0	3	1	0.00	0.01	0.00
2	103	-0	-55	17	0	-9	4	0.00	0.01	0.00
3	103	-0	-55	16	0	-8	3	0.00	0.01	0.00
4	103	0	-67	-18	0	10	-3	0.00	0.01	0.00
5	103	0	-67	-19	0	10	-3	0.00	0.01	0.00
6	103	-0	-59	5	0	-3	1	0.00	0.01	0.00
7	103	-0	-60	4	0	-2	1	0.00	0.01	0.00
8	103	0	-63	-6	0	3	-0	0.00	0.01	0.00
9	103	0	-63	-7	0	4	-1	0.00	0.01	0.00
10	103	-0	-55	17	0	-9	4	0.00	0.01	0.00
11	103	-0	-55	16	0	-8	3	0.00	0.01	0.00
12	103	0	-67	-18	0	10	-3	0.00	0.01	0.00
13	103	0	-67	-19	0	10	-3	0.00	0.01	0.00
14	103	-0	-59	5	0	-3	1	0.00	0.01	0.00
15	103	-0	-60	4	0	-2	1	0.00	0.01	0.00
16	103	0	-63	-6	0	3	-0	0.00	0.01	0.00
17	103	0	-63	-7	0	4	-1	0.00	0.01	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota

2	-0	9	20	15	15	1.000	1.000	0.09	Piano 'zx'
3	-0	8	20	15	15	1.000	1.000	0.09	Piano 'zx'
6	-0	3	18	15	15	1.000	1.000	0.09	Piano 'zx'
7	-0	2	17	15	15	1.000	1.000	0.09	Piano 'zx'
10	-0	9	20	15	15	1.000	1.000	0.09	Piano 'zx'
11	-0	8	20	15	15	1.000	1.000	0.09	Piano 'zx'
14	-0	3	18	15	15	1.000	1.000	0.09	Piano 'zx'
15	-0	2	17	15	15	1.000	1.000	0.09	Piano 'zx'

AMV s.r.l.
Via San Lorenzo, 106 Tel. 0481/779903
34077 Ronchi dei Legionari (GO)

Lavoro: B655-15_v_10 Intestazione lavoro: B655-15_v_10_Tetto
Elemento: TRAVE Metodo di verifica: NTC 2008 - Eurocodice 5
Gruppo: 5 Descrizione: FP_SOTTO-COLMO
Tabella: Tabella travi
Tipo legno: Legno massiccio C24 Beta piano 'yx': 1.000 Beta piano 'zx': 1.000
k mod: 0.900

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

ASTA NUM. 1 NI 46 NF 47 Lungh. 103.1 cm SEZ. 1 Rp B= 31.0 H= 36.0 cm

categoria: p.p. y qy tot.

qy medio: 0.5580 0.5580 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	cm	kg			kg*m						
1	0	-43	4115	0	0	0	0	0.00	0.36	0.00	
2	0	120	826	-38	0	0	0	0.00	0.07	0.00	
3	0	120	826	38	0	0	0	0.00	0.07	0.00	
4	0	-137	826	-38	0	0	0	0.00	0.07	0.00	
5	0	-137	826	38	0	0	0	0.00	0.07	0.00	
6	0	30	826	-128	0	0	0	0.00	0.07	0.00	
7	0	30	826	128	0	0	0	0.00	0.07	0.00	
8	0	-47	826	-128	0	0	0	0.00	0.07	0.00	
9	0	-47	826	128	0	0	0	0.00	0.07	0.00	
10	0	120	826	-38	0	0	0	0.00	0.07	0.00	
11	0	120	826	38	0	0	0	0.00	0.07	0.00	
12	0	-137	826	-38	0	0	0	0.00	0.07	0.00	
13	0	-137	826	38	0	0	0	0.00	0.07	0.00	
14	0	30	826	-128	0	0	0	0.00	0.07	0.00	
15	0	30	826	128	0	0	0	0.00	0.07	0.00	
16	0	-47	826	-128	0	0	0	0.00	0.07	0.00	
17	0	-47	826	128	0	0	0	0.00	0.07	0.00	
1	10	-43	4108	0	0	-0	424	0.04	0.36	0.00	
2	10	120	820	-38	0	4	85	0.01	0.07	0.00	
3	10	120	820	38	0	-4	85	0.01	0.07	0.00	
4	10	-137	820	-38	0	4	85	0.01	0.07	0.00	
5	10	-137	820	38	0	-4	85	0.01	0.07	0.00	
6	10	30	820	-128	0	13	85	0.01	0.07	0.00	
7	10	30	820	128	0	-13	85	0.01	0.07	0.00	
8	10	-47	820	-128	0	13	85	0.01	0.07	0.00	
9	10	-47	820	128	0	-13	85	0.01	0.07	0.00	
10	10	120	820	-38	0	4	85	0.01	0.07	0.00	
11	10	120	820	38	0	-4	85	0.01	0.07	0.00	
12	10	-137	820	-38	0	4	85	0.01	0.07	0.00	
13	10	-137	820	38	0	-4	85	0.01	0.07	0.00	
14	10	30	820	-128	0	13	85	0.01	0.07	0.00	
15	10	30	820	128	0	-13	85	0.01	0.07	0.00	
16	10	-47	820	-128	0	13	85	0.01	0.07	0.00	
17	10	-47	820	128	0	-13	85	0.01	0.07	0.00	
1	21	-43	4100	0	0	-0	847	0.09	0.36	0.00	
2	21	120	815	-38	0	8	169	0.02	0.07	0.00	
3	21	120	815	38	0	-8	169	0.02	0.07	0.00	
4	21	-137	815	-38	0	8	169	0.02	0.07	0.00	
5	21	-137	815	38	0	-8	169	0.02	0.07	0.00	
6	21	30	815	-128	0	26	169	0.02	0.07	0.00	
7	21	30	815	128	0	-26	169	0.02	0.07	0.00	
8	21	-47	815	-128	0	26	169	0.02	0.07	0.00	
9	21	-47	815	128	0	-26	169	0.02	0.07	0.00	
10	21	120	815	-38	0	8	169	0.02	0.07	0.00	
11	21	120	815	38	0	-8	169	0.02	0.07	0.00	
12	21	-137	815	-38	0	8	169	0.02	0.07	0.00	
13	21	-137	815	38	0	-8	169	0.02	0.07	0.00	
14	21	30	815	-128	0	26	169	0.02	0.07	0.00	
15	21	30	815	128	0	-26	169	0.02	0.07	0.00	
16	21	-47	815	-128	0	26	169	0.02	0.07	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

17	21	-47	815	128	0	-26	169	0.02	0.07	0.00
1	31	-43	4093	0	0	0	1270	0.13	0.36	0.00
2	31	120	809	-38	0	12	253	0.03	0.07	0.00
3	31	120	809	38	0	-12	253	0.03	0.07	0.00
4	31	-137	809	-38	0	12	253	0.03	0.07	0.00
5	31	-137	809	38	0	-12	253	0.03	0.07	0.00
6	31	30	809	-128	0	40	253	0.03	0.07	0.00
7	31	30	809	128	0	-40	253	0.03	0.07	0.00
8	31	-47	809	-128	0	40	253	0.03	0.07	0.00
9	31	-47	809	128	0	-40	253	0.03	0.07	0.00
10	31	120	809	-38	0	12	253	0.03	0.07	0.00
11	31	120	809	38	0	-12	253	0.03	0.07	0.00
12	31	-137	809	-38	0	12	253	0.03	0.07	0.00
13	31	-137	809	38	0	-12	253	0.03	0.07	0.00
14	31	30	809	-128	0	40	253	0.03	0.07	0.00
15	31	30	809	128	0	-40	253	0.03	0.07	0.00
16	31	-47	809	-128	0	40	253	0.03	0.07	0.00
17	31	-47	809	128	0	-40	253	0.03	0.07	0.00
1	41	-43	4085	0	0	-0	1691	0.17	0.36	0.00
2	41	120	803	-38	0	16	336	0.04	0.07	0.00
3	41	120	803	38	0	-16	336	0.04	0.07	0.00
4	41	-137	803	-38	0	16	336	0.04	0.07	0.00
5	41	-137	803	38	0	-16	336	0.04	0.07	0.00
6	41	30	803	-128	0	53	336	0.04	0.07	0.00
7	41	30	803	128	0	-53	336	0.04	0.07	0.00
8	41	-47	803	-128	0	53	336	0.04	0.07	0.00
9	41	-47	803	128	0	-53	336	0.04	0.07	0.00
10	41	120	803	-38	0	16	336	0.04	0.07	0.00
11	41	120	803	38	0	-16	336	0.04	0.07	0.00
12	41	-137	803	-38	0	16	336	0.04	0.07	0.00
13	41	-137	803	38	0	-16	336	0.04	0.07	0.00
14	41	30	803	-128	0	53	336	0.04	0.07	0.00
15	41	30	803	128	0	-53	336	0.04	0.07	0.00
16	41	-47	803	-128	0	53	336	0.04	0.07	0.00
17	41	-47	803	128	0	-53	336	0.04	0.07	0.00
1	52	-43	4078	0	0	0	2112	0.21	0.36	0.00
2	52	120	797	-38	0	20	419	0.05	0.07	0.00
3	52	120	797	38	0	-20	419	0.05	0.07	0.00
4	52	-137	797	-38	0	20	419	0.04	0.07	0.00
5	52	-137	797	38	0	-20	419	0.04	0.07	0.00
6	52	30	797	-128	0	66	419	0.05	0.07	0.00
7	52	30	797	128	0	-66	419	0.05	0.07	0.00
8	52	-47	797	-128	0	66	419	0.05	0.07	0.00
9	52	-47	797	128	0	-66	419	0.05	0.07	0.00
10	52	120	797	-38	0	20	419	0.05	0.07	0.00
11	52	120	797	38	0	-20	419	0.05	0.07	0.00
12	52	-137	797	-38	0	20	419	0.04	0.07	0.00
13	52	-137	797	38	0	-20	419	0.04	0.07	0.00
14	52	30	797	-128	0	66	419	0.05	0.07	0.00
15	52	30	797	128	0	-66	419	0.05	0.07	0.00
16	52	-47	797	-128	0	66	419	0.05	0.07	0.00
17	52	-47	797	128	0	-66	419	0.05	0.07	0.00
1	62	-43	4070	0	0	0	2532	0.26	0.36	0.00
2	62	120	792	-38	0	24	501	0.05	0.07	0.00
3	62	120	792	38	0	-24	501	0.05	0.07	0.00
4	62	-137	792	-38	0	24	501	0.05	0.07	0.00
5	62	-137	792	38	0	-24	501	0.05	0.07	0.00
6	62	30	792	-128	0	79	501	0.06	0.07	0.00
7	62	30	792	128	0	-79	501	0.06	0.07	0.00
8	62	-47	792	-128	0	79	501	0.06	0.07	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

9	62	-47	792	128	0	-79	501	0.06	0.07	0.00
10	62	120	792	-38	0	24	501	0.05	0.07	0.00
11	62	120	792	38	0	-24	501	0.05	0.07	0.00
12	62	-137	792	-38	0	24	501	0.05	0.07	0.00
13	62	-137	792	38	0	-24	501	0.05	0.07	0.00
14	62	30	792	-128	0	79	501	0.06	0.07	0.00
15	62	30	792	128	0	-79	501	0.06	0.07	0.00
16	62	-47	792	-128	0	79	501	0.06	0.07	0.00
17	62	-47	792	128	0	-79	501	0.06	0.07	0.00

1	72	-43	4063	0	0	0	2952	0.30	0.36	0.00
2	72	120	786	-38	0	28	582	0.06	0.07	0.00
3	72	120	786	38	0	-28	582	0.06	0.07	0.00
4	72	-137	786	-38	0	28	582	0.06	0.07	0.00
5	72	-137	786	38	0	-28	582	0.06	0.07	0.00
6	72	30	786	-128	0	93	582	0.07	0.07	0.00
7	72	30	786	128	0	-93	582	0.07	0.07	0.00
8	72	-47	786	-128	0	93	582	0.07	0.07	0.00
9	72	-47	786	128	0	-93	582	0.07	0.07	0.00
10	72	120	786	-38	0	28	582	0.06	0.07	0.00
11	72	120	786	38	0	-28	582	0.06	0.07	0.00
12	72	-137	786	-38	0	28	582	0.06	0.07	0.00
13	72	-137	786	38	0	-28	582	0.06	0.07	0.00
14	72	30	786	-128	0	93	582	0.07	0.07	0.00
15	72	30	786	128	0	-93	582	0.07	0.07	0.00
16	72	-47	786	-128	0	93	582	0.07	0.07	0.00
17	72	-47	786	128	0	-93	582	0.07	0.07	0.00

1	83	-43	4055	0	0	-0	3370	0.34	0.36	0.00
2	83	120	780	-38	0	32	663	0.07	0.07	0.00
3	83	120	780	38	0	-32	663	0.07	0.07	0.00
4	83	-137	780	-38	0	32	663	0.07	0.07	0.00
5	83	-137	780	38	0	-32	663	0.07	0.07	0.00
6	83	30	780	-128	0	106	663	0.08	0.07	0.00
7	83	30	780	128	0	-106	663	0.08	0.07	0.00
8	83	-47	780	-128	0	106	663	0.08	0.07	0.00
9	83	-47	780	128	0	-106	663	0.08	0.07	0.00
10	83	120	780	-38	0	32	663	0.07	0.07	0.00
11	83	120	780	38	0	-32	663	0.07	0.07	0.00
12	83	-137	780	-38	0	32	663	0.07	0.07	0.00
13	83	-137	780	38	0	-32	663	0.07	0.07	0.00
14	83	30	780	-128	0	106	663	0.08	0.07	0.00
15	83	30	780	128	0	-106	663	0.08	0.07	0.00
16	83	-47	780	-128	0	106	663	0.08	0.07	0.00
17	83	-47	780	128	0	-106	663	0.08	0.07	0.00

1	93	-43	4048	0	0	-0	3788	0.39	0.36	0.00
2	93	120	774	-38	0	36	743	0.08	0.07	0.00
3	93	120	774	38	0	-36	743	0.08	0.07	0.00
4	93	-137	774	-38	0	36	743	0.08	0.07	0.00
5	93	-137	774	38	0	-36	743	0.08	0.07	0.00
6	93	30	774	-128	0	119	743	0.09	0.07	0.00
7	93	30	774	128	0	-119	743	0.09	0.07	0.00
8	93	-47	774	-128	0	119	743	0.09	0.07	0.00
9	93	-47	774	128	0	-119	743	0.09	0.07	0.00
10	93	120	774	-38	0	36	743	0.08	0.07	0.00
11	93	120	774	38	0	-36	743	0.08	0.07	0.00
12	93	-137	774	-38	0	36	743	0.08	0.07	0.00
13	93	-137	774	38	0	-36	743	0.08	0.07	0.00
14	93	30	774	-128	0	119	743	0.09	0.07	0.00
15	93	30	774	128	0	-119	743	0.09	0.07	0.00
16	93	-47	774	-128	0	119	743	0.09	0.07	0.00
17	93	-47	774	128	0	-119	743	0.09	0.07	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	103	-43	4040	0	0	0	4205	0.43	0.36	0.00
2	103	120	769	-38	0	40	822	0.09	0.07	0.00
3	103	120	769	38	0	-40	822	0.09	0.07	0.00
4	103	-137	769	-38	0	40	822	0.09	0.07	0.00
5	103	-137	769	38	0	-40	822	0.09	0.07	0.00
6	103	30	769	-128	0	132	822	0.09	0.07	0.00
7	103	30	769	128	0	-132	822	0.09	0.07	0.00
8	103	-47	769	-128	0	132	822	0.09	0.07	0.00
9	103	-47	769	128	0	-132	822	0.09	0.07	0.00
10	103	120	769	-38	0	40	822	0.09	0.07	0.00
11	103	120	769	38	0	-40	822	0.09	0.07	0.00
12	103	-137	769	-38	0	40	822	0.09	0.07	0.00
13	103	-137	769	38	0	-40	822	0.09	0.07	0.00
14	103	30	769	-128	0	132	822	0.09	0.07	0.00
15	103	30	769	128	0	-132	822	0.09	0.07	0.00
16	103	-47	769	-128	0	132	822	0.09	0.07	0.00
17	103	-47	769	128	0	-132	822	0.09	0.07	0.00

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
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	kg	kg*m							
1	-43	0	4205	10	12	1.000	1.000	0.09	Piano 'zx'
4	-137	40	822	10	12	1.000	1.000	0.09	Piano 'zx'
5	-137	40	822	10	12	1.000	1.000	0.09	Piano 'zx'
8	-47	132	822	10	12	1.000	1.000	0.09	Piano 'zx'
9	-47	132	822	10	12	1.000	1.000	0.09	Piano 'zx'
12	-137	40	822	10	12	1.000	1.000	0.09	Piano 'zx'
13	-137	40	822	10	12	1.000	1.000	0.09	Piano 'zx'
16	-47	132	822	10	12	1.000	1.000	0.09	Piano 'zx'
17	-47	132	822	10	12	1.000	1.000	0.09	Piano 'zx'

ASTA NUM. 2 NI 47 NF 48 Lungh. 103.1 cm SEZ. 1 Rp B= 31.0 H= 36.0 cm

categoria: p.p. y qy tot.
qy medio: 0.5580 0.5580 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
--	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	cm	kg			kg*m						
1	0	-2	3546	0	0	0	4199	0.43	0.31	0.00	
2	0	85	707	-27	0	40	821	0.09	0.06	0.00	
3	0	85	707	27	0	-40	821	0.09	0.06	0.00	
4	0	-86	707	-27	0	40	821	0.09	0.06	0.00	
5	0	-86	707	27	0	-40	821	0.09	0.06	0.00	
6	0	25	707	-89	0	132	821	0.09	0.06	0.00	
7	0	25	707	89	0	-132	821	0.09	0.06	0.00	
8	0	-26	707	-89	0	132	821	0.09	0.06	0.00	
9	0	-26	707	89	0	-132	821	0.09	0.06	0.00	
10	0	85	707	-27	0	40	821	0.09	0.06	0.00	
11	0	85	707	27	0	-40	821	0.09	0.06	0.00	
12	0	-86	707	-27	0	40	821	0.09	0.06	0.00	
13	0	-86	707	27	0	-40	821	0.09	0.06	0.00	
14	0	25	707	-89	0	132	821	0.09	0.06	0.00	
15	0	25	707	89	0	-132	821	0.09	0.06	0.00	
16	0	-26	707	-89	0	132	821	0.09	0.06	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

