



OGGETTO - REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

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PROGETTO ESECUTIVO
ELABORATI DESCRITTIVI
RELAZIONE DI CALCOLO DELLE STRUTTURE

R.SW.E.002

data:
maggio 2017

scala:
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|-----------|-------------|---|-----------|-----------------------|-------------------|
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1. PREMESSA

Nella presente relazione di calcolo viene esposta la verifica DEGLI ELEMENTI in acciaio previsti per la struttura a supporto dei pannelli fotovoltaici.

Il tabulato riporta:

- numero combinazione di carico;
- ascissa di calcolo (cm);
- in sequenza F_x , F_y , F_z (F), M_x , M_y , M_z (F*m).

Le convenzioni sui segni delle sollecitazioni sono:

- F_x (sforzo normale) è positivo se di trazione;
- F_y (forza tagliante) è positiva se agisce, a sinistra della sezione interessata, nel verso positivo dell'asse locale corrispondente;
- F_z (forza tagliante) è positiva se agisce, a sinistra della sezione interessata, nel verso negativo dell'asse locale corrispondente;
- M_x (momento torcente) è positivo se antiorario intorno a x a sinistra dell'ascissa in esame;
- M_y (momento flettente) è positivo se tende le fibre posteriori, cioè quelle disposte nel verso negativo dell'asse z;
- M_z (momento flettente) è positivo se tende le fibre inferiori, cioè quelle disposte nel verso negativo dell'asse y.

Vengono poi riportate:

classe: rappresenta la classe della sezione; qualora i singoli componenti della sezione (ad esempio ala e anima) abbiano classi diverse viene presa quella più alta; non viene riportata in caso di trazione o taglio puro.

Il potenziale svergolamento viene indagato solo per sezioni a I. Viene riportato il valore di χ_{LT} , che determina il momento resistente di progetto. La stabilità euleriana comporta la determinazione di tre coefficienti χ_{min} , χ_y , χ_z . Il tabulato propone:

- numero combinazione di carico;
- valore dello sforzo normale F_x (compressione più elevata trovata);
- momento flettente M_y più elevato riscontrato in tutte le ascisse;
- momento flettente M_z più elevato riscontrato in tutte le ascisse;
- classe: rappresenta la classe della sezione;
- χ_{minimo} : rappresenta il minimo fra i coefficienti di riduzione del modo di instabilità intorno agli assi coinvolti nella verifica.

Le forze sono espresse in daN e le distanze in cm.

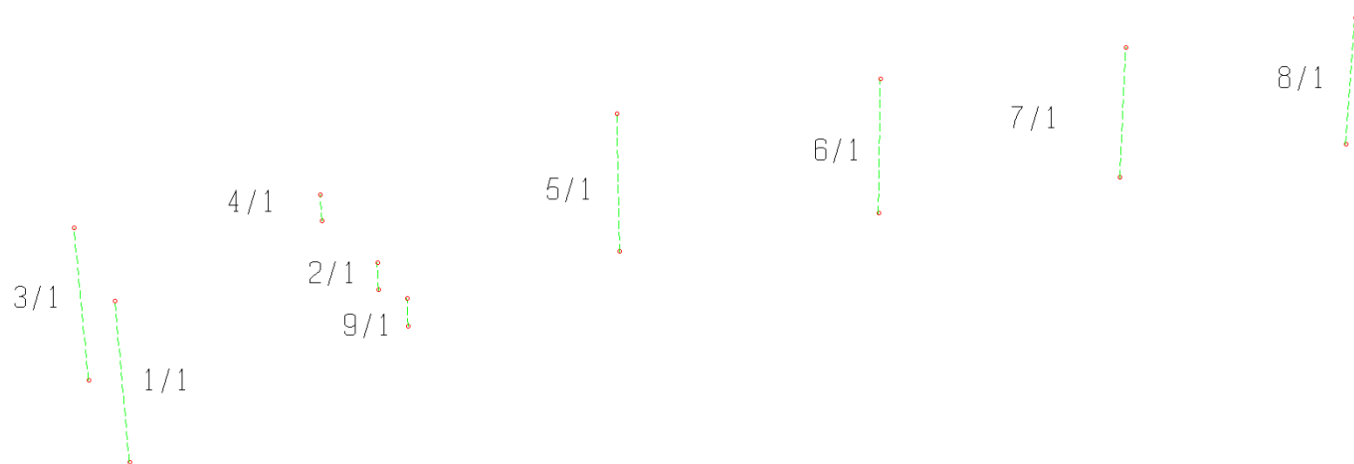
1.1. PROFILARIO

La tabella seguente definisce la classe minima dell'acciaio da utilizzare per le varie tipologie di elementi.

| PROFILO | TIPOLOGIA ACCIAIO |
|--------------|-------------------|
| | |
| HEB 120 | S275 |
| HEB 160 | S275 |
| | |
| IPE 180 | S235 |
| IPE 220 | S275 |
| IPE 240 | S235 |
| IPE 300 | S235 |
| | |
| UPN 140 | S235 |
| UPN 200 | S275 |
| | |
| TIRANTE fi10 | S355 |
| TIRANTE fi12 | S355 |

2. CORPO 1

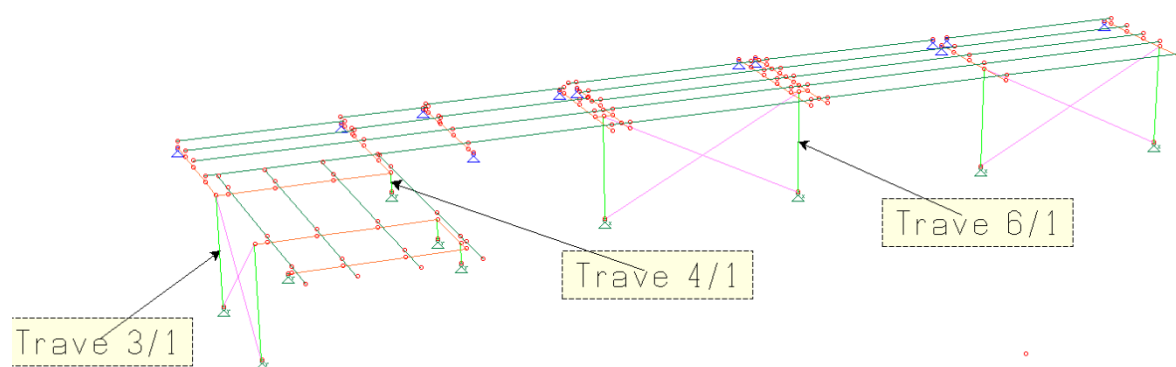
2.1. VERIFICA COLONNE IN ACCIAIO



Prospettiva

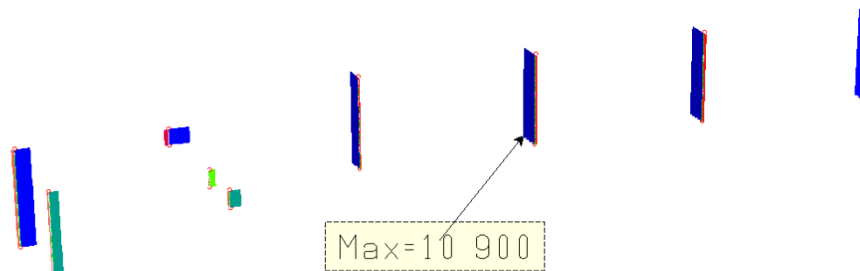
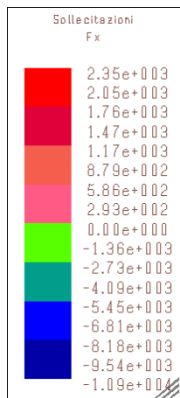
5

Vista assonometrica colonne con indicato il codice degli elementi asta



Prospettiva

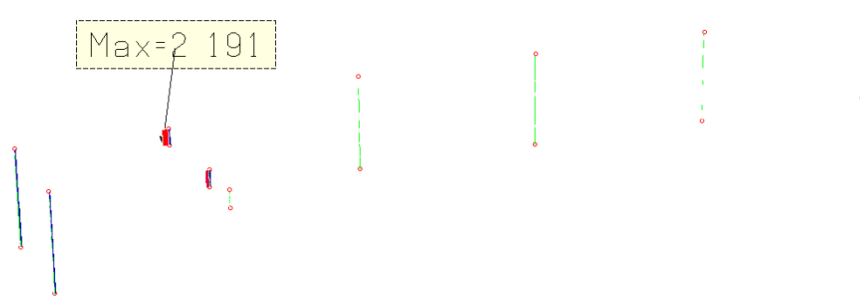
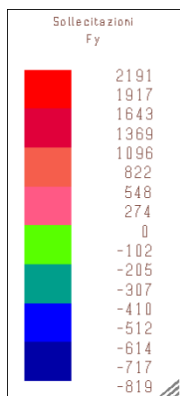
Immagine delle colonne maggiormente sollecitate



Prospettiva

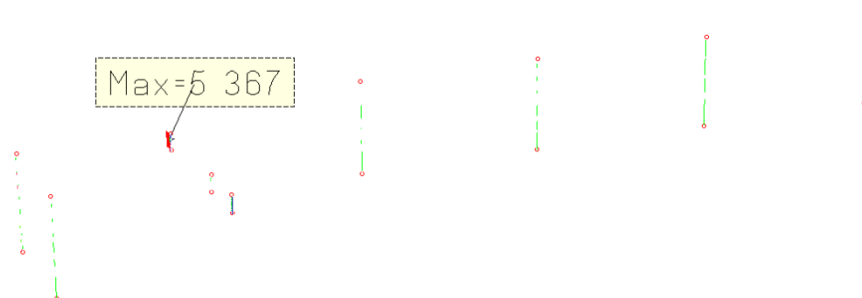
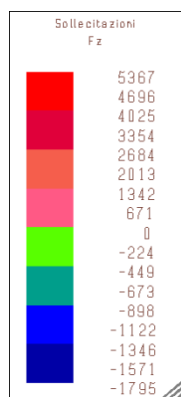
Sforzo normale

6



Prospettiva

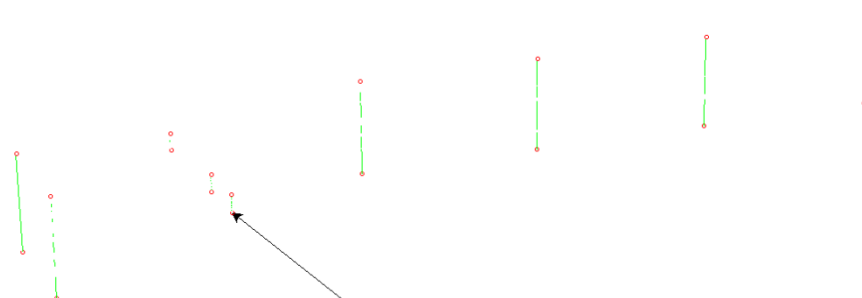
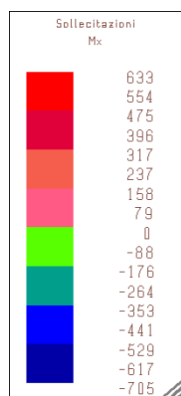
Taglio Vy



Prospettiva

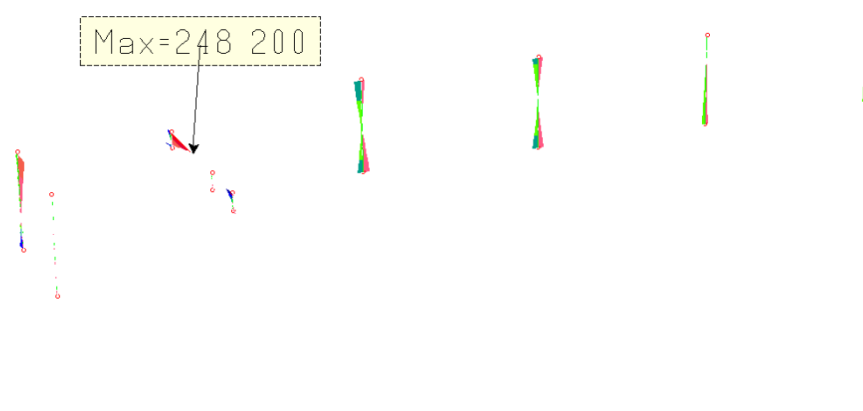
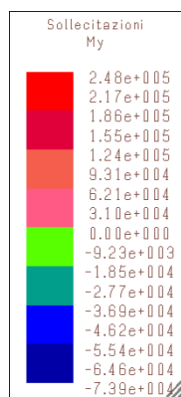
Taglio Vz

7



Prospettiva

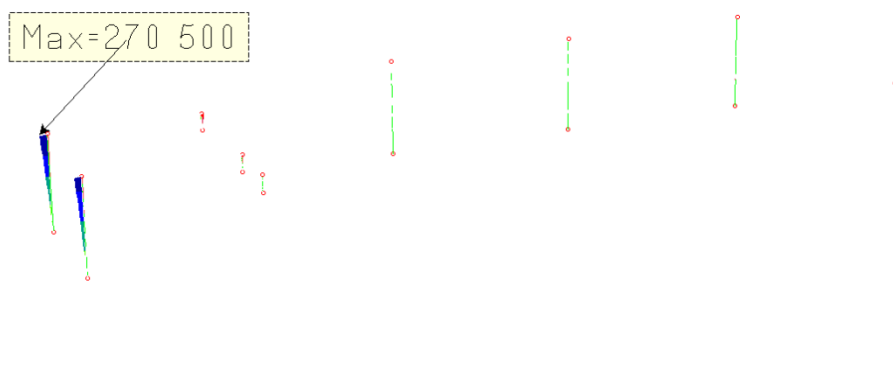
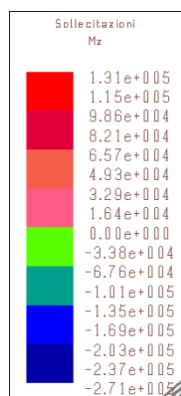
Momento torcente



Prospettiva

Momento My

8



Prospettiva

Momento Mz

2.1.1. VERIFICA SLU E SLE

Lavoro: **Blocco 1** Intestazione lavoro: **ESECUTIVO**

Elemento: **TRAVE** Metodo di verifica: **Stati limite**

Gruppo: **1** Descrizione: **colonne acciaio**

Tabella: **Tabella pilastri**

Tipo acciaio: **S 275** Beta piano 'yx': **2.000** Beta piano 'zx': **2.000**
ASTA NUM. 3 NI 5 NF 42 Lungh. 350.0 cm SEZ. 6 Ps HEB 160

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|-----|-------|------|-----|-------|-------|-------|---------|--------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -5851 | -773 | 453 | 0 | 519 | 0 | 107.8 | 467.0 | 66.2 | 0.0 | 574.7 | 1 | |
| 5 | 0 | -1417 | -99 | 121 | 0 | 139 | 0 | 26.1 | 124.7 | 8.5 | 0.0 | 150.8 | 1 | |
| 6 | 0 | -1410 | -95 | 121 | 0 | 138 | 0 | 26.0 | 124.3 | 8.2 | 0.0 | 150.2 | 1 | |
| 7 | 0 | -1832 | -279 | 122 | 0 | 140 | 0 | 33.7 | 126.2 | 23.9 | 0.0 | 159.9 | 1 | |
| 8 | 0 | -1823 | -275 | 122 | 0 | 140 | 0 | 33.6 | 125.7 | 23.6 | 0.0 | 159.3 | 1 | |
| 9 | 0 | -2190 | -241 | 169 | 0 | 193 | 0 | 40.3 | 174.0 | 20.6 | 0.0 | 214.4 | 1 | |
| 10 | 0 | -2161 | -229 | 168 | 0 | 192 | 0 | 39.8 | 172.5 | 19.6 | 0.0 | 212.3 | 1 | |
| 11 | 0 | -2315 | -295 | 169 | 0 | 194 | 0 | 42.6 | 174.5 | 25.3 | 0.0 | 217.1 | 1 | |
| 12 | 0 | -1668 | -208 | 121 | 0 | 139 | 0 | 30.7 | 124.6 | 17.8 | 0.0 | 155.4 | 1 | |
| 13 | 0 | -4938 | -644 | 381 | 0 | 437 | 0 | 90.9 | 392.8 | 55.2 | 0.0 | 483.7 | 1 | |
| 14 | 0 | 1022 | 187 | -87 | 0 | -100 | 0 | 18.8 | 89.6 | 16.0 | 0.0 | 108.5 | 1 | |
| 15 | 0 | -5137 | -672 | 397 | 0 | 454 | 0 | 94.6 | 408.9 | 57.6 | 0.0 | 503.5 | 1 | |
| 1 | 175 | -5754 | -773 | 453 | 0 | -274 | -1352 | 106.0 | 680.4 | 66.2 | 0.0 | 786.3 | 1 | |
| 5 | 175 | -1343 | -99 | 121 | 0 | -74 | -173 | 24.7 | 121.6 | 8.5 | 0.0 | 146.4 | 1 | |
| 6 | 175 | -1336 | -95 | 121 | 0 | -74 | -166 | 24.6 | 119.6 | 8.2 | 0.0 | 144.2 | 1 | |
| 7 | 175 | -1757 | -279 | 122 | 0 | -73 | -488 | 32.4 | 222.6 | 23.9 | 0.0 | 255.0 | 1 | |
| 8 | 175 | -1749 | -275 | 122 | 0 | -73 | -482 | 32.2 | 220.6 | 23.6 | 0.0 | 252.8 | 1 | |
| 9 | 175 | -2093 | -241 | 169 | 0 | -102 | -421 | 38.5 | 226.8 | 20.6 | 0.0 | 265.3 | 1 | |
| 10 | 175 | -2064 | -229 | 168 | 0 | -102 | -400 | 38.0 | 220.0 | 19.6 | 0.0 | 258.0 | 1 | |
| 11 | 175 | -2218 | -295 | 169 | 0 | -102 | -516 | 40.8 | 257.2 | 25.3 | 0.0 | 298.0 | 1 | |
| 12 | 175 | -1593 | -208 | 121 | 0 | -73 | -364 | 29.3 | 182.9 | 17.8 | 0.0 | 212.2 | 1 | |
| 13 | 175 | -4841 | -644 | 381 | 0 | -230 | -1126 | 89.2 | 568.9 | 55.2 | 0.0 | 658.0 | 1 | |
| 14 | 175 | 1097 | 187 | -87 | 0 | 53 | 327 | 20.2 | 152.5 | 16.0 | 0.0 | 172.6 | 1 | |
| 15 | 175 | -5040 | -672 | 397 | 0 | -240 | -1176 | 92.8 | 593.3 | 57.6 | 0.0 | 686.1 | 1 | |
| 1 | 350 | -5657 | -773 | 453 | 0 | -1066 | -2705 | 104.2 | 1827.7 | 66.2 | 0.0 | 1931.8 | 1 | |
| 5 | 350 | -1268 | -99 | 121 | 0 | -286 | -346 | 23.4 | 368.0 | 8.5 | 0.0 | 391.4 | 1 | |
| 6 | 350 | -1261 | -95 | 121 | 0 | -285 | -333 | 23.2 | 363.6 | 8.2 | 0.0 | 386.8 | 1 | |
| 7 | 350 | -1682 | -279 | 122 | 0 | -287 | -977 | 31.0 | 571.4 | 23.9 | 0.0 | 602.4 | 1 | |
| 8 | 350 | -1674 | -275 | 122 | 0 | -286 | -964 | 30.8 | 566.9 | 23.6 | 0.0 | 597.7 | 1 | |
| 9 | 350 | -1996 | -241 | 169 | 0 | -397 | -843 | 36.8 | 627.6 | 20.6 | 0.0 | 664.4 | 1 | |
| 10 | 350 | -1967 | -229 | 168 | 0 | -395 | -800 | 36.2 | 612.6 | 19.6 | 0.0 | 648.8 | 1 | |
| 11 | 350 | -2121 | -295 | 169 | 0 | -397 | -1033 | 39.1 | 688.9 | 25.3 | 0.0 | 727.9 | 1 | |
| 12 | 350 | -1518 | -208 | 121 | 0 | -285 | -728 | 28.0 | 490.4 | 17.8 | 0.0 | 518.4 | 1 | |
| 13 | 350 | -4744 | -644 | 381 | 0 | -897 | -2253 | 87.4 | 1530.6 | 55.2 | 0.0 | 1617.9 | 1 | |
| 14 | 350 | 1171 | 187 | -87 | 0 | 205 | 654 | 21.6 | 394.6 | 16.0 | 0.0 | 416.1 | 1 | |
| 15 | 350 | -4943 | -672 | 397 | 0 | -934 | -2352 | 91.0 | 1595.5 | 57.6 | 0.0 | 1686.5 | 1 | |

Verifica di STABILITA' e/o SVERGOLAMENTO

| n.comb | Fx | My eq. | Mz eq. | Sn. omega | Sn.yx | Sn.zx | OMEGA | OMEGA1 | Sf | Nota |
|--------|-------|--------|--------|-----------|-------|-------|-------|--------|--------|-------------|
| | daN | daN*m | | | | | | | daN/cm | |
| 1 | -5851 | 432 | 1623 | 174 | 104 | 174 | 5.03 | 1.00 | 1555.7 | Sn.zx > 150 |
| 5 | -1417 | 116 | 207 | 174 | 104 | 174 | 5.03 | 1.00 | 307.2 | Sn.zx > 150 |
| 6 | -1410 | 116 | 200 | 174 | 104 | 174 | 5.03 | 1.00 | 304.0 | Sn.zx > 150 |
| 7 | -1832 | 116 | 586 | 174 | 104 | 174 | 5.03 | 1.00 | 470.9 | Sn.zx > 150 |
| 8 | -1823 | 116 | 578 | 174 | 104 | 174 | 5.03 | 1.00 | 467.4 | Sn.zx > 150 |
| 9 | -2190 | 161 | 506 | 174 | 104 | 174 | 5.03 | 1.00 | 522.4 | Sn.zx > 150 |
| 10 | -2161 | 161 | 480 | 174 | 104 | 174 | 5.03 | 1.00 | 510.9 | Sn.zx > 150 |
| 11 | -2315 | 161 | 620 | 174 | 104 | 174 | 5.03 | 1.00 | 572.1 | Sn.zx > 150 |
| 12 | -1668 | 116 | 437 | 174 | 104 | 174 | 5.03 | 1.00 | 406.1 | Sn.zx > 150 |
| 13 | -4938 | 364 | 1352 | 174 | 104 | 174 | 5.03 | 1.00 | 1290.5 | Sn.zx > 150 |
| 14 | 1171 | 83 | 392 | 174 | 104 | 174 | 1.00 | 1.00 | 222.4 | Sn.zx > 150 |
| 15 | -5137 | 379 | 1411 | 174 | 104 | 174 | 5.03 | 1.00 | 1347.9 | Sn.zx > 150 |

ASTA NUM. 4 NI 6 NF 74 Lungh. 60.0 cm SEZ. 6 Ps HEB 160

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|------|-------|-------|-------|------|---------------------|--------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm ² | | | | | | |
| 1 | 0 | -7696 | 2191 | 5367 | 0 | 739 | 0 | 141.7 | 664.6 | 193.5 | 0.0 | 806.3 | 1 | |
| 5 | 0 | -2175 | 1825 | 1305 | 0 | 160 | 0 | 40.1 | 144.3 | 156.4 | 0.0 | 275.0 | 4 | |
| 6 | 0 | -2182 | 1880 | 1465 | 0 | 222 | 0 | 40.2 | 200.0 | 161.1 | 0.0 | 283.5 | 4 | |
| 7 | 0 | -1761 | -819 | 1294 | 0 | 156 | 0 | 32.4 | 140.4 | 70.2 | 0.0 | 172.8 | 1 | |
| 8 | 0 | -1768 | -763 | 1454 | 0 | 218 | 0 | 32.6 | 196.3 | 65.4 | 0.0 | 228.8 | 1 | |
| 9 | 0 | -2795 | 1049 | 1655 | 0 | 161 | 0 | 51.5 | 144.6 | 89.9 | 0.0 | 196.1 | 1 | |
| 10 | 0 | -2818 | 1234 | 2189 | 0 | 368 | 0 | 51.9 | 330.8 | 105.7 | 0.0 | 382.7 | 1 | |
| 11 | 0 | -2670 | 253 | 1651 | 0 | 159 | 0 | 49.2 | 143.4 | 59.5 | 0.0 | 192.6 | 1 | |
| 12 | 0 | -1921 | 227 | 1645 | 0 | 292 | 0 | 35.4 | 262.9 | 59.3 | 0.0 | 298.2 | 1 | |
| 13 | 0 | -6445 | 1824 | 4495 | 0 | 618 | 0 | 118.7 | 556.4 | 162.1 | 0.0 | 675.1 | 1 | |
| 14 | 0 | 1658 | -537 | -1147 | 0 | -159 | 0 | 30.5 | 143.2 | 46.0 | 0.0 | 173.7 | 1 | |
| 15 | 0 | -6717 | 1904 | 4685 | 0 | 645 | 0 | 123.7 | 580.0 | 168.9 | 0.0 | 703.7 | 1 | |
| | | | | | | | | | | | | | | |
| 1 | 30 | -7680 | 2191 | 5367 | 0 | -872 | 657 | 141.4 | 995.4 | 193.5 | 0.0 | 1136.8 | 1 | |
| 5 | 30 | -2162 | 1825 | 1305 | 0 | -231 | 548 | 39.8 | 383.9 | 156.4 | 0.0 | 423.7 | 1 | |
| 6 | 30 | -2169 | 1880 | 1465 | 0 | -217 | 564 | 39.9 | 376.6 | 161.1 | 0.0 | 416.5 | 1 | |
| 7 | 30 | -1748 | -819 | 1294 | 0 | -232 | -246 | 32.2 | 287.7 | 70.2 | 0.0 | 319.9 | 1 | |
| 8 | 30 | -1755 | -763 | 1454 | 0 | -218 | -229 | 32.3 | 269.7 | 65.4 | 0.0 | 302.0 | 1 | |
| 9 | 30 | -2779 | 1049 | 1655 | 0 | -336 | 315 | 51.2 | 403.2 | 89.9 | 0.0 | 454.3 | 1 | |
| 10 | 30 | -2802 | 1234 | 2189 | 0 | -289 | 370 | 51.6 | 379.0 | 105.7 | 0.0 | 430.6 | 1 | |
| 11 | 30 | -2654 | 253 | 1651 | 0 | -336 | 76 | 48.9 | 326.6 | 59.5 | 0.0 | 375.5 | 1 | |
| 12 | 30 | -1908 | 227 | 1645 | 0 | -201 | 68 | 35.1 | 203.1 | 59.3 | 0.0 | 238.2 | 1 | |
| 13 | 30 | -6428 | 1824 | 4495 | 0 | -730 | 548 | 118.4 | 833.0 | 162.1 | 0.0 | 951.4 | 1 | |
| 14 | 30 | 1671 | -537 | -1147 | 0 | 185 | -161 | 30.8 | 218.0 | 46.0 | 0.0 | 248.8 | 1 | |
| 15 | 30 | -6700 | 1904 | 4685 | 0 | -761 | 571 | 123.4 | 867.9 | 168.9 | 0.0 | 991.3 | 1 | |
| | | | | | | | | | | | | | | |
| 1 | 60 | -7663 | 2191 | 5367 | 0 | -2482 | 1314 | 141.1 | 2655.4 | 193.5 | 0.0 | 2796.5 | 1 | |
| 5 | 60 | -2149 | 1825 | 1305 | 0 | -623 | 1095 | 39.6 | 912.0 | 156.4 | 0.0 | 951.6 | 1 | |
| 6 | 60 | -2156 | 1880 | 1465 | 0 | -657 | 1128 | 39.7 | 953.3 | 161.1 | 0.0 | 993.0 | 1 | |
| 7 | 60 | -1735 | -819 | 1294 | 0 | -620 | -491 | 32.0 | 715.8 | 70.2 | 0.0 | 747.7 | 1 | |
| 8 | 60 | -1742 | -763 | 1454 | 0 | -654 | -458 | 32.1 | 735.7 | 65.4 | 0.0 | 767.8 | 1 | |
| 9 | 60 | -2762 | 1049 | 1655 | 0 | -832 | 630 | 50.9 | 950.9 | 89.9 | 0.0 | 1001.8 | 1 | |
| 10 | 60 | -2785 | 1234 | 2189 | 0 | -946 | 741 | 51.3 | 1088.8 | 105.7 | 0.0 | 1140.1 | 1 | |
| 11 | 60 | -2637 | 253 | 1651 | 0 | -831 | 152 | 48.6 | 796.7 | 59.5 | 0.0 | 845.3 | 1 | |
| 12 | 60 | -1895 | 227 | 1645 | 0 | -695 | 136 | 34.9 | 669.0 | 59.3 | 0.0 | 703.9 | 1 | |
| 13 | 60 | -6411 | 1824 | 4495 | 0 | -2079 | 1095 | 118.1 | 2222.4 | 162.1 | 0.0 | 2340.5 | 1 | |
| 14 | 60 | 1683 | -537 | -1147 | 0 | 529 | -322 | 31.0 | 579.2 | 46.0 | 0.0 | 610.2 | 1 | |
| 15 | 60 | -6683 | 1904 | 4685 | 0 | -2166 | 1142 | 123.1 | 2315.8 | 168.9 | 0.0 | 2438.8 | 1 | |

Verifica di STABILITA' e/o SVERGOLAMENTO

| n.comb | Fx | My eq. | Mz eq. | Sn. omega | Sn.yx | Sn.zx | OMEGA | OMEGA1 | Sf | Nota |
|--------|-------|--------|--------|-----------|-------|-------|-------|--------|---------------------|------|
| | daN | daN*m | | | | | | | daN/cm ² | |
| 1 | -7696 | 1194 | 788 | 30 | 18 | 30 | 1.08 | 1.00 | 1487.7 | |
| 5 | -2175 | 310 | 657 | 30 | 18 | 30 | 1.08 | 1.00 | 533.4 | |
| 6 | -2182 | 305 | 677 | 30 | 18 | 30 | 1.08 | 1.00 | 536.0 | |
| 7 | -1761 | 310 | 295 | 30 | 18 | 30 | 1.08 | 1.00 | 408.8 | |
| 8 | -1768 | 305 | 275 | 30 | 18 | 30 | 1.08 | 1.00 | 398.5 | |
| 9 | -2795 | 435 | 378 | 30 | 18 | 30 | 1.08 | 1.00 | 569.3 | |
| 10 | -2818 | 420 | 444 | 30 | 18 | 30 | 1.08 | 1.00 | 578.0 | |
| 11 | -2670 | 435 | 91 | 30 | 18 | 30 | 1.08 | 1.00 | 474.6 | |
| 12 | -1921 | 300 | 82 | 30 | 18 | 30 | 1.08 | 1.00 | 334.9 | |
| 13 | -6445 | 1000 | 657 | 30 | 18 | 30 | 1.08 | 1.00 | 1244.1 | |
| 14 | 1683 | 254 | 193 | 30 | 18 | 30 | 1.00 | 1.00 | 321.3 | |
| 15 | -6717 | 1042 | 685 | 30 | 18 | 30 | 1.08 | 1.00 | 1296.6 | |

ASTA NUM. 6 NI 17 NF 32 Lungh. 350.0 cm SEZ. 6 Ps HEB 160

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|-----|--------|----|------|-------|------|-----|---------|--------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -10900 | -6 | -57 | 0 | -72 | 0 | 200.7 | 65.1 | 2.0 | 0.0 | 265.9 | 1 | |
| 5 | 0 | -3721 | -2 | 122 | 0 | 234 | 0 | 68.5 | 210.3 | 4.4 | 0.0 | 278.8 | 1 | |
| 6 | 0 | -3716 | -2 | 121 | 0 | 232 | 0 | 68.4 | 209.0 | 4.4 | 0.0 | 277.5 | 1 | |
| 7 | 0 | -2845 | -2 | -146 | 0 | -264 | 0 | 52.4 | 237.4 | 5.3 | 0.0 | 289.8 | 1 | |
| 8 | 0 | -2845 | -2 | -147 | 0 | -265 | 0 | 52.4 | 238.7 | 5.3 | 0.0 | 291.0 | 1 | |
| 9 | 0 | -4219 | -2 | 25 | 0 | 57 | 0 | 77.7 | 51.4 | 0.9 | 0.0 | 129.1 | 1 | |
| 10 | 0 | -4202 | -3 | 23 | 0 | 52 | 0 | 77.4 | 47.1 | 0.8 | 0.0 | 124.5 | 1 | |
| 11 | 0 | -3968 | -2 | -57 | 0 | -96 | 0 | 73.1 | 85.9 | 2.1 | 0.0 | 159.0 | 1 | |
| 12 | 0 | -2856 | -2 | -54 | 0 | -93 | 0 | 52.6 | 84.0 | 2.0 | 0.0 | 136.6 | 1 | |
| 13 | 0 | -9147 | -5 | -47 | 0 | -60 | 0 | 168.5 | 54.0 | 1.7 | 0.0 | 222.4 | 1 | |
| 14 | 0 | 2196 | 1 | 14 | 0 | 17 | 0 | 40.4 | 15.0 | 0.5 | 0.0 | 55.5 | 1 | |
| 15 | 0 | -9527 | -5 | -49 | 0 | -63 | 0 | 175.5 | 56.4 | 1.8 | 0.0 | 231.9 | 1 | |
| 1 | 175 | -10800 | -6 | -57 | 0 | 27 | -11 | 198.9 | 27.6 | 2.0 | 0.0 | 226.5 | 1 | |
| 5 | 175 | -3646 | -2 | 122 | 0 | 20 | -3 | 67.1 | 19.2 | 4.4 | 0.0 | 86.3 | 1 | |
| 6 | 175 | -3641 | -2 | 121 | 0 | 20 | -3 | 67.1 | 19.1 | 4.4 | 0.0 | 86.2 | 1 | |
| 7 | 175 | -2771 | -2 | -146 | 0 | -8 | -3 | 51.0 | 8.4 | 5.3 | 0.0 | 59.4 | 1 | |
| 8 | 175 | -2771 | -2 | -147 | 0 | -8 | -3 | 51.0 | 8.5 | 5.3 | 0.0 | 59.5 | 1 | |
| 9 | 175 | -4122 | -2 | 25 | 0 | 13 | -4 | 75.9 | 13.1 | 0.9 | 0.0 | 89.0 | 1 | |
| 10 | 175 | -4105 | -3 | 23 | 0 | 13 | -5 | 75.6 | 13.0 | 0.8 | 0.0 | 88.6 | 1 | |
| 11 | 175 | -3871 | -2 | -57 | 0 | 4 | -4 | 71.3 | 5.3 | 2.1 | 0.0 | 76.6 | 1 | |
| 12 | 175 | -2782 | -2 | -54 | 0 | 2 | -3 | 51.2 | 2.5 | 2.0 | 0.0 | 53.7 | 1 | |
| 13 | 175 | -9050 | -5 | -47 | 0 | 22 | -9 | 166.7 | 22.9 | 1.7 | 0.0 | 189.6 | 1 | |
| 14 | 175 | 2271 | 1 | 14 | 0 | -8 | 1 | 41.8 | 7.3 | 0.5 | 0.0 | 49.1 | 1 | |
| 15 | 175 | -9430 | -5 | -49 | 0 | 23 | -9 | 173.7 | 23.9 | 1.8 | 0.0 | 197.6 | 1 | |
| 1 | 350 | -10700 | -6 | -57 | 0 | 126 | -21 | 197.1 | 120.4 | 2.0 | 0.0 | 317.4 | 1 | |
| 5 | 350 | -3571 | -2 | 122 | 0 | -193 | -6 | 65.8 | 176.0 | 4.4 | 0.0 | 241.7 | 1 | |
| 6 | 350 | -3566 | -2 | 121 | 0 | -192 | -6 | 65.7 | 174.9 | 4.4 | 0.0 | 240.6 | 1 | |
| 7 | 350 | -2696 | -2 | -146 | 0 | 247 | -6 | 49.7 | 224.7 | 5.3 | 0.0 | 274.4 | 1 | |
| 8 | 350 | -2696 | -2 | -147 | 0 | 249 | -7 | 49.7 | 225.9 | 5.3 | 0.0 | 275.6 | 1 | |
| 9 | 350 | -4025 | -2 | 25 | 0 | -31 | -9 | 74.1 | 30.7 | 0.9 | 0.0 | 104.8 | 1 | |
| 10 | 350 | -4008 | -3 | 23 | 0 | -27 | -9 | 73.8 | 27.1 | 0.8 | 0.0 | 100.9 | 1 | |
| 11 | 350 | -3774 | -2 | -57 | 0 | 104 | -9 | 69.5 | 96.6 | 2.1 | 0.0 | 166.1 | 1 | |
| 12 | 350 | -2707 | -2 | -54 | 0 | 97 | -7 | 49.9 | 89.1 | 2.0 | 0.0 | 138.9 | 1 | |
| 13 | 350 | -8953 | -5 | -47 | 0 | 105 | -18 | 164.9 | 99.8 | 1.7 | 0.0 | 264.7 | 1 | |
| 14 | 350 | 2345 | 1 | 14 | 0 | -32 | 2 | 43.2 | 29.6 | 0.5 | 0.0 | 72.8 | 1 | |
| 15 | 350 | -9333 | -5 | -49 | 0 | 109 | -19 | 171.9 | 104.3 | 1.8 | 0.0 | 276.2 | 1 | |

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Verifica di STABILITA' e/o SVERGOLAMENTO

| n.comb | Fx | My eq. | Mz eq. | Sn. omega | Sn.yx | Sn.zx | OMEGA | OMEGA1 | Sf | Nota |
|--------|--------|--------|--------|-----------|-------|-------|-------|--------|--------|-------------|
| | daN | daN*m | | | | | | | daN/cm | |
| 1 | -10900 | 50 | 13 | 174 | 104 | 174 | 5.03 | 1.00 | 1078.6 | Sn.zx > 150 |
| 5 | -3721 | 93 | 4 | 174 | 104 | 174 | 5.03 | 1.00 | 439.5 | Sn.zx > 150 |
| 6 | -3716 | 93 | 4 | 174 | 104 | 174 | 5.03 | 1.00 | 438.4 | Sn.zx > 150 |
| 7 | -2845 | 106 | 4 | 174 | 104 | 174 | 5.03 | 1.00 | 367.7 | Sn.zx > 150 |
| 8 | -2845 | 106 | 4 | 174 | 104 | 174 | 5.03 | 1.00 | 368.2 | Sn.zx > 150 |
| 9 | -4219 | 23 | 5 | 174 | 104 | 174 | 5.03 | 1.00 | 415.7 | Sn.zx > 150 |
| 10 | -4202 | 21 | 5 | 174 | 104 | 174 | 5.03 | 1.00 | 412.3 | Sn.zx > 150 |
| 11 | -3968 | 42 | 5 | 174 | 104 | 174 | 5.03 | 1.00 | 411.3 | Sn.zx > 150 |
| 12 | -2856 | 39 | 4 | 174 | 104 | 174 | 5.03 | 1.00 | 303.6 | Sn.zx > 150 |
| 13 | -9147 | 42 | 11 | 174 | 104 | 174 | 5.03 | 1.00 | 901.1 | Sn.zx > 150 |
| 14 | 2345 | 13 | 1 | 174 | 104 | 174 | 1.00 | 1.00 | 55.2 | Sn.zx > 150 |
| 15 | -9527 | 44 | 11 | 174 | 104 | 174 | 5.03 | 1.00 | 939.4 | Sn.zx > 150 |

2.1.2. VERIFICA NODO DI BASE

Viene verificato un nodo fittizio imponendo come sollecitazioni le maggiori di tutti i nodi della medesima tipologia.

SN = 2350 daN

T = 2191 daN

TX = 5367 daN

MF = 0 daN cm

Per le sollecitazioni di ogni c.c. riferirsi ai risultati dell'analisi strutturale.

[Verifica piastra di base] (S 235 (Fe 360), Rck 300)

250x200x10 Tipologia n. 1 A = 180 (mm)

[Verifica nervature]

Nervature inferiori Tz: 200x26x2

[Verifica saldatura profilo]

Saldatura a cordone d'angolo (doppia sull'ala): verificata

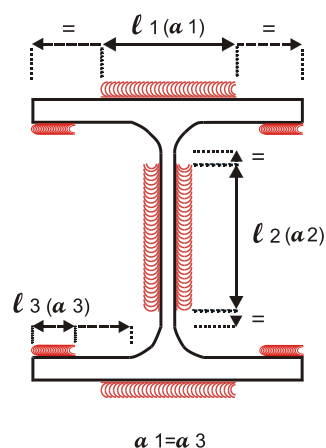
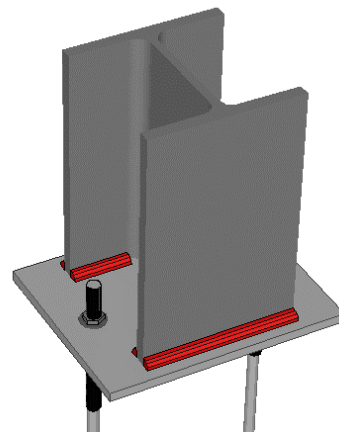
Lunghezza1: 160 (mm) Altezza di gola1: 9 (mm)

Lunghezza2: 104 (mm) Altezza di gola2: 6 (mm)

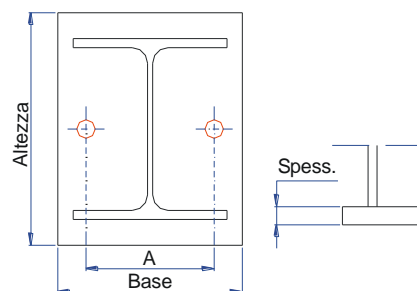
Lunghezza3: 61 (mm) Altezza di gola3: 9 (mm)

Sigma perp. = 37.3 daN/cm² Tens par. = 188.1 daN/cm²

I.R. = 0.16



12



Si ipotizza un ancorante che poi in fase costruttiva potrà essere sostituito con analogo sistema di ancoraggio con caratteristiche analoghe.

Basi della progettazione

Ancorante

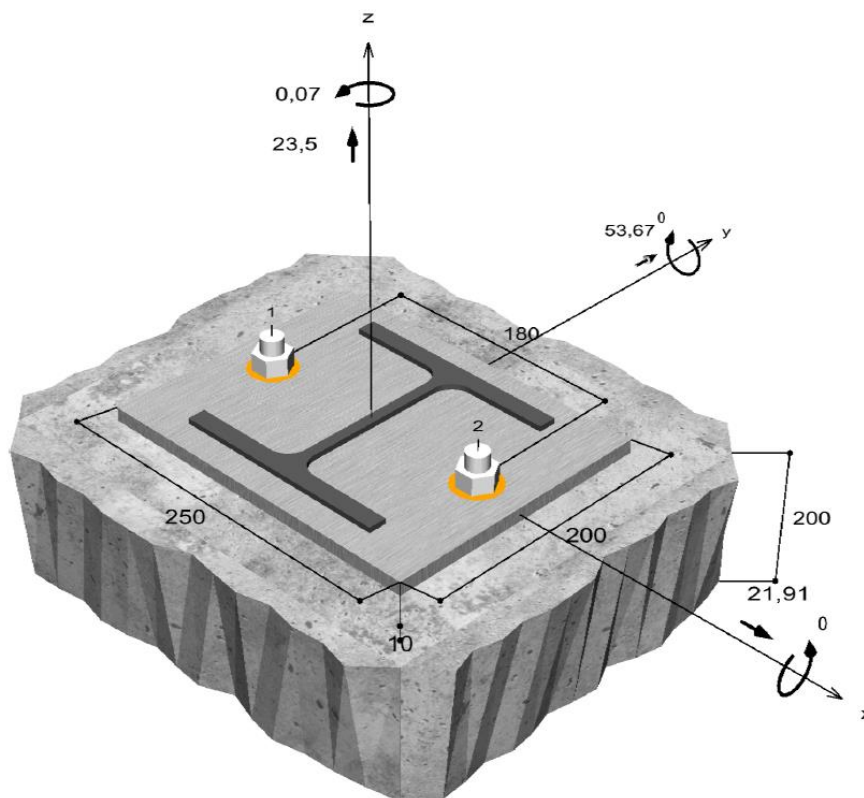
| | |
|--------------------------------|--|
| Sistema | fischer Sistema chimico a iniezione FIS EM |
| Ancorante chimico ad iniezione | FIS EM 390 S |
| Elemento di fissaggio | Barra filettata FIS A M 16 x 200, Acciaio zincato, Classe di resistenza 5.8 |
| Profondità di ancoraggio | 152 mm |
| Dati di progetto | Progettazione dell'ancorante in Calcestruzzo secondo Benestare ETA-10/0012, Opzione 1, Validità: 26/06/2013 - 26/06/2018 |



Geometria / Carichi

mm, kN, kNm

Valore di progetto delle azioni (sono inclusi i coefficienti parziali di sicurezza delle azioni)



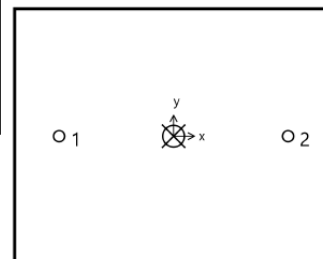
Carichi di progetto *)

| # | N _{Sd} kN | V _{Sd,x} kN | V _{Sd,y} kN | M _{Sd,x} kNm | M _{Sd,y} kNm | M _{T,Sd} kNm | Tipo di carico |
|---|-----------------------|-------------------------|-------------------------|--------------------------|--------------------------|--------------------------|----------------|
| 1 | 23,50 | 21,91 | 53,67 | 0,00 | 0,00 | 0,07 | Statico |

*) I coefficienti parziali di sicurezza per le azioni sono inclusi.

Forze risultanti sull'ancoraggio

| Ancorante n° | Forza di trazione kN | Forza di taglio kN | Forza di taglio x kN | Forza di taglio y kN |
|-----------------|----------------------------|-----------------------|-------------------------|-------------------------|
| 1 | 11,75 | 28,63 | 10,96 | 26,45 |
| 2 | 11,75 | 29,35 | 10,96 | 27,22 |



max. deformazione a compressione del calcestruzzo :

0,00 ‰

max. tensione di compressione del calcestruzzo :

0,0 N/mm²

Forza risultante di trazione :

23,50 kN , Coordinate x/y (0 / 0)

Forza risultante di compressione :

0,00 kN , Coordinate x/y (0 / 0)

Resistenza alla combinazione di trazione e taglio

14

| | | | |
|---|---|-----------------------------|--|
| $\beta_N = \beta_{N,sp;1} = 0,26 \leq 1$ $\beta_V = \beta_{Vs;2} = 0,94 \leq 1$ $\frac{\beta_N + \beta_V}{1,2} = \frac{\beta_{N,sp;1} + \beta_{Vs;2}}{1,2} = 1,00 \leq 1$ |  | Verifica soddisfatta | Equazione (5.9a) Equazione (5.9b) Equazione (5.9c) |
|---|---|-----------------------------|--|

2.1.3. VERIFICA NODO COLONNA - TRAVE PRINCIPALE

Viene verificato un nodo fittizio imponendo come sollecitazioni le maggiori di tutti i nodi della medesima tipologia.

SN = 2350 daN

T = 2191 daN

TX = 5367 daN

MFz = 27500 daN cm

MFy = 248200 daN cm

MT = 705 daN cm

Colonna: HEB 160

Trave: HEB 160 S 235 (Fe 360)

[Verifica] Banca n. 0: Banche generali AMV

[Verifica flangia] (S 235 (Fe 360))

Flangia tipo 1: 160x340x10 A = 90 B = 210 C = 55 G = 0 (mm)

n. 0 file intermedie di bulloni per infittimento

Mensola di rinforzo: h = 160 l = 160 s = 8 t = 13 (mm)

Diam. bulloni M20 Incremento foro: 2.0 (mm) (Classe 8.8)

[Resistenza zona a taglio]

F,Rd = 20514.4 daN (resistenza anima colonna)

[Resistenza zona a compressione]

F,Rd = 24798.8 daN (resistenza anima colonna)

F,Rd = 53371.1 daN (resistenza ala trave)

F,Rd = 32917.5 daN (resistenza flangia mensola)

[Resistenza zona a trazione]

[Seconda fila di bulloni]

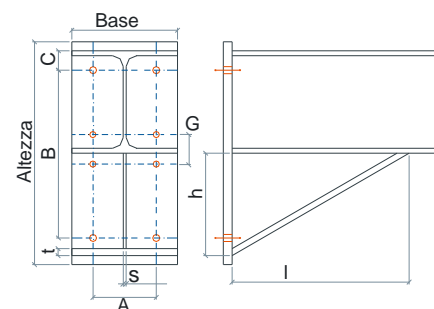
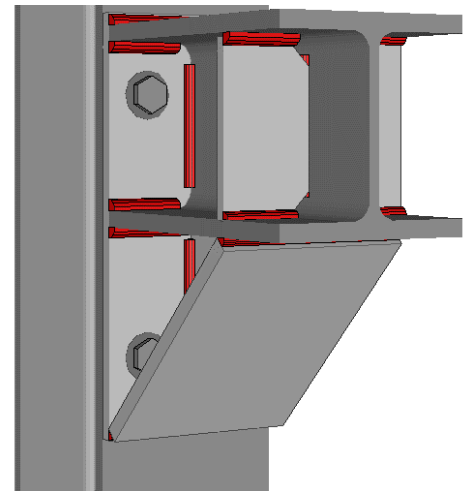
F,Rd = 20348.5 daN (resistenza ala colonna)

F,Rd = 14062.4 daN (resistenza flangia di estremità)

F,Rd = 22052.2 daN (resistenza anima colonna)

F,t2,Rd,ult = 14062.4 daN (resistenza efficace seconda fila)

[Momento resistente]



$M_{j,Rd} = 363512.2 \text{ daN}\cdot\text{cm}$

[Rigidezza rotazionale] (calcolata per N trascurabile)

$S_{j} = 166817920.0 \text{ daN}\cdot\text{cm/rad}$ (rigidezza del giunto)

[Resistenza assiale profilo]

$N_{pl,Rd} = 121528.6 \text{ daN}$ $|N| \leq 0.05 N_{pl,Rd}$ (trascurabile)

[Verifica a presso-tensoflessione del giunto]

I.R. = 0.68

[Verifica a taglio del nodo]

$F_{v,Rd} = 9525.6 \text{ daN}$ (resistenza dei bulloni a taglio)

$F_{t,Rd} = 14288.4 \text{ daN}$ (resistenza dei bulloni a trazione)

I.R. = 0.37

[Verifica di rifollamento]

$F_{b,Rd} = 14181.8 \text{ daN}$ (resistenza a rifollamento)

I.R. = 0.09

[Verifica saldatura profilo con rinforzo]

Saldatura a cordone d'angolo (doppia sull'ala): verificata

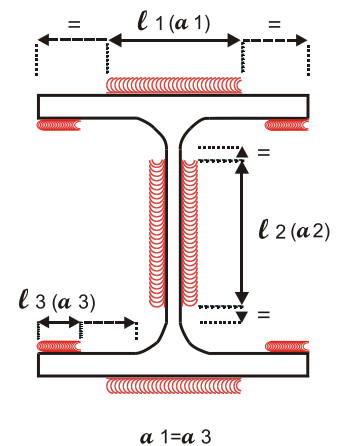
Lunghezza1: 160 (mm) Altezza di gola1: 9 (mm)

Lunghezza2: 262 (mm) Altezza di gola2: 6 (mm)

Lunghezza3: 60 (mm) Altezza di gola3: 9 (mm)

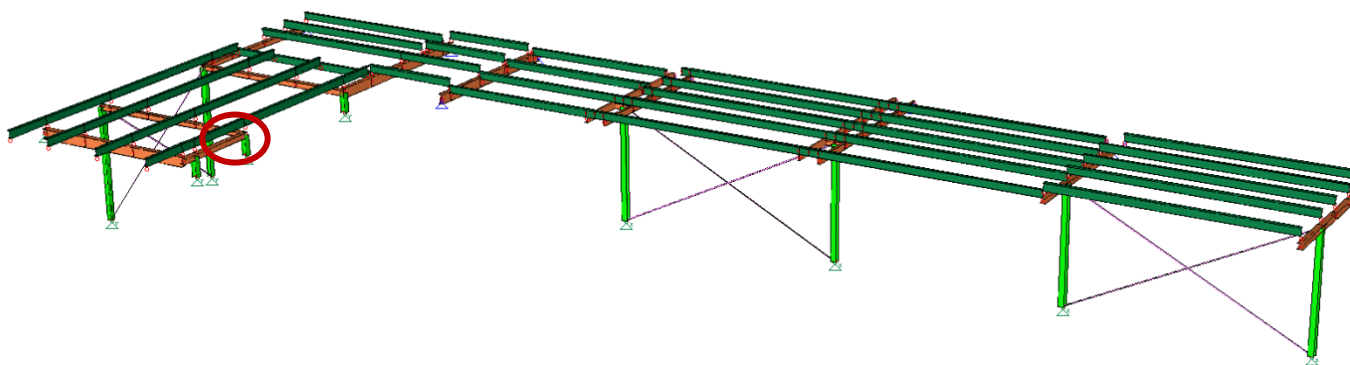
Sigma perp. = 314.3 daN/cm² Tens par. = 195.0 daN/cm²

I.R. = 0.22



2.1.1. VERIFICA NODO TRAVE - ANIMA COOLONNA

Viene verificato il nodo Cerchiato nella immagine sottostante



Prospettiva

17

Colonna: Gruppo = 1 Elemento = 2 HEB 160

Trave secondaria: Gruppo = 2 Elemento = 38 HEB 160 S 235
(Fe 360)

[Verifica] Banca n. 0: Banche generali AMV

$N = 873.70 \text{ daN}$ $T = 161.70 \text{ daN}$

[Bulloni] (Classe 8.8)

n. (lato profilo supportato) = 2 n. (lato profilo supportante) = 1 M14

Disposizione a due bulloni Inc.Foro=1.0

[Squadrette] (S 235 (Fe 360))

L100x50x6 $h = 100$ $A = 30$ $B = 50$ $C = 10$ $D = 50$ (mm)

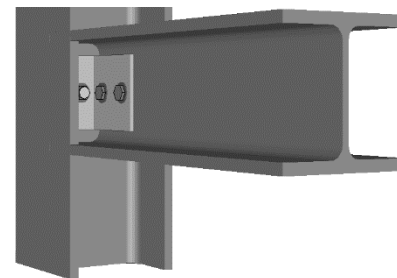
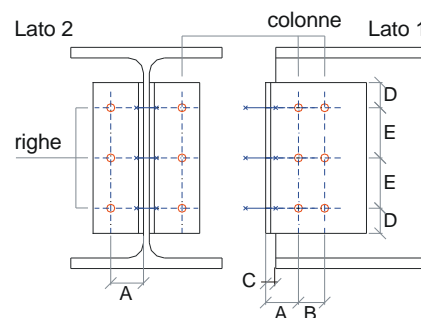
[Resistenza a taglio dei bulloni]

$F_v, R_d, Tot = 4471.2 \text{ daN}$ (trave portata)

I.R. = 0.06

$F_v, R_d, Tot = 4471.2 \text{ daN}$ (trave portante)

I.R. = 0.02



[Rifollamento]

Fb,Rd = 4939.2 daN (squadretta sulla trave portata) I.R. = 0.05

Fb,Rd = 6585.6 daN (trave portata) I.R. = 0.08

Fb,Rd = 4939.2 daN (squadretta sulla trave portante) I.R. = 0.02

Fb,Rd = 8064.0 daN (trave portante) I.R. = 0.01

[Verifica della sezione lorda]

Vpl,Rd = 7753.0 daN (squadretta sul lato della trave portata) I.R. = 0.01

Vpl,Rd = 22793.8 daN (trave portata) I.R. = 0.01

Vpl,Rd = 7753.0 daN (squadretta sul lato della trave portante) I.R. = 0.01

[Verifica della sezione netta]

Vpl,Rd = 8480.1 daN (squadretta sul lato della trave portata) I.R. = 0.01

Vpl,Rd = 27335.9 daN (trave portata) I.R. = 0.01

Vpl,Rd = 8480.1 daN (squadretta sul lato della trave portante) I.R. = 0.01

[Verifica a Block Shear]

Fv,Rd = 7736.5 daN (squadretta sul lato della trave portata) I.R. = 0.01

Fv,Rd = 13966.4 daN (trave portata) I.R. = 0.01

Fv,Rd = 5361.1 daN (squadretta sul lato della trave portante) I.R. = 0.02

[Verifica a momento flettente]

I.R. (squadretta sul lato della trave portata) = 0.04

I.R. (squadretta sul lato della trave portante) = 0.01

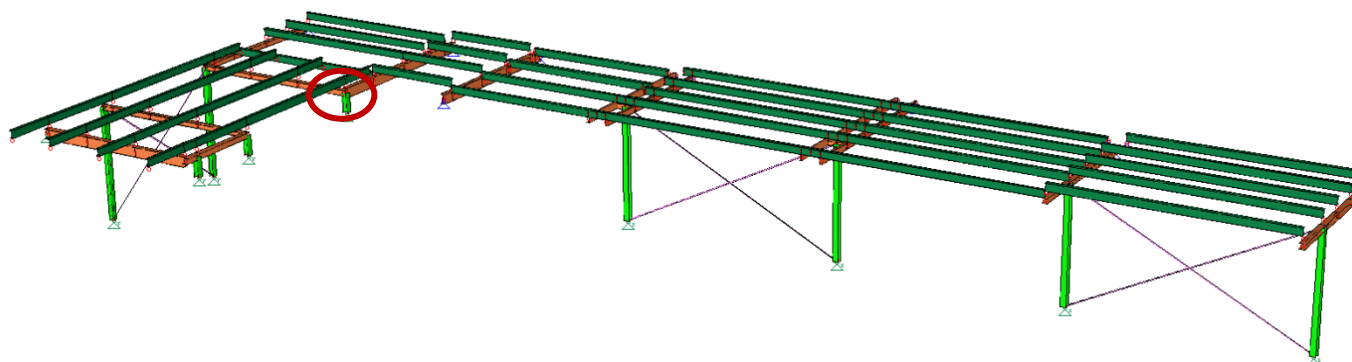
I.R. (trave portata) = 0.01

[Resistenza del nodo]

Modalità di collasso: nessuna, situazione più gravosa [Rifollamento (trave portata)]

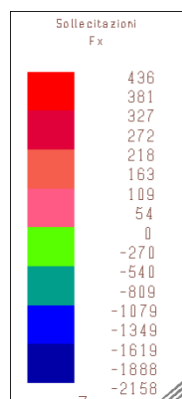
2.1.1. VERIFICA NODO COLONNA - IPE300

Viene verificato il nodo Cerchiato nella immagine sottostante

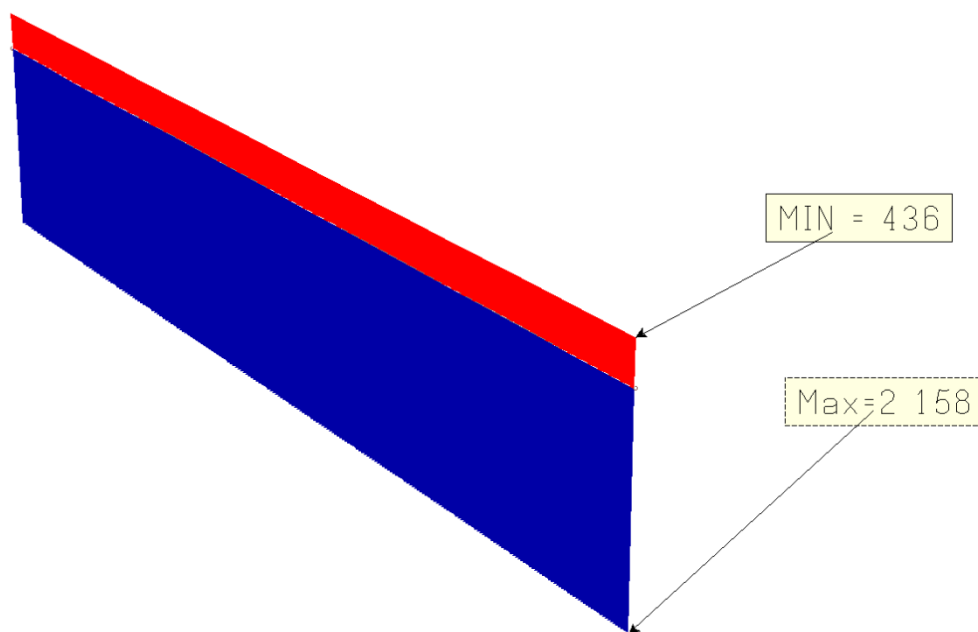


Prospettiva

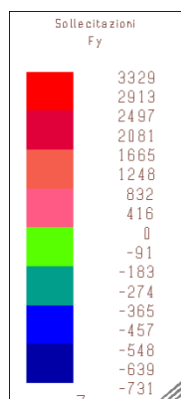
19



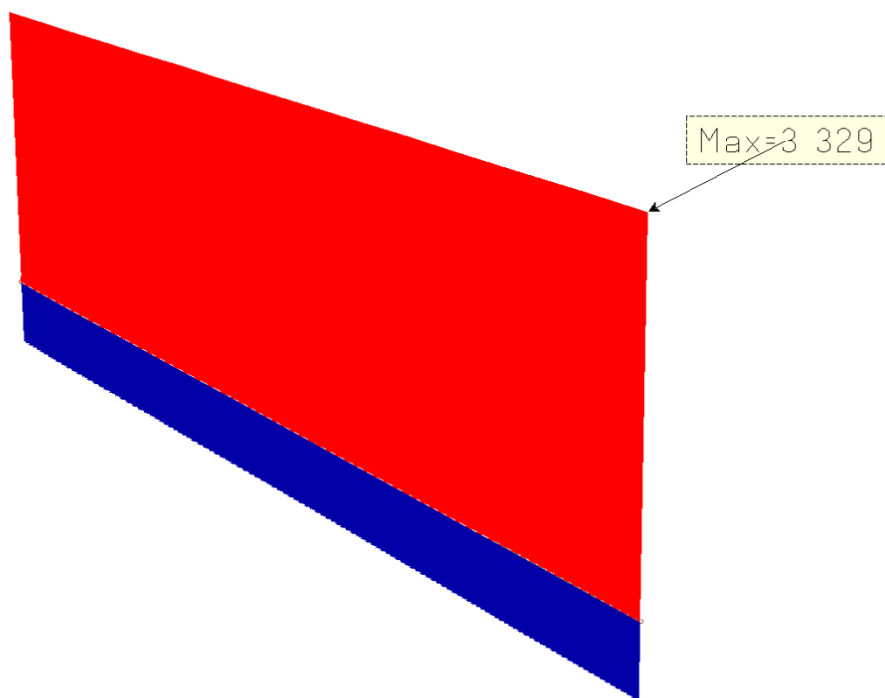
Prospettiva



Sforzo normale

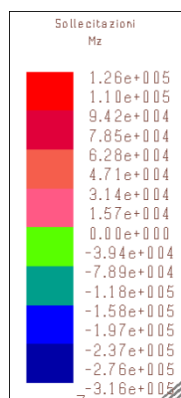


Prospettiva

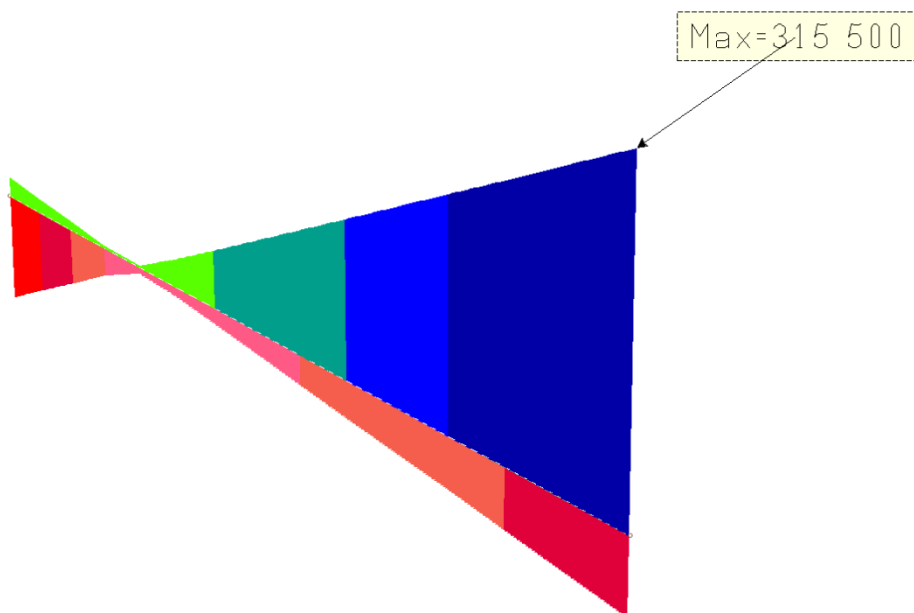


Taglio

20



Prospettiva



Momento flettente

VERIFICA SALDATURA PROFILO IPE300 PIASTRA

Si considera che il taglio sia preso dalla saldatura dell'anima e il momento flettente della saldatura delle ali.

VERIFICA A TAGLIO

| | | |
|------------------|-----------------------|---|
| L | 100 mm | lunghezza cordone |
| a | 3 mm | altezza di gola |
| Sn | 4360 N | |
| V | 33290 N | |
| σ_{\perp} | 5,13753333 N mm | tensione normale agente ortogonalmente all'area di gola |
| T_{\perp} | 5,13753333 N | tensione tangenziale perpendicolare all'asse del cordone di saldatura |
| $T_{ }$ | 39,2267167 N | tensione tangenziale parallelo all'asse del cordone di saldatura |
| f_u | 360 N/mm ² | resistenza nominale a rottura per trazione |
| β_w | 0,8 | fattore di correlazione |
| γ_{Mw} | 1,25 | coefficiente di sicurezza |

$$\sqrt{\sigma_{\perp}^2 + 3 \cdot (\tau_{\perp}^2 + \tau_{||}^2)} < \frac{f_u}{\beta_w \cdot \gamma_{Mw}}$$

$$68,71523 < 360$$

VERIFICATO

$$\sigma_{\perp} < \frac{f_u}{\gamma_{Mw}}$$

$$5,137533 < 288$$

VERIFICATO

VERIFICA A MOMENTO FLETTENTE

$$SN_{max} = MF/300 + SN = 3150000 / 300 + 4360 = 14860 \text{ N}$$

| | | |
|------------------|-----------------------|---|
| L | 100 mm | lunghezza cordone |
| a | 3 mm | altezza di gola |
| Sn | 14860 N | |
| V | 0 N | |
| σ_{\perp} | 17,5100333 N mm | tensione normale agente ortogonalmente all'area di gola |
| T_{\perp} | 17,5100333 N | tensione tangenziale perpendicolare all'asse del cordone di saldatura |
| $T_{ }$ | 0 N | tensione tangenziale parallelo all'asse del cordone di saldatura |
| f_u | 360 N/mm ² | resistenza nominale a rottura per trazione |
| β_w | 0,8 | fattore di correlazione |
| γ_{Mw} | 1,25 | coefficiente di sicurezza |

$$\sqrt{\sigma_{\perp}^2 + 3 \cdot (\tau_{\perp}^2 + \tau_{||}^2)} < \frac{f_u}{\beta_w \cdot \gamma_{Mw}}$$

$$35,02007 < 360$$

VERIFICATO

$$\sigma_{\perp} < \frac{f_u}{\gamma_{Mw}}$$

$$17,51003 < 288$$

VERIFICATO

Le verifiche della saldatura è stata eseguita con un lunghezza della saldatura pari a 10 cm e una altezza di gola pari a 3 mm. Per motivi costruttivi si prolunga la saldatura per tutto il perimetro utile.