17	0	-26	707	89	0	-132	821	0.09	0.06	0.00
1	10	-2	3539	0	0	-0	4564	0.46	0.31	0.00
2	10	85	702	-27	0	42	894	0.10	0.06	0.00
3	10	85	702	27	0	-42	894	0.10	0.06	0.00
4	10	-86	702	-27	0	42	894	0.09	0.06	0.00
5	10	-86	702	27	0	-42	894	0.09	0.06	0.00
6	10	25	702	-89	0	142	894	0.10	0.06	0.00
7	10	25	702	89	0	-142	894	0.10	0.06	0.00
8	10	-26	702	-89	0	142	894	0.10	0.06	0.00
9	10	-26	702	89	0	-142	894	0.10	0.06	0.00
10	10	85	702	-27	0	42	894	0.10	0.06	0.00
11	10	85	702	27	0	-42	894	0.10	0.06	0.00
12	10	-86	702	-27	0	42	894	0.09	0.06	0.00
13	10	-86	702	27	0	-42	894	0.09	0.06	0.00
14	10	25	702	-89	0	142	894	0.10	0.06	0.00
15	10	25	702	89	0	-142	894	0.10	0.06	0.00
16	10	-26	702	-89	0	142	894	0.10	0.06	0.00
17	10	-26	702	89	0	-142	894	0.10	0.06	0.00
1	21	-2	3531	0	0	-0	4929	0.50	0.31	0.00
2	21	85	696	-27	0	45	966	0.10	0.06	0.00
3	21	85	696	27	0	-45	966	0.10	0.06	0.00
4	21	-86	696	-27	0	45	966	0.10	0.06	0.00
5	21	-86	696	27	0	-45	966	0.10	0.06	0.00
6	21	25	696	-89	0	151	966	0.11	0.06	0.00
7	21	25	696	89	0	-151	966	0.11	0.06	0.00
8	21	-26	696	-89	0	151	966	0.11	0.06	0.00
9	21	-26	696	89	0	-151	966	0.11	0.06	0.00
10	21	85	696	-27	0	45	966	0.10	0.06	0.00
11	21	85	696	27	0	-45	966	0.10	0.06	0.00
12	21	-86	696	-27	0	45	966	0.10	0.06	0.00
13	21	-86	696	27	0	-45	966	0.10	0.06	0.00
14	21	25	696	-89	0	151	966	0.11	0.06	0.00
15	21	25	696	89	0	-151	966	0.11	0.06	0.00
16	21	-26	696	-89	0	151	966	0.11	0.06	0.00
17	21	-26	696	89	0	-151	966	0.11	0.06	0.00
1	31	-2	3524	0	0	-0	5293	0.54	0.31	0.00
2	31	85	690	-27	0	48	1037	0.11	0.06	0.00
3	31	85	690	27	0	-48	1037	0.11	0.06	0.00
4	31	-86	690	-27	0	48	1037	0.11	0.06	0.00
5	31	-86	690	27	0	-48	1037	0.11	0.06	0.00
6	31	25	690	-89	0	160	1037	0.12	0.06	0.00
7	31	25	690	89	0	-160	1037	0.12	0.06	0.00
8	31	-26	690	-89	0	160	1037	0.12	0.06	0.00
9	31	-26	690	89	0	-160	1037	0.12	0.06	0.00
10	31	85	690	-27	0	48	1037	0.11	0.06	0.00
11	31	85	690	27	0	-48	1037	0.11	0.06	0.00
12	31	-86	690	-27	0	48	1037	0.11	0.06	0.00
13	31	-86	690	27	0	-48	1037	0.11	0.06	0.00
14	31	25	690	-89	0	160	1037	0.12	0.06	0.00
15	31	25	690	89	0	-160	1037	0.12	0.06	0.00
16	31	-26	690	-89	0	160	1037	0.12	0.06	0.00
17	31	-26	690	89	0	-160	1037	0.12	0.06	0.00
1	41	-2	3516	0	0	-0	5655	0.58	0.31	0.00
2	41	85	684	-27	0	51	1108	0.12	0.06	0.00
3	41	85	684	27	0	-51	1108	0.12	0.06	0.00
4	41	-86	684	-27	0	51	1108	0.12	0.06	0.00
5	41	-86	684	27	0	-51	1108	0.12	0.06	0.00
6	41	25	684	-89	0	169	1108	0.13	0.06	0.00
7	41	25	684	89	0	-169	1108	0.13	0.06	0.00
8	41	-26	684	-89	0	169	1108	0.13	0.06	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

9	41	-26	684	89	0	-169	1108	0.13	0.06	0.00
10	41	85	684	-27	0	51	1108	0.12	0.06	0.00
11	41	85	684	27	0	-51	1108	0.12	0.06	0.00
12	41	-86	684	-27	0	51	1108	0.12	0.06	0.00
13	41	-86	684	27	0	-51	1108	0.12	0.06	0.00
14	41	25	684	-89	0	169	1108	0.13	0.06	0.00
15	41	25	684	89	0	-169	1108	0.13	0.06	0.00
16	41	-26	684	-89	0	169	1108	0.13	0.06	0.00
17	41	-26	684	89	0	-169	1108	0.13	0.06	0.00
1	52	-2	3509	0	0	0	6018	0.61	0.31	0.00
2	52	85	679	-27	0	53	1179	0.13	0.06	0.00
3	52	85	679	27	0	-53	1179	0.13	0.06	0.00
4	52	-86	679	-27	0	53	1179	0.12	0.06	0.00
5	52	-86	679	27	0	-53	1179	0.12	0.06	0.00
6	52	25	679	-89	0	178	1179	0.13	0.06	0.00
7	52	25	679	89	0	-178	1179	0.13	0.06	0.00
8	52	-26	679	-89	0	178	1179	0.13	0.06	0.00
9	52	-26	679	89	0	-178	1179	0.13	0.06	0.00
10	52	85	679	-27	0	53	1179	0.13	0.06	0.00
11	52	85	679	27	0	-53	1179	0.13	0.06	0.00
12	52	-86	679	-27	0	53	1179	0.12	0.06	0.00
13	52	-86	679	27	0	-53	1179	0.12	0.06	0.00
14	52	25	679	-89	0	178	1179	0.13	0.06	0.00
15	52	25	679	89	0	-178	1179	0.13	0.06	0.00
16	52	-26	679	-89	0	178	1179	0.13	0.06	0.00
17	52	-26	679	89	0	-178	1179	0.13	0.06	0.00
1	62	-2	3501	0	0	-0	6379	0.65	0.31	0.00
2	62	85	673	-27	0	56	1248	0.13	0.06	0.00
3	62	85	673	27	0	-56	1248	0.13	0.06	0.00
4	62	-86	673	-27	0	56	1248	0.13	0.06	0.00
5	62	-86	673	27	0	-56	1248	0.13	0.06	0.00
6	62	25	673	-89	0	188	1248	0.14	0.06	0.00
7	62	25	673	89	0	-188	1248	0.14	0.06	0.00
8	62	-26	673	-89	0	188	1248	0.14	0.06	0.00
9	62	-26	673	89	0	-188	1248	0.14	0.06	0.00
10	62	85	673	-27	0	56	1248	0.13	0.06	0.00
11	62	85	673	27	0	-56	1248	0.13	0.06	0.00
12	62	-86	673	-27	0	56	1248	0.13	0.06	0.00
13	62	-86	673	27	0	-56	1248	0.13	0.06	0.00
14	62	25	673	-89	0	188	1248	0.14	0.06	0.00
15	62	25	673	89	0	-188	1248	0.14	0.06	0.00
16	62	-26	673	-89	0	188	1248	0.14	0.06	0.00
17	62	-26	673	89	0	-188	1248	0.14	0.06	0.00
1	72	-2	3494	0	0	-0	6740	0.69	0.31	0.00
2	72	85	667	-27	0	59	1317	0.14	0.06	0.00
3	72	85	667	27	0	-59	1317	0.14	0.06	0.00
4	72	-86	667	-27	0	59	1317	0.14	0.06	0.00
5	72	-86	667	27	0	-59	1317	0.14	0.06	0.00
6	72	25	667	-89	0	197	1317	0.15	0.06	0.00
7	72	25	667	89	0	-197	1317	0.15	0.06	0.00
8	72	-26	667	-89	0	197	1317	0.15	0.06	0.00
9	72	-26	667	89	0	-197	1317	0.15	0.06	0.00
10	72	85	667	-27	0	59	1317	0.14	0.06	0.00
11	72	85	667	27	0	-59	1317	0.14	0.06	0.00
12	72	-86	667	-27	0	59	1317	0.14	0.06	0.00
13	72	-86	667	27	0	-59	1317	0.14	0.06	0.00
14	72	25	667	-89	0	197	1317	0.15	0.06	0.00
15	72	25	667	89	0	-197	1317	0.15	0.06	0.00
16	72	-26	667	-89	0	197	1317	0.15	0.06	0.00
17	72	-26	667	89	0	-197	1317	0.15	0.06	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	83	-2	3486	0	0	-0	7100	0.72	0.31	0.00
2	83	85	661	-27	0	62	1386	0.15	0.06	0.00
3	83	85	661	27	0	-62	1386	0.15	0.06	0.00
4	83	-86	661	-27	0	62	1386	0.15	0.06	0.00
5	83	-86	661	27	0	-62	1386	0.15	0.06	0.00
6	83	25	661	-89	0	206	1386	0.16	0.06	0.00
7	83	25	661	89	0	-206	1386	0.16	0.06	0.00
8	83	-26	661	-89	0	206	1386	0.16	0.06	0.00
9	83	-26	661	89	0	-206	1386	0.16	0.06	0.00
10	83	85	661	-27	0	62	1386	0.15	0.06	0.00
11	83	85	661	27	0	-62	1386	0.15	0.06	0.00
12	83	-86	661	-27	0	62	1386	0.15	0.06	0.00
13	83	-86	661	27	0	-62	1386	0.15	0.06	0.00
14	83	25	661	-89	0	206	1386	0.16	0.06	0.00
15	83	25	661	89	0	-206	1386	0.16	0.06	0.00
16	83	-26	661	-89	0	206	1386	0.16	0.06	0.00
17	83	-26	661	89	0	-206	1386	0.16	0.06	0.00

1	93	-2	3479	0	0	-0	7459	0.76	0.31	0.00
2	93	85	656	-27	0	65	1454	0.15	0.06	0.00
3	93	85	656	27	0	-65	1454	0.15	0.06	0.00
4	93	-86	656	-27	0	65	1454	0.15	0.06	0.00
5	93	-86	656	27	0	-65	1454	0.15	0.06	0.00
6	93	25	656	-89	0	215	1454	0.17	0.06	0.00
7	93	25	656	89	0	-215	1454	0.17	0.06	0.00
8	93	-26	656	-89	0	215	1454	0.17	0.06	0.00
9	93	-26	656	89	0	-215	1454	0.17	0.06	0.00
10	93	85	656	-27	0	65	1454	0.15	0.06	0.00
11	93	85	656	27	0	-65	1454	0.15	0.06	0.00
12	93	-86	656	-27	0	65	1454	0.15	0.06	0.00
13	93	-86	656	27	0	-65	1454	0.15	0.06	0.00
14	93	25	656	-89	0	215	1454	0.17	0.06	0.00
15	93	25	656	89	0	-215	1454	0.17	0.06	0.00
16	93	-26	656	-89	0	215	1454	0.17	0.06	0.00
17	93	-26	656	89	0	-215	1454	0.17	0.06	0.00

1	103	-2	3471	0	0	0	7817	0.80	0.31	0.00
2	103	85	650	-27	0	67	1521	0.16	0.06	0.00
3	103	85	650	27	0	-67	1521	0.16	0.06	0.00
4	103	-86	650	-27	0	67	1521	0.16	0.06	0.00
5	103	-86	650	27	0	-67	1521	0.16	0.06	0.00
6	103	25	650	-89	0	224	1521	0.17	0.06	0.00
7	103	25	650	89	0	-224	1521	0.17	0.06	0.00
8	103	-26	650	-89	0	224	1521	0.17	0.06	0.00
9	103	-26	650	89	0	-224	1521	0.17	0.06	0.00
10	103	85	650	-27	0	67	1521	0.16	0.06	0.00
11	103	85	650	27	0	-67	1521	0.16	0.06	0.00
12	103	-86	650	-27	0	67	1521	0.16	0.06	0.00
13	103	-86	650	27	0	-67	1521	0.16	0.06	0.00
14	103	25	650	-89	0	224	1521	0.17	0.06	0.00
15	103	25	650	89	0	-224	1521	0.17	0.06	0.00
16	103	-26	650	-89	0	224	1521	0.17	0.06	0.00
17	103	-26	650	89	0	-224	1521	0.17	0.06	0.00

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
	kg	kg*m							
1	-2	0	7817	10	12	1.000	1.000	0.09	Piano 'zx'

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

4	-86	67	1521	10	12	1.000	1.000	0.09	Piano 'zx'
5	-86	67	1521	10	12	1.000	1.000	0.09	Piano 'zx'
8	-26	224	1521	10	12	1.000	1.000	0.09	Piano 'zx'
9	-26	224	1521	10	12	1.000	1.000	0.09	Piano 'zx'
12	-86	67	1521	10	12	1.000	1.000	0.09	Piano 'zx'
13	-86	67	1521	10	12	1.000	1.000	0.09	Piano 'zx'
16	-26	224	1521	10	12	1.000	1.000	0.09	Piano 'zx'
17	-26	224	1521	10	12	1.000	1.000	0.09	Piano 'zx'

ASTA NUM. 3 NI 48 NF 49 Lungh. 103,1 cm SEZ. 1 Rp B= 31.0 H= 36.0 cm

categoria: p.p. y qy tot.
qy medio: 0.5580 0.5580 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
--	--	--	--	--	--	--	--	--	--	--	
	cm	kg			kg*m						
1	0	26	1795	0	0	0	7813	0.80	0.16	0.00	
2	0	48	369	-14	0	67	1520	0.16	0.03	0.00	
3	0	48	369	14	0	-67	1520	0.16	0.03	0.00	
4	0	-38	369	-14	0	67	1520	0.16	0.03	0.00	
5	0	-38	369	14	0	-67	1520	0.16	0.03	0.00	
6	0	18	369	-46	0	224	1520	0.17	0.03	0.00	
7	0	18	369	46	0	-224	1520	0.17	0.03	0.00	
8	0	-8	369	-46	0	224	1520	0.17	0.03	0.00	
9	0	-8	369	46	0	-224	1520	0.17	0.03	0.00	
10	0	48	369	-14	0	67	1520	0.16	0.03	0.00	
11	0	48	369	14	0	-67	1520	0.16	0.03	0.00	
12	0	-38	369	-14	0	67	1520	0.16	0.03	0.00	
13	0	-38	369	14	0	-67	1520	0.16	0.03	0.00	
14	0	18	369	-46	0	224	1520	0.17	0.03	0.00	
15	0	18	369	46	0	-224	1520	0.17	0.03	0.00	
16	0	-8	369	-46	0	224	1520	0.17	0.03	0.00	
17	0	-8	369	46	0	-224	1520	0.17	0.03	0.00	
1	10	26	1788	0	0	-0	7998	0.81	0.16	0.00	
2	10	48	363	-14	0	69	1558	0.16	0.03	0.00	
3	10	48	363	14	0	-69	1558	0.16	0.03	0.00	
4	10	-38	363	-14	0	69	1558	0.16	0.03	0.00	
5	10	-38	363	14	0	-69	1558	0.16	0.03	0.00	
6	10	18	363	-46	0	229	1558	0.18	0.03	0.00	
7	10	18	363	46	0	-229	1558	0.18	0.03	0.00	
8	10	-8	363	-46	0	229	1558	0.18	0.03	0.00	
9	10	-8	363	46	0	-229	1558	0.18	0.03	0.00	
10	10	48	363	-14	0	69	1558	0.16	0.03	0.00	
11	10	48	363	14	0	-69	1558	0.16	0.03	0.00	
12	10	-38	363	-14	0	69	1558	0.16	0.03	0.00	
13	10	-38	363	14	0	-69	1558	0.16	0.03	0.00	
14	10	18	363	-46	0	229	1558	0.18	0.03	0.00	
15	10	18	363	46	0	-229	1558	0.18	0.03	0.00	
16	10	-8	363	-46	0	229	1558	0.18	0.03	0.00	
17	10	-8	363	46	0	-229	1558	0.18	0.03	0.00	
1	21	26	1780	0	0	-0	8182	0.83	0.16	0.00	
2	21	48	358	-14	0	70	1595	0.17	0.03	0.00	
3	21	48	358	14	0	-70	1595	0.17	0.03	0.00	
4	21	-38	358	-14	0	70	1595	0.17	0.03	0.00	
5	21	-38	358	14	0	-70	1595	0.17	0.03	0.00	
6	21	18	358	-46	0	234	1595	0.18	0.03	0.00	
7	21	18	358	46	0	-234	1595	0.18	0.03	0.00	
8	21	-8	358	-46	0	234	1595	0.18	0.03	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

9	21	-8	358	46	0	-234	1595	0.18	0.03	0.00
10	21	48	358	-14	0	70	1595	0.17	0.03	0.00
11	21	48	358	14	0	-70	1595	0.17	0.03	0.00
12	21	-38	358	-14	0	70	1595	0.17	0.03	0.00
13	21	-38	358	14	0	-70	1595	0.17	0.03	0.00
14	21	18	358	-46	0	234	1595	0.18	0.03	0.00
15	21	18	358	46	0	-234	1595	0.18	0.03	0.00
16	21	-8	358	-46	0	234	1595	0.18	0.03	0.00
17	21	-8	358	46	0	-234	1595	0.18	0.03	0.00
1	31	26	1773	0	0	-0	8365	0.85	0.16	0.00
2	31	48	352	-14	0	72	1632	0.17	0.03	0.00
3	31	48	352	14	0	-72	1632	0.17	0.03	0.00
4	31	-38	352	-14	0	72	1632	0.17	0.03	0.00
5	31	-38	352	14	0	-72	1632	0.17	0.03	0.00
6	31	18	352	-46	0	239	1632	0.19	0.03	0.00
7	31	18	352	46	0	-239	1632	0.19	0.03	0.00
8	31	-8	352	-46	0	239	1632	0.19	0.03	0.00
9	31	-8	352	46	0	-239	1632	0.19	0.03	0.00
10	31	48	352	-14	0	72	1632	0.17	0.03	0.00
11	31	48	352	14	0	-72	1632	0.17	0.03	0.00
12	31	-38	352	-14	0	72	1632	0.17	0.03	0.00
13	31	-38	352	14	0	-72	1632	0.17	0.03	0.00
14	31	18	352	-46	0	239	1632	0.19	0.03	0.00
15	31	18	352	46	0	-239	1632	0.19	0.03	0.00
16	31	-8	352	-46	0	239	1632	0.19	0.03	0.00
17	31	-8	352	46	0	-239	1632	0.19	0.03	0.00
1	41	26	1765	0	0	-0	8547	0.87	0.16	0.00
2	41	48	346	-14	0	73	1668	0.18	0.03	0.00
3	41	48	346	14	0	-73	1668	0.18	0.03	0.00
4	41	-38	346	-14	0	73	1668	0.18	0.03	0.00
5	41	-38	346	14	0	-73	1668	0.18	0.03	0.00
6	41	18	346	-46	0	243	1668	0.19	0.03	0.00
7	41	18	346	46	0	-243	1668	0.19	0.03	0.00
8	41	-8	346	-46	0	243	1668	0.19	0.03	0.00
9	41	-8	346	46	0	-243	1668	0.19	0.03	0.00
10	41	48	346	-14	0	73	1668	0.18	0.03	0.00
11	41	48	346	14	0	-73	1668	0.18	0.03	0.00
12	41	-38	346	-14	0	73	1668	0.18	0.03	0.00
13	41	-38	346	14	0	-73	1668	0.18	0.03	0.00
14	41	18	346	-46	0	243	1668	0.19	0.03	0.00
15	41	18	346	46	0	-243	1668	0.19	0.03	0.00
16	41	-8	346	-46	0	243	1668	0.19	0.03	0.00
17	41	-8	346	46	0	-243	1668	0.19	0.03	0.00
1	52	26	1758	0	0	-0	8729	0.89	0.15	0.00
2	52	48	340	-14	0	74	1703	0.18	0.03	0.00
3	52	48	340	14	0	-74	1703	0.18	0.03	0.00
4	52	-38	340	-14	0	74	1703	0.18	0.03	0.00
5	52	-38	340	14	0	-74	1703	0.18	0.03	0.00
6	52	18	340	-46	0	248	1703	0.19	0.03	0.00
7	52	18	340	46	0	-248	1703	0.19	0.03	0.00
8	52	-8	340	-46	0	248	1703	0.19	0.03	0.00
9	52	-8	340	46	0	-248	1703	0.19	0.03	0.00
10	52	48	340	-14	0	74	1703	0.18	0.03	0.00
11	52	48	340	14	0	-74	1703	0.18	0.03	0.00
12	52	-38	340	-14	0	74	1703	0.18	0.03	0.00
13	52	-38	340	14	0	-74	1703	0.18	0.03	0.00
14	52	18	340	-46	0	248	1703	0.19	0.03	0.00
15	52	18	340	46	0	-248	1703	0.19	0.03	0.00
16	52	-8	340	-46	0	248	1703	0.19	0.03	0.00
17	52	-8	340	46	0	-248	1703	0.19	0.03	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	62	26	1751	0	0	-0	8910	0.91	0.15	0.00
2	62	48	335	-14	0	76	1738	0.18	0.03	0.00
3	62	48	335	14	0	-76	1738	0.18	0.03	0.00
4	62	-38	335	-14	0	76	1738	0.18	0.03	0.00
5	62	-38	335	14	0	-76	1738	0.18	0.03	0.00
6	62	18	335	-46	0	253	1738	0.20	0.03	0.00
7	62	18	335	46	0	-253	1738	0.20	0.03	0.00
8	62	-8	335	-46	0	253	1738	0.20	0.03	0.00
9	62	-8	335	46	0	-253	1738	0.20	0.03	0.00
10	62	48	335	-14	0	76	1738	0.18	0.03	0.00
11	62	48	335	14	0	-76	1738	0.18	0.03	0.00
12	62	-38	335	-14	0	76	1738	0.18	0.03	0.00
13	62	-38	335	14	0	-76	1738	0.18	0.03	0.00
14	62	18	335	-46	0	253	1738	0.20	0.03	0.00
15	62	18	335	46	0	-253	1738	0.20	0.03	0.00
16	62	-8	335	-46	0	253	1738	0.20	0.03	0.00
17	62	-8	335	46	0	-253	1738	0.20	0.03	0.00