VERIFICHE BULLONI

$$\text{Sforzo a trazione bullone} = SN_{\max} = MF/200 + SN = 3150000 / 200 + 4360 = 20110 \text{ N}$$

$$\text{Taglio} = 33290 \text{ N}$$

Bulloneria – classe vite 8.8

| | | | |
|------------------|--|-------------------|-----------------------------------|
| p | 2 | mm | passo della filettatura |
| f _{tb} | 800 | N/mm ² | Resistenza a rottura per trazione |
| A _{res} | 157 | mm ² | Area resistente del bullone |
| d | 14 | mm | Diametro |
| γ _{M7} | 1,1 | | |
| k | 0,7 · f _{ub} · A _s / γ _{M7} | | fattore k |
| F _p | k · d · F _{pC} | 80 kN | Forza di precarico |
| M _s | 224 | N m | Momento di serraggio |

Durante la fase di montaggio delle strutture metalliche il direttore dei lavori dovrà correggere il momento di serraggio del bullone in funzione del valore k che è riportato sulla confezione dei bulloni come prescritto nel C.4.2.8.1.1

4.2.8.1.1

Unioni con bulloni o chiodi soggette a taglio e/o a trazione

| | | |
|-----------------|-------|-------------------|
| f _{tk} | 360 | N/mm ² |
| t _p | 5 | mm |
| γ _{M2} | 1,25 | |
| d _m | 12,70 | mm |
| d ₀ | 14,00 | mm |

$$F_{tRd} = \frac{0,9 f_{tb} A_{res}}{\gamma_{M2}} = 90432 \text{ N}$$

$$B_{pRd} = 0,6 \pi d_m t_p f_{tk} \gamma_{M2} = 53867 \text{ N}$$

$$F_{vRd} = \frac{0,6 f_{tb} A_{res}}{\gamma_{M2}} = 60288 \text{ N}$$

per ogni piano di taglio

| | | | |
|----|-------|---|-----------------------|
| SN | 20110 | N | sforzo normale totale |
| V | 33290 | N | taglio totale |

Numero bulloni 2
Numero sezioni resistenti 1

F_{vSd} 16645 N

F_{tSd} 10055 N

$$\frac{F_{vSd}}{F_{vRd}} + \frac{F_{tSd}}{1,4 \cdot F_{tRd}} \leq 1$$

0,26 < 1

Verificato

Rifollamento

e1 30 mm

p1 30 mm

e2 30 mm

p2 10000 mm

$$\alpha = \min \left\{ \frac{e_1}{3 \cdot d_0}; \frac{p_1}{3 \cdot d_0} - 1/4; \frac{f_{ub}}{f_u}; 1 \right\} \quad 0,46 \text{ a trazione}$$

$$\alpha = \min \left\{ \frac{e_2}{3 \cdot d_0}; \frac{p_2}{3 \cdot d_0} - 1/4; \frac{f_{ub}}{f_u}; 1 \right\} \quad 0,71 \text{ a taglio}$$

$$F_{bRd} = k \alpha f_{tk} d t / \gamma_{M2}$$

23400,00 N

SN

$$F_{bRd} = k \alpha f_{tk} d t / \gamma_{M2}$$

36000,00 N

V

$$\frac{F_{vSd}}{F_{bRd}} \leq 1$$

I.R: V

0,46 < 1

Verificato

$$\frac{F_{tSd}}{F_{bRd}} \leq 1$$

I.R: SN

0,43 < 1

Verificato

2.2. VERIFICA TRAVI PRINCIPALI

7/2
39/2
14/2
15/2
10/2

40/2
6/2
13/2
9/2

55/2
59/2
60/2
61/2
57/2
62/2

51/2
58/2
52/2
53/2
56/2
54/2

42/2
45/2
46/2
8/2
47/2

50/2
49/2
48/2
44/2
43/2

20/2
19/2
18/2
3/2

37/2
41/2
17/2
35/2
24/2
4/2
33/2

23/2
34/2
22/2
16/2
5/2

36/2
32/2
11/2
2/2

1/2
28/2
21/2
25/2
38/2

29/2
26/2
30/2
31/2
27/2

Pianta travatura principale con indicato il codice degli elementi asta

2.2.1. VERIFICA SLU E SLE IPE300

Sezioni
■ 1 Ps IPE 300 ycap-No



Prospettiva

Lavoro: **Blocco 1** Intestazione lavoro: **ESECUTIVO**

Elemento: **TRAVE** Metodo di verifica: **Stati limite**

Gruppo: **2** Descrizione: **Travi principali**

Tabella: **Tabella travi**

Tipo acciaio: **S 235** Beta piano 'yx': **1.000** Beta piano 'zx': **1.000**

ASTA NUM. 33 NI 74 NF 126 Lungh. 134.0 cm SEZ. 1 Ps IPE 300

categoria: p.p. y qy tot.

qy medio: 0.4223 0.4223 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|------|------|-------|------|-------|---------|--------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -2158 | 3329 | 603 | 0 | 474 | -3155 | 40.1 | 1154.3 | 168.9 | 0.0 | 1194.4 | 1 | |
| 5 | 0 | -768 | 872 | 77 | 0 | 82 | -784 | 14.3 | 242.2 | 44.2 | 0.0 | 256.5 | 1 | |
| 6 | 0 | -319 | 878 | 248 | 0 | 274 | -818 | 5.9 | 486.4 | 44.6 | 0.0 | 492.3 | 1 | |
| 7 | 0 | -814 | 872 | 45 | 0 | -38 | -782 | 15.1 | 187.5 | 44.2 | 0.0 | 202.6 | 1 | |
| 8 | 0 | -364 | 878 | 216 | 0 | 154 | -816 | 6.8 | 338.3 | 44.5 | 0.0 | 345.0 | 1 | |
| 9 | 0 | -1527 | 1204 | -73 | 0 | -137 | -1059 | 28.4 | 359.8 | 61.1 | 0.0 | 388.2 | 1 | |
| 10 | 0 | -29 | 1225 | 496 | 0 | 503 | -1172 | 0.5 | 834.7 | 62.2 | 0.0 | 835.3 | 1 | |
| 11 | 0 | -1541 | 1204 | -84 | 0 | -174 | -1058 | 28.6 | 406.5 | 61.1 | 0.0 | 435.1 | 1 | |
| 12 | 0 | 178 | 885 | 427 | 0 | 420 | -857 | 3.3 | 674.8 | 44.9 | 0.0 | 678.1 | 1 | |
| 13 | 0 | -1812 | 2795 | 502 | 0 | 394 | -2640 | 33.7 | 963.4 | 141.8 | 0.0 | 997.1 | 1 | |
| 14 | 0 | 436 | -674 | -148 | 0 | -116 | 695 | 8.1 | 269.3 | 34.2 | 0.0 | 277.4 | 1 | |
| 15 | 0 | -1887 | 2911 | 524 | 0 | 412 | -2752 | 35.1 | 1005.0 | 147.7 | 0.0 | 1040.1 | 1 | |
| 1 | 13 | -2158 | 3322 | 603 | 0 | 393 | -2709 | 40.1 | 974.1 | 168.5 | 0.0 | 1014.2 | 1 | |
| 5 | 13 | -768 | 866 | 77 | 0 | 71 | -667 | 14.3 | 208.6 | 44.0 | 0.0 | 222.8 | 1 | |
| 6 | 13 | -319 | 872 | 248 | 0 | 240 | -701 | 5.9 | 424.2 | 44.3 | 0.0 | 430.1 | 1 | |
| 7 | 13 | -814 | 866 | 45 | 0 | -44 | -666 | 15.1 | 174.1 | 43.9 | 0.0 | 189.2 | 1 | |
| 8 | 13 | -364 | 872 | 216 | 0 | 125 | -699 | 6.8 | 281.3 | 44.3 | 0.0 | 288.0 | 1 | |
| 9 | 13 | -1527 | 1197 | -73 | 0 | -127 | -898 | 28.4 | 318.8 | 60.7 | 0.0 | 347.2 | 1 | |
| 10 | 13 | -29 | 1218 | 496 | 0 | 436 | -1008 | 0.5 | 722.8 | 61.8 | 0.0 | 723.3 | 1 | |
| 11 | 13 | -1541 | 1197 | -84 | 0 | -163 | -897 | 28.6 | 363.7 | 60.7 | 0.0 | 392.3 | 1 | |
| 12 | 13 | 178 | 880 | 427 | 0 | 362 | -738 | 3.3 | 582.4 | 44.6 | 0.0 | 585.8 | 1 | |
| 13 | 13 | -1812 | 2788 | 502 | 0 | 327 | -2266 | 33.7 | 812.8 | 141.5 | 0.0 | 846.5 | 1 | |
| 14 | 13 | 436 | -680 | -148 | 0 | -97 | 604 | 8.1 | 228.5 | 34.5 | 0.0 | 236.6 | 1 | |
| 15 | 13 | -1887 | 2904 | 524 | 0 | 341 | -2362 | 35.1 | 847.9 | 147.3 | 0.0 | 883.0 | 1 | |
| 1 | 27 | -2158 | 3314 | 603 | 0 | 312 | -2265 | 40.1 | 794.0 | 168.2 | 0.0 | 834.1 | 1 | |
| 5 | 27 | -768 | 861 | 77 | 0 | 61 | -552 | 14.3 | 175.0 | 43.7 | 0.0 | 189.3 | 1 | |
| 6 | 27 | -319 | 867 | 248 | 0 | 207 | -584 | 5.9 | 362.1 | 44.0 | 0.0 | 368.0 | 1 | |
| 7 | 27 | -814 | 860 | 45 | 0 | -50 | -550 | 15.1 | 160.8 | 43.7 | 0.0 | 175.9 | 1 | |
| 8 | 27 | -364 | 867 | 216 | 0 | 97 | -583 | 6.8 | 224.4 | 44.0 | 0.0 | 231.2 | 1 | |
| 9 | 27 | -1527 | 1189 | -73 | 0 | -117 | -738 | 28.4 | 277.9 | 60.4 | 0.0 | 306.3 | 1 | |
| 10 | 27 | -29 | 1210 | 496 | 0 | 370 | -846 | 0.5 | 611.0 | 61.4 | 0.0 | 611.5 | 1 | |
| 11 | 27 | -1541 | 1189 | -84 | 0 | -152 | -737 | 28.6 | 321.0 | 60.4 | 0.0 | 349.7 | 1 | |
| 12 | 27 | 178 | 874 | 427 | 0 | 305 | -621 | 3.3 | 490.2 | 44.3 | 0.0 | 493.5 | 1 | |
| 13 | 27 | -1812 | 2780 | 502 | 0 | 260 | -1893 | 33.7 | 662.3 | 141.1 | 0.0 | 696.0 | 1 | |
| 14 | 27 | 436 | -685 | -148 | 0 | -77 | 513 | 8.1 | 187.5 | 34.8 | 0.0 | 195.6 | 1 | |
| 15 | 27 | -1887 | 2896 | 524 | 0 | 271 | -1974 | 35.1 | 691.0 | 147.0 | 0.0 | 726.1 | 1 | |
| 1 | 40 | -2158 | 3307 | 603 | 0 | 231 | -1821 | 40.1 | 614.1 | 167.8 | 0.0 | 654.2 | 1 | |
| 5 | 40 | -768 | 855 | 77 | 0 | 51 | -437 | 14.3 | 141.6 | 43.4 | 0.0 | 155.9 | 1 | |
| 6 | 40 | -319 | 861 | 248 | 0 | 174 | -468 | 5.9 | 300.1 | 43.7 | 0.0 | 306.1 | 1 | |
| 7 | 40 | -814 | 855 | 45 | 0 | -56 | -435 | 15.1 | 147.6 | 43.4 | 0.0 | 162.7 | 1 | |
| 8 | 40 | -364 | 861 | 216 | 0 | 68 | -467 | 6.8 | 167.7 | 43.7 | 0.0 | 174.5 | 1 | |
| 9 | 40 | -1527 | 1182 | -73 | 0 | -107 | -579 | 28.4 | 237.2 | 60.0 | 0.0 | 265.6 | 1 | |
| 10 | 40 | -29 | 1203 | 496 | 0 | 303 | -684 | 0.5 | 499.4 | 61.0 | 0.0 | 499.9 | 1 | |
| 11 | 40 | -1541 | 1182 | -84 | 0 | -141 | -578 | 28.6 | 278.6 | 60.0 | 0.0 | 307.2 | 1 | |
| 12 | 40 | 178 | 868 | 427 | 0 | 248 | -504 | 3.3 | 398.1 | 44.1 | 0.0 | 401.5 | 1 | |
| 13 | 40 | -1812 | 2773 | 502 | 0 | 193 | -1521 | 33.7 | 512.1 | 140.7 | 0.0 | 545.7 | 1 | |
| 14 | 40 | 436 | -691 | -148 | 0 | -57 | 421 | 8.1 | 146.4 | 35.1 | 0.0 | 154.5 | 1 | |
| 15 | 40 | -1887 | 2889 | 524 | 0 | 201 | -1586 | 35.1 | 534.3 | 146.6 | 0.0 | 569.4 | 1 | |
| 1 | 54 | -2158 | 3299 | 603 | 0 | 151 | -1379 | 40.1 | 434.4 | 167.4 | 0.0 | 474.5 | 1 | |
| 5 | 54 | -768 | 849 | 77 | 0 | 41 | -323 | 14.3 | 108.3 | 43.1 | 0.0 | 122.6 | 1 | |
| 6 | 54 | -319 | 855 | 248 | 0 | 141 | -353 | 5.9 | 238.3 | 43.4 | 0.0 | 244.2 | 1 | |
| 7 | 54 | -814 | 849 | 45 | 0 | -62 | -321 | 15.1 | 134.6 | 43.1 | 0.0 | 149.7 | 1 | |
| 8 | 54 | -364 | 855 | 216 | 0 | 39 | -352 | 6.8 | 111.2 | 43.4 | 0.0 | 117.9 | 1 | |
| 9 | 54 | -1527 | 1175 | -73 | 0 | -98 | -421 | 28.4 | 196.7 | 59.6 | 0.0 | 225.1 | 1 | |
| 10 | 54 | -29 | 1196 | 496 | 0 | 237 | -523 | 0.5 | 388.0 | 60.7 | 0.0 | 388.5 | 1 | |
| 11 | 54 | -1541 | 1175 | -84 | 0 | -130 | -420 | 28.6 | 236.3 | 59.6 | 0.0 | 264.9 | 1 | |
| 12 | 54 | 178 | 863 | 427 | 0 | 190 | -388 | 3.3 | 306.2 | 43.8 | 0.0 | 309.5 | 1 | |
| 13 | 54 | -1812 | 2765 | 502 | 0 | 125 | -1150 | 33.7 | 362.0 | 140.3 | 0.0 | 395.6 | 1 | |
| 14 | 54 | 436 | -697 | -148 | 0 | -37 | 328 | 8.1 | 105.2 | 35.3 | 0.0 | 113.3 | 1 | |
| 15 | 54 | -1887 | 2881 | 524 | 0 | 131 | -1200 | 35.1 | 377.8 | 146.2 | 0.0 | 412.9 | 1 | |
| 1 | 67 | -2158 | 3292 | 603 | 0 | 70 | -937 | 40.1 | 254.8 | 167.0 | 0.0 | 303.9 | 3 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-------|------|------|---|------|------|------|-------|-------|-----|-------|---|
| 5 | 67 | -768 | 844 | 77 | 0 | 30 | -209 | 14.3 | 75.2 | 42.8 | 0.0 | 89.5 | 1 |
| 6 | 67 | -319 | 850 | 248 | 0 | 108 | -239 | 5.9 | 176.6 | 43.1 | 0.0 | 182.6 | 1 |
| 7 | 67 | -814 | 843 | 45 | 0 | -68 | -208 | 15.1 | 121.7 | 42.8 | 0.0 | 136.8 | 1 |
| 8 | 67 | -364 | 850 | 216 | 0 | 10 | -238 | 6.8 | 54.7 | 43.1 | 0.0 | 76.3 | 3 |
| 9 | 67 | -1527 | 1168 | -73 | 0 | -88 | -264 | 28.4 | 156.4 | 59.2 | 0.0 | 184.8 | 1 |
| 10 | 67 | -29 | 1189 | 496 | 0 | 170 | -363 | 0.5 | 276.7 | 60.3 | 0.0 | 277.3 | 1 |
| 11 | 67 | -1541 | 1168 | -84 | 0 | -118 | -263 | 28.6 | 194.2 | 59.2 | 0.0 | 222.8 | 1 |
| 12 | 67 | 178 | 857 | 427 | 0 | 133 | -273 | 3.3 | 214.4 | 43.5 | 0.0 | 217.7 | 1 |
| 13 | 67 | -1812 | 2758 | 502 | 0 | 58 | -780 | 33.7 | 212.0 | 140.0 | 0.0 | 254.0 | 3 |
| 14 | 67 | 436 | -702 | -148 | 0 | -18 | 234 | 8.1 | 63.8 | 35.6 | 0.0 | 71.9 | 1 |
| 15 | 67 | -1887 | 2874 | 524 | 0 | 61 | -814 | 35.1 | 221.5 | 145.8 | 0.0 | 264.9 | 3 |
| | | | | | | | | | | | | | |
| 1 | 80 | -2158 | 3285 | 603 | 0 | -11 | -497 | 40.1 | 102.8 | 166.7 | 0.0 | 291.5 | 4 |
| 5 | 80 | -768 | 838 | 77 | 0 | 20 | -96 | 14.3 | 42.2 | 42.5 | 0.0 | 75.3 | 4 |
| 6 | 80 | -319 | 844 | 248 | 0 | 75 | -125 | 5.9 | 115.1 | 42.8 | 0.0 | 121.0 | 1 |
| 7 | 80 | -814 | 838 | 45 | 0 | -74 | -95 | 15.1 | 108.9 | 42.5 | 0.0 | 124.1 | 1 |
| 8 | 80 | -364 | 844 | 216 | 0 | -19 | -124 | 6.8 | 46.2 | 42.8 | 0.0 | 74.6 | 4 |
| 9 | 80 | -1527 | 1160 | -73 | 0 | -78 | -108 | 28.4 | 116.2 | 58.9 | 0.0 | 144.6 | 1 |
| 10 | 80 | -29 | 1181 | 496 | 0 | 104 | -205 | 0.5 | 165.7 | 59.9 | 0.0 | 166.2 | 1 |
| 11 | 80 | -1541 | 1160 | -84 | 0 | -107 | -107 | 28.6 | 152.3 | 58.9 | 0.0 | 180.9 | 1 |
| 12 | 80 | 178 | 851 | 427 | 0 | 76 | -159 | 3.3 | 122.7 | 43.2 | 0.0 | 126.0 | 1 |
| 13 | 80 | -1812 | 2751 | 502 | 0 | -9 | -411 | 33.7 | 85.1 | 139.6 | 0.0 | 244.2 | 4 |
| 14 | 80 | 436 | -708 | -148 | 0 | 2 | 139 | 8.1 | 27.7 | 35.9 | 0.0 | 62.8 | 4 |
| 15 | 80 | -1887 | 2867 | 524 | 0 | -10 | -430 | 35.1 | 88.9 | 145.5 | 0.0 | 254.5 | 4 |
| | | | | | | | | | | | | | |
| 1 | 94 | -2158 | 3277 | 603 | 0 | -92 | -57 | 40.1 | 124.2 | 166.3 | 0.0 | 291.6 | 4 |
| 5 | 94 | -768 | 832 | 77 | 0 | 10 | 15 | 14.3 | 14.9 | 42.2 | 0.0 | 74.6 | 4 |
| 6 | 94 | -319 | 838 | 248 | 0 | 41 | -13 | 5.9 | 53.7 | 42.5 | 0.0 | 74.2 | 4 |
| 7 | 94 | -814 | 832 | 45 | 0 | -80 | 17 | 15.1 | 102.3 | 42.2 | 0.0 | 117.4 | 1 |
| 8 | 94 | -364 | 838 | 216 | 0 | -48 | -12 | 6.8 | 61.9 | 42.5 | 0.0 | 74.3 | 4 |
| 9 | 94 | -1527 | 1153 | -73 | 0 | -68 | 47 | 28.4 | 93.1 | 58.5 | 0.0 | 121.5 | 1 |
| 10 | 94 | -29 | 1174 | 496 | 0 | 37 | -47 | 0.5 | 54.8 | 59.6 | 0.0 | 103.2 | 4 |
| 11 | 94 | -1541 | 1153 | -84 | 0 | -96 | 48 | 28.6 | 127.6 | 58.5 | 0.0 | 156.2 | 1 |
| 12 | 94 | 178 | 846 | 427 | 0 | 19 | -45 | 3.3 | 31.2 | 42.9 | 0.0 | 74.4 | 4 |
| 13 | 94 | -1812 | 2743 | 502 | 0 | -76 | -42 | 33.7 | 102.5 | 139.2 | 0.0 | 244.1 | 4 |
| 14 | 94 | 436 | -714 | -148 | 0 | 22 | 44 | 8.1 | 35.2 | 36.2 | 0.0 | 63.4 | 4 |
| 15 | 94 | -1887 | 2859 | 524 | 0 | -80 | -46 | 35.1 | 107.2 | 145.1 | 0.0 | 254.4 | 4 |
| | | | | | | | | | | | | | |
| 1 | 107 | -2158 | 3270 | 603 | 0 | -173 | 382 | 40.1 | 282.7 | 165.9 | 0.0 | 322.8 | 1 |
| 5 | 107 | -768 | 827 | 77 | 0 | -1 | 127 | 14.3 | 23.4 | 41.9 | 0.0 | 74.0 | 4 |
| 6 | 107 | -319 | 833 | 248 | 0 | 8 | 99 | 5.9 | 28.0 | 42.3 | 0.0 | 73.5 | 4 |
| 7 | 107 | -814 | 826 | 45 | 0 | -86 | 128 | 15.1 | 129.7 | 41.9 | 0.0 | 144.8 | 1 |
| 8 | 107 | -364 | 833 | 216 | 0 | -77 | 100 | 6.8 | 113.8 | 42.2 | 0.0 | 120.5 | 1 |
| 9 | 107 | -1527 | 1146 | -73 | 0 | -58 | 201 | 28.4 | 108.6 | 58.1 | 0.0 | 137.0 | 1 |
| 10 | 107 | -29 | 1167 | 496 | 0 | -29 | 110 | 0.5 | 55.9 | 59.2 | 0.0 | 102.6 | 4 |
| 11 | 107 | -1541 | 1146 | -84 | 0 | -85 | 201 | 28.6 | 141.3 | 58.1 | 0.0 | 169.9 | 1 |
| 12 | 107 | 178 | 840 | 427 | 0 | -39 | 68 | 3.3 | 60.2 | 42.6 | 0.0 | 74.0 | 4 |
| 13 | 107 | -1812 | 2736 | 502 | 0 | -144 | 325 | 33.7 | 236.6 | 138.8 | 0.0 | 270.3 | 1 |
| 14 | 107 | 436 | -719 | -148 | 0 | 42 | -52 | 8.1 | 61.1 | 36.5 | 0.0 | 69.2 | 1 |
| 15 | 107 | -1887 | 2852 | 524 | 0 | -150 | 337 | 35.1 | 246.5 | 144.7 | 0.0 | 281.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 121 | -2158 | 3262 | 603 | 0 | -253 | 819 | 40.1 | 461.5 | 165.5 | 0.0 | 501.7 | 1 |
| 5 | 121 | -768 | 821 | 77 | 0 | -11 | 237 | 14.3 | 56.0 | 41.7 | 0.0 | 78.1 | 3 |
| 6 | 121 | -319 | 827 | 248 | 0 | -25 | 210 | 5.9 | 68.7 | 42.0 | 0.0 | 74.7 | 1 |
| 7 | 121 | -814 | 821 | 45 | 0 | -92 | 238 | 15.1 | 157.0 | 41.6 | 0.0 | 172.1 | 1 |
| 8 | 121 | -364 | 827 | 216 | 0 | -106 | 212 | 6.8 | 169.7 | 42.0 | 0.0 | 176.4 | 1 |
| 9 | 121 | -1527 | 1138 | -73 | 0 | -49 | 354 | 28.4 | 123.9 | 57.8 | 0.0 | 152.3 | 1 |
| 10 | 121 | -29 | 1159 | 496 | 0 | -96 | 266 | 0.5 | 166.4 | 58.8 | 0.0 | 167.0 | 1 |
| 11 | 121 | -1541 | 1138 | -84 | 0 | -73 | 354 | 28.6 | 154.8 | 57.8 | 0.0 | 183.5 | 1 |
| 12 | 121 | 178 | 834 | 427 | 0 | -96 | 180 | 3.3 | 151.5 | 42.3 | 0.0 | 154.8 | 1 |
| 13 | 121 | -1812 | 2728 | 502 | 0 | -211 | 691 | 33.7 | 385.9 | 138.4 | 0.0 | 419.5 | 1 |
| 14 | 121 | 436 | -725 | -148 | 0 | 61 | -149 | 8.1 | 103.0 | 36.8 | 0.0 | 111.1 | 1 |
| 15 | 121 | -1887 | 2844 | 524 | 0 | -220 | 718 | 35.1 | 402.2 | 144.3 | 0.0 | 437.2 | 1 |
| | | | | | | | | | | | | | |
| 1 | 134 | -2158 | 3255 | 603 | 0 | -334 | 1256 | 40.1 | 640.2 | 165.2 | 0.0 | 680.3 | 1 |
| 5 | 134 | -768 | 815 | 77 | 0 | -21 | 347 | 14.3 | 88.5 | 41.4 | 0.0 | 102.7 | 1 |
| 6 | 134 | -319 | 822 | 248 | 0 | -58 | 321 | 5.9 | 129.7 | 41.7 | 0.0 | 135.7 | 1 |
| 7 | 134 | -814 | 815 | 45 | 0 | -98 | 348 | 15.1 | 184.1 | 41.4 | 0.0 | 199.3 | 1 |
| 8 | 134 | -364 | 821 | 216 | 0 | -135 | 322 | 6.8 | 225.4 | 41.7 | 0.0 | 232.2 | 1 |
| 9 | 134 | -1527 | 1131 | -73 | 0 | -39 | 506 | 28.4 | 139.1 | 57.4 | 0.0 | 167.5 | 1 |
| 10 | 134 | -29 | 1152 | 496 | 0 | -162 | 421 | 0.5 | 276.8 | 58.5 | 0.0 | 277.3 | 1 |
| 11 | 134 | -1541 | 1131 | -84 | 0 | -62 | 507 | 28.6 | 168.2 | 57.4 | 0.0 | 196.8 | 1 |
| 12 | 134 | 178 | 829 | 427 | 0 | -153 | 292 | 3.3 | 242.6 | 42.0 | 0.0 | 245.9 | 1 |
| 13 | 134 | -1812 | 2721 | 502 | 0 | -278 | 1056 | 33.7 | 534.9 | 138.1 | 0.0 | 568.6 | 1 |
| 14 | 134 | 436 | -731 | -148 | 0 | 81 | -246 | 8.1 | 145.1 | 37.1 | 0.0 | 153.2 | 1 |
| 15 | 134 | -1887 | 2837 | 524 | 0 | -290 | 1099 | 35.1 | 557.6 | 144.0 | 0.0 | 592.7 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|------|--------|-------|---------------------|---------|------|----------|------|
| | | cm | daN*m | daN/cm ² | cm | | | |
| 1 | -- | 134 | 1256 | 225.5 | -- | -- | -- | |

| | | | | | | | |
|----|---------|----|---|----|----|------|-----------|
| -- | Rara | 50 | 5 | -- | 59 | 0.00 | 1 / 99999 |
| -- | Freq. | 50 | 5 | -- | 59 | 0.00 | 1 / 99999 |
| -- | Q.Perm. | 50 | 5 | -- | 59 | 0.00 | 1 / 99999 |
| -- | Rara | 50 | 5 | -- | 59 | 0.00 | 1 / 99999 |
| -- | Rara | 50 | 5 | -- | 59 | 0.00 | 1 / 99999 |
| -- | Freq. | 50 | 5 | -- | 59 | 0.00 | 1 / 99999 |
| -- | Freq. | 50 | 5 | -- | 59 | 0.00 | 1 / 99999 |

ASTA NUM. 4 NI 126 NF 61 Lungh. 155.0 cm SEZ. 1 Ps IPE 300

categoria: p.p. y qy tot.

qy medio: 0.4223 0.4223 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf(Fx) | Sf(M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|------|------|-------|------|------|--------|-------|--------|-------|--------|------|------|
| -- | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -2157 | 1919 | -244 | 0 | -334 | 1257 | 40.1 | 640.4 | 97.4 | 0.0 | 680.5 | 1 | |
| 5 | 0 | -842 | 483 | 125 | 0 | -21 | 347 | 15.6 | 88.5 | 24.5 | 0.0 | 104.1 | 1 | |
| 6 | 0 | -243 | 490 | 95 | 0 | -58 | 321 | 4.5 | 129.8 | 24.8 | 0.0 | 134.3 | 1 | |
| 7 | 0 | -889 | 483 | -198 | 0 | -98 | 348 | 16.5 | 184.2 | 24.5 | 0.0 | 200.7 | 1 | |
| 8 | 0 | -289 | 489 | -229 | 0 | -135 | 322 | 5.4 | 225.5 | 24.8 | 0.0 | 230.9 | 1 | |
| 9 | 0 | -1775 | 667 | 22 | 0 | -39 | 506 | 33.0 | 139.1 | 33.9 | 0.0 | 172.1 | 1 | |
| 10 | 0 | 221 | 688 | -81 | 0 | -162 | 421 | 4.1 | 276.8 | 34.9 | 0.0 | 280.9 | 1 | |
| 11 | 0 | -1789 | 667 | -78 | 0 | -62 | 507 | 33.3 | 168.2 | 33.9 | 0.0 | 201.5 | 1 | |
| 12 | 0 | 427 | 497 | -157 | 0 | -153 | 292 | 7.9 | 242.6 | 25.2 | 0.0 | 250.6 | 1 | |
| 13 | 0 | -1811 | 1605 | -203 | 0 | -278 | 1056 | 33.7 | 534.9 | 81.4 | 0.0 | 568.5 | 1 | |
| 14 | 0 | 436 | -423 | 57 | 0 | 81 | -246 | 8.1 | 145.1 | 21.5 | 0.0 | 153.2 | 1 | |
| 15 | 0 | -1886 | 1674 | -212 | 0 | -290 | 1100 | 35.1 | 557.8 | 84.9 | 0.0 | 592.9 | 1 | |
| 1 | 16 | -2157 | 1911 | -244 | 0 | -296 | 1554 | 40.1 | 646.7 | 96.9 | 0.0 | 686.8 | 1 | |
| 5 | 16 | -842 | 477 | 125 | 0 | -41 | 421 | 15.6 | 126.0 | 24.2 | 0.0 | 141.6 | 1 | |
| 6 | 16 | -243 | 483 | 95 | 0 | -73 | 396 | 4.5 | 161.5 | 24.5 | 0.0 | 166.0 | 1 | |
| 7 | 16 | -889 | 477 | -198 | 0 | -67 | 422 | 16.5 | 159.5 | 24.2 | 0.0 | 176.0 | 1 | |
| 8 | 16 | -289 | 483 | -229 | 0 | -100 | 398 | 5.4 | 195.0 | 24.5 | 0.0 | 200.4 | 1 | |
| 9 | 16 | -1775 | 659 | 22 | 0 | -42 | 609 | 33.0 | 161.8 | 33.4 | 0.0 | 194.8 | 1 | |
| 10 | 16 | 221 | 680 | -81 | 0 | -150 | 527 | 4.1 | 280.3 | 34.5 | 0.0 | 284.4 | 1 | |
| 11 | 16 | -1789 | 659 | -78 | 0 | -50 | 610 | 33.3 | 171.8 | 33.4 | 0.0 | 205.0 | 1 | |
| 12 | 16 | 427 | 490 | -157 | 0 | -129 | 368 | 7.9 | 226.2 | 24.9 | 0.0 | 234.2 | 1 | |
| 13 | 16 | -1811 | 1597 | -203 | 0 | -247 | 1304 | 33.7 | 540.4 | 81.0 | 0.0 | 574.0 | 1 | |
| 14 | 16 | 436 | -430 | 57 | 0 | 72 | -312 | 8.1 | 145.9 | 21.8 | 0.0 | 154.0 | 1 | |
| 15 | 16 | -1886 | 1665 | -212 | 0 | -257 | 1359 | 35.1 | 563.5 | 84.5 | 0.0 | 598.5 | 1 | |
| 1 | 31 | -2157 | 1902 | -244 | 0 | -258 | 1849 | 40.1 | 652.8 | 96.5 | 0.0 | 692.9 | 1 | |
| 5 | 31 | -842 | 470 | 125 | 0 | -60 | 495 | 15.6 | 163.3 | 23.9 | 0.0 | 178.9 | 1 | |
| 6 | 31 | -243 | 477 | 95 | 0 | -87 | 471 | 4.5 | 193.1 | 24.2 | 0.0 | 197.6 | 1 | |
| 7 | 31 | -889 | 470 | -198 | 0 | -37 | 496 | 16.5 | 134.6 | 23.9 | 0.0 | 151.1 | 1 | |
| 8 | 31 | -289 | 476 | -229 | 0 | -64 | 472 | 5.4 | 164.4 | 24.2 | 0.0 | 169.7 | 1 | |
| 9 | 31 | -1775 | 650 | 22 | 0 | -46 | 711 | 33.0 | 184.2 | 33.0 | 0.0 | 217.2 | 1 | |
| 10 | 31 | 221 | 671 | -81 | 0 | -137 | 632 | 4.1 | 283.6 | 34.1 | 0.0 | 287.7 | 1 | |
| 11 | 31 | -1789 | 650 | -78 | 0 | -38 | 711 | 33.3 | 175.0 | 33.0 | 0.0 | 208.3 | 1 | |
| 12 | 31 | 427 | 484 | -157 | 0 | -105 | 444 | 7.9 | 209.6 | 24.5 | 0.0 | 217.6 | 1 | |
| 13 | 31 | -1811 | 1588 | -203 | 0 | -215 | 1551 | 33.7 | 545.6 | 80.6 | 0.0 | 579.3 | 1 | |
| 14 | 31 | 436 | -436 | 57 | 0 | 63 | -379 | 8.1 | 146.9 | 22.1 | 0.0 | 155.0 | 1 | |
| 15 | 31 | -1886 | 1657 | -212 | 0 | -225 | 1616 | 35.1 | 568.9 | 84.1 | 0.0 | 604.0 | 1 | |
| 1 | 47 | -2157 | 1894 | -244 | 0 | -221 | 2143 | 40.1 | 658.7 | 96.1 | 0.0 | 698.8 | 1 | |
| 5 | 47 | -842 | 464 | 125 | 0 | -79 | 567 | 15.6 | 200.4 | 23.5 | 0.0 | 216.1 | 1 | |
| 6 | 47 | -243 | 470 | 95 | 0 | -102 | 544 | 4.5 | 224.4 | 23.8 | 0.0 | 228.9 | 1 | |
| 7 | 47 | -889 | 463 | -198 | 0 | -6 | 568 | 16.5 | 109.5 | 23.5 | 0.0 | 126.0 | 1 | |
| 8 | 47 | -289 | 470 | -229 | 0 | -29 | 545 | 5.4 | 133.5 | 23.8 | 0.0 | 138.9 | 1 | |
| 9 | 47 | -1775 | 642 | 22 | 0 | -49 | 811 | 33.0 | 206.4 | 32.6 | 0.0 | 239.4 | 1 | |
| 10 | 47 | 221 | 663 | -81 | 0 | -125 | 735 | 4.1 | 286.6 | 33.6 | 0.0 | 290.7 | 1 | |
| 11 | 47 | -1789 | 642 | -78 | 0 | -26 | 811 | 33.3 | 178.1 | 32.6 | 0.0 | 211.3 | 1 | |
| 12 | 47 | 427 | 477 | -157 | 0 | -80 | 518 | 7.9 | 192.9 | 24.2 | 0.0 | 200.8 | 1 | |
| 13 | 47 | -1811 | 1580 | -203 | 0 | -184 | 1797 | 33.7 | 550.6 | 80.1 | 0.0 | 584.3 | 1 | |
| 14 | 47 | 436 | -443 | 57 | 0 | 55 | -448 | 8.1 | 148.2 | 22.5 | 0.0 | 156.2 | 1 | |
| 15 | 47 | -1886 | 1648 | -212 | 0 | -192 | 1872 | 35.1 | 574.1 | 83.6 | 0.0 | 609.1 | 1 | |
| 1 | 62 | -2157 | 1885 | -244 | 0 | -183 | 2436 | 40.1 | 664.4 | 95.7 | 0.0 | 704.5 | 1 | |
| 5 | 62 | -842 | 457 | 125 | 0 | -99 | 638 | 15.6 | 237.4 | 23.2 | 0.0 | 253.0 | 1 | |
| 6 | 62 | -243 | 463 | 95 | 0 | -117 | 616 | 4.5 | 255.6 | 23.5 | 0.0 | 260.1 | 1 | |
| 7 | 62 | -889 | 457 | -198 | 0 | 25 | 639 | 16.5 | 145.3 | 23.2 | 0.0 | 161.8 | 1 | |
| 8 | 62 | -289 | 463 | -229 | 0 | 7 | 617 | 5.4 | 119.2 | 23.5 | 0.0 | 124.6 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-------|------|------|---|------|------|------|-------|------|-----|-------|---|
| 9 | 62 | -1775 | 633 | 22 | 0 | -52 | 910 | 33.0 | 228.4 | 32.1 | 0.0 | 261.4 | 1 |
| 10 | 62 | 221 | 654 | -81 | 0 | -112 | 837 | 4.1 | 289.4 | 33.2 | 0.0 | 293.5 | 1 |
| 11 | 62 | -1789 | 633 | -78 | 0 | -14 | 910 | 33.3 | 180.9 | 32.1 | 0.0 | 214.1 | 1 |
| 12 | 62 | 427 | 471 | -157 | 0 | -56 | 592 | 7.9 | 175.9 | 23.9 | 0.0 | 183.9 | 1 |
| 13 | 62 | -1811 | 1571 | -203 | 0 | -152 | 2041 | 33.7 | 555.4 | 79.7 | 0.0 | 589.0 | 1 |
| 14 | 62 | 436 | -449 | 57 | 0 | 46 | -517 | 8.1 | 149.5 | 22.8 | 0.0 | 157.6 | 1 |
| 15 | 62 | -1886 | 1640 | -212 | 0 | -159 | 2127 | 35.1 | 579.0 | 83.2 | 0.0 | 614.1 | 1 |
| | | | | | | | | | | | | | |
| 1 | 78 | -2157 | 1877 | -244 | 0 | -145 | 2727 | 40.1 | 669.8 | 95.2 | 0.0 | 709.9 | 1 |
| 5 | 78 | -842 | 451 | 125 | 0 | -118 | 709 | 15.6 | 274.1 | 22.9 | 0.0 | 289.8 | 1 |
| 6 | 78 | -243 | 457 | 95 | 0 | -131 | 688 | 4.5 | 286.6 | 23.2 | 0.0 | 291.1 | 1 |
| 7 | 78 | -889 | 450 | -198 | 0 | 55 | 710 | 16.5 | 196.0 | 22.9 | 0.0 | 212.5 | 1 |
| 8 | 78 | -289 | 457 | -229 | 0 | 42 | 689 | 5.4 | 176.0 | 23.2 | 0.0 | 181.4 | 1 |
| 9 | 78 | -1775 | 625 | 22 | 0 | -56 | 1007 | 33.0 | 250.1 | 31.7 | 0.0 | 283.1 | 1 |
| 10 | 78 | 221 | 646 | -81 | 0 | -99 | 938 | 4.1 | 291.9 | 32.8 | 0.0 | 296.0 | 1 |
| 11 | 78 | -1789 | 625 | -78 | 0 | -2 | 1007 | 33.3 | 183.4 | 31.7 | 0.0 | 216.7 | 1 |
| 12 | 78 | 427 | 464 | -157 | 0 | -32 | 664 | 7.9 | 158.8 | 23.5 | 0.0 | 166.7 | 1 |
| 13 | 78 | -1811 | 1563 | -203 | 0 | -121 | 2284 | 33.7 | 559.9 | 79.3 | 0.0 | 593.6 | 1 |
| 14 | 78 | 436 | -456 | 57 | 0 | 37 | -587 | 8.1 | 151.1 | 23.1 | 0.0 | 159.2 | 1 |
| 15 | 78 | -1886 | 1631 | -212 | 0 | -126 | 2380 | 35.1 | 583.8 | 82.8 | 0.0 | 618.8 | 1 |
| | | | | | | | | | | | | | |
| 1 | 93 | -2157 | 1868 | -244 | 0 | -107 | 3018 | 40.1 | 674.9 | 94.8 | 0.0 | 715.0 | 1 |
| 5 | 93 | -842 | 444 | 125 | 0 | -138 | 778 | 15.6 | 310.7 | 22.5 | 0.0 | 326.3 | 1 |
| 6 | 93 | -243 | 450 | 95 | 0 | -146 | 758 | 4.5 | 317.4 | 22.8 | 0.0 | 322.0 | 1 |
| 7 | 93 | -889 | 444 | -198 | 0 | 86 | 779 | 16.5 | 246.5 | 22.5 | 0.0 | 263.0 | 1 |
| 8 | 93 | -289 | 450 | -229 | 0 | 78 | 759 | 5.4 | 232.6 | 22.8 | 0.0 | 238.0 | 1 |
| 9 | 93 | -1775 | 616 | 22 | 0 | -59 | 1103 | 33.0 | 271.6 | 31.3 | 0.0 | 304.6 | 1 |
| 10 | 93 | 221 | 637 | -81 | 0 | -87 | 1037 | 4.1 | 294.2 | 32.3 | 0.0 | 298.3 | 1 |
| 11 | 93 | -1789 | 616 | -78 | 0 | 10 | 1104 | 33.3 | 210.4 | 31.3 | 0.0 | 243.7 | 1 |
| 12 | 93 | 427 | 457 | -157 | 0 | -8 | 736 | 7.9 | 141.5 | 23.2 | 0.0 | 149.4 | 1 |
| 13 | 93 | -1811 | 1554 | -203 | 0 | -89 | 2526 | 33.7 | 564.2 | 78.9 | 0.0 | 597.8 | 1 |
| 14 | 93 | 436 | -462 | 57 | 0 | 28 | -658 | 8.1 | 152.9 | 23.5 | 0.0 | 161.0 | 1 |
| 15 | 93 | -1886 | 1622 | -212 | 0 | -93 | 2633 | 35.1 | 588.2 | 82.3 | 0.0 | 623.3 | 1 |
| | | | | | | | | | | | | | |
| 1 | 109 | -2157 | 1860 | -244 | 0 | -70 | 3306 | 40.1 | 679.9 | 94.4 | 0.0 | 720.0 | 1 |
| 5 | 109 | -842 | 438 | 125 | 0 | -157 | 846 | 15.6 | 347.1 | 22.2 | 0.0 | 362.7 | 1 |
| 6 | 109 | -243 | 444 | 95 | 0 | -161 | 827 | 4.5 | 348.1 | 22.5 | 0.0 | 352.6 | 1 |
| 7 | 109 | -889 | 437 | -198 | 0 | 117 | 847 | 16.5 | 296.8 | 22.2 | 0.0 | 313.3 | 1 |
| 8 | 109 | -289 | 444 | -229 | 0 | 113 | 828 | 5.4 | 289.0 | 22.5 | 0.0 | 294.4 | 1 |
| 9 | 109 | -1775 | 608 | 22 | 0 | -63 | 1198 | 33.0 | 292.8 | 30.8 | 0.0 | 325.8 | 1 |
| 10 | 109 | 221 | 629 | -81 | 0 | -74 | 1136 | 4.1 | 296.3 | 31.9 | 0.0 | 300.4 | 1 |
| 11 | 109 | -1789 | 608 | -78 | 0 | 22 | 1198 | 33.3 | 242.4 | 30.8 | 0.0 | 275.6 | 1 |
| 12 | 109 | 427 | 451 | -157 | 0 | 17 | 806 | 7.9 | 165.4 | 22.9 | 0.0 | 173.3 | 1 |
| 13 | 109 | -1811 | 1546 | -203 | 0 | -58 | 2766 | 33.7 | 568.2 | 78.4 | 0.0 | 601.9 | 1 |
| 14 | 109 | 436 | -469 | 57 | 0 | 19 | -730 | 8.1 | 154.8 | 23.8 | 0.0 | 162.9 | 1 |
| 15 | 109 | -1886 | 1614 | -212 | 0 | -60 | 2883 | 35.1 | 592.5 | 81.9 | 0.0 | 627.5 | 1 |
| | | | | | | | | | | | | | |
| 1 | 124 | -2157 | 1851 | -244 | 0 | -32 | 3594 | 40.1 | 684.6 | 93.9 | 0.0 | 724.6 | 1 |
| 5 | 124 | -842 | 431 | 125 | 0 | -177 | 913 | 15.6 | 383.3 | 21.9 | 0.0 | 398.9 | 1 |
| 6 | 124 | -243 | 437 | 95 | 0 | -175 | 896 | 4.5 | 378.5 | 22.2 | 0.0 | 383.0 | 1 |
| 7 | 124 | -889 | 431 | -198 | 0 | 147 | 914 | 16.5 | 346.9 | 21.9 | 0.0 | 363.5 | 1 |
| 8 | 124 | -289 | 437 | -229 | 0 | 148 | 897 | 5.4 | 345.3 | 22.2 | 0.0 | 350.6 | 1 |
| 9 | 124 | -1775 | 599 | 22 | 0 | -66 | 1292 | 33.0 | 313.8 | 30.4 | 0.0 | 346.8 | 1 |
| 10 | 124 | 221 | 620 | -81 | 0 | -62 | 1232 | 4.1 | 298.1 | 31.5 | 0.0 | 302.2 | 1 |
| 11 | 124 | -1789 | 599 | -78 | 0 | 34 | 1292 | 33.3 | 274.1 | 30.4 | 0.0 | 307.4 | 1 |
| 12 | 124 | 427 | 444 | -157 | 0 | 41 | 875 | 7.9 | 207.9 | 22.5 | 0.0 | 215.9 | 1 |
| 13 | 124 | -1811 | 1537 | -203 | 0 | -26 | 3005 | 33.7 | 572.1 | 78.0 | 0.0 | 605.7 | 1 |
| 14 | 124 | 436 | -476 | 57 | 0 | 10 | -803 | 8.1 | 156.9 | 24.1 | 0.0 | 165.0 | 1 |
| 15 | 124 | -1886 | 1605 | -212 | 0 | -27 | 3133 | 35.1 | 596.5 | 81.5 | 0.0 | 631.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 140 | -2157 | 1843 | -244 | 0 | 6 | 3880 | 40.1 | 704.0 | 93.5 | 0.0 | 744.1 | 1 |
| 5 | 140 | -842 | 424 | 125 | 0 | -196 | 980 | 15.6 | 419.3 | 21.5 | 0.0 | 435.0 | 1 |
| 6 | 140 | -243 | 431 | 95 | 0 | -190 | 963 | 4.5 | 408.8 | 21.9 | 0.0 | 413.3 | 1 |
| 7 | 140 | -889 | 424 | -198 | 0 | 178 | 981 | 16.5 | 396.9 | 21.5 | 0.0 | 413.4 | 1 |
| 8 | 140 | -289 | 430 | -229 | 0 | 184 | 964 | 5.4 | 401.3 | 21.8 | 0.0 | 406.7 | 1 |
| 9 | 140 | -1775 | 591 | 22 | 0 | -69 | 1384 | 33.0 | 334.6 | 30.0 | 0.0 | 367.6 | 1 |
| 10 | 140 | 221 | 612 | -81 | 0 | -49 | 1328 | 4.1 | 299.7 | 31.0 | 0.0 | 303.8 | 1 |
| 11 | 140 | -1789 | 591 | -78 | 0 | 46 | 1384 | 33.3 | 305.6 | 30.0 | 0.0 | 338.8 | 1 |
| 12 | 140 | 427 | 438 | -157 | 0 | 65 | 944 | 7.9 | 250.4 | 22.2 | 0.0 | 258.3 | 1 |
| 13 | 140 | -1811 | 1529 | -203 | 0 | 5 | 3243 | 33.7 | 588.6 | 77.6 | 0.0 | 622.2 | 1 |
| 14 | 140 | 436 | -482 | 57 | 0 | 1 | -878 | 8.1 | 159.2 | 24.5 | 0.0 | 167.3 | 1 |
| 15 | 140 | -1886 | 1597 | -212 | 0 | 5 | 3381 | 35.1 | 613.6 | 81.0 | 0.0 | 648.7 | 1 |
| | | | | | | | | | | | | | |
| 1 | 155 | -2157 | 1834 | -244 | 0 | 44 | 4165 | 40.1 | 802.1 | 93.1 | 0.0 | 842.2 | 1 |
| 5 | 155 | -842 | 418 | 125 | 0 | -216 | 1045 | 15.6 | 455.2 | 21.2 | 0.0 | 470.8 | 1 |
| 6 | 155 | -243 | 424 | 95 | 0 | -205 | 1029 | 4.5 | 438.9 | 21.5 | 0.0 | 443.4 | 1 |
| 7 | 155 | -889 | 418 | -198 | 0 | 209 | 1046 | 16.5 | 446.7 | 21.2 | 0.0 | 463.2 | 1 |
| 8 | 155 | -289 | 424 | -229 | 0 | 219 | 1030 | 5.4 | 457.2 | 21.5 | 0.0 | 462.6 | 1 |
| 9 | 155 | -1775 | 582 | 22 | 0 | -73 | 1475 | 33.0 | 355.2 | 29.5 | 0.0 | 388.1 | 1 |
| 10 | 155 | 221 | 603 | -81 | 0 | -37 | 1422 | 4.1 | 301.1 | 30.6 | 0.0 | 305.2 | 1 |
| 11 | 155 | -1789 | 582 | -78 | 0 | 58 | 1475 | 33.3 | 336.8 | 29.5 | 0.0 | 370.1 | 1 |
| 12 | 155 | 427 | 431 | -157 | 0 | 89 | 1011 | 7.9 | 292.6 | 21.9 | 0.0 | 300.5 | 1 |
| 13 | 155 | -1811 | 1520 | -203 | 0 | 37 | 3479 | 33.7 | 670.1 | 77.1 | 0.0 | 703.7 | 1 |
| 14 | 155 | 436 | -489 | 57 | 0 | -8 | -953 | 8.1 | 180.4 | 24.8 | 0.0 | 188.5 | 1 |
| 15 | 155 | -1886 | 1588 | -212 | 0 | 38 | 3628 | 35.1 | 698.7 | 80.6 | 0.0 | 733.8 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|--------|-------|--------|---------|------|-----------|------|
| | | cm | daN*m | daN/cm | | cm | | |
| 1 | -- | 155 | 4165 | 747.7 | -- | -- | -- | |
| -- | Rara | 82 | 5 | -- | 80 | 0.00 | 1 / 99999 | |
| -- | Freq. | 82 | 5 | -- | 80 | 0.00 | 1 / 99999 | |
| -- | Q.Perm. | 82 | 5 | -- | 80 | 0.00 | 1 / 99999 | |
| -- | Rara | 82 | 5 | -- | 80 | 0.00 | 1 / 99999 | |
| -- | Rara | 82 | 5 | -- | 80 | 0.00 | 1 / 99999 | |
| -- | Freq. | 82 | 5 | -- | 80 | 0.00 | 1 / 99999 | |
| -- | Freq. | 82 | 5 | -- | 80 | 0.00 | 1 / 99999 | |

ASTA NUM. 24 NI 61 NF 139 Lungh. 106.5 cm SEZ. 1 Ps IPE 300

categoria: p.p. y qy tot.

qy medio: 0.4223 0.4223 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|------|-----|----|-------|------|---------|--------|--------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | daN/cm | | | | |
| 1 | 0 | -2156 | -384 | 54 | 0 | 44 | 4166 | 40.1 | 802.3 | 19.5 | 0.0 | 842.4 | 1 | |
| 5 | 0 | -951 | -79 | -17 | 0 | -216 | 1045 | 17.7 | 455.2 | 4.0 | 0.0 | 472.9 | 1 | |
| 6 | 0 | -134 | -73 | -4 | 0 | -205 | 1029 | 2.5 | 438.9 | 3.7 | 0.0 | 441.4 | 1 | |
| 7 | 0 | -998 | -79 | 21 | 0 | 209 | 1046 | 18.5 | 446.7 | 4.0 | 0.0 | 465.2 | 1 | |
| 8 | 0 | -180 | -73 | 33 | 0 | 219 | 1030 | 3.3 | 457.2 | 3.7 | 0.0 | 460.6 | 1 | |
| 9 | 0 | -2139 | -119 | -11 | 0 | -73 | 1475 | 39.8 | 355.2 | 6.1 | 0.0 | 394.9 | 1 | |
| 10 | 0 | 585 | -99 | 30 | 0 | -37 | 1422 | 10.9 | 301.1 | 5.0 | 0.0 | 311.9 | 1 | |
| 11 | 0 | -2153 | -119 | 2 | 0 | 58 | 1475 | 40.0 | 336.8 | 6.1 | 0.0 | 376.8 | 1 | |
| 12 | 0 | 791 | -66 | 38 | 0 | 89 | 1011 | 14.7 | 292.6 | 3.3 | 0.0 | 307.3 | 1 | |
| 13 | 0 | -1810 | -315 | 45 | 0 | 37 | 3479 | 33.6 | 670.1 | 16.0 | 0.0 | 703.7 | 1 | |
| 14 | 0 | 435 | 126 | -11 | 0 | -8 | -953 | 8.1 | 180.4 | 6.4 | 0.0 | 188.5 | 1 | |
| 15 | 0 | -1885 | -330 | 47 | 0 | 38 | 3628 | 35.0 | 698.7 | 16.7 | 0.0 | 733.8 | 1 | |
| 1 | 11 | -2156 | -390 | 54 | 0 | 38 | 4125 | 40.1 | 787.7 | 19.8 | 0.0 | 827.8 | 1 | |
| 5 | 11 | -951 | -84 | -17 | 0 | -214 | 1036 | 17.7 | 451.4 | 4.2 | 0.0 | 469.1 | 1 | |
| 6 | 11 | -134 | -77 | -4 | 0 | -204 | 1021 | 2.5 | 436.9 | 3.9 | 0.0 | 439.4 | 1 | |
| 7 | 11 | -998 | -84 | 21 | 0 | 206 | 1037 | 18.5 | 442.3 | 4.3 | 0.0 | 460.9 | 1 | |
| 8 | 11 | -180 | -78 | 33 | 0 | 216 | 1022 | 3.3 | 451.4 | 3.9 | 0.0 | 454.7 | 1 | |
| 9 | 11 | -2139 | -125 | -11 | 0 | -72 | 1462 | 39.8 | 351.4 | 6.4 | 0.0 | 391.1 | 1 | |
| 10 | 11 | 585 | -104 | 30 | 0 | -40 | 1411 | 10.9 | 303.0 | 5.3 | 0.0 | 313.9 | 1 | |
| 11 | 11 | -2153 | -125 | 2 | 0 | 58 | 1462 | 40.0 | 334.2 | 6.4 | 0.0 | 374.2 | 1 | |
| 12 | 11 | 791 | -70 | 38 | 0 | 85 | 1004 | 14.7 | 286.3 | 3.6 | 0.0 | 301.0 | 1 | |
| 13 | 11 | -1810 | -321 | 45 | 0 | 32 | 3445 | 33.6 | 658.0 | 16.3 | 0.0 | 691.6 | 1 | |
| 14 | 11 | 435 | 121 | -11 | 0 | -6 | -940 | 8.1 | 176.5 | 6.1 | 0.0 | 184.6 | 1 | |
| 15 | 11 | -1885 | -336 | 47 | 0 | 33 | 3593 | 35.0 | 686.1 | 17.0 | 0.0 | 721.2 | 1 | |
| 1 | 21 | -2156 | -396 | 54 | 0 | 32 | 4083 | 40.1 | 773.0 | 20.1 | 0.0 | 813.1 | 1 | |
| 5 | 21 | -951 | -88 | -17 | 0 | -212 | 1027 | 17.7 | 447.6 | 4.5 | 0.0 | 465.3 | 1 | |
| 6 | 21 | -134 | -82 | -4 | 0 | -204 | 1013 | 2.5 | 434.8 | 4.2 | 0.0 | 437.3 | 1 | |
| 7 | 21 | -998 | -88 | 21 | 0 | 204 | 1028 | 18.5 | 437.9 | 4.5 | 0.0 | 456.5 | 1 | |
| 8 | 21 | -180 | -82 | 33 | 0 | 212 | 1013 | 3.3 | 445.5 | 4.2 | 0.0 | 448.8 | 1 | |
| 9 | 21 | -2139 | -131 | -11 | 0 | -70 | 1448 | 39.8 | 347.5 | 6.7 | 0.0 | 387.2 | 1 | |
| 10 | 21 | 585 | -110 | 30 | 0 | -43 | 1400 | 10.9 | 304.9 | 5.6 | 0.0 | 315.7 | 1 | |
| 11 | 21 | -2153 | -131 | 2 | 0 | 58 | 1448 | 40.0 | 331.4 | 6.7 | 0.0 | 371.4 | 1 | |
| 12 | 21 | 791 | -75 | 38 | 0 | 81 | 996 | 14.7 | 280.0 | 3.8 | 0.0 | 294.7 | 1 | |
| 13 | 21 | -1810 | -326 | 45 | 0 | 27 | 3411 | 33.6 | 645.8 | 16.6 | 0.0 | 679.5 | 1 | |
| 14 | 21 | 435 | 117 | -11 | 0 | -5 | -927 | 8.1 | 172.8 | 5.9 | 0.0 | 180.8 | 1 | |
| 15 | 21 | -1885 | -342 | 47 | 0 | 28 | 3557 | 35.0 | 673.4 | 17.3 | 0.0 | 708.5 | 1 | |
| 1 | 32 | -2156 | -402 | 54 | 0 | 27 | 4040 | 40.1 | 758.2 | 20.4 | 0.0 | 798.3 | 1 | |
| 5 | 32 | -951 | -93 | -17 | 0 | -210 | 1018 | 17.7 | 443.7 | 4.7 | 0.0 | 461.4 | 1 | |
| 6 | 32 | -134 | -86 | -4 | 0 | -203 | 1004 | 2.5 | 432.6 | 4.4 | 0.0 | 435.1 | 1 | |
| 7 | 32 | -998 | -93 | 21 | 0 | 202 | 1018 | 18.5 | 433.4 | 4.7 | 0.0 | 452.0 | 1 | |
| 8 | 32 | -180 | -87 | 33 | 0 | 209 | 1004 | 3.3 | 439.5 | 4.4 | 0.0 | 442.8 | 1 | |
| 9 | 32 | -2139 | -137 | -11 | 0 | -69 | 1434 | 39.8 | 343.5 | 6.9 | 0.0 | 383.2 | 1 | |
| 10 | 32 | 585 | -116 | 30 | 0 | -46 | 1387 | 10.9 | 306.6 | 5.9 | 0.0 | 317.5 | 1 | |
| 11 | 32 | -2153 | -137 | 2 | 0 | 57 | 1434 | 40.0 | 328.5 | 6.9 | 0.0 | 368.6 | 1 | |
| 12 | 32 | 791 | -79 | 38 | 0 | 77 | 988 | 14.7 | 273.5 | 4.0 | 0.0 | 288.2 | 1 | |
| 13 | 32 | -1810 | -332 | 45 | 0 | 22 | 3375 | 33.6 | 633.5 | 16.9 | 0.0 | 667.2 | 1 | |
| 14 | 32 | 435 | 112 | -11 | 0 | -4 | -915 | 8.1 | 169.1 | 5.7 | 0.0 | 177.2 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-------|------|-----|---|------|------|------|-------|------|-----|-------|---|
| 15 | 32 | -1885 | -347 | 47 | 0 | 23 | 3520 | 35.0 | 660.6 | 17.6 | 0.0 | 695.7 | 1 |
| 1 | 43 | -2156 | -408 | 54 | 0 | 21 | 3997 | 40.1 | 743.3 | 20.7 | 0.0 | 783.4 | 1 |
| 5 | 43 | -951 | -97 | -17 | 0 | -208 | 1008 | 17.7 | 439.7 | 4.9 | 0.0 | 457.4 | 1 |
| 6 | 43 | -134 | -91 | -4 | 0 | -203 | 994 | 2.5 | 430.4 | 4.6 | 0.0 | 432.9 | 1 |
| 7 | 43 | -998 | -97 | 21 | 0 | 200 | 1008 | 18.5 | 428.8 | 4.9 | 0.0 | 447.4 | 1 |
| 8 | 43 | -180 | -91 | 33 | 0 | 205 | 995 | 3.3 | 433.4 | 4.6 | 0.0 | 436.7 | 1 |
| 9 | 43 | -2139 | -143 | -11 | 0 | -68 | 1419 | 39.8 | 339.4 | 7.2 | 0.0 | 379.1 | 1 |
| 10 | 43 | 585 | -122 | 30 | 0 | -49 | 1375 | 10.9 | 308.2 | 6.2 | 0.0 | 319.1 | 1 |
| 11 | 43 | -2153 | -143 | 2 | 0 | 57 | 1419 | 40.0 | 325.5 | 7.2 | 0.0 | 365.6 | 1 |
| 12 | 43 | 791 | -84 | 38 | 0 | 73 | 979 | 14.7 | 267.0 | 4.3 | 0.0 | 281.7 | 1 |
| 13 | 43 | -1810 | -338 | 45 | 0 | 17 | 3340 | 33.6 | 621.1 | 17.2 | 0.0 | 654.8 | 1 |
| 14 | 43 | 435 | 108 | -11 | 0 | -3 | -903 | 8.1 | 165.5 | 5.5 | 0.0 | 173.5 | 1 |
| 15 | 43 | -1885 | -353 | 47 | 0 | 18 | 3483 | 35.0 | 647.7 | 17.9 | 0.0 | 682.7 | 1 |
| 1 | 53 | -2156 | -414 | 54 | 0 | 15 | 3953 | 40.1 | 728.2 | 21.0 | 0.0 | 768.3 | 1 |
| 5 | 53 | -951 | -102 | -17 | 0 | -207 | 997 | 17.7 | 435.6 | 5.2 | 0.0 | 453.3 | 1 |
| 6 | 53 | -134 | -95 | -4 | 0 | -202 | 984 | 2.5 | 428.0 | 4.8 | 0.0 | 430.5 | 1 |
| 7 | 53 | -998 | -102 | 21 | 0 | 197 | 998 | 18.5 | 424.2 | 5.2 | 0.0 | 442.7 | 1 |
| 8 | 53 | -180 | -96 | 33 | 0 | 202 | 985 | 3.3 | 427.2 | 4.9 | 0.0 | 430.6 | 1 |
| 9 | 53 | -2139 | -149 | -11 | 0 | -67 | 1404 | 39.8 | 335.2 | 7.5 | 0.0 | 374.9 | 1 |
| 10 | 53 | 585 | -128 | 30 | 0 | -53 | 1361 | 10.9 | 309.7 | 6.5 | 0.0 | 320.6 | 1 |
| 11 | 53 | -2153 | -149 | 2 | 0 | 57 | 1404 | 40.0 | 322.5 | 7.5 | 0.0 | 362.5 | 1 |
| 12 | 53 | 791 | -88 | 38 | 0 | 69 | 970 | 14.7 | 260.4 | 4.5 | 0.0 | 275.1 | 1 |
| 13 | 53 | -1810 | -344 | 45 | 0 | 13 | 3303 | 33.6 | 608.6 | 17.5 | 0.0 | 642.3 | 1 |
| 14 | 53 | 435 | 103 | -11 | 0 | -1 | -892 | 8.1 | 161.9 | 5.2 | 0.0 | 170.0 | 1 |
| 15 | 53 | -1885 | -359 | 47 | 0 | 13 | 3445 | 35.0 | 634.7 | 18.2 | 0.0 | 669.7 | 1 |
| 1 | 64 | -2156 | -419 | 54 | 0 | 9 | 3909 | 40.1 | 713.1 | 21.3 | 0.0 | 753.2 | 1 |
| 5 | 64 | -951 | -106 | -17 | 0 | -205 | 986 | 17.7 | 431.5 | 5.4 | 0.0 | 449.2 | 1 |
| 6 | 64 | -134 | -100 | -4 | 0 | -202 | 974 | 2.5 | 425.6 | 5.1 | 0.0 | 428.1 | 1 |
| 7 | 64 | -998 | -106 | 21 | 0 | 195 | 987 | 18.5 | 419.4 | 5.4 | 0.0 | 437.9 | 1 |
| 8 | 64 | -180 | -100 | 33 | 0 | 198 | 975 | 3.3 | 421.0 | 5.1 | 0.0 | 424.3 | 1 |
| 9 | 64 | -2139 | -154 | -11 | 0 | -66 | 1388 | 39.8 | 330.8 | 7.8 | 0.0 | 370.6 | 1 |
| 10 | 64 | 585 | -134 | 30 | 0 | -56 | 1347 | 10.9 | 311.1 | 6.8 | 0.0 | 322.0 | 1 |
| 11 | 64 | -2153 | -155 | 2 | 0 | 56 | 1388 | 40.0 | 319.2 | 7.8 | 0.0 | 359.3 | 1 |
| 12 | 64 | 791 | -93 | 38 | 0 | 65 | 960 | 14.7 | 253.7 | 4.7 | 0.0 | 268.4 | 1 |
| 13 | 64 | -1810 | -350 | 45 | 0 | 8 | 3266 | 33.6 | 596.0 | 17.8 | 0.0 | 629.6 | 1 |
| 14 | 64 | 435 | 99 | -11 | 0 | -0 | -881 | 8.1 | 158.5 | 5.0 | 0.0 | 166.6 | 1 |
| 15 | 64 | -1885 | -365 | 47 | 0 | 8 | 3406 | 35.0 | 621.5 | 18.5 | 0.0 | 656.5 | 1 |
| 1 | 75 | -2156 | -425 | 54 | 0 | 3 | 3864 | 40.1 | 697.9 | 21.6 | 0.0 | 737.9 | 1 |
| 5 | 75 | -951 | -111 | -17 | 0 | -203 | 974 | 17.7 | 427.2 | 5.6 | 0.0 | 444.9 | 1 |
| 6 | 75 | -134 | -104 | -4 | 0 | -201 | 963 | 2.5 | 423.1 | 5.3 | 0.0 | 425.6 | 1 |
| 7 | 75 | -998 | -111 | 21 | 0 | 193 | 975 | 18.5 | 414.6 | 5.6 | 0.0 | 433.1 | 1 |
| 8 | 75 | -180 | -105 | 33 | 0 | 195 | 964 | 3.3 | 414.6 | 5.3 | 0.0 | 418.0 | 1 |
| 9 | 75 | -2139 | -160 | -11 | 0 | -65 | 1371 | 39.8 | 326.4 | 8.1 | 0.0 | 366.1 | 1 |
| 10 | 75 | 585 | -140 | 30 | 0 | -59 | 1333 | 10.9 | 312.4 | 7.1 | 0.0 | 323.3 | 1 |
| 11 | 75 | -2153 | -160 | 2 | 0 | 56 | 1371 | 40.0 | 315.9 | 8.1 | 0.0 | 355.9 | 1 |
| 12 | 75 | 791 | -97 | 38 | 0 | 61 | 950 | 14.7 | 246.9 | 4.9 | 0.0 | 261.6 | 1 |
| 13 | 75 | -1810 | -356 | 45 | 0 | 3 | 3229 | 33.6 | 583.2 | 18.0 | 0.0 | 616.9 | 1 |
| 14 | 75 | 435 | 94 | -11 | 0 | 1 | -871 | 8.1 | 157.5 | 4.8 | 0.0 | 165.6 | 1 |
| 15 | 75 | -1885 | -371 | 47 | 0 | 3 | 3367 | 35.0 | 608.2 | 18.8 | 0.0 | 643.3 | 1 |
| 1 | 85 | -2156 | -431 | 54 | 0 | -2 | 3818 | 40.1 | 688.3 | 21.9 | 0.0 | 728.4 | 1 |
| 5 | 85 | -951 | -115 | -17 | 0 | -201 | 963 | 17.7 | 422.9 | 5.8 | 0.0 | 440.6 | 1 |
| 6 | 85 | -134 | -109 | -4 | 0 | -201 | 952 | 2.5 | 420.5 | 5.5 | 0.0 | 423.0 | 1 |
| 7 | 85 | -998 | -115 | 21 | 0 | 191 | 963 | 18.5 | 409.6 | 5.9 | 0.0 | 428.2 | 1 |
| 8 | 85 | -180 | -109 | 33 | 0 | 191 | 952 | 3.3 | 408.2 | 5.5 | 0.0 | 411.5 | 1 |
| 9 | 85 | -2139 | -166 | -11 | 0 | -63 | 1354 | 39.8 | 321.8 | 8.4 | 0.0 | 361.6 | 1 |
| 10 | 85 | 585 | -145 | 30 | 0 | -62 | 1317 | 10.9 | 313.6 | 7.4 | 0.0 | 324.5 | 1 |
| 11 | 85 | -2153 | -166 | 2 | 0 | 56 | 1354 | 40.0 | 312.5 | 8.4 | 0.0 | 352.5 | 1 |
| 12 | 85 | 791 | -102 | 38 | 0 | 57 | 940 | 14.7 | 240.0 | 5.2 | 0.0 | 254.7 | 1 |
| 13 | 85 | -1810 | -362 | 45 | 0 | -2 | 3190 | 33.6 | 575.0 | 18.3 | 0.0 | 608.7 | 1 |
| 14 | 85 | 435 | 90 | -11 | 0 | 2 | -861 | 8.1 | 157.3 | 4.5 | 0.0 | 165.4 | 1 |
| 15 | 85 | -1885 | -377 | 47 | 0 | -2 | 3327 | 35.0 | 599.8 | 19.1 | 0.0 | 634.8 | 1 |
| 1 | 96 | -2156 | -437 | 54 | 0 | -8 | 3772 | 40.1 | 687.2 | 22.2 | 0.0 | 727.3 | 1 |
| 5 | 96 | -951 | -120 | -17 | 0 | -200 | 950 | 17.7 | 418.5 | 6.1 | 0.0 | 436.1 | 1 |
| 6 | 96 | -134 | -113 | -4 | 0 | -201 | 940 | 2.5 | 417.8 | 5.8 | 0.0 | 420.3 | 1 |
| 7 | 96 | -998 | -120 | 21 | 0 | 188 | 951 | 18.5 | 404.6 | 6.1 | 0.0 | 423.1 | 1 |
| 8 | 96 | -180 | -114 | 33 | 0 | 188 | 940 | 3.3 | 401.7 | 5.8 | 0.0 | 405.0 | 1 |
| 9 | 96 | -2139 | -172 | -11 | 0 | -62 | 1336 | 39.8 | 317.1 | 8.7 | 0.0 | 356.9 | 1 |
| 10 | 96 | 585 | -151 | 30 | 0 | -65 | 1302 | 10.9 | 314.7 | 7.7 | 0.0 | 325.5 | 1 |
| 11 | 96 | -2153 | -172 | 2 | 0 | 56 | 1336 | 40.0 | 308.9 | 8.7 | 0.0 | 349.0 | 1 |
| 12 | 96 | 791 | -106 | 38 | 0 | 53 | 929 | 14.7 | 233.1 | 5.4 | 0.0 | 247.8 | 1 |
| 13 | 96 | -1810 | -367 | 45 | 0 | -7 | 3152 | 33.6 | 574.0 | 18.6 | 0.0 | 607.7 | 1 |
| 14 | 96 | 435 | 85 | -11 | 0 | 3 | -852 | 8.1 | 157.1 | 4.3 | 0.0 | 165.2 | 1 |
| 15 | 96 | -1885 | -383 | 47 | 0 | -7 | 3287 | 35.0 | 598.7 | 19.4 | 0.0 | 633.8 | 1 |
| 1 | 107 | -2156 | -443 | 54 | 0 | -14 | 3725 | 40.1 | 685.9 | 22.5 | 0.0 | 726.0 | 1 |
| 5 | 107 | -951 | -124 | -17 | 0 | -198 | 937 | 17.7 | 414.0 | 6.3 | 0.0 | 431.6 | 1 |
| 6 | 107 | -134 | -118 | -4 | 0 | -200 | 928 | 2.5 | 415.0 | 6.0 | 0.0 | 417.5 | 1 |
| 7 | 107 | -998 | -124 | 21 | 0 | 186 | 938 | 18.5 | 399.5 | 6.3 | 0.0 | 418.0 | 1 |
| 8 | 107 | -180 | -118 | 33 | 0 | 184 | 928 | 3.3 | 395.1 | 6.0 | 0.0 | 398.4 | 1 |
| 9 | 107 | -2139 | -178 | -11 | 0 | -61 | 1317 | 39.8 | 312.4 | 9.0 | 0.0 | 352.1 | 1 |
| 10 | 107 | 585 | -157 | 30 | 0 | -68 | 1285 | 10.9 | 315.6 | 8.0 | 0.0 | 326.5 | 1 |
| 11 | 107 | -2153 | -178 | 2 | 0 | 55 | 1317 | 40.0 | 305.3 | 9.0 | 0.0 | 345.3 | 1 |
| 12 | 107 | 791 | -111 | 38 | 0 | 49 | 917 | 14.7 | 226.1 | 5.6 | 0.0 | 240.8 | 1 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-------|------|-----|---|-----|------|------|-------|------|-----|-------|---|
| 13 | 107 | -1810 | -373 | 45 | 0 | -12 | 3112 | 33.6 | 572.9 | 18.9 | 0.0 | 606.6 | 1 |
| 14 | 107 | 435 | 81 | -11 | 0 | 5 | -843 | 8.1 | 157.1 | 4.1 | 0.0 | 165.2 | 1 |
| 15 | 107 | -1885 | -388 | 47 | 0 | -12 | 3246 | 35.0 | 597.6 | 19.7 | 0.0 | 632.7 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|--------|-------|--------|---------|------|-----------|------|
| | | cm | daN*m | daN/cm | cm | | | |
| 1 | -- | 0 | 4166 | 747.8 | -- | -- | -- | |
| -- | Rara | 64 | 2 | -- | 62 | 0.00 | 1 / 99999 | |
| -- | Freq. | 64 | 2 | -- | 62 | 0.00 | 1 / 99999 | |
| -- | Q.Perm. | 64 | 2 | -- | 62 | 0.00 | 1 / 99999 | |
| -- | Rara | 64 | 2 | -- | 62 | 0.00 | 1 / 99999 | |
| -- | Rara | 64 | 2 | -- | 62 | 0.00 | 1 / 99999 | |
| -- | Freq. | 64 | 2 | -- | 62 | 0.00 | 1 / 99999 | |
| -- | Freq. | 64 | 2 | -- | 62 | 0.00 | 1 / 99999 | |

ASTA NUM. 35 NI 139 NF 137 Lungh. 22.4 cm SEZ. 1 Ps IPE 300

categoria: p.p. y qy tot.

qy medio: 0.4223 0.4223 daN/cm

32

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|-------|------|-------|------|------|---------|--------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -2156 | -1600 | 119 | 0 | -14 | 3725 | 40.1 | 685.9 | 81.2 | 0.0 | 726.0 | 1 | |
| 5 | 0 | -1009 | -394 | -326 | 0 | -198 | 937 | 18.8 | 413.9 | 20.0 | 0.0 | 432.7 | 1 | |
| 6 | 0 | -76 | -388 | -324 | 0 | -200 | 928 | 1.4 | 415.0 | 19.7 | 0.0 | 416.4 | 1 | |
| 7 | 0 | -1056 | -394 | 361 | 0 | 186 | 937 | 19.6 | 399.5 | 20.0 | 0.0 | 419.1 | 1 | |
| 8 | 0 | -122 | -388 | 362 | 0 | 184 | 928 | 2.3 | 395.1 | 19.7 | 0.0 | 397.3 | 1 | |
| 9 | 0 | -2333 | -557 | -74 | 0 | -61 | 1317 | 43.4 | 312.4 | 28.3 | 0.0 | 355.7 | 1 | |
| 10 | 0 | 779 | -536 | -68 | 0 | -68 | 1285 | 14.5 | 315.6 | 27.2 | 0.0 | 330.1 | 1 | |
| 11 | 0 | -2347 | -557 | 137 | 0 | 55 | 1317 | 43.6 | 305.3 | 28.3 | 0.0 | 348.9 | 1 | |
| 12 | 0 | 985 | -380 | 131 | 0 | 49 | 917 | 18.3 | 226.0 | 19.3 | 0.0 | 244.3 | 1 | |
| 13 | 0 | -1810 | -1333 | 99 | 0 | -12 | 3112 | 33.6 | 572.9 | 67.6 | 0.0 | 606.6 | 1 | |
| 14 | 0 | 435 | 381 | -25 | 0 | 5 | -843 | 8.1 | 157.1 | 19.3 | 0.0 | 165.1 | 1 | |
| 15 | 0 | -1885 | -1391 | 104 | 0 | -12 | 3245 | 35.0 | 597.4 | 70.6 | 0.0 | 632.5 | 1 | |
| 1 | 2 | -2156 | -1601 | 119 | 0 | -17 | 3689 | 40.1 | 682.8 | 81.3 | 0.0 | 722.9 | 1 | |
| 5 | 2 | -1009 | -395 | -326 | 0 | -191 | 928 | 18.8 | 403.3 | 20.0 | 0.0 | 422.1 | 1 | |
| 6 | 2 | -76 | -388 | -324 | 0 | -193 | 919 | 1.4 | 404.4 | 19.7 | 0.0 | 405.8 | 1 | |
| 7 | 2 | -1056 | -395 | 361 | 0 | 178 | 929 | 19.6 | 387.9 | 20.0 | 0.0 | 407.5 | 1 | |
| 8 | 2 | -122 | -389 | 362 | 0 | 176 | 919 | 2.3 | 383.4 | 19.7 | 0.0 | 385.7 | 1 | |
| 9 | 2 | -2333 | -558 | -74 | 0 | -60 | 1305 | 43.4 | 308.1 | 28.3 | 0.0 | 351.4 | 1 | |
| 10 | 2 | 779 | -537 | -68 | 0 | -67 | 1273 | 14.5 | 311.6 | 27.3 | 0.0 | 326.1 | 1 | |
| 11 | 2 | -2347 | -558 | 137 | 0 | 52 | 1305 | 43.6 | 299.2 | 28.3 | 0.0 | 342.9 | 1 | |
| 12 | 2 | 985 | -381 | 131 | 0 | 47 | 908 | 18.3 | 220.9 | 19.4 | 0.0 | 239.2 | 1 | |
| 13 | 2 | -1810 | -1334 | 99 | 0 | -14 | 3082 | 33.6 | 570.3 | 67.7 | 0.0 | 604.0 | 1 | |
| 14 | 2 | 435 | 380 | -25 | 0 | 5 | -834 | 8.1 | 156.2 | 19.3 | 0.0 | 164.3 | 1 | |
| 15 | 2 | -1885 | -1392 | 104 | 0 | -14 | 3214 | 35.0 | 594.7 | 70.7 | 0.0 | 629.8 | 1 | |
| 1 | 4 | -2156 | -1602 | 119 | 0 | -19 | 3653 | 40.1 | 679.7 | 81.3 | 0.0 | 719.8 | 1 | |
| 5 | 4 | -1009 | -396 | -326 | 0 | -183 | 919 | 18.8 | 392.7 | 20.1 | 0.0 | 411.4 | 1 | |
| 6 | 4 | -76 | -389 | -324 | 0 | -186 | 910 | 1.4 | 393.9 | 19.8 | 0.0 | 395.3 | 1 | |
| 7 | 4 | -1056 | -396 | 361 | 0 | 170 | 920 | 19.6 | 376.3 | 20.1 | 0.0 | 395.9 | 1 | |
| 8 | 4 | -122 | -390 | 362 | 0 | 168 | 911 | 2.3 | 371.8 | 19.8 | 0.0 | 374.1 | 1 | |
| 9 | 4 | -2333 | -559 | -74 | 0 | -58 | 1292 | 43.4 | 303.8 | 28.4 | 0.0 | 347.2 | 1 | |
| 10 | 4 | 779 | -539 | -68 | 0 | -65 | 1261 | 14.5 | 307.5 | 27.3 | 0.0 | 322.0 | 1 | |
| 11 | 4 | -2347 | -559 | 137 | 0 | 49 | 1292 | 43.6 | 293.2 | 28.4 | 0.0 | 336.8 | 1 | |
| 12 | 4 | 985 | -382 | 131 | 0 | 44 | 900 | 18.3 | 215.7 | 19.4 | 0.0 | 234.0 | 1 | |
| 13 | 4 | -1810 | -1336 | 99 | 0 | -16 | 3052 | 33.6 | 567.7 | 67.8 | 0.0 | 601.4 | 1 | |
| 14 | 4 | 435 | 379 | -25 | 0 | 6 | -826 | 8.1 | 155.4 | 19.2 | 0.0 | 163.5 | 1 | |
| 15 | 4 | -1885 | -1394 | 104 | 0 | -17 | 3183 | 35.0 | 592.0 | 70.7 | 0.0 | 627.1 | 1 | |
| 1 | 7 | -2156 | -1604 | 119 | 0 | -22 | 3618 | 40.1 | 676.6 | 81.4 | 0.0 | 716.7 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|-------|-------|------|---|------|------|------|-------|------|-----|-------|---|
| 5 | 7 | -1009 | -397 | -326 | 0 | -176 | 910 | 18.8 | 382.0 | 20.1 | 0.0 | 400.8 | 1 |
| 6 | 7 | -76 | -390 | -324 | 0 | -178 | 902 | 1.4 | 383.3 | 19.8 | 0.0 | 384.7 | 1 |
| 7 | 7 | -1056 | -397 | 361 | 0 | 162 | 911 | 19.6 | 364.7 | 20.1 | 0.0 | 384.3 | 1 |
| 8 | 7 | -122 | -391 | 362 | 0 | 160 | 902 | 2.3 | 360.2 | 19.8 | 0.0 | 362.5 | 1 |
| 9 | 7 | -2333 | -560 | -74 | 0 | -56 | 1279 | 43.4 | 299.5 | 28.4 | 0.0 | 342.9 | 1 |
| 10 | 7 | 779 | -540 | -68 | 0 | -64 | 1249 | 14.5 | 303.5 | 27.4 | 0.0 | 318.0 | 1 |
| 11 | 7 | -2347 | -561 | 137 | 0 | 46 | 1279 | 43.6 | 287.1 | 28.4 | 0.0 | 330.7 | 1 |
| 12 | 7 | 985 | -383 | 131 | 0 | 41 | 891 | 18.3 | 210.5 | 19.4 | 0.0 | 228.8 | 1 |
| 13 | 7 | -1810 | -1337 | 99 | 0 | -18 | 3023 | 33.6 | 565.1 | 67.8 | 0.0 | 598.8 | 1 |
| 14 | 7 | 435 | 378 | -25 | 0 | 6 | -818 | 8.1 | 154.6 | 19.2 | 0.0 | 162.6 | 1 |
| 15 | 7 | -1885 | -1395 | 104 | 0 | -19 | 3152 | 35.0 | 589.3 | 70.8 | 0.0 | 624.4 | 1 |
| | | | | | | | | | | | | | |
| 1 | 9 | -2156 | -1605 | 119 | 0 | -25 | 3582 | 40.1 | 673.4 | 81.4 | 0.0 | 713.5 | 1 |
| 5 | 9 | -1009 | -397 | -326 | 0 | -169 | 902 | 18.8 | 371.4 | 20.2 | 0.0 | 390.1 | 1 |
| 6 | 9 | -76 | -391 | -324 | 0 | -171 | 893 | 1.4 | 372.7 | 19.9 | 0.0 | 374.1 | 1 |
| 7 | 9 | -1056 | -398 | 361 | 0 | 154 | 902 | 19.6 | 353.0 | 20.2 | 0.0 | 372.7 | 1 |
| 8 | 9 | -122 | -392 | 362 | 0 | 152 | 893 | 2.3 | 348.6 | 19.9 | 0.0 | 350.8 | 1 |
| 9 | 9 | -2333 | -562 | -74 | 0 | -55 | 1267 | 43.4 | 295.2 | 28.5 | 0.0 | 338.6 | 1 |
| 10 | 9 | 779 | -541 | -68 | 0 | -62 | 1237 | 14.5 | 299.4 | 27.5 | 0.0 | 313.9 | 1 |
| 11 | 9 | -2347 | -562 | 137 | 0 | 43 | 1267 | 43.6 | 281.0 | 28.5 | 0.0 | 324.7 | 1 |
| 12 | 9 | 985 | -384 | 131 | 0 | 38 | 883 | 18.3 | 205.3 | 19.5 | 0.0 | 223.6 | 1 |
| 13 | 9 | -1810 | -1338 | 99 | 0 | -20 | 2993 | 33.6 | 562.5 | 67.9 | 0.0 | 596.2 | 1 |
| 14 | 9 | 435 | 377 | -25 | 0 | 7 | -809 | 8.1 | 153.7 | 19.1 | 0.0 | 161.8 | 1 |
| 15 | 9 | -1885 | -1396 | 104 | 0 | -21 | 3121 | 35.0 | 586.6 | 70.8 | 0.0 | 621.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 11 | -2156 | -1606 | 119 | 0 | -27 | 3546 | 40.1 | 670.3 | 81.5 | 0.0 | 710.4 | 1 |
| 5 | 11 | -1009 | -398 | -326 | 0 | -161 | 893 | 18.8 | 360.7 | 20.2 | 0.0 | 379.5 | 1 |
| 6 | 11 | -76 | -392 | -324 | 0 | -164 | 884 | 1.4 | 362.1 | 19.9 | 0.0 | 363.6 | 1 |
| 7 | 11 | -1056 | -399 | 361 | 0 | 146 | 893 | 19.6 | 341.4 | 20.2 | 0.0 | 361.1 | 1 |
| 8 | 11 | -122 | -392 | 362 | 0 | 144 | 884 | 2.3 | 336.9 | 19.9 | 0.0 | 339.2 | 1 |
| 9 | 11 | -2333 | -563 | -74 | 0 | -53 | 1254 | 43.4 | 290.9 | 28.6 | 0.0 | 334.3 | 1 |
| 10 | 11 | 779 | -542 | -68 | 0 | -61 | 1225 | 14.5 | 295.4 | 27.5 | 0.0 | 309.9 | 1 |
| 11 | 11 | -2347 | -563 | 137 | 0 | 40 | 1254 | 43.6 | 275.0 | 28.6 | 0.0 | 318.6 | 1 |
| 12 | 11 | 985 | -385 | 131 | 0 | 35 | 874 | 18.3 | 200.1 | 19.5 | 0.0 | 218.4 | 1 |
| 13 | 11 | -1810 | -1340 | 99 | 0 | -23 | 2963 | 33.6 | 559.9 | 68.0 | 0.0 | 593.6 | 1 |
| 14 | 11 | 435 | 376 | -25 | 0 | 7 | -801 | 8.1 | 152.9 | 19.1 | 0.0 | 161.0 | 1 |
| 15 | 11 | -1885 | -1398 | 104 | 0 | -24 | 3089 | 35.0 | 583.9 | 70.9 | 0.0 | 618.9 | 1 |
| | | | | | | | | | | | | | |
| 1 | 13 | -2156 | -1607 | 119 | 0 | -30 | 3510 | 40.1 | 667.2 | 81.6 | 0.0 | 707.2 | 1 |
| 5 | 13 | -1009 | -399 | -326 | 0 | -154 | 884 | 18.8 | 350.1 | 20.3 | 0.0 | 368.8 | 1 |
| 6 | 13 | -76 | -393 | -324 | 0 | -157 | 875 | 1.4 | 351.6 | 19.9 | 0.0 | 353.0 | 1 |
| 7 | 13 | -1056 | -400 | 361 | 0 | 138 | 884 | 19.6 | 329.8 | 20.3 | 0.0 | 349.4 | 1 |
| 8 | 13 | -122 | -393 | 362 | 0 | 135 | 876 | 2.3 | 325.3 | 20.0 | 0.0 | 327.6 | 1 |
| 9 | 13 | -2333 | -564 | -74 | 0 | -51 | 1242 | 43.4 | 286.6 | 28.6 | 0.0 | 330.0 | 1 |
| 10 | 13 | 779 | -543 | -68 | 0 | -59 | 1213 | 14.5 | 291.3 | 27.6 | 0.0 | 305.8 | 1 |
| 11 | 13 | -2347 | -564 | 137 | 0 | 37 | 1242 | 43.6 | 268.9 | 28.6 | 0.0 | 312.5 | 1 |
| 12 | 13 | 985 | -386 | 131 | 0 | 32 | 865 | 18.3 | 194.9 | 19.6 | 0.0 | 213.3 | 1 |
| 13 | 13 | -1810 | -1341 | 99 | 0 | -25 | 2933 | 33.6 | 557.3 | 68.0 | 0.0 | 591.0 | 1 |
| 14 | 13 | 435 | 375 | -25 | 0 | 8 | -792 | 8.1 | 152.1 | 19.0 | 0.0 | 160.2 | 1 |
| 15 | 13 | -1885 | -1399 | 104 | 0 | -26 | 3058 | 35.0 | 581.2 | 71.0 | 0.0 | 616.2 | 1 |
| | | | | | | | | | | | | | |
| 1 | 16 | -2156 | -1608 | 119 | 0 | -33 | 3474 | 40.1 | 664.0 | 81.6 | 0.0 | 704.1 | 1 |
| 5 | 16 | -1009 | -400 | -326 | 0 | -147 | 875 | 18.8 | 339.4 | 20.3 | 0.0 | 358.2 | 1 |
| 6 | 16 | -76 | -394 | -324 | 0 | -149 | 866 | 1.4 | 341.0 | 20.0 | 0.0 | 342.4 | 1 |
| 7 | 16 | -1056 | -401 | 361 | 0 | 130 | 875 | 19.6 | 318.2 | 20.3 | 0.0 | 337.8 | 1 |
| 8 | 16 | -122 | -394 | 362 | 0 | 127 | 867 | 2.3 | 313.7 | 20.0 | 0.0 | 315.9 | 1 |
| 9 | 16 | -2333 | -565 | -74 | 0 | -50 | 1229 | 43.4 | 282.3 | 28.7 | 0.0 | 325.7 | 1 |
| 10 | 16 | 779 | -545 | -68 | 0 | -58 | 1201 | 14.5 | 287.3 | 27.6 | 0.0 | 301.7 | 1 |
| 11 | 16 | -2347 | -565 | 137 | 0 | 34 | 1229 | 43.6 | 262.8 | 28.7 | 0.0 | 306.4 | 1 |
| 12 | 16 | 985 | -387 | 131 | 0 | 29 | 857 | 18.3 | 189.7 | 19.6 | 0.0 | 208.1 | 1 |
| 13 | 16 | -1810 | -1342 | 99 | 0 | -27 | 2903 | 33.6 | 554.7 | 68.1 | 0.0 | 588.4 | 1 |
| 14 | 16 | 435 | 374 | -25 | 0 | 9 | -784 | 8.1 | 151.3 | 19.0 | 0.0 | 159.4 | 1 |
| 15 | 16 | -1885 | -1400 | 104 | 0 | -28 | 3027 | 35.0 | 578.4 | 71.0 | 0.0 | 613.5 | 1 |
| | | | | | | | | | | | | | |
| 1 | 18 | -2156 | -1610 | 119 | 0 | -35 | 3438 | 40.1 | 660.9 | 81.7 | 0.0 | 701.0 | 1 |
| 5 | 18 | -1009 | -401 | -326 | 0 | -140 | 866 | 18.8 | 328.8 | 20.4 | 0.0 | 347.5 | 1 |
| 6 | 18 | -76 | -395 | -324 | 0 | -142 | 858 | 1.4 | 330.4 | 20.0 | 0.0 | 331.8 | 1 |
| 7 | 18 | -1056 | -402 | 361 | 0 | 122 | 866 | 19.6 | 306.6 | 20.4 | 0.0 | 326.2 | 1 |
| 8 | 18 | -122 | -395 | 362 | 0 | 119 | 858 | 2.3 | 302.0 | 20.1 | 0.0 | 304.3 | 1 |
| 9 | 18 | -2333 | -567 | -74 | 0 | -48 | 1216 | 43.4 | 278.0 | 28.8 | 0.0 | 321.3 | 1 |
| 10 | 18 | 779 | -546 | -68 | 0 | -56 | 1188 | 14.5 | 283.2 | 27.7 | 0.0 | 297.7 | 1 |
| 11 | 18 | -2347 | -567 | 137 | 0 | 31 | 1216 | 43.6 | 256.7 | 28.8 | 0.0 | 300.3 | 1 |
| 12 | 18 | 985 | -388 | 131 | 0 | 26 | 848 | 18.3 | 184.5 | 19.7 | 0.0 | 202.9 | 1 |
| 13 | 18 | -1810 | -1343 | 99 | 0 | -29 | 2873 | 33.6 | 552.1 | 68.2 | 0.0 | 585.7 | 1 |
| 14 | 18 | 435 | 373 | -25 | 0 | 9 | -776 | 8.1 | 150.5 | 18.9 | 0.0 | 158.6 | 1 |
| 15 | 18 | -1885 | -1401 | 104 | 0 | -31 | 2996 | 35.0 | 575.7 | 71.1 | 0.0 | 610.7 | 1 |
| | | | | | | | | | | | | | |
| 1 | 20 | -2156 | -1611 | 119 | 0 | -38 | 3402 | 40.1 | 657.7 | 81.7 | 0.0 | 697.8 | 1 |
| 5 | 20 | -1009 | -402 | -326 | 0 | -132 | 857 | 18.8 | 318.1 | 20.4 | 0.0 | 336.8 | 1 |
| 6 | 20 | -76 | -396 | -324 | 0 | -135 | 849 | 1.4 | 319.8 | 20.1 | 0.0 | 321.2 | 1 |
| 7 | 20 | -1056 | -402 | 361 | 0 | 114 | 857 | 19.6 | 294.9 | 20.4 | 0.0 | 314.5 | 1 |
| 8 | 20 | -122 | -396 | 362 | 0 | 111 | 849 | 2.3 | 290.4 | 20.1 | 0.0 | 292.7 | 1 |
| 9 | 20 | -2333 | -568 | -74 | 0 | -46 | 1204 | 43.4 | 273.7 | 28.8 | 0.0 | 317.0 | 1 |
| 10 | 20 | 779 | -547 | -68 | 0 | -55 | 1176 | 14.5 | 279.1 | 27.8 | 0.0 | 293.6 | 1 |
| 11 | 20 | -2347 | -568 | 137 | 0 | 28 | 1204 | 43.6 | 250.6 | 28.8 | 0.0 | 294.3 | 1 |
| 12 | 20 | 985 | -389 | 131 | 0 | 23 | 840 | 18.3 | 179.3 | 19.7 | 0.0 | 197.7 | 1 |
| 13 | 20 | -1810 | -1345 | 99 | 0 | -31 | 2843 | 33.6 | 549.5 | 68.2 | 0.0 | 583.1 | 1 |
| 14 | 20 | 435 | 372 | -25 | 0 | 10 | -767 | 8.1 | 149.7 | 18.9 | 0.0 | 157.8 | 1 |
| 15 | 20 | -1885 | -1403 | 104 | 0 | -33 | 2964 | 35.0 | 573.0 | 71.2 | 0.0 | 608.0 | 1 |

| | | | | | | | | | | | | | |
|----|----|-------|-------|------|---|------|------|------|-------|------|-----|-------|---|
| 1 | 22 | -2156 | -1612 | 119 | 0 | -41 | 3366 | 40.1 | 654.6 | 81.8 | 0.0 | 694.6 | 1 |
| 5 | 22 | -1009 | -403 | -326 | 0 | -125 | 848 | 18.8 | 307.4 | 20.5 | 0.0 | 326.2 | 1 |
| 6 | 22 | -76 | -397 | -324 | 0 | -128 | 840 | 1.4 | 309.2 | 20.1 | 0.0 | 310.6 | 1 |
| 7 | 22 | -1056 | -403 | 361 | 0 | 106 | 848 | 19.6 | 283.3 | 20.5 | 0.0 | 302.9 | 1 |
| 8 | 22 | -122 | -397 | 362 | 0 | 103 | 840 | 2.3 | 278.7 | 20.2 | 0.0 | 281.0 | 1 |
| 9 | 22 | -2333 | -569 | -74 | 0 | -45 | 1191 | 43.4 | 269.3 | 28.9 | 0.0 | 312.7 | 1 |
| 10 | 22 | 779 | -548 | -68 | 0 | -53 | 1164 | 14.5 | 275.0 | 27.8 | 0.0 | 289.5 | 1 |
| 11 | 22 | -2347 | -569 | 137 | 0 | 25 | 1191 | 43.6 | 244.5 | 28.9 | 0.0 | 288.2 | 1 |
| 12 | 22 | 985 | -390 | 131 | 0 | 20 | 831 | 18.3 | 174.1 | 19.8 | 0.0 | 192.4 | 1 |
| 13 | 22 | -1810 | -1346 | 99 | 0 | -34 | 2813 | 33.6 | 546.8 | 68.3 | 0.0 | 580.5 | 1 |
| 14 | 22 | 435 | 371 | -25 | 0 | 10 | -759 | 8.1 | 148.9 | 18.8 | 0.0 | 157.0 | 1 |
| 15 | 22 | -1885 | -1404 | 104 | 0 | -35 | 2933 | 35.0 | 570.2 | 71.2 | 0.0 | 605.3 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|--------|-------|--------|---------|-------|-----------|------|
| | | cm | daN*m | daN/cm | cm | | | |
| 1 | -- | 0 | 3725 | 668.7 | -- | -- | -- | |
| -- | Rara | 11 | 0 | -- | 11 | -0.00 | 1 / 99999 | |
| -- | Freq. | 11 | 0 | -- | 11 | -0.00 | 1 / 99999 | |
| -- | Q.Perm. | 11 | 0 | -- | 11 | -0.00 | 1 / 99999 | |
| -- | Rara | 11 | 0 | -- | 11 | -0.00 | 1 / 99999 | |
| -- | Rara | 11 | 0 | -- | 11 | -0.00 | 1 / 99999 | |
| -- | Freq. | 11 | 0 | -- | 11 | -0.00 | 1 / 99999 | |
| -- | Freq. | 11 | 0 | -- | 11 | -0.00 | 1 / 99999 | |

ASTA NUM. 17 NI 137 NF 142 Lungh. 84.2 cm SEZ. 1 Ps IPE 300

34

categoria: p.p. y qy tot.

qy medio: 0.4223 0.4223 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|-------|------|----|-------|------|---------|--------|--------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | daN/cm | | | | |
| 1 | 0 | -2156 | -2360 | -52 | 0 | -41 | 3366 | 40.1 | 654.6 | 119.8 | 0.0 | 694.6 | 1 | |
| 5 | 0 | -1047 | -572 | -736 | 0 | -125 | 848 | 19.5 | 307.4 | 34.4 | 0.0 | 326.9 | 1 | |
| 6 | 0 | -38 | -566 | -738 | 0 | -128 | 840 | 0.7 | 309.2 | 34.5 | 0.0 | 309.9 | 1 | |
| 7 | 0 | -1093 | -572 | 683 | 0 | 106 | 848 | 20.3 | 283.3 | 31.9 | 0.0 | 303.6 | 1 | |
| 8 | 0 | -84 | -566 | 681 | 0 | 103 | 840 | 1.6 | 278.7 | 31.8 | 0.0 | 280.3 | 1 | |
| 9 | 0 | -2458 | -807 | -237 | 0 | -45 | 1191 | 45.7 | 269.3 | 41.0 | 0.0 | 315.0 | 1 | |
| 10 | 0 | 905 | -787 | -245 | 0 | -53 | 1164 | 16.8 | 275.0 | 39.9 | 0.0 | 291.9 | 1 | |
| 11 | 0 | -2473 | -807 | 195 | 0 | 25 | 1191 | 46.0 | 244.5 | 41.0 | 0.0 | 290.5 | 1 | |
| 12 | 0 | 1111 | -559 | 192 | 0 | 20 | 831 | 20.7 | 174.1 | 28.3 | 0.0 | 194.8 | 1 | |
| 13 | 0 | -1810 | -1965 | -43 | 0 | -34 | 2813 | 33.6 | 546.8 | 99.7 | 0.0 | 580.5 | 1 | |
| 14 | 0 | 435 | 576 | 18 | 0 | 10 | -759 | 8.1 | 148.9 | 29.2 | 0.0 | 157.0 | 1 | |
| 15 | 0 | -1885 | -2051 | -45 | 0 | -35 | 2933 | 35.0 | 570.2 | 104.1 | 0.0 | 605.3 | 1 | |
| 1 | 8 | -2156 | -2365 | -52 | 0 | -36 | 3167 | 40.1 | 613.5 | 120.0 | 0.0 | 653.5 | 1 | |
| 5 | 8 | -1047 | -575 | -736 | 0 | -63 | 800 | 19.5 | 221.9 | 34.4 | 0.0 | 241.3 | 1 | |
| 6 | 8 | -38 | -569 | -738 | 0 | -65 | 792 | 0.7 | 223.5 | 34.5 | 0.0 | 224.2 | 1 | |
| 7 | 8 | -1093 | -576 | 683 | 0 | 48 | 800 | 20.3 | 203.2 | 31.9 | 0.0 | 223.5 | 1 | |
| 8 | 8 | -84 | -570 | 681 | 0 | 46 | 792 | 1.6 | 199.0 | 31.8 | 0.0 | 200.6 | 1 | |
| 9 | 8 | -2458 | -812 | -237 | 0 | -25 | 1123 | 45.7 | 232.3 | 41.2 | 0.0 | 278.0 | 1 | |
| 10 | 8 | 905 | -791 | -245 | 0 | -33 | 1098 | 16.8 | 237.6 | 40.1 | 0.0 | 254.4 | 1 | |
| 11 | 8 | -2473 | -812 | 195 | 0 | 8 | 1123 | 46.0 | 211.9 | 41.2 | 0.0 | 257.9 | 1 | |
| 12 | 8 | 1111 | -562 | 192 | 0 | 4 | 784 | 20.7 | 145.6 | 28.5 | 0.0 | 166.3 | 1 | |
| 13 | 8 | -1810 | -1970 | -43 | 0 | -30 | 2647 | 33.6 | 512.6 | 99.9 | 0.0 | 546.3 | 1 | |
| 14 | 8 | 435 | 573 | 18 | 0 | 9 | -711 | 8.1 | 138.3 | 29.1 | 0.0 | 146.4 | 1 | |
| 15 | 8 | -1885 | -2056 | -45 | 0 | -31 | 2760 | 35.0 | 534.5 | 104.3 | 0.0 | 569.5 | 1 | |
| 1 | 17 | -2156 | -2369 | -52 | 0 | -32 | 2968 | 40.1 | 572.3 | 120.2 | 0.0 | 612.4 | 1 | |
| 5 | 17 | -1047 | -579 | -736 | 0 | -1 | 751 | 19.5 | 136.2 | 34.4 | 0.0 | 161.3 | 3 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|-------|-------|------|---|------|------|------|-------|-------|-----|-------|---|
| 6 | 17 | -38 | -573 | -738 | 0 | -3 | 744 | 0.7 | 137.7 | 34.5 | 0.0 | 143.8 | 3 |
| 7 | 17 | -1093 | -579 | 683 | 0 | -10 | 751 | 20.3 | 146.7 | 31.9 | 0.0 | 167.0 | 1 |
| 8 | 17 | -84 | -573 | 681 | 0 | -12 | 744 | 1.6 | 148.1 | 31.8 | 0.0 | 149.6 | 1 |
| 9 | 17 | -2458 | -816 | -237 | 0 | -5 | 1054 | 45.7 | 195.2 | 41.4 | 0.0 | 240.9 | 1 |
| 10 | 17 | 905 | -796 | -245 | 0 | -12 | 1031 | 16.8 | 200.0 | 40.4 | 0.0 | 216.8 | 1 |
| 11 | 17 | -2473 | -817 | 195 | 0 | -8 | 1054 | 46.0 | 199.2 | 41.4 | 0.0 | 245.2 | 1 |
| 12 | 17 | 1111 | -566 | 192 | 0 | -12 | 736 | 20.7 | 147.3 | 28.7 | 0.0 | 167.9 | 1 |
| 13 | 17 | -1810 | -1974 | -43 | 0 | -27 | 2481 | 33.6 | 478.4 | 100.2 | 0.0 | 512.0 | 1 |
| 14 | 17 | 435 | 569 | 18 | 0 | 7 | -662 | 8.1 | 127.8 | 28.9 | 0.0 | 135.9 | 1 |
| 15 | 17 | -1885 | -2060 | -45 | 0 | -28 | 2587 | 35.0 | 498.7 | 104.5 | 0.0 | 533.8 | 1 |
| | | | | | | | | | | | | | |
| 1 | 25 | -2156 | -2374 | -52 | 0 | -27 | 2768 | 40.1 | 531.0 | 120.5 | 0.0 | 571.1 | 1 |
| 5 | 25 | -1047 | -583 | -736 | 0 | 61 | 702 | 19.5 | 201.5 | 34.4 | 0.0 | 221.0 | 1 |
| 6 | 25 | -38 | -576 | -738 | 0 | 59 | 696 | 0.7 | 197.9 | 34.5 | 0.0 | 198.6 | 1 |
| 7 | 25 | -1093 | -583 | 683 | 0 | -67 | 702 | 20.3 | 209.3 | 31.9 | 0.0 | 229.6 | 1 |
| 8 | 25 | -84 | -577 | 681 | 0 | -69 | 696 | 1.6 | 210.5 | 31.8 | 0.0 | 212.1 | 1 |
| 9 | 25 | -2458 | -821 | -237 | 0 | 15 | 985 | 45.7 | 195.7 | 41.7 | 0.0 | 241.4 | 1 |
| 10 | 25 | 905 | -800 | -245 | 0 | 9 | 964 | 16.8 | 183.6 | 40.6 | 0.0 | 200.4 | 1 |
| 11 | 25 | -2473 | -821 | 195 | 0 | -24 | 985 | 46.0 | 207.2 | 41.7 | 0.0 | 253.2 | 1 |
| 12 | 25 | 1111 | -569 | 192 | 0 | -28 | 688 | 20.7 | 158.7 | 28.9 | 0.0 | 179.4 | 1 |
| 13 | 25 | -1810 | -1979 | -43 | 0 | -23 | 2315 | 33.6 | 444.0 | 100.4 | 0.0 | 477.7 | 1 |
| 14 | 25 | 435 | 566 | 18 | 0 | 6 | -615 | 8.1 | 117.3 | 28.7 | 0.0 | 125.4 | 1 |
| 15 | 25 | -1885 | -2065 | -45 | 0 | -24 | 2413 | 35.0 | 462.9 | 104.8 | 0.0 | 497.9 | 1 |
| | | | | | | | | | | | | | |
| 1 | 34 | -2156 | -2378 | -52 | 0 | -23 | 2568 | 40.1 | 489.7 | 120.7 | 0.0 | 529.8 | 1 |
| 5 | 34 | -1047 | -586 | -736 | 0 | 123 | 653 | 19.5 | 269.6 | 34.4 | 0.0 | 289.0 | 1 |
| 6 | 34 | -38 | -580 | -738 | 0 | 121 | 647 | 0.7 | 266.3 | 34.5 | 0.0 | 267.0 | 1 |
| 7 | 34 | -1093 | -586 | 683 | 0 | -125 | 653 | 20.3 | 271.9 | 31.9 | 0.0 | 292.2 | 1 |
| 8 | 34 | -84 | -580 | 681 | 0 | -126 | 647 | 1.6 | 272.9 | 31.8 | 0.0 | 274.5 | 1 |
| 9 | 34 | -2458 | -826 | -237 | 0 | 35 | 916 | 45.7 | 208.1 | 41.9 | 0.0 | 253.8 | 1 |
| 10 | 34 | 905 | -805 | -245 | 0 | 29 | 896 | 16.8 | 197.0 | 40.8 | 0.0 | 213.8 | 1 |
| 11 | 34 | -2473 | -826 | 195 | 0 | -41 | 916 | 46.0 | 215.1 | 41.9 | 0.0 | 261.1 | 1 |
| 12 | 34 | 1111 | -573 | 192 | 0 | -44 | 640 | 20.7 | 170.2 | 29.1 | 0.0 | 190.8 | 1 |
| 13 | 34 | -1810 | -1983 | -43 | 0 | -19 | 2148 | 33.6 | 409.6 | 100.6 | 0.0 | 443.3 | 1 |
| 14 | 34 | 435 | 562 | 18 | 0 | 4 | -567 | 8.1 | 106.9 | 28.5 | 0.0 | 115.0 | 1 |
| 15 | 34 | -1885 | -2069 | -45 | 0 | -20 | 2239 | 35.0 | 427.0 | 105.0 | 0.0 | 462.0 | 1 |
| | | | | | | | | | | | | | |
| 1 | 42 | -2156 | -2383 | -52 | 0 | -19 | 2367 | 40.1 | 448.3 | 120.9 | 0.0 | 488.4 | 1 |
| 5 | 42 | -1047 | -590 | -736 | 0 | 185 | 603 | 19.5 | 337.6 | 34.4 | 0.0 | 357.1 | 1 |
| 6 | 42 | -38 | -584 | -738 | 0 | 183 | 598 | 0.7 | 334.6 | 34.5 | 0.0 | 335.4 | 1 |
| 7 | 42 | -1093 | -590 | 683 | 0 | -182 | 604 | 20.3 | 334.4 | 31.9 | 0.0 | 354.7 | 1 |
| 8 | 42 | -84 | -584 | 681 | 0 | -184 | 598 | 1.6 | 335.3 | 31.8 | 0.0 | 336.9 | 1 |
| 9 | 42 | -2458 | -830 | -237 | 0 | 55 | 846 | 45.7 | 220.4 | 42.1 | 0.0 | 266.0 | 1 |
| 10 | 42 | 905 | -810 | -245 | 0 | 50 | 828 | 16.8 | 210.4 | 41.1 | 0.0 | 227.2 | 1 |
| 11 | 42 | -2473 | -830 | 195 | 0 | -57 | 846 | 46.0 | 223.0 | 42.1 | 0.0 | 268.9 | 1 |
| 12 | 42 | 1111 | -576 | 192 | 0 | -61 | 592 | 20.7 | 181.5 | 29.2 | 0.0 | 202.2 | 1 |
| 13 | 42 | -1810 | -1988 | -43 | 0 | -16 | 1981 | 33.6 | 375.2 | 100.9 | 0.0 | 408.8 | 1 |
| 14 | 42 | 435 | 559 | 18 | 0 | 3 | -520 | 8.1 | 96.5 | 28.3 | 0.0 | 104.6 | 1 |
| 15 | 42 | -1885 | -2074 | -45 | 0 | -16 | 2064 | 35.0 | 391.0 | 105.2 | 0.0 | 426.0 | 1 |
| | | | | | | | | | | | | | |
| 1 | 51 | -2156 | -2388 | -52 | 0 | -14 | 2166 | 40.1 | 406.9 | 121.2 | 0.0 | 446.9 | 1 |
| 5 | 51 | -1047 | -593 | -736 | 0 | 247 | 554 | 19.5 | 405.6 | 34.4 | 0.0 | 425.0 | 1 |
| 6 | 51 | -38 | -587 | -738 | 0 | 245 | 549 | 0.7 | 402.9 | 34.5 | 0.0 | 403.7 | 1 |
| 7 | 51 | -1093 | -594 | 683 | 0 | -240 | 554 | 20.3 | 396.9 | 31.9 | 0.0 | 417.2 | 1 |
| 8 | 51 | -84 | -587 | 681 | 0 | -241 | 549 | 1.6 | 397.6 | 31.8 | 0.0 | 399.2 | 1 |
| 9 | 51 | -2458 | -835 | -237 | 0 | 75 | 776 | 45.7 | 232.6 | 42.4 | 0.0 | 278.3 | 1 |
| 10 | 51 | 905 | -814 | -245 | 0 | 70 | 760 | 16.8 | 223.7 | 41.3 | 0.0 | 240.5 | 1 |
| 11 | 51 | -2473 | -835 | 195 | 0 | -74 | 776 | 46.0 | 230.7 | 42.4 | 0.0 | 276.7 | 1 |
| 12 | 51 | 1111 | -580 | 192 | 0 | -77 | 543 | 20.7 | 192.9 | 29.4 | 0.0 | 213.5 | 1 |
| 13 | 51 | -1810 | -1993 | -43 | 0 | -12 | 1813 | 33.6 | 340.6 | 101.1 | 0.0 | 374.3 | 1 |
| 14 | 51 | 435 | 555 | 18 | 0 | 1 | -473 | 8.1 | 86.2 | 28.2 | 0.0 | 94.8 | 3 |
| 15 | 51 | -1885 | -2079 | -45 | 0 | -13 | 1889 | 35.0 | 354.9 | 105.5 | 0.0 | 390.0 | 1 |
| | | | | | | | | | | | | | |
| 1 | 59 | -2156 | -2392 | -52 | 0 | -10 | 1965 | 40.1 | 365.3 | 121.4 | 0.0 | 405.4 | 1 |
| 5 | 59 | -1047 | -597 | -736 | 0 | 309 | 503 | 19.5 | 473.5 | 34.4 | 0.0 | 492.9 | 1 |
| 6 | 59 | -38 | -591 | -738 | 0 | 307 | 499 | 0.7 | 471.2 | 34.5 | 0.0 | 471.9 | 1 |
| 7 | 59 | -1093 | -597 | 683 | 0 | -297 | 504 | 20.3 | 459.3 | 31.9 | 0.0 | 479.6 | 1 |
| 8 | 59 | -84 | -591 | 681 | 0 | -298 | 499 | 1.6 | 459.9 | 31.8 | 0.0 | 461.4 | 1 |
| 9 | 59 | -2458 | -840 | -237 | 0 | 95 | 706 | 45.7 | 244.7 | 42.6 | 0.0 | 290.4 | 1 |
| 10 | 59 | 905 | -819 | -245 | 0 | 91 | 691 | 16.8 | 236.9 | 41.6 | 0.0 | 253.7 | 1 |
| 11 | 59 | -2473 | -840 | 195 | 0 | -90 | 706 | 46.0 | 238.4 | 42.6 | 0.0 | 284.4 | 1 |
| 12 | 59 | 1111 | -584 | 192 | 0 | -93 | 494 | 20.7 | 204.1 | 29.6 | 0.0 | 224.8 | 1 |
| 13 | 59 | -1810 | -1997 | -43 | 0 | -9 | 1645 | 33.6 | 306.0 | 101.3 | 0.0 | 339.7 | 1 |
| 14 | 59 | 435 | 551 | 18 | 0 | -1 | -427 | 8.1 | 77.2 | 28.0 | 0.0 | 87.6 | 3 |
| 15 | 59 | -1885 | -2083 | -45 | 0 | -9 | 1714 | 35.0 | 318.8 | 105.7 | 0.0 | 353.8 | 1 |
| | | | | | | | | | | | | | |
| 1 | 67 | -2156 | -2397 | -52 | 0 | -6 | 1764 | 40.1 | 323.7 | 121.6 | 0.0 | 371.8 | 3 |
| 5 | 67 | -1047 | -600 | -736 | 0 | 370 | 453 | 19.5 | 541.3 | 34.4 | 0.0 | 560.8 | 1 |
| 6 | 67 | -38 | -594 | -738 | 0 | 369 | 449 | 0.7 | 539.4 | 34.5 | 0.0 | 540.1 | 1 |
| 7 | 67 | -1093 | -601 | 683 | 0 | -355 | 453 | 20.3 | 521.7 | 31.9 | 0.0 | 542.0 | 1 |
| 8 | 67 | -84 | -594 | 681 | 0 | -355 | 449 | 1.6 | 522.1 | 31.8 | 0.0 | 523.6 | 1 |
| 9 | 67 | -2458 | -844 | -237 | 0 | 115 | 635 | 45.7 | 256.8 | 42.8 | 0.0 | 302.5 | 1 |
| 10 | 67 | 905 | -823 | -245 | 0 | 112 | 622 | 16.8 | 250.1 | 41.8 | 0.0 | 266.9 | 1 |
| 11 | 67 | -2473 | -844 | 195 | 0 | -106 | 635 | 46.0 | 246.0 | 42.8 | 0.0 | 292.0 | 1 |
| 12 | 67 | 1111 | -587 | 192 | 0 | -109 | 445 | 20.7 | 215.3 | 29.8 | 0.0 | 236.0 | 1 |
| 13 | 67 | -1810 | -2002 | -43 | 0 | -5 | 1477 | 33.6 | 271.3 | 101.6 | 0.0 | 311.3 | 3 |
| 14 | 67 | 435 | 548 | 18 | 0 | -2 | -380 | 8.1 | 70.8 | 27.8 | 0.0 | 80.7 | 3 |
| 15 | 67 | -1885 | -2088 | -45 | 0 | -5 | 1539 | 35.0 | 282.6 | 105.9 | 0.0 | 324.3 | 3 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|-------|-------|------|---|------|------|------|-------|-------|-----|-------|---|
| 1 | 76 | -2156 | -2401 | -52 | 0 | -1 | 1561 | 40.1 | 282.1 | 121.9 | 0.0 | 341.7 | 3 |
| 5 | 76 | -1047 | -604 | -736 | 0 | 432 | 402 | 19.5 | 609.1 | 34.4 | 0.0 | 628.6 | 1 |
| 6 | 76 | -38 | -598 | -738 | 0 | 432 | 399 | 0.7 | 607.5 | 34.5 | 0.0 | 608.2 | 1 |
| 7 | 76 | -1093 | -604 | 683 | 0 | -412 | 403 | 20.3 | 584.0 | 31.9 | 0.0 | 604.3 | 1 |
| 8 | 76 | -84 | -598 | 681 | 0 | -413 | 399 | 1.6 | 584.2 | 31.8 | 0.0 | 585.8 | 1 |
| 9 | 76 | -2458 | -849 | -237 | 0 | 135 | 563 | 45.7 | 268.8 | 43.1 | 0.0 | 314.5 | 1 |
| 10 | 76 | 905 | -828 | -245 | 0 | 132 | 552 | 16.8 | 263.2 | 42.0 | 0.0 | 280.0 | 1 |
| 11 | 76 | -2473 | -849 | 195 | 0 | -123 | 563 | 46.0 | 253.6 | 43.1 | 0.0 | 299.6 | 1 |
| 12 | 76 | 1111 | -591 | 192 | 0 | -125 | 395 | 20.7 | 226.5 | 30.0 | 0.0 | 247.1 | 1 |
| 13 | 76 | -1810 | -2006 | -43 | 0 | -1 | 1308 | 33.6 | 236.6 | 101.8 | 0.0 | 286.2 | 3 |
| 14 | 76 | 435 | 544 | 18 | 0 | -4 | -334 | 8.1 | 64.4 | 27.6 | 0.0 | 73.9 | 3 |
| 15 | 76 | -1885 | -2092 | -45 | 0 | -1 | 1362 | 35.0 | 246.3 | 106.2 | 0.0 | 298.2 | 3 |
| | | | | | | | | | | | | | |
| 1 | 84 | -2156 | -2406 | -52 | 0 | 3 | 1359 | 40.1 | 247.6 | 122.1 | 0.0 | 312.7 | 3 |
| 5 | 84 | -1047 | -608 | -736 | 0 | 494 | 351 | 19.5 | 676.9 | 34.4 | 0.0 | 696.3 | 1 |
| 6 | 84 | -38 | -601 | -738 | 0 | 494 | 349 | 0.7 | 675.6 | 34.5 | 0.0 | 676.3 | 1 |
| 7 | 84 | -1093 | -608 | 683 | 0 | -470 | 352 | 20.3 | 646.2 | 31.9 | 0.0 | 666.5 | 1 |
| 8 | 84 | -84 | -602 | 681 | 0 | -470 | 349 | 1.6 | 646.3 | 31.8 | 0.0 | 647.9 | 1 |
| 9 | 84 | -2458 | -853 | -237 | 0 | 155 | 492 | 45.7 | 280.7 | 43.3 | 0.0 | 326.4 | 1 |
| 10 | 84 | 905 | -833 | -245 | 0 | 153 | 482 | 16.8 | 276.2 | 42.3 | 0.0 | 293.0 | 1 |
| 11 | 84 | -2473 | -854 | 195 | 0 | -139 | 492 | 46.0 | 261.1 | 43.3 | 0.0 | 307.1 | 1 |
| 12 | 84 | 1111 | -594 | 192 | 0 | -141 | 345 | 20.7 | 237.6 | 30.2 | 0.0 | 258.2 | 1 |
| 13 | 84 | -1810 | -2011 | -43 | 0 | 2 | 1139 | 33.6 | 207.2 | 102.0 | 0.0 | 261.9 | 3 |
| 14 | 84 | 435 | 541 | 18 | 0 | -5 | -289 | 8.1 | 58.1 | 27.4 | 0.0 | 67.4 | 3 |
| 15 | 84 | -1885 | -2097 | -45 | 0 | 2 | 1186 | 35.0 | 215.8 | 106.4 | 0.0 | 272.9 | 3 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|--------|-------|---------------------|---------|------|-----------|------|
| | | cm | daN*m | daN/cm ² | cm | | | |
| 1 | -- | 0 | 3366 | 604.2 | -- | -- | -- | |
| -- | Rara | 42 | 2 | -- | 42 | 0.00 | 1 / 99999 | |
| -- | Freq. | 42 | 2 | -- | 42 | 0.00 | 1 / 99999 | |
| -- | Q.Perm. | 42 | 2 | -- | 42 | 0.00 | 1 / 99999 | |
| -- | Rara | 42 | 2 | -- | 42 | 0.00 | 1 / 99999 | |
| -- | Rara | 42 | 2 | -- | 42 | 0.00 | 1 / 99999 | |
| -- | Freq. | 42 | 2 | -- | 42 | 0.00 | 1 / 99999 | |
| -- | Freq. | 42 | 2 | -- | 42 | 0.00 | 1 / 99999 | |

36
ASTA NUM. 36 NI 142 NF 40 Lungh. 44.7 cm SEZ. 1 Ps IPE 300

categoria: p.p. y qy tot.

qy medio: 0.4223 0.4223 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|-------|-------|----|-------|------|---------|--------|---------------------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | daN/cm ² | | | | |
| 1 | 0 | -2156 | -3030 | 7 | 0 | 3 | 1359 | 40.1 | 247.6 | 153.8 | 0.0 | 336.7 | 3 | |
| 5 | 0 | -1083 | -777 | 1107 | 0 | 494 | 351 | 20.1 | 676.9 | 51.7 | 0.0 | 697.0 | 1 | |
| 6 | 0 | -1 | -771 | 1105 | 0 | 494 | 349 | 0.0 | 675.6 | 51.6 | 0.0 | 675.6 | 1 | |
| 7 | 0 | -1131 | -778 | -1051 | 0 | -470 | 352 | 21.0 | 646.2 | 49.1 | 0.0 | 667.2 | 1 | |
| 8 | 0 | -47 | -771 | -1053 | 0 | -470 | 349 | 0.9 | 646.3 | 49.2 | 0.0 | 647.2 | 1 | |
| 9 | 0 | -2581 | -1089 | 347 | 0 | 155 | 492 | 48.0 | 280.7 | 55.3 | 0.0 | 328.7 | 1 | |
| 10 | 0 | 1027 | -1068 | 342 | 0 | 153 | 482 | 19.1 | 276.2 | 54.2 | 0.0 | 295.3 | 1 | |
| 11 | 0 | -2596 | -1089 | -312 | 0 | -139 | 492 | 48.3 | 261.1 | 55.3 | 0.0 | 309.3 | 1 | |
| 12 | 0 | 1233 | -764 | -317 | 0 | -141 | 345 | 22.9 | 237.6 | 38.8 | 0.0 | 260.5 | 1 | |
| 13 | 0 | -1810 | -2537 | 5 | 0 | 2 | 1139 | 33.6 | 207.2 | 128.7 | 0.0 | 282.1 | 3 | |
| 14 | 0 | 435 | 656 | -11 | 0 | -5 | -289 | 8.1 | 58.1 | 33.3 | 0.0 | 71.9 | 3 | |
| 15 | 0 | -1885 | -2644 | 5 | 0 | 2 | 1186 | 35.0 | 215.8 | 134.2 | 0.0 | 293.9 | 3 | |
| | | | | | | | | | | | | | | |
| 1 | 4 | -2156 | -3033 | 7 | 0 | 3 | 1224 | 40.1 | 222.9 | 153.9 | 0.0 | 319.2 | 3 | |
| 5 | 4 | -1083 | -779 | 1107 | 0 | 445 | 317 | 20.1 | 609.2 | 51.7 | 0.0 | 629.4 | 1 | |
| 6 | 4 | -1 | -773 | 1105 | 0 | 444 | 314 | 0.0 | 608.1 | 51.6 | 0.0 | 608.1 | 1 | |
| 7 | 4 | -1131 | -779 | -1051 | 0 | -423 | 317 | 21.0 | 581.7 | 49.1 | 0.0 | 602.7 | 1 | |
| 8 | 4 | -47 | -773 | -1053 | 0 | -423 | 314 | 0.9 | 581.8 | 49.2 | 0.0 | 582.6 | 1 | |
| 9 | 4 | -2581 | -1091 | 347 | 0 | 140 | 443 | 48.0 | 252.7 | 55.4 | 0.0 | 300.7 | 1 | |
| 10 | 4 | 1027 | -1070 | 342 | 0 | 137 | 435 | 19.1 | 248.7 | 54.3 | 0.0 | 267.8 | 1 | |
| 11 | 4 | -2596 | -1091 | -312 | 0 | -125 | 443 | 48.3 | 235.1 | 55.4 | 0.0 | 283.3 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|-------|-------|-------|---|------|------|------|-------|-------|-----|-------|---|
| 12 | 4 | 1233 | -766 | -317 | 0 | -127 | 311 | 22.9 | 213.9 | 38.9 | 0.0 | 236.8 | 1 |
| 13 | 4 | -1810 | -2540 | 5 | 0 | 2 | 1026 | 33.6 | 186.5 | 128.9 | 0.0 | 267.5 | 3 |
| 14 | 4 | 435 | 654 | -11 | 0 | -5 | -259 | 8.1 | 52.2 | 33.2 | 0.0 | 68.0 | 3 |
| 15 | 4 | -1885 | -2647 | 5 | 0 | 2 | 1068 | 35.0 | 194.3 | 134.3 | 0.0 | 278.6 | 3 |
| 1 | 9 | -2156 | -3035 | 7 | 0 | 2 | 1088 | 40.1 | 198.2 | 154.0 | 0.0 | 302.4 | 3 |
| 5 | 9 | -1083 | -781 | 1107 | 0 | 395 | 282 | 20.1 | 541.6 | 51.7 | 0.0 | 561.7 | 1 |
| 6 | 9 | -1 | -775 | 1105 | 0 | 395 | 280 | 0.0 | 540.6 | 51.6 | 0.0 | 540.6 | 1 |
| 7 | 9 | -1131 | -781 | -1051 | 0 | -376 | 282 | 21.0 | 517.1 | 49.1 | 0.0 | 538.1 | 1 |
| 8 | 9 | -47 | -775 | -1053 | 0 | -376 | 280 | 0.9 | 517.2 | 49.2 | 0.0 | 518.1 | 1 |
| 9 | 9 | -2581 | -1094 | 347 | 0 | 124 | 394 | 48.0 | 224.7 | 55.5 | 0.0 | 272.7 | 1 |
| 10 | 9 | 1027 | -1073 | 342 | 0 | 122 | 387 | 19.1 | 221.1 | 54.4 | 0.0 | 240.2 | 1 |
| 11 | 9 | -2596 | -1094 | -312 | 0 | -111 | 394 | 48.3 | 209.0 | 55.5 | 0.0 | 257.3 | 1 |
| 12 | 9 | 1233 | -768 | -317 | 0 | -113 | 277 | 22.9 | 190.2 | 39.0 | 0.0 | 213.1 | 1 |
| 13 | 9 | -1810 | -2542 | 5 | 0 | 2 | 912 | 33.6 | 165.9 | 129.0 | 0.0 | 253.4 | 3 |
| 14 | 9 | 435 | 652 | -11 | 0 | -4 | -230 | 8.1 | 46.4 | 33.1 | 0.0 | 64.3 | 3 |
| 15 | 9 | -1885 | -2649 | 5 | 0 | 2 | 950 | 35.0 | 172.8 | 134.4 | 0.0 | 263.9 | 3 |
| 1 | 13 | -2156 | -3038 | 7 | 0 | 2 | 952 | 40.1 | 173.5 | 154.1 | 0.0 | 286.3 | 3 |
| 5 | 13 | -1083 | -783 | 1107 | 0 | 346 | 247 | 20.1 | 474.0 | 51.7 | 0.0 | 494.1 | 1 |
| 6 | 13 | -1 | -777 | 1105 | 0 | 346 | 245 | 0.0 | 473.1 | 51.6 | 0.0 | 473.1 | 1 |
| 7 | 13 | -1131 | -783 | -1051 | 0 | -329 | 247 | 21.0 | 452.5 | 49.1 | 0.0 | 473.5 | 1 |
| 8 | 13 | -47 | -777 | -1053 | 0 | -329 | 245 | 0.9 | 452.6 | 49.2 | 0.0 | 453.5 | 1 |
| 9 | 13 | -2581 | -1096 | 347 | 0 | 109 | 345 | 48.0 | 196.7 | 55.6 | 0.0 | 244.7 | 1 |
| 10 | 13 | 1027 | -1075 | 342 | 0 | 107 | 339 | 19.1 | 193.6 | 54.6 | 0.0 | 212.6 | 1 |
| 11 | 13 | -2596 | -1096 | -312 | 0 | -97 | 345 | 48.3 | 183.0 | 55.6 | 0.0 | 231.2 | 1 |
| 12 | 13 | 1233 | -770 | -317 | 0 | -99 | 243 | 22.9 | 166.5 | 39.1 | 0.0 | 189.4 | 1 |
| 13 | 13 | -1810 | -2545 | 5 | 0 | 2 | 798 | 33.6 | 145.2 | 129.1 | 0.0 | 240.0 | 3 |
| 14 | 13 | 435 | 650 | -11 | 0 | -4 | -201 | 8.1 | 40.5 | 33.0 | 0.0 | 60.8 | 3 |
| 15 | 13 | -1885 | -2652 | 5 | 0 | 2 | 831 | 35.0 | 151.3 | 134.5 | 0.0 | 250.0 | 3 |
| 1 | 18 | -2156 | -3040 | 7 | 0 | 2 | 817 | 40.1 | 148.8 | 154.3 | 0.0 | 271.2 | 3 |
| 5 | 18 | -1083 | -785 | 1107 | 0 | 297 | 212 | 20.1 | 406.3 | 51.7 | 0.0 | 426.4 | 1 |
| 6 | 18 | -1 | -779 | 1105 | 0 | 296 | 210 | 0.0 | 405.6 | 51.6 | 0.0 | 405.6 | 1 |
| 7 | 18 | -1131 | -785 | -1051 | 0 | -282 | 212 | 21.0 | 387.9 | 49.1 | 0.0 | 408.9 | 1 |
| 8 | 18 | -47 | -779 | -1053 | 0 | -282 | 210 | 0.9 | 388.0 | 49.2 | 0.0 | 388.9 | 1 |
| 9 | 18 | -2581 | -1099 | 347 | 0 | 93 | 296 | 48.0 | 168.7 | 55.7 | 0.0 | 216.6 | 1 |
| 10 | 18 | 1027 | -1078 | 342 | 0 | 92 | 291 | 19.1 | 166.0 | 54.7 | 0.0 | 185.0 | 1 |
| 11 | 18 | -2596 | -1099 | -312 | 0 | -84 | 296 | 48.3 | 156.9 | 55.7 | 0.0 | 205.1 | 1 |
| 12 | 18 | 1233 | -772 | -317 | 0 | -85 | 208 | 22.9 | 142.7 | 39.2 | 0.0 | 165.6 | 1 |
| 13 | 18 | -1810 | -2547 | 5 | 0 | 1 | 685 | 33.6 | 124.5 | 129.2 | 0.0 | 227.3 | 3 |
| 14 | 18 | 435 | 648 | -11 | 0 | -3 | -172 | 8.1 | 34.7 | 32.9 | 0.0 | 57.6 | 4 |
| 15 | 18 | -1885 | -2654 | 5 | 0 | 1 | 713 | 35.0 | 129.7 | 134.7 | 0.0 | 236.8 | 3 |
| 1 | 22 | -2156 | -3043 | 7 | 0 | 1 | 681 | 40.1 | 124.0 | 154.4 | 0.0 | 270.4 | 4 |
| 5 | 22 | -1083 | -787 | 1107 | 0 | 247 | 177 | 20.1 | 338.6 | 51.7 | 0.0 | 358.8 | 1 |
| 6 | 22 | -1 | -781 | 1105 | 0 | 247 | 175 | 0.0 | 338.0 | 51.6 | 0.0 | 338.0 | 1 |
| 7 | 22 | -1131 | -787 | -1051 | 0 | -235 | 177 | 21.0 | 323.3 | 49.1 | 0.0 | 344.3 | 1 |
| 8 | 22 | -47 | -781 | -1053 | 0 | -235 | 175 | 0.9 | 323.4 | 49.2 | 0.0 | 324.2 | 1 |
| 9 | 22 | -2581 | -1101 | 347 | 0 | 78 | 247 | 48.0 | 140.6 | 55.9 | 0.0 | 188.6 | 1 |
| 10 | 22 | 1027 | -1080 | 342 | 0 | 76 | 243 | 19.1 | 138.3 | 54.8 | 0.0 | 157.4 | 1 |
| 11 | 22 | -2596 | -1101 | -312 | 0 | -70 | 247 | 48.3 | 130.8 | 55.9 | 0.0 | 179.0 | 1 |
| 12 | 22 | 1233 | -774 | -317 | 0 | -71 | 174 | 22.9 | 119.0 | 39.3 | 0.0 | 141.9 | 1 |
| 13 | 22 | -1810 | -2550 | 5 | 0 | 1 | 571 | 33.6 | 103.8 | 129.4 | 0.0 | 226.6 | 4 |
| 14 | 22 | 435 | 646 | -11 | 0 | -3 | -143 | 8.1 | 28.9 | 32.8 | 0.0 | 57.4 | 4 |
| 15 | 22 | -1885 | -2657 | 5 | 0 | 1 | 594 | 35.0 | 108.2 | 134.8 | 0.0 | 236.1 | 4 |
| 1 | 27 | -2156 | -3045 | 7 | 0 | 1 | 545 | 40.1 | 99.3 | 154.5 | 0.0 | 270.6 | 4 |
| 5 | 27 | -1083 | -789 | 1107 | 0 | 198 | 142 | 20.1 | 270.9 | 51.7 | 0.0 | 291.1 | 1 |
| 6 | 27 | -1 | -782 | 1105 | 0 | 197 | 140 | 0.0 | 270.4 | 51.6 | 0.0 | 270.4 | 1 |
| 7 | 27 | -1131 | -789 | -1051 | 0 | -188 | 142 | 21.0 | 258.7 | 49.1 | 0.0 | 279.7 | 1 |
| 8 | 27 | -47 | -783 | -1053 | 0 | -188 | 140 | 0.9 | 258.7 | 49.2 | 0.0 | 259.6 | 1 |
| 9 | 27 | -2581 | -1103 | 347 | 0 | 62 | 198 | 48.0 | 112.5 | 56.0 | 0.0 | 160.5 | 1 |
| 10 | 27 | 1027 | -1082 | 342 | 0 | 61 | 194 | 19.1 | 110.7 | 54.9 | 0.0 | 129.8 | 1 |
| 11 | 27 | -2596 | -1103 | -312 | 0 | -56 | 198 | 48.3 | 104.7 | 56.0 | 0.0 | 152.9 | 1 |
| 12 | 27 | 1233 | -775 | -317 | 0 | -57 | 139 | 22.9 | 95.2 | 39.3 | 0.0 | 118.1 | 1 |
| 13 | 27 | -1810 | -2552 | 5 | 0 | 1 | 457 | 33.6 | 83.1 | 129.5 | 0.0 | 226.8 | 4 |
| 14 | 27 | 435 | 644 | -11 | 0 | -2 | -114 | 8.1 | 23.1 | 32.7 | 0.0 | 57.2 | 4 |
| 15 | 27 | -1885 | -2659 | 5 | 0 | 1 | 476 | 35.0 | 86.6 | 134.9 | 0.0 | 236.3 | 4 |
| 1 | 31 | -2156 | -3048 | 7 | 0 | 1 | 409 | 40.1 | 74.5 | 154.6 | 0.0 | 270.8 | 4 |
| 5 | 31 | -1083 | -791 | 1107 | 0 | 148 | 106 | 20.1 | 203.2 | 51.7 | 0.0 | 223.3 | 1 |
| 6 | 31 | -1 | -784 | 1105 | 0 | 148 | 105 | 0.0 | 202.8 | 51.6 | 0.0 | 202.9 | 1 |
| 7 | 31 | -1131 | -791 | -1051 | 0 | -141 | 106 | 21.0 | 194.0 | 49.1 | 0.0 | 215.0 | 1 |
| 8 | 31 | -47 | -785 | -1053 | 0 | -141 | 105 | 0.9 | 194.1 | 49.2 | 0.0 | 194.9 | 1 |
| 9 | 31 | -2581 | -1106 | 347 | 0 | 47 | 149 | 48.0 | 84.4 | 56.1 | 0.0 | 132.4 | 1 |
| 10 | 31 | 1027 | -1085 | 342 | 0 | 46 | 146 | 19.1 | 83.1 | 55.0 | 0.0 | 102.2 | 1 |
| 11 | 31 | -2596 | -1106 | -312 | 0 | -42 | 149 | 48.3 | 78.5 | 56.1 | 0.0 | 126.8 | 1 |
| 12 | 31 | 1233 | -777 | -317 | 0 | -42 | 105 | 22.9 | 71.4 | 39.4 | 0.0 | 94.4 | 1 |
| 13 | 31 | -1810 | -2555 | 5 | 0 | 1 | 343 | 33.6 | 62.4 | 129.6 | 0.0 | 227.0 | 4 |
| 14 | 31 | 435 | 643 | -11 | 0 | -2 | -86 | 8.1 | 17.3 | 32.6 | 0.0 | 57.1 | 4 |
| 15 | 31 | -1885 | -2662 | 5 | 0 | 1 | 357 | 35.0 | 65.0 | 135.1 | 0.0 | 236.5 | 4 |
| 1 | 36 | -2156 | -3050 | 7 | 0 | 1 | 273 | 40.1 | 49.7 | 154.8 | 0.0 | 271.0 | 4 |
| 5 | 36 | -1083 | -792 | 1107 | 0 | 99 | 71 | 20.1 | 135.5 | 51.7 | 0.0 | 155.6 | 1 |
| 6 | 36 | -1 | -786 | 1105 | 0 | 99 | 70 | 0.0 | 135.2 | 51.6 | 0.0 | 135.3 | 1 |
| 7 | 36 | -1131 | -793 | -1051 | 0 | -94 | 71 | 21.0 | 129.4 | 49.1 | 0.0 | 150.4 | 1 |
| 8 | 36 | -47 | -787 | -1053 | 0 | -94 | 70 | 0.9 | 129.4 | 49.2 | 0.0 | 130.3 | 1 |
| 9 | 36 | -2581 | -1108 | 347 | 0 | 31 | 99 | 48.0 | 56.3 | 56.2 | 0.0 | 109.4 | 4 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|-------|-------|-------|---|-----|-----|------|------|-------|-----|-------|---|
| 10 | 36 | 1027 | -1087 | 342 | 0 | 31 | 97 | 19.1 | 55.4 | 55.2 | 0.0 | 97.8 | 4 |
| 11 | 36 | -2596 | -1108 | -312 | 0 | -28 | 99 | 48.3 | 52.4 | 56.2 | 0.0 | 109.4 | 4 |
| 12 | 36 | 1233 | -779 | -317 | 0 | -28 | 70 | 22.9 | 47.6 | 39.5 | 0.0 | 72.8 | 4 |
| 13 | 36 | -1810 | -2557 | 5 | 0 | 0 | 229 | 33.6 | 41.6 | 129.8 | 0.0 | 227.2 | 4 |
| 14 | 36 | 435 | 641 | -11 | 0 | -1 | -57 | 8.1 | 11.5 | 32.5 | 0.0 | 56.9 | 4 |
| 15 | 36 | -1885 | -2664 | 5 | 0 | 0 | 238 | 35.0 | 43.3 | 135.2 | 0.0 | 236.8 | 4 |
| | | | | | | | | | | | | | |
| 1 | 40 | -2156 | -3053 | 7 | 0 | 0 | 136 | 40.1 | 24.8 | 154.9 | 0.0 | 271.3 | 4 |
| 5 | 40 | -1083 | -794 | 1107 | 0 | 49 | 36 | 20.1 | 67.8 | 51.7 | 0.0 | 108.5 | 3 |
| 6 | 40 | -1 | -788 | 1105 | 0 | 49 | 35 | 0.0 | 67.6 | 51.6 | 0.0 | 104.5 | 3 |
| 7 | 40 | -1131 | -795 | -1051 | 0 | -47 | 36 | 21.0 | 64.7 | 49.1 | 0.0 | 105.0 | 3 |
| 8 | 40 | -47 | -788 | -1053 | 0 | -47 | 35 | 0.9 | 64.7 | 49.2 | 0.0 | 101.0 | 3 |
| 9 | 40 | -2581 | -1111 | 347 | 0 | 16 | 50 | 48.0 | 28.2 | 56.4 | 0.0 | 109.2 | 4 |
| 10 | 40 | 1027 | -1090 | 342 | 0 | 15 | 49 | 19.1 | 27.7 | 55.3 | 0.0 | 97.8 | 4 |
| 11 | 40 | -2596 | -1111 | -312 | 0 | -14 | 50 | 48.3 | 26.2 | 56.4 | 0.0 | 109.3 | 4 |
| 12 | 40 | 1233 | -781 | -317 | 0 | -14 | 35 | 22.9 | 23.8 | 39.6 | 0.0 | 72.6 | 4 |
| 13 | 40 | -1810 | -2560 | 5 | 0 | 0 | 114 | 33.6 | 20.8 | 129.9 | 0.0 | 227.5 | 4 |
| 14 | 40 | 435 | 639 | -11 | 0 | -1 | -28 | 8.1 | 5.7 | 32.4 | 0.0 | 56.7 | 4 |
| 15 | 40 | -1885 | -2667 | 5 | 0 | 0 | 119 | 35.0 | 21.7 | 135.3 | 0.0 | 237.0 | 4 |
| | | | | | | | | | | | | | |
| 1 | 45 | -2156 | -3055 | 7 | 0 | -0 | 0 | 40.1 | 0.0 | 155.0 | 0.0 | 271.5 | 4 |
| 5 | 45 | -1083 | -796 | 1107 | 0 | 0 | 0 | 20.1 | 0.0 | 51.7 | 0.0 | 106.5 | 3 |
| 6 | 45 | -1 | -790 | 1105 | 0 | 0 | 0 | 0.0 | 0.0 | 51.6 | 0.0 | 104.2 | 3 |
| 7 | 45 | -1131 | -797 | -1051 | 0 | -0 | 0 | 21.0 | 0.0 | 49.1 | 0.0 | 102.9 | 3 |
| 8 | 45 | -47 | -790 | -1053 | 0 | -0 | 0 | 0.9 | 0.0 | 49.2 | 0.0 | 100.7 | 3 |
| 9 | 45 | -2581 | -1113 | 347 | 0 | -0 | 0 | 48.0 | 0.0 | 56.5 | 0.0 | 109.0 | 4 |
| 10 | 45 | 1027 | -1092 | 342 | 0 | -0 | 0 | 19.1 | 0.0 | 55.4 | 0.0 | 97.9 | 4 |
| 11 | 45 | -2596 | -1113 | -312 | 0 | -0 | 0 | 48.3 | 0.0 | 56.5 | 0.0 | 109.1 | 4 |
| 12 | 45 | 1233 | -783 | -317 | 0 | -0 | 0 | 22.9 | 0.0 | 39.7 | 0.0 | 72.5 | 4 |
| 13 | 45 | -1810 | -2562 | 5 | 0 | -0 | 0 | 33.6 | 0.0 | 130.0 | 0.0 | 227.7 | 4 |
| 14 | 45 | 435 | 637 | -11 | 0 | 0 | 0 | 8.1 | 0.0 | 32.3 | 0.0 | 56.6 | 4 |
| 15 | 45 | -1885 | -2669 | 5 | 0 | -0 | 0 | 35.0 | 0.0 | 135.4 | 0.0 | 237.2 | 4 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x | Mmax | Mmax | Sf (M) | x | fmax. | fmax | fmax / l | Nota |
|----|---------|----|-------|--------|--------|-------|-----------|------|----------|------|
| | | cm | daN*m | daN/cm | | cm | | | | |
| 1 | -- | 0 | 1359 | 244.0 | -- | -- | -- | -- | -- | |
| -- | Rara | 34 | 0 | -- | 19 | -0.00 | 1 / 99999 | | | |
| -- | Freq. | 34 | 0 | -- | 19 | -0.00 | 1 / 99999 | | | |
| -- | Q.Perm. | 34 | 0 | -- | 19 | -0.00 | 1 / 99999 | | | |
| -- | Rara | 34 | 0 | -- | 19 | -0.00 | 1 / 99999 | | | |
| -- | Rara | 34 | 0 | -- | 19 | -0.00 | 1 / 99999 | | | |
| -- | Freq. | 34 | 0 | -- | 19 | -0.00 | 1 / 99999 | | | |
| -- | Freq. | 34 | 0 | -- | 19 | -0.00 | 1 / 99999 | | | |

38
Verifica di STABILITA' e/o SVERGOLAMENTO

| n.comb | Fx | My eq. | Mz eq. | Sn. omega | Sn. yx | Sn. zx | OMEGA | OMEGA1 | Sf | Nota |
|--------|-------|--------|--------|-----------|--------|--------|-------|--------|--------|-------------|
| | daN | daN*m | daN/cm | | | | | | | |
| 1 | -2158 | 284 | 1893 | 164 | 44 | 164 | 3.86 | 1.99 | 1206.6 | Sn.zx > 150 |
| 5 | -1083 | 49 | 470 | 164 | 44 | 164 | 3.86 | 1.99 | 308.8 | Sn.zx > 150 |
| 6 | -319 | 164 | 491 | 164 | 44 | 164 | 3.86 | 1.99 | 403.8 | Sn.zx > 150 |
| 7 | -1131 | 23 | 469 | 164 | 44 | 164 | 3.86 | 1.99 | 278.4 | Sn.zx > 150 |
| 8 | -364 | 93 | 490 | 164 | 44 | 164 | 3.86 | 1.99 | 317.5 | Sn.zx > 150 |
| 9 | -2581 | 82 | 635 | 164 | 44 | 164 | 3.86 | 1.99 | 522.1 | Sn.zx > 150 |
| 10 | -29 | 302 | 703 | 164 | 44 | 164 | 3.86 | 1.99 | 628.5 | Sn.zx > 150 |
| 11 | -2596 | 105 | 635 | 164 | 44 | 164 | 3.86 | 1.99 | 552.9 | Sn.zx > 150 |
| 12 | 1233 | 252 | 514 | 164 | 44 | 164 | 1.00 | 1.99 | 519.4 | Sn.zx > 150 |
| 13 | -1812 | 237 | 1584 | 164 | 44 | 164 | 3.86 | 1.99 | 1005.4 | Sn.zx > 150 |
| 14 | 436 | 70 | 417 | 164 | 44 | 164 | 1.00 | 1.99 | 244.0 | Sn.zx > 150 |
| 15 | -1887 | 247 | 1651 | 164 | 44 | 164 | 3.86 | 1.99 | 1049.1 | Sn.zx > 150 |

ASTA NUM. 5 NI 55 NF 23 Lungh. 45.2 cm SEZ. 1 Ps IPE 300

categoria: p.p. y qy tot.

qy medio: 0.4223 0.4223 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|------|-------|-------|------|------|---------------------|--------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm ² | | | | | | |
| 1 | 0 | 3 | 3406 | -1181 | 0 | 0 | 0 | 0.1 | 0.0 | 172.8 | 0.0 | 299.4 | 4 | |
| 5 | 0 | 167 | 851 | 1644 | 0 | 0 | 0 | 3.1 | 0.0 | 76.8 | 0.0 | 145.1 | 3 | |
| 6 | 0 | -168 | 851 | 1612 | 0 | 0 | 0 | 3.1 | 0.0 | 75.3 | 0.0 | 142.7 | 3 | |
| 7 | 0 | 169 | 878 | -2158 | 0 | 0 | 0 | 3.1 | 0.0 | 100.8 | 0.0 | 184.5 | 3 | |
| 8 | 0 | -166 | 878 | -2190 | 0 | 0 | 0 | 3.1 | 0.0 | 102.3 | 0.0 | 187.0 | 3 | |
| 9 | 0 | 559 | 1201 | 240 | 0 | 0 | 0 | 10.4 | 0.0 | 60.9 | 0.0 | 106.1 | 4 | |
| 10 | 0 | -557 | 1201 | 134 | 0 | 0 | 0 | 10.4 | 0.0 | 60.9 | 0.0 | 106.1 | 4 | |
| 11 | 0 | 560 | 1209 | -913 | 0 | -0 | 0 | 10.4 | 0.0 | 61.3 | 0.0 | 110.8 | 3 | |
| 12 | 0 | -557 | 869 | -905 | 0 | 0 | 0 | 10.4 | 0.0 | 44.1 | 0.0 | 94.5 | 3 | |
| 13 | 0 | 3 | 2850 | -984 | 0 | 0 | 0 | 0.1 | 0.0 | 144.6 | 0.0 | 250.5 | 4 | |
| 14 | 0 | -1 | -748 | 278 | 0 | 0 | 0 | 0.0 | 0.0 | 37.9 | 0.0 | 65.7 | 4 | |
| 15 | 0 | 3 | 2971 | -1027 | 0 | 0 | 0 | 0.1 | 0.0 | 150.8 | 0.0 | 261.1 | 4 | |
| | | | | | | | | | | | | | | |
| 1 | 5 | 3 | 3404 | -1181 | 0 | 53 | 154 | 0.1 | 94.0 | 172.7 | 0.0 | 299.2 | 4 | |
| 5 | 5 | 167 | 849 | 1644 | 0 | -74 | 38 | 3.1 | 99.2 | 76.8 | 0.0 | 145.6 | 3 | |
| 6 | 5 | -168 | 849 | 1612 | 0 | -73 | 38 | 3.1 | 97.5 | 75.3 | 0.0 | 143.3 | 3 | |
| 7 | 5 | 169 | 876 | -2158 | 0 | 98 | 40 | 3.1 | 128.3 | 100.8 | 0.0 | 185.1 | 3 | |
| 8 | 5 | -166 | 876 | -2190 | 0 | 99 | 40 | 3.1 | 130.1 | 102.3 | 0.0 | 187.6 | 3 | |
| 9 | 5 | 559 | 1199 | 240 | 0 | -11 | 54 | 10.4 | 23.2 | 60.8 | 0.0 | 105.9 | 4 | |
| 10 | 5 | -557 | 1199 | 134 | 0 | -6 | 54 | 10.4 | 17.3 | 60.8 | 0.0 | 105.9 | 4 | |
| 11 | 5 | 560 | 1207 | -913 | 0 | 41 | 55 | 10.4 | 61.1 | 61.2 | 0.0 | 112.4 | 3 | |
| 12 | 5 | -557 | 867 | -905 | 0 | 41 | 39 | 10.4 | 57.9 | 44.0 | 0.0 | 95.8 | 3 | |
| 13 | 5 | 3 | 2848 | -984 | 0 | 44 | 129 | 0.1 | 78.4 | 144.5 | 0.0 | 250.3 | 4 | |
| 14 | 5 | -1 | -750 | 278 | 0 | -13 | -34 | 0.0 | 21.7 | 38.0 | 0.0 | 65.9 | 4 | |
| 15 | 5 | 3 | 2969 | -1027 | 0 | 46 | 134 | 0.1 | 81.8 | 150.6 | 0.0 | 260.9 | 4 | |
| | | | | | | | | | | | | | | |
| 1 | 9 | 3 | 3401 | -1181 | 0 | 107 | 308 | 0.1 | 187.9 | 172.6 | 0.0 | 299.0 | 4 | |
| 5 | 9 | 167 | 847 | 1644 | 0 | -149 | 77 | 3.1 | 198.5 | 76.8 | 0.0 | 201.6 | 1 | |
| 6 | 9 | -168 | 847 | 1612 | 0 | -146 | 77 | 3.1 | 194.9 | 75.3 | 0.0 | 198.0 | 1 | |
| 7 | 9 | 169 | 874 | -2158 | 0 | 195 | 79 | 3.1 | 256.6 | 100.8 | 0.0 | 259.8 | 1 | |
| 8 | 9 | -166 | 874 | -2190 | 0 | 198 | 79 | 3.1 | 260.2 | 102.3 | 0.0 | 263.3 | 1 | |
| 9 | 9 | 559 | 1196 | 240 | 0 | -22 | 108 | 10.4 | 46.4 | 60.7 | 0.0 | 105.8 | 4 | |
| 10 | 9 | -557 | 1196 | 134 | 0 | -12 | 108 | 10.4 | 34.5 | 60.7 | 0.0 | 105.7 | 4 | |
| 11 | 9 | 560 | 1204 | -913 | 0 | 83 | 109 | 10.4 | 122.2 | 61.1 | 0.0 | 132.6 | 1 | |
| 12 | 9 | -557 | 865 | -905 | 0 | 82 | 78 | 10.4 | 115.7 | 43.9 | 0.0 | 126.1 | 1 | |
| 13 | 9 | 3 | 2845 | -984 | 0 | 89 | 257 | 0.1 | 156.7 | 144.4 | 0.0 | 250.1 | 4 | |
| 14 | 9 | -1 | -751 | 278 | 0 | -25 | -68 | 0.0 | 43.4 | 38.1 | 0.0 | 66.1 | 4 | |
| 15 | 9 | 3 | 2966 | -1027 | 0 | 93 | 268 | 0.1 | 163.5 | 150.5 | 0.0 | 260.7 | 4 | |
| | | | | | | | | | | | | | | |
| 1 | 14 | 3 | 3398 | -1181 | 0 | 160 | 462 | 0.1 | 281.8 | 172.5 | 0.0 | 298.8 | 4 | |
| 5 | 14 | 167 | 845 | 1644 | 0 | -223 | 115 | 3.1 | 297.7 | 76.8 | 0.0 | 300.8 | 1 | |
| 6 | 14 | -168 | 846 | 1612 | 0 | -219 | 115 | 3.1 | 292.3 | 75.3 | 0.0 | 295.5 | 1 | |
| 7 | 14 | 169 | 872 | -2158 | 0 | 293 | 119 | 3.1 | 384.9 | 100.8 | 0.0 | 388.0 | 1 | |
| 8 | 14 | -166 | 872 | -2190 | 0 | 297 | 119 | 3.1 | 390.3 | 102.3 | 0.0 | 393.3 | 1 | |
| 9 | 14 | 559 | 1194 | 240 | 0 | -33 | 162 | 10.4 | 69.6 | 60.6 | 0.0 | 105.6 | 4 | |
| 10 | 14 | -557 | 1194 | 134 | 0 | -18 | 162 | 10.4 | 51.8 | 60.6 | 0.0 | 105.5 | 4 | |
| 11 | 14 | 560 | 1202 | -913 | 0 | 124 | 163 | 10.4 | 183.2 | 61.0 | 0.0 | 193.6 | 1 | |
| 12 | 14 | -557 | 863 | -905 | 0 | 123 | 117 | 10.4 | 173.5 | 43.8 | 0.0 | 183.9 | 1 | |
| 13 | 14 | 3 | 2842 | -984 | 0 | 133 | 386 | 0.1 | 235.0 | 144.2 | 0.0 | 250.0 | 4 | |
| 14 | 14 | -1 | -753 | 278 | 0 | -38 | -102 | 0.0 | 65.1 | 38.2 | 0.0 | 66.2 | 4 | |
| 15 | 14 | 3 | 2963 | -1027 | 0 | 139 | 403 | 0.1 | 245.2 | 150.4 | 0.0 | 260.6 | 4 | |
| | | | | | | | | | | | | | | |
| 1 | 18 | 3 | 3396 | -1181 | 0 | 214 | 615 | 0.1 | 375.7 | 172.3 | 0.0 | 375.8 | 1 | |
| 5 | 18 | 167 | 844 | 1644 | 0 | -297 | 153 | 3.1 | 396.9 | 76.8 | 0.0 | 400.0 | 1 | |
| 6 | 18 | -168 | 844 | 1612 | 0 | -292 | 153 | 3.1 | 389.8 | 75.3 | 0.0 | 392.9 | 1 | |
| 7 | 18 | 169 | 870 | -2158 | 0 | 390 | 158 | 3.1 | 513.1 | 100.8 | 0.0 | 516.3 | 1 | |
| 8 | 18 | -166 | 870 | -2190 | 0 | 396 | 158 | 3.1 | 520.3 | 102.3 | 0.0 | 523.4 | 1 | |
| 9 | 18 | 559 | 1191 | 240 | 0 | -43 | 216 | 10.4 | 92.7 | 60.4 | 0.0 | 105.5 | 4 | |
| 10 | 18 | -557 | 1191 | 134 | 0 | -24 | 216 | 10.4 | 69.0 | 60.4 | 0.0 | 105.3 | 4 | |
| 11 | 18 | 560 | 1199 | -913 | 0 | 165 | 218 | 10.4 | 244.2 | 60.8 | 0.0 | 254.6 | 1 | |
| 12 | 18 | -557 | 861 | -905 | 0 | 164 | 156 | 10.4 | 231.3 | 43.7 | 0.0 | 241.7 | 1 | |
| 13 | 18 | 3 | 2840 | -984 | 0 | 178 | 515 | 0.1 | 313.3 | 144.1 | 0.0 | 313.4 | 1 | |
| 14 | 18 | -1 | -755 | 278 | 0 | -50 | -136 | 0.0 | 86.8 | 38.3 | 0.0 | 86.8 | 1 | |
| 15 | 18 | 3 | 2961 | -1027 | 0 | 186 | 537 | 0.1 | 326.9 | 150.3 | 0.0 | 327.0 | 1 | |
| | | | | | | | | | | | | | | |
| 1 | 23 | 3 | 3394 | -1181 | 0 | 267 | 769 | 0.1 | 469.6 | 172.2 | 0.0 | 469.7 | 1 | |
| 5 | 23 | 167 | 842 | 1644 | 0 | -372 | 191 | 3.1 | 496.0 | 76.8 | 0.0 | 499.1 | 1 | |
| 6 | 23 | -168 | 842 | 1612 | 0 | -365 | 191 | 3.1 | 487.2 | 75.3 | 0.0 | 490.3 | 1 | |
| 7 | 23 | 169 | 868 | -2158 | 0 | 488 | 197 | 3.1 | 641.4 | 100.8 | 0.0 | 644.5 | 1 | |
| 8 | 23 | -166 | 868 | -2190 | 0 | 495 | 197 | 3.1 | 650.3 | 102.3 | 0.0 | 653.4 | 1 | |
| 9 | 23 | 559 | 1189 | 240 | 0 | -54 | 270 | 10.4 | 115.9 | 60.3 | 0.0 | 126.2 | 1 | |
| 10 | 23 | -557 | 1189 | 134 | 0 | -30 | 270 | 10.4 | 86.2 | 60.3 | 0.0 | 105.2 | 4 | |
| 11 | 23 | 560 | 1197 | -913 | 0 | 207 | 272 | 10.4 | 305.2 | 60.7 | 0.0 | 315.6 | 1 | |
| 12 | 23 | -557 | 859 | -905 | 0 | 205 | 195 | 10.4 | 289.1 | 43.6 | 0.0 | 299.5 | 1 | |
| 13 | 23 | 3 | 2838 | -984 | 0 | 222 | 643 | 0.1 | 391.6 | 144.0 | 0.0 | 391.7 | 1 | |
| 14 | 23 | -1 | -757 | 278 | 0 | -63 | -170 | 0.0 | 108.5 | 38.4 | 0.0 | 108.5 | 1 | |
| 15 | 23 | 3 | 2959 | -1027 | 0 | 232 | 670 | 0.1 | 408.6 | 150.1 | 0.0 | 408.7 | 1 | |
| | | | | | | | | | | | | | | |
| 1 | 27 | 3 | 3391 | -1181 | 0 | 320 | 922 | 0.1 | 563.5 | 172.1 | 0.0 | 563.6 | 1 | |
| 5 | 27 | 167 | 840 | 1644 | 0 | -446 | 229 | 3.1 | 595.2 | 76.8 | 0.0 | 598.3 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|------|------|-------|---|------|------|------|--------|-------|-----|--------|---|
| 6 | 27 | -168 | 840 | 1612 | 0 | -438 | 229 | 3.1 | 584.5 | 75.3 | 0.0 | 587.7 | 1 |
| 7 | 27 | 169 | 866 | -2158 | 0 | 586 | 237 | 3.1 | 769.6 | 100.8 | 0.0 | 772.8 | 1 |
| 8 | 27 | -166 | 866 | -2190 | 0 | 594 | 237 | 3.1 | 780.4 | 102.3 | 0.0 | 783.4 | 1 |
| 9 | 27 | 559 | 1186 | 240 | 0 | -65 | 324 | 10.4 | 139.0 | 60.2 | 0.0 | 149.4 | 1 |
| 10 | 27 | -557 | 1186 | 134 | 0 | -36 | 324 | 10.4 | 103.4 | 60.2 | 0.0 | 113.7 | 1 |
| 11 | 27 | 560 | 1194 | -913 | 0 | 248 | 326 | 10.4 | 366.2 | 60.6 | 0.0 | 376.6 | 1 |
| 12 | 27 | -557 | 857 | -905 | 0 | 246 | 234 | 10.4 | 346.9 | 43.5 | 0.0 | 357.3 | 1 |
| 13 | 27 | 3 | 2835 | -984 | 0 | 267 | 771 | 0.1 | 469.9 | 143.9 | 0.0 | 469.9 | 1 |
| 14 | 27 | -1 | -759 | 278 | 0 | -75 | -204 | 0.0 | 130.3 | 38.5 | 0.0 | 130.3 | 1 |
| 15 | 27 | 3 | 2956 | -1027 | 0 | 279 | 804 | 0.1 | 490.3 | 150.0 | 0.0 | 490.3 | 1 |
| | | | | | | | | | | | | | |
| 1 | 32 | 3 | 3389 | -1181 | 0 | 374 | 1076 | 0.1 | 657.3 | 171.9 | 0.0 | 657.4 | 1 |
| 5 | 32 | 167 | 838 | 1644 | 0 | -521 | 267 | 3.1 | 694.3 | 76.8 | 0.0 | 697.5 | 1 |
| 6 | 32 | -168 | 838 | 1612 | 0 | -511 | 267 | 3.1 | 681.9 | 75.3 | 0.0 | 685.0 | 1 |
| 7 | 32 | 169 | 864 | -2158 | 0 | 683 | 276 | 3.1 | 897.8 | 100.8 | 0.0 | 901.0 | 1 |
| 8 | 32 | -166 | 864 | -2190 | 0 | 693 | 276 | 3.1 | 910.4 | 102.3 | 0.0 | 913.4 | 1 |
| 9 | 32 | 559 | 1184 | 240 | 0 | -76 | 377 | 10.4 | 162.0 | 60.1 | 0.0 | 172.4 | 1 |
| 10 | 32 | -557 | 1184 | 134 | 0 | -43 | 377 | 10.4 | 120.5 | 60.1 | 0.0 | 130.9 | 1 |
| 11 | 32 | 560 | 1192 | -913 | 0 | 289 | 380 | 10.4 | 427.2 | 60.5 | 0.0 | 437.6 | 1 |
| 12 | 32 | -557 | 855 | -905 | 0 | 286 | 273 | 10.4 | 404.7 | 43.4 | 0.0 | 415.0 | 1 |
| 13 | 32 | 3 | 2833 | -984 | 0 | 311 | 899 | 0.1 | 548.1 | 143.7 | 0.0 | 548.2 | 1 |
| 14 | 32 | -1 | -761 | 278 | 0 | -88 | -239 | 0.0 | 152.0 | 38.6 | 0.0 | 152.1 | 1 |
| 15 | 32 | 3 | 2954 | -1027 | 0 | 325 | 938 | 0.1 | 571.9 | 149.9 | 0.0 | 572.0 | 1 |
| | | | | | | | | | | | | | |
| 1 | 36 | 3 | 3386 | -1181 | 0 | 427 | 1229 | 0.1 | 751.2 | 171.8 | 0.0 | 751.2 | 1 |
| 5 | 36 | 167 | 836 | 1644 | 0 | -595 | 305 | 3.1 | 793.5 | 76.8 | 0.0 | 796.6 | 1 |
| 6 | 36 | -168 | 836 | 1612 | 0 | -583 | 305 | 3.1 | 779.3 | 75.3 | 0.0 | 782.4 | 1 |
| 7 | 36 | 169 | 862 | -2158 | 0 | 781 | 315 | 3.1 | 1026.0 | 100.8 | 0.0 | 1029.2 | 1 |
| 8 | 36 | -166 | 862 | -2190 | 0 | 792 | 315 | 3.1 | 1040.4 | 102.3 | 0.0 | 1043.4 | 1 |
| 9 | 36 | 559 | 1181 | 240 | 0 | -87 | 431 | 10.4 | 185.1 | 59.9 | 0.0 | 195.5 | 1 |
| 10 | 36 | -557 | 1181 | 134 | 0 | -49 | 431 | 10.4 | 137.7 | 59.9 | 0.0 | 148.0 | 1 |
| 11 | 36 | 560 | 1189 | -913 | 0 | 330 | 434 | 10.4 | 488.1 | 60.3 | 0.0 | 498.5 | 1 |
| 12 | 36 | -557 | 853 | -905 | 0 | 327 | 312 | 10.4 | 462.4 | 43.3 | 0.0 | 472.8 | 1 |
| 13 | 36 | 3 | 2830 | -984 | 0 | 356 | 1027 | 0.1 | 626.4 | 143.6 | 0.0 | 626.4 | 1 |
| 14 | 36 | -1 | -763 | 278 | 0 | -100 | -273 | 0.0 | 173.8 | 38.7 | 0.0 | 173.8 | 1 |
| 15 | 36 | 3 | 2951 | -1027 | 0 | 371 | 1071 | 0.1 | 653.5 | 149.7 | 0.0 | 653.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 41 | 3 | 3383 | -1181 | 0 | 481 | 1382 | 0.1 | 845.0 | 171.7 | 0.0 | 845.0 | 1 |
| 5 | 41 | 167 | 834 | 1644 | 0 | -669 | 343 | 3.1 | 892.6 | 76.8 | 0.0 | 895.7 | 1 |
| 6 | 41 | -168 | 834 | 1612 | 0 | -656 | 343 | 3.1 | 876.6 | 75.3 | 0.0 | 879.7 | 1 |
| 7 | 41 | 169 | 860 | -2158 | 0 | 878 | 354 | 3.1 | 1154.2 | 100.8 | 0.0 | 1157.4 | 1 |
| 8 | 41 | -166 | 861 | -2190 | 0 | 891 | 354 | 3.1 | 1170.3 | 102.3 | 0.0 | 1173.4 | 1 |
| 9 | 41 | 559 | 1179 | 240 | 0 | -98 | 484 | 10.4 | 208.2 | 59.8 | 0.0 | 218.6 | 1 |
| 10 | 41 | -557 | 1179 | 134 | 0 | -55 | 484 | 10.4 | 154.8 | 59.8 | 0.0 | 165.2 | 1 |
| 11 | 41 | 560 | 1187 | -913 | 0 | 372 | 487 | 10.4 | 549.0 | 60.2 | 0.0 | 559.4 | 1 |
| 12 | 41 | -557 | 852 | -905 | 0 | 368 | 350 | 10.4 | 520.2 | 43.2 | 0.0 | 530.5 | 1 |
| 13 | 41 | 3 | 2827 | -984 | 0 | 400 | 1155 | 0.1 | 704.6 | 143.5 | 0.0 | 704.6 | 1 |
| 14 | 41 | -1 | -765 | 278 | 0 | -113 | -308 | 0.0 | 195.6 | 38.8 | 0.0 | 195.6 | 1 |
| 15 | 41 | 3 | 2948 | -1027 | 0 | 418 | 1205 | 0.1 | 735.1 | 149.6 | 0.0 | 735.2 | 1 |
| | | | | | | | | | | | | | |
| 1 | 45 | 3 | 3381 | -1181 | 0 | 534 | 1535 | 0.1 | 938.8 | 171.6 | 0.0 | 938.8 | 1 |
| 5 | 45 | 167 | 832 | 1644 | 0 | -744 | 381 | 3.1 | 991.7 | 76.8 | 0.0 | 994.8 | 1 |
| 6 | 45 | -168 | 832 | 1612 | 0 | -729 | 381 | 3.1 | 973.9 | 75.3 | 0.0 | 977.0 | 1 |
| 7 | 45 | 169 | 859 | -2158 | 0 | 976 | 393 | 3.1 | 1282.4 | 100.8 | 0.0 | 1285.5 | 1 |
| 8 | 45 | -166 | 859 | -2190 | 0 | 990 | 393 | 3.1 | 1300.3 | 102.3 | 0.0 | 1303.4 | 1 |
| 9 | 45 | 559 | 1176 | 240 | 0 | -109 | 537 | 10.4 | 231.2 | 59.7 | 0.0 | 241.6 | 1 |
| 10 | 45 | -557 | 1176 | 134 | 0 | -61 | 538 | 10.4 | 171.9 | 59.7 | 0.0 | 182.3 | 1 |
| 11 | 45 | 560 | 1184 | -913 | 0 | 413 | 541 | 10.4 | 609.9 | 60.1 | 0.0 | 620.4 | 1 |
| 12 | 45 | -557 | 850 | -905 | 0 | 409 | 389 | 10.4 | 577.9 | 43.1 | 0.0 | 588.2 | 1 |
| 13 | 45 | 3 | 2825 | -984 | 0 | 445 | 1283 | 0.1 | 782.8 | 143.4 | 0.0 | 782.8 | 1 |
| 14 | 45 | -1 | -767 | 278 | 0 | -126 | -343 | 0.0 | 217.4 | 38.9 | 0.0 | 217.5 | 1 |
| 15 | 45 | 3 | 2946 | -1027 | 0 | 464 | 1338 | 0.1 | 816.7 | 149.5 | 0.0 | 816.8 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|--------|-------|---------------------|---------|-------|-----------|------|
| | | cm | daN*m | daN/cm ² | cm | | | |
| 1 | -- | 45 | 1535 | 275.6 | -- | -- | -- | |
| -- | Rara | 23 | 0 | -- | 24 | -0.00 | 1 / 99999 | |
| -- | Freq. | 23 | 0 | -- | 24 | -0.00 | 1 / 99999 | |
| -- | Q.Perm. | 23 | 0 | -- | 24 | -0.00 | 1 / 99999 | |
| -- | Rara | 23 | 0 | -- | 24 | -0.00 | 1 / 99999 | |
| -- | Rara | 23 | 0 | -- | 24 | -0.00 | 1 / 99999 | |
| -- | Freq. | 23 | 0 | -- | 24 | -0.00 | 1 / 99999 | |
| -- | Freq. | 23 | 0 | -- | 24 | -0.00 | 1 / 99999 | |