1	72	26	1743	0	0	-0	9090	0.93	0.15	0.00
2	72	48	329	-14	0	77	1772	0.19	0.03	0.00
3	72	48	329	14	0	-77	1772	0.19	0.03	0.00
4	72	-38	329	-14	0	77	1772	0.19	0.03	0.00
5	72	-38	329	14	0	-77	1772	0.19	0.03	0.00
6	72	18	329	-46	0	257	1772	0.20	0.03	0.00
7	72	18	329	46	0	-257	1772	0.20	0.03	0.00
8	72	-8	329	-46	0	257	1772	0.20	0.03	0.00
9	72	-8	329	46	0	-257	1772	0.20	0.03	0.00
10	72	48	329	-14	0	77	1772	0.19	0.03	0.00
11	72	48	329	14	0	-77	1772	0.19	0.03	0.00
12	72	-38	329	-14	0	77	1772	0.19	0.03	0.00
13	72	-38	329	14	0	-77	1772	0.19	0.03	0.00
14	72	18	329	-46	0	257	1772	0.20	0.03	0.00
15	72	18	329	46	0	-257	1772	0.20	0.03	0.00
16	72	-8	329	-46	0	257	1772	0.20	0.03	0.00
17	72	-8	329	46	0	-257	1772	0.20	0.03	0.00

1	83	26	1736	0	0	-0	9270	0.94	0.15	0.00
2	83	48	323	-14	0	79	1806	0.19	0.03	0.00
3	83	48	323	14	0	-79	1806	0.19	0.03	0.00
4	83	-38	323	-14	0	79	1806	0.19	0.03	0.00
5	83	-38	323	14	0	-79	1806	0.19	0.03	0.00
6	83	18	323	-46	0	262	1806	0.21	0.03	0.00
7	83	18	323	46	0	-262	1806	0.21	0.03	0.00
8	83	-8	323	-46	0	262	1806	0.21	0.03	0.00
9	83	-8	323	46	0	-262	1806	0.21	0.03	0.00
10	83	48	323	-14	0	79	1806	0.19	0.03	0.00
11	83	48	323	14	0	-79	1806	0.19	0.03	0.00
12	83	-38	323	-14	0	79	1806	0.19	0.03	0.00
13	83	-38	323	14	0	-79	1806	0.19	0.03	0.00
14	83	18	323	-46	0	262	1806	0.21	0.03	0.00
15	83	18	323	46	0	-262	1806	0.21	0.03	0.00
16	83	-8	323	-46	0	262	1806	0.21	0.03	0.00
17	83	-8	323	46	0	-262	1806	0.21	0.03	0.00

1	93	26	1728	0	0	-0	9448	0.96	0.15	0.00
2	93	48	317	-14	0	80	1839	0.19	0.03	0.00
3	93	48	317	14	0	-80	1839	0.19	0.03	0.00
4	93	-38	317	-14	0	80	1839	0.19	0.03	0.00
5	93	-38	317	14	0	-80	1839	0.19	0.03	0.00
6	93	18	317	-46	0	267	1839	0.21	0.03	0.00
7	93	18	317	46	0	-267	1839	0.21	0.03	0.00
8	93	-8	317	-46	0	267	1839	0.21	0.03	0.00
9	93	-8	317	46	0	-267	1839	0.21	0.03	0.00
10	93	48	317	-14	0	80	1839	0.19	0.03	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

11	93	48	317	14	0	-80	1839	0.19	0.03	0.00
12	93	-38	317	-14	0	80	1839	0.19	0.03	0.00
13	93	-38	317	14	0	-80	1839	0.19	0.03	0.00
14	93	18	317	-46	0	267	1839	0.21	0.03	0.00
15	93	18	317	46	0	-267	1839	0.21	0.03	0.00
16	93	-8	317	-46	0	267	1839	0.21	0.03	0.00
17	93	-8	317	46	0	-267	1839	0.21	0.03	0.00
1	103	26	1721	0	0	0	9626	0.98	0.15	0.00
2	103	48	312	-14	0	82	1871	0.20	0.03	0.00
3	103	48	312	14	0	-82	1871	0.20	0.03	0.00
4	103	-38	312	-14	0	82	1871	0.20	0.03	0.00
5	103	-38	312	14	0	-82	1871	0.20	0.03	0.00
6	103	18	312	-46	0	272	1871	0.21	0.03	0.00
7	103	18	312	46	0	-272	1871	0.21	0.03	0.00
8	103	-8	312	-46	0	272	1871	0.21	0.03	0.00
9	103	-8	312	46	0	-272	1871	0.21	0.03	0.00
10	103	48	312	-14	0	82	1871	0.20	0.03	0.00
11	103	48	312	14	0	-82	1871	0.20	0.03	0.00
12	103	-38	312	-14	0	82	1871	0.20	0.03	0.00
13	103	-38	312	14	0	-82	1871	0.20	0.03	0.00
14	103	18	312	-46	0	272	1871	0.21	0.03	0.00
15	103	18	312	46	0	-272	1871	0.21	0.03	0.00
16	103	-8	312	-46	0	272	1871	0.21	0.03	0.00
17	103	-8	312	46	0	-272	1871	0.21	0.03	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
4	-38	82	1871	10	12	1.000	1.000	0.09	Piano 'zx'
5	-38	82	1871	10	12	1.000	1.000	0.09	Piano 'zx'
8	-8	272	1871	10	12	1.000	1.000	0.09	Piano 'zx'
9	-8	272	1871	10	12	1.000	1.000	0.09	Piano 'zx'
12	-38	82	1871	10	12	1.000	1.000	0.09	Piano 'zx'
13	-38	82	1871	10	12	1.000	1.000	0.09	Piano 'zx'
16	-8	272	1871	10	12	1.000	1.000	0.09	Piano 'zx'
17	-8	272	1871	10	12	1.000	1.000	0.09	Piano 'zx'

ASTA NUM. 4 NI 49 NF 50 Lungh. 103.1 cm SEZ. 1 Rp B= 31.0 H= 36.0 cm

categoria: p.p. y qy tot.
qy medio: 0.5580 0.5580 kg/cm

NC	x -- cm	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
		kg			kg*m						
1	0	36	149	0	0	0	9624	0.98	0.01	0.00	
2	0	7	50	-0	0	82	1871	0.20	0.00	0.00	
3	0	7	50	0	0	-82	1871	0.20	0.00	0.00	
4	0	7	50	-0	0	82	1871	0.20	0.00	0.00	
5	0	7	50	0	0	-82	1871	0.20	0.00	0.00	
6	0	7	50	-0	0	272	1871	0.21	0.00	0.00	
7	0	7	50	0	0	-272	1871	0.21	0.00	0.00	
8	0	7	50	-0	0	272	1871	0.21	0.00	0.00	
9	0	7	50	0	0	-272	1871	0.21	0.00	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

10	0	7	50	-0	0	82	1871	0.20	0.00	0.00
11	0	7	50	0	0	-82	1871	0.20	0.00	0.00
12	0	7	50	-0	0	82	1871	0.20	0.00	0.00
13	0	7	50	0	0	-82	1871	0.20	0.00	0.00
14	0	7	50	-0	0	272	1871	0.21	0.00	0.00
15	0	7	50	0	0	-272	1871	0.21	0.00	0.00
16	0	7	50	-0	0	272	1871	0.21	0.00	0.00
17	0	7	50	0	0	-272	1871	0.21	0.00	0.00

1	10	36	142	0	0	0	9639	0.98	0.01	0.00
2	10	7	44	-0	0	82	1876	0.20	0.00	0.00
3	10	7	44	0	0	-82	1876	0.20	0.00	0.00
4	10	7	44	-0	0	82	1876	0.20	0.00	0.00
5	10	7	44	0	0	-82	1876	0.20	0.00	0.00
6	10	7	44	-0	0	272	1876	0.21	0.00	0.00
7	10	7	44	0	0	-272	1876	0.21	0.00	0.00
8	10	7	44	-0	0	272	1876	0.21	0.00	0.00
9	10	7	44	0	0	-272	1876	0.21	0.00	0.00
10	10	7	44	-0	0	82	1876	0.20	0.00	0.00
11	10	7	44	0	0	-82	1876	0.20	0.00	0.00
12	10	7	44	-0	0	82	1876	0.20	0.00	0.00
13	10	7	44	0	0	-82	1876	0.20	0.00	0.00
14	10	7	44	-0	0	272	1876	0.21	0.00	0.00
15	10	7	44	0	0	-272	1876	0.21	0.00	0.00
16	10	7	44	-0	0	272	1876	0.21	0.00	0.00
17	10	7	44	0	0	-272	1876	0.21	0.00	0.00

1	21	36	134	0	0	0	9653	0.98	0.01	0.00
2	21	7	38	-0	0	82	1880	0.20	0.00	0.00
3	21	7	38	0	0	-82	1880	0.20	0.00	0.00
4	21	7	38	-0	0	82	1880	0.20	0.00	0.00
5	21	7	38	0	0	-82	1880	0.20	0.00	0.00
6	21	7	38	-0	0	272	1880	0.21	0.00	0.00
7	21	7	38	0	0	-272	1880	0.21	0.00	0.00
8	21	7	38	-0	0	272	1880	0.21	0.00	0.00
9	21	7	38	0	0	-272	1880	0.21	0.00	0.00
10	21	7	38	-0	0	82	1880	0.20	0.00	0.00
11	21	7	38	0	0	-82	1880	0.20	0.00	0.00
12	21	7	38	-0	0	82	1880	0.20	0.00	0.00
13	21	7	38	0	0	-82	1880	0.20	0.00	0.00
14	21	7	38	-0	0	272	1880	0.21	0.00	0.00
15	21	7	38	0	0	-272	1880	0.21	0.00	0.00
16	21	7	38	-0	0	272	1880	0.21	0.00	0.00
17	21	7	38	0	0	-272	1880	0.21	0.00	0.00

1	31	36	127	0	0	0	9667	0.98	0.01	0.00
2	31	7	33	-0	0	82	1884	0.20	0.00	0.00
3	31	7	33	0	0	-82	1884	0.20	0.00	0.00
4	31	7	33	-0	0	82	1884	0.20	0.00	0.00
5	31	7	33	0	0	-82	1884	0.20	0.00	0.00
6	31	7	33	-0	0	272	1884	0.21	0.00	0.00
7	31	7	33	0	0	-272	1884	0.21	0.00	0.00
8	31	7	33	-0	0	272	1884	0.21	0.00	0.00
9	31	7	33	0	0	-272	1884	0.21	0.00	0.00
10	31	7	33	-0	0	82	1884	0.20	0.00	0.00
11	31	7	33	0	0	-82	1884	0.20	0.00	0.00
12	31	7	33	-0	0	82	1884	0.20	0.00	0.00
13	31	7	33	0	0	-82	1884	0.20	0.00	0.00
14	31	7	33	-0	0	272	1884	0.21	0.00	0.00
15	31	7	33	0	0	-272	1884	0.21	0.00	0.00
16	31	7	33	-0	0	272	1884	0.21	0.00	0.00
17	31	7	33	0	0	-272	1884	0.21	0.00	0.00

1	41	36	119	0	0	0	9680	0.99	0.01	0.00
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Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

2	41	7	27	-0	0	82	1887	0.20	0.00	0.00
3	41	7	27	0	0	-82	1887	0.20	0.00	0.00
4	41	7	27	-0	0	82	1887	0.20	0.00	0.00
5	41	7	27	0	0	-82	1887	0.20	0.00	0.00
6	41	7	27	-0	0	272	1887	0.21	0.00	0.00
7	41	7	27	0	0	-272	1887	0.21	0.00	0.00
8	41	7	27	-0	0	272	1887	0.21	0.00	0.00
9	41	7	27	0	0	-272	1887	0.21	0.00	0.00
10	41	7	27	-0	0	82	1887	0.20	0.00	0.00
11	41	7	27	0	0	-82	1887	0.20	0.00	0.00
12	41	7	27	-0	0	82	1887	0.20	0.00	0.00
13	41	7	27	0	0	-82	1887	0.20	0.00	0.00
14	41	7	27	-0	0	272	1887	0.21	0.00	0.00
15	41	7	27	0	0	-272	1887	0.21	0.00	0.00
16	41	7	27	-0	0	272	1887	0.21	0.00	0.00
17	41	7	27	0	0	-272	1887	0.21	0.00	0.00

1	52	36	112	0	0	0	9692	0.99	0.01	0.00
2	52	7	21	-0	0	82	1889	0.20	0.00	0.00
3	52	7	21	0	0	-82	1889	0.20	0.00	0.00
4	52	7	21	-0	0	82	1889	0.20	0.00	0.00
5	52	7	21	0	0	-82	1889	0.20	0.00	0.00
6	52	7	21	-0	0	272	1889	0.21	0.00	0.00
7	52	7	21	0	0	-272	1889	0.21	0.00	0.00
8	52	7	21	-0	0	272	1889	0.21	0.00	0.00
9	52	7	21	0	0	-272	1889	0.21	0.00	0.00
10	52	7	21	-0	0	82	1889	0.20	0.00	0.00
11	52	7	21	0	0	-82	1889	0.20	0.00	0.00
12	52	7	21	-0	0	82	1889	0.20	0.00	0.00
13	52	7	21	0	0	-82	1889	0.20	0.00	0.00
14	52	7	21	-0	0	272	1889	0.21	0.00	0.00
15	52	7	21	0	0	-272	1889	0.21	0.00	0.00
16	52	7	21	-0	0	272	1889	0.21	0.00	0.00
17	52	7	21	0	0	-272	1889	0.21	0.00	0.00

1	62	36	104	0	0	0	9703	0.99	0.01	0.00
2	62	7	15	-0	0	82	1891	0.20	0.00	0.00
3	62	7	15	0	0	-82	1891	0.20	0.00	0.00
4	62	7	15	-0	0	82	1891	0.20	0.00	0.00
5	62	7	15	0	0	-82	1891	0.20	0.00	0.00
6	62	7	15	-0	0	272	1891	0.21	0.00	0.00
7	62	7	15	0	0	-272	1891	0.21	0.00	0.00
8	62	7	15	-0	0	272	1891	0.21	0.00	0.00
9	62	7	15	0	0	-272	1891	0.21	0.00	0.00
10	62	7	15	-0	0	82	1891	0.20	0.00	0.00
11	62	7	15	0	0	-82	1891	0.20	0.00	0.00
12	62	7	15	-0	0	82	1891	0.20	0.00	0.00
13	62	7	15	0	0	-82	1891	0.20	0.00	0.00
14	62	7	15	-0	0	272	1891	0.21	0.00	0.00
15	62	7	15	0	0	-272	1891	0.21	0.00	0.00
16	62	7	15	-0	0	272	1891	0.21	0.00	0.00
17	62	7	15	0	0	-272	1891	0.21	0.00	0.00

1	72	36	97	0	0	0	9713	0.99	0.01	0.00
2	72	7	10	-0	0	82	1893	0.20	0.00	0.00
3	72	7	10	0	0	-82	1893	0.20	0.00	0.00
4	72	7	10	-0	0	82	1893	0.20	0.00	0.00
5	72	7	10	0	0	-82	1893	0.20	0.00	0.00
6	72	7	10	-0	0	272	1893	0.22	0.00	0.00
7	72	7	10	0	0	-272	1893	0.22	0.00	0.00
8	72	7	10	-0	0	272	1893	0.22	0.00	0.00
9	72	7	10	0	0	-272	1893	0.22	0.00	0.00
10	72	7	10	-0	0	82	1893	0.20	0.00	0.00
11	72	7	10	0	0	-82	1893	0.20	0.00	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

12	72	7	10	-0	0	82	1893	0.20	0.00	0.00
13	72	7	10	0	0	-82	1893	0.20	0.00	0.00
14	72	7	10	-0	0	272	1893	0.22	0.00	0.00
15	72	7	10	0	0	-272	1893	0.22	0.00	0.00
16	72	7	10	-0	0	272	1893	0.22	0.00	0.00
17	72	7	10	0	0	-272	1893	0.22	0.00	0.00
1	83	36	89	0	0	0	9723	0.99	0.01	0.00
2	83	7	4	-0	0	82	1893	0.20	0.00	0.00
3	83	7	4	0	0	-82	1893	0.20	0.00	0.00
4	83	7	4	-0	0	82	1893	0.20	0.00	0.00
5	83	7	4	0	0	-82	1893	0.20	0.00	0.00
6	83	7	4	-0	0	272	1893	0.22	0.00	0.00
7	83	7	4	0	0	-272	1893	0.22	0.00	0.00
8	83	7	4	-0	0	272	1893	0.22	0.00	0.00
9	83	7	4	0	0	-272	1893	0.22	0.00	0.00
10	83	7	4	-0	0	82	1893	0.20	0.00	0.00
11	83	7	4	0	0	-82	1893	0.20	0.00	0.00
12	83	7	4	-0	0	82	1893	0.20	0.00	0.00
13	83	7	4	0	0	-82	1893	0.20	0.00	0.00
14	83	7	4	-0	0	272	1893	0.22	0.00	0.00
15	83	7	4	0	0	-272	1893	0.22	0.00	0.00
16	83	7	4	-0	0	272	1893	0.22	0.00	0.00
17	83	7	4	0	0	-272	1893	0.22	0.00	0.00
1	93	36	82	0	0	0	9732	0.99	0.01	0.00
2	93	7	-2	-0	0	82	1893	0.20	0.00	0.00
3	93	7	-2	0	0	-82	1893	0.20	0.00	0.00
4	93	7	-2	-0	0	82	1893	0.20	0.00	0.00
5	93	7	-2	0	0	-82	1893	0.20	0.00	0.00
6	93	7	-2	-0	0	272	1893	0.22	0.00	0.00
7	93	7	-2	0	0	-272	1893	0.22	0.00	0.00
8	93	7	-2	-0	0	272	1893	0.22	0.00	0.00
9	93	7	-2	0	0	-272	1893	0.22	0.00	0.00
10	93	7	-2	-0	0	82	1893	0.20	0.00	0.00
11	93	7	-2	0	0	-82	1893	0.20	0.00	0.00
12	93	7	-2	-0	0	82	1893	0.20	0.00	0.00
13	93	7	-2	0	0	-82	1893	0.20	0.00	0.00
14	93	7	-2	-0	0	272	1893	0.22	0.00	0.00
15	93	7	-2	0	0	-272	1893	0.22	0.00	0.00
16	93	7	-2	-0	0	272	1893	0.22	0.00	0.00
17	93	7	-2	0	0	-272	1893	0.22	0.00	0.00
1	103	36	75	0	0	0	9740	0.99	0.01	0.00
2	103	7	-8	-0	0	82	1893	0.20	0.00	0.00
3	103	7	-8	0	0	-82	1893	0.20	0.00	0.00
4	103	7	-8	-0	0	82	1893	0.20	0.00	0.00
5	103	7	-8	0	0	-82	1893	0.20	0.00	0.00
6	103	7	-8	-0	0	272	1893	0.22	0.00	0.00
7	103	7	-8	0	0	-272	1893	0.22	0.00	0.00
8	103	7	-8	-0	0	272	1893	0.22	0.00	0.00
9	103	7	-8	0	0	-272	1893	0.22	0.00	0.00
10	103	7	-8	-0	0	82	1893	0.20	0.00	0.00
11	103	7	-8	0	0	-82	1893	0.20	0.00	0.00
12	103	7	-8	-0	0	82	1893	0.20	0.00	0.00
13	103	7	-8	0	0	-82	1893	0.20	0.00	0.00
14	103	7	-8	-0	0	272	1893	0.22	0.00	0.00
15	103	7	-8	0	0	-272	1893	0.22	0.00	0.00
16	103	7	-8	-0	0	272	1893	0.22	0.00	0.00
17	103	7	-8	0	0	-272	1893	0.22	0.00	0.00