ASTA NUM. 16 NI 23 NF 67 Lungh. 155.0 cm SEZ. 1 Ps IPE 300

categoria: p.p. y qy tot.

qy medio: 0.4223 0.4223 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|------|------|-------|------|------|---------|--------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | 1 | 2151 | 465 | 0 | 534 | 1533 | 0.0 | 938.4 | 109.1 | 0.0 | 938.4 | 1 | |
| 5 | 0 | 97 | 527 | -447 | 0 | -744 | 380 | 1.8 | 991.6 | 26.7 | 0.0 | 993.4 | 1 | |
| 6 | 0 | -103 | 527 | -435 | 0 | -729 | 380 | 1.9 | 973.9 | 26.7 | 0.0 | 975.8 | 1 | |
| 7 | 0 | 103 | 552 | 662 | 0 | 976 | 392 | 1.9 | 1282.3 | 30.9 | 0.0 | 1284.2 | 1 | |
| 8 | 0 | -97 | 552 | 674 | 0 | 990 | 392 | 1.8 | 1300.2 | 31.5 | 0.0 | 1302.0 | 1 | |
| 9 | 0 | 333 | 749 | -31 | 0 | -109 | 537 | 6.2 | 231.1 | 38.0 | 0.0 | 237.3 | 1 | |
| 10 | 0 | -334 | 749 | 9 | 0 | -61 | 537 | 6.2 | 171.8 | 38.0 | 0.0 | 178.0 | 1 | |
| 11 | 0 | 335 | 756 | 304 | 0 | 413 | 540 | 6.2 | 609.8 | 38.4 | 0.0 | 616.1 | 1 | |
| 12 | 0 | -333 | 543 | 299 | 0 | 409 | 388 | 6.2 | 577.8 | 27.6 | 0.0 | 584.0 | 1 | |
| 13 | 0 | 1 | 1797 | 387 | 0 | 445 | 1282 | 0.0 | 782.6 | 91.2 | 0.0 | 782.6 | 1 | |
| 14 | 0 | -0 | -485 | -112 | 0 | -126 | -342 | 0.0 | 217.4 | 24.6 | 0.0 | 217.4 | 1 | |
| 15 | 0 | 1 | 1874 | 404 | 0 | 464 | 1336 | 0.0 | 816.4 | 95.1 | 0.0 | 816.4 | 1 | |
| 1 | 16 | 1 | 2143 | 465 | 0 | 462 | 1866 | 0.0 | 908.7 | 108.7 | 0.0 | 908.7 | 1 | |
| 5 | 16 | 97 | 520 | -447 | 0 | -674 | 461 | 1.8 | 920.2 | 26.4 | 0.0 | 922.0 | 1 | |
| 6 | 16 | -103 | 520 | -435 | 0 | -662 | 461 | 1.9 | 904.7 | 26.4 | 0.0 | 906.6 | 1 | |
| 7 | 16 | 103 | 545 | 662 | 0 | 873 | 477 | 1.9 | 1170.2 | 30.9 | 0.0 | 1172.1 | 1 | |
| 8 | 16 | -97 | 545 | 674 | 0 | 886 | 477 | 1.8 | 1185.8 | 31.5 | 0.0 | 1187.6 | 1 | |
| 9 | 16 | 333 | 740 | -31 | 0 | -104 | 652 | 6.2 | 245.9 | 37.5 | 0.0 | 252.1 | 1 | |
| 10 | 16 | -334 | 740 | 9 | 0 | -62 | 652 | 6.2 | 194.2 | 37.6 | 0.0 | 200.4 | 1 | |
| 11 | 16 | 335 | 748 | 304 | 0 | 366 | 657 | 6.2 | 572.2 | 37.9 | 0.0 | 578.5 | 1 | |
| 12 | 16 | -333 | 537 | 299 | 0 | 363 | 472 | 6.2 | 535.4 | 27.2 | 0.0 | 541.5 | 1 | |
| 13 | 16 | 1 | 1789 | 387 | 0 | 385 | 1560 | 0.0 | 758.0 | 90.8 | 0.0 | 758.0 | 1 | |
| 14 | 16 | -0 | -491 | -112 | 0 | -108 | -418 | 0.0 | 209.4 | 24.9 | 0.0 | 209.5 | 1 | |
| 15 | 16 | 1 | 1866 | 404 | 0 | 402 | 1626 | 0.0 | 790.7 | 94.7 | 0.0 | 790.7 | 1 | |
| 1 | 31 | 1 | 2134 | 465 | 0 | 390 | 2197 | 0.0 | 878.8 | 108.3 | 0.0 | 878.8 | 1 | |
| 5 | 31 | 97 | 514 | -447 | 0 | -605 | 541 | 1.8 | 848.6 | 26.1 | 0.0 | 850.4 | 1 | |
| 6 | 31 | -103 | 514 | -435 | 0 | -594 | 542 | 1.9 | 835.3 | 26.1 | 0.0 | 837.2 | 1 | |
| 7 | 31 | 103 | 539 | 662 | 0 | 771 | 561 | 1.9 | 1057.9 | 30.9 | 0.0 | 1059.8 | 1 | |
| 8 | 31 | -97 | 539 | 674 | 0 | 782 | 561 | 1.8 | 1071.2 | 31.5 | 0.0 | 1073.0 | 1 | |
| 9 | 31 | 333 | 731 | -31 | 0 | -99 | 766 | 6.2 | 260.5 | 37.1 | 0.0 | 266.7 | 1 | |
| 10 | 31 | -334 | 732 | 9 | 0 | -63 | 766 | 6.2 | 216.3 | 37.1 | 0.0 | 222.5 | 1 | |
| 11 | 31 | 335 | 739 | 304 | 0 | 319 | 772 | 6.2 | 534.4 | 37.5 | 0.0 | 540.6 | 1 | |
| 12 | 31 | -333 | 530 | 299 | 0 | 317 | 554 | 6.2 | 492.7 | 26.9 | 0.0 | 498.9 | 1 | |
| 13 | 31 | 1 | 1780 | 387 | 0 | 325 | 1837 | 0.0 | 733.2 | 90.3 | 0.0 | 733.2 | 1 | |
| 14 | 31 | -0 | -498 | -112 | 0 | -91 | -494 | 0.0 | 201.7 | 25.3 | 0.0 | 201.7 | 1 | |
| 15 | 31 | 1 | 1857 | 404 | 0 | 339 | 1914 | 0.0 | 764.8 | 94.2 | 0.0 | 764.8 | 1 | |
| 1 | 47 | 1 | 2126 | 465 | 0 | 318 | 2527 | 0.0 | 848.7 | 107.9 | 0.0 | 848.7 | 1 | |
| 5 | 47 | 97 | 507 | -447 | 0 | -536 | 621 | 1.8 | 776.8 | 25.7 | 0.0 | 778.6 | 1 | |
| 6 | 47 | -103 | 507 | -435 | 0 | -527 | 621 | 1.9 | 765.8 | 25.7 | 0.0 | 767.7 | 1 | |
| 7 | 47 | 103 | 532 | 662 | 0 | 668 | 644 | 1.9 | 945.4 | 30.9 | 0.0 | 947.4 | 1 | |
| 8 | 47 | -97 | 532 | 674 | 0 | 677 | 644 | 1.8 | 956.5 | 31.5 | 0.0 | 958.3 | 1 | |
| 9 | 47 | 333 | 723 | -31 | 0 | -94 | 879 | 6.2 | 274.9 | 36.7 | 0.0 | 281.1 | 1 | |
| 10 | 47 | -334 | 723 | 9 | 0 | -65 | 879 | 6.2 | 238.2 | 36.7 | 0.0 | 244.4 | 1 | |
| 11 | 47 | 335 | 731 | 304 | 0 | 272 | 886 | 6.2 | 496.3 | 37.1 | 0.0 | 502.5 | 1 | |
| 12 | 47 | -333 | 524 | 299 | 0 | 270 | 636 | 6.2 | 449.9 | 26.6 | 0.0 | 456.1 | 1 | |
| 13 | 47 | 1 | 1772 | 387 | 0 | 265 | 2112 | 0.0 | 708.2 | 89.9 | 0.0 | 708.2 | 1 | |
| 14 | 47 | -0 | -504 | -112 | 0 | -74 | -572 | 0.0 | 194.2 | 25.6 | 0.0 | 194.2 | 1 | |
| 15 | 47 | 1 | 1849 | 404 | 0 | 277 | 2202 | 0.0 | 738.6 | 93.8 | 0.0 | 738.6 | 1 | |
| 1 | 62 | 1 | 2117 | 465 | 0 | 246 | 2856 | 0.0 | 818.3 | 107.4 | 0.0 | 818.3 | 1 | |
| 5 | 62 | 97 | 500 | -447 | 0 | -467 | 699 | 1.8 | 704.8 | 25.4 | 0.0 | 706.6 | 1 | |
| 6 | 62 | -103 | 501 | -435 | 0 | -460 | 699 | 1.9 | 696.1 | 25.4 | 0.0 | 698.0 | 1 | |
| 7 | 62 | 103 | 526 | 662 | 0 | 566 | 726 | 1.9 | 832.8 | 30.9 | 0.0 | 834.7 | 1 | |
| 8 | 62 | -97 | 526 | 674 | 0 | 573 | 726 | 1.8 | 841.6 | 31.5 | 0.0 | 843.4 | 1 | |
| 9 | 62 | 333 | 714 | -31 | 0 | -90 | 990 | 6.2 | 289.0 | 36.3 | 0.0 | 295.2 | 1 | |
| 10 | 62 | -334 | 715 | 9 | 0 | -66 | 990 | 6.2 | 259.8 | 36.3 | 0.0 | 266.0 | 1 | |
| 11 | 62 | 335 | 722 | 304 | 0 | 224 | 999 | 6.2 | 458.0 | 36.6 | 0.0 | 464.2 | 1 | |
| 12 | 62 | -333 | 517 | 299 | 0 | 224 | 717 | 6.2 | 406.9 | 26.2 | 0.0 | 413.1 | 1 | |
| 13 | 62 | 1 | 1763 | 387 | 0 | 205 | 2386 | 0.0 | 682.9 | 89.5 | 0.0 | 682.9 | 1 | |
| 14 | 62 | -0 | -511 | -112 | 0 | -56 | -651 | 0.0 | 186.8 | 25.9 | 0.0 | 186.8 | 1 | |
| 15 | 62 | 1 | 1840 | 404 | 0 | 214 | 2487 | 0.0 | 712.2 | 93.4 | 0.0 | 712.2 | 1 | |
| 1 | 78 | 1 | 2109 | 465 | 0 | 174 | 3183 | 0.0 | 787.7 | 107.0 | 0.0 | 787.7 | 1 | |
| 5 | 78 | 97 | 494 | -447 | 0 | -397 | 776 | 1.8 | 632.7 | 25.1 | 0.0 | 634.5 | 1 | |
| 6 | 78 | -103 | 494 | -435 | 0 | -392 | 776 | 1.9 | 626.2 | 25.1 | 0.0 | 628.1 | 1 | |
| 7 | 78 | 103 | 519 | 662 | 0 | 463 | 807 | 1.9 | 720.0 | 30.9 | 0.0 | 721.9 | 1 | |
| 8 | 78 | -97 | 519 | 674 | 0 | 468 | 807 | 1.8 | 726.4 | 31.5 | 0.0 | 728.2 | 1 | |
| 9 | 78 | 333 | 706 | -31 | 0 | -85 | 1100 | 6.2 | 302.9 | 35.8 | 0.0 | 309.1 | 1 | |
| 10 | 78 | -334 | 706 | 9 | 0 | -67 | 1100 | 6.2 | 281.2 | 35.8 | 0.0 | 287.4 | 1 | |
| 11 | 78 | 335 | 714 | 304 | 0 | 177 | 1110 | 6.2 | 419.4 | 36.2 | 0.0 | 425.7 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|------|------|---|------|-------|-----|--------|-------|-----|--------|---|
| 12 | 78 | -333 | 511 | 299 | 0 | 178 | 796 | 6.2 | 363.8 | 25.9 | 0.0 | 369.9 | 1 |
| 13 | 78 | 1 | 1755 | 387 | 0 | 145 | 2658 | 0.0 | 657.4 | 89.0 | 0.0 | 657.4 | 1 |
| 14 | 78 | -0 | -517 | -112 | 0 | -39 | -730 | 0.0 | 179.6 | 26.2 | 0.0 | 179.6 | 1 |
| 15 | 78 | 1 | 1832 | 404 | 0 | 151 | 2772 | 0.0 | 685.6 | 92.9 | 0.0 | 685.6 | 1 |
| 1 | 93 | 1 | 2100 | 465 | 0 | 102 | 3510 | 0.0 | 756.8 | 106.6 | 0.0 | 756.8 | 1 |
| 5 | 93 | 97 | 487 | -447 | 0 | -328 | 852 | 1.8 | 560.3 | 24.7 | 0.0 | 562.1 | 1 |
| 6 | 93 | -103 | 487 | -435 | 0 | -325 | 852 | 1.9 | 556.1 | 24.7 | 0.0 | 558.0 | 1 |
| 7 | 93 | 103 | 512 | 662 | 0 | 361 | 887 | 1.9 | 606.9 | 30.9 | 0.0 | 608.9 | 1 |
| 8 | 93 | -97 | 512 | 674 | 0 | 364 | 887 | 1.8 | 611.1 | 31.5 | 0.0 | 612.9 | 1 |
| 9 | 93 | 333 | 697 | -31 | 0 | -80 | 1209 | 6.2 | 316.5 | 35.4 | 0.0 | 322.7 | 1 |
| 10 | 93 | -334 | 698 | 9 | 0 | -69 | 1209 | 6.2 | 302.4 | 35.4 | 0.0 | 308.6 | 1 |
| 11 | 93 | 335 | 705 | 304 | 0 | 130 | 1220 | 6.2 | 380.7 | 35.8 | 0.0 | 386.9 | 1 |
| 12 | 93 | -333 | 504 | 299 | 0 | 132 | 875 | 6.2 | 320.4 | 25.6 | 0.0 | 326.6 | 1 |
| 13 | 93 | 1 | 1746 | 387 | 0 | 85 | 2930 | 0.0 | 631.7 | 88.6 | 0.0 | 631.7 | 1 |
| 14 | 93 | -0 | -524 | -112 | 0 | -22 | -811 | 0.0 | 172.6 | 26.6 | 0.0 | 172.6 | 1 |
| 15 | 93 | 1 | 1823 | 404 | 0 | 89 | 3055 | 0.0 | 658.7 | 92.5 | 0.0 | 658.8 | 1 |
| 1 | 109 | 1 | 2092 | 464 | 0 | 30 | 3834 | 0.0 | 725.7 | 106.1 | 0.0 | 725.7 | 1 |
| 5 | 109 | 97 | 481 | -447 | 0 | -259 | 927 | 1.8 | 487.8 | 24.4 | 0.0 | 489.6 | 1 |
| 6 | 109 | -103 | 481 | -435 | 0 | -257 | 927 | 1.9 | 485.8 | 24.4 | 0.0 | 487.8 | 1 |
| 7 | 109 | 103 | 506 | 662 | 0 | 258 | 966 | 1.9 | 493.7 | 30.9 | 0.0 | 495.6 | 1 |
| 8 | 109 | -97 | 506 | 674 | 0 | 259 | 966 | 1.8 | 495.7 | 31.5 | 0.0 | 497.5 | 1 |
| 9 | 109 | 333 | 689 | -31 | 0 | -75 | 1317 | 6.2 | 329.9 | 35.0 | 0.0 | 336.1 | 1 |
| 10 | 109 | -334 | 689 | 9 | 0 | -70 | 1317 | 6.2 | 323.3 | 35.0 | 0.0 | 329.5 | 1 |
| 11 | 109 | 335 | 697 | 304 | 0 | 83 | 1329 | 6.2 | 341.6 | 35.3 | 0.0 | 347.9 | 1 |
| 12 | 109 | -333 | 497 | 299 | 0 | 85 | 952 | 6.2 | 276.9 | 25.2 | 0.0 | 283.1 | 1 |
| 13 | 109 | 1 | 1738 | 387 | 0 | 25 | 3200 | 0.0 | 605.7 | 88.2 | 0.0 | 605.7 | 1 |
| 14 | 109 | -0 | -530 | -112 | 0 | -4 | -893 | 0.0 | 165.7 | 26.9 | 0.0 | 165.8 | 1 |
| 15 | 109 | 1 | 1815 | 404 | 0 | 26 | 3337 | 0.0 | 631.6 | 92.1 | 0.0 | 631.7 | 1 |
| 1 | 124 | 1 | 2083 | 465 | 0 | -42 | 4158 | 0.0 | 798.4 | 105.7 | 0.0 | 798.4 | 1 |
| 5 | 124 | 97 | 474 | -447 | 0 | -190 | 1001 | 1.8 | 415.1 | 24.1 | 0.0 | 416.9 | 1 |
| 6 | 124 | -103 | 474 | -435 | 0 | -190 | 1001 | 1.9 | 415.4 | 24.1 | 0.0 | 417.3 | 1 |
| 7 | 124 | 103 | 499 | 662 | 0 | 155 | 1044 | 1.9 | 380.3 | 30.9 | 0.0 | 382.3 | 1 |
| 8 | 124 | -97 | 499 | 674 | 0 | 155 | 1044 | 1.8 | 380.0 | 31.5 | 0.0 | 381.8 | 1 |
| 9 | 124 | 333 | 680 | -31 | 0 | -71 | 1423 | 6.2 | 343.1 | 34.5 | 0.0 | 349.3 | 1 |
| 10 | 124 | -334 | 681 | 9 | 0 | -71 | 1423 | 6.2 | 344.0 | 34.5 | 0.0 | 350.2 | 1 |
| 11 | 124 | 335 | 688 | 304 | 0 | 36 | 1436 | 6.2 | 302.4 | 34.9 | 0.0 | 308.6 | 1 |
| 12 | 124 | -333 | 491 | 299 | 0 | 39 | 1029 | 6.2 | 233.2 | 24.9 | 0.0 | 239.3 | 1 |
| 13 | 124 | 1 | 1729 | 387 | 0 | -35 | 3469 | 0.0 | 665.8 | 87.7 | 0.0 | 665.8 | 1 |
| 14 | 124 | -0 | -537 | -112 | 0 | 13 | -976 | 0.0 | 191.1 | 27.2 | 0.0 | 191.1 | 1 |
| 15 | 124 | 1 | 1806 | 404 | 0 | -36 | 3618 | 0.0 | 694.6 | 91.6 | 0.0 | 694.6 | 1 |
| 1 | 140 | 1 | 2075 | 465 | 0 | -114 | 4480 | 0.0 | 945.7 | 105.3 | 0.0 | 945.7 | 1 |
| 5 | 140 | 97 | 468 | -447 | 0 | -120 | 1074 | 1.8 | 342.2 | 23.7 | 0.0 | 344.0 | 1 |
| 6 | 140 | -103 | 468 | -435 | 0 | -122 | 1074 | 1.9 | 344.8 | 23.7 | 0.0 | 346.7 | 1 |
| 7 | 140 | 103 | 493 | 662 | 0 | 53 | 1121 | 1.9 | 266.8 | 30.9 | 0.0 | 268.7 | 1 |
| 8 | 140 | -97 | 493 | 674 | 0 | 51 | 1121 | 1.8 | 264.1 | 31.5 | 0.0 | 265.9 | 1 |
| 9 | 140 | 333 | 672 | -31 | 0 | -66 | 1528 | 6.2 | 356.0 | 34.1 | 0.0 | 362.2 | 1 |
| 10 | 140 | -334 | 672 | 9 | 0 | -73 | 1528 | 6.2 | 364.5 | 34.1 | 0.0 | 370.7 | 1 |
| 11 | 140 | 335 | 680 | 304 | 0 | -11 | 1542 | 6.2 | 290.8 | 34.5 | 0.0 | 297.1 | 1 |
| 12 | 140 | -333 | 484 | 299 | 0 | -7 | 1104 | 6.2 | 207.3 | 24.6 | 0.0 | 213.5 | 1 |
| 13 | 140 | 1 | 1721 | 387 | 0 | -95 | 3736 | 0.0 | 788.3 | 87.3 | 0.0 | 788.3 | 1 |
| 14 | 140 | -0 | -543 | -112 | 0 | 30 | -1059 | 0.0 | 227.7 | 27.6 | 0.0 | 227.7 | 1 |
| 15 | 140 | 1 | 1798 | 404 | 0 | -99 | 3897 | 0.0 | 822.4 | 91.2 | 0.0 | 822.4 | 1 |
| 1 | 155 | 1 | 2066 | 465 | 0 | -186 | 4801 | 0.0 | 1092.7 | 104.8 | 0.0 | 1092.7 | 1 |
| 5 | 155 | 97 | 461 | -447 | 0 | -51 | 1146 | 1.8 | 269.2 | 23.4 | 0.0 | 271.0 | 1 |
| 6 | 155 | -103 | 461 | -435 | 0 | -55 | 1146 | 1.9 | 274.0 | 23.4 | 0.0 | 275.9 | 1 |
| 7 | 155 | 103 | 486 | 662 | 0 | -50 | 1197 | 1.9 | 276.7 | 30.9 | 0.0 | 278.6 | 1 |
| 8 | 155 | -97 | 486 | 674 | 0 | -54 | 1197 | 1.8 | 281.6 | 31.5 | 0.0 | 283.4 | 1 |
| 9 | 155 | 333 | 663 | -31 | 0 | -61 | 1631 | 6.2 | 368.7 | 33.7 | 0.0 | 374.9 | 1 |
| 10 | 155 | -334 | 664 | 9 | 0 | -74 | 1631 | 6.2 | 384.7 | 33.7 | 0.0 | 390.9 | 1 |
| 11 | 155 | 335 | 671 | 304 | 0 | -58 | 1647 | 6.2 | 368.2 | 34.0 | 0.0 | 374.4 | 1 |
| 12 | 155 | -333 | 478 | 299 | 0 | -54 | 1179 | 6.2 | 278.1 | 24.2 | 0.0 | 284.3 | 1 |
| 13 | 155 | 1 | 1712 | 387 | 0 | -155 | 4002 | 0.0 | 910.5 | 86.9 | 0.0 | 910.5 | 1 |
| 14 | 155 | -0 | -550 | -112 | 0 | 48 | -1144 | 0.0 | 264.4 | 27.9 | 0.0 | 264.4 | 1 |
| 15 | 155 | 1 | 1789 | 404 | 0 | -162 | 4175 | 0.0 | 950.0 | 90.8 | 0.0 | 950.0 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|--------|-------|---------------------|---------|------|-----------|------|
| | | cm | daN*m | daN/cm ² | | cm | | |
| 1 | -- | 155 | 4801 | 861.8 | -- | -- | -- | |
| -- | Rara | 75 | 5 | -- | 76 | 0.00 | 1 / 99999 | |
| -- | Freq. | 75 | 5 | -- | 76 | 0.00 | 1 / 99999 | |
| -- | Q.Perm. | 75 | 5 | -- | 76 | 0.00 | 1 / 99999 | |
| -- | Rara | 75 | 5 | -- | 76 | 0.00 | 1 / 99999 | |
| -- | Rara | 75 | 5 | -- | 76 | 0.00 | 1 / 99999 | |
| -- | Freq. | 75 | 5 | -- | 76 | 0.00 | 1 / 99999 | |
| -- | Freq. | 75 | 5 | -- | 76 | 0.00 | 1 / 99999 | |

ASTA NUM. 22 NI 67 NF 138 Lungh. 128.9 cm SEZ. 1 Ps IPE 300

categoria: p.p. y qy tot.

qy medio: 0.4223 0.4223 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-----|------|------|-------|------|-------|---------|--------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -1 | -176 | -162 | 0 | -186 | 4800 | 0.0 | 1092.5 | 8.9 | 0.0 | 1092.5 | 1 | |
| 5 | 0 | -13 | -12 | 5 | 0 | -51 | 1146 | 0.2 | 269.2 | 0.6 | 0.0 | 269.4 | 1 | |
| 6 | 0 | 6 | -12 | 1 | 0 | -55 | 1146 | 0.1 | 274.0 | 0.6 | 0.0 | 274.1 | 1 | |
| 7 | 0 | -7 | -29 | -92 | 0 | -50 | 1196 | 0.1 | 276.5 | 4.3 | 0.0 | 276.7 | 1 | |
| 8 | 0 | 12 | -29 | -96 | 0 | -54 | 1196 | 0.2 | 281.5 | 4.5 | 0.0 | 281.7 | 1 | |
| 9 | 0 | -33 | -30 | -39 | 0 | -61 | 1631 | 0.6 | 368.7 | 1.8 | 0.0 | 369.3 | 1 | |
| 10 | 0 | 31 | -30 | -49 | 0 | -74 | 1631 | 0.6 | 384.7 | 2.3 | 0.0 | 385.3 | 1 | |
| 11 | 0 | -31 | -35 | -66 | 0 | -58 | 1646 | 0.6 | 368.0 | 3.1 | 0.0 | 368.6 | 1 | |
| 12 | 0 | 32 | -23 | -61 | 0 | -54 | 1179 | 0.6 | 278.1 | 2.9 | 0.0 | 278.7 | 1 | |
| 13 | 0 | -1 | -139 | -135 | 0 | -155 | 4001 | 0.0 | 910.3 | 7.1 | 0.0 | 910.3 | 1 | |
| 14 | 0 | 0 | 84 | 41 | 0 | 48 | -1144 | 0.0 | 264.4 | 4.3 | 0.0 | 264.4 | 1 | |
| 15 | 0 | -1 | -147 | -140 | 0 | -162 | 4175 | 0.0 | 950.0 | 7.5 | 0.0 | 950.0 | 1 | |
| 1 | 13 | -1 | -183 | -162 | 0 | -165 | 4777 | 0.0 | 1062.5 | 9.3 | 0.0 | 1062.5 | 1 | |
| 5 | 13 | -13 | -18 | 5 | 0 | -52 | 1144 | 0.2 | 269.6 | 0.9 | 0.0 | 269.8 | 1 | |
| 6 | 13 | 6 | -18 | 1 | 0 | -55 | 1144 | 0.1 | 273.8 | 0.9 | 0.0 | 274.0 | 1 | |
| 7 | 13 | -7 | -34 | -92 | 0 | -38 | 1192 | 0.1 | 261.1 | 4.3 | 0.0 | 261.2 | 1 | |
| 8 | 13 | 12 | -34 | -96 | 0 | -41 | 1192 | 0.2 | 265.4 | 4.5 | 0.0 | 265.7 | 1 | |
| 9 | 13 | -33 | -37 | -39 | 0 | -56 | 1627 | 0.6 | 361.8 | 1.9 | 0.0 | 362.4 | 1 | |
| 10 | 13 | 31 | -37 | -49 | 0 | -68 | 1627 | 0.6 | 376.0 | 2.3 | 0.0 | 376.6 | 1 | |
| 11 | 13 | -31 | -42 | -66 | 0 | -50 | 1641 | 0.6 | 356.6 | 3.1 | 0.0 | 357.2 | 1 | |
| 12 | 13 | 32 | -29 | -61 | 0 | -46 | 1176 | 0.6 | 267.8 | 2.9 | 0.0 | 268.4 | 1 | |
| 13 | 13 | -1 | -146 | -135 | 0 | -137 | 3983 | 0.0 | 885.5 | 7.4 | 0.0 | 885.5 | 1 | |
| 14 | 13 | 0 | 79 | 41 | 0 | 42 | -1133 | 0.0 | 255.8 | 4.0 | 0.0 | 255.9 | 1 | |
| 15 | 13 | -1 | -154 | -140 | 0 | -143 | 4156 | 0.0 | 924.0 | 7.8 | 0.0 | 924.0 | 1 | |
| 1 | 26 | -1 | -190 | -162 | 0 | -144 | 4753 | 0.0 | 1032.3 | 9.6 | 0.0 | 1032.3 | 1 | |
| 5 | 26 | -13 | -23 | 5 | 0 | -52 | 1141 | 0.2 | 269.8 | 1.2 | 0.0 | 270.1 | 1 | |
| 6 | 26 | 6 | -23 | 1 | 0 | -55 | 1141 | 0.1 | 273.6 | 1.2 | 0.0 | 273.7 | 1 | |
| 7 | 26 | -7 | -40 | -92 | 0 | -26 | 1187 | 0.1 | 245.4 | 4.3 | 0.0 | 245.6 | 1 | |
| 8 | 26 | 12 | -40 | -96 | 0 | -29 | 1187 | 0.2 | 249.3 | 4.5 | 0.0 | 249.5 | 1 | |
| 9 | 26 | -33 | -44 | -39 | 0 | -51 | 1621 | 0.6 | 354.6 | 2.2 | 0.0 | 355.2 | 1 | |
| 10 | 26 | 31 | -44 | -49 | 0 | -61 | 1621 | 0.6 | 367.2 | 2.3 | 0.0 | 367.7 | 1 | |
| 11 | 26 | -31 | -49 | -66 | 0 | -41 | 1635 | 0.6 | 345.0 | 3.1 | 0.0 | 345.6 | 1 | |
| 12 | 26 | 32 | -34 | -61 | 0 | -38 | 1172 | 0.6 | 257.3 | 2.9 | 0.0 | 257.9 | 1 | |
| 13 | 26 | -1 | -154 | -135 | 0 | -120 | 3963 | 0.0 | 860.5 | 7.8 | 0.0 | 860.5 | 1 | |
| 14 | 26 | 0 | 73 | 41 | 0 | 37 | -1124 | 0.0 | 247.5 | 3.7 | 0.0 | 247.5 | 1 | |
| 15 | 26 | -1 | -161 | -140 | 0 | -125 | 4135 | 0.0 | 897.9 | 8.2 | 0.0 | 897.9 | 1 | |
| 1 | 39 | -1 | -197 | -162 | 0 | -123 | 4728 | 0.0 | 1001.9 | 10.0 | 0.0 | 1001.9 | 1 | |
| 5 | 39 | -13 | -29 | 5 | 0 | -53 | 1138 | 0.2 | 270.0 | 1.5 | 0.0 | 270.2 | 1 | |
| 6 | 39 | 6 | -29 | 1 | 0 | -55 | 1138 | 0.1 | 273.2 | 1.5 | 0.0 | 273.3 | 1 | |
| 7 | 39 | -7 | -45 | -92 | 0 | -14 | 1182 | 0.1 | 229.7 | 4.3 | 0.0 | 229.8 | 1 | |
| 8 | 39 | 12 | -45 | -96 | 0 | -17 | 1182 | 0.2 | 233.0 | 4.5 | 0.0 | 233.2 | 1 | |
| 9 | 39 | -33 | -51 | -39 | 0 | -46 | 1615 | 0.6 | 347.3 | 2.6 | 0.0 | 347.9 | 1 | |
| 10 | 39 | 31 | -51 | -49 | 0 | -55 | 1615 | 0.6 | 358.1 | 2.6 | 0.0 | 358.7 | 1 | |
| 11 | 39 | -31 | -56 | -66 | 0 | -33 | 1629 | 0.6 | 333.3 | 3.1 | 0.0 | 333.9 | 1 | |
| 12 | 39 | 32 | -40 | -61 | 0 | -30 | 1167 | 0.6 | 246.6 | 2.9 | 0.0 | 247.2 | 1 | |
| 13 | 39 | -1 | -161 | -135 | 0 | -103 | 3943 | 0.0 | 835.3 | 8.1 | 0.0 | 835.3 | 1 | |
| 14 | 39 | 0 | 68 | 41 | 0 | 32 | -1114 | 0.0 | 239.2 | 3.4 | 0.0 | 239.2 | 1 | |
| 15 | 39 | -1 | -168 | -140 | 0 | -107 | 4114 | 0.0 | 871.6 | 8.5 | 0.0 | 871.6 | 1 | |
| 1 | 52 | -1 | -204 | -162 | 0 | -103 | 4702 | 0.0 | 971.4 | 10.3 | 0.0 | 971.4 | 1 | |
| 5 | 52 | -13 | -34 | 5 | 0 | -53 | 1134 | 0.2 | 270.0 | 1.7 | 0.0 | 270.2 | 1 | |
| 6 | 52 | 6 | -34 | 1 | 0 | -56 | 1134 | 0.1 | 272.7 | 1.7 | 0.0 | 272.8 | 1 | |
| 7 | 52 | -7 | -50 | -92 | 0 | -2 | 1176 | 0.1 | 213.8 | 4.3 | 0.0 | 213.9 | 1 | |
| 8 | 52 | 12 | -51 | -96 | 0 | -4 | 1176 | 0.2 | 216.6 | 4.5 | 0.0 | 216.8 | 1 | |
| 9 | 52 | -33 | -58 | -39 | 0 | -41 | 1608 | 0.6 | 339.9 | 2.9 | 0.0 | 340.5 | 1 | |
| 10 | 52 | 31 | -58 | -49 | 0 | -49 | 1608 | 0.6 | 349.0 | 2.9 | 0.0 | 349.5 | 1 | |
| 11 | 52 | -31 | -63 | -66 | 0 | -25 | 1621 | 0.6 | 321.4 | 3.2 | 0.0 | 322.0 | 1 | |
| 12 | 52 | 32 | -45 | -61 | 0 | -22 | 1161 | 0.6 | 235.9 | 2.9 | 0.0 | 236.5 | 1 | |
| 13 | 52 | -1 | -168 | -135 | 0 | -85 | 3922 | 0.0 | 810.0 | 8.5 | 0.0 | 810.0 | 1 | |
| 14 | 52 | 0 | 62 | 41 | 0 | 26 | -1106 | 0.0 | 231.1 | 3.2 | 0.0 | 231.1 | 1 | |
| 15 | 52 | -1 | -176 | -140 | 0 | -89 | 4092 | 0.0 | 845.1 | 8.9 | 0.0 | 845.1 | 1 | |
| 1 | 64 | -1 | -211 | -162 | 0 | -82 | 4675 | 0.0 | 940.7 | 10.7 | 0.0 | 940.7 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-----|------|------|---|-----|-------|-----|-------|------|-----|-------|---|
| 5 | 64 | -13 | -40 | 5 | 0 | -54 | 1129 | 0.2 | 269.8 | 2.0 | 0.0 | 270.1 | 1 |
| 6 | 64 | 6 | -40 | 1 | 0 | -56 | 1129 | 0.1 | 272.1 | 2.0 | 0.0 | 272.2 | 1 |
| 7 | 64 | -7 | -56 | -92 | 0 | 10 | 1169 | 0.1 | 221.8 | 4.3 | 0.0 | 221.9 | 1 |
| 8 | 64 | 12 | -56 | -96 | 0 | 8 | 1169 | 0.2 | 219.5 | 4.5 | 0.0 | 219.8 | 1 |
| 9 | 64 | -33 | -65 | -39 | 0 | -36 | 1600 | 0.6 | 332.2 | 3.3 | 0.0 | 332.9 | 1 |
| 10 | 64 | 31 | -65 | -49 | 0 | -42 | 1600 | 0.6 | 339.6 | 3.3 | 0.0 | 340.2 | 1 |
| 11 | 64 | -31 | -70 | -66 | 0 | -16 | 1612 | 0.6 | 309.4 | 3.5 | 0.0 | 310.0 | 1 |
| 12 | 64 | 32 | -50 | -61 | 0 | -14 | 1155 | 0.6 | 225.0 | 2.9 | 0.0 | 225.6 | 1 |
| 13 | 64 | -1 | -175 | -135 | 0 | -68 | 3900 | 0.0 | 784.5 | 8.9 | 0.0 | 784.5 | 1 |
| 14 | 64 | 0 | 57 | 41 | 0 | 21 | -1098 | 0.0 | 223.0 | 2.9 | 0.0 | 223.0 | 1 |
| 15 | 64 | -1 | -183 | -140 | 0 | -71 | 4068 | 0.0 | 818.4 | 9.3 | 0.0 | 818.5 | 1 |
| | | | | | | | | | | | | | |
| 1 | 77 | -1 | -218 | -162 | 0 | -61 | 4648 | 0.0 | 909.9 | 11.1 | 0.0 | 909.9 | 1 |
| 5 | 77 | -13 | -45 | 5 | 0 | -55 | 1124 | 0.2 | 269.6 | 2.3 | 0.0 | 269.8 | 1 |
| 6 | 77 | 6 | -45 | 1 | 0 | -56 | 1124 | 0.1 | 271.3 | 2.3 | 0.0 | 271.4 | 1 |
| 7 | 77 | -7 | -61 | -92 | 0 | 22 | 1161 | 0.1 | 235.2 | 4.3 | 0.0 | 235.3 | 1 |
| 8 | 77 | 12 | -61 | -96 | 0 | 20 | 1161 | 0.2 | 233.5 | 4.5 | 0.0 | 233.7 | 1 |
| 9 | 77 | -33 | -72 | -39 | 0 | -31 | 1592 | 0.6 | 324.5 | 3.7 | 0.0 | 325.1 | 1 |
| 10 | 77 | 31 | -72 | -49 | 0 | -36 | 1592 | 0.6 | 330.1 | 3.7 | 0.0 | 330.7 | 1 |
| 11 | 77 | -31 | -77 | -66 | 0 | -8 | 1603 | 0.6 | 297.2 | 3.9 | 0.0 | 297.8 | 1 |
| 12 | 77 | 32 | -56 | -61 | 0 | -6 | 1148 | 0.6 | 214.0 | 2.9 | 0.0 | 214.7 | 1 |
| 13 | 77 | -1 | -182 | -135 | 0 | -51 | 3877 | 0.0 | 758.8 | 9.2 | 0.0 | 758.8 | 1 |
| 14 | 77 | 0 | 52 | 41 | 0 | 16 | -1091 | 0.0 | 215.1 | 2.6 | 0.0 | 215.2 | 1 |
| 15 | 77 | -1 | -190 | -140 | 0 | -53 | 4044 | 0.0 | 791.6 | 9.6 | 0.0 | 791.7 | 1 |
| | | | | | | | | | | | | | |
| 1 | 90 | -1 | -225 | -162 | 0 | -40 | 4619 | 0.0 | 878.9 | 11.4 | 0.0 | 878.9 | 1 |
| 5 | 90 | -13 | -50 | 5 | 0 | -55 | 1118 | 0.2 | 269.2 | 2.6 | 0.0 | 269.5 | 1 |
| 6 | 90 | 6 | -50 | 1 | 0 | -56 | 1118 | 0.1 | 270.4 | 2.6 | 0.0 | 270.5 | 1 |
| 7 | 90 | -7 | -67 | -92 | 0 | 33 | 1153 | 0.1 | 248.5 | 4.3 | 0.0 | 248.6 | 1 |
| 8 | 90 | 12 | -67 | -96 | 0 | 32 | 1153 | 0.2 | 247.3 | 4.5 | 0.0 | 247.5 | 1 |
| 9 | 90 | -33 | -79 | -39 | 0 | -26 | 1582 | 0.6 | 316.5 | 4.0 | 0.0 | 317.1 | 1 |
| 10 | 90 | 31 | -79 | -49 | 0 | -29 | 1582 | 0.6 | 320.4 | 4.0 | 0.0 | 321.0 | 1 |
| 11 | 90 | -31 | -84 | -66 | 0 | 1 | 1593 | 0.6 | 287.0 | 4.3 | 0.0 | 287.5 | 1 |
| 12 | 90 | 32 | -61 | -61 | 0 | 2 | 1141 | 0.6 | 206.7 | 3.1 | 0.0 | 207.3 | 1 |
| 13 | 90 | -1 | -189 | -135 | 0 | -33 | 3853 | 0.0 | 733.0 | 9.6 | 0.0 | 733.0 | 1 |
| 14 | 90 | 0 | 46 | 41 | 0 | 10 | -1085 | 0.0 | 207.4 | 2.3 | 0.0 | 207.4 | 1 |
| 15 | 90 | -1 | -197 | -140 | 0 | -35 | 4019 | 0.0 | 764.7 | 10.0 | 0.0 | 764.7 | 1 |
| | | | | | | | | | | | | | |
| 1 | 103 | -1 | -232 | -162 | 0 | -19 | 4590 | 0.0 | 847.7 | 11.8 | 0.0 | 847.7 | 1 |
| 5 | 103 | -13 | -56 | 5 | 0 | -56 | 1111 | 0.2 | 268.7 | 2.8 | 0.0 | 269.0 | 1 |
| 6 | 103 | 6 | -56 | 1 | 0 | -56 | 1111 | 0.1 | 269.4 | 2.8 | 0.0 | 269.5 | 1 |
| 7 | 103 | -7 | -72 | -92 | 0 | 45 | 1144 | 0.1 | 261.7 | 4.3 | 0.0 | 261.8 | 1 |
| 8 | 103 | 12 | -72 | -96 | 0 | 45 | 1144 | 0.2 | 261.0 | 4.5 | 0.0 | 261.2 | 1 |
| 9 | 103 | -33 | -86 | -39 | 0 | -21 | 1571 | 0.6 | 308.4 | 4.4 | 0.0 | 309.0 | 1 |
| 10 | 103 | 31 | -86 | -49 | 0 | -23 | 1571 | 0.6 | 310.6 | 4.4 | 0.0 | 311.2 | 1 |
| 11 | 103 | -31 | -91 | -66 | 0 | 9 | 1581 | 0.6 | 295.4 | 4.6 | 0.0 | 296.0 | 1 |
| 12 | 103 | 32 | -67 | -61 | 0 | 9 | 1133 | 0.6 | 214.9 | 3.4 | 0.0 | 215.5 | 1 |
| 13 | 103 | -1 | -196 | -135 | 0 | -16 | 3828 | 0.0 | 707.0 | 9.9 | 0.0 | 707.0 | 1 |
| 14 | 103 | 0 | 41 | 41 | 0 | 5 | -1079 | 0.0 | 199.7 | 2.1 | 0.0 | 199.8 | 1 |
| 15 | 103 | -1 | -204 | -140 | 0 | -17 | 3993 | 0.0 | 737.5 | 10.3 | 0.0 | 737.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 116 | -1 | -239 | -162 | 0 | 2 | 4559 | 0.0 | 820.6 | 12.1 | 0.0 | 820.6 | 1 |
| 5 | 116 | -13 | -61 | 5 | 0 | -56 | 1103 | 0.2 | 268.1 | 3.1 | 0.0 | 268.3 | 1 |
| 6 | 116 | 6 | -61 | 1 | 0 | -57 | 1103 | 0.1 | 268.3 | 3.1 | 0.0 | 268.4 | 1 |
| 7 | 116 | -7 | -78 | -92 | 0 | 57 | 1134 | 0.1 | 274.7 | 4.3 | 0.0 | 274.8 | 1 |
| 8 | 116 | 12 | -78 | -96 | 0 | 57 | 1134 | 0.2 | 274.5 | 4.5 | 0.0 | 274.8 | 1 |
| 9 | 116 | -33 | -93 | -39 | 0 | -16 | 1560 | 0.6 | 300.1 | 4.7 | 0.0 | 300.7 | 1 |
| 10 | 116 | 31 | -93 | -49 | 0 | -17 | 1560 | 0.6 | 300.6 | 4.7 | 0.0 | 301.2 | 1 |
| 11 | 116 | -31 | -98 | -66 | 0 | 18 | 1569 | 0.6 | 303.8 | 5.0 | 0.0 | 304.3 | 1 |
| 12 | 116 | 32 | -72 | -61 | 0 | 17 | 1124 | 0.6 | 223.1 | 3.7 | 0.0 | 223.7 | 1 |
| 13 | 116 | -1 | -203 | -134 | 0 | 1 | 3803 | 0.0 | 684.3 | 10.3 | 0.0 | 684.4 | 1 |
| 14 | 116 | 0 | 35 | 41 | 0 | -0 | -1074 | 0.0 | 193.4 | 1.9 | 0.0 | 193.4 | 1 |
| 15 | 116 | -1 | -211 | -140 | 0 | 1 | 3967 | 0.0 | 713.9 | 10.7 | 0.0 | 713.9 | 1 |
| | | | | | | | | | | | | | |
| 1 | 129 | -1 | -246 | -162 | 0 | 23 | 4528 | 0.0 | 840.8 | 12.5 | 0.0 | 840.8 | 1 |
| 5 | 129 | -13 | -67 | 5 | 0 | -57 | 1095 | 0.2 | 267.4 | 3.4 | 0.0 | 267.6 | 1 |
| 6 | 129 | 6 | -67 | 1 | 0 | -57 | 1095 | 0.1 | 267.0 | 3.4 | 0.0 | 267.1 | 1 |
| 7 | 129 | -7 | -83 | -92 | 0 | 69 | 1124 | 0.1 | 287.6 | 4.3 | 0.0 | 287.7 | 1 |
| 8 | 129 | 12 | -83 | -96 | 0 | 69 | 1124 | 0.2 | 288.0 | 4.5 | 0.0 | 288.2 | 1 |
| 9 | 129 | -33 | -100 | -39 | 0 | -11 | 1547 | 0.6 | 291.7 | 5.1 | 0.0 | 292.3 | 1 |
| 10 | 129 | 31 | -100 | -49 | 0 | -10 | 1547 | 0.6 | 290.4 | 5.1 | 0.0 | 291.0 | 1 |
| 11 | 129 | -31 | -105 | -66 | 0 | 26 | 1556 | 0.6 | 311.9 | 5.3 | 0.0 | 312.5 | 1 |
| 12 | 129 | 32 | -78 | -61 | 0 | 25 | 1114 | 0.6 | 231.1 | 3.9 | 0.0 | 231.7 | 1 |
| 13 | 129 | -1 | -210 | -135 | 0 | 19 | 3776 | 0.0 | 701.1 | 10.7 | 0.0 | 701.1 | 1 |
| 14 | 129 | 0 | 30 | 41 | 0 | -6 | -1070 | 0.0 | 199.3 | 1.9 | 0.0 | 199.3 | 1 |
| 15 | 129 | -1 | -218 | -140 | 0 | 20 | 3939 | 0.0 | 731.4 | 11.1 | 0.0 | 731.4 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|-------|--------|-------|---------|---------|------|-----------|------|
| | | cm | daN*m | daN/cmq | | cm | | |
| 1 | -- | 0 | 4800 | 861.7 | -- | -- | -- | |
| -- | Rara | 72 | 3 | -- | 70 | 0.00 | 1 / 99999 | |
| -- | Freq. | 72 | 3 | -- | 70 | 0.00 | 1 / 99999 | |

| | | | | | | | |
|----|---------|----|---|----|----|------|-----------|
| -- | Q.Perm. | 72 | 3 | -- | 70 | 0.00 | 1 / 99999 |
| -- | Rara | 72 | 3 | -- | 70 | 0.00 | 1 / 99999 |
| -- | Rara | 72 | 3 | -- | 70 | 0.00 | 1 / 99999 |
| -- | Freq. | 72 | 3 | -- | 70 | 0.00 | 1 / 99999 |
| -- | Freq. | 72 | 3 | -- | 70 | 0.00 | 1 / 99999 |

ASTA NUM. 34 NI 138 NF 69 Lungh. 13.5 cm SEZ. 1 Ps IPE 300

categoria: p.p. y qy tot.

qy medio: 0.4223 0.4223 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|-------|------|-------|-----|-------|---------|--------|--------|-------|--------|------|------|
| -- | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -1 | -995 | 9 | 0 | 23 | 4528 | 0.0 | 840.8 | 50.5 | 0.0 | 840.8 | 1 | |
| 5 | 0 | -51 | -236 | 160 | 0 | -57 | 1095 | 1.0 | 267.4 | 12.0 | 0.0 | 268.3 | 1 | |
| 6 | 0 | 45 | -236 | 161 | 0 | -57 | 1095 | 0.8 | 267.0 | 12.0 | 0.0 | 267.8 | 1 | |
| 7 | 0 | -46 | -252 | -160 | 0 | 69 | 1124 | 0.9 | 287.6 | 12.8 | 0.0 | 288.4 | 1 | |
| 8 | 0 | 51 | -252 | -159 | 0 | 69 | 1124 | 0.9 | 288.0 | 12.8 | 0.0 | 288.9 | 1 | |
| 9 | 0 | -162 | -338 | 48 | 0 | -11 | 1547 | 3.0 | 291.7 | 17.2 | 0.0 | 294.7 | 1 | |
| 10 | 0 | 160 | -339 | 51 | 0 | -10 | 1547 | 3.0 | 290.4 | 17.2 | 0.0 | 293.4 | 1 | |
| 11 | 0 | -160 | -344 | -47 | 0 | 26 | 1556 | 3.0 | 311.9 | 17.4 | 0.0 | 314.9 | 1 | |
| 12 | 0 | 162 | -246 | -45 | 0 | 25 | 1114 | 3.0 | 231.1 | 12.5 | 0.0 | 234.1 | 1 | |
| 13 | 0 | -1 | -830 | 7 | 0 | 19 | 3776 | 0.0 | 701.1 | 42.1 | 0.0 | 701.1 | 1 | |
| 14 | 0 | 0 | 235 | -2 | 0 | -6 | -1070 | 0.0 | 199.3 | 11.9 | 0.0 | 199.3 | 1 | |
| 15 | 0 | -1 | -865 | 8 | 0 | 20 | 3939 | 0.0 | 731.4 | 43.9 | 0.0 | 731.4 | 1 | |
| 1 | 7 | -1 | -998 | 9 | 0 | 22 | 4461 | 0.0 | 828.0 | 50.7 | 0.0 | 828.0 | 1 | |
| 5 | 7 | -51 | -238 | 160 | 0 | -68 | 1079 | 1.0 | 277.9 | 12.1 | 0.0 | 278.9 | 1 | |
| 6 | 7 | 45 | -238 | 161 | 0 | -68 | 1079 | 0.8 | 277.6 | 12.1 | 0.0 | 278.4 | 1 | |
| 7 | 7 | -46 | -255 | -160 | 0 | 80 | 1107 | 0.9 | 298.0 | 12.9 | 0.0 | 298.8 | 1 | |
| 8 | 7 | 51 | -255 | -159 | 0 | 80 | 1107 | 0.9 | 298.3 | 12.9 | 0.0 | 299.2 | 1 | |
| 9 | 7 | -162 | -342 | 48 | 0 | -15 | 1524 | 3.0 | 291.6 | 17.4 | 0.0 | 294.6 | 1 | |
| 10 | 7 | 160 | -342 | 51 | 0 | -14 | 1524 | 3.0 | 290.6 | 17.4 | 0.0 | 293.6 | 1 | |
| 11 | 7 | -160 | -347 | -47 | 0 | 29 | 1533 | 3.0 | 311.6 | 17.6 | 0.0 | 314.6 | 1 | |
| 12 | 7 | 162 | -249 | -45 | 0 | 28 | 1098 | 3.0 | 232.0 | 12.6 | 0.0 | 235.0 | 1 | |
| 13 | 7 | -1 | -833 | 7 | 0 | 18 | 3720 | 0.0 | 690.4 | 42.3 | 0.0 | 690.4 | 1 | |
| 14 | 7 | 0 | 232 | -2 | 0 | -6 | -1054 | 0.0 | 196.4 | 11.8 | 0.0 | 196.4 | 1 | |
| 15 | 7 | -1 | -869 | 8 | 0 | 19 | 3881 | 0.0 | 720.3 | 44.1 | 0.0 | 720.3 | 1 | |
| 1 | 13 | -1 | -1002 | 9 | 0 | 21 | 4393 | 0.0 | 815.1 | 50.8 | 0.0 | 815.1 | 1 | |
| 5 | 13 | -51 | -241 | 160 | 0 | -79 | 1063 | 1.0 | 288.4 | 12.2 | 0.0 | 289.4 | 1 | |
| 6 | 13 | 45 | -241 | 161 | 0 | -78 | 1063 | 0.8 | 288.2 | 12.2 | 0.0 | 289.0 | 1 | |
| 7 | 13 | -46 | -258 | -160 | 0 | 91 | 1090 | 0.9 | 308.3 | 13.1 | 0.0 | 309.2 | 1 | |
| 8 | 13 | 51 | -258 | -159 | 0 | 91 | 1090 | 0.9 | 308.6 | 13.1 | 0.0 | 309.5 | 1 | |
| 9 | 13 | -162 | -346 | 48 | 0 | -18 | 1501 | 3.0 | 291.5 | 17.5 | 0.0 | 294.5 | 1 | |
| 10 | 13 | 160 | -346 | 51 | 0 | -17 | 1501 | 3.0 | 290.7 | 17.6 | 0.0 | 293.7 | 1 | |
| 11 | 13 | -160 | -351 | -47 | 0 | 33 | 1509 | 3.0 | 311.3 | 17.8 | 0.0 | 314.3 | 1 | |
| 12 | 13 | 162 | -252 | -45 | 0 | 31 | 1081 | 3.0 | 232.8 | 12.8 | 0.0 | 235.8 | 1 | |
| 13 | 13 | -1 | -837 | 7 | 0 | 18 | 3663 | 0.0 | 679.6 | 42.5 | 0.0 | 679.6 | 1 | |
| 14 | 13 | 0 | 229 | -2 | 0 | -6 | -1039 | 0.0 | 193.5 | 11.6 | 0.0 | 193.5 | 1 | |
| 15 | 13 | -1 | -873 | 8 | 0 | 19 | 3822 | 0.0 | 709.1 | 44.3 | 0.0 | 709.1 | 1 | |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x | Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|----|-------|--------|--------|---------|-----------|----------|------|
| -- | | cm | daN*m | daN/cm | daN/cm | cm | cm | | |
| 1 | -- | 0 | 4528 | 812.8 | -- | -- | -- | -- | |
| -- | Rara | 7 | 0 | -- | 7 | -0.00 | 1 / 99999 | | |
| -- | Freq. | 7 | 0 | -- | 7 | -0.00 | 1 / 99999 | | |
| -- | Q.Perm. | 7 | 0 | -- | 7 | -0.00 | 1 / 99999 | | |
| -- | Rara | 7 | 0 | -- | 7 | -0.00 | 1 / 99999 | | |
| -- | Rara | 7 | 0 | -- | 7 | -0.00 | 1 / 99999 | | |
| -- | Freq. | 7 | 0 | -- | 7 | -0.00 | 1 / 99999 | | |
| -- | Freq. | 7 | 0 | -- | 7 | -0.00 | 1 / 99999 | | |

ASTA NUM. 23 NI 69 NF 141 Lungh. 115.4 cm SEZ. 1 Ps IPE 300

categoria: p.p. y qy tot.

qy medio: 0.4223 0.4223 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|-------|------|-------|-----|-------|---------|--------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -1 | -2348 | 26 | 0 | 21 | 4394 | 0.0 | 815.3 | 119.1 | 0.0 | 815.3 | 1 | |
| 5 | 0 | -108 | -540 | -340 | 0 | -79 | 1063 | 2.0 | 288.4 | 27.4 | 0.0 | 290.4 | 1 | |
| 6 | 0 | 119 | -540 | -339 | 0 | -78 | 1063 | 2.2 | 288.2 | 27.4 | 0.0 | 290.4 | 1 | |
| 7 | 0 | -119 | -557 | 343 | 0 | 91 | 1090 | 2.2 | 308.3 | 28.2 | 0.0 | 310.5 | 1 | |
| 8 | 0 | 108 | -557 | 343 | 0 | 91 | 1090 | 2.0 | 308.6 | 28.3 | 0.0 | 310.6 | 1 | |
| 9 | 0 | -377 | -769 | -98 | 0 | -18 | 1501 | 7.0 | 291.5 | 39.0 | 0.0 | 298.5 | 1 | |
| 10 | 0 | 380 | -769 | -96 | 0 | -17 | 1501 | 7.1 | 290.7 | 39.0 | 0.0 | 297.8 | 1 | |
| 11 | 0 | -380 | -774 | 109 | 0 | 33 | 1509 | 7.1 | 311.3 | 39.3 | 0.0 | 318.4 | 1 | |
| 12 | 0 | 376 | -551 | 108 | 0 | 31 | 1081 | 7.0 | 232.8 | 28.0 | 0.0 | 239.8 | 1 | |
| 13 | 0 | -1 | -1950 | 22 | 0 | 18 | 3664 | 0.0 | 679.8 | 98.9 | 0.0 | 679.8 | 1 | |
| 14 | 0 | 0 | 607 | -5 | 0 | -6 | -1039 | 0.0 | 193.5 | 30.8 | 0.0 | 193.5 | 1 | |
| 15 | 0 | -1 | -2036 | 23 | 0 | 19 | 3822 | 0.0 | 709.1 | 103.3 | 0.0 | 709.1 | 1 | |
| 1 | 12 | -1 | -2354 | 26 | 0 | 18 | 4123 | 0.0 | 762.8 | 119.5 | 0.0 | 762.9 | 1 | |
| 5 | 12 | -108 | -545 | -340 | 0 | -39 | 1000 | 2.0 | 228.5 | 27.7 | 0.0 | 230.5 | 1 | |
| 6 | 12 | 119 | -545 | -339 | 0 | -39 | 1000 | 2.2 | 228.3 | 27.7 | 0.0 | 230.5 | 1 | |
| 7 | 12 | -119 | -562 | 343 | 0 | 51 | 1025 | 2.2 | 247.6 | 28.5 | 0.0 | 249.8 | 1 | |
| 8 | 12 | 108 | -562 | 343 | 0 | 51 | 1025 | 2.0 | 247.8 | 28.5 | 0.0 | 249.8 | 1 | |
| 9 | 12 | -377 | -775 | -98 | 0 | -6 | 1412 | 7.0 | 261.5 | 39.3 | 0.0 | 268.5 | 1 | |
| 10 | 12 | 380 | -775 | -96 | 0 | -6 | 1412 | 7.1 | 261.0 | 39.3 | 0.0 | 268.1 | 1 | |
| 11 | 12 | -380 | -780 | 109 | 0 | 20 | 1419 | 7.1 | 279.7 | 39.6 | 0.0 | 286.8 | 1 | |
| 12 | 12 | 376 | -556 | 108 | 0 | 19 | 1017 | 7.0 | 205.8 | 28.2 | 0.0 | 212.8 | 1 | |
| 13 | 12 | -1 | -1956 | 22 | 0 | 15 | 3439 | 0.0 | 636.2 | 99.3 | 0.0 | 636.2 | 1 | |
| 14 | 12 | 0 | 602 | -5 | 0 | -5 | -969 | 0.0 | 180.3 | 30.5 | 0.0 | 180.3 | 1 | |
| 15 | 12 | -1 | -2042 | 23 | 0 | 16 | 3587 | 0.0 | 663.6 | 103.6 | 0.0 | 663.6 | 1 | |
| 1 | 23 | -1 | -2361 | 26 | 0 | 15 | 3850 | 0.0 | 710.3 | 119.8 | 0.0 | 710.3 | 1 | |
| 5 | 23 | -108 | -550 | -340 | 0 | -0 | 937 | 2.0 | 168.4 | 27.9 | 0.0 | 170.4 | 1 | |
| 6 | 23 | 119 | -550 | -339 | 0 | -0 | 937 | 2.2 | 168.4 | 27.9 | 0.0 | 170.6 | 1 | |
| 7 | 23 | -119 | -566 | 343 | 0 | 12 | 960 | 2.2 | 186.9 | 28.7 | 0.0 | 189.1 | 1 | |
| 8 | 23 | 108 | -567 | 343 | 0 | 12 | 960 | 2.0 | 186.9 | 28.7 | 0.0 | 188.9 | 1 | |
| 9 | 23 | -377 | -781 | -98 | 0 | 5 | 1322 | 7.0 | 243.4 | 39.6 | 0.0 | 250.4 | 1 | |
| 10 | 23 | 380 | -781 | -96 | 0 | 5 | 1322 | 7.1 | 243.5 | 39.6 | 0.0 | 250.6 | 1 | |
| 11 | 23 | -380 | -786 | 109 | 0 | 8 | 1329 | 7.1 | 247.9 | 39.9 | 0.0 | 255.0 | 1 | |
| 12 | 23 | 376 | -561 | 108 | 0 | 6 | 953 | 7.0 | 178.7 | 28.5 | 0.0 | 185.7 | 1 | |
| 13 | 23 | -1 | -1963 | 22 | 0 | 13 | 3212 | 0.0 | 592.5 | 99.6 | 0.0 | 592.5 | 1 | |
| 14 | 23 | 0 | 597 | -5 | 0 | -5 | -900 | 0.0 | 167.2 | 30.3 | 0.0 | 167.2 | 1 | |
| 15 | 23 | -1 | -2049 | 23 | 0 | 13 | 3351 | 0.0 | 618.0 | 104.0 | 0.0 | 618.0 | 1 | |
| 1 | 35 | -1 | -2367 | 26 | 0 | 12 | 3578 | 0.0 | 657.6 | 120.1 | 0.0 | 657.6 | 1 | |
| 5 | 35 | -108 | -555 | -340 | 0 | 39 | 873 | 2.0 | 205.2 | 28.2 | 0.0 | 207.3 | 1 | |
| 6 | 35 | 119 | -555 | -339 | 0 | 39 | 873 | 2.2 | 205.2 | 28.2 | 0.0 | 207.4 | 1 | |
| 7 | 35 | -119 | -571 | 343 | 0 | -28 | 895 | 2.2 | 195.2 | 29.0 | 0.0 | 197.5 | 1 | |
| 8 | 35 | 108 | -571 | 343 | 0 | -28 | 895 | 2.0 | 195.3 | 29.0 | 0.0 | 197.3 | 1 | |
| 9 | 35 | -377 | -788 | -98 | 0 | 16 | 1232 | 7.0 | 241.2 | 40.0 | 0.0 | 248.2 | 1 | |
| 10 | 35 | 380 | -788 | -96 | 0 | 16 | 1232 | 7.1 | 241.0 | 40.0 | 0.0 | 248.0 | 1 | |
| 11 | 35 | -380 | -793 | 109 | 0 | -5 | 1238 | 7.1 | 228.5 | 40.2 | 0.0 | 235.5 | 1 | |
| 12 | 35 | 376 | -566 | 108 | 0 | -6 | 888 | 7.0 | 167.2 | 28.7 | 0.0 | 174.2 | 1 | |
| 13 | 35 | -1 | -1969 | 22 | 0 | 10 | 2986 | 0.0 | 548.7 | 99.9 | 0.0 | 548.7 | 1 | |
| 14 | 35 | 0 | 592 | -5 | 0 | -4 | -832 | 0.0 | 154.3 | 30.0 | 0.0 | 154.3 | 1 | |
| 15 | 35 | -1 | -2055 | 23 | 0 | 11 | 3114 | 0.0 | 572.3 | 104.3 | 0.0 | 572.3 | 1 | |
| 1 | 46 | -1 | -2374 | 26 | 0 | 9 | 3304 | 0.0 | 604.8 | 120.4 | 0.0 | 604.8 | 1 | |
| 5 | 46 | -108 | -560 | -340 | 0 | 78 | 809 | 2.0 | 242.4 | 28.4 | 0.0 | 244.4 | 1 | |
| 6 | 46 | 119 | -560 | -339 | 0 | 78 | 809 | 2.2 | 242.2 | 28.4 | 0.0 | 244.4 | 1 | |
| 7 | 46 | -119 | -576 | 343 | 0 | -67 | 829 | 2.2 | 232.4 | 29.2 | 0.0 | 234.7 | 1 | |
| 8 | 46 | 108 | -576 | 343 | 0 | -68 | 829 | 2.0 | 232.6 | 29.2 | 0.0 | 234.6 | 1 | |
| 9 | 46 | -377 | -794 | -98 | 0 | 28 | 1140 | 7.0 | 238.9 | 40.3 | 0.0 | 245.9 | 1 | |
| 10 | 46 | 380 | -794 | -96 | 0 | 27 | 1140 | 7.1 | 238.3 | 40.3 | 0.0 | 245.4 | 1 | |
| 11 | 46 | -380 | -799 | 109 | 0 | -18 | 1146 | 7.1 | 227.6 | 40.5 | 0.0 | 234.6 | 1 | |
| 12 | 46 | 376 | -571 | 108 | 0 | -19 | 822 | 7.0 | 171.0 | 29.0 | 0.0 | 178.0 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|-------|------|---|------|------|-----|-------|-------|-----|-------|---|
| 13 | 46 | -1 | -1975 | 22 | 0 | 8 | 2758 | 0.0 | 504.7 | 100.2 | 0.0 | 504.7 | 1 |
| 14 | 46 | 0 | 587 | -5 | 0 | -3 | -763 | 0.0 | 141.4 | 29.8 | 0.0 | 141.4 | 1 |
| 15 | 46 | -1 | -2062 | 23 | 0 | 8 | 2876 | 0.0 | 526.4 | 104.6 | 0.0 | 526.4 | 1 |
| 1 | 58 | -1 | -2380 | 26 | 0 | 6 | 3030 | 0.0 | 551.8 | 120.8 | 0.0 | 551.8 | 1 |
| 5 | 58 | -108 | -565 | -340 | 0 | 117 | 744 | 2.0 | 279.4 | 28.7 | 0.0 | 281.4 | 1 |
| 6 | 58 | 119 | -565 | -339 | 0 | 117 | 744 | 2.2 | 279.2 | 28.7 | 0.0 | 281.4 | 1 |
| 7 | 58 | -119 | -581 | 343 | 0 | -107 | 762 | 2.2 | 269.5 | 29.5 | 0.0 | 271.8 | 1 |
| 8 | 58 | 108 | -581 | 343 | 0 | -107 | 762 | 2.0 | 269.8 | 29.5 | 0.0 | 271.8 | 1 |
| 9 | 58 | -377 | -800 | -98 | 0 | 39 | 1048 | 7.0 | 236.5 | 40.6 | 0.0 | 243.5 | 1 |
| 10 | 58 | 380 | -800 | -96 | 0 | 38 | 1048 | 7.1 | 235.5 | 40.6 | 0.0 | 242.6 | 1 |
| 11 | 58 | -380 | -805 | 109 | 0 | -30 | 1054 | 7.1 | 226.5 | 40.9 | 0.0 | 233.6 | 1 |
| 12 | 58 | 376 | -576 | 108 | 0 | -31 | 756 | 7.0 | 174.6 | 29.2 | 0.0 | 181.6 | 1 |
| 13 | 58 | -1 | -1982 | 22 | 0 | 5 | 2530 | 0.0 | 460.6 | 100.5 | 0.0 | 460.6 | 1 |
| 14 | 58 | 0 | 582 | -5 | 0 | -3 | -696 | 0.0 | 128.6 | 29.5 | 0.0 | 128.6 | 1 |
| 15 | 58 | -1 | -2068 | 23 | 0 | 6 | 2638 | 0.0 | 480.4 | 104.9 | 0.0 | 480.4 | 1 |
| 1 | 69 | -1 | -2386 | 26 | 0 | 3 | 2755 | 0.0 | 498.7 | 121.1 | 0.0 | 498.7 | 1 |
| 5 | 69 | -108 | -570 | -340 | 0 | 157 | 679 | 2.0 | 316.3 | 28.9 | 0.0 | 318.4 | 1 |
| 6 | 69 | 119 | -570 | -339 | 0 | 156 | 679 | 2.2 | 316.0 | 28.9 | 0.0 | 318.2 | 1 |
| 7 | 69 | -119 | -586 | 343 | 0 | -146 | 694 | 2.2 | 306.5 | 29.7 | 0.0 | 308.8 | 1 |
| 8 | 69 | 108 | -586 | 343 | 0 | -147 | 694 | 2.0 | 306.9 | 29.7 | 0.0 | 308.9 | 1 |
| 9 | 69 | -377 | -807 | -98 | 0 | 50 | 956 | 7.0 | 233.9 | 40.9 | 0.0 | 240.9 | 1 |
| 10 | 69 | 380 | -807 | -96 | 0 | 49 | 956 | 7.1 | 232.6 | 40.9 | 0.0 | 239.6 | 1 |
| 11 | 69 | -380 | -812 | 109 | 0 | -43 | 961 | 7.1 | 225.3 | 41.2 | 0.0 | 232.4 | 1 |
| 12 | 69 | 376 | -580 | 108 | 0 | -44 | 689 | 7.0 | 178.2 | 29.5 | 0.0 | 185.2 | 1 |
| 13 | 69 | -1 | -1988 | 22 | 0 | 3 | 2301 | 0.0 | 416.4 | 100.9 | 0.0 | 416.4 | 1 |
| 14 | 69 | 0 | 577 | -5 | 0 | -2 | -629 | 0.0 | 116.0 | 29.3 | 0.0 | 116.0 | 1 |
| 15 | 69 | -1 | -2074 | 23 | 0 | 3 | 2399 | 0.0 | 434.3 | 105.3 | 0.0 | 434.3 | 1 |
| 1 | 81 | -1 | -2393 | 26 | 0 | 0 | 2479 | 0.0 | 445.5 | 121.4 | 0.0 | 445.5 | 1 |
| 5 | 81 | -108 | -574 | -340 | 0 | 196 | 613 | 2.0 | 353.2 | 29.2 | 0.0 | 355.2 | 1 |
| 6 | 81 | 119 | -575 | -339 | 0 | 196 | 613 | 2.2 | 352.7 | 29.2 | 0.0 | 354.9 | 1 |
| 7 | 81 | -119 | -591 | 343 | 0 | -186 | 627 | 2.2 | 343.4 | 30.0 | 0.0 | 345.7 | 1 |
| 8 | 81 | 108 | -591 | 343 | 0 | -186 | 627 | 2.0 | 343.9 | 30.0 | 0.0 | 345.9 | 1 |
| 9 | 81 | -377 | -813 | -98 | 0 | 62 | 862 | 7.0 | 231.2 | 41.2 | 0.0 | 238.2 | 1 |
| 10 | 81 | 380 | -813 | -96 | 0 | 60 | 862 | 7.1 | 229.5 | 41.3 | 0.0 | 236.6 | 1 |
| 11 | 81 | -380 | -818 | 109 | 0 | -55 | 867 | 7.1 | 224.0 | 41.5 | 0.0 | 231.1 | 1 |
| 12 | 81 | 376 | -585 | 108 | 0 | -56 | 622 | 7.0 | 181.6 | 29.7 | 0.0 | 188.6 | 1 |
| 13 | 81 | -1 | -1994 | 22 | 0 | 0 | 2071 | 0.0 | 372.1 | 101.2 | 0.0 | 372.1 | 1 |
| 14 | 81 | 0 | 573 | -5 | 0 | -2 | -563 | 0.0 | 103.4 | 29.1 | 0.0 | 103.4 | 1 |
| 15 | 81 | -1 | -2081 | 23 | 0 | 0 | 2159 | 0.0 | 388.0 | 105.6 | 0.0 | 388.0 | 1 |
| 1 | 92 | -1 | -2399 | 26 | 0 | -3 | 2202 | 0.0 | 398.5 | 121.7 | 0.0 | 401.7 | 3 |
| 5 | 92 | -108 | -579 | -340 | 0 | 235 | 546 | 2.0 | 389.9 | 29.4 | 0.0 | 391.9 | 1 |
| 6 | 92 | 119 | -579 | -339 | 0 | 235 | 546 | 2.2 | 389.4 | 29.4 | 0.0 | 391.6 | 1 |
| 7 | 92 | -119 | -596 | 343 | 0 | -226 | 558 | 2.2 | 380.2 | 30.2 | 0.0 | 382.4 | 1 |
| 8 | 92 | 108 | -596 | 343 | 0 | -226 | 558 | 2.0 | 380.8 | 30.2 | 0.0 | 382.8 | 1 |
| 9 | 92 | -377 | -819 | -98 | 0 | 73 | 768 | 7.0 | 228.3 | 41.6 | 0.0 | 235.4 | 1 |
| 10 | 92 | 380 | -819 | -96 | 0 | 71 | 768 | 7.1 | 226.3 | 41.6 | 0.0 | 233.4 | 1 |
| 11 | 92 | -380 | -824 | 109 | 0 | -68 | 772 | 7.1 | 222.6 | 41.8 | 0.0 | 229.6 | 1 |
| 12 | 92 | 376 | -590 | 108 | 0 | -69 | 554 | 7.0 | 185.0 | 30.0 | 0.0 | 192.0 | 1 |
| 13 | 92 | -1 | -2000 | 22 | 0 | -2 | 1840 | 0.0 | 333.1 | 101.5 | 0.0 | 335.5 | 3 |
| 14 | 92 | 0 | 568 | -5 | 0 | -1 | -497 | 0.0 | 90.9 | 28.8 | 0.0 | 91.4 | 3 |
| 15 | 92 | -1 | -2087 | 23 | 0 | -2 | 1919 | 0.0 | 347.4 | 105.9 | 0.0 | 349.9 | 3 |
| 1 | 104 | -1 | -2406 | 26 | 0 | -6 | 1925 | 0.0 | 352.4 | 122.1 | 0.0 | 360.3 | 3 |
| 5 | 104 | -108 | -584 | -340 | 0 | 274 | 479 | 2.0 | 426.5 | 29.6 | 0.0 | 428.5 | 1 |
| 6 | 104 | 119 | -584 | -339 | 0 | 274 | 479 | 2.2 | 425.9 | 29.7 | 0.0 | 428.1 | 1 |
| 7 | 104 | -119 | -601 | 343 | 0 | -265 | 489 | 2.2 | 416.9 | 30.5 | 0.0 | 419.1 | 1 |
| 8 | 104 | 108 | -601 | 343 | 0 | -266 | 489 | 2.0 | 417.6 | 30.5 | 0.0 | 419.6 | 1 |
| 9 | 104 | -377 | -826 | -98 | 0 | 84 | 673 | 7.0 | 225.4 | 41.9 | 0.0 | 232.4 | 1 |
| 10 | 104 | 380 | -826 | -96 | 0 | 82 | 673 | 7.1 | 223.0 | 41.9 | 0.0 | 230.1 | 1 |
| 11 | 104 | -380 | -831 | 109 | 0 | -80 | 676 | 7.1 | 221.0 | 42.1 | 0.0 | 228.1 | 1 |
| 12 | 104 | 376 | -595 | 108 | 0 | -81 | 486 | 7.0 | 188.3 | 30.2 | 0.0 | 195.2 | 1 |
| 13 | 104 | -1 | -2007 | 22 | 0 | -5 | 1609 | 0.0 | 294.7 | 101.8 | 0.0 | 301.0 | 3 |
| 14 | 104 | 0 | 563 | -5 | 0 | -1 | -432 | 0.0 | 78.6 | 28.6 | 0.0 | 81.5 | 3 |
| 15 | 104 | -1 | -2094 | 23 | 0 | -5 | 1678 | 0.0 | 307.3 | 106.2 | 0.0 | 313.9 | 3 |
| 1 | 115 | -1 | -2412 | 26 | 0 | -9 | 1647 | 0.0 | 306.2 | 122.4 | 0.0 | 320.0 | 3 |
| 5 | 115 | -108 | -589 | -340 | 0 | 314 | 411 | 2.0 | 463.1 | 29.9 | 0.0 | 465.1 | 1 |
| 6 | 115 | 119 | -589 | -339 | 0 | 313 | 411 | 2.2 | 462.3 | 29.9 | 0.0 | 464.5 | 1 |
| 7 | 115 | -119 | -606 | 343 | 0 | -305 | 420 | 2.2 | 453.5 | 30.7 | 0.0 | 455.7 | 1 |
| 8 | 115 | 108 | -606 | 343 | 0 | -305 | 420 | 2.0 | 454.3 | 30.7 | 0.0 | 456.3 | 1 |
| 9 | 115 | -377 | -832 | -98 | 0 | 95 | 578 | 7.0 | 222.3 | 42.2 | 0.0 | 229.3 | 1 |
| 10 | 115 | 380 | -832 | -96 | 0 | 93 | 578 | 7.1 | 219.5 | 42.2 | 0.0 | 226.6 | 1 |
| 11 | 115 | -380 | -837 | 109 | 0 | -93 | 580 | 7.1 | 219.3 | 42.5 | 0.0 | 226.3 | 1 |
| 12 | 115 | 376 | -600 | 108 | 0 | -94 | 417 | 7.0 | 191.4 | 30.4 | 0.0 | 198.4 | 1 |
| 13 | 115 | -1 | -2013 | 22 | 0 | -7 | 1377 | 0.0 | 256.2 | 102.1 | 0.0 | 267.4 | 3 |
| 14 | 115 | 0 | 558 | -5 | 0 | -0 | -367 | 0.0 | 66.3 | 28.3 | 0.0 | 72.0 | 3 |
| 15 | 115 | -1 | -2100 | 23 | 0 | -8 | 1436 | 0.0 | 267.1 | 106.6 | 0.0 | 278.9 | 3 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|------|--------|-------|---------------------|---------|------|----------|------|
| | | cm | daN*m | daN/cm ² | | cm | | |

| | | | | | | | |
|----|---------|----|------|-------|----|------|-----------|
| 1 | -- | 0 | 4394 | 788.8 | -- | -- | -- |
| -- | Rara | 58 | 3 | -- | 58 | 0.00 | 1 / 99999 |
| -- | Freq. | 58 | 3 | -- | 58 | 0.00 | 1 / 99999 |
| -- | Q.Perm. | 58 | 3 | -- | 58 | 0.00 | 1 / 99999 |
| -- | Rara | 58 | 3 | -- | 58 | 0.00 | 1 / 99999 |
| -- | Rara | 58 | 3 | -- | 58 | 0.00 | 1 / 99999 |
| -- | Freq. | 58 | 3 | -- | 58 | 0.00 | 1 / 99999 |
| -- | Freq. | 58 | 3 | -- | 58 | 0.00 | 1 / 99999 |