Verifica di STABILITA'

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
	--								
	kg		kg*m						

ASTA NUM. 5 NI 50 NF 51 Lungh. 103.1 cm SEZ. 1 Rp B= 31.0 H= 36.0 cm

categoria: p.p. y qy tot.
qy medio: 0.5580 0.5580 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	--										
	cm		kg			kg*m					

1	0	27	-1480	-0	0	0	9741	0.99	0.13	0.00	
2	0	-38	-267	14	0	82	1893	0.20	0.02	0.00	
3	0	-38	-267	-14	0	-82	1893	0.20	0.02	0.00	
4	0	48	-267	14	0	82	1893	0.20	0.02	0.00	
5	0	48	-267	-14	0	-82	1893	0.20	0.02	0.00	
6	0	-8	-267	46	0	272	1893	0.22	0.02	0.00	
7	0	-8	-267	-46	0	-272	1893	0.22	0.02	0.00	
8	0	18	-267	46	0	272	1893	0.22	0.02	0.00	
9	0	18	-267	-46	0	-272	1893	0.22	0.02	0.00	
10	0	-38	-267	14	0	82	1893	0.20	0.02	0.00	
11	0	-38	-267	-14	0	-82	1893	0.20	0.02	0.00	
12	0	48	-267	14	0	82	1893	0.20	0.02	0.00	
13	0	48	-267	-14	0	-82	1893	0.20	0.02	0.00	
14	0	-8	-267	46	0	272	1893	0.22	0.02	0.00	
15	0	-8	-267	-46	0	-272	1893	0.22	0.02	0.00	
16	0	18	-267	46	0	272	1893	0.22	0.02	0.00	
17	0	18	-267	-46	0	-272	1893	0.22	0.02	0.00	

1	10	27	-1488	-0	0	0	9588	0.98	0.13	0.00	
2	10	-38	-272	14	0	80	1865	0.20	0.02	0.00	
3	10	-38	-272	-14	0	-80	1865	0.20	0.02	0.00	
4	10	48	-272	14	0	80	1865	0.20	0.02	0.00	
5	10	48	-272	-14	0	-80	1865	0.20	0.02	0.00	
6	10	-8	-272	46	0	267	1865	0.21	0.02	0.00	
7	10	-8	-272	-46	0	-267	1865	0.21	0.02	0.00	
8	10	18	-272	46	0	267	1865	0.21	0.02	0.00	
9	10	18	-272	-46	0	-267	1865	0.21	0.02	0.00	
10	10	-38	-272	14	0	80	1865	0.20	0.02	0.00	
11	10	-38	-272	-14	0	-80	1865	0.20	0.02	0.00	
12	10	48	-272	14	0	80	1865	0.20	0.02	0.00	
13	10	48	-272	-14	0	-80	1865	0.20	0.02	0.00	
14	10	-8	-272	46	0	267	1865	0.21	0.02	0.00	
15	10	-8	-272	-46	0	-267	1865	0.21	0.02	0.00	
16	10	18	-272	46	0	267	1865	0.21	0.02	0.00	
17	10	18	-272	-46	0	-267	1865	0.21	0.02	0.00	

1	21	27	-1495	-0	0	0	9434	0.96	0.13	0.00	
2	21	-38	-278	14	0	79	1837	0.19	0.02	0.00	
3	21	-38	-278	-14	0	-79	1837	0.19	0.02	0.00	
4	21	48	-278	14	0	79	1837	0.19	0.02	0.00	
5	21	48	-278	-14	0	-79	1837	0.19	0.02	0.00	
6	21	-8	-278	46	0	262	1837	0.21	0.02	0.00	
7	21	-8	-278	-46	0	-262	1837	0.21	0.02	0.00	
8	21	18	-278	46	0	262	1837	0.21	0.02	0.00	
9	21	18	-278	-46	0	-262	1837	0.21	0.02	0.00	
10	21	-38	-278	14	0	79	1837	0.19	0.02	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

11	21	-38	-278	-14	0	-79	1837	0.19	0.02	0.00
12	21	48	-278	14	0	79	1837	0.19	0.02	0.00
13	21	48	-278	-14	0	-79	1837	0.19	0.02	0.00
14	21	-8	-278	46	0	262	1837	0.21	0.02	0.00
15	21	-8	-278	-46	0	-262	1837	0.21	0.02	0.00
16	21	18	-278	46	0	262	1837	0.21	0.02	0.00
17	21	18	-278	-46	0	-262	1837	0.21	0.02	0.00
1	31	27	-1503	-0	0	0	9280	0.94	0.13	0.00
2	31	-38	-284	14	0	77	1808	0.19	0.02	0.00
3	31	-38	-284	-14	0	-77	1808	0.19	0.02	0.00
4	31	48	-284	14	0	77	1808	0.19	0.02	0.00
5	31	48	-284	-14	0	-77	1808	0.19	0.02	0.00
6	31	-8	-284	46	0	258	1808	0.21	0.03	0.00
7	31	-8	-284	-46	0	-258	1808	0.21	0.03	0.00
8	31	18	-284	46	0	258	1808	0.21	0.03	0.00
9	31	18	-284	-46	0	-258	1808	0.21	0.03	0.00
10	31	-38	-284	14	0	77	1808	0.19	0.02	0.00
11	31	-38	-284	-14	0	-77	1808	0.19	0.02	0.00
12	31	48	-284	14	0	77	1808	0.19	0.02	0.00
13	31	48	-284	-14	0	-77	1808	0.19	0.02	0.00
14	31	-8	-284	46	0	258	1808	0.21	0.03	0.00
15	31	-8	-284	-46	0	-258	1808	0.21	0.03	0.00
16	31	18	-284	46	0	258	1808	0.21	0.03	0.00
17	31	18	-284	-46	0	-258	1808	0.21	0.03	0.00
1	41	27	-1510	-0	0	0	9124	0.93	0.13	0.00
2	41	-38	-290	14	0	76	1778	0.19	0.03	0.00
3	41	-38	-290	-14	0	-76	1778	0.19	0.03	0.00
4	41	48	-289	14	0	76	1778	0.19	0.03	0.00
5	41	48	-289	-14	0	-76	1778	0.19	0.03	0.00
6	41	-8	-290	46	0	253	1778	0.20	0.03	0.00
7	41	-8	-290	-46	0	-253	1778	0.20	0.03	0.00
8	41	18	-289	46	0	253	1778	0.20	0.03	0.00
9	41	18	-289	-46	0	-253	1778	0.20	0.03	0.00
10	41	-38	-290	14	0	76	1778	0.19	0.03	0.00
11	41	-38	-290	-14	0	-76	1778	0.19	0.03	0.00
12	41	48	-289	14	0	76	1778	0.19	0.03	0.00
13	41	48	-289	-14	0	-76	1778	0.19	0.03	0.00
14	41	-8	-290	46	0	253	1778	0.20	0.03	0.00
15	41	-8	-290	-46	0	-253	1778	0.20	0.03	0.00
16	41	18	-289	46	0	253	1778	0.20	0.03	0.00
17	41	18	-289	-46	0	-253	1778	0.20	0.03	0.00
1	52	27	-1518	-0	0	0	8968	0.91	0.13	0.00
2	52	-38	-295	14	0	74	1748	0.18	0.03	0.00
3	52	-38	-295	-14	0	-74	1748	0.18	0.03	0.00
4	52	48	-295	14	0	74	1748	0.18	0.03	0.00
5	52	48	-295	-14	0	-74	1748	0.18	0.03	0.00
6	52	-8	-295	46	0	248	1748	0.20	0.03	0.00
7	52	-8	-295	-46	0	-248	1748	0.20	0.03	0.00
8	52	18	-295	46	0	248	1748	0.20	0.03	0.00
9	52	18	-295	-46	0	-248	1748	0.20	0.03	0.00
10	52	-38	-295	14	0	74	1748	0.18	0.03	0.00
11	52	-38	-295	-14	0	-74	1748	0.18	0.03	0.00
12	52	48	-295	14	0	74	1748	0.18	0.03	0.00
13	52	48	-295	-14	0	-74	1748	0.18	0.03	0.00
14	52	-8	-295	46	0	248	1748	0.20	0.03	0.00
15	52	-8	-295	-46	0	-248	1748	0.20	0.03	0.00
16	52	18	-295	46	0	248	1748	0.20	0.03	0.00
17	52	18	-295	-46	0	-248	1748	0.20	0.03	0.00
1	62	27	-1525	-0	0	0	8811	0.90	0.13	0.00
2	62	-38	-301	14	0	73	1717	0.18	0.03	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

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PROGETTO DEFINITIVO

Relazione di calcolo strutturale

3	62	-38	-301	-14	0	-73	1717	0.18	0.03	0.00
4	62	48	-301	14	0	73	1717	0.18	0.03	0.00
5	62	48	-301	-14	0	-73	1717	0.18	0.03	0.00
6	62	-8	-301	46	0	244	1717	0.19	0.03	0.00
7	62	-8	-301	-46	0	-244	1717	0.19	0.03	0.00
8	62	18	-301	46	0	244	1717	0.20	0.03	0.00
9	62	18	-301	-46	0	-244	1717	0.20	0.03	0.00
10	62	-38	-301	14	0	73	1717	0.18	0.03	0.00
11	62	-38	-301	-14	0	-73	1717	0.18	0.03	0.00
12	62	48	-301	14	0	73	1717	0.18	0.03	0.00
13	62	48	-301	-14	0	-73	1717	0.18	0.03	0.00
14	62	-8	-301	46	0	244	1717	0.19	0.03	0.00
15	62	-8	-301	-46	0	-244	1717	0.19	0.03	0.00
16	62	18	-301	46	0	244	1717	0.20	0.03	0.00
17	62	18	-301	-46	0	-244	1717	0.20	0.03	0.00

1	72	27	-1533	-0	0	0	8654	0.88	0.13	0.00
2	72	-38	-307	14	0	72	1686	0.18	0.03	0.00
3	72	-38	-307	-14	0	-72	1686	0.18	0.03	0.00
4	72	48	-307	14	0	72	1686	0.18	0.03	0.00
5	72	48	-307	-14	0	-72	1686	0.18	0.03	0.00
6	72	-8	-307	46	0	239	1686	0.19	0.03	0.00
7	72	-8	-307	-46	0	-239	1686	0.19	0.03	0.00
8	72	18	-307	46	0	239	1686	0.19	0.03	0.00
9	72	18	-307	-46	0	-239	1686	0.19	0.03	0.00
10	72	-38	-307	14	0	72	1686	0.18	0.03	0.00
11	72	-38	-307	-14	0	-72	1686	0.18	0.03	0.00
12	72	48	-307	14	0	72	1686	0.18	0.03	0.00
13	72	48	-307	-14	0	-72	1686	0.18	0.03	0.00
14	72	-8	-307	46	0	239	1686	0.19	0.03	0.00
15	72	-8	-307	-46	0	-239	1686	0.19	0.03	0.00
16	72	18	-307	46	0	239	1686	0.19	0.03	0.00
17	72	18	-307	-46	0	-239	1686	0.19	0.03	0.00

1	83	27	-1540	-0	0	0	8495	0.86	0.14	0.00
2	83	-38	-313	14	0	70	1654	0.17	0.03	0.00
3	83	-38	-313	-14	0	-70	1654	0.17	0.03	0.00
4	83	48	-313	14	0	70	1654	0.17	0.03	0.00
5	83	48	-313	-14	0	-70	1654	0.17	0.03	0.00
6	83	-8	-313	46	0	234	1654	0.19	0.03	0.00
7	83	-8	-313	-46	0	-234	1654	0.19	0.03	0.00
8	83	18	-313	46	0	234	1654	0.19	0.03	0.00
9	83	18	-313	-46	0	-234	1654	0.19	0.03	0.00
10	83	-38	-313	14	0	70	1654	0.17	0.03	0.00
11	83	-38	-313	-14	0	-70	1654	0.17	0.03	0.00
12	83	48	-313	14	0	70	1654	0.17	0.03	0.00
13	83	48	-313	-14	0	-70	1654	0.17	0.03	0.00
14	83	-8	-313	46	0	234	1654	0.19	0.03	0.00
15	83	-8	-313	-46	0	-234	1654	0.19	0.03	0.00
16	83	18	-313	46	0	234	1654	0.19	0.03	0.00
17	83	18	-313	-46	0	-234	1654	0.19	0.03	0.00

1	93	27	-1548	-0	0	0	8336	0.85	0.14	0.00
2	93	-38	-318	14	0	69	1621	0.17	0.03	0.00
3	93	-38	-318	-14	0	-69	1621	0.17	0.03	0.00
4	93	48	-318	14	0	69	1621	0.17	0.03	0.00
5	93	48	-318	-14	0	-69	1621	0.17	0.03	0.00
6	93	-8	-318	46	0	229	1621	0.18	0.03	0.00
7	93	-8	-318	-46	0	-229	1621	0.18	0.03	0.00
8	93	18	-318	46	0	229	1621	0.18	0.03	0.00
9	93	18	-318	-46	0	-229	1621	0.18	0.03	0.00
10	93	-38	-318	14	0	69	1621	0.17	0.03	0.00
11	93	-38	-318	-14	0	-69	1621	0.17	0.03	0.00
12	93	48	-318	14	0	69	1621	0.17	0.03	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

13	93	48	-318	-14	0	-69	1621	0.17	0.03	0.00
14	93	-8	-318	46	0	229	1621	0.18	0.03	0.00
15	93	-8	-318	-46	0	-229	1621	0.18	0.03	0.00
16	93	18	-318	46	0	229	1621	0.18	0.03	0.00
17	93	18	-318	-46	0	-229	1621	0.18	0.03	0.00
1	103	27	-1555	-0	0	0	8176	0.83	0.14	0.00
2	103	-38	-324	14	0	67	1588	0.17	0.03	0.00
3	103	-38	-324	-14	0	-67	1588	0.17	0.03	0.00
4	103	48	-324	14	0	67	1588	0.17	0.03	0.00
5	103	48	-324	-14	0	-67	1588	0.17	0.03	0.00
6	103	-8	-324	46	0	225	1588	0.18	0.03	0.00
7	103	-8	-324	-46	0	-225	1588	0.18	0.03	0.00
8	103	18	-324	46	0	225	1588	0.18	0.03	0.00
9	103	18	-324	-46	0	-225	1588	0.18	0.03	0.00
10	103	-38	-324	14	0	67	1588	0.17	0.03	0.00
11	103	-38	-324	-14	0	-67	1588	0.17	0.03	0.00
12	103	48	-324	14	0	67	1588	0.17	0.03	0.00
13	103	48	-324	-14	0	-67	1588	0.17	0.03	0.00
14	103	-8	-324	46	0	225	1588	0.18	0.03	0.00
15	103	-8	-324	-46	0	-225	1588	0.18	0.03	0.00
16	103	18	-324	46	0	225	1588	0.18	0.03	0.00
17	103	18	-324	-46	0	-225	1588	0.18	0.03	0.00

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
	kg	kg*m							
2	-38	82	1893	10	12	1.000	1.000	0.09	Piano 'zx'
3	-38	82	1893	10	12	1.000	1.000	0.09	Piano 'zx'
6	-8	272	1893	10	12	1.000	1.000	0.09	Piano 'zx'
7	-8	272	1893	10	12	1.000	1.000	0.09	Piano 'zx'
10	-38	82	1893	10	12	1.000	1.000	0.09	Piano 'zx'
11	-38	82	1893	10	12	1.000	1.000	0.09	Piano 'zx'
14	-8	272	1893	10	12	1.000	1.000	0.09	Piano 'zx'
15	-8	272	1893	10	12	1.000	1.000	0.09	Piano 'zx'

ASTA NUM. 6 NI 51 NF 52 Lungh. 103.1 cm SEZ. 1 Rp B= 31.0 H= 36.0 cm

categoria: p.p. y qy tot.
qy medio: 0.5580 0.5580 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	cm	kg			kg*m						
1	0	-1	-3151	-0	0	0	8180	0.83	0.28	0.00	
2	0	-86	-590	27	0	67	1589	0.17	0.05	0.00	
3	0	-86	-590	-27	0	-67	1589	0.17	0.05	0.00	
4	0	86	-590	27	0	67	1589	0.17	0.05	0.00	
5	0	86	-590	-27	0	-67	1589	0.17	0.05	0.00	
6	0	-26	-590	89	0	225	1589	0.18	0.05	0.00	
7	0	-26	-590	-89	0	-225	1589	0.18	0.05	0.00	
8	0	26	-590	89	0	225	1589	0.18	0.05	0.00	
9	0	26	-590	-89	0	-225	1589	0.18	0.05	0.00	
10	0	-86	-590	27	0	67	1589	0.17	0.05	0.00	
11	0	-86	-590	-27	0	-67	1589	0.17	0.05	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

12	0	86	-590	27	0	67	1589	0.17	0.05	0.00
13	0	86	-590	-27	0	-67	1589	0.17	0.05	0.00
14	0	-26	-590	89	0	225	1589	0.18	0.05	0.00
15	0	-26	-590	-89	0	-225	1589	0.18	0.05	0.00
16	0	26	-590	89	0	225	1589	0.18	0.05	0.00
17	0	26	-590	-89	0	-225	1589	0.18	0.05	0.00
1	10	-1	-3159	-0	0	0	7855	0.80	0.28	0.00
2	10	-86	-596	27	0	65	1528	0.16	0.05	0.00
3	10	-86	-596	-27	0	-65	1528	0.16	0.05	0.00
4	10	86	-595	27	0	65	1528	0.16	0.05	0.00
5	10	86	-595	-27	0	-65	1528	0.16	0.05	0.00
6	10	-26	-595	89	0	215	1528	0.17	0.05	0.00
7	10	-26	-595	-89	0	-215	1528	0.17	0.05	0.00
8	10	26	-595	89	0	215	1528	0.17	0.05	0.00
9	10	26	-595	-89	0	-215	1528	0.17	0.05	0.00
10	10	-86	-596	27	0	65	1528	0.16	0.05	0.00
11	10	-86	-596	-27	0	-65	1528	0.16	0.05	0.00
12	10	86	-595	27	0	65	1528	0.16	0.05	0.00
13	10	86	-595	-27	0	-65	1528	0.16	0.05	0.00
14	10	-26	-595	89	0	215	1528	0.17	0.05	0.00
15	10	-26	-595	-89	0	-215	1528	0.17	0.05	0.00
16	10	26	-595	89	0	215	1528	0.17	0.05	0.00
17	10	26	-595	-89	0	-215	1528	0.17	0.05	0.00
1	21	-1	-3166	-0	0	0	7529	0.77	0.28	0.00
2	21	-86	-601	27	0	62	1466	0.15	0.05	0.00
3	21	-86	-601	-27	0	-62	1466	0.15	0.05	0.00
4	21	86	-601	27	0	62	1466	0.16	0.05	0.00
5	21	86	-601	-27	0	-62	1466	0.16	0.05	0.00
6	21	-26	-601	89	0	206	1466	0.17	0.05	0.00
7	21	-26	-601	-89	0	-206	1466	0.17	0.05	0.00
8	21	26	-601	89	0	206	1466	0.17	0.05	0.00
9	21	26	-601	-89	0	-206	1466	0.17	0.05	0.00
10	21	-86	-601	27	0	62	1466	0.15	0.05	0.00
11	21	-86	-601	-27	0	-62	1466	0.15	0.05	0.00
12	21	86	-601	27	0	62	1466	0.16	0.05	0.00
13	21	86	-601	-27	0	-62	1466	0.16	0.05	0.00
14	21	-26	-601	89	0	206	1466	0.17	0.05	0.00
15	21	-26	-601	-89	0	-206	1466	0.17	0.05	0.00
16	21	26	-601	89	0	206	1466	0.17	0.05	0.00
17	21	26	-601	-89	0	-206	1466	0.17	0.05	0.00
1	31	-1	-3174	-0	0	0	7202	0.73	0.28	0.00
2	31	-86	-607	27	0	59	1404	0.15	0.05	0.00
3	31	-86	-607	-27	0	-59	1404	0.15	0.05	0.00
4	31	86	-607	27	0	59	1404	0.15	0.05	0.00
5	31	86	-607	-27	0	-59	1404	0.15	0.05	0.00
6	31	-26	-607	89	0	197	1404	0.16	0.05	0.00
7	31	-26	-607	-89	0	-197	1404	0.16	0.05	0.00
8	31	26	-607	89	0	197	1404	0.16	0.05	0.00
9	31	26	-607	-89	0	-197	1404	0.16	0.05	0.00
10	31	-86	-607	27	0	59	1404	0.15	0.05	0.00
11	31	-86	-607	-27	0	-59	1404	0.15	0.05	0.00
12	31	86	-607	27	0	59	1404	0.15	0.05	0.00
13	31	86	-607	-27	0	-59	1404	0.15	0.05	0.00
14	31	-26	-607	89	0	197	1404	0.16	0.05	0.00
15	31	-26	-607	-89	0	-197	1404	0.16	0.05	0.00
16	31	26	-607	89	0	197	1404	0.16	0.05	0.00
17	31	26	-607	-89	0	-197	1404	0.16	0.05	0.00
1	41	-1	-3181	-0	0	0	6874	0.70	0.28	0.00
2	41	-86	-613	27	0	56	1341	0.14	0.05	0.00
3	41	-86	-613	-27	0	-56	1341	0.14	0.05	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

4	41	86	-613	27	0	56	1341	0.14	0.05	0.00
5	41	86	-613	-27	0	-56	1341	0.14	0.05	0.00
6	41	-26	-613	89	0	188	1341	0.15	0.05	0.00
7	41	-26	-613	-89	0	-188	1341	0.15	0.05	0.00
8	41	26	-613	89	0	188	1341	0.15	0.05	0.00
9	41	26	-613	-89	0	-188	1341	0.15	0.05	0.00
10	41	-86	-613	27	0	56	1341	0.14	0.05	0.00
11	41	-86	-613	-27	0	-56	1341	0.14	0.05	0.00
12	41	86	-613	27	0	56	1341	0.14	0.05	0.00
13	41	86	-613	-27	0	-56	1341	0.14	0.05	0.00
14	41	-26	-613	89	0	188	1341	0.15	0.05	0.00
15	41	-26	-613	-89	0	-188	1341	0.15	0.05	0.00
16	41	26	-613	89	0	188	1341	0.15	0.05	0.00
17	41	26	-613	-89	0	-188	1341	0.15	0.05	0.00
1	52	-1	-3189	-0	0	0	6546	0.67	0.28	0.00
2	52	-86	-619	27	0	54	1278	0.13	0.05	0.00
3	52	-86	-619	-27	0	-54	1278	0.13	0.05	0.00
4	52	86	-619	27	0	54	1278	0.14	0.05	0.00
5	52	86	-619	-27	0	-54	1278	0.14	0.05	0.00
6	52	-26	-619	89	0	179	1278	0.14	0.05	0.00
7	52	-26	-619	-89	0	-179	1278	0.14	0.05	0.00
8	52	26	-619	89	0	179	1278	0.15	0.05	0.00
9	52	26	-619	-89	0	-179	1278	0.15	0.05	0.00
10	52	-86	-619	27	0	54	1278	0.13	0.05	0.00
11	52	-86	-619	-27	0	-54	1278	0.13	0.05	0.00
12	52	86	-619	27	0	54	1278	0.14	0.05	0.00
13	52	86	-619	-27	0	-54	1278	0.14	0.05	0.00
14	52	-26	-619	89	0	179	1278	0.14	0.05	0.00
15	52	-26	-619	-89	0	-179	1278	0.14	0.05	0.00
16	52	26	-619	89	0	179	1278	0.15	0.05	0.00
17	52	26	-619	-89	0	-179	1278	0.15	0.05	0.00
1	62	-1	-3196	-0	0	0	6216	0.63	0.28	0.00
2	62	-86	-624	27	0	51	1214	0.13	0.05	0.00
3	62	-86	-624	-27	0	-51	1214	0.13	0.05	0.00
4	62	86	-624	27	0	51	1214	0.13	0.05	0.00
5	62	86	-624	-27	0	-51	1214	0.13	0.05	0.00
6	62	-26	-624	89	0	169	1214	0.14	0.06	0.00
7	62	-26	-624	-89	0	-169	1214	0.14	0.06	0.00
8	62	26	-624	89	0	169	1214	0.14	0.06	0.00
9	62	26	-624	-89	0	-169	1214	0.14	0.06	0.00
10	62	-86	-624	27	0	51	1214	0.13	0.05	0.00
11	62	-86	-624	-27	0	-51	1214	0.13	0.05	0.00
12	62	86	-624	27	0	51	1214	0.13	0.05	0.00
13	62	86	-624	-27	0	-51	1214	0.13	0.05	0.00
14	62	-26	-624	89	0	169	1214	0.14	0.06	0.00
15	62	-26	-624	-89	0	-169	1214	0.14	0.06	0.00
16	62	26	-624	89	0	169	1214	0.14	0.06	0.00
17	62	26	-624	-89	0	-169	1214	0.14	0.06	0.00
1	72	-1	-3204	-0	0	0	5887	0.60	0.28	0.00
2	72	-86	-630	27	0	48	1149	0.12	0.06	0.00
3	72	-86	-630	-27	0	-48	1149	0.12	0.06	0.00
4	72	86	-630	27	0	48	1149	0.12	0.06	0.00
5	72	86	-630	-27	0	-48	1149	0.12	0.06	0.00
6	72	-26	-630	89	0	160	1149	0.13	0.06	0.00
7	72	-26	-630	-89	0	-160	1149	0.13	0.06	0.00
8	72	26	-630	89	0	160	1149	0.13	0.06	0.00
9	72	26	-630	-89	0	-160	1149	0.13	0.06	0.00
10	72	-86	-630	27	0	48	1149	0.12	0.06	0.00
11	72	-86	-630	-27	0	-48	1149	0.12	0.06	0.00
12	72	86	-630	27	0	48	1149	0.12	0.06	0.00
13	72	86	-630	-27	0	-48	1149	0.12	0.06	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

14	72	-26	-630	89	0	160	1149	0.13	0.06	0.00
15	72	-26	-630	-89	0	-160	1149	0.13	0.06	0.00
16	72	26	-630	89	0	160	1149	0.13	0.06	0.00
17	72	26	-630	-89	0	-160	1149	0.13	0.06	0.00

1	83	-1	-3211	-0	0	0	5556	0.57	0.28	0.00
2	83	-86	-636	27	0	45	1084	0.11	0.06	0.00
3	83	-86	-636	-27	0	-45	1084	0.11	0.06	0.00
4	83	86	-636	27	0	45	1084	0.11	0.06	0.00
5	83	86	-636	-27	0	-45	1084	0.11	0.06	0.00
6	83	-26	-636	89	0	151	1084	0.12	0.06	0.00
7	83	-26	-636	-89	0	-151	1084	0.12	0.06	0.00
8	83	26	-636	89	0	151	1084	0.12	0.06	0.00
9	83	26	-636	-89	0	-151	1084	0.12	0.06	0.00
10	83	-86	-636	27	0	45	1084	0.11	0.06	0.00
11	83	-86	-636	-27	0	-45	1084	0.11	0.06	0.00
12	83	86	-636	27	0	45	1084	0.11	0.06	0.00
13	83	86	-636	-27	0	-45	1084	0.11	0.06	0.00
14	83	-26	-636	89	0	151	1084	0.12	0.06	0.00
15	83	-26	-636	-89	0	-151	1084	0.12	0.06	0.00
16	83	26	-636	89	0	151	1084	0.12	0.06	0.00
17	83	26	-636	-89	0	-151	1084	0.12	0.06	0.00

1	93	-1	-3219	-0	0	0	5224	0.53	0.28	0.00
2	93	-86	-642	27	0	43	1018	0.11	0.06	0.00
3	93	-86	-642	-27	0	-43	1018	0.11	0.06	0.00
4	93	86	-642	27	0	43	1018	0.11	0.06	0.00
5	93	86	-642	-27	0	-43	1018	0.11	0.06	0.00
6	93	-26	-642	89	0	142	1018	0.12	0.06	0.00
7	93	-26	-642	-89	0	-142	1018	0.12	0.06	0.00
8	93	26	-642	89	0	142	1018	0.12	0.06	0.00
9	93	26	-642	-89	0	-142	1018	0.12	0.06	0.00
10	93	-86	-642	27	0	43	1018	0.11	0.06	0.00
11	93	-86	-642	-27	0	-43	1018	0.11	0.06	0.00
12	93	86	-642	27	0	43	1018	0.11	0.06	0.00
13	93	86	-642	-27	0	-43	1018	0.11	0.06	0.00
14	93	-26	-642	89	0	142	1018	0.12	0.06	0.00
15	93	-26	-642	-89	0	-142	1018	0.12	0.06	0.00
16	93	26	-642	89	0	142	1018	0.12	0.06	0.00
17	93	26	-642	-89	0	-142	1018	0.12	0.06	0.00

1	103	-1	-3226	-0	0	0	4892	0.50	0.28	0.00
2	103	-86	-647	27	0	40	951	0.10	0.06	0.00
3	103	-86	-647	-27	0	-40	951	0.10	0.06	0.00
4	103	86	-647	27	0	40	951	0.10	0.06	0.00
5	103	86	-647	-27	0	-40	951	0.10	0.06	0.00
6	103	-26	-647	89	0	133	951	0.11	0.06	0.00
7	103	-26	-647	-89	0	-133	951	0.11	0.06	0.00
8	103	26	-647	89	0	133	951	0.11	0.06	0.00
9	103	26	-647	-89	0	-133	951	0.11	0.06	0.00
10	103	-86	-647	27	0	40	951	0.10	0.06	0.00
11	103	-86	-647	-27	0	-40	951	0.10	0.06	0.00
12	103	86	-647	27	0	40	951	0.10	0.06	0.00
13	103	86	-647	-27	0	-40	951	0.10	0.06	0.00
14	103	-26	-647	89	0	133	951	0.11	0.06	0.00
15	103	-26	-647	-89	0	-133	951	0.11	0.06	0.00
16	103	26	-647	89	0	133	951	0.11	0.06	0.00
17	103	26	-647	-89	0	-133	951	0.11	0.06	0.00

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
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File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

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kg		kg*m							
1	-1	0	8180	10	12	1.000	1.000	0.09	Piano 'zx'
2	-86	67	1589	10	12	1.000	1.000	0.09	Piano 'zx'
3	-86	67	1589	10	12	1.000	1.000	0.09	Piano 'zx'
6	-26	225	1589	10	12	1.000	1.000	0.09	Piano 'zx'
7	-26	225	1589	10	12	1.000	1.000	0.09	Piano 'zx'
10	-86	67	1589	10	12	1.000	1.000	0.09	Piano 'zx'
11	-86	67	1589	10	12	1.000	1.000	0.09	Piano 'zx'
14	-26	225	1589	10	12	1.000	1.000	0.09	Piano 'zx'
15	-26	225	1589	10	12	1.000	1.000	0.09	Piano 'zx'

ASTA NUM. 7 NI 52 NF 53 Lungh. 103.1 cm SEZ. 1 Rp B= 31.0 H= 36.0 cm

categoria: p.p. y qy tot.
qy medio: 0.5580 0.5580 kg/cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
--		-----				-----					
cm		kg		kg*m							
1	0	-42	-4712	-0	0	0	4898	0.50	0.41	0.00	
2	0	-137	-895	39	0	40	953	0.10	0.08	0.00	
3	0	-137	-895	-39	0	-40	953	0.10	0.08	0.00	
4	0	120	-895	39	0	40	953	0.10	0.08	0.00	
5	0	120	-895	-39	0	-40	953	0.10	0.08	0.00	
6	0	-47	-895	129	0	133	953	0.11	0.08	0.00	
7	0	-47	-895	-129	0	-133	953	0.11	0.08	0.00	
8	0	30	-895	129	0	133	953	0.11	0.08	0.00	
9	0	30	-895	-129	0	-133	953	0.11	0.08	0.00	
10	0	-137	-895	39	0	40	953	0.10	0.08	0.00	
11	0	-137	-895	-39	0	-40	953	0.10	0.08	0.00	
12	0	120	-895	39	0	40	953	0.10	0.08	0.00	
13	0	120	-895	-39	0	-40	953	0.10	0.08	0.00	
14	0	-47	-895	129	0	133	953	0.11	0.08	0.00	
15	0	-47	-895	-129	0	-133	953	0.11	0.08	0.00	
16	0	30	-895	129	0	133	953	0.11	0.08	0.00	
17	0	30	-895	-129	0	-133	953	0.11	0.08	0.00	
1	10	-42	-4720	-0	0	0	4412	0.45	0.41	0.00	
2	10	-137	-901	39	0	36	860	0.09	0.08	0.00	
3	10	-137	-901	-39	0	-36	860	0.09	0.08	0.00	
4	10	120	-901	39	0	36	860	0.09	0.08	0.00	
5	10	120	-901	-39	0	-36	860	0.09	0.08	0.00	
6	10	-47	-901	129	0	119	860	0.10	0.08	0.00	
7	10	-47	-901	-129	0	-119	860	0.10	0.08	0.00	
8	10	30	-901	129	0	119	860	0.10	0.08	0.00	
9	10	30	-901	-129	0	-119	860	0.10	0.08	0.00	
10	10	-137	-901	39	0	36	860	0.09	0.08	0.00	
11	10	-137	-901	-39	0	-36	860	0.09	0.08	0.00	
12	10	120	-901	39	0	36	860	0.09	0.08	0.00	
13	10	120	-901	-39	0	-36	860	0.09	0.08	0.00	
14	10	-47	-901	129	0	119	860	0.10	0.08	0.00	
15	10	-47	-901	-129	0	-119	860	0.10	0.08	0.00	
16	10	30	-901	129	0	119	860	0.10	0.08	0.00	
17	10	30	-901	-129	0	-119	860	0.10	0.08	0.00	
1	21	-42	-4727	-0	0	0	3925	0.40	0.42	0.00	
2	21	-137	-907	39	0	32	767	0.08	0.08	0.00	
3	21	-137	-907	-39	0	-32	767	0.08	0.08	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

4	21	120	-906	39	0	32	767	0.08	0.08	0.00
5	21	120	-906	-39	0	-32	767	0.08	0.08	0.00
6	21	-47	-907	129	0	106	767	0.09	0.08	0.00
7	21	-47	-907	-129	0	-106	767	0.09	0.08	0.00
8	21	30	-906	129	0	106	767	0.09	0.08	0.00
9	21	30	-906	-129	0	-106	767	0.09	0.08	0.00
10	21	-137	-907	39	0	32	767	0.08	0.08	0.00
11	21	-137	-907	-39	0	-32	767	0.08	0.08	0.00
12	21	120	-906	39	0	32	767	0.08	0.08	0.00
13	21	120	-906	-39	0	-32	767	0.08	0.08	0.00
14	21	-47	-907	129	0	106	767	0.09	0.08	0.00
15	21	-47	-907	-129	0	-106	767	0.09	0.08	0.00
16	21	30	-906	129	0	106	767	0.09	0.08	0.00
17	21	30	-906	-129	0	-106	767	0.09	0.08	0.00

1	31	-42	-4735	-0	0	0	3437	0.35	0.42	0.00
2	31	-137	-912	39	0	28	673	0.07	0.08	0.00
3	31	-137	-912	-39	0	-28	673	0.07	0.08	0.00
4	31	120	-912	39	0	28	673	0.07	0.08	0.00
5	31	120	-912	-39	0	-28	673	0.07	0.08	0.00
6	31	-47	-912	129	0	93	673	0.08	0.08	0.00
7	31	-47	-912	-129	0	-93	673	0.08	0.08	0.00
8	31	30	-912	129	0	93	673	0.08	0.08	0.00
9	31	30	-912	-129	0	-93	673	0.08	0.08	0.00
10	31	-137	-912	39	0	28	673	0.07	0.08	0.00
11	31	-137	-912	-39	0	-28	673	0.07	0.08	0.00
12	31	120	-912	39	0	28	673	0.07	0.08	0.00
13	31	120	-912	-39	0	-28	673	0.07	0.08	0.00
14	31	-47	-912	129	0	93	673	0.08	0.08	0.00
15	31	-47	-912	-129	0	-93	673	0.08	0.08	0.00
16	31	30	-912	129	0	93	673	0.08	0.08	0.00
17	31	30	-912	-129	0	-93	673	0.08	0.08	0.00

1	41	-42	-4742	-0	0	0	2948	0.30	0.42	0.00
2	41	-137	-918	39	0	24	579	0.06	0.08	0.00
3	41	-137	-918	-39	0	-24	579	0.06	0.08	0.00
4	41	120	-918	39	0	24	579	0.06	0.08	0.00
5	41	120	-918	-39	0	-24	579	0.06	0.08	0.00
6	41	-47	-918	129	0	80	579	0.07	0.08	0.00
7	41	-47	-918	-129	0	-80	579	0.07	0.08	0.00
8	41	30	-918	129	0	80	579	0.07	0.08	0.00
9	41	30	-918	-129	0	-80	579	0.07	0.08	0.00
10	41	-137	-918	39	0	24	579	0.06	0.08	0.00
11	41	-137	-918	-39	0	-24	579	0.06	0.08	0.00
12	41	120	-918	39	0	24	579	0.06	0.08	0.00
13	41	120	-918	-39	0	-24	579	0.06	0.08	0.00
14	41	-47	-918	129	0	80	579	0.07	0.08	0.00
15	41	-47	-918	-129	0	-80	579	0.07	0.08	0.00
16	41	30	-918	129	0	80	579	0.07	0.08	0.00
17	41	30	-918	-129	0	-80	579	0.07	0.08	0.00

1	52	-42	-4750	-0	0	0	2459	0.25	0.42	0.00
2	52	-137	-924	39	0	20	484	0.05	0.08	0.00
3	52	-137	-924	-39	0	-20	484	0.05	0.08	0.00
4	52	120	-924	39	0	20	484	0.05	0.08	0.00
5	52	120	-924	-39	0	-20	484	0.05	0.08	0.00
6	52	-47	-924	129	0	66	484	0.05	0.08	0.00
7	52	-47	-924	-129	0	-66	484	0.05	0.08	0.00
8	52	30	-924	129	0	66	484	0.06	0.08	0.00
9	52	30	-924	-129	0	-66	484	0.06	0.08	0.00
10	52	-137	-924	39	0	20	484	0.05	0.08	0.00
11	52	-137	-924	-39	0	-20	484	0.05	0.08	0.00
12	52	120	-924	39	0	20	484	0.05	0.08	0.00
13	52	120	-924	-39	0	-20	484	0.05	0.08	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

14	52	-47	-924	129	0	66	484	0.05	0.08	0.00
15	52	-47	-924	-129	0	-66	484	0.05	0.08	0.00
16	52	30	-924	129	0	66	484	0.06	0.08	0.00
17	52	30	-924	-129	0	-66	484	0.06	0.08	0.00