ASTA NUM. 41 NI 141 NF 38 Lungh. 27.0 cm SEZ. 1 Ps IPE 300

categoria: p.p. y qy tot.

qy medio: 0.4223 0.4223 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf(Fx) | Sf(M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|-------|------|----|-------|------|--------|--------|--------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | daN/cm | | | | | |
| 1 | 0 | -1 | -2811 | -13 | 0 | -9 | 1647 | 0.0 | 306.2 | 142.6 | 0.0 | 334.6 | 3 | |
| 5 | 0 | -133 | -693 | 807 | 0 | 314 | 411 | 2.5 | 463.1 | 37.7 | 0.0 | 465.5 | 1 | |
| 6 | 0 | 144 | -693 | 806 | 0 | 313 | 411 | 2.7 | 462.3 | 37.7 | 0.0 | 465.0 | 1 | |
| 7 | 0 | -144 | -709 | -786 | 0 | -305 | 420 | 2.7 | 453.5 | 36.7 | 0.0 | 456.2 | 1 | |
| 8 | 0 | 133 | -709 | -786 | 0 | -305 | 420 | 2.5 | 454.3 | 36.7 | 0.0 | 456.7 | 1 | |
| 9 | 0 | -459 | -976 | 245 | 0 | 95 | 578 | 8.5 | 222.3 | 49.5 | 0.0 | 230.8 | 1 | |
| 10 | 0 | 462 | -976 | 243 | 0 | 93 | 578 | 8.6 | 219.5 | 49.5 | 0.0 | 228.1 | 1 | |
| 11 | 0 | -463 | -981 | -238 | 0 | -93 | 580 | 8.6 | 219.3 | 49.8 | 0.0 | 227.9 | 1 | |
| 12 | 0 | 459 | -703 | -239 | 0 | -94 | 417 | 8.5 | 191.4 | 35.7 | 0.0 | 199.9 | 1 | |
| 13 | 0 | -1 | -2348 | -11 | 0 | -7 | 1377 | 0.0 | 256.2 | 119.1 | 0.0 | 279.7 | 3 | |
| 14 | 0 | 0 | 641 | -2 | 0 | -0 | -367 | 0.0 | 66.3 | 32.5 | 0.0 | 75.1 | 3 | |
| 15 | 0 | -1 | -2448 | -11 | 0 | -8 | 1436 | 0.0 | 267.1 | 124.2 | 0.0 | 291.7 | 3 | |
| 1 | 3 | -1 | -2813 | -13 | 0 | -8 | 1571 | 0.0 | 292.2 | 142.7 | 0.0 | 324.4 | 3 | |
| 5 | 3 | -133 | -694 | 807 | 0 | 292 | 392 | 2.5 | 432.7 | 37.7 | 0.0 | 435.1 | 1 | |
| 6 | 3 | 144 | -694 | 806 | 0 | 291 | 392 | 2.7 | 431.9 | 37.7 | 0.0 | 434.6 | 1 | |
| 7 | 3 | -144 | -710 | -786 | 0 | -283 | 400 | 2.7 | 423.8 | 36.7 | 0.0 | 426.4 | 1 | |
| 8 | 3 | 133 | -710 | -786 | 0 | -284 | 400 | 2.5 | 424.5 | 36.7 | 0.0 | 427.0 | 1 | |
| 9 | 3 | -459 | -977 | 245 | 0 | 89 | 551 | 8.5 | 209.3 | 49.6 | 0.0 | 217.9 | 1 | |
| 10 | 3 | 462 | -977 | 243 | 0 | 87 | 551 | 8.6 | 206.7 | 49.6 | 0.0 | 215.2 | 1 | |
| 11 | 3 | -463 | -982 | -238 | 0 | -86 | 554 | 8.6 | 206.5 | 49.8 | 0.0 | 215.1 | 1 | |
| 12 | 3 | 459 | -705 | -239 | 0 | -87 | 398 | 8.5 | 180.0 | 35.8 | 0.0 | 188.5 | 1 | |
| 13 | 3 | -1 | -2349 | -11 | 0 | -7 | 1314 | 0.0 | 244.4 | 119.2 | 0.0 | 271.1 | 3 | |
| 14 | 3 | 0 | 640 | -2 | 0 | -0 | -350 | 0.0 | 63.1 | 32.5 | 0.0 | 72.7 | 3 | |
| 15 | 3 | -1 | -2450 | -11 | 0 | -7 | 1370 | 0.0 | 254.9 | 124.3 | 0.0 | 282.7 | 3 | |
| 1 | 5 | -1 | -2814 | -13 | 0 | -8 | 1495 | 0.0 | 278.2 | 142.8 | 0.0 | 314.3 | 3 | |
| 5 | 5 | -133 | -695 | 807 | 0 | 270 | 374 | 2.5 | 402.3 | 37.7 | 0.0 | 404.7 | 1 | |
| 6 | 5 | 144 | -695 | 806 | 0 | 269 | 374 | 2.7 | 401.5 | 37.7 | 0.0 | 404.2 | 1 | |
| 7 | 5 | -144 | -711 | -786 | 0 | -262 | 381 | 2.7 | 394.0 | 36.7 | 0.0 | 396.7 | 1 | |
| 8 | 5 | 133 | -711 | -786 | 0 | -263 | 381 | 2.5 | 394.7 | 36.7 | 0.0 | 397.2 | 1 | |
| 9 | 5 | -459 | -979 | 245 | 0 | 82 | 525 | 8.5 | 196.4 | 49.7 | 0.0 | 204.9 | 1 | |
| 10 | 5 | 462 | -979 | 243 | 0 | 80 | 525 | 8.6 | 193.8 | 49.7 | 0.0 | 202.3 | 1 | |
| 11 | 5 | -463 | -984 | -238 | 0 | -80 | 527 | 8.6 | 193.8 | 49.9 | 0.0 | 202.4 | 1 | |
| 12 | 5 | 459 | -706 | -239 | 0 | -81 | 379 | 8.5 | 168.6 | 35.8 | 0.0 | 177.1 | 1 | |
| 13 | 5 | -1 | -2351 | -11 | 0 | -7 | 1250 | 0.0 | 232.7 | 119.3 | 0.0 | 262.7 | 3 | |
| 14 | 5 | 0 | 639 | -2 | 0 | -0 | -333 | 0.0 | 59.9 | 32.4 | 0.0 | 70.4 | 3 | |
| 15 | 5 | -1 | -2451 | -11 | 0 | -7 | 1304 | 0.0 | 242.6 | 124.4 | 0.0 | 273.9 | 3 | |
| 1 | 8 | -1 | -2816 | -13 | 0 | -8 | 1419 | 0.0 | 264.1 | 142.9 | 0.0 | 304.3 | 3 | |
| 5 | 8 | -133 | -696 | 807 | 0 | 248 | 355 | 2.5 | 371.9 | 37.7 | 0.0 | 374.3 | 1 | |
| 6 | 8 | 144 | -696 | 806 | 0 | 248 | 355 | 2.7 | 371.1 | 37.7 | 0.0 | 373.8 | 1 | |
| 7 | 8 | -144 | -712 | -786 | 0 | -241 | 362 | 2.7 | 364.2 | 36.7 | 0.0 | 366.9 | 1 | |
| 8 | 8 | 133 | -712 | -786 | 0 | -242 | 362 | 2.5 | 364.9 | 36.7 | 0.0 | 367.4 | 1 | |
| 9 | 8 | -459 | -980 | 245 | 0 | 76 | 499 | 8.5 | 183.4 | 49.7 | 0.0 | 191.9 | 1 | |
| 10 | 8 | 462 | -980 | 243 | 0 | 74 | 499 | 8.6 | 180.9 | 49.7 | 0.0 | 189.4 | 1 | |
| 11 | 8 | -463 | -985 | -238 | 0 | -73 | 501 | 8.6 | 181.0 | 50.0 | 0.0 | 189.6 | 1 | |
| 12 | 8 | 459 | -707 | -239 | 0 | -75 | 360 | 8.5 | 157.2 | 35.9 | 0.0 | 165.7 | 1 | |
| 13 | 8 | -1 | -2352 | -11 | 0 | -6 | 1187 | 0.0 | 220.9 | 119.4 | 0.0 | 254.4 | 3 | |
| 14 | 8 | 0 | 638 | -2 | 0 | -0 | -315 | 0.0 | 56.8 | 32.4 | 0.0 | 68.1 | 3 | |
| 15 | 8 | -1 | -2453 | -11 | 0 | -7 | 1238 | 0.0 | 230.4 | 124.4 | 0.0 | 265.3 | 3 | |
| 1 | 11 | -1 | -2817 | -13 | 0 | -7 | 1343 | 0.0 | 250.0 | 142.9 | 0.0 | 294.6 | 3 | |
| 5 | 11 | -133 | -697 | 807 | 0 | 226 | 336 | 2.5 | 341.4 | 37.7 | 0.0 | 343.9 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|------|-------|------|---|------|------|-----|-------|-------|-----|-------|---|
| 6 | 11 | 144 | -697 | 806 | 0 | 226 | 336 | 2.7 | 340.7 | 37.7 | 0.0 | 343.4 | 1 |
| 7 | 11 | -144 | -713 | -786 | 0 | -220 | 343 | 2.7 | 334.4 | 36.7 | 0.0 | 337.1 | 1 |
| 8 | 11 | 133 | -713 | -786 | 0 | -220 | 343 | 2.5 | 335.1 | 36.7 | 0.0 | 337.6 | 1 |
| 9 | 11 | -459 | -982 | 245 | 0 | 69 | 472 | 8.5 | 170.4 | 49.8 | 0.0 | 178.9 | 1 |
| 10 | 11 | 462 | -982 | 243 | 0 | 67 | 472 | 8.6 | 167.9 | 49.8 | 0.0 | 176.5 | 1 |
| 11 | 11 | -463 | -987 | -238 | 0 | -67 | 474 | 8.6 | 168.3 | 50.1 | 0.0 | 176.9 | 1 |
| 12 | 11 | 459 | -708 | -239 | 0 | -68 | 340 | 8.5 | 145.7 | 35.9 | 0.0 | 154.3 | 1 |
| 13 | 11 | -1 | -2354 | -11 | 0 | -6 | 1123 | 0.0 | 209.2 | 119.4 | 0.0 | 246.3 | 3 |
| 14 | 11 | 0 | 637 | -2 | 0 | -0 | -298 | 0.0 | 53.6 | 32.3 | 0.0 | 65.8 | 3 |
| 15 | 11 | -1 | -2454 | -11 | 0 | -6 | 1171 | 0.0 | 218.1 | 124.5 | 0.0 | 256.8 | 3 |
| | | | | | | | | | | | | | |
| 1 | 13 | -1 | -2819 | -13 | 0 | -7 | 1267 | 0.0 | 236.0 | 143.0 | 0.0 | 285.1 | 3 |
| 5 | 13 | -133 | -698 | 807 | 0 | 205 | 317 | 2.5 | 311.0 | 37.7 | 0.0 | 313.5 | 1 |
| 6 | 13 | 144 | -698 | 806 | 0 | 204 | 317 | 2.7 | 310.3 | 37.7 | 0.0 | 313.0 | 1 |
| 7 | 13 | -144 | -715 | -786 | 0 | -199 | 323 | 2.7 | 304.6 | 36.7 | 0.0 | 307.3 | 1 |
| 8 | 13 | 133 | -715 | -786 | 0 | -199 | 323 | 2.5 | 305.3 | 36.7 | 0.0 | 307.8 | 1 |
| 9 | 13 | -459 | -983 | 245 | 0 | 62 | 446 | 8.5 | 157.4 | 49.9 | 0.0 | 166.0 | 1 |
| 10 | 13 | 462 | -983 | 243 | 0 | 60 | 446 | 8.6 | 155.0 | 49.9 | 0.0 | 163.6 | 1 |
| 11 | 13 | -463 | -988 | -238 | 0 | -61 | 447 | 8.6 | 155.5 | 50.1 | 0.0 | 164.1 | 1 |
| 12 | 13 | 459 | -709 | -239 | 0 | -62 | 321 | 8.5 | 134.3 | 36.0 | 0.0 | 142.8 | 1 |
| 13 | 13 | -1 | -2355 | -11 | 0 | -6 | 1060 | 0.0 | 197.4 | 119.5 | 0.0 | 238.4 | 3 |
| 14 | 13 | 0 | 636 | -2 | 0 | -0 | -281 | 0.0 | 50.5 | 32.3 | 0.0 | 63.6 | 3 |
| 15 | 13 | -1 | -2456 | -11 | 0 | -6 | 1105 | 0.0 | 205.8 | 124.6 | 0.0 | 248.5 | 3 |
| | | | | | | | | | | | | | |
| 1 | 16 | -1 | -2820 | -13 | 0 | -6 | 1191 | 0.0 | 221.9 | 143.1 | 0.0 | 275.9 | 3 |
| 5 | 16 | -133 | -699 | 807 | 0 | 183 | 298 | 2.5 | 280.6 | 37.7 | 0.0 | 283.1 | 1 |
| 6 | 16 | 144 | -699 | 806 | 0 | 182 | 298 | 2.7 | 279.9 | 37.7 | 0.0 | 282.6 | 1 |
| 7 | 16 | -144 | -716 | -786 | 0 | -177 | 304 | 2.7 | 274.9 | 36.7 | 0.0 | 277.5 | 1 |
| 8 | 16 | 133 | -716 | -786 | 0 | -178 | 304 | 2.5 | 275.5 | 36.7 | 0.0 | 278.0 | 1 |
| 9 | 16 | -459 | -985 | 245 | 0 | 56 | 419 | 8.5 | 144.4 | 50.0 | 0.0 | 153.0 | 1 |
| 10 | 16 | 462 | -985 | 243 | 0 | 54 | 419 | 8.6 | 142.1 | 50.0 | 0.0 | 150.7 | 1 |
| 11 | 16 | -463 | -990 | -238 | 0 | -54 | 421 | 8.6 | 142.7 | 50.2 | 0.0 | 151.3 | 1 |
| 12 | 16 | 459 | -710 | -239 | 0 | -55 | 302 | 8.5 | 122.9 | 36.0 | 0.0 | 131.4 | 1 |
| 13 | 16 | -1 | -2356 | -11 | 0 | -5 | 996 | 0.0 | 185.7 | 119.6 | 0.0 | 230.7 | 3 |
| 14 | 16 | 0 | 634 | -2 | 0 | 0 | -264 | 0.0 | 47.4 | 32.2 | 0.0 | 61.5 | 3 |
| 15 | 16 | -1 | -2457 | -11 | 0 | -6 | 1039 | 0.0 | 193.6 | 124.7 | 0.0 | 240.5 | 3 |
| | | | | | | | | | | | | | |
| 1 | 19 | -1 | -2822 | -13 | 0 | -6 | 1115 | 0.0 | 207.8 | 143.2 | 0.0 | 267.0 | 3 |
| 5 | 19 | -133 | -700 | 807 | 0 | 161 | 279 | 2.5 | 250.2 | 37.7 | 0.0 | 252.6 | 1 |
| 6 | 19 | 144 | -701 | 806 | 0 | 161 | 279 | 2.7 | 249.5 | 37.7 | 0.0 | 252.2 | 1 |
| 7 | 19 | -144 | -717 | -786 | 0 | -156 | 285 | 2.7 | 245.1 | 36.7 | 0.0 | 247.7 | 1 |
| 8 | 19 | 133 | -717 | -786 | 0 | -157 | 285 | 2.5 | 245.7 | 36.7 | 0.0 | 248.2 | 1 |
| 9 | 19 | -459 | -986 | 245 | 0 | 49 | 392 | 8.5 | 131.4 | 50.0 | 0.0 | 140.0 | 1 |
| 10 | 19 | 462 | -986 | 243 | 0 | 47 | 392 | 8.6 | 129.2 | 50.0 | 0.0 | 137.8 | 1 |
| 11 | 19 | -463 | -991 | -238 | 0 | -48 | 394 | 8.6 | 130.0 | 50.3 | 0.0 | 138.5 | 1 |
| 12 | 19 | 459 | -711 | -239 | 0 | -49 | 283 | 8.5 | 111.4 | 36.1 | 0.0 | 119.9 | 1 |
| 13 | 19 | -1 | -2358 | -11 | 0 | -5 | 933 | 0.0 | 173.9 | 119.6 | 0.0 | 223.2 | 3 |
| 14 | 19 | 0 | 633 | -2 | 0 | 0 | -247 | 0.0 | 44.4 | 32.1 | 0.0 | 59.5 | 3 |
| 15 | 19 | -1 | -2459 | -11 | 0 | -5 | 972 | 0.0 | 181.3 | 124.8 | 0.0 | 232.7 | 3 |
| | | | | | | | | | | | | | |
| 1 | 22 | -1 | -2823 | -13 | 0 | -6 | 1039 | 0.0 | 193.7 | 143.2 | 0.0 | 258.3 | 3 |
| 5 | 22 | -133 | -702 | 807 | 0 | 139 | 260 | 2.5 | 219.7 | 37.7 | 0.0 | 222.2 | 1 |
| 6 | 22 | 144 | -702 | 806 | 0 | 139 | 260 | 2.7 | 219.1 | 37.7 | 0.0 | 221.7 | 1 |
| 7 | 22 | -144 | -718 | -786 | 0 | -135 | 265 | 2.7 | 215.2 | 36.7 | 0.0 | 217.9 | 1 |
| 8 | 22 | 133 | -718 | -786 | 0 | -135 | 265 | 2.5 | 215.9 | 36.7 | 0.0 | 218.3 | 1 |
| 9 | 22 | -459 | -988 | 245 | 0 | 42 | 366 | 8.5 | 118.4 | 50.1 | 0.0 | 127.0 | 1 |
| 10 | 22 | 462 | -988 | 243 | 0 | 41 | 366 | 8.6 | 116.2 | 50.1 | 0.0 | 124.8 | 1 |
| 11 | 22 | -463 | -993 | -238 | 0 | -41 | 367 | 8.6 | 117.2 | 50.4 | 0.0 | 125.8 | 1 |
| 12 | 22 | 459 | -713 | -239 | 0 | -42 | 264 | 8.5 | 100.0 | 36.2 | 0.0 | 108.5 | 1 |
| 13 | 22 | -1 | -2359 | -11 | 0 | -5 | 869 | 0.0 | 162.1 | 119.7 | 0.0 | 216.0 | 3 |
| 14 | 22 | 0 | 632 | -2 | 0 | 0 | -230 | 0.0 | 41.4 | 32.1 | 0.0 | 57.5 | 3 |
| 15 | 22 | -1 | -2460 | -11 | 0 | -5 | 906 | 0.0 | 169.0 | 124.8 | 0.0 | 225.2 | 3 |
| | | | | | | | | | | | | | |
| 1 | 24 | -1 | -2825 | -13 | 0 | -5 | 963 | 0.0 | 179.6 | 143.3 | 0.0 | 250.0 | 3 |
| 5 | 24 | -133 | -703 | 807 | 0 | 118 | 241 | 2.5 | 189.3 | 37.7 | 0.0 | 191.8 | 1 |
| 6 | 24 | 144 | -703 | 806 | 0 | 117 | 241 | 2.7 | 188.7 | 37.7 | 0.0 | 191.3 | 1 |
| 7 | 24 | -144 | -719 | -786 | 0 | -114 | 246 | 2.7 | 185.4 | 36.7 | 0.0 | 188.1 | 1 |
| 8 | 24 | 133 | -719 | -786 | 0 | -114 | 246 | 2.5 | 186.1 | 36.7 | 0.0 | 188.5 | 1 |
| 9 | 24 | -459 | -989 | 245 | 0 | 36 | 339 | 8.5 | 105.4 | 50.2 | 0.0 | 113.9 | 1 |
| 10 | 24 | 462 | -989 | 243 | 0 | 34 | 339 | 8.6 | 103.3 | 50.2 | 0.0 | 111.9 | 1 |
| 11 | 24 | -463 | -994 | -238 | 0 | -35 | 340 | 8.6 | 104.4 | 50.4 | 0.0 | 113.0 | 1 |
| 12 | 24 | 459 | -714 | -239 | 0 | -36 | 244 | 8.5 | 88.5 | 36.2 | 0.0 | 97.0 | 1 |
| 13 | 24 | -1 | -2361 | -11 | 0 | -5 | 805 | 0.0 | 150.3 | 119.8 | 0.0 | 209.1 | 3 |
| 14 | 24 | 0 | 631 | -2 | 0 | 0 | -213 | 0.0 | 38.4 | 32.0 | 0.0 | 55.6 | 3 |
| 15 | 24 | -1 | -2462 | -11 | 0 | -5 | 840 | 0.0 | 156.7 | 124.9 | 0.0 | 218.0 | 3 |
| | | | | | | | | | | | | | |
| 1 | 27 | -1 | -2826 | -13 | 0 | -5 | 887 | 0.0 | 165.5 | 143.4 | 0.0 | 248.4 | 4 |
| 5 | 27 | -133 | -704 | 807 | 0 | 96 | 223 | 2.5 | 158.8 | 37.7 | 0.0 | 161.3 | 1 |
| 6 | 27 | 144 | -704 | 806 | 0 | 95 | 223 | 2.7 | 158.2 | 37.7 | 0.0 | 160.9 | 1 |
| 7 | 27 | -144 | -720 | -786 | 0 | -93 | 227 | 2.7 | 155.6 | 36.7 | 0.0 | 158.3 | 1 |
| 8 | 27 | 133 | -720 | -786 | 0 | -93 | 227 | 2.5 | 156.2 | 36.7 | 0.0 | 158.7 | 1 |
| 9 | 27 | -459 | -991 | 245 | 0 | 29 | 312 | 8.5 | 92.4 | 50.3 | 0.0 | 100.9 | 1 |
| 10 | 27 | 462 | -991 | 243 | 0 | 28 | 312 | 8.6 | 90.3 | 50.3 | 0.0 | 98.9 | 1 |
| 11 | 27 | -463 | -996 | -238 | 0 | -28 | 314 | 8.6 | 91.6 | 50.5 | 0.0 | 100.2 | 1 |
| 12 | 27 | 459 | -715 | -239 | 0 | -30 | 225 | 8.5 | 77.1 | 36.3 | 0.0 | 85.6 | 1 |
| 13 | 27 | -1 | -2362 | -11 | 0 | -4 | 742 | 0.0 | 138.5 | 119.9 | 0.0 | 207.6 | 4 |
| 14 | 27 | 0 | 630 | -2 | 0 | 0 | -196 | 0.0 | 35.4 | 32.0 | 0.0 | 55.4 | 4 |
| 15 | 27 | -1 | -2463 | -11 | 0 | -5 | 773 | 0.0 | 144.4 | 125.0 | 0.0 | 216.5 | 4 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|--------|-------|--------|---------|------|-----------|------|
| | | cm | daN*m | daN/cm | | cm | | |
| 1 | -- | 0 | 1647 | 295.7 | -- | -- | -- | |
| -- | Rara | 27 | 1 | -- | 11 | 0.00 | 1 / 99999 | |
| -- | Freq. | 27 | 1 | -- | 11 | 0.00 | 1 / 99999 | |
| -- | Q.Perm. | 27 | 1 | -- | 11 | 0.00 | 1 / 99999 | |
| -- | Rara | 27 | 1 | -- | 11 | 0.00 | 1 / 99999 | |
| -- | Rara | 27 | 1 | -- | 11 | 0.00 | 1 / 99999 | |
| -- | Freq. | 27 | 1 | -- | 11 | 0.00 | 1 / 99999 | |
| -- | Freq. | 27 | 1 | -- | 11 | 0.00 | 1 / 99999 | |

ASTA NUM. 37 NI 38 NF 57 Lung. 25.0 cm SEZ. 1 Ps IPE 300

categoria: p.p. y qy tot.

qy medio: 0.4223 0.4223 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|-------|------|----|-------|------|---------|--------|--------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | daN/cm | | | | |
| 1 | 0 | -1 | -3542 | -21 | 0 | -5 | 887 | 0.0 | 165.6 | 179.7 | 0.0 | 311.3 | 4 | |
| 5 | 0 | -169 | -885 | 383 | 0 | 96 | 223 | 3.1 | 158.9 | 44.9 | 0.0 | 162.0 | 1 | |
| 6 | 0 | 182 | -885 | 381 | 0 | 95 | 223 | 3.4 | 158.3 | 44.9 | 0.0 | 161.6 | 1 | |
| 7 | 0 | -183 | -902 | -370 | 0 | -93 | 227 | 3.4 | 155.6 | 45.8 | 0.0 | 159.0 | 1 | |
| 8 | 0 | 168 | -902 | -372 | 0 | -93 | 227 | 3.1 | 156.2 | 45.8 | 0.0 | 159.4 | 1 | |
| 9 | 0 | -583 | -1243 | 117 | 0 | 29 | 313 | 10.8 | 92.4 | 63.1 | 0.0 | 110.0 | 4 | |
| 10 | 0 | 587 | -1243 | 110 | 0 | 28 | 313 | 10.9 | 90.4 | 63.1 | 0.0 | 110.0 | 4 | |
| 11 | 0 | -587 | -1248 | -114 | 0 | -28 | 314 | 10.9 | 91.6 | 63.3 | 0.0 | 110.4 | 4 | |
| 12 | 0 | 583 | -896 | -118 | 0 | -30 | 225 | 10.8 | 77.1 | 45.5 | 0.0 | 87.9 | 1 | |
| 13 | 0 | -1 | -2961 | -17 | 0 | -4 | 742 | 0.0 | 138.6 | 150.3 | 0.0 | 260.2 | 4 | |
| 14 | 0 | 0 | 788 | 1 | 0 | 0 | -196 | 0.0 | 35.4 | 40.0 | 0.0 | 69.3 | 4 | |
| 15 | 0 | -1 | -3088 | -18 | 0 | -5 | 774 | 0.0 | 144.5 | 156.7 | 0.0 | 271.4 | 4 | |
| 1 | 3 | -1 | -3543 | -21 | 0 | -5 | 799 | 0.0 | 149.1 | 179.8 | 0.0 | 311.4 | 4 | |
| 5 | 3 | -169 | -886 | 383 | 0 | 86 | 200 | 3.1 | 143.0 | 45.0 | 0.0 | 146.1 | 1 | |
| 6 | 3 | 182 | -886 | 381 | 0 | 86 | 201 | 3.4 | 142.4 | 45.0 | 0.0 | 145.8 | 1 | |
| 7 | 3 | -183 | -903 | -370 | 0 | -83 | 204 | 3.4 | 140.1 | 45.8 | 0.0 | 143.5 | 1 | |
| 8 | 3 | 168 | -903 | -372 | 0 | -84 | 204 | 3.1 | 140.6 | 45.8 | 0.0 | 143.8 | 1 | |
| 9 | 3 | -583 | -1244 | 117 | 0 | 26 | 281 | 10.8 | 83.2 | 63.1 | 0.0 | 110.1 | 4 | |
| 10 | 3 | 587 | -1244 | 110 | 0 | 25 | 281 | 10.9 | 81.4 | 63.1 | 0.0 | 110.1 | 4 | |
| 11 | 3 | -587 | -1249 | -114 | 0 | -26 | 283 | 10.9 | 82.5 | 63.4 | 0.0 | 110.5 | 4 | |
| 12 | 3 | 583 | -897 | -118 | 0 | -27 | 203 | 10.8 | 69.4 | 45.5 | 0.0 | 80.2 | 1 | |
| 13 | 3 | -1 | -2962 | -17 | 0 | -4 | 668 | 0.0 | 124.8 | 150.3 | 0.0 | 260.4 | 4 | |
| 14 | 3 | 0 | 787 | 1 | 0 | 0 | -176 | 0.0 | 31.9 | 39.9 | 0.0 | 69.2 | 4 | |
| 15 | 3 | -1 | -3089 | -18 | 0 | -4 | 696 | 0.0 | 130.0 | 156.8 | 0.0 | 271.5 | 4 | |
| 1 | 5 | -1 | -3545 | -21 | 0 | -4 | 710 | 0.0 | 132.5 | 179.9 | 0.0 | 311.5 | 4 | |
| 5 | 5 | -169 | -887 | 383 | 0 | 77 | 178 | 3.1 | 127.1 | 45.0 | 0.0 | 130.3 | 1 | |
| 6 | 5 | 182 | -888 | 381 | 0 | 76 | 178 | 3.4 | 126.6 | 45.0 | 0.0 | 130.0 | 1 | |
| 7 | 5 | -183 | -904 | -370 | 0 | -74 | 182 | 3.4 | 124.6 | 45.9 | 0.0 | 127.9 | 1 | |
| 8 | 5 | 168 | -904 | -372 | 0 | -74 | 182 | 3.1 | 125.0 | 45.9 | 0.0 | 128.2 | 1 | |
| 9 | 5 | -583 | -1246 | 117 | 0 | 23 | 250 | 10.8 | 74.0 | 63.2 | 0.0 | 110.2 | 4 | |
| 10 | 5 | 587 | -1246 | 110 | 0 | 22 | 250 | 10.9 | 72.3 | 63.2 | 0.0 | 110.2 | 4 | |
| 11 | 5 | -587 | -1251 | -114 | 0 | -23 | 251 | 10.9 | 73.3 | 63.5 | 0.0 | 110.6 | 4 | |
| 12 | 5 | 583 | -898 | -118 | 0 | -24 | 181 | 10.8 | 61.7 | 45.6 | 0.0 | 79.9 | 4 | |
| 13 | 5 | -1 | -2964 | -17 | 0 | -3 | 594 | 0.0 | 110.9 | 150.4 | 0.0 | 260.5 | 4 | |
| 14 | 5 | 0 | 786 | 1 | 0 | 0 | -156 | 0.0 | 28.3 | 39.9 | 0.0 | 69.1 | 4 | |
| 15 | 5 | -1 | -3091 | -18 | 0 | -4 | 619 | 0.0 | 115.6 | 156.8 | 0.0 | 271.6 | 4 | |
| 1 | 8 | -1 | -3546 | -21 | 0 | -4 | 621 | 0.0 | 116.0 | 179.9 | 0.0 | 311.7 | 4 | |
| 5 | 8 | -169 | -888 | 383 | 0 | 67 | 156 | 3.1 | 111.2 | 45.1 | 0.0 | 114.4 | 1 | |
| 6 | 8 | 182 | -889 | 381 | 0 | 67 | 156 | 3.4 | 110.8 | 45.1 | 0.0 | 114.2 | 1 | |
| 7 | 8 | -183 | -905 | -370 | 0 | -65 | 159 | 3.4 | 109.0 | 45.9 | 0.0 | 112.4 | 1 | |
| 8 | 8 | 168 | -905 | -372 | 0 | -65 | 159 | 3.1 | 109.4 | 45.9 | 0.0 | 112.5 | 1 | |
| 9 | 8 | -583 | -1247 | 117 | 0 | 20 | 219 | 10.8 | 64.8 | 63.3 | 0.0 | 110.3 | 4 | |
| 10 | 8 | 587 | -1247 | 110 | 0 | 19 | 219 | 10.9 | 63.3 | 63.3 | 0.0 | 110.3 | 4 | |
| 11 | 8 | -587 | -1252 | -114 | 0 | -20 | 220 | 10.9 | 64.2 | 63.5 | 0.0 | 110.7 | 4 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|------|-------|------|---|-----|------|------|-------|-------|-----|-------|---|
| 12 | 8 | 583 | -899 | -118 | 0 | -21 | 158 | 10.8 | 54.0 | 45.6 | 0.0 | 80.0 | 4 |
| 13 | 8 | -1 | -2965 | -17 | 0 | -3 | 520 | 0.0 | 97.1 | 150.5 | 0.0 | 260.6 | 4 |
| 14 | 8 | 0 | 785 | 1 | 0 | 0 | -137 | 0.0 | 24.8 | 39.8 | 0.0 | 69.0 | 4 |
| 15 | 8 | -1 | -3092 | -18 | 0 | -3 | 542 | 0.0 | 101.2 | 156.9 | 0.0 | 271.7 | 4 |
| 1 | 10 | -1 | -3547 | -21 | 0 | -3 | 533 | 0.0 | 99.4 | 180.0 | 0.0 | 311.8 | 4 |
| 5 | 10 | -169 | -890 | 383 | 0 | 57 | 134 | 3.1 | 95.4 | 45.1 | 0.0 | 98.5 | 1 |
| 6 | 10 | 182 | -890 | 381 | 0 | 57 | 134 | 3.4 | 95.0 | 45.1 | 0.0 | 98.4 | 1 |
| 7 | 10 | -183 | -906 | -370 | 0 | -56 | 136 | 3.4 | 93.4 | 46.0 | 0.0 | 96.8 | 1 |
| 8 | 10 | 168 | -906 | -372 | 0 | -56 | 136 | 3.1 | 93.8 | 46.0 | 0.0 | 96.9 | 1 |
| 9 | 10 | -583 | -1249 | 117 | 0 | 18 | 188 | 10.8 | 55.5 | 63.4 | 0.0 | 110.4 | 4 |
| 10 | 10 | 587 | -1249 | 110 | 0 | 17 | 188 | 10.9 | 54.3 | 63.4 | 0.0 | 110.4 | 4 |
| 11 | 10 | -587 | -1254 | -114 | 0 | -17 | 189 | 10.9 | 55.0 | 63.6 | 0.0 | 110.8 | 4 |
| 12 | 10 | 583 | -900 | -118 | 0 | -18 | 136 | 10.8 | 46.3 | 45.7 | 0.0 | 80.0 | 4 |
| 13 | 10 | -1 | -2967 | -17 | 0 | -3 | 446 | 0.0 | 83.2 | 150.5 | 0.0 | 260.7 | 4 |
| 14 | 10 | 0 | 784 | 1 | 0 | 0 | -117 | 0.0 | 21.2 | 39.8 | 0.0 | 68.9 | 4 |
| 15 | 10 | -1 | -3093 | -18 | 0 | -3 | 465 | 0.0 | 86.8 | 157.0 | 0.0 | 271.9 | 4 |
| 1 | 13 | -1 | -3549 | -21 | 0 | -3 | 444 | 0.0 | 82.9 | 180.1 | 0.0 | 311.9 | 4 |
| 5 | 13 | -169 | -891 | 383 | 0 | 48 | 112 | 3.1 | 79.5 | 45.2 | 0.0 | 82.6 | 1 |
| 6 | 13 | 182 | -891 | 381 | 0 | 48 | 112 | 3.4 | 79.2 | 45.2 | 0.0 | 82.6 | 1 |
| 7 | 13 | -183 | -907 | -370 | 0 | -46 | 114 | 3.4 | 77.9 | 46.0 | 0.0 | 81.3 | 1 |
| 8 | 13 | 168 | -907 | -372 | 0 | -47 | 114 | 3.1 | 78.2 | 46.0 | 0.0 | 81.3 | 1 |
| 9 | 13 | -583 | -1250 | 117 | 0 | 15 | 157 | 10.8 | 46.3 | 63.4 | 0.0 | 110.5 | 4 |
| 10 | 13 | 587 | -1250 | 110 | 0 | 14 | 157 | 10.9 | 45.3 | 63.4 | 0.0 | 110.5 | 4 |
| 11 | 13 | -587 | -1255 | -114 | 0 | -14 | 157 | 10.9 | 45.9 | 63.7 | 0.0 | 110.9 | 4 |
| 12 | 13 | 583 | -901 | -118 | 0 | -15 | 113 | 10.8 | 38.6 | 45.7 | 0.0 | 80.1 | 4 |
| 13 | 13 | -1 | -2968 | -17 | 0 | -2 | 371 | 0.0 | 69.4 | 150.6 | 0.0 | 260.9 | 4 |
| 14 | 13 | 0 | 783 | 1 | 0 | 0 | -98 | 0.0 | 17.7 | 39.7 | 0.0 | 68.8 | 4 |
| 15 | 13 | -1 | -3095 | -18 | 0 | -2 | 387 | 0.0 | 72.3 | 157.0 | 0.0 | 272.0 | 4 |
| 1 | 15 | -1 | -3550 | -21 | 0 | -2 | 355 | 0.0 | 66.3 | 180.1 | 0.0 | 312.0 | 4 |
| 5 | 15 | -169 | -892 | 383 | 0 | 38 | 89 | 3.1 | 63.6 | 45.2 | 0.0 | 78.6 | 4 |
| 6 | 15 | 182 | -892 | 381 | 0 | 38 | 89 | 3.4 | 63.4 | 45.2 | 0.0 | 78.6 | 4 |
| 7 | 15 | -183 | -908 | -370 | 0 | -37 | 91 | 3.4 | 62.3 | 46.1 | 0.0 | 80.0 | 4 |
| 8 | 15 | 168 | -908 | -372 | 0 | -37 | 91 | 3.1 | 62.6 | 46.1 | 0.0 | 80.0 | 4 |
| 9 | 15 | -583 | -1251 | 117 | 0 | 12 | 125 | 10.8 | 37.0 | 63.5 | 0.0 | 110.6 | 4 |
| 10 | 15 | 587 | -1251 | 110 | 0 | 11 | 125 | 10.9 | 36.2 | 63.5 | 0.0 | 110.6 | 4 |
| 11 | 15 | -587 | -1256 | -114 | 0 | -11 | 126 | 10.9 | 36.7 | 63.8 | 0.0 | 111.0 | 4 |
| 12 | 15 | 583 | -903 | -118 | 0 | -12 | 90 | 10.8 | 30.9 | 45.8 | 0.0 | 80.2 | 4 |
| 13 | 15 | -1 | -2969 | -17 | 0 | -2 | 297 | 0.0 | 55.5 | 150.7 | 0.0 | 261.0 | 4 |
| 14 | 15 | 0 | 782 | 1 | 0 | 0 | -78 | 0.0 | 14.1 | 39.7 | 0.0 | 68.7 | 4 |
| 15 | 15 | -1 | -3096 | -18 | 0 | -2 | 310 | 0.0 | 57.9 | 157.1 | 0.0 | 272.1 | 4 |
| 1 | 18 | -1 | -3551 | -21 | 0 | -2 | 266 | 0.0 | 49.8 | 180.2 | 0.0 | 312.1 | 4 |
| 5 | 18 | -169 | -893 | 383 | 0 | 29 | 67 | 3.1 | 47.7 | 45.3 | 0.0 | 78.6 | 4 |
| 6 | 18 | 182 | -893 | 381 | 0 | 29 | 67 | 3.4 | 47.5 | 45.3 | 0.0 | 78.6 | 4 |
| 7 | 18 | -183 | -909 | -370 | 0 | -28 | 68 | 3.4 | 46.7 | 46.1 | 0.0 | 80.1 | 4 |
| 8 | 18 | 168 | -909 | -372 | 0 | -28 | 68 | 3.1 | 46.9 | 46.1 | 0.0 | 80.0 | 4 |
| 9 | 18 | -583 | -1253 | 117 | 0 | 9 | 94 | 10.8 | 27.8 | 63.6 | 0.0 | 110.7 | 4 |
| 10 | 18 | 587 | -1253 | 110 | 0 | 8 | 94 | 10.9 | 27.2 | 63.6 | 0.0 | 110.7 | 4 |
| 11 | 18 | -587 | -1258 | -114 | 0 | -9 | 95 | 10.9 | 27.5 | 63.8 | 0.0 | 111.1 | 4 |
| 12 | 18 | 583 | -904 | -118 | 0 | -9 | 68 | 10.8 | 23.2 | 45.8 | 0.0 | 80.2 | 4 |
| 13 | 18 | -1 | -2971 | -17 | 0 | -1 | 223 | 0.0 | 41.6 | 150.7 | 0.0 | 261.1 | 4 |
| 14 | 18 | 0 | 781 | 1 | 0 | 0 | -58 | 0.0 | 10.6 | 39.6 | 0.0 | 68.6 | 4 |
| 15 | 18 | -1 | -3097 | -18 | 0 | -1 | 232 | 0.0 | 43.4 | 157.2 | 0.0 | 272.2 | 4 |
| 1 | 20 | -1 | -3552 | -21 | 0 | -1 | 178 | 0.0 | 33.2 | 180.3 | 0.0 | 312.2 | 4 |
| 5 | 20 | -169 | -894 | 383 | 0 | 19 | 45 | 3.1 | 31.8 | 45.4 | 0.0 | 78.7 | 4 |
| 6 | 20 | 182 | -894 | 381 | 0 | 19 | 45 | 3.4 | 31.7 | 45.4 | 0.0 | 78.7 | 4 |
| 7 | 20 | -183 | -910 | -370 | 0 | -19 | 46 | 3.4 | 31.2 | 46.2 | 0.0 | 80.1 | 4 |
| 8 | 20 | 168 | -910 | -372 | 0 | -19 | 46 | 3.1 | 31.3 | 46.2 | 0.0 | 80.1 | 4 |
| 9 | 20 | -583 | -1254 | 117 | 0 | 6 | 63 | 10.8 | 18.5 | 63.6 | 0.0 | 110.8 | 4 |
| 10 | 20 | 587 | -1254 | 110 | 0 | 6 | 63 | 10.9 | 18.1 | 63.6 | 0.0 | 110.8 | 4 |
| 11 | 20 | -587 | -1259 | -114 | 0 | -6 | 63 | 10.9 | 18.4 | 63.9 | 0.0 | 111.2 | 4 |
| 12 | 20 | 583 | -905 | -118 | 0 | -6 | 45 | 10.8 | 15.5 | 45.9 | 0.0 | 80.3 | 4 |
| 13 | 20 | -1 | -2972 | -17 | 0 | -1 | 149 | 0.0 | 27.8 | 150.8 | 0.0 | 261.2 | 4 |
| 14 | 20 | 0 | 780 | 1 | 0 | 0 | -39 | 0.0 | 7.0 | 39.6 | 0.0 | 68.5 | 4 |
| 15 | 20 | -1 | -3098 | -18 | 0 | -1 | 155 | 0.0 | 28.9 | 157.2 | 0.0 | 272.3 | 4 |
| 1 | 23 | -1 | -3554 | -21 | 0 | -1 | 89 | 0.0 | 16.6 | 180.3 | 0.0 | 312.3 | 4 |
| 5 | 23 | -169 | -895 | 383 | 0 | 10 | 22 | 3.1 | 15.9 | 45.4 | 0.0 | 78.7 | 4 |
| 6 | 23 | 182 | -895 | 381 | 0 | 10 | 22 | 3.4 | 15.8 | 45.4 | 0.0 | 78.7 | 4 |
| 7 | 23 | -183 | -911 | -370 | 0 | -9 | 23 | 3.4 | 15.6 | 46.2 | 0.0 | 80.2 | 4 |
| 8 | 23 | 168 | -911 | -372 | 0 | -9 | 23 | 3.1 | 15.6 | 46.2 | 0.0 | 80.2 | 4 |
| 9 | 23 | -583 | -1256 | 117 | 0 | 3 | 31 | 10.8 | 9.3 | 63.7 | 0.0 | 110.9 | 4 |
| 10 | 23 | 587 | -1256 | 110 | 0 | 3 | 31 | 10.9 | 9.1 | 63.7 | 0.0 | 110.9 | 4 |
| 11 | 23 | -587 | -1261 | -114 | 0 | -3 | 32 | 10.9 | 9.2 | 64.0 | 0.0 | 111.3 | 4 |
| 12 | 23 | 583 | -906 | -118 | 0 | -3 | 23 | 10.8 | 7.7 | 46.0 | 0.0 | 80.4 | 4 |
| 13 | 23 | -1 | -2974 | -17 | 0 | -0 | 74 | 0.0 | 13.9 | 150.9 | 0.0 | 261.4 | 4 |
| 14 | 23 | 0 | 779 | 1 | 0 | 0 | -19 | 0.0 | 3.5 | 39.5 | 0.0 | 68.4 | 4 |
| 15 | 23 | -1 | -3100 | -18 | 0 | -0 | 78 | 0.0 | 14.5 | 157.3 | 0.0 | 272.4 | 4 |
| 1 | 25 | -1 | -3555 | -21 | 0 | 0 | 0 | 0.0 | 0.0 | 180.4 | 0.0 | 312.5 | 4 |
| 5 | 25 | -169 | -896 | 383 | 0 | 0 | 0 | 3.1 | 0.0 | 45.5 | 0.0 | 78.8 | 4 |
| 6 | 25 | 182 | -896 | 381 | 0 | 0 | 0 | 3.4 | 0.0 | 45.5 | 0.0 | 78.8 | 4 |
| 7 | 25 | -183 | -912 | -370 | 0 | 0 | 0 | 3.4 | 0.0 | 46.3 | 0.0 | 80.2 | 4 |
| 8 | 25 | 168 | -912 | -372 | 0 | 0 | 0 | 3.1 | 0.0 | 46.3 | 0.0 | 80.2 | 4 |
| 9 | 25 | -583 | -1257 | 117 | 0 | 0 | 0 | 10.8 | 0.0 | 63.8 | 0.0 | 111.0 | 4 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|------|-------|------|---|---|---|------|-----|-------|-----|-------|---|
| 10 | 25 | 587 | -1257 | 110 | 0 | 0 | 0 | 10.9 | 0.0 | 63.8 | 0.0 | 111.0 | 4 |
| 11 | 25 | -587 | -1262 | -114 | 0 | 0 | 0 | 10.9 | 0.0 | 64.0 | 0.0 | 111.5 | 4 |
| 12 | 25 | 583 | -907 | -118 | 0 | 0 | 0 | 10.8 | 0.0 | 46.0 | 0.0 | 80.4 | 4 |
| 13 | 25 | -1 | -2975 | -17 | 0 | 0 | 0 | 0.0 | 0.0 | 151.0 | 0.0 | 261.5 | 4 |
| 14 | 25 | 0 | 778 | 1 | 0 | 0 | 0 | 0.0 | 0.0 | 39.5 | 0.0 | 68.3 | 4 |
| 15 | 25 | -1 | -3101 | -18 | 0 | 0 | 0 | 0.0 | 0.0 | 157.4 | 0.0 | 272.5 | 4 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|--------|-------|--------|---------|------|-----------|------|
| | | cm | daN*m | daN/cm | cm | | | |
| 1 | -- | 0 | 887 | 159.2 | -- | -- | -- | |
| -- | Rara | 6 | 1 | -- | 13 | 0.00 | 1 / 99999 | |
| -- | Freq. | 6 | 1 | -- | 13 | 0.00 | 1 / 99999 | |
| -- | Q.Perm. | 6 | 1 | -- | 13 | 0.00 | 1 / 99999 | |
| -- | Rara | 6 | 1 | -- | 13 | 0.00 | 1 / 99999 | |
| -- | Rara | 6 | 1 | -- | 13 | 0.00 | 1 / 99999 | |
| -- | Freq. | 6 | 1 | -- | 13 | 0.00 | 1 / 99999 | |
| -- | Freq. | 6 | 1 | -- | 13 | 0.00 | 1 / 99999 | |

Verifica di STABILITA' e/o SVERGOLAMENTO

| n.comb | Fx | My eq. | Mz eq. | Sn. omega | Sn.yx | Sn.zx | OMEGA | OMEGA1 | Sf | Nota |
|--------|------|--------|--------|-----------|-------|-------|-------|--------|--------|-------------|
| | daN | daN*m | | | | | | | daN/cm | |
| 1 | -1 | 0 | 0 | 153 | 41 | 153 | 3.41 | 1.86 | 0.1 | Sn.zx > 150 |
| 5 | -169 | 0 | 0 | 153 | 41 | 153 | 3.41 | 1.86 | 10.7 | Sn.zx > 150 |
| 6 | -168 | 0 | 0 | 153 | 41 | 153 | 3.41 | 1.86 | 10.6 | Sn.zx > 150 |
| 7 | -183 | 0 | 0 | 153 | 41 | 153 | 3.41 | 1.86 | 11.6 | Sn.zx > 150 |
| 8 | -166 | 0 | 0 | 153 | 41 | 153 | 3.41 | 1.86 | 10.5 | Sn.zx > 150 |
| 9 | -583 | 0 | 0 | 153 | 41 | 153 | 3.41 | 1.86 | 37.0 | Sn.zx > 150 |
| 10 | -557 | 0 | 0 | 153 | 41 | 153 | 3.41 | 1.86 | 35.3 | Sn.zx > 150 |
| 11 | -587 | 0 | 0 | 153 | 41 | 153 | 3.41 | 1.86 | 37.2 | Sn.zx > 150 |
| 12 | -557 | 0 | 0 | 153 | 41 | 153 | 3.41 | 1.86 | 35.3 | Sn.zx > 150 |
| 13 | -1 | 0 | 0 | 153 | 41 | 153 | 3.41 | 1.86 | 0.1 | Sn.zx > 150 |
| 14 | -1 | 0 | 0 | 153 | 41 | 153 | 3.41 | 1.86 | 0.1 | Sn.zx > 150 |
| 15 | -1 | 0 | 0 | 153 | 41 | 153 | 3.41 | 1.86 | 0.1 | Sn.zx > 150 |

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ASTA NUM. 29 NI 111 NF 1 Lungh. 10.5 cm SEZ. 1 Ps IPE 300

categoria: p.p. y qy tot.

qy medio: 0.4223 0.4223 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|------|-------|-------|-------|-------|---------|--------|--------|--------|--------|------|------|
| | cm | daN | daN | daN | daN*m | daN*m | daN*m | daN/cm | daN/cm | daN/cm | daN/cm | daN/cm | | |
| 1 | 0 | -262 | 3294 | 1345 | 0 | 190 | 0 | 4.9 | 235.9 | 167.1 | 0.0 | 290.0 | 4 | |
| 5 | 0 | 1065 | 826 | -202 | 0 | -155 | 0 | 19.8 | 192.8 | 41.9 | 0.0 | 212.6 | 1 | |
| 6 | 0 | 1212 | 827 | 1276 | 0 | 269 | 0 | 22.5 | 333.7 | 59.6 | 0.0 | 356.2 | 1 | |
| 7 | 0 | -1340 | 827 | -650 | 0 | -175 | 0 | 24.9 | 216.9 | 42.0 | 0.0 | 241.8 | 1 | |
| 8 | 0 | -1193 | 828 | 805 | 0 | 249 | 0 | 22.2 | 309.6 | 42.0 | 0.0 | 331.7 | 1 | |
| 9 | 0 | 28 | 1153 | -2019 | 0 | -638 | 0 | 0.5 | 792.7 | 94.3 | 0.0 | 793.2 | 1 | |
| 10 | 0 | 518 | 1154 | 2888 | 0 | 775 | 0 | 9.6 | 962.3 | 135.0 | 0.0 | 972.0 | 1 | |
| 11 | 0 | -694 | 1153 | -2160 | 0 | -645 | 0 | 12.9 | 800.7 | 100.9 | 0.0 | 813.6 | 1 | |
| 12 | 0 | -178 | 828 | 2611 | 0 | 750 | 0 | 3.3 | 931.5 | 122.0 | 0.0 | 934.8 | 1 | |
| 13 | 0 | -219 | 2753 | 1119 | 0 | 158 | 0 | 4.1 | 196.4 | 139.7 | 0.0 | 242.3 | 4 | |
| 14 | 0 | 63 | -741 | -343 | 0 | -47 | 0 | 1.2 | 58.0 | 37.6 | 0.0 | 65.2 | 4 | |
| 15 | 0 | -228 | 2870 | 1168 | 0 | 165 | 0 | 4.2 | 205.0 | 145.6 | 0.0 | 252.6 | 4 | |
| 1 | 5 | -262 | 3291 | 1345 | 0 | 119 | 173 | 4.9 | 179.3 | 167.0 | 0.0 | 289.5 | 4 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|-------|------|-------|---|------|-----|------|-------|-------|-----|-------|---|
| 5 | 5 | 1065 | 824 | -202 | 0 | -145 | 43 | 19.8 | 187.5 | 41.8 | 0.0 | 207.2 | 1 |
| 6 | 5 | 1212 | 824 | 1276 | 0 | 202 | 43 | 22.5 | 258.2 | 59.6 | 0.0 | 280.8 | 1 |
| 7 | 5 | -1340 | 825 | -650 | 0 | -141 | 43 | 24.9 | 182.4 | 41.9 | 0.0 | 207.3 | 1 |
| 8 | 5 | -1193 | 825 | 805 | 0 | 207 | 43 | 22.2 | 265.0 | 41.9 | 0.0 | 287.1 | 1 |
| 9 | 5 | 28 | 1150 | -2019 | 0 | -532 | 60 | 0.5 | 671.9 | 94.3 | 0.0 | 672.5 | 1 |
| 10 | 5 | 518 | 1151 | 2888 | 0 | 623 | 60 | 9.6 | 784.9 | 135.0 | 0.0 | 794.5 | 1 |
| 11 | 5 | -694 | 1151 | -2160 | 0 | -531 | 60 | 12.9 | 670.8 | 100.9 | 0.0 | 683.7 | 1 |
| 12 | 5 | -178 | 825 | 2611 | 0 | 613 | 43 | 3.3 | 769.1 | 122.0 | 0.0 | 772.4 | 1 |
| 13 | 5 | -219 | 2750 | 1119 | 0 | 99 | 144 | 4.1 | 149.4 | 139.5 | 0.0 | 241.9 | 4 |
| 14 | 5 | 63 | -743 | -343 | 0 | -29 | -39 | 1.2 | 42.7 | 37.7 | 0.0 | 65.4 | 4 |
| 15 | 5 | -228 | 2868 | 1168 | 0 | 104 | 151 | 4.2 | 155.9 | 145.5 | 0.0 | 252.2 | 4 |
| | | | | | | | | | | | | | |
| 1 | 11 | -262 | 3288 | 1345 | 0 | 49 | 346 | 4.9 | 122.6 | 166.8 | 0.0 | 289.1 | 4 |
| 5 | 11 | 1065 | 822 | -202 | 0 | -134 | 87 | 19.8 | 182.0 | 41.7 | 0.0 | 201.8 | 1 |
| 6 | 11 | 1212 | 822 | 1276 | 0 | 135 | 87 | 22.5 | 182.8 | 59.6 | 0.0 | 205.3 | 1 |
| 7 | 11 | -1340 | 823 | -650 | 0 | -107 | 87 | 24.9 | 147.8 | 41.8 | 0.0 | 172.7 | 1 |
| 8 | 11 | -1193 | 823 | 805 | 0 | 165 | 87 | 22.2 | 220.3 | 41.8 | 0.0 | 242.5 | 1 |
| 9 | 11 | 28 | 1147 | -2019 | 0 | -426 | 121 | 0.5 | 551.2 | 94.3 | 0.0 | 551.7 | 1 |
| 10 | 11 | 518 | 1148 | 2888 | 0 | 472 | 121 | 9.6 | 607.4 | 135.0 | 0.0 | 617.0 | 1 |
| 11 | 11 | -694 | 1148 | -2160 | 0 | -418 | 121 | 12.9 | 540.8 | 100.9 | 0.0 | 553.7 | 1 |
| 12 | 11 | -178 | 823 | 2611 | 0 | 476 | 87 | 3.3 | 606.6 | 122.0 | 0.0 | 609.9 | 1 |
| 13 | 11 | -219 | 2747 | 1119 | 0 | 41 | 289 | 4.1 | 102.3 | 139.4 | 0.0 | 241.5 | 4 |
| 14 | 11 | 63 | -745 | -343 | 0 | -11 | -78 | 1.2 | 27.4 | 37.8 | 0.0 | 65.5 | 4 |
| 15 | 11 | -228 | 2865 | 1168 | 0 | 42 | 301 | 4.2 | 106.7 | 145.4 | 0.0 | 251.9 | 4 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|----|-------|--------|---------|-------|-----------|------|
| | | cm | daN*m | daN/cm | cm | | | |
| 1 | -- | 11 | 346 | 62.0 | -- | -- | -- | |
| -- | Rara | 5 | 0 | -- | 4 | -0.00 | 1 / 99999 | |
| -- | Freq. | 5 | 0 | -- | 4 | -0.00 | 1 / 99999 | |
| -- | Q.Perm. | 5 | 0 | -- | 4 | -0.00 | 1 / 99999 | |
| -- | Rara | 5 | 0 | -- | 4 | -0.00 | 1 / 99999 | |
| -- | Rara | 5 | 0 | -- | 4 | -0.00 | 1 / 99999 | |
| -- | Freq. | 5 | 0 | -- | 4 | -0.00 | 1 / 99999 | |
| -- | Freq. | 5 | 0 | -- | 4 | -0.00 | 1 / 99999 | |

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ASTA NUM. 30 NI 1 NF 124 Lungh. 142.8 cm SEZ. 1 Ps IPE 300

categoria: p.p. y qy tot.

qy medio: 0.4223 0.4223 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|------|------|----|-------|-----|---------|--------|--------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | daN/cm | | | | |
| 1 | 0 | -251 | 2320 | 70 | 0 | 49 | 346 | 4.7 | 122.6 | 117.7 | 0.0 | 204.0 | 4 | |
| 5 | 0 | 881 | 577 | -129 | 0 | -134 | 87 | 16.4 | 182.0 | 29.3 | 0.0 | 198.4 | 1 | |
| 6 | 0 | 1029 | 577 | 155 | 0 | 135 | 87 | 19.1 | 182.8 | 29.3 | 0.0 | 201.9 | 1 | |
| 7 | 0 | -1152 | 578 | -115 | 0 | -107 | 87 | 21.4 | 147.8 | 29.3 | 0.0 | 169.2 | 1 | |
| 8 | 0 | -1003 | 578 | 171 | 0 | 165 | 87 | 18.6 | 220.3 | 29.3 | 0.0 | 239.0 | 1 | |
| 9 | 0 | -26 | 806 | -439 | 0 | -426 | 121 | 0.5 | 551.2 | 40.9 | 0.0 | 551.6 | 1 | |
| 10 | 0 | 467 | 807 | 507 | 0 | 472 | 121 | 8.7 | 607.4 | 40.9 | 0.0 | 616.1 | 1 | |
| 11 | 0 | -635 | 806 | -435 | 0 | -418 | 121 | 11.8 | 540.8 | 40.9 | 0.0 | 552.7 | 1 | |
| 12 | 0 | -118 | 578 | 505 | 0 | 476 | 87 | 2.2 | 606.6 | 29.3 | 0.0 | 608.8 | 1 | |
| 13 | 0 | -209 | 1937 | 59 | 0 | 41 | 289 | 3.9 | 102.3 | 98.3 | 0.0 | 170.4 | 4 | |
| 14 | 0 | 60 | -531 | -16 | 0 | -11 | -78 | 1.1 | 27.4 | 27.0 | 0.0 | 46.7 | 4 | |
| 15 | 0 | -218 | 2021 | 61 | 0 | 42 | 301 | 4.1 | 106.7 | 102.6 | 0.0 | 177.7 | 4 | |
| | | | | | | | | | | | | | | |
| 1 | 14 | -251 | 2312 | 70 | 0 | 39 | 676 | 4.7 | 169.5 | 117.3 | 0.0 | 203.3 | 4 | |
| 5 | 14 | 881 | 571 | -129 | 0 | -116 | 169 | 16.4 | 174.0 | 29.0 | 0.0 | 190.4 | 1 | |
| 6 | 14 | 1029 | 571 | 155 | 0 | 113 | 169 | 19.1 | 170.1 | 29.0 | 0.0 | 189.2 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-------|------|------|---|------|------|------|-------|-------|-----|-------|---|
| 7 | 14 | -1152 | 572 | -115 | 0 | -90 | 169 | 21.4 | 142.2 | 29.0 | 0.0 | 163.6 | 1 |
| 8 | 14 | -1003 | 572 | 171 | 0 | 140 | 169 | 18.6 | 204.7 | 29.0 | 0.0 | 223.3 | 1 |
| 9 | 14 | -26 | 798 | -439 | 0 | -364 | 235 | 0.5 | 493.8 | 40.5 | 0.0 | 494.3 | 1 |
| 10 | 14 | 467 | 799 | 507 | 0 | 399 | 235 | 8.7 | 538.1 | 40.5 | 0.0 | 546.8 | 1 |
| 11 | 14 | -635 | 798 | -435 | 0 | -356 | 235 | 11.8 | 484.2 | 40.5 | 0.0 | 496.0 | 1 |
| 12 | 14 | -118 | 572 | 505 | 0 | 404 | 169 | 2.2 | 531.8 | 29.0 | 0.0 | 534.0 | 1 |
| 13 | 14 | -209 | 1929 | 59 | 0 | 32 | 565 | 3.9 | 141.5 | 97.9 | 0.0 | 169.7 | 4 |
| 14 | 14 | 60 | -537 | -16 | 0 | -8 | -154 | 1.1 | 38.2 | 27.3 | 0.0 | 47.2 | 4 |
| 15 | 14 | -218 | 2013 | 61 | 0 | 34 | 589 | 4.1 | 147.6 | 102.2 | 0.0 | 177.0 | 4 |
| | | | | | | | | | | | | | |
| 1 | 29 | -251 | 2304 | 70 | 0 | 29 | 1006 | 4.7 | 216.2 | 116.9 | 0.0 | 233.9 | 3 |
| 5 | 29 | 881 | 565 | -129 | 0 | -97 | 250 | 16.4 | 165.7 | 28.7 | 0.0 | 182.1 | 1 |
| 6 | 29 | 1029 | 565 | 155 | 0 | 91 | 250 | 19.1 | 157.3 | 28.7 | 0.0 | 176.4 | 1 |
| 7 | 29 | -1152 | 566 | -115 | 0 | -74 | 250 | 21.4 | 136.4 | 28.7 | 0.0 | 157.8 | 1 |
| 8 | 29 | -1003 | 566 | 171 | 0 | 116 | 250 | 18.6 | 188.9 | 28.7 | 0.0 | 207.5 | 1 |
| 9 | 29 | -26 | 790 | -439 | 0 | -301 | 349 | 0.5 | 436.3 | 40.1 | 0.0 | 436.8 | 1 |
| 10 | 29 | 467 | 791 | 507 | 0 | 327 | 349 | 8.7 | 468.6 | 40.1 | 0.0 | 477.3 | 1 |
| 11 | 29 | -635 | 791 | -435 | 0 | -294 | 349 | 11.8 | 427.4 | 40.1 | 0.0 | 439.2 | 1 |
| 12 | 29 | -118 | 566 | 505 | 0 | 332 | 250 | 2.2 | 456.8 | 28.7 | 0.0 | 459.0 | 1 |
| 13 | 29 | -209 | 1921 | 59 | 0 | 24 | 840 | 3.9 | 180.5 | 97.5 | 0.0 | 195.2 | 3 |
| 14 | 29 | 60 | -543 | -16 | 0 | -6 | -231 | 1.1 | 49.2 | 27.6 | 0.0 | 54.4 | 3 |
| 15 | 29 | -218 | 2005 | 61 | 0 | 25 | 876 | 4.1 | 188.2 | 101.8 | 0.0 | 203.6 | 3 |
| | | | | | | | | | | | | | |
| 1 | 43 | -251 | 2296 | 70 | 0 | 19 | 1335 | 4.7 | 262.6 | 116.5 | 0.0 | 276.3 | 3 |
| 5 | 43 | 881 | 559 | -129 | 0 | -79 | 330 | 16.4 | 157.3 | 28.4 | 0.0 | 173.7 | 1 |
| 6 | 43 | 1029 | 559 | 155 | 0 | 68 | 330 | 19.1 | 144.3 | 28.4 | 0.0 | 163.4 | 1 |
| 7 | 43 | -1152 | 560 | -115 | 0 | -57 | 330 | 21.4 | 130.5 | 28.4 | 0.0 | 151.9 | 1 |
| 8 | 43 | -1003 | 560 | 171 | 0 | 92 | 331 | 18.6 | 173.0 | 28.4 | 0.0 | 191.6 | 1 |
| 9 | 43 | -26 | 782 | -439 | 0 | -238 | 461 | 0.5 | 378.6 | 39.7 | 0.0 | 379.0 | 1 |
| 10 | 43 | 467 | 783 | 507 | 0 | 255 | 461 | 8.7 | 398.8 | 39.7 | 0.0 | 407.5 | 1 |
| 11 | 43 | -635 | 783 | -435 | 0 | -232 | 461 | 11.8 | 370.4 | 39.7 | 0.0 | 382.2 | 1 |
| 12 | 43 | -118 | 560 | 505 | 0 | 260 | 330 | 2.2 | 381.7 | 28.4 | 0.0 | 383.9 | 1 |
| 13 | 43 | -209 | 1914 | 59 | 0 | 16 | 1114 | 3.9 | 219.2 | 97.1 | 0.0 | 230.5 | 3 |
| 14 | 43 | 60 | -549 | -16 | 0 | -4 | -310 | 1.1 | 60.4 | 27.9 | 0.0 | 64.7 | 3 |
| 15 | 43 | -218 | 1997 | 61 | 0 | 16 | 1162 | 4.1 | 228.7 | 101.4 | 0.0 | 240.5 | 3 |
| | | | | | | | | | | | | | |
| 1 | 57 | -251 | 2288 | 70 | 0 | 9 | 1662 | 4.7 | 308.9 | 116.1 | 0.0 | 322.1 | 3 |
| 5 | 57 | 881 | 553 | -129 | 0 | -61 | 409 | 16.4 | 148.8 | 28.1 | 0.0 | 165.2 | 1 |
| 6 | 57 | 1029 | 553 | 155 | 0 | 46 | 409 | 19.1 | 131.1 | 28.1 | 0.0 | 150.2 | 1 |
| 7 | 57 | -1152 | 554 | -115 | 0 | -41 | 410 | 21.4 | 124.4 | 28.1 | 0.0 | 145.8 | 1 |
| 8 | 57 | -1003 | 554 | 171 | 0 | 67 | 410 | 18.6 | 156.9 | 28.1 | 0.0 | 175.5 | 1 |
| 9 | 57 | -26 | 775 | -439 | 0 | -175 | 572 | 0.5 | 320.6 | 39.3 | 0.0 | 321.1 | 1 |
| 10 | 57 | 467 | 775 | 507 | 0 | 182 | 573 | 8.7 | 328.9 | 39.3 | 0.0 | 337.6 | 1 |
| 11 | 57 | -635 | 775 | -435 | 0 | -170 | 572 | 11.8 | 313.2 | 39.3 | 0.0 | 325.0 | 1 |
| 12 | 57 | -118 | 554 | 505 | 0 | 188 | 410 | 2.2 | 306.4 | 28.1 | 0.0 | 308.6 | 1 |
| 13 | 57 | -209 | 1906 | 59 | 0 | 7 | 1387 | 3.9 | 257.8 | 96.7 | 0.0 | 268.6 | 3 |
| 14 | 57 | 60 | -555 | -16 | 0 | -2 | -388 | 1.1 | 71.7 | 28.2 | 0.0 | 76.0 | 3 |
| 15 | 57 | -218 | 1989 | 61 | 0 | 7 | 1447 | 4.1 | 268.9 | 100.9 | 0.0 | 280.3 | 3 |
| | | | | | | | | | | | | | |
| 1 | 71 | -251 | 2281 | 70 | 0 | -2 | 1988 | 4.7 | 358.8 | 115.7 | 0.0 | 370.1 | 3 |
| 5 | 71 | 881 | 547 | -129 | 0 | -42 | 488 | 16.4 | 140.1 | 27.8 | 0.0 | 156.5 | 1 |
| 6 | 71 | 1029 | 547 | 155 | 0 | 24 | 488 | 19.1 | 117.8 | 27.8 | 0.0 | 136.9 | 1 |
| 7 | 71 | -1152 | 548 | -115 | 0 | -25 | 489 | 21.4 | 118.2 | 27.8 | 0.0 | 139.6 | 1 |
| 8 | 71 | -1003 | 548 | 171 | 0 | 43 | 489 | 18.6 | 140.6 | 27.8 | 0.0 | 159.2 | 1 |
| 9 | 71 | -26 | 767 | -439 | 0 | -113 | 682 | 0.5 | 262.5 | 38.9 | 0.0 | 263.0 | 1 |
| 10 | 71 | 467 | 767 | 507 | 0 | 110 | 683 | 8.7 | 258.8 | 38.9 | 0.0 | 267.5 | 1 |
| 11 | 71 | -635 | 767 | -435 | 0 | -107 | 682 | 11.8 | 255.8 | 38.9 | 0.0 | 267.6 | 1 |
| 12 | 71 | -118 | 548 | 505 | 0 | 115 | 489 | 2.2 | 231.0 | 27.8 | 0.0 | 233.2 | 1 |
| 13 | 71 | -209 | 1898 | 59 | 0 | -1 | 1658 | 3.9 | 299.2 | 96.3 | 0.0 | 308.6 | 3 |
| 14 | 71 | 60 | -561 | -16 | 0 | 1 | -468 | 1.1 | 84.9 | 28.5 | 0.0 | 87.9 | 3 |
| 15 | 71 | -218 | 1982 | 61 | 0 | -1 | 1730 | 4.1 | 312.2 | 100.5 | 0.0 | 321.9 | 3 |
| | | | | | | | | | | | | | |
| 1 | 86 | -251 | 2273 | 70 | 0 | -12 | 2313 | 4.7 | 429.7 | 115.3 | 0.0 | 434.3 | 1 |
| 5 | 86 | 881 | 541 | -129 | 0 | -24 | 566 | 16.4 | 131.3 | 27.4 | 0.0 | 147.6 | 1 |
| 6 | 86 | 1029 | 541 | 155 | 0 | 2 | 566 | 19.1 | 104.3 | 27.5 | 0.0 | 123.5 | 1 |
| 7 | 86 | -1152 | 542 | -115 | 0 | -8 | 566 | 21.4 | 111.8 | 27.5 | 0.0 | 133.2 | 1 |
| 8 | 86 | -1003 | 542 | 171 | 0 | 18 | 567 | 18.6 | 124.2 | 27.5 | 0.0 | 142.8 | 1 |
| 9 | 86 | -26 | 759 | -439 | 0 | -50 | 791 | 0.5 | 204.2 | 38.5 | 0.0 | 204.6 | 1 |
| 10 | 86 | 467 | 759 | 507 | 0 | 37 | 792 | 8.7 | 188.5 | 38.5 | 0.0 | 197.2 | 1 |
| 11 | 86 | -635 | 759 | -435 | 0 | -45 | 791 | 11.8 | 198.2 | 38.5 | 0.0 | 210.0 | 1 |
| 12 | 86 | -118 | 542 | 505 | 0 | 43 | 567 | 2.2 | 155.4 | 27.5 | 0.0 | 157.6 | 1 |
| 13 | 86 | -209 | 1890 | 59 | 0 | -10 | 1929 | 3.9 | 358.2 | 95.9 | 0.0 | 362.1 | 1 |
| 14 | 86 | 60 | -567 | -16 | 0 | 3 | -549 | 1.1 | 102.2 | 28.8 | 0.0 | 103.3 | 1 |
| 15 | 86 | -218 | 1974 | 61 | 0 | -10 | 2012 | 4.1 | 373.7 | 100.1 | 0.0 | 377.8 | 1 |
| | | | | | | | | | | | | | |
| 1 | 100 | -251 | 2265 | 70 | 0 | -22 | 2638 | 4.7 | 500.3 | 114.9 | 0.0 | 505.0 | 1 |
| 5 | 100 | 881 | 535 | -129 | 0 | -6 | 642 | 16.4 | 122.2 | 27.1 | 0.0 | 138.6 | 1 |
| 6 | 100 | 1029 | 535 | 155 | 0 | -20 | 643 | 19.1 | 140.0 | 27.1 | 0.0 | 159.1 | 1 |
| 7 | 100 | -1152 | 536 | -115 | 0 | 8 | 643 | 21.4 | 125.8 | 27.2 | 0.0 | 147.2 | 1 |
| 8 | 100 | -1003 | 536 | 171 | 0 | -6 | 644 | 18.6 | 123.4 | 27.2 | 0.0 | 142.1 | 1 |
| 9 | 100 | -26 | 751 | -439 | 0 | 13 | 899 | 0.5 | 177.2 | 38.1 | 0.0 | 177.7 | 1 |
| 10 | 100 | 467 | 752 | 507 | 0 | -35 | 900 | 8.7 | 205.1 | 38.1 | 0.0 | 213.8 | 1 |
| 11 | 100 | -635 | 751 | -435 | 0 | 17 | 899 | 11.8 | 182.5 | 38.1 | 0.0 | 194.3 | 1 |
| 12 | 100 | -118 | 536 | 505 | 0 | -29 | 643 | 2.2 | 151.3 | 27.2 | 0.0 | 153.5 | 1 |
| 13 | 100 | -209 | 1882 | 59 | 0 | -18 | 2198 | 3.9 | 417.0 | 95.5 | 0.0 | 420.9 | 1 |
| 14 | 100 | 60 | -573 | -16 | 0 | 5 | -630 | 1.1 | 119.7 | 29.1 | 0.0 | 120.8 | 1 |
| 15 | 100 | -218 | 1966 | 61 | 0 | -19 | 2294 | 4.1 | 435.1 | 99.7 | 0.0 | 439.2 | 1 |
| | | | | | | | | | | | | | |
| 1 | 114 | -251 | 2257 | 70 | 0 | -32 | 2960 | 4.7 | 570.8 | 114.5 | 0.0 | 575.5 | 1 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-------|------|------|---|------|------|------|-------|-------|-----|-------|---|
| 5 | 114 | 881 | 529 | -129 | 0 | 13 | 718 | 16.4 | 144.8 | 26.8 | 0.0 | 161.2 | 1 |
| 6 | 114 | 1029 | 529 | 155 | 0 | -42 | 719 | 19.1 | 181.0 | 26.8 | 0.0 | 200.2 | 1 |
| 7 | 114 | -1152 | 530 | -115 | 0 | 25 | 720 | 21.4 | 159.8 | 26.9 | 0.0 | 181.2 | 1 |
| 8 | 114 | -1003 | 530 | 171 | 0 | -31 | 720 | 18.6 | 167.5 | 26.9 | 0.0 | 186.1 | 1 |
| 9 | 114 | -26 | 743 | -439 | 0 | 75 | 1006 | 0.5 | 274.3 | 37.7 | 0.0 | 274.7 | 1 |
| 10 | 114 | 467 | 744 | 507 | 0 | -107 | 1007 | 8.7 | 314.2 | 37.7 | 0.0 | 322.9 | 1 |
| 11 | 114 | -635 | 743 | -435 | 0 | 79 | 1006 | 11.8 | 278.8 | 37.7 | 0.0 | 290.6 | 1 |
| 12 | 114 | -118 | 530 | 505 | 0 | -101 | 720 | 2.2 | 254.5 | 26.9 | 0.0 | 256.7 | 1 |
| 13 | 114 | -209 | 1875 | 59 | 0 | -26 | 2467 | 3.9 | 475.6 | 95.1 | 0.0 | 479.5 | 1 |
| 14 | 114 | 60 | -579 | -16 | 0 | 8 | -713 | 1.1 | 137.3 | 29.4 | 0.0 | 138.4 | 1 |
| 15 | 114 | -218 | 1958 | 61 | 0 | -28 | 2574 | 4.1 | 496.3 | 99.3 | 0.0 | 500.3 | 1 |
| | | | | | | | | | | | | | |
| 1 | 129 | -251 | 2249 | 70 | 0 | -42 | 3282 | 4.7 | 641.1 | 114.1 | 0.0 | 645.7 | 1 |
| 5 | 129 | 881 | 523 | -129 | 0 | 31 | 793 | 16.4 | 181.1 | 26.5 | 0.0 | 197.5 | 1 |
| 6 | 129 | 1029 | 523 | 155 | 0 | -64 | 794 | 19.1 | 221.9 | 26.5 | 0.0 | 241.1 | 1 |
| 7 | 129 | -1152 | 524 | -115 | 0 | 41 | 795 | 21.4 | 193.7 | 26.6 | 0.0 | 215.1 | 1 |
| 8 | 129 | -1003 | 524 | 171 | 0 | -55 | 795 | 18.6 | 211.4 | 26.6 | 0.0 | 230.0 | 1 |
| 9 | 129 | -26 | 735 | -439 | 0 | 138 | 1112 | 0.5 | 371.1 | 37.3 | 0.0 | 371.6 | 1 |
| 10 | 129 | 467 | 736 | 507 | 0 | -180 | 1112 | 8.7 | 423.1 | 37.3 | 0.0 | 431.8 | 1 |
| 11 | 129 | -635 | 736 | -435 | 0 | 141 | 1112 | 11.8 | 374.9 | 37.3 | 0.0 | 386.7 | 1 |
| 12 | 129 | -118 | 524 | 505 | 0 | -173 | 795 | 2.2 | 357.6 | 26.6 | 0.0 | 359.8 | 1 |
| 13 | 129 | -209 | 1867 | 59 | 0 | -35 | 2734 | 3.9 | 534.0 | 94.7 | 0.0 | 537.8 | 1 |
| 14 | 129 | 60 | -585 | -16 | 0 | 10 | -796 | 1.1 | 155.1 | 29.7 | 0.0 | 156.2 | 1 |
| 15 | 129 | -218 | 1950 | 61 | 0 | -36 | 2853 | 4.1 | 557.2 | 98.9 | 0.0 | 561.3 | 1 |
| | | | | | | | | | | | | | |
| 1 | 143 | -251 | 2241 | 70 | 0 | -52 | 3603 | 4.7 | 711.1 | 113.7 | 0.0 | 715.8 | 1 |
| 5 | 143 | 881 | 517 | -129 | 0 | 50 | 868 | 16.4 | 217.2 | 26.2 | 0.0 | 233.6 | 1 |
| 6 | 143 | 1029 | 517 | 155 | 0 | -86 | 868 | 19.1 | 262.7 | 26.2 | 0.0 | 281.8 | 1 |
| 7 | 143 | -1152 | 518 | -115 | 0 | 57 | 869 | 21.4 | 227.4 | 26.3 | 0.0 | 248.8 | 1 |
| 8 | 143 | -1003 | 518 | 171 | 0 | -80 | 869 | 18.6 | 255.1 | 26.3 | 0.0 | 273.8 | 1 |
| 9 | 143 | -26 | 728 | -439 | 0 | 201 | 1216 | 0.5 | 467.7 | 36.9 | 0.0 | 468.2 | 1 |
| 10 | 143 | 467 | 728 | 507 | 0 | -252 | 1217 | 8.7 | 531.8 | 36.9 | 0.0 | 540.4 | 1 |
| 11 | 143 | -635 | 728 | -435 | 0 | 203 | 1216 | 11.8 | 470.9 | 36.9 | 0.0 | 482.7 | 1 |
| 12 | 143 | -118 | 518 | 505 | 0 | -245 | 869 | 2.2 | 460.5 | 26.3 | 0.0 | 462.7 | 1 |
| 13 | 143 | -209 | 1859 | 59 | 0 | -43 | 3000 | 3.9 | 592.1 | 94.3 | 0.0 | 596.0 | 1 |
| 14 | 143 | 60 | -592 | -16 | 0 | 12 | -880 | 1.1 | 173.0 | 30.0 | 0.0 | 174.1 | 1 |
| 15 | 143 | -218 | 1942 | 61 | 0 | -45 | 3131 | 4.1 | 618.0 | 98.5 | 0.0 | 622.0 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x | Mmax | Sf (M) | x | fmax. | fmax | fmax / l | Nota |
|----|---------|-----|-------|--------|----|-------|-----------|----------|------|
| | | cm | daN*m | daN/cm | | cm | | | |
| 1 | -- | 143 | 3603 | 646.8 | -- | -- | -- | -- | |
| -- | Rara | 67 | 3 | -- | 68 | 0.00 | 1 / 99999 | | |
| -- | Freq. | 67 | 3 | -- | 68 | 0.00 | 1 / 99999 | | |
| -- | Q.Perm. | 67 | 3 | -- | 68 | 0.00 | 1 / 99999 | | |
| -- | Rara | 67 | 3 | -- | 68 | 0.00 | 1 / 99999 | | |
| -- | Rara | 67 | 3 | -- | 68 | 0.00 | 1 / 99999 | | |
| -- | Freq. | 67 | 3 | -- | 68 | 0.00 | 1 / 99999 | | |
| -- | Freq. | 67 | 3 | -- | 68 | 0.00 | 1 / 99999 | | |