1	62	-42	-4757	-0	0	0	1968	0.20	0.42	0.00
2	62	-137	-930	39	0	16	388	0.04	0.08	0.00
3	62	-137	-930	-39	0	-16	388	0.04	0.08	0.00
4	62	120	-929	39	0	16	388	0.04	0.08	0.00
5	62	120	-929	-39	0	-16	388	0.04	0.08	0.00
6	62	-47	-930	129	0	53	388	0.04	0.08	0.00
7	62	-47	-930	-129	0	-53	388	0.04	0.08	0.00
8	62	30	-929	129	0	53	388	0.04	0.08	0.00
9	62	30	-929	-129	0	-53	388	0.04	0.08	0.00
10	62	-137	-930	39	0	16	388	0.04	0.08	0.00
11	62	-137	-930	-39	0	-16	388	0.04	0.08	0.00
12	62	120	-929	39	0	16	388	0.04	0.08	0.00
13	62	120	-929	-39	0	-16	388	0.04	0.08	0.00
14	62	-47	-930	129	0	53	388	0.04	0.08	0.00
15	62	-47	-930	-129	0	-53	388	0.04	0.08	0.00
16	62	30	-929	129	0	53	388	0.04	0.08	0.00
17	62	30	-929	-129	0	-53	388	0.04	0.08	0.00

1	72	-42	-4765	-0	0	0	1478	0.15	0.42	0.00
2	72	-137	-935	39	0	12	292	0.03	0.08	0.00
3	72	-137	-935	-39	0	-12	292	0.03	0.08	0.00
4	72	120	-935	39	0	12	292	0.03	0.08	0.00
5	72	120	-935	-39	0	-12	292	0.03	0.08	0.00
6	72	-47	-935	129	0	40	292	0.03	0.08	0.00
7	72	-47	-935	-129	0	-40	292	0.03	0.08	0.00
8	72	30	-935	129	0	40	292	0.03	0.08	0.00
9	72	30	-935	-129	0	-40	292	0.03	0.08	0.00
10	72	-137	-935	39	0	12	292	0.03	0.08	0.00
11	72	-137	-935	-39	0	-12	292	0.03	0.08	0.00
12	72	120	-935	39	0	12	292	0.03	0.08	0.00
13	72	120	-935	-39	0	-12	292	0.03	0.08	0.00
14	72	-47	-935	129	0	40	292	0.03	0.08	0.00
15	72	-47	-935	-129	0	-40	292	0.03	0.08	0.00
16	72	30	-935	129	0	40	292	0.03	0.08	0.00
17	72	30	-935	-129	0	-40	292	0.03	0.08	0.00

1	83	-42	-4772	-0	0	0	986	0.10	0.42	0.00
2	83	-137	-941	39	0	8	195	0.02	0.08	0.00
3	83	-137	-941	-39	0	-8	195	0.02	0.08	0.00
4	83	120	-941	39	0	8	195	0.02	0.08	0.00
5	83	120	-941	-39	0	-8	195	0.02	0.08	0.00
6	83	-47	-941	129	0	27	195	0.02	0.08	0.00
7	83	-47	-941	-129	0	-27	195	0.02	0.08	0.00
8	83	30	-941	129	0	27	195	0.02	0.08	0.00
9	83	30	-941	-129	0	-27	195	0.02	0.08	0.00
10	83	-137	-941	39	0	8	195	0.02	0.08	0.00
11	83	-137	-941	-39	0	-8	195	0.02	0.08	0.00
12	83	120	-941	39	0	8	195	0.02	0.08	0.00
13	83	120	-941	-39	0	-8	195	0.02	0.08	0.00
14	83	-47	-941	129	0	27	195	0.02	0.08	0.00
15	83	-47	-941	-129	0	-27	195	0.02	0.08	0.00
16	83	30	-941	129	0	27	195	0.02	0.08	0.00
17	83	30	-941	-129	0	-27	195	0.02	0.08	0.00

1	93	-42	-4780	-0	0	0	493	0.05	0.42	0.00
2	93	-137	-947	39	0	4	98	0.01	0.08	0.00
3	93	-137	-947	-39	0	-4	98	0.01	0.08	0.00
4	93	120	-947	39	0	4	98	0.01	0.08	0.00
5	93	120	-947	-39	0	-4	98	0.01	0.08	0.00

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

6	93	-47	-947	129	0	13	98	0.01	0.08	0.00
7	93	-47	-947	-129	0	-13	98	0.01	0.08	0.00
8	93	30	-947	129	0	13	98	0.01	0.08	0.00
9	93	30	-947	-129	0	-13	98	0.01	0.08	0.00
10	93	-137	-947	39	0	4	98	0.01	0.08	0.00
11	93	-137	-947	-39	0	-4	98	0.01	0.08	0.00
12	93	120	-947	39	0	4	98	0.01	0.08	0.00
13	93	120	-947	-39	0	-4	98	0.01	0.08	0.00
14	93	-47	-947	129	0	13	98	0.01	0.08	0.00
15	93	-47	-947	-129	0	-13	98	0.01	0.08	0.00
16	93	30	-947	129	0	13	98	0.01	0.08	0.00
17	93	30	-947	-129	0	-13	98	0.01	0.08	0.00
1	103	-42	-4787	-0	0	0	0	0.00	0.42	0.00
2	103	-137	-953	39	0	0	0	0.00	0.08	0.00
3	103	-137	-953	-39	0	0	0	0.00	0.08	0.00
4	103	120	-953	39	0	0	0	0.00	0.08	0.00
5	103	120	-953	-39	0	0	0	0.00	0.08	0.00
6	103	-47	-953	129	0	0	0	0.00	0.08	0.00
7	103	-47	-953	-129	0	0	0	0.00	0.08	0.00
8	103	30	-953	129	0	0	0	0.00	0.08	0.00
9	103	30	-953	-129	0	0	0	0.00	0.08	0.00
10	103	-137	-953	39	0	0	0	0.00	0.08	0.00
11	103	-137	-953	-39	0	0	0	0.00	0.08	0.00
12	103	120	-953	39	0	0	0	0.00	0.08	0.00
13	103	120	-953	-39	0	0	0	0.00	0.08	0.00
14	103	-47	-953	129	0	0	0	0.00	0.08	0.00
15	103	-47	-953	-129	0	0	0	0.00	0.08	0.00
16	103	30	-953	129	0	0	0	0.00	0.08	0.00
17	103	30	-953	-129	0	0	0	0.00	0.08	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
1	-42	0	4898	10	12	1.000	1.000	0.09	Piano 'zx'
2	-137	40	953	10	12	1.000	1.000	0.09	Piano 'zx'
3	-137	40	953	10	12	1.000	1.000	0.09	Piano 'zx'
6	-47	133	953	10	12	1.000	1.000	0.09	Piano 'zx'
7	-47	133	953	10	12	1.000	1.000	0.09	Piano 'zx'
10	-137	40	953	10	12	1.000	1.000	0.09	Piano 'zx'
11	-137	40	953	10	12	1.000	1.000	0.09	Piano 'zx'
14	-47	133	953	10	12	1.000	1.000	0.09	Piano 'zx'
15	-47	133	953	10	12	1.000	1.000	0.09	Piano 'zx'

AMV s.r.l.
Via San Lorenzo, 106 Tel. 0481/779903
34077 Ronchi dei Legionari (GO)

Lavoro: B655-15_v_10 Intestazione lavoro: B655-15_v_10_Tetto
Elemento: TRAVE Metodo di verifica: NTC 2008 - Eurocodice 5
Gruppo: 6 Descrizione: FP_BIELLE
Tabella: Tabella pilastri
Tipo legno: Legno massiccio C24 Beta piano 'yx': 1.000 Beta piano 'zx': 1.000

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

k mod: 0.600

ASTA NUM. 1 NI 47 NF 5 Lungh. 30.0 cm SEZ. 5 Rp B= 10.0 H= 10.0 cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	cm	kg			kg*m						
1	0	-494	-41	0	0	0	6	0.04	0.06	0.00	
2	0	-61	-8	1	0	0	1	0.01	0.01	0.00	
3	0	-61	-8	-1	0	-0	1	0.01	0.01	0.00	
4	0	-61	-8	1	0	0	1	0.01	0.01	0.00	
5	0	-61	-8	-1	0	-0	1	0.01	0.01	0.00	
6	0	-61	-8	4	0	1	1	0.01	0.01	0.00	
7	0	-61	-8	-4	0	-1	1	0.01	0.01	0.00	
8	0	-61	-8	4	0	1	1	0.01	0.01	0.00	
9	0	-61	-8	-4	0	-1	1	0.01	0.01	0.00	
10	0	-61	-8	1	0	0	1	0.01	0.01	0.00	
11	0	-61	-8	-1	0	-0	1	0.01	0.01	0.00	
12	0	-61	-8	1	0	0	1	0.01	0.01	0.00	
13	0	-61	-8	-1	0	-0	1	0.01	0.01	0.00	
14	0	-61	-8	4	0	1	1	0.01	0.01	0.00	
15	0	-61	-8	-4	0	-1	1	0.01	0.01	0.00	
16	0	-61	-8	4	0	1	1	0.01	0.01	0.00	
17	0	-61	-8	-4	0	-1	1	0.01	0.01	0.00	
1	15	-493	-41	0	0	0	-0	0.00	0.06	0.00	
2	15	-61	-8	1	0	-0	0	0.00	0.01	0.00	
3	15	-61	-8	-1	0	0	0	0.00	0.01	0.00	
4	15	-60	-8	1	0	-0	0	0.00	0.01	0.00	
5	15	-60	-8	-1	0	0	0	0.00	0.01	0.00	
6	15	-61	-8	4	0	0	0	0.00	0.01	0.00	
7	15	-61	-8	-4	0	-0	0	0.00	0.01	0.00	
8	15	-61	-8	4	0	0	0	0.00	0.01	0.00	
9	15	-61	-8	-4	0	-0	0	0.00	0.01	0.00	
10	15	-61	-8	1	0	-0	0	0.00	0.01	0.00	
11	15	-61	-8	-1	0	0	0	0.00	0.01	0.00	
12	15	-60	-8	1	0	-0	0	0.00	0.01	0.00	
13	15	-60	-8	-1	0	0	0	0.00	0.01	0.00	
14	15	-61	-8	4	0	0	0	0.00	0.01	0.00	
15	15	-61	-8	-4	0	-0	0	0.00	0.01	0.00	
16	15	-61	-8	4	0	0	0	0.00	0.01	0.00	
17	15	-61	-8	-4	0	-0	0	0.00	0.01	0.00	
1	30	-492	-41	0	0	0	-6	0.04	0.06	0.00	
2	30	-60	-8	1	0	-0	-1	0.01	0.01	0.00	
3	30	-60	-8	-1	0	0	-1	0.01	0.01	0.00	
4	30	-60	-8	1	0	-0	-1	0.01	0.01	0.00	
5	30	-60	-8	-1	0	0	-1	0.01	0.01	0.00	
6	30	-60	-8	4	0	-1	-1	0.01	0.01	0.00	
7	30	-60	-8	-4	0	1	-1	0.01	0.01	0.00	
8	30	-60	-8	4	0	-1	-1	0.01	0.01	0.00	
9	30	-60	-8	-4	0	1	-1	0.01	0.01	0.00	
10	30	-60	-8	1	0	-0	-1	0.01	0.01	0.00	
11	30	-60	-8	-1	0	0	-1	0.01	0.01	0.00	
12	30	-60	-8	1	0	-0	-1	0.01	0.01	0.00	
13	30	-60	-8	-1	0	0	-1	0.01	0.01	0.00	
14	30	-60	-8	4	0	-1	-1	0.01	0.01	0.00	
15	30	-60	-8	-4	0	1	-1	0.01	0.01	0.00	
16	30	-60	-8	4	0	-1	-1	0.01	0.01	0.00	
17	30	-60	-8	-4	0	1	-1	0.01	0.01	0.00	

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
--	kg	kg*m							
1	-494	0	6	11	11	1.000	1.000	0.09	Piano 'yx'
2	-61	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
3	-61	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
4	-61	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
5	-61	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
6	-61	1	1	11	11	1.000	1.000	0.09	Piano 'yx'
7	-61	1	1	11	11	1.000	1.000	0.09	Piano 'yx'
8	-61	1	1	11	11	1.000	1.000	0.09	Piano 'yx'
9	-61	1	1	11	11	1.000	1.000	0.09	Piano 'yx'
10	-61	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
11	-61	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
12	-61	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
13	-61	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
14	-61	1	1	11	11	1.000	1.000	0.09	Piano 'yx'
15	-61	1	1	11	11	1.000	1.000	0.09	Piano 'yx'
16	-61	1	1	11	11	1.000	1.000	0.09	Piano 'yx'
17	-61	1	1	11	11	1.000	1.000	0.09	Piano 'yx'

ASTA NUM. 2 NI 48 NF 6 Lungh. 30.0 cm SEZ. 5 Rp B= 10.0 H= 10.0 cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
--	cm	kg	kg	kg	kg*m	kg*m	kg*m				
1	0	-1676	-28	0	0	0	4	0.06	0.04	0.00	
2	0	-281	-5	-0	0	-0	1	0.01	0.01	0.00	
3	0	-281	-5	0	0	0	1	0.01	0.01	0.00	
4	0	-281	-6	-0	0	-0	1	0.01	0.01	0.00	
5	0	-281	-6	0	0	0	1	0.01	0.01	0.00	
6	0	-281	-5	-1	0	-0	1	0.01	0.01	0.00	
7	0	-281	-5	1	0	0	1	0.01	0.01	0.00	
8	0	-281	-6	-1	0	-0	1	0.01	0.01	0.00	
9	0	-281	-6	1	0	0	1	0.01	0.01	0.00	
10	0	-281	-5	-0	0	-0	1	0.01	0.01	0.00	
11	0	-281	-5	0	0	0	1	0.01	0.01	0.00	
12	0	-281	-6	-0	0	-0	1	0.01	0.01	0.00	
13	0	-281	-6	0	0	0	1	0.01	0.01	0.00	
14	0	-281	-5	-1	0	-0	1	0.01	0.01	0.00	
15	0	-281	-5	1	0	0	1	0.01	0.01	0.00	
16	0	-281	-6	-1	0	-0	1	0.01	0.01	0.00	
17	0	-281	-6	1	0	0	1	0.01	0.01	0.00	
1	15	-1675	-28	0	0	0	0	0.20	0.04	0.00	
2	15	-280	-5	-0	0	-0	0	0.00	0.01	0.00	
3	15	-280	-5	0	0	0	0	0.00	0.01	0.00	
4	15	-280	-6	-0	0	-0	0	0.00	0.01	0.00	
5	15	-280	-6	0	0	0	0	0.00	0.01	0.00	
6	15	-280	-5	-1	0	0	0	0.00	0.01	0.00	
7	15	-280	-5	1	0	-0	0	0.00	0.01	0.00	
8	15	-280	-6	-1	0	0	0	0.00	0.01	0.00	
9	15	-280	-6	1	0	-0	0	0.00	0.01	0.00	
10	15	-280	-5	-0	0	-0	0	0.00	0.01	0.00	
11	15	-280	-5	0	0	0	0	0.00	0.01	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

12	15	-280	-6	-0	0	-0	0	0.00	0.01	0.00
13	15	-280	-6	0	0	0	0	0.00	0.01	0.00
14	15	-280	-5	-1	0	0	0	0.00	0.01	0.00
15	15	-280	-5	1	0	-0	0	0.00	0.01	0.00
16	15	-280	-6	-1	0	0	0	0.00	0.01	0.00
17	15	-280	-6	1	0	-0	0	0.00	0.01	0.00
1	30	-1674	-28	0	0	0	-4	0.06	0.04	0.00
2	30	-279	-5	-0	0	0	-1	0.01	0.01	0.00
3	30	-279	-5	0	0	-0	-1	0.01	0.01	0.00
4	30	-279	-6	-0	0	0	-1	0.01	0.01	0.00
5	30	-279	-6	0	0	-0	-1	0.01	0.01	0.00
6	30	-279	-5	-1	0	0	-1	0.01	0.01	0.00
7	30	-279	-5	1	0	-0	-1	0.01	0.01	0.00
8	30	-279	-6	-1	0	0	-1	0.01	0.01	0.00
9	30	-279	-6	1	0	-0	-1	0.01	0.01	0.00
10	30	-279	-5	-0	0	0	-1	0.01	0.01	0.00
11	30	-279	-5	0	0	-0	-1	0.01	0.01	0.00
12	30	-279	-6	-0	0	0	-1	0.01	0.01	0.00
13	30	-279	-6	0	0	-0	-1	0.01	0.01	0.00
14	30	-279	-5	-1	0	0	-1	0.01	0.01	0.00
15	30	-279	-5	1	0	-0	-1	0.01	0.01	0.00
16	30	-279	-6	-1	0	0	-1	0.01	0.01	0.00
17	30	-279	-6	1	0	-0	-1	0.01	0.01	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota

1	-1676	0	4	11	11	1.000	1.000	0.09	Piano 'yx'
2	-281	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
3	-281	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
4	-281	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
5	-281	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
6	-281	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
7	-281	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
8	-281	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
9	-281	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
10	-281	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
11	-281	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
12	-281	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
13	-281	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
14	-281	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
15	-281	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
16	-281	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
17	-281	0	1	11	11	1.000	1.000	0.09	Piano 'yx'

ASTA NUM. 3 NI 49 NF 7 Lungh. 30.0 cm SEZ. 5 Rp B= 10.0 H= 10.0 cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
	cm	kg			kg*m						
1	0	-1571	-10	0	0	0	2	0.04	0.02	0.00	
2	0	-262	-2	-1	0	-0	0	0.00	0.00	0.00	
3	0	-262	-2	1	0	0	0	0.00	0.00	0.00	
4	0	-262	-2	-1	0	-0	0	0.00	0.00	0.00	

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

5	0	-262	-2	1	0	0	0	0.00	0.00	0.00
6	0	-262	-2	-3	0	-0	0	0.00	0.01	0.00
7	0	-262	-2	3	0	0	0	0.00	0.01	0.00
8	0	-262	-2	-3	0	-0	0	0.00	0.01	0.00
9	0	-262	-2	3	0	0	0	0.00	0.01	0.00
10	0	-262	-2	-1	0	-0	0	0.00	0.00	0.00
11	0	-262	-2	1	0	0	0	0.00	0.00	0.00
12	0	-262	-2	-1	0	-0	0	0.00	0.00	0.00
13	0	-262	-2	1	0	0	0	0.00	0.00	0.00
14	0	-262	-2	-3	0	-0	0	0.00	0.01	0.00
15	0	-262	-2	3	0	0	0	0.00	0.01	0.00
16	0	-262	-2	-3	0	-0	0	0.00	0.01	0.00
17	0	-262	-2	3	0	0	0	0.00	0.01	0.00

1	15	-1570	-10	0	0	0	0	0.18	0.02	0.00
2	15	-261	-2	-1	0	0	0	0.00	0.00	0.00
3	15	-261	-2	1	0	-0	0	0.00	0.00	0.00
4	15	-261	-2	-1	0	0	0	0.00	0.00	0.00
5	15	-261	-2	1	0	-0	0	0.00	0.00	0.00
6	15	-261	-2	-3	0	0	0	0.00	0.01	0.00
7	15	-261	-2	3	0	-0	0	0.00	0.01	0.00
8	15	-261	-2	-3	0	0	0	0.00	0.01	0.00
9	15	-261	-2	3	0	-0	0	0.00	0.01	0.00
10	15	-261	-2	-1	0	0	0	0.00	0.00	0.00
11	15	-261	-2	1	0	-0	0	0.00	0.00	0.00
12	15	-261	-2	-1	0	0	0	0.00	0.00	0.00
13	15	-261	-2	1	0	-0	0	0.00	0.00	0.00
14	15	-261	-2	-3	0	0	0	0.00	0.01	0.00
15	15	-261	-2	3	0	-0	0	0.00	0.01	0.00
16	15	-261	-2	-3	0	0	0	0.00	0.01	0.00
17	15	-261	-2	3	0	-0	0	0.00	0.01	0.00

1	30	-1569	-10	0	0	0	-2	0.04	0.02	0.00
2	30	-260	-2	-1	0	0	-0	0.00	0.00	0.00
3	30	-260	-2	1	0	-0	-0	0.00	0.00	0.00
4	30	-260	-2	-1	0	0	-0	0.00	0.00	0.00
5	30	-260	-2	1	0	-0	-0	0.00	0.00	0.00
6	30	-260	-2	-3	0	0	-0	0.00	0.01	0.00
7	30	-260	-2	3	0	-0	-0	0.00	0.01	0.00
8	30	-260	-2	-3	0	0	-0	0.00	0.01	0.00
9	30	-260	-2	3	0	-0	-0	0.00	0.01	0.00
10	30	-260	-2	-1	0	0	-0	0.00	0.00	0.00
11	30	-260	-2	1	0	-0	-0	0.00	0.00	0.00
12	30	-260	-2	-1	0	0	-0	0.00	0.00	0.00
13	30	-260	-2	1	0	-0	-0	0.00	0.00	0.00
14	30	-260	-2	-3	0	0	-0	0.00	0.01	0.00
15	30	-260	-2	3	0	-0	-0	0.00	0.01	0.00
16	30	-260	-2	-3	0	0	-0	0.00	0.01	0.00
17	30	-260	-2	3	0	-0	-0	0.00	0.01	0.00

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
	--								
	kg		kg*m						
<hr/>									
1	-1571	0	2	11	11	1.000	1.000	0.09	Piano 'yx'
2	-262	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
3	-262	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
4	-262	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
5	-262	0	0	11	11	1.000	1.000	0.09	Piano 'yx'

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

6	-262	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
7	-262	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
8	-262	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
9	-262	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
10	-262	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
11	-262	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
12	-262	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
13	-262	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
14	-262	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
15	-262	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
16	-262	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
17	-262	0	0	11	11	1.000	1.000	0.09	Piano 'yx'

ASTA NUM. 4 NI 50 NF 8 Lungh. 30.0 cm SEZ. 5 Rp B= 10.0 H= 10.0 cm

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
--	cm	kg			kg*m						
1	0	-1555	10	0	0	0	-1	0.04	0.01	0.00	
2	0	-259	2	-1	0	-0	-0	0.00	0.00	0.00	
3	0	-259	2	1	0	0	-0	0.00	0.00	0.00	
4	0	-259	2	-1	0	-0	-0	0.00	0.00	0.00	
5	0	-259	2	1	0	0	-0	0.00	0.00	0.00	
6	0	-259	2	-3	0	-0	-0	0.00	0.01	0.00	
7	0	-259	2	3	0	0	-0	0.00	0.01	0.00	
8	0	-259	2	-3	0	-0	-0	0.00	0.01	0.00	
9	0	-259	2	3	0	0	-0	0.00	0.01	0.00	
10	0	-259	2	-1	0	-0	-0	0.00	0.00	0.00	
11	0	-259	2	1	0	0	-0	0.00	0.00	0.00	
12	0	-259	2	-1	0	-0	-0	0.00	0.00	0.00	
13	0	-259	2	1	0	0	-0	0.00	0.00	0.00	
14	0	-259	2	-3	0	-0	-0	0.00	0.01	0.00	
15	0	-259	2	3	0	0	-0	0.00	0.01	0.00	
16	0	-259	2	-3	0	-0	-0	0.00	0.01	0.00	
17	0	-259	2	3	0	0	-0	0.00	0.01	0.00	
1	15	-1554	10	0	0	0	0	0.18	0.01	0.00	
2	15	-258	2	-1	0	0	0	0.00	0.00	0.00	
3	15	-258	2	1	0	-0	0	0.00	0.00	0.00	
4	15	-258	2	-1	0	0	0	0.00	0.00	0.00	
5	15	-258	2	1	0	-0	0	0.00	0.00	0.00	
6	15	-258	2	-3	0	0	0	0.00	0.01	0.00	
7	15	-258	2	3	0	-0	0	0.00	0.01	0.00	
8	15	-258	2	-3	0	0	0	0.00	0.01	0.00	
9	15	-258	2	3	0	-0	0	0.00	0.01	0.00	
10	15	-258	2	-1	0	0	0	0.00	0.00	0.00	
11	15	-258	2	1	0	-0	0	0.00	0.00	0.00	
12	15	-258	2	-1	0	0	0	0.00	0.00	0.00	
13	15	-258	2	1	0	-0	0	0.00	0.00	0.00	
14	15	-258	2	-3	0	0	0	0.00	0.01	0.00	
15	15	-258	2	3	0	-0	0	0.00	0.01	0.00	
16	15	-258	2	-3	0	0	0	0.00	0.01	0.00	
17	15	-258	2	3	0	-0	0	0.00	0.01	0.00	
1	30	-1553	10	0	0	0	1	0.04	0.01	0.00	
2	30	-257	2	-1	0	0	0	0.00	0.00	0.00	
3	30	-257	2	1	0	-0	0	0.00	0.00	0.00	
4	30	-257	2	-1	0	0	0	0.00	0.00	0.00	
5	30	-257	2	1	0	-0	0	0.00	0.00	0.00	
6	30	-257	2	-3	0	0	0	0.00	0.01	0.00	
7	30	-257	2	3	0	-0	0	0.00	0.01	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

8	30	-257	2	-3	0	0	0	0.00	0.01	0.00
9	30	-257	2	3	0	-0	0	0.00	0.01	0.00
10	30	-257	2	-1	0	0	0	0.00	0.00	0.00
11	30	-257	2	1	0	-0	0	0.00	0.00	0.00
12	30	-257	2	-1	0	0	0	0.00	0.00	0.00
13	30	-257	2	1	0	-0	0	0.00	0.00	0.00
14	30	-257	2	-3	0	0	0	0.00	0.01	0.00
15	30	-257	2	3	0	-0	0	0.00	0.01	0.00
16	30	-257	2	-3	0	0	0	0.00	0.01	0.00
17	30	-257	2	3	0	-0	0	0.00	0.01	0.00

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
1	-1555	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
2	-259	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
3	-259	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
4	-259	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
5	-259	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
6	-259	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
7	-259	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
8	-259	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
9	-259	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
10	-259	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
11	-259	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
12	-259	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
13	-259	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
14	-259	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
15	-259	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
16	-259	0	0	11	11	1.000	1.000	0.09	Piano 'yx'
17	-259	0	0	11	11	1.000	1.000	0.09	Piano 'yx'

ASTA NUM. 5 NI 51 NF 9 Lungh. 30.0 cm SEZ. 5 Rp B= 10.0 H= 10.0 cm

NC	x -- cm	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
1	0	-1596	28	0	0	0	-4	0.06	0.04	0.00	
2	0	-266	6	-0	0	-0	-1	0.01	0.01	0.00	
3	0	-266	6	0	0	0	-1	0.01	0.01	0.00	
4	0	-266	5	-0	0	-0	-1	0.01	0.01	0.00	
5	0	-266	5	0	0	0	-1	0.01	0.01	0.00	
6	0	-266	5	-1	0	-0	-1	0.01	0.01	0.00	
7	0	-266	5	1	0	0	-1	0.01	0.01	0.00	
8	0	-266	5	-1	0	-0	-1	0.01	0.01	0.00	
9	0	-266	5	1	0	0	-1	0.01	0.01	0.00	
10	0	-266	6	-0	0	-0	-1	0.01	0.01	0.00	
11	0	-266	6	0	0	0	-1	0.01	0.01	0.00	
12	0	-266	5	-0	0	-0	-1	0.01	0.01	0.00	
13	0	-266	5	0	0	0	-1	0.01	0.01	0.00	
14	0	-266	5	-1	0	-0	-1	0.01	0.01	0.00	
15	0	-266	5	1	0	0	-1	0.01	0.01	0.00	
16	0	-266	5	-1	0	-0	-1	0.01	0.01	0.00	
17	0	-266	5	1	0	0	-1	0.01	0.01	0.00	

Realizzazione della centralina idroelettrica in località Miandette nel comune di Prali

(intervento ex legge 65/2012) codice 13L65PR1A

PROGETTO DEFINITIVO

Relazione di calcolo strutturale

1	15	-1595	28	0	0	0	0	0.19	0.04	0.00
2	15	-265	6	-0	0	0	0	0.00	0.01	0.00
3	15	-265	6	0	0	-0	0	0.00	0.01	0.00
4	15	-265	5	-0	0	0	0	0.00	0.01	0.00
5	15	-265	5	0	0	-0	0	0.00	0.01	0.00
6	15	-265	5	-1	0	0	0	0.00	0.01	0.00
7	15	-265	5	1	0	-0	0	0.00	0.01	0.00
8	15	-265	5	-1	0	0	0	0.00	0.01	0.00
9	15	-265	5	1	0	-0	0	0.00	0.01	0.00
10	15	-265	6	-0	0	0	0	0.00	0.01	0.00
11	15	-265	6	0	0	-0	0	0.00	0.01	0.00
12	15	-265	5	-0	0	0	0	0.00	0.01	0.00
13	15	-265	5	0	0	-0	0	0.00	0.01	0.00
14	15	-265	5	-1	0	0	0	0.00	0.01	0.00
15	15	-265	5	1	0	-0	0	0.00	0.01	0.00
16	15	-265	5	-1	0	0	0	0.00	0.01	0.00
17	15	-265	5	1	0	-0	0	0.00	0.01	0.00

1	30	-1594	28	0	0	0	4	0.06	0.04	0.00
2	30	-264	6	-0	0	0	1	0.01	0.01	0.00
3	30	-264	6	0	0	-0	1	0.01	0.01	0.00
4	30	-264	5	-0	0	0	1	0.01	0.01	0.00
5	30	-264	5	0	0	-0	1	0.01	0.01	0.00
6	30	-264	5	-1	0	0	1	0.01	0.01	0.00
7	30	-264	5	1	0	-0	1	0.01	0.01	0.00
8	30	-264	5	-1	0	0	1	0.01	0.01	0.00
9	30	-264	5	1	0	-0	1	0.01	0.01	0.00
10	30	-264	6	-0	0	0	1	0.01	0.01	0.00
11	30	-264	6	0	0	-0	1	0.01	0.01	0.00
12	30	-264	5	-0	0	0	1	0.01	0.01	0.00
13	30	-264	5	0	0	-0	1	0.01	0.01	0.00
14	30	-264	5	-1	0	0	1	0.01	0.01	0.00
15	30	-264	5	1	0	-0	1	0.01	0.01	0.00
16	30	-264	5	-1	0	0	1	0.01	0.01	0.00
17	30	-264	5	1	0	-0	1	0.01	0.01	0.00

Verifica di STABILITA'

NC	Fx	My	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
	kg	kg*m							
1	-1596	0	4	11	11	1.000	1.000	0.09	Piano 'yx'
2	-266	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
3	-266	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
4	-266	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
5	-266	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
6	-266	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
7	-266	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
8	-266	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
9	-266	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
10	-266	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
11	-266	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
12	-266	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
13	-266	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
14	-266	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
15	-266	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
16	-266	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
17	-266	0	1	11	11	1.000	1.000	0.09	Piano 'yx'

ASTA NUM. 6 NI 52 NF 10 Lungh. 30.0 cm SEZ. 5 Rp B= 10.0 H= 10.0 cm

File: "13L65PR1A_ST_E_3.2_0 - Relazione di calcolo strutturale.docx"

Mod. Doc.: "Relazioni_calcolo_1.0_2014_10_26.dotx"

NC	x	Fx	Fy	Fz	Mx	My	Mz	I.R.	I.V.	I.Tor.	Nota
--	cm	kg			kg*m						
<hr/>											
1	0	-1487	41	0	0	0	-6	0.07	0.06	0.00	
2	0	-248	8	1	0	0	-1	0.01	0.01	0.00	
3	0	-248	8	-1	0	-0	-1	0.01	0.01	0.00	
4	0	-248	8	1	0	0	-1	0.01	0.01	0.00	
5	0	-248	8	-1	0	-0	-1	0.01	0.01	0.00	
6	0	-248	8	4	0	1	-1	0.01	0.01	0.00	
7	0	-248	8	-4	0	-1	-1	0.01	0.01	0.00	
8	0	-248	8	4	0	1	-1	0.01	0.01	0.00	
9	0	-248	8	-4	0	-1	-1	0.01	0.01	0.00	
10	0	-248	8	1	0	0	-1	0.01	0.01	0.00	
11	0	-248	8	-1	0	-0	-1	0.01	0.01	0.00	
12	0	-248	8	1	0	0	-1	0.01	0.01	0.00	
13	0	-248	8	-1	0	-0	-1	0.01	0.01	0.00	
14	0	-248	8	4	0	1	-1	0.01	0.01	0.00	
15	0	-248	8	-4	0	-1	-1	0.01	0.01	0.00	
16	0	-248	8	4	0	1	-1	0.01	0.01	0.00	
17	0	-248	8	-4	0	-1	-1	0.01	0.01	0.00	
<hr/>											
1	15	-1486	41	0	0	0	0	0.17	0.06	0.00	
2	15	-247	8	1	0	-0	0	0.00	0.01	0.00	
3	15	-247	8	-1	0	0	0	0.00	0.01	0.00	
4	15	-247	8	1	0	-0	0	0.00	0.01	0.00	
5	15	-247	8	-1	0	0	0	0.00	0.01	0.00	
6	15	-247	8	4	0	-0	0	0.00	0.01	0.00	
7	15	-247	8	-4	0	0	0	0.00	0.01	0.00	
8	15	-247	8	4	0	-0	0	0.00	0.01	0.00	
9	15	-247	8	-4	0	0	0	0.00	0.01	0.00	
10	15	-247	8	1	0	-0	0	0.00	0.01	0.00	
11	15	-247	8	-1	0	0	0	0.00	0.01	0.00	
12	15	-247	8	1	0	-0	0	0.00	0.01	0.00	
13	15	-247	8	-1	0	0	0	0.00	0.01	0.00	
14	15	-247	8	4	0	-0	0	0.00	0.01	0.00	
15	15	-247	8	-4	0	0	0	0.00	0.01	0.00	
16	15	-247	8	4	0	-0	0	0.00	0.01	0.00	
17	15	-247	8	-4	0	0	0	0.00	0.01	0.00	
<hr/>											
1	30	-1485	41	0	0	0	6	0.07	0.06	0.00	
2	30	-246	8	1	0	-0	1	0.01	0.01	0.00	
3	30	-246	8	-1	0	0	1	0.01	0.01	0.00	
4	30	-246	8	1	0	-0	1	0.01	0.01	0.00	
5	30	-246	8	-1	0	0	1	0.01	0.01	0.00	
6	30	-246	8	4	0	-1	1	0.01	0.01	0.00	
7	30	-246	8	-4	0	1	1	0.01	0.01	0.00	
8	30	-246	8	4	0	-1	1	0.01	0.01	0.00	
9	30	-246	8	-4	0	1	1	0.01	0.01	0.00	
10	30	-246	8	1	0	-0	1	0.01	0.01	0.00	
11	30	-246	8	-1	0	0	1	0.01	0.01	0.00	
12	30	-246	8	1	0	-0	1	0.01	0.01	0.00	
13	30	-246	8	-1	0	0	1	0.01	0.01	0.00	
14	30	-246	8	4	0	-1	1	0.01	0.01	0.00	
15	30	-246	8	-4	0	1	1	0.01	0.01	0.00	
16	30	-246	8	4	0	-1	1	0.01	0.01	0.00	
17	30	-246	8	-4	0	1	1	0.01	0.01	0.00	

Verifica di STABILITA'

NC	Fx -- kg	My ----- kg*m	Mz	Sn.yx	Sn.zx	Kc,yx	Kc,zx	I.S.	Nota
1	-1487	0	6	11	11	1.000	1.000	0.09	Piano 'yx'
2	-248	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
3	-248	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
4	-248	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
5	-248	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
6	-248	1	1	11	11	1.000	1.000	0.09	Piano 'yx'
7	-248	1	1	11	11	1.000	1.000	0.09	Piano 'yx'
8	-248	1	1	11	11	1.000	1.000	0.09	Piano 'yx'
9	-248	1	1	11	11	1.000	1.000	0.09	Piano 'yx'
10	-248	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
11	-248	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
12	-248	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
13	-248	0	1	11	11	1.000	1.000	0.09	Piano 'yx'
14	-248	1	1	11	11	1.000	1.000	0.09	Piano 'yx'
15	-248	1	1	11	11	1.000	1.000	0.09	Piano 'yx'
16	-248	1	1	11	11	1.000	1.000	0.09	Piano 'yx'
17	-248	1	1	11	11	1.000	1.000	0.09	Piano 'yx'

06.04 OUTPUT GRAFICO

Si allegano delle fotografiche che riassumono i dati di output del problema ingegneristico.

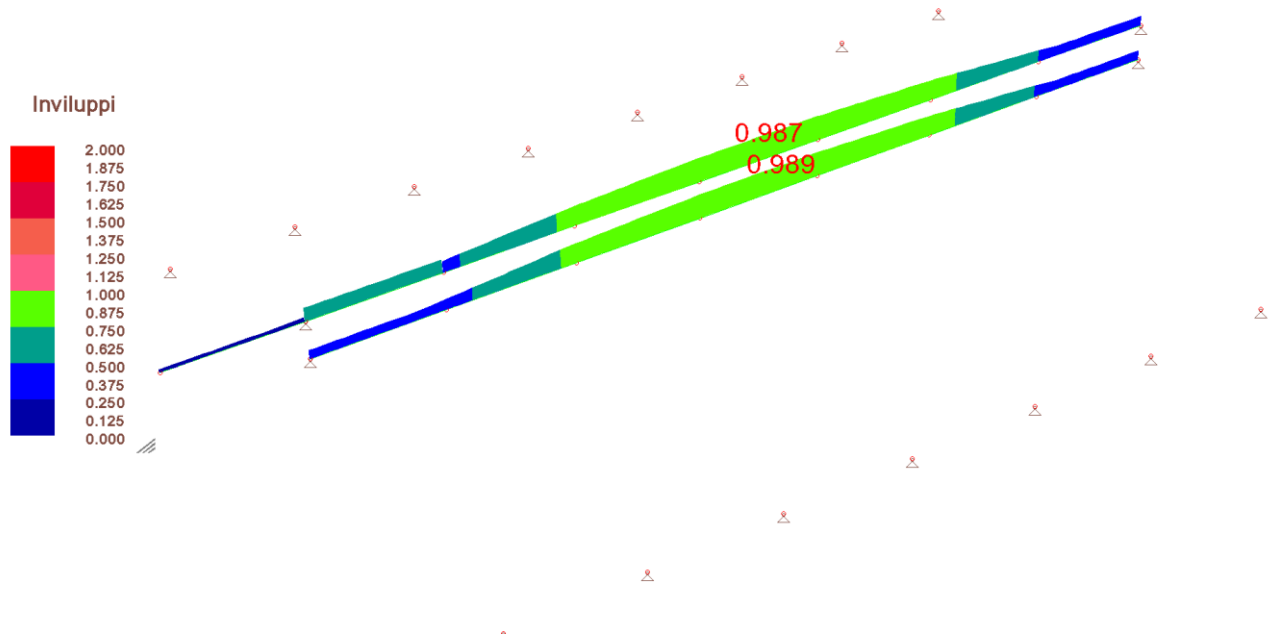


Figura 26, IR dei colmi.