ASTA NUM. 26 NI 124 NF 123 Lungh. 178.3 cm SEZ. 1 Ps IPE 300

categoria: p.p. y qy tot.

qy medio: 0.4223 0.4223 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|-----|-----|----|-------|------|---------|--------|--------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | daN/cm | | | | |
| 1 | 0 | -240 | 206 | -61 | 0 | -52 | 3603 | 4.5 | 711.1 | 10.5 | 0.0 | 715.6 | 1 | |
| 5 | 0 | 529 | 72 | -26 | 0 | 50 | 868 | 9.8 | 217.2 | 3.7 | 0.0 | 227.1 | 1 | |
| 6 | 0 | 678 | 72 | -28 | 0 | -86 | 868 | 12.6 | 262.7 | 3.7 | 0.0 | 275.3 | 1 | |
| 7 | 0 | -795 | 73 | -4 | 0 | 57 | 869 | 14.8 | 227.4 | 3.7 | 0.0 | 242.1 | 1 | |
| 8 | 0 | -646 | 73 | -7 | 0 | -80 | 869 | 12.0 | 255.1 | 3.7 | 0.0 | 267.1 | 1 | |
| 9 | 0 | -129 | 98 | -25 | 0 | 201 | 1216 | 2.4 | 467.7 | 5.0 | 0.0 | 470.1 | 1 | |
| 10 | 0 | 366 | 99 | -31 | 0 | -252 | 1217 | 6.8 | 531.8 | 5.0 | 0.0 | 538.6 | 1 | |
| 11 | 0 | -526 | 98 | -18 | 0 | 203 | 1216 | 9.8 | 470.9 | 5.0 | 0.0 | 480.6 | 1 | |
| 12 | 0 | -7 | 73 | -19 | 0 | -245 | 869 | 0.1 | 460.5 | 3.7 | 0.0 | 460.6 | 1 | |
| 13 | 0 | -200 | 179 | -51 | 0 | -43 | 3000 | 3.7 | 592.1 | 9.1 | 0.0 | 595.8 | 1 | |
| 14 | 0 | 57 | -6 | 15 | 0 | 12 | -880 | 1.1 | 173.0 | 0.7 | 0.0 | 174.1 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|-----|-----|---|------|------|------|-------|------|-----|-------|---|
| 15 | 0 | -209 | 185 | -53 | 0 | -45 | 3131 | 3.9 | 618.0 | 9.4 | 0.0 | 621.9 | 1 |
| 1 | 18 | -240 | 196 | -61 | 0 | -41 | 3639 | 4.5 | 704.1 | 10.0 | 0.0 | 708.5 | 1 |
| 5 | 18 | 529 | 65 | -26 | 0 | 54 | 880 | 9.8 | 225.2 | 3.3 | 0.0 | 235.0 | 1 |
| 6 | 18 | 678 | 65 | -28 | 0 | -81 | 880 | 12.6 | 258.8 | 3.3 | 0.0 | 271.4 | 1 |
| 7 | 18 | -795 | 66 | -4 | 0 | 58 | 881 | 14.8 | 230.5 | 3.3 | 0.0 | 245.3 | 1 |
| 8 | 18 | -646 | 66 | -7 | 0 | -79 | 882 | 12.0 | 255.8 | 3.3 | 0.0 | 267.8 | 1 |
| 9 | 18 | -129 | 88 | -25 | 0 | 205 | 1233 | 2.4 | 476.2 | 4.5 | 0.0 | 478.6 | 1 |
| 10 | 18 | 366 | 89 | -31 | 0 | -247 | 1234 | 6.8 | 527.8 | 4.5 | 0.0 | 534.6 | 1 |
| 11 | 18 | -526 | 88 | -18 | 0 | 207 | 1233 | 9.8 | 477.9 | 4.5 | 0.0 | 487.6 | 1 |
| 12 | 18 | -7 | 66 | -19 | 0 | -242 | 882 | 0.1 | 458.6 | 3.3 | 0.0 | 458.7 | 1 |
| 13 | 18 | -200 | 169 | -51 | 0 | -34 | 3031 | 3.7 | 586.5 | 8.6 | 0.0 | 590.2 | 1 |
| 14 | 18 | 57 | -14 | 15 | 0 | 10 | -882 | 1.1 | 170.1 | 0.7 | 0.0 | 171.1 | 1 |
| 15 | 18 | -209 | 175 | -53 | 0 | -36 | 3163 | 3.9 | 612.0 | 8.9 | 0.0 | 615.9 | 1 |
| 1 | 36 | -240 | 187 | -61 | 0 | -30 | 3673 | 4.5 | 696.7 | 9.5 | 0.0 | 701.1 | 1 |
| 5 | 36 | 529 | 57 | -26 | 0 | 59 | 891 | 9.8 | 232.9 | 2.9 | 0.0 | 242.7 | 1 |
| 6 | 36 | 678 | 57 | -28 | 0 | -76 | 891 | 12.6 | 254.6 | 2.9 | 0.0 | 267.2 | 1 |
| 7 | 36 | -795 | 58 | -4 | 0 | 59 | 892 | 14.8 | 233.5 | 2.9 | 0.0 | 248.2 | 1 |
| 8 | 36 | -646 | 58 | -7 | 0 | -77 | 893 | 12.0 | 256.3 | 3.0 | 0.0 | 268.3 | 1 |
| 9 | 36 | -129 | 78 | -25 | 0 | 210 | 1247 | 2.4 | 484.4 | 4.0 | 0.0 | 486.8 | 1 |
| 10 | 36 | 366 | 79 | -31 | 0 | -241 | 1249 | 6.8 | 523.6 | 4.0 | 0.0 | 530.4 | 1 |
| 11 | 36 | -526 | 79 | -18 | 0 | 210 | 1248 | 9.8 | 484.6 | 4.0 | 0.0 | 494.3 | 1 |
| 12 | 36 | -7 | 58 | -19 | 0 | -238 | 893 | 0.1 | 456.4 | 2.9 | 0.0 | 456.5 | 1 |
| 13 | 36 | -200 | 159 | -51 | 0 | -25 | 3060 | 3.7 | 580.5 | 8.1 | 0.0 | 584.2 | 1 |
| 14 | 36 | 57 | -21 | 15 | 0 | 7 | -885 | 1.1 | 167.4 | 1.1 | 0.0 | 168.4 | 1 |
| 15 | 36 | -209 | 165 | -53 | 0 | -26 | 3193 | 3.9 | 605.7 | 8.4 | 0.0 | 609.6 | 1 |
| 1 | 53 | -240 | 177 | -61 | 0 | -19 | 3705 | 4.5 | 689.0 | 9.0 | 0.0 | 693.4 | 1 |
| 5 | 53 | 529 | 50 | -26 | 0 | 63 | 900 | 9.8 | 240.3 | 2.5 | 0.0 | 250.2 | 1 |
| 6 | 53 | 678 | 50 | -28 | 0 | -71 | 901 | 12.6 | 250.2 | 2.5 | 0.0 | 262.8 | 1 |
| 7 | 53 | -795 | 50 | -4 | 0 | 60 | 902 | 14.8 | 236.1 | 2.6 | 0.0 | 250.9 | 1 |
| 8 | 53 | -646 | 51 | -7 | 0 | -76 | 903 | 12.0 | 256.5 | 2.6 | 0.0 | 268.5 | 1 |
| 9 | 53 | -129 | 69 | -25 | 0 | 214 | 1260 | 2.4 | 492.3 | 3.5 | 0.0 | 494.7 | 1 |
| 10 | 53 | 366 | 69 | -31 | 0 | -236 | 1262 | 6.8 | 519.0 | 3.5 | 0.0 | 525.8 | 1 |
| 11 | 53 | -526 | 69 | -18 | 0 | 213 | 1261 | 9.8 | 491.0 | 3.5 | 0.0 | 500.7 | 1 |
| 12 | 53 | -7 | 51 | -19 | 0 | -235 | 902 | 0.1 | 453.9 | 2.6 | 0.0 | 454.1 | 1 |
| 13 | 53 | -200 | 150 | -51 | 0 | -16 | 3088 | 3.7 | 574.2 | 7.6 | 0.0 | 577.9 | 1 |
| 14 | 53 | 57 | -29 | 15 | 0 | 4 | -889 | 1.1 | 164.9 | 1.5 | 0.0 | 166.0 | 1 |
| 15 | 53 | -209 | 155 | -53 | 0 | -17 | 3222 | 3.9 | 599.1 | 7.9 | 0.0 | 603.0 | 1 |
| 1 | 71 | -240 | 167 | -61 | 0 | -8 | 3736 | 4.5 | 681.0 | 8.5 | 0.0 | 685.4 | 1 |
| 5 | 71 | 529 | 42 | -26 | 0 | 68 | 908 | 9.8 | 247.6 | 2.1 | 0.0 | 257.4 | 1 |
| 6 | 71 | 678 | 42 | -28 | 0 | -66 | 909 | 12.6 | 245.5 | 2.1 | 0.0 | 258.1 | 1 |
| 7 | 71 | -795 | 43 | -4 | 0 | 61 | 910 | 14.8 | 238.6 | 2.2 | 0.0 | 253.4 | 1 |
| 8 | 71 | -646 | 43 | -7 | 0 | -75 | 911 | 12.0 | 256.4 | 2.2 | 0.0 | 268.4 | 1 |
| 9 | 71 | -129 | 59 | -25 | 0 | 219 | 1272 | 2.4 | 499.8 | 3.0 | 0.0 | 502.2 | 1 |
| 10 | 71 | 366 | 59 | -31 | 0 | -230 | 1273 | 6.8 | 514.2 | 3.0 | 0.0 | 521.0 | 1 |
| 11 | 71 | -526 | 59 | -18 | 0 | 216 | 1272 | 9.8 | 497.0 | 3.0 | 0.0 | 506.8 | 1 |
| 12 | 71 | -7 | 43 | -19 | 0 | -232 | 911 | 0.1 | 451.3 | 2.2 | 0.0 | 451.4 | 1 |
| 13 | 71 | -200 | 140 | -51 | 0 | -7 | 3114 | 3.7 | 567.6 | 7.1 | 0.0 | 571.3 | 1 |
| 14 | 71 | 57 | -36 | 15 | 0 | 2 | -895 | 1.1 | 162.7 | 1.8 | 0.0 | 163.7 | 1 |
| 15 | 71 | -209 | 146 | -53 | 0 | -7 | 3249 | 3.9 | 592.2 | 7.4 | 0.0 | 596.1 | 1 |
| 1 | 89 | -240 | 157 | -61 | 0 | 3 | 3765 | 4.5 | 679.0 | 8.0 | 0.0 | 683.4 | 1 |
| 5 | 89 | 529 | 35 | -26 | 0 | 73 | 915 | 9.8 | 254.5 | 1.8 | 0.0 | 264.4 | 1 |
| 6 | 89 | 678 | 35 | -28 | 0 | -61 | 916 | 12.6 | 240.6 | 1.8 | 0.0 | 253.2 | 1 |
| 7 | 89 | -795 | 35 | -4 | 0 | 61 | 917 | 14.8 | 240.8 | 1.8 | 0.0 | 255.6 | 1 |
| 8 | 89 | -646 | 36 | -7 | 0 | -74 | 918 | 12.0 | 256.2 | 1.8 | 0.0 | 268.2 | 1 |
| 9 | 89 | -129 | 49 | -25 | 0 | 223 | 1281 | 2.4 | 507.0 | 2.5 | 0.0 | 509.4 | 1 |
| 10 | 89 | 366 | 50 | -31 | 0 | -224 | 1283 | 6.8 | 509.0 | 2.5 | 0.0 | 515.8 | 1 |
| 11 | 89 | -526 | 49 | -18 | 0 | 220 | 1282 | 9.8 | 502.8 | 2.5 | 0.0 | 512.6 | 1 |
| 12 | 89 | -7 | 35 | -19 | 0 | -228 | 918 | 0.1 | 448.3 | 1.8 | 0.0 | 448.5 | 1 |
| 13 | 89 | -200 | 130 | -51 | 0 | 2 | 3138 | 3.7 | 565.9 | 6.6 | 0.0 | 569.6 | 1 |
| 14 | 89 | 57 | -44 | 15 | 0 | -1 | -902 | 1.1 | 163.2 | 2.2 | 0.0 | 164.3 | 1 |
| 15 | 89 | -209 | 136 | -53 | 0 | 2 | 3274 | 3.9 | 590.4 | 6.9 | 0.0 | 594.3 | 1 |
| 1 | 107 | -240 | 147 | -61 | 0 | 13 | 3792 | 4.5 | 697.4 | 7.5 | 0.0 | 701.8 | 1 |
| 5 | 107 | 529 | 27 | -26 | 0 | 77 | 921 | 9.8 | 261.3 | 1.4 | 0.0 | 271.1 | 1 |
| 6 | 107 | 678 | 27 | -28 | 0 | -56 | 921 | 12.6 | 235.5 | 1.4 | 0.0 | 248.1 | 1 |
| 7 | 107 | -795 | 28 | -4 | 0 | 62 | 923 | 14.8 | 242.7 | 1.4 | 0.0 | 257.5 | 1 |
| 8 | 107 | -646 | 28 | -7 | 0 | -72 | 924 | 12.0 | 255.7 | 1.4 | 0.0 | 267.7 | 1 |
| 9 | 107 | -129 | 39 | -25 | 0 | 228 | 1289 | 2.4 | 514.0 | 2.0 | 0.0 | 516.4 | 1 |
| 10 | 107 | 366 | 40 | -31 | 0 | -219 | 1291 | 6.8 | 503.5 | 2.0 | 0.0 | 510.3 | 1 |
| 11 | 107 | -526 | 40 | -18 | 0 | 223 | 1290 | 9.8 | 508.2 | 2.0 | 0.0 | 518.0 | 1 |
| 12 | 107 | -7 | 28 | -19 | 0 | -225 | 923 | 0.1 | 445.2 | 1.4 | 0.0 | 445.3 | 1 |
| 13 | 107 | -200 | 120 | -51 | 0 | 11 | 3160 | 3.7 | 581.1 | 6.1 | 0.0 | 584.8 | 1 |
| 14 | 107 | 57 | -51 | 15 | 0 | -4 | -911 | 1.1 | 168.0 | 2.6 | 0.0 | 169.1 | 1 |
| 15 | 107 | -209 | 126 | -53 | 0 | 12 | 3297 | 3.9 | 606.3 | 6.4 | 0.0 | 610.2 | 1 |
| 1 | 125 | -240 | 138 | -61 | 0 | 24 | 3817 | 4.5 | 715.4 | 7.0 | 0.0 | 719.9 | 1 |
| 5 | 125 | 529 | 19 | -26 | 0 | 82 | 925 | 9.8 | 267.8 | 1.2 | 0.0 | 277.6 | 1 |
| 6 | 125 | 678 | 20 | -28 | 0 | -52 | 925 | 12.6 | 230.1 | 1.3 | 0.0 | 242.7 | 1 |
| 7 | 125 | -795 | 20 | -4 | 0 | 63 | 927 | 14.8 | 244.5 | 1.0 | 0.0 | 259.2 | 1 |
| 8 | 125 | -646 | 20 | -7 | 0 | -71 | 928 | 12.0 | 254.9 | 1.0 | 0.0 | 266.9 | 1 |
| 9 | 125 | -129 | 30 | -25 | 0 | 232 | 1295 | 2.4 | 520.6 | 1.5 | 0.0 | 523.0 | 1 |
| 10 | 125 | 366 | 30 | -31 | 0 | -213 | 1297 | 6.8 | 497.7 | 1.5 | 0.0 | 504.5 | 1 |
| 11 | 125 | -526 | 30 | -18 | 0 | 226 | 1296 | 9.8 | 513.4 | 1.5 | 0.0 | 523.1 | 1 |
| 12 | 125 | -7 | 20 | -19 | 0 | -222 | 928 | 0.1 | 441.8 | 1.0 | 0.0 | 441.9 | 1 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|-----|-----|---|------|------|------|-------|-----|-----|-------|---|
| 13 | 125 | -200 | 110 | -51 | 0 | 20 | 3181 | 3.7 | 596.1 | 5.6 | 0.0 | 599.8 | 1 |
| 14 | 125 | 57 | -59 | 15 | 0 | -6 | -920 | 1.1 | 173.0 | 3.0 | 0.0 | 174.1 | 1 |
| 15 | 125 | -209 | 116 | -53 | 0 | 21 | 3319 | 3.9 | 621.9 | 5.9 | 0.0 | 625.8 | 1 |
| 1 | 143 | -240 | 128 | -61 | 0 | 35 | 3841 | 4.5 | 733.2 | 6.5 | 0.0 | 737.6 | 1 |
| 5 | 143 | 529 | 12 | -26 | 0 | 87 | 928 | 9.8 | 274.0 | 1.2 | 0.0 | 283.9 | 1 |
| 6 | 143 | 678 | 12 | -28 | 0 | -47 | 928 | 12.6 | 224.5 | 1.3 | 0.0 | 237.1 | 1 |
| 7 | 143 | -795 | 13 | -4 | 0 | 64 | 930 | 14.8 | 245.9 | 0.6 | 0.0 | 260.7 | 1 |
| 8 | 143 | -646 | 13 | -7 | 0 | -70 | 931 | 12.0 | 253.9 | 0.7 | 0.0 | 265.9 | 1 |
| 9 | 143 | -129 | 20 | -25 | 0 | 236 | 1300 | 2.4 | 526.9 | 1.2 | 0.0 | 529.3 | 1 |
| 10 | 143 | 366 | 20 | -31 | 0 | -208 | 1301 | 6.8 | 491.6 | 1.5 | 0.0 | 498.4 | 1 |
| 11 | 143 | -526 | 20 | -18 | 0 | 229 | 1300 | 9.8 | 518.2 | 1.0 | 0.0 | 528.0 | 1 |
| 12 | 143 | -7 | 13 | -19 | 0 | -218 | 931 | 0.1 | 438.1 | 0.9 | 0.0 | 438.3 | 1 |
| 13 | 143 | -200 | 101 | -51 | 0 | 29 | 3200 | 3.7 | 610.7 | 5.1 | 0.0 | 614.4 | 1 |
| 14 | 143 | 57 | -66 | 15 | 0 | -9 | -932 | 1.1 | 178.3 | 3.4 | 0.0 | 179.4 | 1 |
| 15 | 143 | -209 | 106 | -53 | 0 | 31 | 3339 | 3.9 | 637.2 | 5.4 | 0.0 | 641.1 | 1 |
| 1 | 160 | -240 | 118 | -61 | 0 | 46 | 3863 | 4.5 | 750.6 | 6.0 | 0.0 | 755.0 | 1 |
| 5 | 160 | 529 | 4 | -26 | 0 | 91 | 929 | 9.8 | 280.1 | 1.2 | 0.0 | 289.9 | 1 |
| 6 | 160 | 678 | 5 | -28 | 0 | -42 | 930 | 12.6 | 218.6 | 1.3 | 0.0 | 231.2 | 1 |
| 7 | 160 | -795 | 5 | -4 | 0 | 64 | 932 | 14.8 | 247.2 | 0.3 | 0.0 | 262.0 | 1 |
| 8 | 160 | -646 | 5 | -7 | 0 | -69 | 933 | 12.0 | 252.7 | 0.3 | 0.0 | 264.7 | 1 |
| 9 | 160 | -129 | 10 | -25 | 0 | 241 | 1302 | 2.4 | 532.8 | 1.2 | 0.0 | 535.2 | 1 |
| 10 | 160 | 366 | 11 | -31 | 0 | -202 | 1304 | 6.8 | 485.1 | 1.5 | 0.0 | 491.9 | 1 |
| 11 | 160 | -526 | 10 | -18 | 0 | 233 | 1303 | 9.8 | 522.7 | 0.8 | 0.0 | 532.5 | 1 |
| 12 | 160 | -7 | 5 | -19 | 0 | -215 | 932 | 0.1 | 434.3 | 0.9 | 0.0 | 434.4 | 1 |
| 13 | 160 | -200 | 91 | -51 | 0 | 38 | 3217 | 3.7 | 625.0 | 4.6 | 0.0 | 628.7 | 1 |
| 14 | 160 | 57 | -74 | 15 | 0 | -12 | -944 | 1.1 | 183.8 | 3.8 | 0.0 | 184.9 | 1 |
| 15 | 160 | -209 | 97 | -53 | 0 | 40 | 3357 | 3.9 | 652.2 | 4.9 | 0.0 | 656.1 | 1 |
| 1 | 178 | -240 | 108 | -61 | 0 | 57 | 3883 | 4.5 | 767.7 | 5.5 | 0.0 | 772.2 | 1 |
| 5 | 178 | 529 | -3 | -26 | 0 | 96 | 929 | 9.8 | 285.8 | 1.2 | 0.0 | 295.7 | 1 |
| 6 | 178 | 678 | -3 | -28 | 0 | -37 | 930 | 12.6 | 212.5 | 1.3 | 0.0 | 225.1 | 1 |
| 7 | 178 | -795 | -2 | -4 | 0 | 65 | 932 | 14.8 | 248.2 | 0.2 | 0.0 | 262.9 | 1 |
| 8 | 178 | -646 | -2 | -7 | 0 | -67 | 933 | 12.0 | 251.2 | 0.3 | 0.0 | 263.2 | 1 |
| 9 | 178 | -129 | 0 | -25 | 0 | 245 | 1303 | 2.4 | 538.5 | 1.2 | 0.0 | 540.9 | 1 |
| 10 | 178 | 366 | 1 | -31 | 0 | -197 | 1305 | 6.8 | 478.4 | 1.5 | 0.0 | 485.2 | 1 |
| 11 | 178 | -526 | 0 | -18 | 0 | 236 | 1304 | 9.8 | 526.9 | 0.8 | 0.0 | 536.7 | 1 |
| 12 | 178 | -7 | -2 | -19 | 0 | -212 | 933 | 0.1 | 430.1 | 0.9 | 0.0 | 430.3 | 1 |
| 13 | 178 | -200 | 81 | -51 | 0 | 47 | 3232 | 3.7 | 639.0 | 4.1 | 0.0 | 642.7 | 1 |
| 14 | 178 | 57 | -81 | 15 | 0 | -14 | -958 | 1.1 | 189.6 | 4.1 | 0.0 | 190.6 | 1 |
| 15 | 178 | -209 | 87 | -53 | 0 | 49 | 3373 | 3.9 | 666.9 | 4.4 | 0.0 | 670.7 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x | Mmax | Sf (M) | x | fmax. | fmax | fmax / l | Nota |
|----|---------|-----|-------|--------|----|-------|-----------|----------|------|
| | | cm | daN*m | daN/cm | | cm | | | |
| 1 | -- | 178 | 3883 | 697.0 | -- | -- | -- | -- | |
| -- | Rara | 81 | 5 | -- | 82 | 0.00 | 1 / 99999 | | |
| -- | Freq. | 81 | 5 | -- | 82 | 0.00 | 1 / 99999 | | |
| -- | Q.Perm. | 81 | 5 | -- | 82 | 0.00 | 1 / 99999 | | |
| -- | Rara | 81 | 5 | -- | 82 | 0.00 | 1 / 99999 | | |
| -- | Rara | 81 | 5 | -- | 82 | 0.00 | 1 / 99999 | | |
| -- | Freq. | 81 | 5 | -- | 82 | 0.00 | 1 / 99999 | | |
| -- | Freq. | 81 | 5 | -- | 82 | 0.00 | 1 / 99999 | | |

ASTA NUM. 31 NI 123 NF 35 Lungh. 178.3 cm SEZ. 1 Ps IPE 300

categoria: p.p. y qy tot.

qy medio: 0.4223 0.4223 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|-------|-----|----|-------|------|---------|--------|--------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | daN/cm | | | | |
| 1 | 0 | -228 | -2135 | 170 | 0 | 57 | 3883 | 4.2 | 767.7 | 108.3 | 0.0 | 771.9 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|-------|------|---|------|------|-----|-------|-------|-----|-------|---|
| 5 | 0 | 145 | -486 | 120 | 0 | 96 | 929 | 2.7 | 285.8 | 24.7 | 0.0 | 288.5 | 1 |
| 6 | 0 | 294 | -486 | -59 | 0 | -37 | 930 | 5.5 | 212.5 | 24.7 | 0.0 | 218.0 | 1 |
| 7 | 0 | -405 | -486 | 142 | 0 | 65 | 932 | 7.5 | 248.2 | 24.7 | 0.0 | 255.7 | 1 |
| 8 | 0 | -255 | -486 | -37 | 0 | -67 | 933 | 4.7 | 251.2 | 24.6 | 0.0 | 255.9 | 1 |
| 9 | 0 | -243 | -685 | 352 | 0 | 245 | 1303 | 4.5 | 538.5 | 34.8 | 0.0 | 543.0 | 1 |
| 10 | 0 | 255 | -685 | -245 | 0 | -197 | 1305 | 4.7 | 478.4 | 34.7 | 0.0 | 483.1 | 1 |
| 11 | 0 | -407 | -685 | 359 | 0 | 236 | 1304 | 7.6 | 526.9 | 34.8 | 0.0 | 534.5 | 1 |
| 12 | 0 | 113 | -486 | -255 | 0 | -212 | 933 | 2.1 | 430.1 | 24.6 | 0.0 | 432.2 | 1 |
| 13 | 0 | -190 | -1768 | 141 | 0 | 47 | 3232 | 3.5 | 639.0 | 89.7 | 0.0 | 642.5 | 1 |
| 14 | 0 | 55 | 576 | -41 | 0 | -14 | -958 | 1.0 | 189.6 | 29.2 | 0.0 | 190.6 | 1 |
| 15 | 0 | -199 | -1848 | 148 | 0 | 49 | 3373 | 3.7 | 666.9 | 93.8 | 0.0 | 670.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 18 | -228 | -2145 | 170 | 0 | 27 | 3501 | 4.2 | 661.6 | 108.8 | 0.0 | 665.9 | 1 |
| 5 | 18 | 145 | -494 | 120 | 0 | 74 | 842 | 2.7 | 243.6 | 25.1 | 0.0 | 246.2 | 1 |
| 6 | 18 | 294 | -494 | -59 | 0 | -26 | 843 | 5.5 | 183.8 | 25.0 | 0.0 | 189.2 | 1 |
| 7 | 18 | -405 | -493 | 142 | 0 | 40 | 845 | 7.5 | 201.1 | 25.0 | 0.0 | 208.6 | 1 |
| 8 | 18 | -255 | -493 | -37 | 0 | -61 | 846 | 4.7 | 227.2 | 25.0 | 0.0 | 232.0 | 1 |
| 9 | 18 | -243 | -695 | 352 | 0 | 182 | 1180 | 4.5 | 438.4 | 35.3 | 0.0 | 442.9 | 1 |
| 10 | 18 | 255 | -694 | -245 | 0 | -153 | 1182 | 4.7 | 402.1 | 35.2 | 0.0 | 406.8 | 1 |
| 11 | 18 | -407 | -695 | 359 | 0 | 172 | 1181 | 7.6 | 425.4 | 35.3 | 0.0 | 433.0 | 1 |
| 12 | 18 | 113 | -493 | -255 | 0 | -166 | 845 | 2.1 | 358.0 | 25.0 | 0.0 | 360.0 | 1 |
| 13 | 18 | -190 | -1778 | 141 | 0 | 22 | 2916 | 3.5 | 550.9 | 90.2 | 0.0 | 554.4 | 1 |
| 14 | 18 | 55 | 569 | -41 | 0 | -7 | -856 | 1.0 | 162.1 | 28.9 | 0.0 | 163.2 | 1 |
| 15 | 18 | -199 | -1858 | 148 | 0 | 23 | 3043 | 3.7 | 574.9 | 94.3 | 0.0 | 578.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 36 | -228 | -2155 | 170 | 0 | -4 | 3118 | 4.2 | 564.2 | 109.3 | 0.0 | 568.5 | 1 |
| 5 | 36 | 145 | -501 | 120 | 0 | 53 | 753 | 2.7 | 201.1 | 25.4 | 0.0 | 203.7 | 1 |
| 6 | 36 | 294 | -501 | -59 | 0 | -16 | 754 | 5.5 | 154.8 | 25.4 | 0.0 | 160.2 | 1 |
| 7 | 36 | -405 | -501 | 142 | 0 | 14 | 756 | 7.5 | 153.7 | 25.4 | 0.0 | 161.2 | 1 |
| 8 | 36 | -255 | -501 | -37 | 0 | -54 | 757 | 4.7 | 203.1 | 25.4 | 0.0 | 207.8 | 1 |
| 9 | 36 | -243 | -705 | 352 | 0 | 120 | 1055 | 4.5 | 338.0 | 35.8 | 0.0 | 342.5 | 1 |
| 10 | 36 | 255 | -704 | -245 | 0 | -109 | 1057 | 4.7 | 325.5 | 35.7 | 0.0 | 330.2 | 1 |
| 11 | 36 | -407 | -705 | 359 | 0 | 108 | 1056 | 7.6 | 323.6 | 35.8 | 0.0 | 331.2 | 1 |
| 12 | 36 | 113 | -501 | -255 | 0 | -121 | 757 | 2.1 | 285.5 | 25.4 | 0.0 | 287.6 | 1 |
| 13 | 36 | -190 | -1788 | 141 | 0 | -3 | 2598 | 3.5 | 470.1 | 90.7 | 0.0 | 473.7 | 1 |
| 14 | 36 | 55 | 561 | -41 | 0 | 0 | -755 | 1.0 | 136.1 | 28.5 | 0.0 | 137.1 | 1 |
| 15 | 36 | -199 | -1868 | 148 | 0 | -3 | 2710 | 3.7 | 490.5 | 94.8 | 0.0 | 494.2 | 1 |
| | | | | | | | | | | | | | |
| 1 | 54 | -228 | -2164 | 170 | 0 | -34 | 2733 | 4.2 | 532.7 | 109.8 | 0.0 | 536.9 | 1 |
| 5 | 54 | 145 | -509 | 120 | 0 | 32 | 663 | 2.7 | 158.3 | 25.8 | 0.0 | 161.0 | 1 |
| 6 | 54 | 294 | -509 | -59 | 0 | -5 | 664 | 5.5 | 125.5 | 25.8 | 0.0 | 131.0 | 1 |
| 7 | 54 | -405 | -508 | 142 | 0 | -11 | 666 | 7.5 | 133.1 | 25.8 | 0.0 | 140.6 | 1 |
| 8 | 54 | -255 | -508 | -37 | 0 | -47 | 667 | 4.7 | 178.6 | 25.8 | 0.0 | 183.4 | 1 |
| 9 | 54 | -243 | -715 | 352 | 0 | 57 | 929 | 4.5 | 237.3 | 36.3 | 0.0 | 241.8 | 1 |
| 10 | 54 | 255 | -714 | -245 | 0 | -66 | 931 | 4.7 | 248.5 | 36.2 | 0.0 | 253.3 | 1 |
| 11 | 54 | -407 | -714 | 359 | 0 | 44 | 930 | 7.6 | 221.5 | 36.3 | 0.0 | 229.0 | 1 |
| 12 | 54 | 113 | -508 | -255 | 0 | -75 | 667 | 2.1 | 212.8 | 25.8 | 0.0 | 214.9 | 1 |
| 13 | 54 | -190 | -1797 | 141 | 0 | -28 | 2278 | 3.5 | 444.0 | 91.2 | 0.0 | 447.6 | 1 |
| 14 | 54 | 55 | 554 | -41 | 0 | 8 | -656 | 1.0 | 127.4 | 28.1 | 0.0 | 128.4 | 1 |
| 15 | 54 | -199 | -1877 | 148 | 0 | -30 | 2376 | 3.7 | 463.2 | 95.3 | 0.0 | 466.9 | 1 |
| | | | | | | | | | | | | | |
| 1 | 71 | -228 | -2174 | 170 | 0 | -64 | 2346 | 4.2 | 500.8 | 110.3 | 0.0 | 505.1 | 1 |
| 5 | 71 | 145 | -516 | 120 | 0 | 10 | 572 | 2.7 | 115.3 | 26.2 | 0.0 | 118.0 | 1 |
| 6 | 71 | 294 | -516 | -59 | 0 | 5 | 572 | 5.5 | 109.4 | 26.2 | 0.0 | 114.9 | 1 |
| 7 | 71 | -405 | -516 | 142 | 0 | -36 | 575 | 7.5 | 148.2 | 26.2 | 0.0 | 155.7 | 1 |
| 8 | 71 | -255 | -516 | -37 | 0 | -41 | 576 | 4.7 | 154.0 | 26.2 | 0.0 | 158.7 | 1 |
| 9 | 71 | -243 | -724 | 352 | 0 | -6 | 800 | 4.5 | 151.1 | 36.8 | 0.0 | 155.6 | 1 |
| 10 | 71 | 255 | -724 | -245 | 0 | -22 | 803 | 4.7 | 171.3 | 36.7 | 0.0 | 176.0 | 1 |
| 11 | 71 | -407 | -724 | 359 | 0 | -20 | 801 | 7.6 | 168.7 | 36.7 | 0.0 | 176.3 | 1 |
| 12 | 71 | 113 | -516 | -255 | 0 | -30 | 575 | 2.1 | 139.9 | 26.2 | 0.0 | 142.0 | 1 |
| 13 | 71 | -190 | -1807 | 141 | 0 | -54 | 1956 | 3.5 | 417.6 | 91.7 | 0.0 | 421.2 | 1 |
| 14 | 71 | 55 | 546 | -41 | 0 | 15 | -558 | 1.0 | 118.8 | 27.7 | 0.0 | 119.8 | 1 |
| 15 | 71 | -198 | -1887 | 148 | 0 | -56 | 2041 | 3.7 | 435.7 | 95.8 | 0.0 | 439.4 | 1 |
| | | | | | | | | | | | | | |
| 1 | 89 | -228 | -2184 | 170 | 0 | -94 | 1958 | 4.2 | 468.6 | 110.8 | 0.0 | 472.9 | 1 |
| 5 | 89 | 145 | -524 | 120 | 0 | -11 | 479 | 2.7 | 99.9 | 26.6 | 0.0 | 102.5 | 1 |
| 6 | 89 | 294 | -524 | -59 | 0 | 16 | 480 | 5.5 | 105.9 | 26.6 | 0.0 | 111.3 | 1 |
| 7 | 89 | -405 | -524 | 142 | 0 | -62 | 482 | 7.5 | 163.0 | 26.6 | 0.0 | 170.5 | 1 |
| 8 | 89 | -255 | -523 | -37 | 0 | -34 | 483 | 4.7 | 129.0 | 26.6 | 0.0 | 133.8 | 1 |
| 9 | 89 | -243 | -734 | 352 | 0 | -69 | 670 | 4.5 | 205.8 | 37.3 | 0.0 | 210.3 | 1 |
| 10 | 89 | 255 | -734 | -245 | 0 | 22 | 673 | 4.7 | 147.8 | 37.2 | 0.0 | 152.6 | 1 |
| 11 | 89 | -407 | -734 | 359 | 0 | -84 | 671 | 7.6 | 224.8 | 37.2 | 0.0 | 232.4 | 1 |
| 12 | 89 | 113 | -523 | -255 | 0 | 16 | 483 | 2.1 | 106.5 | 26.6 | 0.0 | 108.6 | 1 |
| 13 | 89 | -190 | -1817 | 141 | 0 | -79 | 1633 | 3.5 | 390.9 | 92.2 | 0.0 | 394.4 | 1 |
| 14 | 89 | 55 | 539 | -41 | 0 | 22 | -461 | 1.0 | 110.5 | 27.3 | 0.0 | 111.6 | 1 |
| 15 | 89 | -199 | -1897 | 148 | 0 | -82 | 1703 | 3.7 | 407.8 | 96.3 | 0.0 | 411.5 | 1 |
| | | | | | | | | | | | | | |
| 1 | 107 | -228 | -2194 | 170 | 0 | -125 | 1567 | 4.2 | 436.1 | 111.3 | 0.0 | 440.4 | 1 |
| 5 | 107 | 145 | -531 | 120 | 0 | -33 | 385 | 2.7 | 109.5 | 27.0 | 0.0 | 112.2 | 1 |
| 6 | 107 | 294 | -531 | -59 | 0 | 26 | 386 | 5.5 | 102.1 | 27.0 | 0.0 | 107.5 | 1 |
| 7 | 107 | -405 | -531 | 142 | 0 | -87 | 388 | 7.5 | 177.6 | 26.9 | 0.0 | 185.1 | 1 |
| 8 | 107 | -255 | -531 | -37 | 0 | -27 | 389 | 4.7 | 103.9 | 26.9 | 0.0 | 108.6 | 1 |
| 9 | 107 | -243 | -744 | 352 | 0 | -132 | 539 | 4.5 | 260.1 | 37.8 | 0.0 | 264.6 | 1 |
| 10 | 107 | 255 | -743 | -245 | 0 | 65 | 541 | 4.7 | 178.4 | 37.7 | 0.0 | 183.2 | 1 |
| 11 | 107 | -407 | -744 | 359 | 0 | -148 | 540 | 7.6 | 280.5 | 37.7 | 0.0 | 288.1 | 1 |
| 12 | 107 | 113 | -531 | -255 | 0 | 62 | 389 | 2.1 | 146.2 | 26.9 | 0.0 | 148.2 | 1 |
| 13 | 107 | -190 | -1827 | 141 | 0 | -104 | 1308 | 3.5 | 363.9 | 92.7 | 0.0 | 367.4 | 1 |
| 14 | 107 | 55 | 531 | -41 | 0 | 30 | -365 | 1.0 | 102.5 | 27.0 | 0.0 | 103.5 | 1 |
| 15 | 107 | -199 | -1907 | 148 | 0 | -108 | 1364 | 3.7 | 379.6 | 96.8 | 0.0 | 383.2 | 1 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|-------|------|---|------|------|-----|-------|-------|-----|-------|---|
| 1 | 125 | -228 | -2204 | 170 | 0 | -155 | 1175 | 4.2 | 403.3 | 111.8 | 0.0 | 407.6 | 1 |
| 5 | 125 | 145 | -539 | 120 | 0 | -54 | 289 | 2.7 | 119.0 | 27.3 | 0.0 | 121.7 | 1 |
| 6 | 125 | 294 | -539 | -59 | 0 | 37 | 290 | 5.5 | 98.0 | 27.3 | 0.0 | 103.5 | 1 |
| 7 | 125 | -405 | -539 | 142 | 0 | -112 | 293 | 7.5 | 191.9 | 27.3 | 0.0 | 199.4 | 1 |
| 8 | 125 | -255 | -538 | -37 | 0 | -21 | 294 | 4.7 | 78.5 | 27.3 | 0.0 | 83.2 | 1 |
| 9 | 125 | -243 | -754 | 352 | 0 | -194 | 405 | 4.5 | 314.2 | 38.2 | 0.0 | 318.7 | 1 |
| 10 | 125 | 255 | -753 | -245 | 0 | 109 | 408 | 4.7 | 208.7 | 38.2 | 0.0 | 213.5 | 1 |
| 11 | 125 | -407 | -754 | 359 | 0 | -212 | 406 | 7.6 | 336.0 | 38.2 | 0.0 | 343.6 | 1 |
| 12 | 125 | 113 | -538 | -255 | 0 | 107 | 293 | 2.1 | 185.6 | 27.3 | 0.0 | 187.7 | 1 |
| 13 | 125 | -190 | -1837 | 141 | 0 | -129 | 981 | 3.5 | 336.5 | 93.2 | 0.0 | 340.1 | 1 |
| 14 | 125 | 55 | 524 | -41 | 0 | 37 | -271 | 1.0 | 94.7 | 26.6 | 0.0 | 95.7 | 1 |
| 15 | 125 | -199 | -1917 | 148 | 0 | -135 | 1023 | 3.7 | 351.0 | 97.3 | 0.0 | 354.7 | 1 |
| | | | | | | | | | | | | | |
| 1 | 143 | -228 | -2213 | 170 | 0 | -185 | 781 | 4.2 | 370.2 | 112.3 | 0.0 | 374.5 | 1 |
| 5 | 143 | 145 | -546 | 120 | 0 | -75 | 193 | 2.7 | 128.2 | 27.7 | 0.0 | 130.9 | 1 |
| 6 | 143 | 294 | -546 | -59 | 0 | 48 | 193 | 5.5 | 93.7 | 27.7 | 0.0 | 99.2 | 1 |
| 7 | 143 | -405 | -546 | 142 | 0 | -138 | 196 | 7.5 | 206.0 | 27.7 | 0.0 | 213.5 | 1 |
| 8 | 143 | -255 | -546 | -37 | 0 | -14 | 197 | 4.7 | 52.9 | 27.7 | 0.0 | 57.6 | 1 |
| 9 | 143 | -243 | -764 | 352 | 0 | -257 | 270 | 4.5 | 367.9 | 38.7 | 0.0 | 372.4 | 1 |
| 10 | 143 | 255 | -763 | -245 | 0 | 153 | 273 | 4.7 | 238.7 | 38.7 | 0.0 | 243.5 | 1 |
| 11 | 143 | -407 | -763 | 359 | 0 | -276 | 271 | 7.6 | 391.1 | 38.7 | 0.0 | 398.7 | 1 |
| 12 | 143 | 113 | -546 | -255 | 0 | 153 | 197 | 2.1 | 224.7 | 27.7 | 0.0 | 226.8 | 1 |
| 13 | 143 | -190 | -1846 | 141 | 0 | -154 | 653 | 3.5 | 308.9 | 93.7 | 0.0 | 312.4 | 1 |
| 14 | 143 | 55 | 516 | -41 | 0 | 44 | -179 | 1.0 | 87.1 | 26.2 | 0.0 | 88.1 | 1 |
| 15 | 143 | -199 | -1926 | 148 | 0 | -161 | 681 | 3.7 | 322.2 | 97.8 | 0.0 | 325.9 | 1 |
| | | | | | | | | | | | | | |
| 1 | 161 | -228 | -2223 | 170 | 0 | -215 | 386 | 4.2 | 336.8 | 112.8 | 0.0 | 341.0 | 1 |
| 5 | 161 | 145 | -554 | 120 | 0 | -97 | 94 | 2.7 | 137.2 | 28.1 | 0.0 | 139.8 | 1 |
| 6 | 161 | 294 | -554 | -59 | 0 | 58 | 95 | 5.5 | 89.2 | 28.1 | 0.0 | 94.6 | 1 |
| 7 | 161 | -405 | -554 | 142 | 0 | -163 | 98 | 7.5 | 219.8 | 28.1 | 0.0 | 227.4 | 1 |
| 8 | 161 | -255 | -553 | -37 | 0 | -7 | 99 | 4.7 | 27.0 | 28.1 | 0.0 | 48.9 | 4 |
| 9 | 161 | -243 | -773 | 352 | 0 | -320 | 133 | 4.5 | 421.3 | 39.2 | 0.0 | 425.8 | 1 |
| 10 | 161 | 255 | -773 | -245 | 0 | 197 | 136 | 4.7 | 268.4 | 39.2 | 0.0 | 273.1 | 1 |
| 11 | 161 | -407 | -773 | 359 | 0 | -340 | 134 | 7.6 | 445.9 | 39.2 | 0.0 | 453.5 | 1 |
| 12 | 161 | 113 | -553 | -255 | 0 | 198 | 99 | 2.1 | 263.6 | 28.1 | 0.0 | 265.7 | 1 |
| 13 | 161 | -190 | -1856 | 141 | 0 | -180 | 323 | 3.5 | 280.9 | 94.2 | 0.0 | 284.4 | 1 |
| 14 | 161 | 55 | 509 | -41 | 0 | 52 | -87 | 1.0 | 79.8 | 25.8 | 0.0 | 80.8 | 1 |
| 15 | 161 | -198 | -1936 | 148 | 0 | -187 | 336 | 3.7 | 293.0 | 98.2 | 0.0 | 296.7 | 1 |
| | | | | | | | | | | | | | |
| 1 | 178 | -228 | -2233 | 170 | 0 | -246 | -11 | 4.2 | 307.1 | 113.3 | 0.0 | 311.4 | 1 |
| 5 | 178 | 145 | -562 | 120 | 0 | -118 | -5 | 2.7 | 147.7 | 28.5 | 0.0 | 150.4 | 1 |
| 6 | 178 | 294 | -561 | -59 | 0 | 69 | -4 | 5.5 | 85.9 | 28.5 | 0.0 | 91.4 | 1 |
| 7 | 178 | -405 | -561 | 142 | 0 | -188 | -1 | 7.5 | 233.9 | 28.5 | 0.0 | 241.5 | 1 |
| 8 | 178 | -255 | -561 | -37 | 0 | -1 | -1 | 4.7 | 1.1 | 28.5 | 0.0 | 49.5 | 4 |
| 9 | 178 | -243 | -783 | 352 | 0 | -383 | -6 | 4.5 | 476.5 | 39.7 | 0.0 | 481.0 | 1 |
| 10 | 178 | 255 | -783 | -245 | 0 | 240 | -3 | 4.7 | 298.8 | 39.7 | 0.0 | 303.5 | 1 |
| 11 | 178 | -407 | -783 | 359 | 0 | -404 | -5 | 7.6 | 502.1 | 39.7 | 0.0 | 509.7 | 1 |
| 12 | 178 | 113 | -561 | -255 | 0 | 244 | -1 | 2.1 | 302.6 | 28.5 | 0.0 | 304.7 | 1 |
| 13 | 178 | -190 | -1866 | 141 | 0 | -205 | -9 | 3.5 | 256.0 | 94.7 | 0.0 | 259.5 | 1 |
| 14 | 178 | 55 | 501 | -41 | 0 | 59 | 3 | 1.0 | 73.7 | 25.4 | 0.0 | 74.7 | 1 |
| 15 | 178 | -199 | -1946 | 148 | 0 | -214 | -10 | 3.7 | 267.1 | 98.7 | 0.0 | 270.8 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x | Mmax | Mmax | Sf (M) | x | fmax. | fmax | fmax / l | Nota |
|----|---------|-----|-------|--------|--------|------|-----------|------|----------|------|
| | | cm | daN*m | daN/cm | | cm | | | | |
| 1 | -- | 0 | 3883 | 697.0 | -- | -- | -- | -- | -- | |
| -- | Rara | 108 | 10 | -- | 98 | 0.00 | 1 / 99999 | | | |
| -- | Freq. | 108 | 10 | -- | 98 | 0.00 | 1 / 99999 | | | |
| -- | Q.Perm. | 108 | 10 | -- | 98 | 0.00 | 1 / 99999 | | | |
| -- | Rara | 108 | 10 | -- | 98 | 0.00 | 1 / 99999 | | | |
| -- | Rara | 108 | 10 | -- | 98 | 0.00 | 1 / 99999 | | | |
| -- | Freq. | 108 | 10 | -- | 98 | 0.00 | 1 / 99999 | | | |
| -- | Freq. | 108 | 10 | -- | 98 | 0.00 | 1 / 99999 | | | |

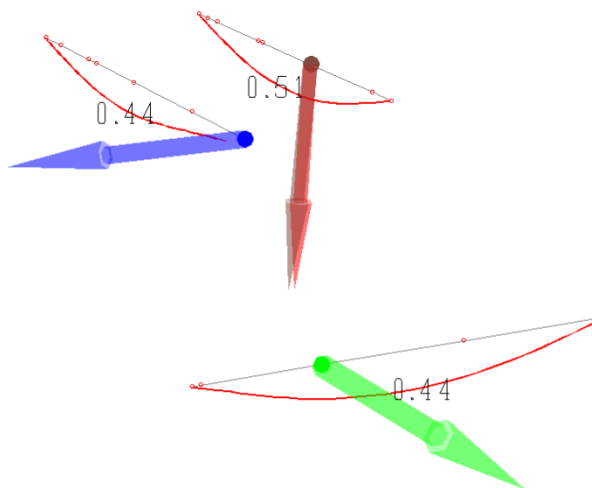
Verifica di STABILITA' e/o SVERGOLAMENTO

| n.comb | Fx | My eq. | Mz eq. | Sn. omega | Sn.yx | Sn.zx | OMEGA | OMEGA1 | Sf | Nota |
|--------|-------|--------|--------|-----------|-------|-------|-------|--------|--------|-------------|
| | daN | daN*m | | | | | | | daN/cm | |
| 1 | -262 | 98 | 7 | 153 | 41 | 153 | 3.41 | 1.86 | 141.6 | Sn.zx > 150 |
| 5 | 1065 | 140 | 3 | 153 | 41 | 153 | 1.00 | 1.86 | 195.2 | Sn.zx > 150 |
| 6 | 1212 | 189 | 2 | 153 | 41 | 153 | 1.00 | 1.86 | 257.6 | Sn.zx > 150 |
| 7 | -1340 | 183 | 1 | 153 | 41 | 153 | 3.41 | 1.86 | 318.8 | Sn.zx > 150 |
| 8 | -1193 | 149 | 0 | 153 | 41 | 153 | 3.41 | 1.86 | 265.8 | Sn.zx > 150 |
| 9 | -243 | 536 | 3 | 153 | 41 | 153 | 3.41 | 1.86 | 685.7 | Sn.zx > 150 |
| 10 | 518 | 561 | 2 | 153 | 41 | 153 | 1.00 | 1.86 | 706.9 | Sn.zx > 150 |
| 11 | -694 | 548 | 3 | 153 | 41 | 153 | 3.41 | 1.86 | 735.9 | Sn.zx > 150 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | |
|----|------|-----|---|-----|----|-----|------|------|-------|-------------|
| 12 | -178 | 548 | 1 | 153 | 41 | 153 | 3.41 | 1.86 | 693.9 | Sn.zx > 150 |
| 13 | -219 | 82 | 6 | 153 | 41 | 153 | 3.41 | 1.86 | 118.0 | Sn.zx > 150 |
| 14 | 63 | 24 | 2 | 153 | 41 | 153 | 1.00 | 1.86 | 31.0 | Sn.zx > 150 |
| 15 | -228 | 85 | 6 | 153 | 41 | 153 | 3.41 | 1.86 | 123.1 | Sn.zx > 150 |

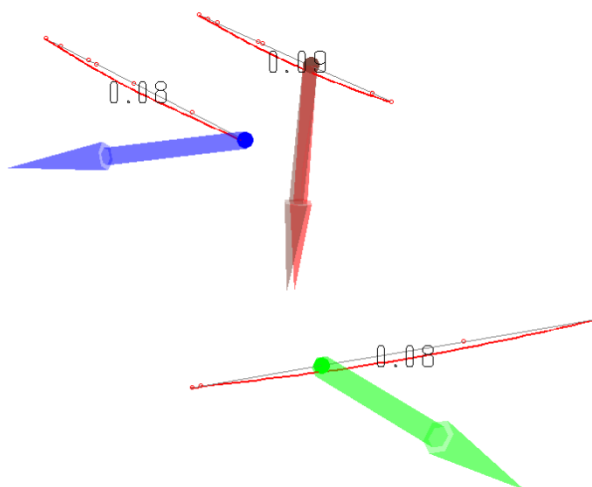
Verifica spostamenti verticali (rif.)4.2.4.2.1 delle NTC 2008)



Prospettiva

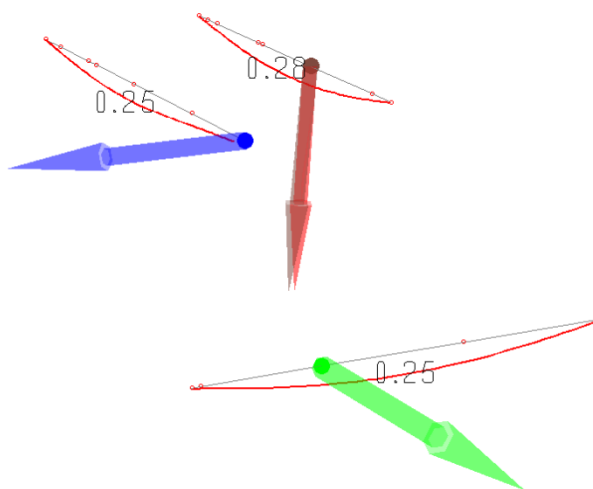
61

Freccia massima combinazione rara



Prospettiva

Freccia massima combinazione quasi permanente



Prospettiva

Freccia massima combinazione frequente

62

Luce di calcolo 510 cm

Rara $510/0.51 = 1000 > 250 \rightarrow$ verificato

Frequente $510/0.28 = 1821 > 250 \rightarrow$ verificato

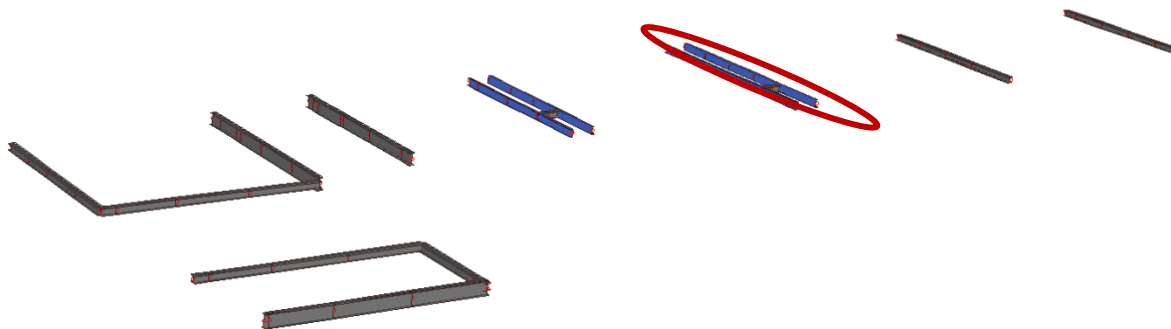
Quasi permanente $510/0.09 = 5667 > 250 \rightarrow$ verificato

2.2.1. VERIFICA SLU E SLE UPN200

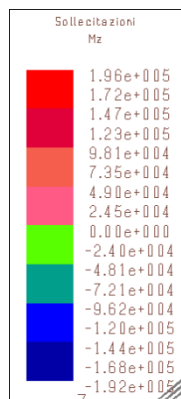
Sezioni
2 Ps UNP 200 ycap=No



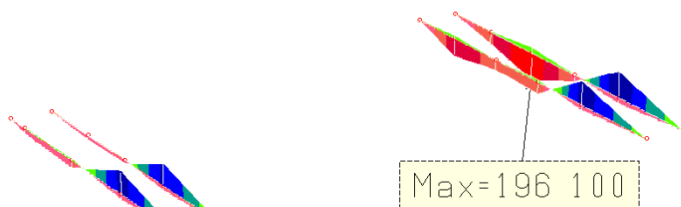
Prospettiva



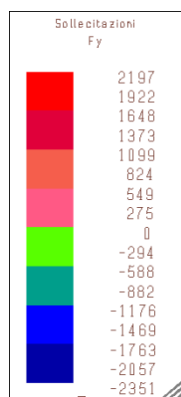
63



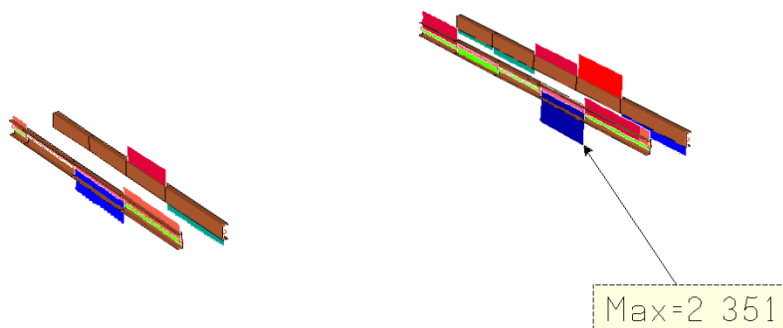
Prospettiva



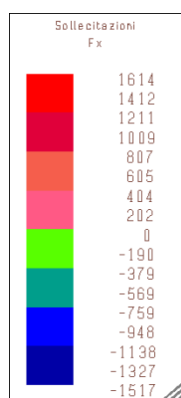
Momento flettente



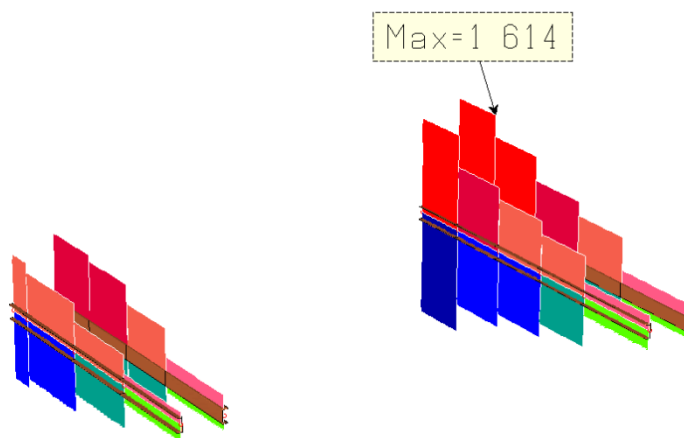
Prospettiva



Taglio



Prospettiva



Sforzo normale

Lavoro: **Blocco 1** Intestazione lavoro: **ESECUTIVO**

Elemento: **TRAVE** Metodo di verifica: **Stati limite**

Gruppo: **2** Descrizione: **Travi principali**

Tabella: **TABELLA TRAVI SECONDARIE**

Tipo acciaio: **S 275**
ASTA NUM. 54 NI 91 NF 64 Lungh. 155.0 cm SEZ. 2 Ps UNP 200

categoria: p.p. y qy tot.

qy medio: 0.2528 0.2528 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf(Fx) | Sf(M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|-------|-----|-------|-----|------|--------|-------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | 103 | -1207 | 47 | 0 | 35 | -0 | 3.2 | 131.5 | 85.1 | 0.0 | 156.1 | 5 | |
| 5 | 0 | 99 | -271 | 67 | 0 | 50 | -0 | 3.1 | 186.9 | 19.1 | 0.0 | 183.8 | 1 | |
| 6 | 0 | 220 | -271 | 68 | 0 | 51 | -0 | 6.8 | 188.8 | 19.1 | 0.0 | 182.0 | 1 | |
| 7 | 0 | -175 | -324 | -47 | 0 | -36 | 0 | 5.4 | 132.0 | 22.8 | 0.0 | 126.6 | 1 | |
| 8 | 0 | -54 | -324 | -47 | 0 | -35 | 0 | 1.7 | 130.1 | 22.9 | 0.0 | 128.4 | 1 | |
| 9 | 0 | -122 | -407 | 34 | 0 | 25 | -0 | 3.8 | 92.9 | 28.7 | 0.0 | 96.7 | 1 | |
| 10 | 0 | 280 | -408 | 36 | 0 | 27 | -0 | 8.7 | 99.5 | 28.7 | 0.0 | 90.8 | 1 | |
| 11 | 0 | -208 | -423 | -3 | 0 | -2 | -0 | 6.5 | 7.6 | 29.9 | 0.0 | 52.5 | 5 | |
| 12 | 0 | 184 | -306 | -5 | 0 | -4 | -0 | 5.7 | 13.8 | 21.5 | 0.0 | 37.3 | 5 | |
| 13 | 0 | 86 | -1007 | 39 | 0 | 29 | -0 | 2.7 | 109.3 | 71.0 | 0.0 | 130.2 | 5 | |
| 14 | 0 | -29 | 282 | -13 | 0 | -10 | 0 | 0.9 | 36.5 | 19.9 | 0.0 | 37.3 | 5 | |
| 15 | 0 | 90 | -1050 | 41 | 0 | 31 | -0 | 2.8 | 114.1 | 74.1 | 0.0 | 135.8 | 5 | |
| 1 | 16 | 103 | -1212 | 47 | 0 | 28 | -188 | 3.2 | 202.3 | 85.5 | 0.0 | 199.1 | 1 | |
| 5 | 16 | 99 | -275 | 67 | 0 | 40 | -43 | 3.1 | 170.4 | 19.4 | 0.0 | 167.3 | 1 | |
| 6 | 16 | 220 | -275 | 68 | 0 | 40 | -43 | 6.8 | 171.9 | 19.4 | 0.0 | 165.1 | 1 | |
| 7 | 16 | -175 | -328 | -47 | 0 | -28 | -50 | 5.4 | 131.1 | 23.1 | 0.0 | 125.7 | 1 | |
| 8 | 16 | -54 | -328 | -47 | 0 | -28 | -50 | 1.7 | 129.6 | 23.1 | 0.0 | 127.9 | 1 | |
| 9 | 16 | -122 | -412 | 34 | 0 | 20 | -64 | 3.8 | 106.9 | 29.1 | 0.0 | 110.6 | 1 | |
| 10 | 16 | 280 | -413 | 36 | 0 | 21 | -64 | 8.7 | 112.1 | 29.1 | 0.0 | 103.4 | 1 | |
| 11 | 16 | -208 | -428 | -3 | 0 | -2 | -66 | 6.5 | 40.7 | 30.2 | 0.0 | 53.4 | 4 | |
| 12 | 16 | 184 | -309 | -5 | 0 | -3 | -48 | 5.7 | 35.9 | 21.8 | 0.0 | 41.7 | 1 | |
| 13 | 16 | 86 | -1012 | 39 | 0 | 23 | -157 | 2.7 | 168.5 | 71.4 | 0.0 | 165.8 | 1 | |
| 14 | 16 | -29 | 278 | -13 | 0 | -8 | 43 | 0.9 | 51.6 | 19.6 | 0.0 | 50.7 | 1 | |
| 15 | 16 | 90 | -1055 | 41 | 0 | 24 | -164 | 2.8 | 175.8 | 74.4 | 0.0 | 173.1 | 1 | |
| 1 | 31 | 103 | -1217 | 47 | 0 | 21 | -376 | 3.2 | 273.5 | 85.9 | 0.0 | 270.3 | 1 | |
| 5 | 31 | 99 | -279 | 67 | 0 | 30 | -85 | 3.1 | 154.2 | 19.7 | 0.0 | 151.1 | 1 | |
| 6 | 31 | 220 | -279 | 68 | 0 | 30 | -85 | 6.8 | 155.4 | 19.7 | 0.0 | 148.6 | 1 | |
| 7 | 31 | -175 | -332 | -47 | 0 | -21 | -102 | 5.4 | 130.6 | 23.4 | 0.0 | 125.2 | 1 | |
| 8 | 31 | -54 | -332 | -47 | 0 | -21 | -102 | 1.7 | 129.5 | 23.4 | 0.0 | 127.8 | 1 | |
| 9 | 31 | -122 | -417 | 34 | 0 | 15 | -128 | 3.8 | 121.2 | 29.4 | 0.0 | 125.0 | 1 | |
| 10 | 31 | 280 | -418 | 36 | 0 | 16 | -128 | 8.7 | 125.2 | 29.5 | 0.0 | 116.5 | 1 | |
| 11 | 31 | -208 | -434 | -3 | 0 | -1 | -133 | 6.5 | 74.1 | 30.6 | 0.0 | 78.6 | 4 | |
| 12 | 31 | 184 | -313 | -5 | 0 | -2 | -96 | 5.7 | 58.4 | 22.1 | 0.0 | 64.1 | 1 | |
| 13 | 31 | 86 | -1017 | 39 | 0 | 17 | -314 | 2.7 | 228.1 | 71.8 | 0.0 | 225.4 | 1 | |
| 14 | 31 | -29 | 274 | -13 | 0 | -6 | 86 | 0.9 | 66.4 | 19.3 | 0.0 | 65.5 | 1 | |
| 15 | 31 | 90 | -1060 | 41 | 0 | 18 | -328 | 2.8 | 238.0 | 74.8 | 0.0 | 235.2 | 1 | |
| 1 | 47 | 103 | -1222 | 47 | 0 | 13 | -565 | 3.2 | 345.1 | 86.2 | 0.0 | 341.9 | 1 | |
| 5 | 47 | 99 | -283 | 67 | 0 | 19 | -129 | 3.1 | 138.3 | 19.9 | 0.0 | 135.2 | 1 | |
| 6 | 47 | 220 | -283 | 68 | 0 | 19 | -129 | 6.8 | 139.1 | 19.9 | 0.0 | 132.3 | 1 | |
| 7 | 47 | -175 | -336 | -47 | 0 | -14 | -153 | 5.4 | 130.5 | 23.7 | 0.0 | 125.0 | 1 | |
| 8 | 47 | -54 | -336 | -47 | 0 | -13 | -153 | 1.7 | 129.7 | 23.7 | 0.0 | 128.0 | 1 | |
| 9 | 47 | -122 | -422 | 34 | 0 | 9 | -193 | 3.8 | 136.0 | 29.8 | 0.0 | 139.8 | 1 | |
| 10 | 47 | 280 | -423 | 36 | 0 | 10 | -193 | 8.7 | 138.7 | 29.8 | 0.0 | 130.0 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|-------|-----|---|-----|-------|-----|--------|------|-----|--------|---|
| 11 | 47 | -208 | -439 | -3 | 0 | -1 | -201 | 6.5 | 108.0 | 30.9 | 0.0 | 112.5 | 3 |
| 12 | 47 | 184 | -317 | -5 | 0 | -1 | -145 | 5.7 | 81.1 | 22.4 | 0.0 | 86.8 | 1 |
| 13 | 47 | 86 | -1022 | 39 | 0 | 11 | -472 | 2.7 | 288.1 | 72.1 | 0.0 | 285.4 | 1 |
| 14 | 47 | -29 | 270 | -13 | 0 | -4 | 128 | 0.9 | 80.9 | 19.0 | 0.0 | 80.0 | 1 |
| 15 | 47 | 90 | -1065 | 41 | 0 | 12 | -492 | 2.8 | 300.6 | 75.1 | 0.0 | 297.8 | 1 |
| | | | | | | | | | | | | | |
| 1 | 62 | 103 | -1227 | 47 | 0 | 6 | -755 | 3.2 | 417.2 | 86.6 | 0.0 | 413.9 | 1 |
| 5 | 62 | 99 | -287 | 67 | 0 | 9 | -173 | 3.1 | 122.7 | 20.2 | 0.0 | 119.7 | 1 |
| 6 | 62 | 220 | -287 | 68 | 0 | 9 | -173 | 6.8 | 123.2 | 20.2 | 0.0 | 116.4 | 1 |
| 7 | 62 | -175 | -339 | -47 | 0 | -6 | -206 | 5.4 | 130.6 | 23.9 | 0.0 | 125.2 | 1 |
| 8 | 62 | -54 | -340 | -47 | 0 | -6 | -206 | 1.7 | 130.3 | 24.0 | 0.0 | 128.6 | 1 |
| 9 | 62 | -122 | -428 | 34 | 0 | 4 | -259 | 3.8 | 151.2 | 30.2 | 0.0 | 155.0 | 1 |
| 10 | 62 | 280 | -428 | 36 | 0 | 5 | -259 | 8.7 | 152.7 | 30.2 | 0.0 | 150.6 | 3 |
| 11 | 62 | -208 | -444 | -3 | 0 | -0 | -269 | 6.5 | 142.3 | 31.3 | 0.0 | 147.8 | 3 |
| 12 | 62 | 184 | -321 | -5 | 0 | -1 | -194 | 5.7 | 104.1 | 22.7 | 0.0 | 109.8 | 1 |
| 13 | 62 | 86 | -1027 | 39 | 0 | 5 | -631 | 2.7 | 348.5 | 72.5 | 0.0 | 345.8 | 1 |
| 14 | 62 | -29 | 266 | -13 | 0 | -2 | 170 | 0.9 | 95.0 | 18.8 | 0.0 | 94.1 | 1 |
| 15 | 62 | 90 | -1070 | 41 | 0 | 5 | -658 | 2.8 | 363.5 | 75.5 | 0.0 | 360.8 | 1 |
| | | | | | | | | | | | | | |
| 1 | 78 | 103 | -1233 | 47 | 0 | -1 | -945 | 3.2 | 499.7 | 86.9 | 0.0 | 502.9 | 1 |
| 5 | 78 | 99 | -291 | 67 | 0 | -2 | -218 | 3.1 | 120.4 | 20.5 | 0.0 | 123.5 | 1 |
| 6 | 78 | 220 | -291 | 68 | 0 | -2 | -218 | 6.8 | 120.5 | 20.5 | 0.0 | 127.3 | 1 |
| 7 | 78 | -175 | -343 | -47 | 0 | 1 | -258 | 5.4 | 139.4 | 24.2 | 0.0 | 144.8 | 1 |
| 8 | 78 | -54 | -344 | -47 | 0 | 1 | -259 | 1.7 | 139.5 | 24.2 | 0.0 | 141.1 | 1 |
| 9 | 78 | -122 | -433 | 34 | 0 | -1 | -326 | 3.8 | 173.9 | 30.5 | 0.0 | 175.4 | 3 |
| 10 | 78 | 280 | -433 | 36 | 0 | -1 | -326 | 8.7 | 174.0 | 30.5 | 0.0 | 182.8 | 1 |
| 11 | 78 | -208 | -449 | -3 | 0 | -0 | -338 | 6.5 | 177.0 | 31.7 | 0.0 | 183.4 | 3 |
| 12 | 78 | 184 | -325 | -5 | 0 | 0 | -244 | 5.7 | 128.3 | 22.9 | 0.0 | 133.8 | 3 |
| 13 | 78 | 86 | -1033 | 39 | 0 | -1 | -790 | 2.7 | 417.7 | 72.8 | 0.0 | 420.4 | 1 |
| 14 | 78 | -29 | 262 | -13 | 0 | 0 | 211 | 0.9 | 111.8 | 18.5 | 0.0 | 112.7 | 1 |
| 15 | 78 | 90 | -1076 | 41 | 0 | -1 | -824 | 2.8 | 435.7 | 75.9 | 0.0 | 438.5 | 1 |
| | | | | | | | | | | | | | |
| 1 | 93 | 103 | -1238 | 47 | 0 | -9 | -1137 | 3.2 | 627.1 | 87.3 | 0.0 | 630.4 | 1 |
| 5 | 93 | 99 | -294 | 67 | 0 | -12 | -263 | 3.1 | 182.8 | 20.8 | 0.0 | 185.9 | 1 |
| 6 | 93 | 220 | -295 | 68 | 0 | -12 | -263 | 6.8 | 183.2 | 20.8 | 0.0 | 190.1 | 1 |
| 7 | 93 | -175 | -347 | -47 | 0 | 8 | -312 | 5.4 | 194.6 | 24.5 | 0.0 | 200.1 | 1 |
| 8 | 93 | -54 | -347 | -47 | 0 | 8 | -312 | 1.7 | 194.3 | 24.5 | 0.0 | 196.0 | 1 |
| 9 | 93 | -122 | -438 | 34 | 0 | -6 | -393 | 3.8 | 228.5 | 30.9 | 0.0 | 224.7 | 1 |
| 10 | 93 | 280 | -438 | 36 | 0 | -6 | -393 | 8.7 | 230.0 | 30.9 | 0.0 | 238.7 | 1 |
| 11 | 93 | -208 | -454 | -3 | 0 | 0 | -408 | 6.5 | 214.9 | 32.0 | 0.0 | 221.4 | 1 |
| 12 | 93 | 184 | -329 | -5 | 0 | 1 | -295 | 5.7 | 157.7 | 23.2 | 0.0 | 161.3 | 3 |
| 13 | 93 | 86 | -1038 | 39 | 0 | -7 | -951 | 2.7 | 524.3 | 73.2 | 0.0 | 527.0 | 1 |
| 14 | 93 | -29 | 258 | -13 | 0 | 2 | 251 | 0.9 | 140.5 | 18.2 | 0.0 | 141.4 | 1 |
| 15 | 93 | 90 | -1081 | 41 | 0 | -8 | -991 | 2.8 | 546.9 | 76.2 | 0.0 | 549.7 | 1 |
| | | | | | | | | | | | | | |
| 1 | 109 | 103 | -1243 | 47 | 0 | -16 | -1329 | 3.2 | 755.0 | 87.7 | 0.0 | 758.2 | 1 |
| 5 | 109 | 99 | -298 | 67 | 0 | -23 | -309 | 3.1 | 245.5 | 21.0 | 0.0 | 248.6 | 1 |
| 6 | 109 | 220 | -298 | 68 | 0 | -23 | -309 | 6.8 | 246.3 | 21.1 | 0.0 | 253.1 | 1 |
| 7 | 109 | -175 | -351 | -47 | 0 | 16 | -366 | 5.4 | 250.2 | 24.8 | 0.0 | 255.6 | 1 |
| 8 | 109 | -54 | -351 | -47 | 0 | 16 | -366 | 1.7 | 249.5 | 24.8 | 0.0 | 251.2 | 1 |
| 9 | 109 | -122 | -443 | 34 | 0 | -11 | -461 | 3.8 | 283.5 | 31.2 | 0.0 | 279.7 | 1 |
| 10 | 109 | 280 | -443 | 36 | 0 | -12 | -462 | 8.7 | 286.3 | 31.3 | 0.0 | 295.0 | 1 |
| 11 | 109 | -208 | -459 | -3 | 0 | 1 | -479 | 6.5 | 253.4 | 32.4 | 0.0 | 259.9 | 1 |
| 12 | 109 | 184 | -333 | -5 | 0 | 2 | -346 | 5.7 | 187.4 | 23.5 | 0.0 | 189.2 | 3 |
| 13 | 109 | 86 | -1043 | 39 | 0 | -13 | -1112 | 2.7 | 631.3 | 73.5 | 0.0 | 634.0 | 1 |
| 14 | 109 | -29 | 254 | -13 | 0 | 4 | 291 | 0.9 | 168.8 | 17.9 | 0.0 | 169.7 | 1 |
| 15 | 109 | 90 | -1086 | 41 | 0 | -14 | -1159 | 2.8 | 658.4 | 76.6 | 0.0 | 661.2 | 1 |
| | | | | | | | | | | | | | |
| 1 | 124 | 103 | -1248 | 47 | 0 | -23 | -1522 | 3.2 | 883.2 | 88.0 | 0.0 | 886.4 | 1 |
| 5 | 124 | 99 | -302 | 67 | 0 | -33 | -356 | 3.1 | 308.5 | 21.3 | 0.0 | 311.5 | 1 |
| 6 | 124 | 220 | -302 | 68 | 0 | -33 | -356 | 6.8 | 309.7 | 21.3 | 0.0 | 316.5 | 1 |
| 7 | 124 | -175 | -355 | -47 | 0 | 23 | -421 | 5.4 | 306.1 | 25.1 | 0.0 | 311.5 | 1 |
| 8 | 124 | -54 | -355 | -47 | 0 | 23 | -421 | 1.7 | 305.0 | 25.1 | 0.0 | 306.7 | 1 |
| 9 | 124 | -122 | -448 | 34 | 0 | -17 | -530 | 3.8 | 338.9 | 31.6 | 0.0 | 335.1 | 1 |
| 10 | 124 | 280 | -448 | 36 | 0 | -18 | -531 | 8.7 | 343.0 | 31.6 | 0.0 | 351.7 | 1 |
| 11 | 124 | -208 | -464 | -3 | 0 | 1 | -550 | 6.5 | 292.4 | 32.7 | 0.0 | 298.8 | 1 |
| 12 | 124 | 184 | -337 | -5 | 0 | 2 | -398 | 5.7 | 217.4 | 23.8 | 0.0 | 217.4 | 3 |
| 13 | 124 | 86 | -1048 | 39 | 0 | -19 | -1274 | 2.7 | 738.7 | 73.9 | 0.0 | 741.4 | 1 |
| 14 | 124 | -29 | 250 | -13 | 0 | 7 | 330 | 0.9 | 196.9 | 17.7 | 0.0 | 197.8 | 1 |
| 15 | 124 | 90 | -1091 | 41 | 0 | -20 | -1328 | 2.8 | 770.4 | 76.9 | 0.0 | 773.2 | 1 |
| | | | | | | | | | | | | | |
| 1 | 140 | 103 | -1253 | 47 | 0 | -31 | -1715 | 3.2 | 1011.9 | 88.4 | 0.0 | 1015.1 | 1 |
| 5 | 140 | 99 | -306 | 67 | 0 | -43 | -403 | 3.1 | 371.8 | 21.6 | 0.0 | 374.9 | 1 |
| 6 | 140 | 220 | -306 | 68 | 0 | -44 | -403 | 6.8 | 373.4 | 21.6 | 0.0 | 380.2 | 1 |
| 7 | 140 | -175 | -359 | -47 | 0 | 30 | -476 | 5.4 | 362.2 | 25.3 | 0.0 | 367.7 | 1 |
| 8 | 140 | -54 | -359 | -47 | 0 | 30 | -476 | 1.7 | 360.8 | 25.3 | 0.0 | 362.5 | 1 |
| 9 | 140 | -122 | -453 | 34 | 0 | -22 | -600 | 3.8 | 394.7 | 32.0 | 0.0 | 390.9 | 1 |
| 10 | 140 | 280 | -453 | 36 | 0 | -23 | -601 | 8.7 | 400.1 | 32.0 | 0.0 | 408.9 | 1 |
| 11 | 140 | -208 | -469 | -3 | 0 | 2 | -623 | 6.5 | 331.7 | 33.1 | 0.0 | 338.2 | 1 |
| 12 | 140 | 184 | -341 | -5 | 0 | 3 | -451 | 5.7 | 247.7 | 24.0 | 0.0 | 246.0 | 3 |
| 13 | 140 | 86 | -1053 | 39 | 0 | -26 | -1436 | 2.7 | 846.6 | 74.3 | 0.0 | 849.2 | 1 |
| 14 | 140 | -29 | 247 | -13 | 0 | 9 | 368 | 0.9 | 224.6 | 17.4 | 0.0 | 225.5 | 1 |
| 15 | 140 | 90 | -1096 | 41 | 0 | -27 | -1498 | 2.8 | 882.8 | 77.3 | 0.0 | 885.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 155 | 103 | -1258 | 47 | 0 | -38 | -1910 | 3.2 | 1141.0 | 88.7 | 0.0 | 1144.2 | 1 |
| 5 | 155 | 99 | -310 | 67 | 0 | -54 | -451 | 3.1 | 435.4 | 21.9 | 0.0 | 438.5 | 1 |
| 6 | 155 | 220 | -310 | 68 | 0 | -54 | -451 | 6.8 | 437.5 | 21.9 | 0.0 | 444.3 | 1 |
| 7 | 155 | -175 | -363 | -47 | 0 | 38 | -532 | 5.4 | 418.7 | 25.6 | 0.0 | 424.2 | 1 |
| 8 | 155 | -54 | -363 | -47 | 0 | 37 | -532 | 1.7 | 416.9 | 25.6 | 0.0 | 418.6 | 1 |

| | | | | | | | | | | | | | |
|----|-----|------|-------|-----|---|-----|-------|-----|-------|------|-----|-------|---|
| 9 | 155 | -122 | -458 | 34 | 0 | -27 | -671 | 3.8 | 450.9 | 32.3 | 0.0 | 447.1 | 1 |
| 10 | 155 | 280 | -458 | 36 | 0 | -29 | -671 | 8.7 | 457.7 | 32.3 | 0.0 | 466.4 | 1 |
| 11 | 155 | -208 | -474 | -3 | 0 | 2 | -696 | 6.5 | 371.5 | 33.5 | 0.0 | 377.9 | 1 |
| 12 | 155 | 184 | -345 | -5 | 0 | 4 | -504 | 5.7 | 278.4 | 24.3 | 0.0 | 274.8 | 3 |
| 13 | 155 | 86 | -1058 | 39 | 0 | -32 | -1600 | 2.7 | 954.8 | 74.6 | 0.0 | 957.5 | 1 |
| 14 | 155 | -29 | 243 | -13 | 0 | 11 | 406 | 0.9 | 252.1 | 17.1 | 0.0 | 253.0 | 1 |
| 15 | 155 | 90 | -1101 | 41 | 0 | -33 | -1668 | 2.8 | 995.6 | 77.7 | 0.0 | 998.4 | 1 |