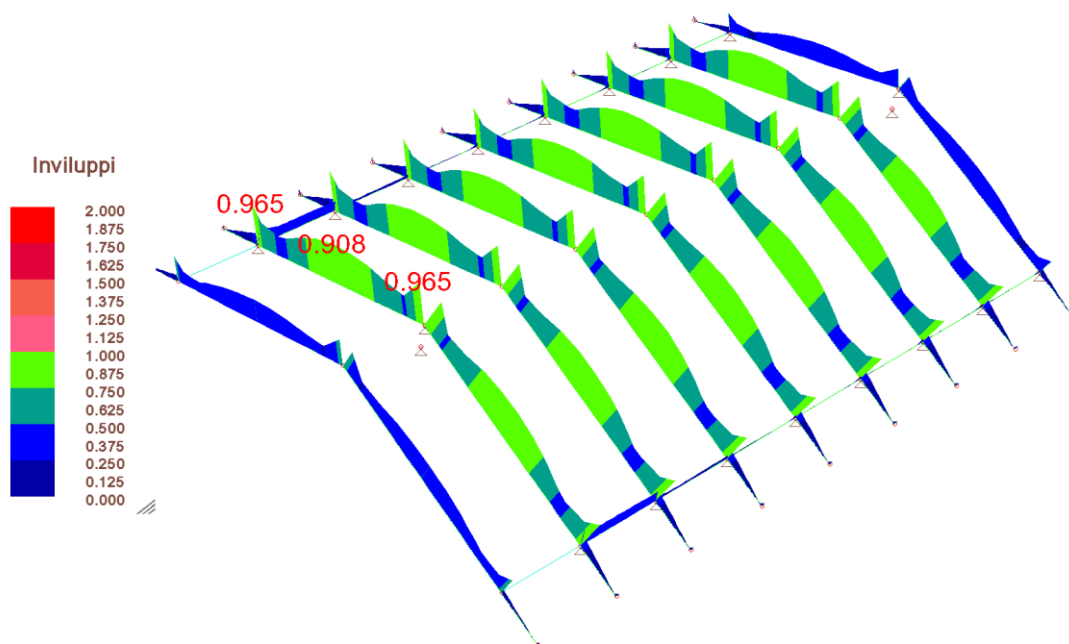


Figura 27, IR degli elementi secondari.

07. ELEMENTI SECONDARI

Si riportano le verifiche di alcuni elementi secondari.

07.01 PASSAFUORI DI ACCIAIO

Si ha che $M_{z,Sd}=152400 \text{ daN}\cdot\text{cm}$, $f_d=2238 \text{ daN/cm}^2$, $W_{nec}=68 \text{ cm}^3$, sez. a T 14/14, $s=1 \text{ cm}$ con $W_{disp}=147 \text{ cm}^3$, $IR=68/147=0.46<1$, ok.

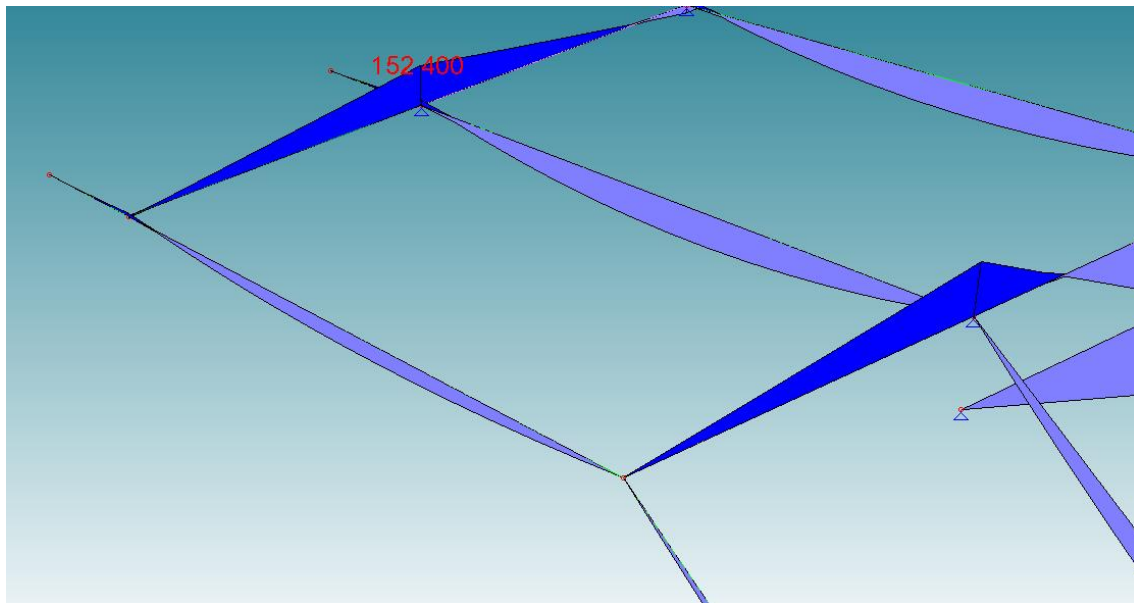


Figura 28, valore di M_{zSd} nell'passafuori d'acciaio.

07.02 SUPPORTO DEL PARANCO

Si ha che $F_k=1500$ daN (peso turbina e peso proprio del profilato HEA 160, con valutazione per eccesso), $F_{sd}=1.5*1500=2250$ daN.

Si considera il telaio elementare ad L di acciaio, svincolato dai colmi della copertura dell'edificio.

La valutazione del peso in eccesso consistente di inglobare a forfait anche il peso del telaio stesso.

Poiché le operazioni di manutenzione sono rare si adotta il principio di non considerare sul carico sospeso le azioni sismiche in quanto statisticamente non compresenti.

Inoltre non si cumula la neve con le operazioni di manutenzione in quanto il sito è raggiungibile solamente quando non si ha neve a terra.

07.02.01 TRAVE ORIZZONTALE (PROFILATO HEA 160)

Si calcola pertanto l'elemento come trave su n. 2 appoggi con carico in mezzzeria.

Poiché $l=450$ cm, $V_{sd}=F_{sd}/2=1.13E3$ daN, $M_{sd}=F_{sd}*l/4=2.53E5$ daN*cm.

Si riporta il listato di verifica eseguito sulla membratura, a mezzo del sw Verifiche Acciaio, sottoprocedura di verifica dedicata all'acciaio prodotta dalla AMV Srl.

AMV s.r.l.

Via San Lorenzo, 106

Tel. 0481/779903

34077 Ronchi dei Legionari (GO)

VERIFICA ASTE

Intestazione: **Paranco_Trave**
 Metodo di verifica: **Eurocodice 3** Tipologia tabella: **Trave**
 Tipo acciaio: **S 235** Beta piano 'yx': **1.000** Beta piano 'zx': **1.000**
 γ_{M0} : **1.050** γ_{M1} : **1.050** γ_{M1}' : **1.050** γ_{M2} : **1.250**
 Tipo collegamento: **saldato** Connessione su un solo lato Connessione sul lato corto (solo 'L')

SEZ. Ps	HEA 160		
Famiglia:	I		
Materiale:	S 235		
fy:	235.0000	fu:	360.0000
Area lorda:	3880.0000		
Area utile:	3880.0000		
Area netta:	3880.0000		
Wely:	77000.0000	Welz:	220000.0000
Wply:	117600.0000	Wplz:	245100.0000
h:	152.0000	b:	160.0000
c:	80.0000	d:	104.0000
tf:	9.0000	tw:	6.0000
tl:	0.0000	t2:	0.0000
t:	0.0000		
raggio =	15.0000	raggio ala =	0.0000

inclinaz. = 0.0000

-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota	
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
daN				daN*m							
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

0	1125	0	0	0	2530	1	0.06	0.00	0.45	
---	------	---	---	---	------	---	------	------	------	--

Verifica asta (i risultati sono in mm e Newton)
ATTENZIONE ASSI 'y' e 'z' INVERTITI RISPETTO EUROCODICE

Mx_Rd: 1916539.1250
Avy: 1324.0000 Avz: 3006.0000
Classificazione
c/tf: 8.8889
alfa: 0.0000
d/tw: 17.3333
Epsilon: 1.0000
psi: 0.0000

Classificazione secondo N-Mz

alfa limite1: 0.0000
alfa limite2: 0.0000
psi: 0.0000
Classe ala Mz: 1 Classe anima Mz: 1
Classe ala: 1 Classe anima: 1
Classe: 1

Verifica a N

Nc,Rd: 868381.0000
Nb,Rd: 0.0000
Nvy,Rd: 0.0000 Nvz,Rd: 0.0000

Verifica a N, M, V, T

Vply_Rd: 171082.6406 Vplz_Rd: 388424.7813
VplyTEd_Rd: 171082.6406 VplzTEd_Rd: 388424.7813
rhoy: 0.0000 rhoz: 0.0000
EnneS: 0.0000
limite ay: 0.1289 limite az: 0.2577
Mply: 26320002.0000 Mplz: 54855716.0000
Mnvy,Rd: 0.0000 Mnvz,Rd: 0.0000
Mcy,Rd: 26320002.0000 Mcz,Rd: 54855716.0000
Mvy_Rd: 26320002.0000 Mvz_Rd: 54855716.0000
Ris. N,M,V: 0.4524

Indici

I.T. SOLO torsione: 0.0000
I.T. taglio e torsione: 0.0645
I.R.n Nc,Rd: 0.0000
I.R.n Nu,Rd: 0.0000
I.R. Nv,Rd (caso solo N,V): 0.0000
I.R. N,M,V: 0.4524

ANIMA NON IRRIGIDITA

d/tw: 17.3333

Verifica di STABILITA' e/o SVERGOLAMENTO, Lungh. 450.0 cm

-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Fx	My	Mz	Classe	$\chi_{min.}$	ky	kz	kLT	χ_{LT}	I.S.n.	I.S.m.	I.S.	Nota
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
daN		daN*m										
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

0	0	2530	1	0.0000	0.0000	0.0000	--	--	--	--	--	
---	---	------	---	--------	--------	--------	----	----	----	----	----	--

Verifica di Stabilità e/o stabilità flessione torsionale

Classe max: 1
Sforzo normale: 0.0000
Mz max: 24819302.0000
My max: 0.0000

BETA A: 0.0000

Coefficienti per stabilità a compressione

Curva Z:
alpha Z: 0.0000

lambda segnato Z:	0.0000
phiZ:	0.0000
CHIZ:	0.0000
Curva Y:	
alpha Y:	0.0000
lambda segnato Y:	0.0000
phiY:	0.0000
CHIY:	0.0000
Coefficienti per stabilità a stabilità flesso torsionale	
BetaMz:	0.0000
BetaMy:	0.0000
BetaMLT:	0.0000
k:	1.0000
kw:	1.0000
C1:	0.0000
C2:	0.0000
C3:	0.0000
Mcr:	0.0000
lambda segnato LT:	0.0000
phiLT:	0.0000
CHILT:	0.0000
Muz:	0.0000
kz:	0.0000
Muy:	0.0000
ky:	0.0000
MuLT:	0.0000
kLT:	0.0000
Stabilità N	
Nbz_Rd:	0.0000
Nby_Rd:	0.0000
Stabilità N + My + Mz	
Risultato_Stabilità:	0.0000
stabilità flesso torsionale solo M monoassiale	
Mb_Rd:	0.0000
stabilità flesso torsionale My + Mz + compressione	
Risultato_Svergolam.	0.0000
stabilità flesso torsionale M monoassiale + trazione	
Sigmacom:	0.0000
Meff:	0.0000
Indici	
I.S.n.:	0.0000
I.S. (N+M):	0.0000
I.S.m. (Ncompr.+M):	0.0000

Poichè $IR < 1$ le verifiche sono soddisfatte.

07.02.02 TRAVE VERTICALE (PILASTRO HEA 160)

Si calcola pertanto l'elemento come colonna con base incastrata e testa libera, $\beta=2$, $I_0=\beta \cdot I=2 \cdot I$ con $I=270$ cm.

Si ha che $N_{Sd}=-F_{Sd}=-2.25E3$ daN.

Si riporta il listato di verifica eseguito sulla membratura, a mezzo del sw Verifiche Acciaio, sottoprocedura di verifica dedicata all'acciaio prodotta dalla AMV Srl.

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VERIFICA ASTE

Intestazione: **Paranco_Pilastro**
 Metodo di verifica: **Eurocodice 3** Tipologia tabella: **Pilastro**
 Tipo acciaio: **S 235** Beta piano 'yx': **2.000** Beta piano 'zx': **2.000**
 γ_{M0} : **1.050** γ_{M1} : **1.050** γ_{M1} : **1.050** γ_{M2} : **1.250**
 Tipo collegamento: **saldato** Connessione su un solo lato Connessione sul lato corto (solo 'L')

SEZ. Ps HEA 160
 Famiglia: I
 Materiale: S 235
 fy: 235.0000 fu: 360.0000
 Area lorda: 3880.0000
 Area utile: 3880.0000
 Area netta: 3880.0000
 Wely: 77000.0000 Welz: 220000.0000
 Wply: 117600.0000 Wplz: 245100.0000
 h: 152.0000 b: 160.0000
 c: 80.0000 d: 104.0000
 tf: 9.0000 tw: 6.0000
 t1: 0.0000 t2: 0.0000
 t: 0.0000
 raggio = 15.0000 raggio ala = 0.0000
 inclinaz. = 0.0000

Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
daN			daN*m							
-2250	0	0	0	0	0	1	0.00	0.03	0.00	

Verifica asta (i risultati sono in mm e Newton)
 ATTENZIONE ASSI 'y' e 'z' INVERTITI RISPETTO EUROCODICE

Mx_Rd: 1916539.1250
 Avy: 1324.0000 Avz: 3006.0000
 Classificazione
 c/tf: 8.8889
 alfa: 0.0000
 d/tw: 17.3333
 Epsilon: 1.0000
 psi: 0.0000

Classe ala: 1 Classe anima: 1
 Classe: 1

Verifica a N
 Nc,Rd: 868381.0000
 Nb,Rd: 285594.3125
 Nvy,Rd: 0.0000 Nvz,Rd: 0.0000

Verifica a N, M, V, T
 Vply_Rd: 171082.6406 Vplz_Rd: 388424.7813
 VplyTEd_Rd: 171082.6406 VplzTEd_Rd: 388424.7813
 rhoy: 0.0000 rhoz: 0.0000
 EnneS: 0.0242
 limite ay: 0.1289 limite az: 0.2577
 Mply: 26320002.0000 Mplz: 54855716.0000
 Mnv,Rd: 0.0000 Mnvz,Rd: 0.0000
 Mcy,Rd: 26320002.0000 Mcz,Rd: 54855716.0000
 Mvy_Rd: 26320002.0000 Mvz_Rd: 54855716.0000
 Ris. N,M,V: 0.0000

Indici
 I.T. SOLO torsione: 0.0000
 I.T. taglio e torsione: 0.0000
 I.R.n Nc,Rd: 0.0254
 I.R.n Nu,Rd: 0.0000
 I.R. Nv,Rd (caso solo N,V): 0.0000
 I.R. N,M,V: 0.0000

ANIMA NON IRRIGIDITA
 d/tw: 17.3333

Verifica di STABILITA' e/o SVERGOLAMENTO, Lungh. 270.0 cm

-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Fx	My	Mz	Classe	$\chi_{min.}$	ky	kz	kLT	χ_{LT}	I.S.n.	I.S.m.	I.S.	Nota
daN	daN*m											
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-2250	0	0	1	0.3289	0.0000	0.0000	--	--	0.08	--	0.00	Piano 'zx'
Verifica di Stabilità e/o stabilità flessione torsionale Classe max: 1 Sforzo normale: -22072.5000 Mz max: 0.0000 My max: 0.0000 BETA A: 1.0000 Coefficienti per stabilità a compressione Curva Z: b alpha Z: 0.3400 lambda segnato Z: 0.8841 phiZ: 1.0071 CHIZ: 0.6714 Curva Y: c alpha Y: 0.4900 lambda segnato Y: 1.4570 phiY: 1.8694 CHIY: 0.3289 Coefficienti per stabilità a stabilità flessione torsionale BetaMz: 0.0000 BetaMy: 0.0000 BetaMLT: 0.0000 k: 1.0000 kw: 1.0000 C1: 0.0000 C2: 0.0000 C3: 0.0000 Mcr: 0.0000 lambda segnato LT: 0.0000 phiLT: 0.0000 CHILT: 0.0000 Muz: 0.0000 kz: 0.0000 Muy: 0.0000 ky: 0.0000 MuLT: 0.0000 kLT: 0.0000 Stabilità N NbZ_Rd: 583022.7500 Nby_Rd: 285594.3125 Stabilità N + My + Mz Risultato_Stabilità: 0.0000 stabilità flessione torsionale solo M monoassiale Mb_Rd: 0.0000 stabilità flessione torsionale My + Mz + compressione Risultato_Svergolam. 0.0000 stabilità flessione torsionale M monoassiale + trazione Sigmacom: 0.0000 Meff: 0.0000 Indici I.S.n.: 0.0773 I.S. (N+M): 0.0000 I.S.m. (Ncomp.+M): 0.0000												

Poichè $IR < 1$ le verifiche sono soddisfatte.

07.02.03 SISTEMI DI CONNESSIONE

Essendo essi poco sollecitati si omettono le verifiche di rito.

07.03 ARCHITRAVE

Si ha che i colmi scaricano un'azione pari a $F_{Sd}=10840+4115=14955$ daN. Considerando a sicurezza anche i pesi propri dei cordoli e delle sovrarmature, si considera un'azione concentrata maggiore, pari a $F_{Sd}'=2E4$ daN.

Poiché $L=2$ m (considerando anche la parte in appoggio), si ottiene che:

1. $V_{Sd}=1e4$ daN;
2. $M_{Sd}=1E6$ daN*cm.

Con sezione cm 24x45, $c=4$ cm, $A_{sl}=4\phi 16$, $A_{sw}=\phi 10/15$, si ha:

1. $V_{Rd,2}=15016$ daN, $IR=0.67<1$, ok;
2. $M_{Rd}=1.19E6$, $IR=0.84<1$, ok.

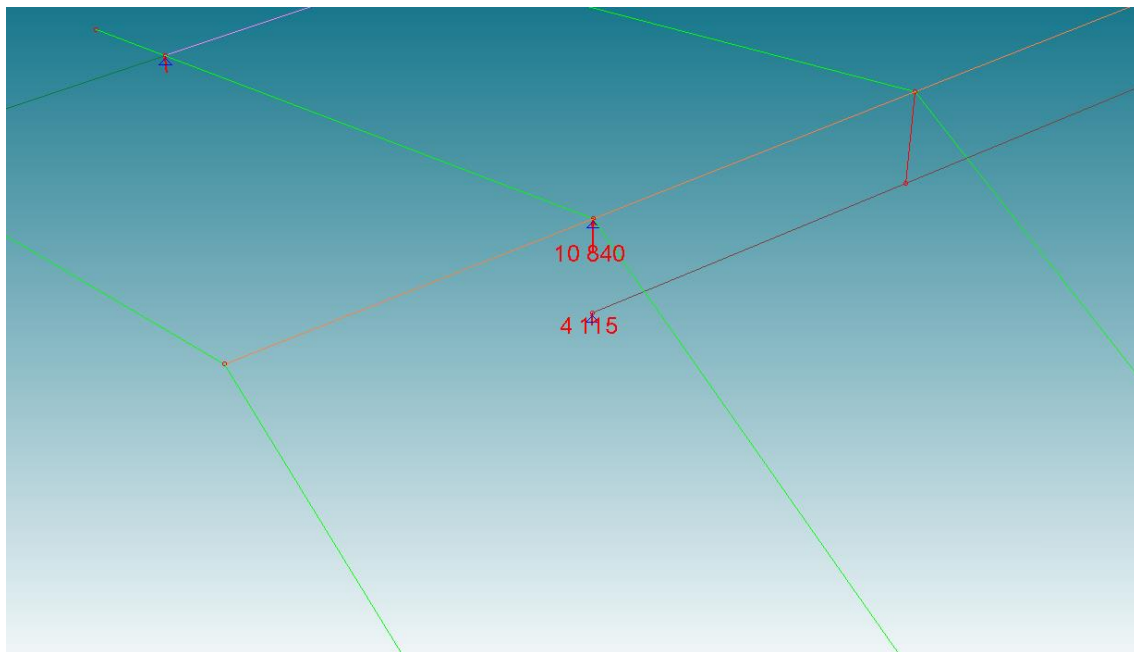


Figura 29, scarico dei colmi.