ASTA NUM. 53 NI 64 NF 76 Lungh. 109.3 cm SEZ. 2 Ps UNP 200

categoria: p.p. y qy tot.

qy medio: 0.2528 0.2528 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf(Fx) | Sf(M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|------|-----|-------|-----|-------|--------|--------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | 255 | 2197 | 20 | 0 | 10 | -1923 | 7.9 | 1045.2 | 155.0 | 0.0 | 1037.3 | 1 | |
| 5 | 0 | 332 | 533 | 95 | 0 | 46 | -454 | 10.3 | 406.4 | 37.6 | 0.0 | 396.1 | 1 | |
| 6 | 0 | 646 | 533 | 96 | 0 | 46 | -454 | 20.1 | 407.8 | 37.6 | 0.0 | 387.7 | 1 | |
| 7 | 0 | -546 | 644 | -93 | 0 | -44 | -536 | 17.0 | 445.0 | 45.4 | 0.0 | 428.1 | 1 | |
| 8 | 0 | -232 | 644 | -92 | 0 | -44 | -536 | 7.2 | 444.1 | 45.4 | 0.0 | 436.9 | 1 | |
| 9 | 0 | -304 | 798 | 32 | 0 | 15 | -676 | 9.4 | 409.4 | 56.3 | 0.0 | 418.8 | 1 | |
| 10 | 0 | 744 | 799 | 34 | 0 | 16 | -676 | 23.1 | 413.6 | 56.3 | 0.0 | 398.9 | 3 | |
| 11 | 0 | -573 | 832 | -24 | 0 | -11 | -701 | 17.8 | 407.4 | 58.7 | 0.0 | 399.4 | 3 | |
| 12 | 0 | 450 | 606 | -23 | 0 | -11 | -508 | 14.0 | 306.5 | 42.7 | 0.0 | 320.5 | 1 | |
| 13 | 0 | 212 | 1848 | 17 | 0 | 9 | -1611 | 6.6 | 875.6 | 130.4 | 0.0 | 869.0 | 1 | |
| 14 | 0 | -68 | -423 | -4 | 0 | -2 | 408 | 2.1 | 220.1 | 29.8 | 0.0 | 218.1 | 3 | |
| 15 | 0 | 221 | 1924 | 17 | 0 | 9 | -1679 | 6.9 | 912.5 | 135.7 | 0.0 | 905.7 | 1 | |
| 1 | 11 | 255 | 2193 | 20 | 0 | 8 | -1683 | 7.9 | 911.6 | 154.7 | 0.0 | 903.7 | 1 | |
| 5 | 11 | 332 | 530 | 95 | 0 | 35 | -396 | 10.3 | 337.3 | 37.4 | 0.0 | 327.0 | 1 | |
| 6 | 11 | 646 | 531 | 96 | 0 | 35 | -396 | 20.1 | 338.4 | 37.4 | 0.0 | 318.3 | 1 | |
| 7 | 11 | -546 | 641 | -93 | 0 | -34 | -466 | 17.0 | 370.6 | 45.2 | 0.0 | 353.7 | 1 | |
| 8 | 11 | -232 | 641 | -92 | 0 | -34 | -466 | 7.2 | 369.9 | 45.2 | 0.0 | 362.7 | 1 | |
| 9 | 11 | -304 | 794 | 32 | 0 | 12 | -589 | 9.4 | 351.0 | 56.0 | 0.0 | 360.5 | 1 | |
| 10 | 11 | 744 | 795 | 34 | 0 | 12 | -589 | 23.1 | 354.4 | 56.1 | 0.0 | 348.3 | 3 | |
| 11 | 11 | -573 | 828 | -24 | 0 | -8 | -610 | 17.8 | 350.4 | 58.4 | 0.0 | 348.4 | 3 | |
| 12 | 11 | 450 | 603 | -23 | 0 | -8 | -442 | 14.0 | 262.5 | 42.5 | 0.0 | 276.5 | 1 | |
| 13 | 11 | 212 | 1844 | 17 | 0 | 7 | -1409 | 6.6 | 763.3 | 130.1 | 0.0 | 756.7 | 1 | |
| 14 | 11 | -68 | -425 | -4 | 0 | -1 | 362 | 2.1 | 194.4 | 30.0 | 0.0 | 193.4 | 3 | |
| 15 | 11 | 221 | 1920 | 17 | 0 | 7 | -1469 | 6.9 | 795.6 | 135.5 | 0.0 | 788.7 | 1 | |
| 1 | 22 | 255 | 2190 | 20 | 0 | 6 | -1444 | 7.9 | 778.2 | 154.5 | 0.0 | 771.7 | 3 | |
| 5 | 22 | 332 | 528 | 95 | 0 | 25 | -338 | 10.3 | 268.4 | 37.2 | 0.0 | 258.1 | 1 | |
| 6 | 22 | 646 | 528 | 96 | 0 | 25 | -338 | 20.1 | 269.2 | 37.2 | 0.0 | 249.1 | 1 | |
| 7 | 22 | -546 | 638 | -93 | 0 | -24 | -396 | 17.0 | 296.4 | 45.0 | 0.0 | 279.5 | 1 | |
| 8 | 22 | -232 | 638 | -92 | 0 | -24 | -396 | 7.2 | 295.9 | 45.0 | 0.0 | 288.7 | 1 | |
| 9 | 22 | -304 | 791 | 32 | 0 | 8 | -502 | 9.4 | 292.9 | 55.8 | 0.0 | 302.3 | 1 | |
| 10 | 22 | 744 | 792 | 34 | 0 | 9 | -503 | 23.1 | 295.4 | 55.8 | 0.0 | 298.0 | 3 | |
| 11 | 22 | -573 | 825 | -24 | 0 | -6 | -520 | 17.8 | 293.6 | 58.2 | 0.0 | 297.7 | 3 | |
| 12 | 22 | 450 | 600 | -23 | 0 | -6 | -376 | 14.0 | 218.6 | 42.3 | 0.0 | 232.6 | 1 | |
| 13 | 22 | 212 | 1841 | 17 | 0 | 5 | -1208 | 6.6 | 651.2 | 129.8 | 0.0 | 645.7 | 3 | |
| 14 | 22 | -68 | -428 | -4 | 0 | -1 | 315 | 2.1 | 168.5 | 30.2 | 0.0 | 168.4 | 3 | |
| 15 | 22 | 221 | 1917 | 17 | 0 | 5 | -1259 | 6.9 | 678.9 | 135.2 | 0.0 | 673.1 | 3 | |
| 1 | 33 | 255 | 2186 | 20 | 0 | 4 | -1205 | 7.9 | 645.0 | 154.2 | 0.0 | 643.6 | 3 | |
| 5 | 33 | 332 | 525 | 95 | 0 | 14 | -280 | 10.3 | 199.6 | 37.0 | 0.0 | 189.3 | 1 | |
| 6 | 33 | 646 | 525 | 96 | 0 | 14 | -281 | 20.1 | 200.1 | 37.0 | 0.0 | 186.4 | 3 | |
| 7 | 33 | -546 | 635 | -93 | 0 | -14 | -326 | 17.0 | 222.4 | 44.8 | 0.0 | 206.6 | 3 | |
| 8 | 33 | -232 | 636 | -92 | 0 | -14 | -327 | 7.2 | 222.1 | 44.8 | 0.0 | 214.9 | 1 | |
| 9 | 33 | -304 | 787 | 32 | 0 | 5 | -416 | 9.4 | 235.0 | 55.5 | 0.0 | 244.4 | 1 | |
| 10 | 33 | 744 | 788 | 34 | 0 | 5 | -416 | 23.1 | 236.6 | 55.6 | 0.0 | 247.8 | 3 | |
| 11 | 33 | -573 | 821 | -24 | 0 | -3 | -430 | 17.8 | 237.0 | 57.9 | 0.0 | 247.1 | 3 | |
| 12 | 33 | 450 | 597 | -23 | 0 | -3 | -311 | 14.0 | 174.9 | 42.1 | 0.0 | 188.9 | 1 | |
| 13 | 33 | 212 | 1837 | 17 | 0 | 3 | -1007 | 6.6 | 539.3 | 129.6 | 0.0 | 538.0 | 3 | |
| 14 | 33 | -68 | -431 | -4 | 0 | -1 | 268 | 2.1 | 142.5 | 30.4 | 0.0 | 143.3 | 3 | |
| 15 | 33 | 221 | 1913 | 17 | 0 | 3 | -1050 | 6.9 | 562.3 | 135.0 | 0.0 | 561.0 | 3 | |
| 1 | 44 | 255 | 2183 | 20 | 0 | 2 | -966 | 7.9 | 512.1 | 154.0 | 0.0 | 515.8 | 3 | |
| 5 | 44 | 332 | 522 | 95 | 0 | 4 | -223 | 10.3 | 131.0 | 36.8 | 0.0 | 132.3 | 3 | |
| 6 | 44 | 646 | 522 | 96 | 0 | 4 | -223 | 20.1 | 131.2 | 36.8 | 0.0 | 142.2 | 3 | |
| 7 | 44 | -546 | 633 | -93 | 0 | -4 | -257 | 17.0 | 148.4 | 44.6 | 0.0 | 156.6 | 3 | |
| 8 | 44 | -232 | 633 | -92 | 0 | -4 | -257 | 7.2 | 148.4 | 44.6 | 0.0 | 146.9 | 3 | |
| 9 | 44 | -304 | 784 | 32 | 0 | 1 | -330 | 9.4 | 177.2 | 55.3 | 0.0 | 186.7 | 1 | |
| 10 | 44 | 744 | 784 | 34 | 0 | 1 | -330 | 23.1 | 177.9 | 55.3 | 0.0 | 197.9 | 3 | |
| 11 | 44 | -573 | 818 | -23 | 0 | -1 | -340 | 17.8 | 180.6 | 57.7 | 0.0 | 196.8 | 3 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|------|-----|---|-----|------|------|-------|-------|-----|-------|---|
| 12 | 44 | 450 | 594 | -23 | 0 | -1 | -246 | 14.0 | 131.3 | 41.9 | 0.0 | 145.3 | 1 |
| 13 | 44 | 212 | 1834 | 17 | 0 | 2 | -806 | 6.6 | 427.6 | 129.3 | 0.0 | 430.6 | 3 |
| 14 | 44 | -68 | -434 | -4 | 0 | -0 | 221 | 2.1 | 116.3 | 30.6 | 0.0 | 118.1 | 3 |
| 15 | 44 | 221 | 1910 | 17 | 0 | 2 | -841 | 6.9 | 446.0 | 134.7 | 0.0 | 449.2 | 3 |
| 1 | 55 | 255 | 2179 | 20 | 0 | -0 | -727 | 7.9 | 382.1 | 153.7 | 0.0 | 392.9 | 4 |
| 5 | 55 | 332 | 519 | 95 | 0 | -7 | -166 | 10.3 | 111.6 | 36.6 | 0.0 | 121.9 | 1 |
| 6 | 55 | 646 | 520 | 96 | 0 | -7 | -167 | 20.1 | 111.8 | 36.7 | 0.0 | 131.9 | 1 |
| 7 | 55 | -546 | 630 | -93 | 0 | 6 | -188 | 17.0 | 122.1 | 44.4 | 0.0 | 139.1 | 1 |
| 8 | 55 | -232 | 630 | -92 | 0 | 6 | -188 | 7.2 | 122.0 | 44.4 | 0.0 | 129.2 | 1 |
| 9 | 55 | -304 | 780 | 32 | 0 | -2 | -244 | 9.4 | 136.1 | 55.0 | 0.0 | 141.6 | 4 |
| 10 | 55 | 744 | 781 | 34 | 0 | -2 | -245 | 23.1 | 136.7 | 55.1 | 0.0 | 159.8 | 1 |
| 11 | 55 | -573 | 814 | -24 | 0 | 2 | -251 | 17.8 | 138.3 | 57.4 | 0.0 | 156.1 | 1 |
| 12 | 55 | 450 | 592 | -23 | 0 | 2 | -181 | 14.0 | 101.2 | 41.7 | 0.0 | 111.6 | 4 |
| 13 | 55 | 212 | 1830 | 17 | 0 | -0 | -606 | 6.6 | 318.4 | 129.1 | 0.0 | 328.0 | 4 |
| 14 | 55 | -68 | -436 | -4 | 0 | 0 | 174 | 2.1 | 91.8 | 30.8 | 0.0 | 93.9 | 1 |
| 15 | 55 | 221 | 1906 | 17 | 0 | -0 | -633 | 6.9 | 332.3 | 134.4 | 0.0 | 342.2 | 4 |
| 1 | 66 | 255 | 2175 | 20 | 0 | -3 | -490 | 7.9 | 265.7 | 153.4 | 0.0 | 299.5 | 4 |
| 5 | 66 | 332 | 517 | 95 | 0 | -17 | -110 | 10.3 | 120.7 | 36.4 | 0.0 | 131.0 | 1 |
| 6 | 66 | 646 | 517 | 96 | 0 | -17 | -110 | 20.1 | 121.2 | 36.5 | 0.0 | 141.2 | 1 |
| 7 | 66 | -546 | 627 | -93 | 0 | 17 | -119 | 17.0 | 123.8 | 44.2 | 0.0 | 140.8 | 1 |
| 8 | 66 | -232 | 627 | -92 | 0 | 16 | -119 | 7.2 | 123.5 | 44.3 | 0.0 | 130.7 | 1 |
| 9 | 66 | -304 | 776 | 32 | 0 | -6 | -159 | 9.4 | 104.4 | 54.8 | 0.0 | 110.5 | 4 |
| 10 | 66 | 744 | 777 | 34 | 0 | -6 | -160 | 23.1 | 105.8 | 54.8 | 0.0 | 128.9 | 1 |
| 11 | 66 | -573 | 810 | -24 | 0 | 4 | -162 | 17.8 | 101.4 | 57.2 | 0.0 | 119.2 | 1 |
| 12 | 66 | 450 | 589 | -23 | 0 | 4 | -116 | 14.0 | 76.9 | 41.5 | 0.0 | 87.6 | 4 |
| 13 | 66 | 212 | 1826 | 17 | 0 | -2 | -406 | 6.6 | 220.6 | 128.8 | 0.0 | 249.7 | 4 |
| 14 | 66 | -68 | -439 | -4 | 0 | 1 | 126 | 2.1 | 68.2 | 31.0 | 0.0 | 71.0 | 4 |
| 15 | 66 | 221 | 1902 | 17 | 0 | -2 | -425 | 6.9 | 230.4 | 134.2 | 0.0 | 260.6 | 4 |
| 1 | 76 | 255 | 2172 | 20 | 0 | -5 | -252 | 7.9 | 149.4 | 153.2 | 0.0 | 265.3 | 5 |
| 5 | 76 | 332 | 514 | 95 | 0 | -27 | -53 | 10.3 | 130.0 | 36.2 | 0.0 | 140.3 | 1 |
| 6 | 76 | 646 | 514 | 96 | 0 | -28 | -54 | 20.1 | 130.7 | 36.3 | 0.0 | 150.7 | 1 |
| 7 | 76 | -546 | 624 | -93 | 0 | 27 | -51 | 17.0 | 125.7 | 44.0 | 0.0 | 142.6 | 1 |
| 8 | 76 | -232 | 625 | -92 | 0 | 27 | -51 | 7.2 | 125.1 | 44.1 | 0.0 | 132.3 | 1 |
| 9 | 76 | -304 | 773 | 32 | 0 | -9 | -75 | 9.4 | 72.9 | 54.5 | 0.0 | 96.9 | 5 |
| 10 | 76 | 744 | 774 | 34 | 0 | -10 | -75 | 23.1 | 75.1 | 54.6 | 0.0 | 98.2 | 1 |
| 11 | 76 | -573 | 807 | -24 | 0 | 7 | -74 | 17.8 | 64.6 | 56.9 | 0.0 | 98.9 | 5 |
| 12 | 76 | 450 | 586 | -23 | 0 | 7 | -52 | 14.0 | 52.8 | 41.3 | 0.0 | 75.3 | 5 |
| 13 | 76 | 212 | 1823 | 17 | 0 | -4 | -207 | 6.6 | 123.0 | 128.6 | 0.0 | 222.7 | 5 |
| 14 | 76 | -68 | -442 | -4 | 0 | 1 | 78 | 2.1 | 44.5 | 31.2 | 0.0 | 54.0 | 5 |
| 15 | 76 | 221 | 1899 | 17 | 0 | -4 | -217 | 6.9 | 128.8 | 133.9 | 0.0 | 232.0 | 5 |
| 1 | 87 | 255 | 2168 | 20 | 0 | -7 | -15 | 7.9 | 33.4 | 152.9 | 0.0 | 264.9 | 5 |
| 5 | 87 | 332 | 511 | 95 | 0 | -38 | 3 | 10.3 | 142.0 | 36.0 | 0.0 | 152.3 | 1 |
| 6 | 87 | 646 | 511 | 96 | 0 | -38 | 2 | 20.1 | 142.9 | 36.1 | 0.0 | 162.9 | 1 |
| 7 | 87 | -546 | 622 | -93 | 0 | 37 | 17 | 17.0 | 145.6 | 43.8 | 0.0 | 162.6 | 1 |
| 8 | 87 | -232 | 622 | -92 | 0 | 37 | 17 | 7.2 | 144.7 | 43.9 | 0.0 | 151.9 | 1 |
| 9 | 87 | -304 | 769 | 32 | 0 | -13 | 10 | 9.4 | 51.6 | 54.3 | 0.0 | 97.7 | 5 |
| 10 | 87 | 744 | 770 | 34 | 0 | -13 | 9 | 23.1 | 54.5 | 54.3 | 0.0 | 94.2 | 5 |
| 11 | 87 | -573 | 803 | -24 | 0 | 10 | 14 | 17.8 | 42.8 | 56.7 | 0.0 | 98.2 | 5 |
| 12 | 87 | 450 | 583 | -23 | 0 | 9 | 12 | 14.0 | 41.3 | 41.2 | 0.0 | 76.2 | 5 |
| 13 | 87 | 212 | 1819 | 17 | 0 | -6 | -8 | 6.6 | 25.6 | 128.3 | 0.0 | 222.3 | 5 |
| 14 | 87 | -68 | -445 | -4 | 0 | 1 | 29 | 2.1 | 20.6 | 31.4 | 0.0 | 54.3 | 5 |
| 15 | 87 | 221 | 1895 | 17 | 0 | -6 | -10 | 6.9 | 27.3 | 133.7 | 0.0 | 231.5 | 5 |
| 1 | 98 | 255 | 2165 | 20 | 0 | -9 | 222 | 7.9 | 149.8 | 152.7 | 0.0 | 264.5 | 5 |
| 5 | 98 | 332 | 508 | 95 | 0 | -48 | 58 | 10.3 | 209.8 | 35.9 | 0.0 | 220.1 | 1 |
| 6 | 98 | 646 | 509 | 96 | 0 | -49 | 58 | 20.1 | 211.0 | 35.9 | 0.0 | 231.0 | 1 |
| 7 | 98 | -546 | 619 | -93 | 0 | 47 | 85 | 17.0 | 218.7 | 43.7 | 0.0 | 235.7 | 1 |
| 8 | 98 | -232 | 619 | -92 | 0 | 47 | 85 | 7.2 | 217.6 | 43.7 | 0.0 | 224.8 | 1 |
| 9 | 98 | -304 | 766 | 32 | 0 | -16 | 93 | 9.4 | 108.3 | 54.0 | 0.0 | 98.8 | 1 |
| 10 | 98 | 744 | 766 | 34 | 0 | -17 | 93 | 23.1 | 112.0 | 54.1 | 0.0 | 135.2 | 1 |
| 11 | 98 | -573 | 800 | -24 | 0 | 12 | 102 | 17.8 | 98.2 | 56.4 | 0.0 | 116.0 | 1 |
| 12 | 98 | 450 | 581 | -23 | 0 | 12 | 75 | 14.0 | 84.1 | 41.0 | 0.0 | 77.1 | 5 |
| 13 | 98 | 212 | 1816 | 17 | 0 | -8 | 190 | 6.6 | 127.8 | 128.1 | 0.0 | 221.9 | 5 |
| 14 | 98 | -68 | -447 | -4 | 0 | 2 | -19 | 2.1 | 16.9 | 31.6 | 0.0 | 54.7 | 5 |
| 15 | 98 | 221 | 1892 | 17 | 0 | -8 | 197 | 6.9 | 132.6 | 133.4 | 0.0 | 231.1 | 5 |
| 1 | 109 | 255 | 2161 | 20 | 0 | -11 | 458 | 7.9 | 281.5 | 152.4 | 0.0 | 289.4 | 1 |
| 5 | 109 | 332 | 506 | 95 | 0 | -59 | 114 | 10.3 | 277.5 | 35.7 | 0.0 | 287.8 | 1 |
| 6 | 109 | 646 | 506 | 96 | 0 | -59 | 114 | 20.1 | 278.9 | 35.7 | 0.0 | 299.0 | 1 |
| 7 | 109 | -546 | 616 | -93 | 0 | 57 | 152 | 17.0 | 291.7 | 43.5 | 0.0 | 308.7 | 1 |
| 8 | 109 | -232 | 616 | -92 | 0 | 57 | 152 | 7.2 | 290.3 | 43.5 | 0.0 | 297.5 | 1 |
| 9 | 109 | -304 | 762 | 32 | 0 | -19 | 177 | 9.4 | 164.8 | 53.8 | 0.0 | 155.3 | 1 |
| 10 | 109 | 744 | 763 | 34 | 0 | -21 | 177 | 23.1 | 169.4 | 53.8 | 0.0 | 192.5 | 1 |
| 11 | 109 | -573 | 796 | -24 | 0 | 15 | 189 | 17.8 | 153.3 | 56.1 | 0.0 | 171.1 | 1 |
| 12 | 109 | 450 | 578 | -23 | 0 | 15 | 139 | 14.0 | 126.7 | 40.8 | 0.0 | 112.7 | 1 |
| 13 | 109 | 212 | 1812 | 17 | 0 | -9 | 389 | 6.6 | 238.3 | 127.8 | 0.0 | 244.9 | 1 |
| 14 | 109 | -68 | -450 | -4 | 0 | 2 | -68 | 2.1 | 44.1 | 31.7 | 0.0 | 55.0 | 5 |
| 15 | 109 | 221 | 1888 | 17 | 0 | -10 | 404 | 6.9 | 247.7 | 133.2 | 0.0 | 254.5 | 1 |

ASTA NUM. 52 NI 76 NF 68 Lungh. 109.3 cm SEZ. 2 Ps UNP 200

categoria: p.p. y qy tot.

qy medio: 0.2528 0.2528 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|------|------|-------|------|------|---------|--------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | 285 | 1395 | 2 | 0 | -0 | 457 | 8.8 | 240.0 | 98.4 | 0.0 | 251.2 | 4 | |
| 5 | 0 | 58 | 356 | -196 | 0 | -124 | 113 | 1.8 | 517.5 | 25.1 | 0.0 | 519.3 | 1 | |
| 6 | 0 | 529 | 356 | -196 | 0 | -123 | 113 | 16.4 | 517.1 | 25.1 | 0.0 | 533.5 | 1 | |
| 7 | 0 | -421 | 334 | 198 | 0 | 124 | 152 | 13.1 | 540.3 | 23.6 | 0.0 | 553.3 | 1 | |
| 8 | 0 | 49 | 334 | 198 | 0 | 124 | 152 | 1.5 | 540.3 | 23.6 | 0.0 | 538.7 | 1 | |
| 9 | 0 | -622 | 485 | -61 | 0 | -39 | 177 | 19.3 | 235.9 | 34.2 | 0.0 | 216.6 | 1 | |
| 10 | 0 | 948 | 485 | -61 | 0 | -39 | 177 | 29.4 | 235.5 | 34.2 | 0.0 | 265.0 | 1 | |
| 11 | 0 | -765 | 479 | 60 | 0 | 37 | 188 | 23.7 | 236.3 | 33.8 | 0.0 | 260.0 | 1 | |
| 12 | 0 | 777 | 342 | 60 | 0 | 37 | 139 | 24.1 | 210.8 | 24.1 | 0.0 | 186.6 | 1 | |
| 13 | 0 | 237 | 1164 | 2 | 0 | -0 | 388 | 7.4 | 203.3 | 82.1 | 0.0 | 212.2 | 4 | |
| 14 | 0 | -69 | -324 | 2 | 0 | 1 | -68 | 2.2 | 40.9 | 22.8 | 0.0 | 43.1 | 1 | |
| 15 | 0 | 248 | 1214 | 2 | 0 | -0 | 403 | 7.7 | 211.2 | 85.6 | 0.0 | 220.7 | 4 | |
| 1 | 11 | 285 | 1391 | 2 | 0 | -0 | 609 | 8.8 | 320.3 | 98.1 | 0.0 | 329.1 | 1 | |
| 5 | 11 | 58 | 353 | -196 | 0 | -102 | 152 | 1.8 | 458.3 | 24.9 | 0.0 | 460.1 | 1 | |
| 6 | 11 | 529 | 353 | -196 | 0 | -102 | 152 | 16.4 | 458.0 | 24.9 | 0.0 | 474.4 | 1 | |
| 7 | 11 | -421 | 332 | 198 | 0 | 103 | 188 | 13.1 | 479.2 | 23.4 | 0.0 | 492.3 | 1 | |
| 8 | 11 | 49 | 332 | 198 | 0 | 103 | 188 | 1.5 | 479.2 | 23.4 | 0.0 | 477.6 | 1 | |
| 9 | 11 | -622 | 482 | -61 | 0 | -32 | 229 | 19.3 | 238.8 | 34.0 | 0.0 | 219.5 | 1 | |
| 10 | 11 | 948 | 482 | -61 | 0 | -32 | 229 | 29.4 | 238.5 | 34.0 | 0.0 | 267.9 | 1 | |
| 11 | 11 | -765 | 475 | 60 | 0 | 31 | 240 | 23.7 | 239.4 | 33.5 | 0.0 | 263.1 | 1 | |
| 12 | 11 | 777 | 339 | 60 | 0 | 31 | 176 | 24.1 | 206.0 | 23.9 | 0.0 | 181.9 | 1 | |
| 13 | 11 | 237 | 1160 | 2 | 0 | -0 | 515 | 7.4 | 270.4 | 81.9 | 0.0 | 277.7 | 1 | |
| 14 | 11 | -69 | -327 | 2 | 0 | 1 | -104 | 2.2 | 58.7 | 23.0 | 0.0 | 60.8 | 1 | |
| 15 | 11 | 248 | 1210 | 2 | 0 | -0 | 535 | 7.7 | 281.2 | 85.4 | 0.0 | 288.9 | 1 | |
| 1 | 22 | 285 | 1388 | 2 | 0 | -1 | 761 | 8.8 | 400.4 | 97.9 | 0.0 | 409.2 | 1 | |
| 5 | 22 | 58 | 350 | -196 | 0 | -81 | 191 | 1.8 | 399.0 | 24.7 | 0.0 | 400.8 | 1 | |
| 6 | 22 | 529 | 350 | -196 | 0 | -81 | 191 | 16.4 | 398.8 | 24.7 | 0.0 | 415.2 | 1 | |
| 7 | 22 | -421 | 329 | 198 | 0 | 81 | 224 | 13.1 | 418.0 | 23.2 | 0.0 | 431.1 | 1 | |
| 8 | 22 | 49 | 329 | 198 | 0 | 81 | 224 | 1.5 | 417.9 | 23.2 | 0.0 | 416.4 | 1 | |
| 9 | 22 | -622 | 478 | -61 | 0 | -25 | 282 | 19.3 | 241.4 | 33.7 | 0.0 | 222.1 | 1 | |
| 10 | 22 | 948 | 478 | -61 | 0 | -25 | 282 | 29.4 | 241.2 | 33.7 | 0.0 | 270.7 | 1 | |
| 11 | 22 | -765 | 472 | 60 | 0 | 24 | 292 | 23.7 | 242.3 | 33.3 | 0.0 | 266.1 | 1 | |
| 12 | 22 | 777 | 336 | 60 | 0 | 24 | 213 | 24.1 | 201.1 | 23.7 | 0.0 | 177.0 | 1 | |
| 13 | 22 | 237 | 1157 | 2 | 0 | -0 | 641 | 7.4 | 337.2 | 81.6 | 0.0 | 344.6 | 1 | |
| 14 | 22 | -69 | -329 | 2 | 0 | 1 | -139 | 2.2 | 76.6 | 23.2 | 0.0 | 78.8 | 1 | |
| 15 | 22 | 248 | 1207 | 2 | 0 | -1 | 667 | 7.7 | 351.0 | 85.1 | 0.0 | 358.7 | 1 | |
| 1 | 33 | 285 | 1384 | 2 | 0 | -1 | 912 | 8.8 | 480.3 | 97.6 | 0.0 | 489.1 | 1 | |
| 5 | 33 | 58 | 347 | -196 | 0 | -59 | 229 | 1.8 | 339.5 | 24.5 | 0.0 | 341.4 | 1 | |
| 6 | 33 | 529 | 347 | -196 | 0 | -59 | 229 | 16.4 | 339.3 | 24.5 | 0.0 | 355.8 | 1 | |
| 7 | 33 | -421 | 326 | 198 | 0 | 59 | 260 | 13.1 | 356.6 | 23.0 | 0.0 | 369.7 | 1 | |
| 8 | 33 | 49 | 326 | 198 | 0 | 59 | 260 | 1.5 | 356.5 | 23.0 | 0.0 | 355.0 | 1 | |
| 9 | 33 | -622 | 474 | -61 | 0 | -19 | 334 | 19.3 | 243.9 | 33.5 | 0.0 | 224.5 | 1 | |
| 10 | 33 | 948 | 474 | -61 | 0 | -19 | 334 | 29.4 | 243.8 | 33.5 | 0.0 | 273.2 | 1 | |
| 11 | 33 | -765 | 468 | 60 | 0 | 18 | 344 | 23.7 | 245.0 | 33.0 | 0.0 | 268.8 | 1 | |
| 12 | 33 | 777 | 333 | 60 | 0 | 18 | 249 | 24.1 | 196.1 | 23.5 | 0.0 | 178.6 | 3 | |
| 13 | 33 | 237 | 1153 | 2 | 0 | -1 | 767 | 7.4 | 403.9 | 81.3 | 0.0 | 411.3 | 1 | |
| 14 | 33 | -69 | -332 | 2 | 0 | 1 | -176 | 2.2 | 94.7 | 23.4 | 0.0 | 96.9 | 1 | |
| 15 | 33 | 248 | 1203 | 2 | 0 | -1 | 799 | 7.7 | 420.5 | 84.9 | 0.0 | 428.2 | 1 | |
| 1 | 44 | 285 | 1381 | 2 | 0 | -1 | 1063 | 8.8 | 560.0 | 97.4 | 0.0 | 568.8 | 1 | |
| 5 | 44 | 58 | 345 | -196 | 0 | -38 | 266 | 1.8 | 279.9 | 24.3 | 0.0 | 281.7 | 1 | |
| 6 | 44 | 529 | 344 | -196 | 0 | -38 | 266 | 16.4 | 279.8 | 24.3 | 0.0 | 296.2 | 1 | |
| 7 | 44 | -421 | 323 | 198 | 0 | 38 | 296 | 13.1 | 295.0 | 22.8 | 0.0 | 308.1 | 1 | |
| 8 | 44 | 49 | 323 | 198 | 0 | 38 | 296 | 1.5 | 295.0 | 22.8 | 0.0 | 293.4 | 1 | |
| 9 | 44 | -622 | 471 | -61 | 0 | -12 | 385 | 19.3 | 246.1 | 33.2 | 0.0 | 237.3 | 3 | |
| 10 | 44 | 948 | 471 | -61 | 0 | -12 | 385 | 29.4 | 246.1 | 33.2 | 0.0 | 275.5 | 1 | |
| 11 | 44 | -765 | 464 | 60 | 0 | 11 | 394 | 23.7 | 247.5 | 32.8 | 0.0 | 271.3 | 1 | |
| 12 | 44 | 777 | 331 | 60 | 0 | 11 | 285 | 24.1 | 190.9 | 23.3 | 0.0 | 188.7 | 3 | |
| 13 | 44 | 237 | 1150 | 2 | 0 | -1 | 893 | 7.4 | 470.4 | 81.1 | 0.0 | 477.7 | 1 | |
| 14 | 44 | -69 | -335 | 2 | 0 | 1 | -212 | 2.2 | 113.0 | 23.6 | 0.0 | 115.1 | 1 | |
| 15 | 44 | 248 | 1200 | 2 | 0 | -1 | 930 | 7.7 | 489.9 | 84.6 | 0.0 | 497.6 | 1 | |
| 1 | 55 | 285 | 1377 | 2 | 0 | -1 | 1214 | 8.8 | 639.5 | 97.1 | 0.0 | 648.3 | 1 | |
| 5 | 55 | 58 | 342 | -196 | 0 | -16 | 304 | 1.8 | 220.2 | 24.1 | 0.0 | 222.0 | 1 | |
| 6 | 55 | 529 | 342 | -196 | 0 | -16 | 304 | 16.4 | 220.1 | 24.1 | 0.0 | 236.5 | 1 | |
| 7 | 55 | -421 | 321 | 198 | 0 | 16 | 331 | 13.1 | 233.4 | 22.6 | 0.0 | 246.4 | 1 | |
| 8 | 55 | 49 | 321 | 198 | 0 | 16 | 331 | 1.5 | 233.3 | 22.6 | 0.0 | 231.7 | 1 | |
| 9 | 55 | -622 | 467 | -61 | 0 | -5 | 437 | 19.3 | 248.1 | 33.0 | 0.0 | 255.0 | 3 | |
| 10 | 55 | 948 | 467 | -61 | 0 | -5 | 437 | 29.4 | 248.2 | 33.0 | 0.0 | 277.6 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|------|------|---|-----|------|------|--------|------|-----|--------|---|
| 11 | 55 | -765 | 461 | 60 | 0 | 5 | 445 | 23.7 | 249.8 | 32.5 | 0.0 | 273.6 | 1 |
| 12 | 55 | 777 | 328 | 60 | 0 | 5 | 321 | 24.1 | 185.5 | 23.1 | 0.0 | 198.7 | 3 |
| 13 | 55 | 237 | 1146 | 2 | 0 | -1 | 1019 | 7.4 | 536.6 | 80.8 | 0.0 | 544.0 | 1 |
| 14 | 55 | -69 | -338 | 2 | 0 | 0 | -249 | 2.2 | 131.4 | 23.8 | 0.0 | 133.5 | 1 |
| 15 | 55 | 248 | 1196 | 2 | 0 | -1 | 1061 | 7.7 | 559.0 | 84.4 | 0.0 | 566.7 | 1 |
| | | | | | | | | | | | | | |
| 1 | 66 | 285 | 1373 | 2 | 0 | -1 | 1364 | 8.8 | 718.8 | 96.9 | 0.0 | 727.6 | 1 |
| 5 | 66 | 58 | 339 | -196 | 0 | 5 | 341 | 1.8 | 196.8 | 23.9 | 0.0 | 195.0 | 1 |
| 6 | 66 | 529 | 339 | -196 | 0 | 5 | 341 | 16.4 | 196.8 | 23.9 | 0.0 | 201.6 | 3 |
| 7 | 66 | -421 | 318 | 198 | 0 | -5 | 366 | 13.1 | 211.3 | 22.4 | 0.0 | 211.8 | 3 |
| 8 | 66 | 49 | 318 | 198 | 0 | -5 | 366 | 1.5 | 211.5 | 22.4 | 0.0 | 213.0 | 1 |
| 9 | 66 | -622 | 464 | -61 | 0 | 1 | 488 | 19.3 | 260.4 | 32.7 | 0.0 | 279.7 | 1 |
| 10 | 66 | 948 | 464 | -61 | 0 | 1 | 488 | 29.4 | 260.2 | 32.7 | 0.0 | 286.4 | 3 |
| 11 | 66 | -765 | 457 | 60 | 0 | -2 | 495 | 23.7 | 266.3 | 32.2 | 0.0 | 285.5 | 3 |
| 12 | 66 | 777 | 325 | 60 | 0 | -2 | 357 | 24.1 | 193.8 | 22.9 | 0.0 | 217.9 | 1 |
| 13 | 66 | 237 | 1142 | 2 | 0 | -1 | 1144 | 7.4 | 602.7 | 80.6 | 0.0 | 610.1 | 1 |
| 14 | 66 | -69 | -340 | 2 | 0 | 0 | -286 | 2.2 | 149.9 | 24.0 | 0.0 | 152.1 | 1 |
| 15 | 66 | 248 | 1192 | 2 | 0 | -1 | 1192 | 7.7 | 628.0 | 84.1 | 0.0 | 635.7 | 1 |
| | | | | | | | | | | | | | |
| 1 | 76 | 285 | 1370 | 2 | 0 | -2 | 1514 | 8.8 | 797.9 | 96.6 | 0.0 | 806.7 | 1 |
| 5 | 76 | 58 | 336 | -196 | 0 | 26 | 378 | 1.8 | 295.5 | 23.7 | 0.0 | 293.7 | 1 |
| 6 | 76 | 529 | 336 | -196 | 0 | 26 | 378 | 16.4 | 295.5 | 23.7 | 0.0 | 279.1 | 1 |
| 7 | 76 | -421 | 315 | 198 | 0 | -27 | 400 | 13.1 | 309.5 | 22.2 | 0.0 | 296.5 | 1 |
| 8 | 76 | 49 | 315 | 198 | 0 | -27 | 400 | 1.5 | 309.7 | 22.2 | 0.0 | 311.2 | 1 |
| 9 | 76 | -622 | 460 | -61 | 0 | 8 | 538 | 19.3 | 311.6 | 32.5 | 0.0 | 330.9 | 1 |
| 10 | 76 | 948 | 460 | -61 | 0 | 8 | 538 | 29.4 | 311.3 | 32.5 | 0.0 | 321.9 | 3 |
| 11 | 76 | -765 | 454 | 60 | 0 | -8 | 545 | 23.7 | 316.5 | 32.0 | 0.0 | 320.4 | 3 |
| 12 | 76 | 777 | 322 | 60 | 0 | -8 | 393 | 24.1 | 236.5 | 22.7 | 0.0 | 260.7 | 1 |
| 13 | 76 | 237 | 1139 | 2 | 0 | -1 | 1268 | 7.4 | 668.5 | 80.3 | 0.0 | 675.9 | 1 |
| 14 | 76 | -69 | -343 | 2 | 0 | -0 | -323 | 2.2 | 169.5 | 24.2 | 0.0 | 171.4 | 3 |
| 15 | 76 | 248 | 1189 | 2 | 0 | -1 | 1322 | 7.7 | 696.7 | 83.9 | 0.0 | 704.4 | 1 |
| | | | | | | | | | | | | | |
| 1 | 87 | 285 | 1366 | 2 | 0 | -2 | 1663 | 8.8 | 876.7 | 96.4 | 0.0 | 885.6 | 1 |
| 5 | 87 | 58 | 333 | -196 | 0 | 48 | 415 | 1.8 | 394.1 | 23.5 | 0.0 | 392.2 | 1 |
| 6 | 87 | 529 | 333 | -196 | 0 | 48 | 415 | 16.4 | 394.0 | 23.5 | 0.0 | 377.5 | 1 |
| 7 | 87 | -421 | 312 | 198 | 0 | -49 | 435 | 13.1 | 407.6 | 22.0 | 0.0 | 394.5 | 1 |
| 8 | 87 | 49 | 312 | 198 | 0 | -49 | 435 | 1.5 | 407.7 | 22.0 | 0.0 | 409.3 | 1 |
| 9 | 87 | -622 | 456 | -61 | 0 | 15 | 588 | 19.3 | 362.6 | 32.2 | 0.0 | 381.9 | 1 |
| 10 | 87 | 948 | 456 | -61 | 0 | 15 | 588 | 29.4 | 362.2 | 32.2 | 0.0 | 357.1 | 3 |
| 11 | 87 | -765 | 450 | 60 | 0 | -15 | 594 | 23.7 | 366.5 | 31.7 | 0.0 | 355.1 | 3 |
| 12 | 87 | 777 | 320 | 60 | 0 | -15 | 428 | 24.1 | 279.1 | 22.5 | 0.0 | 303.2 | 1 |
| 13 | 87 | 237 | 1135 | 2 | 0 | -1 | 1393 | 7.4 | 734.2 | 80.1 | 0.0 | 741.5 | 1 |
| 14 | 87 | -69 | -346 | 2 | 0 | -0 | -361 | 2.2 | 190.1 | 24.4 | 0.0 | 191.4 | 3 |
| 15 | 87 | 248 | 1185 | 2 | 0 | -2 | 1452 | 7.7 | 765.3 | 83.6 | 0.0 | 772.9 | 1 |
| | | | | | | | | | | | | | |
| 1 | 98 | 285 | 1363 | 2 | 0 | -2 | 1812 | 8.8 | 955.4 | 96.1 | 0.0 | 964.3 | 1 |
| 5 | 98 | 58 | 331 | -196 | 0 | 69 | 451 | 1.8 | 492.4 | 23.3 | 0.0 | 490.6 | 1 |
| 6 | 98 | 529 | 331 | -196 | 0 | 69 | 451 | 16.4 | 492.3 | 23.3 | 0.0 | 475.9 | 1 |
| 7 | 98 | -421 | 310 | 198 | 0 | -70 | 469 | 13.1 | 505.5 | 21.8 | 0.0 | 492.4 | 1 |
| 8 | 98 | 49 | 309 | 198 | 0 | -70 | 469 | 1.5 | 505.6 | 21.8 | 0.0 | 507.2 | 1 |
| 9 | 98 | -622 | 453 | -61 | 0 | 21 | 638 | 19.3 | 413.4 | 31.9 | 0.0 | 432.7 | 1 |
| 10 | 98 | 948 | 453 | -61 | 0 | 21 | 638 | 29.4 | 412.9 | 31.9 | 0.0 | 392.2 | 3 |
| 11 | 98 | -765 | 446 | 60 | 0 | -21 | 643 | 23.7 | 416.3 | 31.5 | 0.0 | 392.6 | 1 |
| 12 | 98 | 777 | 317 | 60 | 0 | -21 | 462 | 24.1 | 321.5 | 22.4 | 0.0 | 345.6 | 1 |
| 13 | 98 | 237 | 1132 | 2 | 0 | -2 | 1517 | 7.4 | 799.6 | 79.8 | 0.0 | 807.0 | 1 |
| 14 | 98 | -69 | -349 | 2 | 0 | -1 | -399 | 2.2 | 210.8 | 24.6 | 0.0 | 211.6 | 3 |
| 15 | 98 | 248 | 1182 | 2 | 0 | -2 | 1581 | 7.7 | 833.6 | 83.3 | 0.0 | 841.3 | 1 |
| | | | | | | | | | | | | | |
| 1 | 109 | 285 | 1359 | 2 | 0 | -2 | 1961 | 8.8 | 1033.9 | 95.9 | 0.0 | 1042.7 | 1 |
| 5 | 109 | 58 | 328 | -196 | 0 | 91 | 487 | 1.8 | 590.7 | 23.1 | 0.0 | 588.9 | 1 |
| 6 | 109 | 529 | 328 | -196 | 0 | 91 | 487 | 16.4 | 590.5 | 23.1 | 0.0 | 574.1 | 1 |
| 7 | 109 | -421 | 307 | 198 | 0 | -92 | 502 | 13.1 | 603.2 | 21.6 | 0.0 | 590.1 | 1 |
| 8 | 109 | 49 | 307 | 198 | 0 | -92 | 502 | 1.5 | 603.4 | 21.6 | 0.0 | 604.9 | 1 |
| 9 | 109 | -622 | 449 | -61 | 0 | 28 | 687 | 19.3 | 464.0 | 31.7 | 0.0 | 483.3 | 1 |
| 10 | 109 | 948 | 449 | -61 | 0 | 28 | 687 | 29.4 | 463.4 | 31.7 | 0.0 | 433.9 | 1 |
| 11 | 109 | -765 | 443 | 60 | 0 | -28 | 692 | 23.7 | 465.9 | 31.2 | 0.0 | 442.1 | 1 |
| 12 | 109 | 777 | 314 | 60 | 0 | -28 | 497 | 24.1 | 363.7 | 22.2 | 0.0 | 387.9 | 1 |
| 13 | 109 | 237 | 1128 | 2 | 0 | -2 | 1640 | 7.4 | 864.9 | 79.6 | 0.0 | 872.2 | 1 |
| 14 | 109 | -69 | -352 | 2 | 0 | -1 | -437 | 2.2 | 231.6 | 24.8 | 0.0 | 231.9 | 3 |
| 15 | 109 | 248 | 1178 | 2 | 0 | -2 | 1710 | 7.7 | 901.7 | 83.1 | 0.0 | 909.4 | 1 |

ASTA NUM. 58 NI 68 NF 65 Lungh. 109.3 cm SEZ. 2 Ps UNP 200

categoria: p.p. y qy tot.

qy medio: 0.2528 0.2528 daN/cm

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf(Fx) | Sf(M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|-------|------|-------|------|------|---------------------|--------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm ² | | | | | | |
| 1 | 0 | 285 | -1008 | -2 | 0 | -1 | 1961 | 8.8 | 1031.5 | 71.1 | 0.0 | 1040.3 | 1 | |
| 5 | 0 | -910 | -193 | -382 | 0 | -200 | 487 | 28.3 | 996.7 | 13.6 | 0.0 | 968.4 | 1 | |
| 6 | 0 | -287 | -193 | -382 | 0 | -200 | 487 | 8.9 | 997.4 | 13.6 | 0.0 | 988.5 | 1 | |
| 7 | 0 | 398 | -207 | 383 | 0 | 200 | 502 | 12.3 | 1005.9 | 14.6 | 0.0 | 993.5 | 1 | |
| 8 | 0 | 1021 | -207 | 383 | 0 | 200 | 502 | 31.7 | 1005.1 | 14.6 | 0.0 | 973.4 | 1 | |
| 9 | 0 | -1152 | -284 | -117 | 0 | -61 | 687 | 35.8 | 587.3 | 20.0 | 0.0 | 551.5 | 1 | |
| 10 | 0 | 926 | -284 | -118 | 0 | -62 | 687 | 28.7 | 589.9 | 20.0 | 0.0 | 618.6 | 1 | |
| 11 | 0 | -751 | -289 | 115 | 0 | 60 | 692 | 23.3 | 584.7 | 20.4 | 0.0 | 608.1 | 1 | |
| 12 | 0 | 1300 | -202 | 114 | 0 | 59 | 497 | 40.4 | 480.7 | 14.3 | 0.0 | 440.3 | 1 | |
| 13 | 0 | 237 | -826 | -1 | 0 | -1 | 1640 | 7.4 | 862.4 | 58.2 | 0.0 | 869.8 | 1 | |
| 14 | 0 | -62 | 329 | 3 | 0 | 2 | -437 | 1.9 | 234.3 | 23.2 | 0.0 | 236.2 | 1 | |
| 15 | 0 | 248 | -865 | -1 | 0 | -1 | 1710 | 7.7 | 899.3 | 61.0 | 0.0 | 906.9 | 1 | |
| 1 | 11 | 285 | -1012 | -2 | 0 | -1 | 1851 | 8.8 | 973.1 | 71.4 | 0.0 | 981.9 | 1 | |
| 5 | 11 | -910 | -196 | -382 | 0 | -158 | 466 | 28.3 | 830.7 | 13.8 | 0.0 | 802.4 | 1 | |
| 6 | 11 | -287 | -196 | -382 | 0 | -158 | 466 | 8.9 | 831.4 | 13.8 | 0.0 | 822.5 | 1 | |
| 7 | 11 | 398 | -210 | 383 | 0 | 158 | 479 | 12.3 | 838.7 | 14.8 | 0.0 | 826.4 | 1 | |
| 8 | 11 | 1021 | -210 | 383 | 0 | 158 | 479 | 31.7 | 838.0 | 14.8 | 0.0 | 806.3 | 1 | |
| 9 | 11 | -1152 | -288 | -117 | 0 | -49 | 656 | 35.8 | 523.4 | 20.3 | 0.0 | 487.6 | 1 | |
| 10 | 11 | 926 | -288 | -118 | 0 | -49 | 656 | 28.7 | 525.7 | 20.3 | 0.0 | 554.4 | 1 | |
| 11 | 11 | -751 | -292 | 115 | 0 | 47 | 660 | 23.3 | 521.6 | 20.6 | 0.0 | 544.9 | 1 | |
| 12 | 11 | 1300 | -205 | 114 | 0 | 47 | 475 | 40.4 | 422.7 | 14.5 | 0.0 | 382.3 | 1 | |
| 13 | 11 | 237 | -829 | -1 | 0 | -1 | 1550 | 7.4 | 814.6 | 58.5 | 0.0 | 821.9 | 1 | |
| 14 | 11 | -62 | 326 | 3 | 0 | 1 | -401 | 1.9 | 214.5 | 23.0 | 0.0 | 216.4 | 1 | |
| 15 | 11 | 248 | -869 | -1 | 0 | -1 | 1615 | 7.7 | 849.1 | 61.3 | 0.0 | 856.8 | 1 | |
| 1 | 22 | 285 | -1015 | -2 | 0 | -1 | 1740 | 8.8 | 914.5 | 71.6 | 0.0 | 923.3 | 1 | |
| 5 | 22 | -910 | -198 | -382 | 0 | -116 | 444 | 28.3 | 664.6 | 14.0 | 0.0 | 636.3 | 1 | |
| 6 | 22 | -287 | -198 | -382 | 0 | -117 | 444 | 8.9 | 665.2 | 14.0 | 0.0 | 656.3 | 1 | |
| 7 | 22 | 398 | -213 | 383 | 0 | 117 | 456 | 12.3 | 671.4 | 15.0 | 0.0 | 659.1 | 1 | |
| 8 | 22 | 1021 | -213 | 383 | 0 | 116 | 456 | 31.7 | 670.8 | 15.0 | 0.0 | 639.1 | 1 | |
| 9 | 22 | -1152 | -291 | -117 | 0 | -36 | 624 | 35.8 | 459.3 | 20.6 | 0.0 | 423.5 | 1 | |
| 10 | 22 | 926 | -291 | -118 | 0 | -36 | 624 | 28.7 | 461.2 | 20.6 | 0.0 | 490.0 | 1 | |
| 11 | 22 | -751 | -296 | 115 | 0 | 35 | 628 | 23.3 | 458.3 | 20.9 | 0.0 | 481.6 | 1 | |
| 12 | 22 | 1300 | -208 | 114 | 0 | 35 | 452 | 40.4 | 364.6 | 14.7 | 0.0 | 324.2 | 1 | |
| 13 | 22 | 237 | -833 | -1 | 0 | -1 | 1459 | 7.4 | 766.5 | 58.7 | 0.0 | 773.9 | 1 | |
| 14 | 22 | -62 | 323 | 3 | 0 | 1 | -366 | 1.9 | 194.9 | 22.8 | 0.0 | 196.8 | 1 | |
| 15 | 22 | 248 | -873 | -1 | 0 | -1 | 1520 | 7.7 | 798.8 | 61.5 | 0.0 | 806.5 | 1 | |
| 1 | 33 | 285 | -1019 | -2 | 0 | -1 | 1629 | 8.8 | 855.7 | 71.9 | 0.0 | 864.5 | 1 | |
| 5 | 33 | -910 | -201 | -382 | 0 | -75 | 422 | 28.3 | 498.3 | 14.2 | 0.0 | 470.0 | 1 | |
| 6 | 33 | -287 | -201 | -382 | 0 | -75 | 422 | 8.9 | 498.8 | 14.2 | 0.0 | 489.9 | 1 | |
| 7 | 33 | 398 | -216 | 383 | 0 | 75 | 433 | 12.3 | 504.0 | 15.2 | 0.0 | 491.6 | 1 | |
| 8 | 33 | 1021 | -216 | 383 | 0 | 75 | 433 | 31.7 | 503.5 | 15.2 | 0.0 | 471.7 | 1 | |
| 9 | 33 | -1152 | -295 | -117 | 0 | -23 | 592 | 35.8 | 394.9 | 20.8 | 0.0 | 376.8 | 3 | |
| 10 | 33 | 926 | -295 | -118 | 0 | -23 | 592 | 28.7 | 396.6 | 20.8 | 0.0 | 425.3 | 1 | |
| 11 | 33 | -751 | -299 | 115 | 0 | 22 | 595 | 23.3 | 394.7 | 21.1 | 0.0 | 418.1 | 1 | |
| 12 | 33 | 1300 | -210 | 114 | 0 | 22 | 429 | 40.4 | 306.4 | 14.8 | 0.0 | 294.9 | 3 | |
| 13 | 33 | 237 | -836 | -1 | 0 | -1 | 1368 | 7.4 | 718.3 | 59.0 | 0.0 | 725.7 | 1 | |
| 14 | 33 | -62 | 320 | 3 | 0 | 1 | -331 | 1.9 | 175.4 | 22.6 | 0.0 | 177.3 | 1 | |
| 15 | 33 | 248 | -876 | -1 | 0 | -1 | 1424 | 7.7 | 748.2 | 61.8 | 0.0 | 755.9 | 1 | |
| 1 | 44 | 285 | -1022 | -2 | 0 | -1 | 1517 | 8.8 | 796.7 | 72.1 | 0.0 | 805.5 | 1 | |
| 5 | 44 | -910 | -204 | -382 | 0 | -33 | 400 | 28.3 | 331.8 | 14.4 | 0.0 | 303.6 | 1 | |
| 6 | 44 | -287 | -204 | -382 | 0 | -33 | 400 | 8.9 | 332.3 | 14.4 | 0.0 | 323.4 | 1 | |
| 7 | 44 | 398 | -218 | 383 | 0 | 33 | 409 | 12.3 | 336.4 | 15.4 | 0.0 | 324.0 | 1 | |
| 8 | 44 | 1021 | -218 | 383 | 0 | 33 | 409 | 31.7 | 335.9 | 15.4 | 0.0 | 304.2 | 1 | |
| 9 | 44 | -1152 | -299 | -117 | 0 | -10 | 560 | 35.8 | 330.4 | 21.1 | 0.0 | 342.4 | 3 | |
| 10 | 44 | 926 | -299 | -118 | 0 | -10 | 560 | 28.7 | 331.8 | 21.1 | 0.0 | 360.5 | 1 | |
| 11 | 44 | -751 | -303 | 115 | 0 | 10 | 563 | 23.3 | 331.0 | 21.4 | 0.0 | 354.3 | 1 | |
| 12 | 44 | 1300 | -213 | 114 | 0 | 10 | 406 | 40.4 | 247.9 | 15.0 | 0.0 | 265.8 | 3 | |
| 13 | 44 | 237 | -840 | -1 | 0 | -1 | 1276 | 7.4 | 669.9 | 59.3 | 0.0 | 677.2 | 1 | |
| 14 | 44 | -62 | 317 | 3 | 0 | 0 | -296 | 1.9 | 156.0 | 22.4 | 0.0 | 157.9 | 1 | |
| 15 | 44 | 248 | -880 | -1 | 0 | -1 | 1329 | 7.7 | 697.5 | 62.1 | 0.0 | 705.2 | 1 | |
| 1 | 55 | 285 | -1026 | -2 | 0 | -1 | 1405 | 8.8 | 737.5 | 72.4 | 0.0 | 746.3 | 1 | |
| 5 | 55 | -910 | -207 | -382 | 0 | 9 | 378 | 28.3 | 230.1 | 14.6 | 0.0 | 258.4 | 1 | |
| 6 | 55 | -287 | -207 | -382 | 0 | 9 | 378 | 8.9 | 229.8 | 14.6 | 0.0 | 238.7 | 1 | |
| 7 | 55 | 398 | -221 | 383 | 0 | -9 | 385 | 12.3 | 234.6 | 15.6 | 0.0 | 247.0 | 1 | |
| 8 | 55 | 1021 | -221 | 383 | 0 | -9 | 385 | 31.7 | 235.0 | 15.6 | 0.0 | 266.7 | 1 | |
| 9 | 55 | -1152 | -302 | -117 | 0 | 3 | 527 | 35.8 | 285.9 | 21.3 | 0.0 | 321.7 | 1 | |
| 10 | 55 | 926 | -302 | -118 | 0 | 2 | 527 | 28.7 | 284.7 | 21.3 | 0.0 | 307.8 | 3 | |
| 11 | 55 | -751 | -307 | 115 | 0 | -3 | 529 | 23.3 | 286.9 | 21.6 | 0.0 | 303.9 | 3 | |
| 12 | 55 | 1300 | -216 | 114 | 0 | -3 | 383 | 40.4 | 211.1 | 15.2 | 0.0 | 251.4 | 1 | |
| 13 | 55 | 237 | -844 | -1 | 0 | -0 | 1184 | 7.4 | 621.2 | 59.5 | 0.0 | 628.6 | 1 | |
| 14 | 55 | -62 | 315 | 3 | 0 | 0 | -261 | 1.9 | 136.8 | 22.2 | 0.0 | 138.8 | 1 | |
| 15 | 55 | 248 | -883 | -1 | 0 | -0 | 1232 | 7.7 | 646.5 | 62.3 | 0.0 | 654.2 | 1 | |
| 1 | 66 | 285 | -1030 | -2 | 0 | -0 | 1293 | 8.8 | 678.1 | 72.6 | 0.0 | 686.9 | 1 | |
| 5 | 66 | -910 | -209 | -382 | 0 | 51 | 355 | 28.3 | 373.1 | 14.8 | 0.0 | 401.4 | 1 | |
| 6 | 66 | -287 | -209 | -382 | 0 | 50 | 355 | 8.9 | 372.8 | 14.8 | 0.0 | 381.7 | 1 | |
| 7 | 66 | 398 | -224 | 383 | 0 | -51 | 361 | 12.3 | 377.1 | 15.8 | 0.0 | 389.4 | 1 | |
| 8 | 66 | 1021 | -224 | 383 | 0 | -51 | 361 | 31.7 | 377.4 | 15.8 | 0.0 | 409.1 | 1 | |
| 9 | 66 | -1152 | -306 | -117 | 0 | 16 | 494 | 35.8 | 316.1 | 21.6 | 0.0 | 351.8 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-------|-------|------|---|------|------|------|-------|------|-----|-------|---|
| 10 | 66 | 926 | -306 | -118 | 0 | 15 | 494 | 28.7 | 315.2 | 21.6 | 0.0 | 307.9 | 3 |
| 11 | 66 | -751 | -310 | 115 | 0 | -15 | 496 | 23.3 | 315.7 | 21.9 | 0.0 | 303.3 | 3 |
| 12 | 66 | 1300 | -219 | 114 | 0 | -15 | 359 | 40.4 | 244.9 | 15.4 | 0.0 | 285.3 | 1 |
| 13 | 66 | 237 | -847 | -1 | 0 | -0 | 1092 | 7.4 | 572.4 | 59.8 | 0.0 | 579.7 | 1 |
| 14 | 66 | -62 | 312 | 3 | 0 | -0 | -227 | 1.9 | 119.8 | 22.0 | 0.0 | 121.1 | 3 |
| 15 | 66 | 248 | -887 | -1 | 0 | -0 | 1135 | 7.7 | 595.4 | 62.6 | 0.0 | 603.1 | 1 |
| | | | | | | | | | | | | | |
| 1 | 76 | 285 | -1033 | -2 | 0 | -0 | 1180 | 8.8 | 618.4 | 72.9 | 0.0 | 627.3 | 1 |
| 5 | 76 | -910 | -212 | -382 | 0 | 92 | 332 | 28.3 | 515.9 | 15.0 | 0.0 | 544.2 | 1 |
| 6 | 76 | -287 | -212 | -382 | 0 | 92 | 332 | 8.9 | 515.7 | 15.0 | 0.0 | 524.6 | 1 |
| 7 | 76 | 398 | -227 | 383 | 0 | -93 | 336 | 12.3 | 519.4 | 16.0 | 0.0 | 531.8 | 1 |
| 8 | 76 | 1021 | -227 | 383 | 0 | -93 | 336 | 31.7 | 519.7 | 16.0 | 0.0 | 551.4 | 1 |
| 9 | 76 | -1152 | -309 | -117 | 0 | 28 | 460 | 35.8 | 346.0 | 21.8 | 0.0 | 381.8 | 1 |
| 10 | 76 | 926 | -309 | -118 | 0 | 28 | 460 | 28.7 | 345.5 | 21.8 | 0.0 | 316.7 | 1 |
| 11 | 76 | -751 | -314 | 115 | 0 | -28 | 461 | 23.3 | 344.4 | 22.1 | 0.0 | 321.1 | 1 |
| 12 | 76 | 1300 | -222 | 114 | 0 | -28 | 335 | 40.4 | 278.6 | 15.6 | 0.0 | 319.0 | 1 |
| 13 | 76 | 237 | -851 | -1 | 0 | -0 | 999 | 7.4 | 523.3 | 60.0 | 0.0 | 530.7 | 1 |
| 14 | 76 | -62 | 309 | 3 | 0 | -1 | -193 | 1.9 | 103.2 | 21.8 | 0.0 | 103.8 | 3 |
| 15 | 76 | 248 | -891 | -1 | 0 | -0 | 1038 | 7.7 | 544.0 | 62.8 | 0.0 | 551.7 | 1 |
| | | | | | | | | | | | | | |
| 1 | 87 | 285 | -1037 | -2 | 0 | -0 | 1067 | 8.8 | 558.6 | 73.1 | 0.0 | 567.5 | 1 |
| 5 | 87 | -910 | -215 | -382 | 0 | 134 | 309 | 28.3 | 658.6 | 15.2 | 0.0 | 686.9 | 1 |
| 6 | 87 | -287 | -215 | -382 | 0 | 134 | 309 | 8.9 | 658.4 | 15.2 | 0.0 | 667.4 | 1 |
| 7 | 87 | 398 | -229 | 383 | 0 | -134 | 311 | 12.3 | 661.6 | 16.2 | 0.0 | 673.9 | 1 |
| 8 | 87 | 1021 | -229 | 383 | 0 | -134 | 311 | 31.7 | 661.7 | 16.2 | 0.0 | 693.5 | 1 |
| 9 | 87 | -1152 | -313 | -117 | 0 | 41 | 426 | 35.8 | 375.8 | 22.1 | 0.0 | 411.6 | 1 |
| 10 | 87 | 926 | -313 | -118 | 0 | 41 | 426 | 28.7 | 375.5 | 22.1 | 0.0 | 346.8 | 1 |
| 11 | 87 | -751 | -317 | 115 | 0 | -40 | 427 | 23.3 | 372.9 | 22.4 | 0.0 | 349.6 | 1 |
| 12 | 87 | 1300 | -224 | 114 | 0 | -40 | 310 | 40.4 | 312.2 | 15.8 | 0.0 | 352.6 | 1 |
| 13 | 87 | 237 | -854 | -1 | 0 | -0 | 906 | 7.4 | 474.1 | 60.3 | 0.0 | 481.4 | 1 |
| 14 | 87 | -62 | 306 | 3 | 0 | -1 | -160 | 1.9 | 86.7 | 21.6 | 0.0 | 86.6 | 3 |
| 15 | 87 | 248 | -894 | -1 | 0 | -0 | 941 | 7.7 | 492.4 | 63.1 | 0.0 | 500.1 | 1 |
| | | | | | | | | | | | | | |
| 1 | 98 | 285 | -1040 | -2 | 0 | 0 | 954 | 8.8 | 499.8 | 73.4 | 0.0 | 508.3 | 3 |
| 5 | 98 | -910 | -218 | -382 | 0 | 176 | 285 | 28.3 | 801.1 | 15.4 | 0.0 | 829.4 | 1 |
| 6 | 98 | -287 | -218 | -382 | 0 | 176 | 285 | 8.9 | 801.0 | 15.4 | 0.0 | 809.9 | 1 |
| 7 | 98 | 398 | -232 | 383 | 0 | -176 | 286 | 12.3 | 803.6 | 16.4 | 0.0 | 815.9 | 1 |
| 8 | 98 | 1021 | -232 | 383 | 0 | -176 | 286 | 31.7 | 803.7 | 16.4 | 0.0 | 835.4 | 1 |
| 9 | 98 | -1152 | -317 | -117 | 0 | 54 | 392 | 35.8 | 405.4 | 22.3 | 0.0 | 441.2 | 1 |
| 10 | 98 | 926 | -317 | -118 | 0 | 54 | 392 | 28.7 | 405.4 | 22.3 | 0.0 | 376.7 | 1 |
| 11 | 98 | -751 | -321 | 115 | 0 | -53 | 392 | 23.3 | 401.1 | 22.6 | 0.0 | 377.8 | 1 |
| 12 | 98 | 1300 | -227 | 114 | 0 | -53 | 286 | 40.4 | 345.6 | 16.0 | 0.0 | 386.0 | 1 |
| 13 | 98 | 237 | -858 | -1 | 0 | 0 | 812 | 7.4 | 425.2 | 60.5 | 0.0 | 432.4 | 3 |
| 14 | 98 | -62 | 304 | 3 | 0 | -1 | -126 | 1.9 | 70.4 | 21.4 | 0.0 | 69.5 | 3 |
| 15 | 98 | 248 | -898 | -1 | 0 | 0 | 843 | 7.7 | 441.4 | 63.3 | 0.0 | 448.9 | 3 |
| | | | | | | | | | | | | | |
| 1 | 109 | 285 | -1044 | -2 | 0 | 0 | 840 | 8.8 | 440.9 | 73.6 | 0.0 | 448.9 | 3 |
| 5 | 109 | -910 | -221 | -382 | 0 | 218 | 261 | 28.3 | 943.4 | 15.6 | 0.0 | 971.7 | 1 |
| 6 | 109 | -287 | -221 | -382 | 0 | 218 | 261 | 8.9 | 943.4 | 15.6 | 0.0 | 952.3 | 1 |
| 7 | 109 | 398 | -235 | 383 | 0 | -218 | 261 | 12.3 | 945.5 | 16.6 | 0.0 | 957.8 | 1 |
| 8 | 109 | 1021 | -235 | 383 | 0 | -218 | 261 | 31.7 | 945.5 | 16.6 | 0.0 | 977.2 | 1 |
| 9 | 109 | -1152 | -320 | -117 | 0 | 67 | 357 | 35.8 | 434.7 | 22.6 | 0.0 | 470.5 | 1 |
| 10 | 109 | 926 | -320 | -118 | 0 | 67 | 357 | 28.7 | 435.1 | 22.6 | 0.0 | 406.3 | 1 |
| 11 | 109 | -751 | -325 | 115 | 0 | -65 | 357 | 23.3 | 429.2 | 22.9 | 0.0 | 405.9 | 1 |
| 12 | 109 | 1300 | -230 | 114 | 0 | -65 | 261 | 40.4 | 378.8 | 16.2 | 0.0 | 419.2 | 1 |
| 13 | 109 | 237 | -862 | -1 | 0 | 0 | 718 | 7.4 | 376.5 | 60.8 | 0.0 | 383.4 | 3 |
| 14 | 109 | -62 | 301 | 3 | 0 | -1 | -93 | 1.9 | 54.2 | 21.2 | 0.0 | 53.1 | 4 |
| 15 | 109 | 248 | -901 | -1 | 0 | 0 | 745 | 7.7 | 390.5 | 63.6 | 0.0 | 397.6 | 3 |

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ASTA NUM. 51 NI 65 NF 136 Lungh. 98.1 cm SEZ. 2 Ps UNP 200

categoria: p.p. y qy tot.

qy medio: 0.2528 0.2528 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|------|-----|-------|-----|-----|---------|--------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | 280 | -841 | -1 | 0 | -1 | 842 | 8.7 | 443.9 | 59.3 | 0.0 | 452.6 | 1 | |
| 5 | 0 | -1492 | -254 | 43 | 0 | 42 | 261 | 46.3 | 292.3 | 17.9 | 0.0 | 338.6 | 1 | |
| 6 | 0 | -775 | -254 | 43 | 0 | 42 | 261 | 24.1 | 292.1 | 17.9 | 0.0 | 316.2 | 1 | |
| 7 | 0 | 886 | -254 | -43 | 0 | -42 | 261 | 27.5 | 293.8 | 17.9 | 0.0 | 321.3 | 1 | |
| 8 | 0 | 1602 | -254 | -43 | 0 | -42 | 261 | 49.8 | 293.9 | 17.9 | 0.0 | 343.6 | 1 | |
| 9 | 0 | -1473 | -348 | 13 | 0 | 13 | 357 | 45.7 | 234.1 | 24.5 | 0.0 | 279.8 | 1 | |
| 10 | 0 | 915 | -348 | 13 | 0 | 13 | 357 | 28.4 | 233.7 | 24.5 | 0.0 | 232.5 | 3 | |

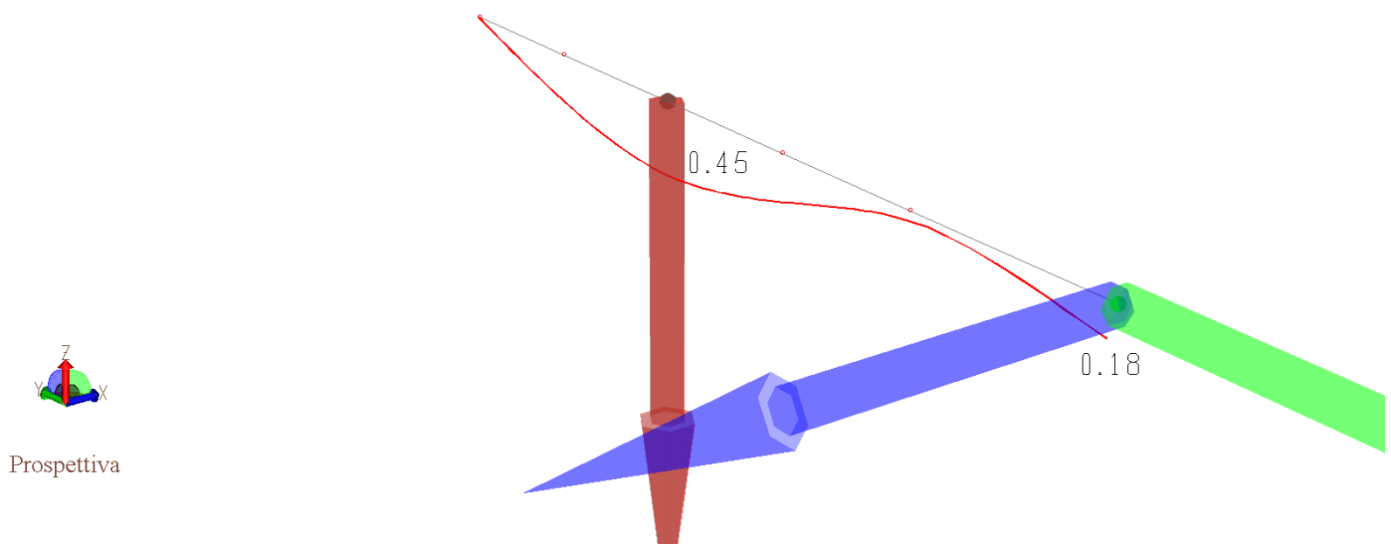
REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|-------|------|-----|---|-----|-----|------|-------|------|-----|-------|---|
| 11 | 0 | -747 | -348 | -13 | 0 | -13 | 357 | 23.2 | 234.8 | 24.5 | 0.0 | 227.6 | 3 |
| 12 | 0 | 1614 | -254 | -13 | 0 | -13 | 261 | 50.1 | 184.6 | 17.9 | 0.0 | 234.7 | 1 |
| 13 | 0 | 233 | -717 | -1 | 0 | -1 | 719 | 7.2 | 379.3 | 50.5 | 0.0 | 386.5 | 1 |
| 14 | 0 | -57 | 108 | -0 | 0 | -0 | -94 | 1.8 | 49.2 | 7.6 | 0.0 | 50.9 | 3 |
| 15 | 0 | 243 | -744 | -1 | 0 | -1 | 746 | 7.6 | 393.3 | 52.5 | 0.0 | 400.9 | 1 |
| 1 | 10 | 280 | -845 | -1 | 0 | -1 | 759 | 8.7 | 400.2 | 59.6 | 0.0 | 408.9 | 1 |
| 5 | 10 | -1492 | -256 | 43 | 0 | 38 | 236 | 46.3 | 263.6 | 18.1 | 0.0 | 309.9 | 1 |
| 6 | 10 | -775 | -256 | 43 | 0 | 38 | 236 | 24.1 | 263.5 | 18.1 | 0.0 | 287.5 | 1 |
| 7 | 10 | 886 | -256 | -43 | 0 | -38 | 236 | 27.5 | 265.0 | 18.1 | 0.0 | 292.5 | 1 |
| 8 | 10 | 1602 | -256 | -43 | 0 | -38 | 236 | 49.8 | 265.1 | 18.1 | 0.0 | 314.8 | 1 |
| 9 | 10 | -1473 | -351 | 13 | 0 | 11 | 323 | 45.7 | 211.4 | 24.8 | 0.0 | 257.2 | 1 |
| 10 | 10 | 915 | -351 | 13 | 0 | 11 | 323 | 28.4 | 211.1 | 24.8 | 0.0 | 212.8 | 3 |
| 11 | 10 | -747 | -351 | -13 | 0 | -12 | 323 | 23.2 | 212.1 | 24.8 | 0.0 | 207.9 | 3 |
| 12 | 10 | 1614 | -256 | -13 | 0 | -12 | 236 | 50.1 | 166.7 | 18.1 | 0.0 | 216.8 | 1 |
| 13 | 10 | 233 | -720 | -1 | 0 | -1 | 649 | 7.2 | 342.1 | 50.8 | 0.0 | 349.4 | 1 |
| 14 | 10 | -57 | 105 | -0 | 0 | -0 | -83 | 1.8 | 43.7 | 7.4 | 0.0 | 45.4 | 3 |
| 15 | 10 | 243 | -747 | -1 | 0 | -1 | 673 | 7.6 | 354.7 | 52.7 | 0.0 | 362.3 | 1 |
| 1 | 20 | 280 | -848 | -1 | 0 | -1 | 676 | 8.7 | 356.4 | 59.8 | 0.0 | 365.1 | 1 |
| 5 | 20 | -1492 | -259 | 43 | 0 | 34 | 211 | 46.3 | 234.8 | 18.3 | 0.0 | 281.2 | 1 |
| 6 | 20 | -775 | -259 | 43 | 0 | 33 | 211 | 24.1 | 234.7 | 18.3 | 0.0 | 258.8 | 1 |
| 7 | 20 | 886 | -258 | -43 | 0 | -34 | 211 | 27.5 | 236.0 | 18.2 | 0.0 | 263.6 | 1 |
| 8 | 20 | 1602 | -258 | -43 | 0 | -34 | 211 | 49.8 | 236.1 | 18.2 | 0.0 | 285.9 | 1 |
| 9 | 20 | -1473 | -354 | 13 | 0 | 10 | 288 | 45.7 | 188.6 | 25.0 | 0.0 | 234.3 | 1 |
| 10 | 20 | 915 | -354 | 13 | 0 | 10 | 288 | 28.4 | 188.3 | 25.0 | 0.0 | 193.0 | 3 |
| 11 | 20 | -747 | -354 | -13 | 0 | -10 | 288 | 23.2 | 189.2 | 25.0 | 0.0 | 188.1 | 3 |
| 12 | 20 | 1614 | -259 | -13 | 0 | -10 | 211 | 50.1 | 148.7 | 18.2 | 0.0 | 198.8 | 1 |
| 13 | 20 | 233 | -723 | -1 | 0 | -1 | 578 | 7.2 | 304.8 | 51.0 | 0.0 | 312.0 | 1 |
| 14 | 20 | -57 | 103 | -0 | 0 | -0 | -73 | 1.8 | 38.4 | 7.3 | 0.0 | 40.0 | 3 |
| 15 | 20 | 243 | -750 | -1 | 0 | -1 | 599 | 7.6 | 316.0 | 52.9 | 0.0 | 323.5 | 1 |
| 1 | 29 | 280 | -851 | -1 | 0 | -1 | 592 | 8.7 | 312.5 | 60.0 | 0.0 | 321.1 | 1 |
| 5 | 29 | -1492 | -261 | 43 | 0 | 29 | 186 | 46.3 | 205.9 | 18.4 | 0.0 | 252.2 | 1 |
| 6 | 29 | -775 | -261 | 43 | 0 | 29 | 186 | 24.1 | 205.8 | 18.4 | 0.0 | 229.9 | 1 |
| 7 | 29 | 886 | -261 | -43 | 0 | -30 | 185 | 27.5 | 207.0 | 18.4 | 0.0 | 234.5 | 1 |
| 8 | 29 | 1602 | -261 | -43 | 0 | -30 | 185 | 49.8 | 207.1 | 18.4 | 0.0 | 256.8 | 1 |
| 9 | 29 | -1473 | -358 | 13 | 0 | 9 | 253 | 45.7 | 165.6 | 25.2 | 0.0 | 211.3 | 1 |
| 10 | 29 | 915 | -358 | 13 | 0 | 9 | 253 | 28.4 | 165.3 | 25.2 | 0.0 | 173.0 | 3 |
| 11 | 29 | -747 | -357 | -13 | 0 | -9 | 253 | 23.2 | 166.1 | 25.2 | 0.0 | 168.0 | 3 |
| 12 | 29 | 1614 | -261 | -13 | 0 | -9 | 185 | 50.1 | 130.6 | 18.4 | 0.0 | 180.7 | 1 |
| 13 | 29 | 233 | -726 | -1 | 0 | -1 | 507 | 7.2 | 267.2 | 51.2 | 0.0 | 274.5 | 1 |
| 14 | 29 | -57 | 100 | -0 | 0 | -0 | -63 | 1.8 | 33.1 | 7.1 | 0.0 | 34.8 | 3 |
| 15 | 29 | 243 | -753 | -1 | 0 | -1 | 525 | 7.6 | 277.1 | 53.1 | 0.0 | 284.6 | 1 |
| 1 | 39 | 280 | -854 | -1 | 0 | -1 | 509 | 8.7 | 268.3 | 60.3 | 0.0 | 277.0 | 1 |
| 5 | 39 | -1492 | -264 | 43 | 0 | 25 | 160 | 46.3 | 176.9 | 18.6 | 0.0 | 223.2 | 1 |
| 6 | 39 | -775 | -264 | 43 | 0 | 25 | 160 | 24.1 | 176.8 | 18.6 | 0.0 | 200.9 | 1 |
| 7 | 39 | 886 | -263 | -43 | 0 | -25 | 160 | 27.5 | 177.8 | 18.6 | 0.0 | 205.3 | 1 |
| 8 | 39 | 1602 | -263 | -43 | 0 | -25 | 160 | 49.8 | 177.9 | 18.6 | 0.0 | 227.6 | 1 |
| 9 | 39 | -1473 | -361 | 13 | 0 | 8 | 218 | 45.7 | 142.4 | 25.5 | 0.0 | 188.2 | 1 |
| 10 | 39 | 915 | -361 | 13 | 0 | 8 | 218 | 28.4 | 142.2 | 25.5 | 0.0 | 152.8 | 3 |
| 11 | 39 | -747 | -361 | -13 | 0 | -8 | 218 | 23.2 | 142.9 | 25.4 | 0.0 | 147.8 | 3 |
| 12 | 39 | 1614 | -264 | -13 | 0 | -8 | 160 | 50.1 | 112.3 | 18.6 | 0.0 | 162.4 | 1 |
| 13 | 39 | 233 | -729 | -1 | 0 | -0 | 435 | 7.2 | 229.6 | 51.5 | 0.0 | 236.8 | 1 |
| 14 | 39 | -57 | 98 | -0 | 0 | -0 | -53 | 1.8 | 28.0 | 6.9 | 0.0 | 29.7 | 3 |
| 15 | 39 | 243 | -757 | -1 | 0 | -0 | 451 | 7.6 | 238.0 | 53.4 | 0.0 | 245.5 | 1 |
| 1 | 49 | 280 | -857 | -1 | 0 | -0 | 425 | 8.7 | 224.0 | 60.5 | 0.0 | 232.7 | 1 |
| 5 | 49 | -1492 | -266 | 43 | 0 | 21 | 134 | 46.3 | 147.7 | 18.8 | 0.0 | 194.1 | 1 |
| 6 | 49 | -775 | -266 | 43 | 0 | 21 | 134 | 24.1 | 147.6 | 18.8 | 0.0 | 171.7 | 1 |
| 7 | 49 | 886 | -266 | -43 | 0 | -21 | 134 | 27.5 | 148.5 | 18.8 | 0.0 | 176.0 | 1 |
| 8 | 49 | 1602 | -266 | -43 | 0 | -21 | 134 | 49.8 | 148.5 | 18.8 | 0.0 | 198.3 | 1 |
| 9 | 49 | -1473 | -364 | 13 | 0 | 6 | 183 | 45.7 | 119.1 | 25.7 | 0.0 | 164.9 | 1 |
| 10 | 49 | 915 | -364 | 13 | 0 | 6 | 183 | 28.4 | 118.9 | 25.7 | 0.0 | 132.5 | 3 |
| 11 | 49 | -747 | -364 | -13 | 0 | -6 | 183 | 23.2 | 119.5 | 25.7 | 0.0 | 127.5 | 3 |
| 12 | 49 | 1614 | -266 | -13 | 0 | -6 | 134 | 50.1 | 93.9 | 18.8 | 0.0 | 144.0 | 1 |
| 13 | 49 | 233 | -733 | -1 | 0 | -0 | 364 | 7.2 | 191.7 | 51.7 | 0.0 | 199.0 | 1 |
| 14 | 49 | -57 | 95 | -0 | 0 | -0 | -44 | 1.8 | 23.0 | 6.7 | 0.0 | 24.7 | 3 |
| 15 | 49 | 243 | -760 | -1 | 0 | -0 | 377 | 7.6 | 198.7 | 53.6 | 0.0 | 206.3 | 1 |
| 1 | 59 | 280 | -861 | -1 | 0 | -0 | 340 | 8.7 | 179.5 | 60.7 | 0.0 | 188.2 | 1 |
| 5 | 59 | -1492 | -269 | 43 | 0 | 17 | 107 | 46.3 | 118.4 | 19.0 | 0.0 | 164.8 | 1 |
| 6 | 59 | -775 | -269 | 43 | 0 | 17 | 107 | 24.1 | 118.4 | 19.0 | 0.0 | 142.4 | 1 |
| 7 | 59 | 886 | -268 | -43 | 0 | -17 | 107 | 27.5 | 119.0 | 18.9 | 0.0 | 146.6 | 1 |
| 8 | 59 | 1602 | -268 | -43 | 0 | -17 | 107 | 49.8 | 119.1 | 18.9 | 0.0 | 168.8 | 1 |
| 9 | 59 | -1473 | -367 | 13 | 0 | 5 | 147 | 45.7 | 95.6 | 25.9 | 0.0 | 141.4 | 1 |
| 10 | 59 | 915 | -367 | 13 | 0 | 5 | 147 | 28.4 | 95.5 | 25.9 | 0.0 | 112.0 | 3 |
| 11 | 59 | -747 | -367 | -13 | 0 | -5 | 147 | 23.2 | 95.9 | 25.9 | 0.0 | 107.0 | 3 |
| 12 | 59 | 1614 | -268 | -13 | 0 | -5 | 107 | 50.1 | 75.4 | 18.9 | 0.0 | 125.5 | 1 |
| 13 | 59 | 233 | -736 | -1 | 0 | -0 | 291 | 7.2 | 153.7 | 51.9 | 0.0 | 160.9 | 1 |
| 14 | 59 | -57 | 93 | -0 | 0 | -0 | -35 | 1.8 | 18.2 | 6.6 | 0.0 | 19.9 | 3 |
| 15 | 59 | 243 | -763 | -1 | 0 | -0 | 302 | 7.6 | 159.3 | 53.8 | 0.0 | 166.9 | 1 |
| 1 | 69 | 280 | -864 | -1 | 0 | -0 | 256 | 8.7 | 134.9 | 60.9 | 0.0 | 147.4 | 4 |
| 5 | 69 | -1492 | -271 | 43 | 0 | 13 | 81 | 46.3 | 89.0 | 19.1 | 0.0 | 135.3 | 1 |
| 6 | 69 | -775 | -271 | 43 | 0 | 13 | 81 | 24.1 | 89.0 | 19.1 | 0.0 | 113.0 | 1 |
| 7 | 69 | 886 | -271 | -43 | 0 | -13 | 81 | 27.5 | 89.5 | 19.1 | 0.0 | 117.0 | 1 |
| 8 | 69 | 1602 | -271 | -43 | 0 | -13 | 81 | 49.8 | 89.5 | 19.1 | 0.0 | 139.3 | 1 |

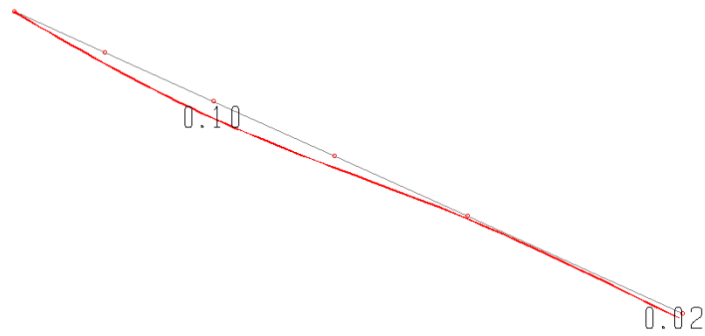
REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|-------|------|-----|---|----|-----|------|-------|------|-----|-------|---|
| 9 | 69 | -1473 | -371 | 13 | 0 | 4 | 111 | 45.7 | 72.0 | 26.1 | 0.0 | 117.7 | 1 |
| 10 | 69 | 915 | -371 | 13 | 0 | 4 | 111 | 28.4 | 71.8 | 26.1 | 0.0 | 91.4 | 3 |
| 11 | 69 | -747 | -370 | -13 | 0 | -4 | 110 | 23.2 | 72.2 | 26.1 | 0.0 | 86.3 | 3 |
| 12 | 69 | 1614 | -271 | -13 | 0 | -4 | 81 | 50.1 | 56.7 | 19.1 | 0.0 | 106.8 | 1 |
| 13 | 69 | 233 | -739 | -1 | 0 | -0 | 219 | 7.2 | 115.5 | 52.1 | 0.0 | 126.0 | 4 |
| 14 | 69 | -57 | 90 | -0 | 0 | -0 | -26 | 1.8 | 13.4 | 6.4 | 0.0 | 15.7 | 4 |
| 15 | 69 | 243 | -766 | -1 | 0 | -0 | 227 | 7.6 | 119.7 | 54.1 | 0.0 | 130.7 | 4 |
| | | | | | | | | | | | | | |
| 1 | 79 | 280 | -867 | -1 | 0 | -0 | 171 | 8.7 | 90.1 | 61.2 | 0.0 | 115.5 | 4 |
| 5 | 79 | -1492 | -274 | 43 | 0 | 8 | 54 | 46.3 | 59.5 | 19.3 | 0.0 | 105.8 | 1 |
| 6 | 79 | -775 | -274 | 43 | 0 | 8 | 54 | 24.1 | 59.4 | 19.3 | 0.0 | 83.5 | 1 |
| 7 | 79 | 886 | -273 | -43 | 0 | -8 | 54 | 27.5 | 59.8 | 19.3 | 0.0 | 87.3 | 1 |
| 8 | 79 | 1602 | -273 | -43 | 0 | -8 | 54 | 49.8 | 59.8 | 19.3 | 0.0 | 109.6 | 1 |
| 9 | 79 | -1473 | -374 | 13 | 0 | 3 | 74 | 45.7 | 48.1 | 26.4 | 0.0 | 93.9 | 1 |
| 10 | 79 | 915 | -374 | 13 | 0 | 3 | 74 | 28.4 | 48.1 | 26.4 | 0.0 | 72.3 | 4 |
| 11 | 79 | -747 | -374 | -13 | 0 | -3 | 74 | 23.2 | 48.3 | 26.4 | 0.0 | 67.7 | 4 |
| 12 | 79 | 1614 | -273 | -13 | 0 | -3 | 54 | 50.1 | 37.9 | 19.3 | 0.0 | 88.1 | 1 |
| 13 | 79 | 233 | -742 | -1 | 0 | -0 | 146 | 7.2 | 77.2 | 52.4 | 0.0 | 98.7 | 4 |
| 14 | 79 | -57 | 88 | -0 | 0 | -0 | -17 | 1.8 | 8.8 | 6.2 | 0.0 | 12.2 | 4 |
| 15 | 79 | 243 | -770 | -1 | 0 | -0 | 152 | 7.6 | 80.0 | 54.3 | 0.0 | 102.4 | 4 |
| | | | | | | | | | | | | | |
| 1 | 88 | 280 | -870 | -1 | 0 | -0 | 86 | 8.7 | 45.1 | 61.4 | 0.0 | 106.7 | 5 |
| 5 | 88 | -1492 | -276 | 43 | 0 | 4 | 27 | 46.3 | 29.8 | 19.5 | 0.0 | 76.1 | 1 |
| 6 | 88 | -775 | -276 | 43 | 0 | 4 | 27 | 24.1 | 29.8 | 19.5 | 0.0 | 53.9 | 1 |
| 7 | 88 | 886 | -276 | -43 | 0 | -4 | 27 | 27.5 | 30.0 | 19.5 | 0.0 | 57.5 | 1 |
| 8 | 88 | 1602 | -276 | -43 | 0 | -4 | 27 | 49.8 | 30.0 | 19.5 | 0.0 | 79.7 | 1 |
| 9 | 88 | -1473 | -377 | 13 | 0 | 1 | 37 | 45.7 | 24.2 | 26.6 | 0.0 | 70.0 | 4 |
| 10 | 88 | 915 | -377 | 13 | 0 | 1 | 37 | 28.4 | 24.1 | 26.6 | 0.0 | 56.9 | 4 |
| 11 | 88 | -747 | -377 | -13 | 0 | -1 | 37 | 23.2 | 24.2 | 26.6 | 0.0 | 52.7 | 4 |
| 12 | 88 | 1614 | -276 | -13 | 0 | -1 | 27 | 50.1 | 19.0 | 19.5 | 0.0 | 69.2 | 1 |
| 13 | 88 | 233 | -746 | -1 | 0 | -0 | 73 | 7.2 | 38.7 | 52.6 | 0.0 | 91.4 | 5 |
| 14 | 88 | -57 | 85 | -0 | 0 | -0 | -8 | 1.8 | 4.3 | 6.0 | 0.0 | 10.6 | 5 |
| 15 | 88 | 243 | -773 | -1 | 0 | -0 | 76 | 7.6 | 40.1 | 54.5 | 0.0 | 94.7 | 5 |
| | | | | | | | | | | | | | |
| 1 | 98 | 280 | -874 | -1 | 0 | 0 | 0 | 8.7 | 0.0 | 61.6 | 0.0 | 107.1 | 5 |
| 5 | 98 | -1492 | -279 | 43 | 0 | 0 | 0 | 46.3 | 0.0 | 19.7 | 0.0 | 57.5 | 5 |
| 6 | 98 | -775 | -279 | 43 | 0 | 0 | 0 | 24.1 | 0.0 | 19.7 | 0.0 | 41.7 | 5 |
| 7 | 98 | 886 | -278 | -43 | 0 | 0 | 0 | 27.5 | 0.0 | 19.6 | 0.0 | 43.7 | 5 |
| 8 | 98 | 1602 | -278 | -43 | 0 | 0 | 0 | 49.8 | 0.0 | 19.6 | 0.0 | 60.3 | 5 |
| 9 | 98 | -1473 | -380 | 13 | 0 | 0 | 0 | 45.7 | 0.0 | 26.8 | 0.0 | 65.2 | 5 |
| 10 | 98 | 915 | -380 | 13 | 0 | 0 | 0 | 28.4 | 0.0 | 26.8 | 0.0 | 54.5 | 5 |
| 11 | 98 | -747 | -380 | -13 | 0 | 0 | 0 | 23.2 | 0.0 | 26.8 | 0.0 | 51.9 | 5 |
| 12 | 98 | 1614 | -278 | -13 | 0 | 0 | 0 | 50.1 | 0.0 | 19.6 | 0.0 | 60.6 | 5 |
| 13 | 98 | 233 | -749 | -1 | 0 | 0 | 0 | 7.2 | 0.0 | 52.8 | 0.0 | 91.8 | 5 |
| 14 | 98 | -57 | 83 | -0 | 0 | 0 | 0 | 1.8 | 0.0 | 5.9 | 0.0 | 10.3 | 5 |
| 15 | 98 | 243 | -776 | -1 | 0 | 0 | 0 | 7.6 | 0.0 | 54.7 | 0.0 | 95.1 | 5 |

Verifica spostamenti verticali (rif.)4.2.4.2.1 delle NTC 2008)



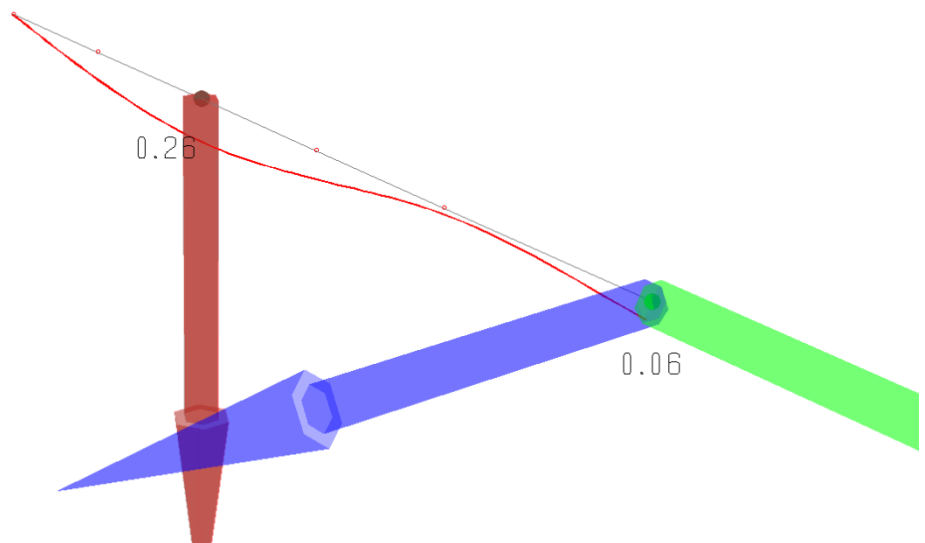
Freccia massima combinazione rara



Prospettiva

75

Freccia massima combinazione quasi permanente



Prospettiva

Freccia massima combinazione frequente

Luce di calcolo 425+155 cm

Campata

Rara $425/0.45 = 944 > 250 \rightarrow$ verificato

Frequente $425/0.26 = 1635 > 250 \rightarrow$ verificato

Quasi permanente $425/0.10 = 4250 > 250 \rightarrow$ verificato

Sbalzo

Rara $155/0.18 = 861 > 250 \rightarrow$ verificato

Frequente $155/0.06 = 2583 > 250 \rightarrow$ verificato

Quasi permanente $155/0.02 = 7750 > 250 \rightarrow$ verificato

2.2.1. VERIFICA SLU E SLE HEB160

Sezioni
6 Ps HEB 160 ycap=No



Prospettiva

Lavoro: **Blocco 1** Intestazione lavoro: **ESECUTIVO**

Elemento: **TRAVE** Metodo di verifica: **Stati limite**

Gruppo: **2** Descrizione: **Travi principali**

Tabella: **Tabella travi**

Tipo acciaio: **S 235** Beta piano 'yx': **1.000** Beta piano 'zx': **1.000**

ASTA NUM. 9 NI 63 NF 33 Lungh. 155.0 cm SEZ. 6 Ps HEB 160

categoria: p.p. y qy tot.

qy medio: 0.4263 0.4263 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|-------|----|-------|----|----|---------|--------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | 1 | -2191 | 34 | 0 | 0 | 1 | 0.0 | 0.2 | 187.8 | 0.0 | 325.2 | 4 | |
| 5 | 0 | -112 | -546 | -6 | 0 | 0 | 0 | 2.1 | 0.1 | 46.8 | 0.0 | 81.0 | 4 | |
| 6 | 0 | 113 | -546 | -6 | 0 | 0 | 0 | 2.1 | 0.1 | 46.8 | 0.0 | 81.0 | 4 | |
| 7 | 0 | -113 | -543 | 28 | 0 | 0 | 0 | 2.1 | 0.1 | 46.5 | 0.0 | 80.6 | 4 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|-------|-----|---|-----|-------|-----|-------|-------|-----|-------|---|
| 8 | 0 | 112 | -543 | 29 | 0 | 0 | 0 | 2.1 | 0.1 | 46.5 | 0.0 | 80.6 | 4 |
| 9 | 0 | -374 | -761 | 9 | 0 | 0 | 0 | 6.9 | 0.1 | 65.2 | 0.0 | 113.1 | 4 |
| 10 | 0 | 375 | -760 | 11 | 0 | 0 | 0 | 6.9 | 0.1 | 65.2 | 0.0 | 113.1 | 4 |
| 11 | 0 | -375 | -760 | 17 | 0 | 0 | 0 | 6.9 | 0.1 | 65.1 | 0.0 | 113.0 | 4 |
| 12 | 0 | 375 | -544 | 15 | 0 | 0 | 0 | 6.9 | 0.1 | 46.6 | 0.0 | 81.0 | 4 |
| 13 | 0 | 1 | -1829 | 28 | 0 | 0 | 1 | 0.0 | 0.2 | 156.7 | 0.0 | 271.5 | 4 |
| 14 | 0 | -0 | 504 | -11 | 0 | -0 | -0 | 0.0 | 0.0 | 43.2 | 0.0 | 74.8 | 4 |
| 15 | 0 | 1 | -1908 | 29 | 0 | 0 | 1 | 0.0 | 0.2 | 163.5 | 0.0 | 283.2 | 4 |
| | | | | | | | | | | | | | |
| 1 | 16 | 1 | -2200 | 34 | 0 | -5 | -339 | 0.0 | 113.7 | 188.5 | 0.0 | 326.5 | 4 |
| 5 | 16 | -112 | -552 | -6 | 0 | 1 | -85 | 2.1 | 28.1 | 47.3 | 0.0 | 82.0 | 4 |
| 6 | 16 | 113 | -552 | -6 | 0 | 1 | -85 | 2.1 | 28.0 | 47.3 | 0.0 | 82.0 | 4 |
| 7 | 16 | -113 | -549 | 28 | 0 | -4 | -84 | 2.1 | 31.1 | 47.1 | 0.0 | 81.6 | 4 |
| 8 | 16 | 112 | -549 | 29 | 0 | -4 | -84 | 2.1 | 31.1 | 47.1 | 0.0 | 81.6 | 4 |
| 9 | 16 | -374 | -769 | 9 | 0 | -1 | -118 | 6.9 | 39.2 | 65.9 | 0.0 | 114.4 | 4 |
| 10 | 16 | 375 | -769 | 11 | 0 | -2 | -118 | 6.9 | 39.4 | 65.9 | 0.0 | 114.3 | 4 |
| 11 | 16 | -375 | -768 | 17 | 0 | -3 | -118 | 6.9 | 40.3 | 65.8 | 0.0 | 114.2 | 4 |
| 12 | 16 | 375 | -550 | 15 | 0 | -2 | -85 | 6.9 | 29.3 | 47.2 | 0.0 | 82.0 | 4 |
| 13 | 16 | 1 | -1838 | 28 | 0 | -4 | -284 | 0.0 | 95.0 | 157.5 | 0.0 | 272.7 | 4 |
| 14 | 16 | -0 | 497 | -11 | 0 | 2 | 77 | 0.0 | 26.3 | 42.6 | 0.0 | 73.8 | 4 |
| 15 | 16 | 1 | -1917 | 29 | 0 | -5 | -296 | 0.0 | 99.0 | 164.2 | 0.0 | 284.5 | 4 |
| | | | | | | | | | | | | | |
| 1 | 31 | 1 | -2208 | 34 | 0 | -11 | -681 | 0.0 | 228.1 | 189.2 | 0.0 | 346.0 | 3 |
| 5 | 31 | -112 | -559 | -6 | 0 | 2 | -171 | 2.1 | 56.6 | 47.9 | 0.0 | 88.5 | 3 |
| 6 | 31 | 113 | -559 | -6 | 0 | 2 | -171 | 2.1 | 56.4 | 47.9 | 0.0 | 88.5 | 3 |
| 7 | 31 | -113 | -556 | 28 | 0 | -9 | -170 | 2.1 | 62.5 | 47.6 | 0.0 | 88.2 | 3 |
| 8 | 31 | 112 | -556 | 29 | 0 | -9 | -170 | 2.1 | 62.7 | 47.6 | 0.0 | 88.2 | 3 |
| 9 | 31 | -374 | -778 | 9 | 0 | -3 | -238 | 6.9 | 79.0 | 66.6 | 0.0 | 125.4 | 3 |
| 10 | 31 | 375 | -778 | 11 | 0 | -3 | -238 | 6.9 | 79.4 | 66.6 | 0.0 | 125.4 | 3 |
| 11 | 31 | -375 | -777 | 17 | 0 | -5 | -238 | 6.9 | 81.1 | 66.6 | 0.0 | 125.3 | 3 |
| 12 | 31 | 375 | -557 | 15 | 0 | -5 | -170 | 6.9 | 58.9 | 47.7 | 0.0 | 91.0 | 3 |
| 13 | 31 | 1 | -1846 | 28 | 0 | -9 | -569 | 0.0 | 190.5 | 158.2 | 0.0 | 289.3 | 3 |
| 14 | 31 | -0 | 491 | -11 | 0 | 3 | 154 | 0.0 | 52.4 | 42.0 | 0.0 | 77.3 | 3 |
| 15 | 31 | 1 | -1925 | 29 | 0 | -9 | -593 | 0.0 | 198.7 | 165.0 | 0.0 | 301.6 | 3 |
| | | | | | | | | | | | | | |
| 1 | 47 | 1 | -2217 | 34 | 0 | -16 | -1024 | 0.0 | 342.9 | 190.0 | 0.0 | 403.6 | 3 |
| 5 | 47 | -112 | -566 | -6 | 0 | 3 | -258 | 2.1 | 85.4 | 48.5 | 0.0 | 103.8 | 3 |
| 6 | 47 | 113 | -566 | -6 | 0 | 3 | -258 | 2.1 | 85.2 | 48.5 | 0.0 | 103.8 | 3 |
| 7 | 47 | -113 | -563 | 28 | 0 | -13 | -257 | 2.1 | 94.3 | 48.2 | 0.0 | 103.6 | 3 |
| 8 | 47 | 112 | -563 | 29 | 0 | -13 | -257 | 2.1 | 94.5 | 48.2 | 0.0 | 103.6 | 3 |
| 9 | 47 | -374 | -786 | 9 | 0 | -4 | -359 | 6.9 | 119.2 | 67.4 | 0.0 | 147.2 | 3 |
| 10 | 47 | 375 | -786 | 11 | 0 | -5 | -359 | 6.9 | 119.8 | 67.4 | 0.0 | 147.2 | 3 |
| 11 | 47 | -375 | -785 | 17 | 0 | -8 | -359 | 6.9 | 122.3 | 67.3 | 0.0 | 147.1 | 3 |
| 12 | 47 | 375 | -564 | 15 | 0 | -7 | -257 | 6.9 | 88.9 | 48.3 | 0.0 | 107.0 | 3 |
| 13 | 47 | 1 | -1855 | 28 | 0 | -13 | -856 | 0.0 | 286.5 | 158.9 | 0.0 | 337.5 | 3 |
| 14 | 47 | -0 | 484 | -11 | 0 | 5 | 230 | 0.0 | 78.1 | 41.5 | 0.0 | 89.3 | 3 |
| 15 | 47 | 1 | -1934 | 29 | 0 | -14 | -892 | 0.0 | 298.8 | 165.7 | 0.0 | 351.9 | 3 |
| | | | | | | | | | | | | | |
| 1 | 62 | 1 | -2225 | 34 | 0 | -21 | -1368 | 0.0 | 458.1 | 190.7 | 0.0 | 472.6 | 3 |
| 5 | 62 | -112 | -572 | -6 | 0 | 4 | -346 | 2.1 | 114.5 | 49.0 | 0.0 | 121.9 | 3 |
| 6 | 62 | 113 | -572 | -6 | 0 | 3 | -346 | 2.1 | 114.3 | 49.0 | 0.0 | 121.9 | 3 |
| 7 | 62 | -113 | -569 | 28 | 0 | -18 | -345 | 2.1 | 126.4 | 48.8 | 0.0 | 128.5 | 1 |
| 8 | 62 | 112 | -569 | 29 | 0 | -18 | -345 | 2.1 | 126.7 | 48.8 | 0.0 | 128.8 | 1 |
| 9 | 62 | -374 | -795 | 9 | 0 | -6 | -482 | 6.9 | 159.8 | 68.1 | 0.0 | 172.7 | 3 |
| 10 | 62 | 375 | -795 | 11 | 0 | -7 | -482 | 6.9 | 160.6 | 68.1 | 0.0 | 172.8 | 3 |
| 11 | 62 | -375 | -794 | 17 | 0 | -10 | -481 | 6.9 | 164.0 | 68.0 | 0.0 | 172.7 | 3 |
| 12 | 62 | 375 | -570 | 15 | 0 | -9 | -345 | 6.9 | 119.3 | 48.9 | 0.0 | 126.2 | 1 |
| 13 | 62 | 1 | -1863 | 28 | 0 | -17 | -1144 | 0.0 | 383.0 | 159.7 | 0.0 | 395.4 | 3 |
| 14 | 62 | -0 | 477 | -11 | 0 | 7 | 304 | 0.0 | 103.5 | 40.9 | 0.0 | 103.7 | 3 |
| 15 | 62 | 1 | -1942 | 29 | 0 | -18 | -1193 | 0.0 | 399.3 | 166.4 | 0.0 | 412.3 | 3 |
| | | | | | | | | | | | | | |
| 1 | 78 | 1 | -2234 | 34 | 0 | -26 | -1713 | 0.0 | 573.7 | 191.4 | 0.0 | 573.8 | 1 |
| 5 | 78 | -112 | -579 | -6 | 0 | 5 | -436 | 2.1 | 144.0 | 49.6 | 0.0 | 146.0 | 1 |
| 6 | 78 | 113 | -579 | -6 | 0 | 4 | -436 | 2.1 | 143.7 | 49.6 | 0.0 | 145.7 | 1 |
| 7 | 78 | -113 | -576 | 28 | 0 | -22 | -433 | 2.1 | 158.9 | 49.3 | 0.0 | 161.0 | 1 |
| 8 | 78 | 112 | -576 | 29 | 0 | -22 | -433 | 2.1 | 159.2 | 49.3 | 0.0 | 161.3 | 1 |
| 9 | 78 | -374 | -803 | 9 | 0 | -7 | -606 | 6.9 | 200.8 | 68.8 | 0.0 | 207.7 | 1 |
| 10 | 78 | 375 | -803 | 11 | 0 | -8 | -606 | 6.9 | 201.9 | 68.8 | 0.0 | 208.8 | 1 |
| 11 | 78 | -375 | -803 | 17 | 0 | -13 | -605 | 6.9 | 206.0 | 68.8 | 0.0 | 212.9 | 1 |
| 12 | 78 | 375 | -577 | 15 | 0 | -12 | -434 | 6.9 | 149.9 | 49.4 | 0.0 | 156.8 | 1 |
| 13 | 78 | 1 | -1872 | 28 | 0 | -22 | -1434 | 0.0 | 479.8 | 160.4 | 0.0 | 479.8 | 1 |
| 14 | 78 | -0 | 471 | -11 | 0 | 8 | 378 | 0.0 | 128.6 | 40.3 | 0.0 | 128.6 | 1 |
| 15 | 78 | 1 | -1951 | 29 | 0 | -23 | -1495 | 0.0 | 500.3 | 167.2 | 0.0 | 500.3 | 1 |
| | | | | | | | | | | | | | |
| 1 | 93 | 1 | -2243 | 34 | 0 | -32 | -2060 | 0.0 | 689.8 | 192.2 | 0.0 | 689.8 | 1 |
| 5 | 93 | -112 | -585 | -6 | 0 | 6 | -526 | 2.1 | 173.8 | 50.2 | 0.0 | 175.8 | 1 |
| 6 | 93 | 113 | -585 | -6 | 0 | 5 | -526 | 2.1 | 173.4 | 50.2 | 0.0 | 175.5 | 1 |
| 7 | 93 | -113 | -582 | 28 | 0 | -26 | -523 | 2.1 | 191.7 | 49.9 | 0.0 | 193.7 | 1 |
| 8 | 93 | 112 | -582 | 29 | 0 | -27 | -523 | 2.1 | 192.1 | 49.9 | 0.0 | 194.1 | 1 |
| 9 | 93 | -374 | -812 | 9 | 0 | -9 | -731 | 6.9 | 242.3 | 69.6 | 0.0 | 249.2 | 1 |
| 10 | 93 | 375 | -812 | 11 | 0 | -10 | -731 | 6.9 | 243.6 | 69.6 | 0.0 | 250.5 | 1 |
| 11 | 93 | -375 | -811 | 17 | 0 | -16 | -730 | 6.9 | 248.5 | 69.5 | 0.0 | 255.4 | 1 |
| 12 | 93 | 375 | -583 | 15 | 0 | -14 | -524 | 6.9 | 180.9 | 50.0 | 0.0 | 187.8 | 1 |
| 13 | 93 | 1 | -1881 | 28 | 0 | -26 | -1724 | 0.0 | 577.1 | 161.2 | 0.0 | 577.1 | 1 |
| 14 | 93 | -0 | 464 | -11 | 0 | 10 | 450 | 0.0 | 153.3 | 39.8 | 0.0 | 153.3 | 1 |
| 15 | 93 | 1 | -1960 | 29 | 0 | -27 | -1798 | 0.0 | 601.7 | 167.9 | 0.0 | 601.7 | 1 |
| | | | | | | | | | | | | | |
| 1 | 109 | 1 | -2251 | 34 | 0 | -37 | -2409 | 0.0 | 806.3 | 192.9 | 0.0 | 806.3 | 1 |
| 5 | 109 | -112 | -592 | -6 | 0 | 6 | -617 | 2.1 | 203.9 | 50.7 | 0.0 | 206.0 | 1 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|-------|-----|---|-----|-------|-----|--------|-------|-----|--------|---|
| 6 | 109 | 113 | -592 | -6 | 0 | 6 | -617 | 2.1 | 203.5 | 50.7 | 0.0 | 205.5 | 1 |
| 7 | 109 | -113 | -589 | 28 | 0 | -31 | -614 | 2.1 | 224.8 | 50.5 | 0.0 | 226.8 | 1 |
| 8 | 109 | 112 | -589 | 29 | 0 | -31 | -614 | 2.1 | 225.2 | 50.5 | 0.0 | 227.3 | 1 |
| 9 | 109 | -374 | -821 | 9 | 0 | -10 | -857 | 6.9 | 284.2 | 70.3 | 0.0 | 291.1 | 1 |
| 10 | 109 | 375 | -821 | 11 | 0 | -12 | -857 | 6.9 | 285.7 | 70.3 | 0.0 | 292.6 | 1 |
| 11 | 109 | -375 | -820 | 17 | 0 | -18 | -857 | 6.9 | 291.5 | 70.2 | 0.0 | 298.4 | 1 |
| 12 | 109 | 375 | -590 | 15 | 0 | -16 | -615 | 6.9 | 212.2 | 50.6 | 0.0 | 219.1 | 1 |
| 13 | 109 | 1 | -1889 | 28 | 0 | -31 | -2017 | 0.0 | 674.8 | 161.9 | 0.0 | 674.8 | 1 |
| 14 | 109 | -0 | 458 | -11 | 0 | 11 | 522 | 0.0 | 177.8 | 39.2 | 0.0 | 177.8 | 1 |
| 15 | 109 | 1 | -1968 | 29 | 0 | -32 | -2102 | 0.0 | 703.5 | 168.7 | 0.0 | 703.5 | 1 |
| | | | | | | | | | | | | | |
| 1 | 124 | 1 | -2260 | 34 | 0 | -42 | -2758 | 0.0 | 923.3 | 193.6 | 0.0 | 923.3 | 1 |
| 5 | 124 | -112 | -599 | -6 | 0 | 7 | -709 | 2.1 | 234.3 | 51.3 | 0.0 | 236.4 | 1 |
| 6 | 124 | 113 | -599 | -6 | 0 | 7 | -709 | 2.1 | 233.8 | 51.3 | 0.0 | 235.9 | 1 |
| 7 | 124 | -113 | -596 | 28 | 0 | -35 | -706 | 2.1 | 258.2 | 51.0 | 0.0 | 260.3 | 1 |
| 8 | 124 | 112 | -596 | 29 | 0 | -36 | -706 | 2.1 | 258.7 | 51.0 | 0.0 | 260.8 | 1 |
| 9 | 124 | -374 | -829 | 9 | 0 | -11 | -985 | 6.9 | 326.5 | 71.1 | 0.0 | 333.4 | 1 |
| 10 | 124 | 375 | -829 | 11 | 0 | -13 | -985 | 6.9 | 328.2 | 71.0 | 0.0 | 335.1 | 1 |
| 11 | 124 | -375 | -828 | 17 | 0 | -21 | -984 | 6.9 | 334.8 | 71.0 | 0.0 | 341.7 | 1 |
| 12 | 124 | 375 | -597 | 15 | 0 | -19 | -707 | 6.9 | 243.9 | 51.1 | 0.0 | 250.8 | 1 |
| 13 | 124 | 1 | -1898 | 28 | 0 | -35 | -2310 | 0.0 | 773.0 | 162.6 | 0.0 | 773.0 | 1 |
| 14 | 124 | -0 | 451 | -11 | 0 | 13 | 592 | 0.0 | 201.8 | 38.6 | 0.0 | 201.8 | 1 |
| 15 | 124 | 1 | -1977 | 29 | 0 | -36 | -2408 | 0.0 | 805.7 | 169.4 | 0.0 | 805.7 | 1 |
| | | | | | | | | | | | | | |
| 1 | 140 | 1 | -2268 | 34 | 0 | -47 | -3109 | 0.0 | 1040.6 | 194.4 | 0.0 | 1040.6 | 1 |
| 5 | 140 | -112 | -605 | -6 | 0 | 8 | -803 | 2.1 | 265.1 | 51.9 | 0.0 | 267.2 | 1 |
| 6 | 140 | 113 | -605 | -6 | 0 | 8 | -803 | 2.1 | 264.6 | 51.9 | 0.0 | 266.6 | 1 |
| 7 | 140 | -113 | -602 | 28 | 0 | -40 | -799 | 2.1 | 292.0 | 51.6 | 0.0 | 294.0 | 1 |
| 8 | 140 | 112 | -602 | 29 | 0 | -40 | -799 | 2.1 | 292.6 | 51.6 | 0.0 | 294.6 | 1 |
| 9 | 140 | -374 | -838 | 9 | 0 | -13 | -1114 | 6.9 | 369.3 | 71.8 | 0.0 | 376.2 | 1 |
| 10 | 140 | 375 | -838 | 11 | 0 | -15 | -1114 | 6.9 | 371.2 | 71.8 | 0.0 | 378.1 | 1 |
| 11 | 140 | -375 | -837 | 17 | 0 | -23 | -1114 | 6.9 | 378.6 | 71.7 | 0.0 | 385.5 | 1 |
| 12 | 140 | 375 | -603 | 15 | 0 | -21 | -800 | 6.9 | 275.8 | 51.7 | 0.0 | 282.7 | 1 |
| 13 | 140 | 1 | -1906 | 28 | 0 | -39 | -2605 | 0.0 | 871.5 | 163.4 | 0.0 | 871.6 | 1 |
| 14 | 140 | -0 | 444 | -11 | 0 | 15 | 661 | 0.0 | 225.6 | 38.1 | 0.0 | 225.6 | 1 |
| 15 | 140 | 1 | -1985 | 29 | 0 | -41 | -2715 | 0.0 | 908.4 | 170.1 | 0.0 | 908.4 | 1 |
| | | | | | | | | | | | | | |
| 1 | 155 | 1 | -2277 | 34 | 0 | -53 | -3461 | 0.0 | 1158.4 | 195.1 | 0.0 | 1158.4 | 1 |
| 5 | 155 | -112 | -612 | -6 | 0 | 9 | -897 | 2.1 | 296.2 | 52.4 | 0.0 | 298.3 | 1 |
| 6 | 155 | 113 | -612 | -6 | 0 | 9 | -897 | 2.1 | 295.6 | 52.4 | 0.0 | 297.7 | 1 |
| 7 | 155 | -113 | -609 | 28 | 0 | -44 | -892 | 2.1 | 326.1 | 52.2 | 0.0 | 328.1 | 1 |
| 8 | 155 | 112 | -609 | 29 | 0 | -45 | -892 | 2.1 | 326.7 | 52.2 | 0.0 | 328.8 | 1 |
| 9 | 155 | -374 | -846 | 9 | 0 | -14 | -1245 | 6.9 | 412.4 | 72.5 | 0.0 | 419.3 | 1 |
| 10 | 155 | 375 | -846 | 11 | 0 | -17 | -1245 | 6.9 | 414.5 | 72.5 | 0.0 | 421.5 | 1 |
| 11 | 155 | -375 | -845 | 17 | 0 | -26 | -1244 | 6.9 | 422.9 | 72.4 | 0.0 | 429.8 | 1 |
| 12 | 155 | 375 | -610 | 15 | 0 | -23 | -894 | 6.9 | 308.1 | 52.3 | 0.0 | 315.0 | 1 |
| 13 | 155 | 1 | -1915 | 28 | 0 | -44 | -2901 | 0.0 | 970.5 | 164.1 | 0.0 | 970.6 | 1 |
| 14 | 155 | -0 | 438 | -11 | 0 | 16 | 730 | 0.0 | 249.0 | 37.5 | 0.0 | 249.0 | 1 |
| 15 | 155 | 1 | -1994 | 29 | 0 | -46 | -3023 | 0.0 | 1011.5 | 170.9 | 0.0 | 1011.5 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|--------|-------|---------------------|---------|------|-----------|------|
| | | cm | daN*m | daN/cm ² | | cm | | |
| 14 | -- | 155 | 730 | 234.3 | -- | -- | -- | |
| -- | Rara | 63 | 8 | -- | 71 | 0.00 | 1 / 99999 | |
| -- | Freq. | 63 | 8 | -- | 71 | 0.00 | 1 / 99999 | |
| -- | Q.Perm. | 63 | 8 | -- | 71 | 0.00 | 1 / 99999 | |
| -- | Rara | 63 | 8 | -- | 71 | 0.00 | 1 / 99999 | |
| -- | Rara | 63 | 8 | -- | 71 | 0.00 | 1 / 99999 | |
| -- | Freq. | 63 | 8 | -- | 71 | 0.00 | 1 / 99999 | |
| -- | Freq. | 63 | 8 | -- | 71 | 0.00 | 1 / 99999 | |

ASTA NUM. 13 NI 33 NF 54 Lungh. 109.3 cm SEZ. 6 Ps HEB 160

categoria: p.p. y qy tot.

qy medio: 0.4263 0.4263 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|------|------|-------|------|-------|---------|--------|--------|-------|--------|------|------|
| -- | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | 61 | 3989 | -37 | 0 | -52 | -3251 | 1.1 | 1090.8 | 341.8 | 0.0 | 1091.9 | 1 | |
| 5 | 0 | -267 | 994 | 277 | 0 | 10 | -820 | 4.9 | 271.8 | 85.2 | 0.0 | 276.7 | 1 | |
| 6 | 0 | 313 | 995 | 276 | 0 | 9 | -822 | 5.8 | 271.7 | 85.2 | 0.0 | 277.5 | 1 | |
| 7 | 0 | -268 | 989 | -318 | 0 | -44 | -814 | 4.9 | 301.2 | 84.7 | 0.0 | 306.1 | 1 | |
| 8 | 0 | 311 | 989 | -318 | 0 | -45 | -816 | 5.7 | 302.4 | 84.7 | 0.0 | 308.1 | 1 | |
| 9 | 0 | -936 | 1385 | 71 | 0 | -14 | -1140 | 17.2 | 378.6 | 118.7 | 0.0 | 395.8 | 1 | |
| 10 | 0 | 996 | 1386 | 70 | 0 | -16 | -1145 | 18.3 | 382.3 | 118.8 | 0.0 | 400.6 | 1 | |
| 11 | 0 | -937 | 1383 | -104 | 0 | -26 | -1138 | 17.2 | 388.9 | 118.5 | 0.0 | 406.1 | 1 | |
| 12 | 0 | 988 | 992 | -103 | 0 | -24 | -820 | 18.2 | 284.5 | 85.0 | 0.0 | 302.7 | 1 | |
| 13 | 0 | 53 | 3331 | -31 | 0 | -43 | -2718 | 1.0 | 911.6 | 285.4 | 0.0 | 912.6 | 1 | |
| 14 | 0 | -1 | -916 | 11 | 0 | 16 | 726 | 0.0 | 247.9 | 78.5 | 0.0 | 247.9 | 1 | |
| 15 | 0 | 55 | 3474 | -32 | 0 | -45 | -2834 | 1.0 | 950.6 | 297.7 | 0.0 | 951.6 | 1 | |
| 1 | 11 | 61 | 3983 | -37 | 0 | -48 | -2815 | 1.1 | 947.4 | 341.3 | 0.0 | 948.5 | 1 | |
| 5 | 11 | -267 | 989 | 277 | 0 | -21 | -712 | 4.9 | 247.0 | 84.8 | 0.0 | 251.9 | 1 | |
| 6 | 11 | 313 | 990 | 276 | 0 | -21 | -713 | 5.8 | 248.1 | 84.8 | 0.0 | 253.8 | 1 | |
| 7 | 11 | -268 | 984 | -318 | 0 | -10 | -706 | 4.9 | 235.3 | 84.3 | 0.0 | 240.3 | 1 | |
| 8 | 11 | 311 | 984 | -318 | 0 | -10 | -708 | 5.7 | 236.4 | 84.4 | 0.0 | 242.2 | 1 | |
| 9 | 11 | -936 | 1379 | 71 | 0 | -22 | -989 | 17.2 | 337.1 | 118.2 | 0.0 | 354.4 | 1 | |
| 10 | 11 | 996 | 1380 | 70 | 0 | -24 | -994 | 18.3 | 340.6 | 118.3 | 0.0 | 359.0 | 1 | |
| 11 | 11 | -937 | 1377 | -104 | 0 | -15 | -987 | 17.2 | 330.2 | 118.0 | 0.0 | 347.4 | 1 | |
| 12 | 11 | 988 | 987 | -103 | 0 | -12 | -712 | 18.2 | 239.7 | 84.6 | 0.0 | 257.9 | 1 | |
| 13 | 11 | 53 | 3325 | -31 | 0 | -40 | -2354 | 1.0 | 791.9 | 284.9 | 0.0 | 792.9 | 1 | |
| 14 | 11 | -1 | -921 | 11 | 0 | 15 | 626 | 0.0 | 214.6 | 78.9 | 0.0 | 214.6 | 1 | |
| 15 | 11 | 55 | 3468 | -32 | 0 | -42 | -2455 | 1.0 | 825.7 | 297.2 | 0.0 | 826.7 | 1 | |
| 1 | 22 | 61 | 3977 | -37 | 0 | -44 | -2381 | 1.1 | 804.1 | 340.8 | 0.0 | 832.3 | 3 | |
| 5 | 22 | -267 | 985 | 277 | 0 | -51 | -604 | 4.9 | 239.6 | 84.4 | 0.0 | 244.5 | 1 | |
| 6 | 22 | 313 | 985 | 276 | 0 | -51 | -605 | 5.8 | 240.6 | 84.4 | 0.0 | 246.3 | 1 | |
| 7 | 22 | -268 | 979 | -318 | 0 | 25 | -599 | 4.9 | 215.1 | 83.9 | 0.0 | 220.0 | 1 | |
| 8 | 22 | 311 | 980 | -318 | 0 | 25 | -601 | 5.7 | 215.0 | 84.0 | 0.0 | 220.7 | 1 | |
| 9 | 22 | -936 | 1373 | 71 | 0 | -30 | -839 | 17.2 | 295.9 | 117.6 | 0.0 | 313.1 | 1 | |
| 10 | 22 | 996 | 1374 | 70 | 0 | -32 | -843 | 18.3 | 299.2 | 117.7 | 0.0 | 317.5 | 1 | |
| 11 | 22 | -937 | 1371 | -104 | 0 | -3 | -837 | 17.2 | 271.7 | 117.5 | 0.0 | 303.3 | 3 | |
| 12 | 22 | 988 | 982 | -103 | 0 | -1 | -605 | 18.2 | 195.1 | 84.2 | 0.0 | 223.1 | 3 | |
| 13 | 22 | 53 | 3319 | -31 | 0 | -37 | -1991 | 1.0 | 672.4 | 284.4 | 0.0 | 695.5 | 3 | |
| 14 | 22 | -1 | -925 | 11 | 0 | 14 | 525 | 0.0 | 181.1 | 79.3 | 0.0 | 187.7 | 3 | |
| 15 | 22 | 55 | 3462 | -32 | 0 | -38 | -2076 | 1.0 | 701.0 | 296.6 | 0.0 | 725.3 | 3 | |
| 1 | 33 | 61 | 3971 | -37 | 0 | -40 | -1946 | 1.1 | 661.1 | 340.3 | 0.0 | 745.0 | 3 | |
| 5 | 33 | -267 | 980 | 277 | 0 | -81 | -496 | 4.9 | 232.3 | 84.0 | 0.0 | 237.2 | 1 | |
| 6 | 33 | 313 | 981 | 276 | 0 | -82 | -498 | 5.8 | 233.2 | 84.0 | 0.0 | 239.0 | 1 | |
| 7 | 33 | -268 | 975 | -318 | 0 | 60 | -492 | 4.9 | 212.1 | 83.5 | 0.0 | 217.0 | 1 | |
| 8 | 33 | 311 | 975 | -318 | 0 | 59 | -494 | 5.7 | 212.0 | 83.6 | 0.0 | 217.7 | 1 | |
| 9 | 33 | -936 | 1367 | 71 | 0 | -37 | -689 | 17.2 | 254.8 | 117.1 | 0.0 | 273.2 | 3 | |
| 10 | 33 | 996 | 1368 | 70 | 0 | -39 | -693 | 18.3 | 257.9 | 117.2 | 0.0 | 276.3 | 1 | |
| 11 | 33 | -937 | 1365 | -104 | 0 | 8 | -688 | 17.2 | 228.0 | 117.0 | 0.0 | 271.9 | 3 | |
| 12 | 33 | 988 | 978 | -103 | 0 | 10 | -497 | 18.2 | 168.8 | 83.8 | 0.0 | 200.3 | 3 | |
| 13 | 33 | 53 | 3313 | -31 | 0 | -33 | -1629 | 1.0 | 553.0 | 283.9 | 0.0 | 622.6 | 3 | |
| 14 | 33 | -1 | -930 | 11 | 0 | 13 | 424 | 0.0 | 147.5 | 79.7 | 0.0 | 168.5 | 3 | |
| 15 | 33 | 55 | 3456 | -32 | 0 | -35 | -1698 | 1.0 | 576.6 | 296.1 | 0.0 | 649.2 | 3 | |
| 1 | 44 | 61 | 3965 | -37 | 0 | -36 | -1513 | 1.1 | 518.3 | 339.8 | 0.0 | 667.1 | 3 | |
| 5 | 44 | -267 | 975 | 277 | 0 | -111 | -389 | 4.9 | 225.2 | 83.6 | 0.0 | 230.1 | 1 | |
| 6 | 44 | 313 | 976 | 276 | 0 | -112 | -391 | 5.8 | 226.1 | 83.6 | 0.0 | 231.8 | 1 | |
| 7 | 44 | -268 | 970 | -318 | 0 | 95 | -386 | 4.9 | 209.2 | 83.1 | 0.0 | 214.2 | 1 | |
| 8 | 44 | 311 | 970 | -318 | 0 | 94 | -388 | 5.7 | 209.2 | 83.2 | 0.0 | 214.9 | 1 | |
| 9 | 44 | -936 | 1361 | 71 | 0 | -45 | -540 | 17.2 | 214.0 | 116.6 | 0.0 | 244.4 | 3 | |
| 10 | 44 | 996 | 1362 | 70 | 0 | -47 | -544 | 18.3 | 216.9 | 116.7 | 0.0 | 246.1 | 3 | |
| 11 | 44 | -937 | 1359 | -104 | 0 | 19 | -539 | 17.2 | 190.5 | 116.5 | 0.0 | 243.3 | 3 | |
| 12 | 44 | 988 | 973 | -103 | 0 | 21 | -391 | 18.2 | 144.7 | 83.4 | 0.0 | 179.4 | 3 | |
| 13 | 44 | 53 | 3307 | -31 | 0 | -30 | -1267 | 1.0 | 433.9 | 283.3 | 0.0 | 557.3 | 3 | |
| 14 | 44 | -1 | -935 | 11 | 0 | 11 | 322 | 0.0 | 113.7 | 80.1 | 0.0 | 151.6 | 3 | |
| 15 | 44 | 55 | 3450 | -32 | 0 | -31 | -1321 | 1.0 | 452.3 | 295.6 | 0.0 | 581.2 | 3 | |
| 1 | 55 | 61 | 3959 | -37 | 0 | -32 | -1080 | 1.1 | 375.7 | 339.3 | 0.0 | 601.9 | 3 | |
| 5 | 55 | -267 | 971 | 277 | 0 | -142 | -283 | 4.9 | 218.2 | 83.2 | 0.0 | 223.1 | 1 | |
| 6 | 55 | 313 | 971 | 276 | 0 | -142 | -284 | 5.8 | 219.0 | 83.2 | 0.0 | 224.8 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|------|------|---|------|------|------|-------|-------|-----|-------|---|
| 7 | 55 | -268 | 965 | -318 | 0 | 129 | -280 | 4.9 | 206.5 | 82.7 | 0.0 | 211.5 | 1 |
| 8 | 55 | 311 | 966 | -318 | 0 | 129 | -282 | 5.7 | 206.5 | 82.8 | 0.0 | 212.3 | 1 |
| 9 | 55 | -936 | 1355 | 71 | 0 | -53 | -391 | 17.2 | 173.4 | 116.1 | 0.0 | 219.0 | 3 |
| 10 | 55 | 996 | 1356 | 70 | 0 | -55 | -396 | 18.3 | 176.1 | 116.2 | 0.0 | 220.5 | 3 |
| 11 | 55 | -937 | 1353 | -104 | 0 | 31 | -391 | 17.2 | 153.2 | 115.9 | 0.0 | 218.2 | 3 |
| 12 | 55 | 988 | 969 | -103 | 0 | 33 | -285 | 18.2 | 120.7 | 83.0 | 0.0 | 160.8 | 3 |
| 13 | 55 | 53 | 3301 | -31 | 0 | -27 | -906 | 1.0 | 315.0 | 282.8 | 0.0 | 502.6 | 3 |
| 14 | 55 | -1 | -939 | 11 | 0 | 10 | 220 | 0.0 | 79.7 | 80.5 | 0.0 | 139.4 | 4 |
| 15 | 55 | 55 | 3444 | -32 | 0 | -28 | -944 | 1.0 | 328.2 | 295.1 | 0.0 | 524.2 | 3 |
| | | | | | | | | | | | | | |
| 1 | 66 | 61 | 3953 | -37 | 0 | -28 | -647 | 1.1 | 233.3 | 338.7 | 0.0 | 586.7 | 4 |
| 5 | 66 | -267 | 966 | 277 | 0 | -172 | -177 | 4.9 | 211.4 | 82.8 | 0.0 | 216.4 | 1 |
| 6 | 66 | 313 | 967 | 276 | 0 | -172 | -178 | 5.8 | 212.2 | 82.8 | 0.0 | 218.0 | 1 |
| 7 | 66 | -268 | 961 | -318 | 0 | 164 | -175 | 4.9 | 204.0 | 82.3 | 0.0 | 209.0 | 1 |
| 8 | 66 | 311 | 961 | -318 | 0 | 164 | -176 | 5.7 | 204.1 | 82.4 | 0.0 | 209.8 | 1 |
| 9 | 66 | -936 | 1348 | 71 | 0 | -61 | -244 | 17.2 | 132.9 | 115.5 | 0.0 | 201.1 | 4 |
| 10 | 66 | 996 | 1350 | 70 | 0 | -62 | -248 | 18.3 | 135.5 | 115.7 | 0.0 | 201.5 | 4 |
| 11 | 66 | -937 | 1347 | -104 | 0 | 42 | -243 | 17.2 | 116.1 | 115.4 | 0.0 | 200.8 | 4 |
| 12 | 66 | 988 | 964 | -103 | 0 | 44 | -179 | 18.2 | 96.9 | 82.6 | 0.0 | 145.3 | 3 |
| 13 | 66 | 53 | 3294 | -31 | 0 | -23 | -546 | 1.0 | 196.3 | 282.3 | 0.0 | 489.0 | 4 |
| 14 | 66 | -1 | -944 | 11 | 0 | 9 | 117 | 0.0 | 45.6 | 80.9 | 0.0 | 140.1 | 4 |
| 15 | 66 | 55 | 3437 | -32 | 0 | -24 | -568 | 1.0 | 204.4 | 294.6 | 0.0 | 510.2 | 4 |
| | | | | | | | | | | | | | |
| 1 | 76 | 61 | 3947 | -37 | 0 | -24 | -216 | 1.1 | 91.1 | 338.2 | 0.0 | 585.8 | 4 |
| 5 | 76 | -267 | 962 | 277 | 0 | -202 | -72 | 4.9 | 204.8 | 82.4 | 0.0 | 209.7 | 1 |
| 6 | 76 | 313 | 962 | 276 | 0 | -202 | -73 | 5.8 | 205.5 | 82.4 | 0.0 | 211.3 | 1 |
| 7 | 76 | -268 | 956 | -318 | 0 | 199 | -70 | 4.9 | 201.7 | 81.9 | 0.0 | 206.6 | 1 |
| 8 | 76 | 311 | 956 | -318 | 0 | 199 | -72 | 5.7 | 201.7 | 82.0 | 0.0 | 207.5 | 1 |
| 9 | 76 | -936 | 1342 | 71 | 0 | -69 | -97 | 17.2 | 92.7 | 115.0 | 0.0 | 200.3 | 4 |
| 10 | 76 | 996 | 1344 | 70 | 0 | -70 | -101 | 18.3 | 95.1 | 115.2 | 0.0 | 200.6 | 4 |
| 11 | 76 | -937 | 1341 | -104 | 0 | 54 | -96 | 17.2 | 79.2 | 114.9 | 0.0 | 200.0 | 4 |
| 12 | 76 | 988 | 959 | -103 | 0 | 55 | -74 | 18.2 | 73.2 | 82.2 | 0.0 | 143.9 | 4 |
| 13 | 76 | 53 | 3288 | -31 | 0 | -20 | -186 | 1.0 | 77.9 | 281.8 | 0.0 | 488.1 | 4 |
| 14 | 76 | -1 | -949 | 11 | 0 | 8 | 13 | 0.0 | 11.3 | 81.3 | 0.0 | 140.8 | 4 |
| 15 | 76 | 55 | 3431 | -32 | 0 | -21 | -193 | 1.0 | 80.8 | 294.0 | 0.0 | 509.3 | 4 |
| | | | | | | | | | | | | | |
| 1 | 87 | 61 | 3941 | -37 | 0 | -20 | 215 | 1.1 | 87.3 | 337.7 | 0.0 | 584.9 | 4 |
| 5 | 87 | -267 | 957 | 277 | 0 | -232 | 33 | 4.9 | 219.5 | 82.0 | 0.0 | 224.4 | 1 |
| 6 | 87 | 313 | 957 | 276 | 0 | -232 | 32 | 5.8 | 219.4 | 82.0 | 0.0 | 225.1 | 1 |
| 7 | 87 | -268 | 951 | -318 | 0 | 234 | 34 | 4.9 | 221.1 | 81.5 | 0.0 | 226.1 | 1 |
| 8 | 87 | 311 | 952 | -318 | 0 | 233 | 33 | 5.7 | 220.5 | 81.6 | 0.0 | 226.2 | 1 |
| 9 | 87 | -936 | 1336 | 71 | 0 | -76 | 50 | 17.2 | 84.7 | 114.5 | 0.0 | 199.4 | 4 |
| 10 | 87 | 996 | 1338 | 70 | 0 | -77 | 46 | 18.3 | 84.5 | 114.7 | 0.0 | 199.8 | 4 |
| 11 | 87 | -937 | 1335 | -104 | 0 | 65 | 50 | 17.2 | 74.7 | 114.4 | 0.0 | 199.2 | 4 |
| 12 | 87 | 988 | 955 | -103 | 0 | 66 | 30 | 18.2 | 69.3 | 81.8 | 0.0 | 143.2 | 4 |
| 13 | 87 | 53 | 3282 | -31 | 0 | -17 | 173 | 1.0 | 70.6 | 281.3 | 0.0 | 487.2 | 4 |
| 14 | 87 | -1 | -953 | 11 | 0 | 7 | -91 | 0.0 | 35.0 | 81.7 | 0.0 | 141.5 | 4 |
| 15 | 87 | 55 | 3425 | -32 | 0 | -18 | 182 | 1.0 | 74.2 | 293.5 | 0.0 | 508.4 | 4 |
| | | | | | | | | | | | | | |
| 1 | 98 | 61 | 3935 | -37 | 0 | -16 | 645 | 1.1 | 221.8 | 337.2 | 0.0 | 584.0 | 4 |
| 5 | 98 | -267 | 952 | 277 | 0 | -262 | 137 | 4.9 | 280.2 | 81.6 | 0.0 | 285.1 | 1 |
| 6 | 98 | 313 | 953 | 276 | 0 | -263 | 136 | 5.8 | 280.0 | 81.6 | 0.0 | 285.8 | 1 |
| 7 | 98 | -268 | 947 | -318 | 0 | 268 | 137 | 4.9 | 285.7 | 81.1 | 0.0 | 290.6 | 1 |
| 8 | 98 | 311 | 947 | -318 | 0 | 268 | 136 | 5.7 | 285.1 | 81.2 | 0.0 | 290.9 | 1 |
| 9 | 98 | -936 | 1330 | 71 | 0 | -84 | 195 | 17.2 | 138.5 | 114.0 | 0.0 | 198.5 | 4 |
| 10 | 98 | 996 | 1332 | 70 | 0 | -85 | 192 | 18.3 | 138.2 | 114.1 | 0.0 | 198.9 | 4 |
| 11 | 98 | -937 | 1329 | -104 | 0 | 77 | 196 | 17.2 | 131.7 | 113.9 | 0.0 | 198.3 | 4 |
| 12 | 98 | 988 | 950 | -103 | 0 | 77 | 135 | 18.2 | 112.8 | 81.4 | 0.0 | 142.6 | 4 |
| 13 | 98 | 53 | 3276 | -31 | 0 | -13 | 531 | 1.0 | 182.6 | 280.7 | 0.0 | 486.3 | 4 |
| 14 | 98 | -1 | -958 | 11 | 0 | 5 | -195 | 0.0 | 67.4 | 82.1 | 0.0 | 142.2 | 4 |
| 15 | 98 | 55 | 3419 | -32 | 0 | -14 | 556 | 1.0 | 191.1 | 293.0 | 0.0 | 507.5 | 4 |
| | | | | | | | | | | | | | |
| 1 | 109 | 61 | 3929 | -37 | 0 | -12 | 1075 | 1.1 | 356.1 | 336.7 | 0.0 | 597.4 | 3 |
| 5 | 109 | -267 | 948 | 277 | 0 | -293 | 241 | 4.9 | 340.7 | 81.2 | 0.0 | 345.6 | 1 |
| 6 | 109 | 313 | 948 | 276 | 0 | -293 | 240 | 5.8 | 340.5 | 81.2 | 0.0 | 346.3 | 1 |
| 7 | 109 | -268 | 942 | -318 | 0 | 303 | 241 | 4.9 | 350.1 | 80.7 | 0.0 | 355.0 | 1 |
| 8 | 109 | 311 | 942 | -318 | 0 | 303 | 240 | 5.7 | 349.6 | 80.8 | 0.0 | 355.3 | 1 |
| 9 | 109 | -936 | 1324 | 71 | 0 | -92 | 341 | 17.2 | 192.0 | 113.5 | 0.0 | 209.3 | 1 |
| 10 | 109 | 996 | 1326 | 70 | 0 | -93 | 337 | 18.3 | 191.7 | 113.6 | 0.0 | 210.0 | 1 |
| 11 | 109 | -937 | 1323 | -104 | 0 | 88 | 340 | 17.2 | 188.4 | 113.4 | 0.0 | 208.9 | 3 |
| 12 | 109 | 988 | 945 | -103 | 0 | 89 | 238 | 18.2 | 156.1 | 81.0 | 0.0 | 174.3 | 1 |
| 13 | 109 | 53 | 3270 | -31 | 0 | -10 | 889 | 1.0 | 294.5 | 280.2 | 0.0 | 496.4 | 3 |
| 14 | 109 | -1 | -963 | 11 | 0 | 4 | -300 | 0.0 | 100.0 | 82.5 | 0.0 | 151.3 | 3 |
| 15 | 109 | 55 | 3413 | -32 | 0 | -11 | 929 | 1.0 | 307.9 | 292.5 | 0.0 | 518.4 | 3 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x | Mmax | Mmax | Sf (M) | x | fmax. | fmax | fmax / l | Nota |
|----|----------|-----|-------|---------------------|--------|-------|-----------|------|----------|------|
| | | cm | daN*m | daN/cm ² | | cm | | | | |
| 1 | -- | 109 | 1075 | 345.1 | -- | -- | -- | -- | -- | |
| -- | Rara | 69 | 1 | -- | 35 | -0.00 | 1 / 99999 | | | |
| -- | Freq. | 69 | 1 | -- | 35 | -0.00 | 1 / 99999 | | | |
| -- | Q. Perm. | 69 | 1 | -- | 35 | -0.00 | 1 / 99999 | | | |
| -- | Rara | 69 | 1 | -- | 35 | -0.00 | 1 / 99999 | | | |

-- Rara 69 1 -- 35 -0.00 1 / 99999
 -- Freq. 69 1 -- 35 -0.00 1 / 99999
 -- Freq. 69 1 -- 35 -0.00 1 / 99999

ASTA NUM. 6 NI 54 NF 127 Lungh. 109.3 cm SEZ. 6 Ps HEB 160

categoria: p.p. y qy tot.

qy medio: 0.4263 0.4263 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|------|-----|-------|-------|-------|---------|--------|--------|--------|--------|------|------|
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | cm | daN | daN | daN | daN*m | daN*m | daN*m | daN/cm | daN/cm | daN/cm | daN/cm | daN/cm | | |
| 1 | 0 | 62 | 898 | -5 | 0 | -12 | 1075 | 1.1 | 356.1 | 76.9 | 0.0 | 357.2 | 1 | |
| 5 | 0 | -416 | 243 | -59 | 0 | -293 | 241 | 7.7 | 340.7 | 20.8 | 0.0 | 348.4 | 1 | |
| 6 | 0 | 458 | 244 | -59 | 0 | -293 | 240 | 8.4 | 340.5 | 20.9 | 0.0 | 349.0 | 1 | |
| 7 | 0 | -413 | 243 | 74 | 0 | 303 | 241 | 7.6 | 350.1 | 20.9 | 0.0 | 357.7 | 1 | |
| 8 | 0 | 460 | 244 | 75 | 0 | 303 | 240 | 8.5 | 349.6 | 20.9 | 0.0 | 358.1 | 1 | |
| 9 | 0 | -1426 | 337 | -21 | 0 | -92 | 341 | 26.3 | 192.1 | 28.8 | 0.0 | 218.3 | 1 | |
| 10 | 0 | 1485 | 338 | -20 | 0 | -93 | 337 | 27.3 | 191.7 | 29.0 | 0.0 | 219.0 | 1 | |
| 11 | 0 | -1425 | 337 | 20 | 0 | 88 | 340 | 26.2 | 188.4 | 28.8 | 0.0 | 214.7 | 1 | |
| 12 | 0 | 1478 | 245 | 22 | 0 | 89 | 238 | 27.2 | 156.1 | 21.0 | 0.0 | 183.4 | 1 | |
| 13 | 0 | 54 | 756 | -4 | 0 | -10 | 889 | 1.0 | 294.5 | 64.8 | 0.0 | 295.5 | 1 | |
| 14 | 0 | -1 | -166 | 3 | 0 | 4 | -300 | 0.0 | 100.0 | 14.3 | 0.0 | 100.0 | 1 | |
| 15 | 0 | 55 | 787 | -5 | 0 | -11 | 930 | 1.0 | 307.9 | 67.4 | 0.0 | 309.0 | 1 | |
| 1 | 11 | 62 | 891 | -5 | 0 | -12 | 1173 | 1.1 | 387.0 | 76.4 | 0.0 | 388.1 | 1 | |
| 5 | 11 | -416 | 239 | -59 | 0 | -286 | 267 | 7.7 | 343.4 | 20.4 | 0.0 | 351.0 | 1 | |
| 6 | 11 | 458 | 239 | -59 | 0 | -286 | 266 | 8.4 | 343.2 | 20.5 | 0.0 | 351.7 | 1 | |
| 7 | 11 | -413 | 239 | 74 | 0 | 295 | 267 | 7.6 | 351.3 | 20.5 | 0.0 | 358.9 | 1 | |
| 8 | 11 | 460 | 239 | 75 | 0 | 295 | 266 | 8.5 | 350.7 | 20.5 | 0.0 | 359.2 | 1 | |
| 9 | 11 | -1426 | 331 | -21 | 0 | -90 | 377 | 26.3 | 201.7 | 28.3 | 0.0 | 228.0 | 1 | |
| 10 | 11 | 1485 | 332 | -20 | 0 | -91 | 374 | 27.3 | 201.5 | 28.5 | 0.0 | 228.8 | 1 | |
| 11 | 11 | -1425 | 331 | 20 | 0 | 86 | 377 | 26.2 | 198.2 | 28.3 | 0.0 | 224.4 | 1 | |
| 12 | 11 | 1478 | 240 | 22 | 0 | 86 | 265 | 27.2 | 162.5 | 20.6 | 0.0 | 189.7 | 1 | |
| 13 | 11 | 54 | 750 | -4 | 0 | -10 | 971 | 1.0 | 320.5 | 64.3 | 0.0 | 321.5 | 1 | |
| 14 | 11 | -1 | -171 | 3 | 0 | 4 | -318 | 0.0 | 105.7 | 14.6 | 0.0 | 105.7 | 1 | |
| 15 | 11 | 55 | 781 | -5 | 0 | -10 | 1015 | 1.0 | 335.0 | 66.9 | 0.0 | 336.0 | 1 | |
| 1 | 22 | 62 | 885 | -5 | 0 | -11 | 1270 | 1.1 | 417.6 | 75.9 | 0.0 | 418.7 | 1 | |
| 5 | 22 | -416 | 234 | -59 | 0 | -280 | 293 | 7.7 | 345.9 | 20.1 | 0.0 | 353.5 | 1 | |
| 6 | 22 | 458 | 234 | -59 | 0 | -280 | 292 | 8.4 | 345.8 | 20.1 | 0.0 | 354.2 | 1 | |
| 7 | 22 | -413 | 234 | 74 | 0 | 287 | 293 | 7.6 | 352.2 | 20.1 | 0.0 | 359.8 | 1 | |
| 8 | 22 | 460 | 235 | 75 | 0 | 287 | 292 | 8.5 | 351.7 | 20.1 | 0.0 | 360.2 | 1 | |
| 9 | 22 | -1426 | 324 | -21 | 0 | -87 | 413 | 26.3 | 211.1 | 27.8 | 0.0 | 237.4 | 1 | |
| 10 | 22 | 1485 | 326 | -20 | 0 | -88 | 410 | 27.3 | 211.1 | 28.0 | 0.0 | 238.4 | 1 | |
| 11 | 22 | -1425 | 325 | 20 | 0 | 84 | 413 | 26.2 | 207.7 | 27.8 | 0.0 | 233.9 | 1 | |
| 12 | 22 | 1478 | 235 | 22 | 0 | 84 | 291 | 27.2 | 168.6 | 20.2 | 0.0 | 195.8 | 1 | |
| 13 | 22 | 54 | 744 | -4 | 0 | -9 | 1053 | 1.0 | 346.3 | 63.7 | 0.0 | 347.3 | 1 | |
| 14 | 22 | -1 | -176 | 3 | 0 | 4 | -337 | 0.0 | 111.5 | 15.0 | 0.0 | 111.6 | 1 | |
| 15 | 22 | 55 | 775 | -5 | 0 | -10 | 1100 | 1.0 | 361.8 | 66.4 | 0.0 | 362.8 | 1 | |
| 1 | 33 | 62 | 879 | -5 | 0 | -10 | 1366 | 1.1 | 448.1 | 75.4 | 0.0 | 449.2 | 1 | |
| 5 | 33 | -416 | 229 | -59 | 0 | -273 | 319 | 7.7 | 348.2 | 19.7 | 0.0 | 355.8 | 1 | |
| 6 | 33 | 458 | 230 | -59 | 0 | -274 | 318 | 8.4 | 348.2 | 19.7 | 0.0 | 356.6 | 1 | |
| 7 | 33 | -413 | 229 | 74 | 0 | 279 | 318 | 7.6 | 353.0 | 19.7 | 0.0 | 360.7 | 1 | |
| 8 | 33 | 460 | 230 | 75 | 0 | 278 | 317 | 8.5 | 352.5 | 19.7 | 0.0 | 361.0 | 1 | |
| 9 | 33 | -1426 | 318 | -21 | 0 | -85 | 448 | 26.3 | 220.3 | 27.3 | 0.0 | 246.6 | 1 | |
| 10 | 33 | 1485 | 320 | -20 | 0 | -86 | 445 | 27.3 | 220.5 | 27.4 | 0.0 | 247.8 | 1 | |
| 11 | 33 | -1425 | 318 | 20 | 0 | 81 | 448 | 26.2 | 217.0 | 27.3 | 0.0 | 243.2 | 1 | |
| 12 | 33 | 1478 | 231 | 22 | 0 | 81 | 316 | 27.2 | 174.6 | 19.8 | 0.0 | 201.8 | 1 | |
| 13 | 33 | 54 | 738 | -4 | 0 | -9 | 1134 | 1.0 | 371.8 | 63.2 | 0.0 | 372.8 | 1 | |
| 14 | 33 | -1 | -180 | 3 | 0 | 3 | -357 | 0.0 | 117.5 | 15.4 | 0.0 | 117.5 | 1 | |
| 15 | 33 | 55 | 769 | -5 | 0 | -9 | 1184 | 1.0 | 388.4 | 65.9 | 0.0 | 389.4 | 1 | |
| 1 | 44 | 62 | 873 | -5 | 0 | -10 | 1462 | 1.1 | 478.3 | 74.8 | 0.0 | 479.4 | 1 | |
| 5 | 44 | -416 | 225 | -59 | 0 | -267 | 343 | 7.7 | 350.3 | 19.3 | 0.0 | 358.0 | 1 | |
| 6 | 44 | 458 | 225 | -59 | 0 | -267 | 343 | 8.4 | 350.4 | 19.3 | 0.0 | 358.8 | 1 | |
| 7 | 44 | -413 | 225 | 74 | 0 | 271 | 343 | 7.6 | 353.7 | 19.3 | 0.0 | 361.3 | 1 | |
| 8 | 44 | 460 | 225 | 75 | 0 | 270 | 342 | 8.5 | 353.1 | 19.3 | 0.0 | 361.6 | 1 | |
| 9 | 44 | -1426 | 312 | -21 | 0 | -83 | 482 | 26.3 | 229.3 | 26.8 | 0.0 | 255.6 | 1 | |
| 10 | 44 | 1485 | 314 | -20 | 0 | -84 | 480 | 27.3 | 229.7 | 26.9 | 0.0 | 257.0 | 1 | |
| 11 | 44 | -1425 | 312 | 20 | 0 | 79 | 482 | 26.2 | 226.0 | 26.8 | 0.0 | 252.3 | 1 | |
| 12 | 44 | 1478 | 226 | 22 | 0 | 79 | 341 | 27.2 | 180.4 | 19.4 | 0.0 | 207.6 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-------|------|-----|---|------|------|------|-------|------|-----|-------|---|
| 13 | 44 | 54 | 732 | -4 | 0 | -8 | 1214 | 1.0 | 397.2 | 62.7 | 0.0 | 398.2 | 1 |
| 14 | 44 | -1 | -185 | 3 | 0 | 3 | -377 | 0.0 | 123.7 | 15.8 | 0.0 | 123.7 | 1 |
| 15 | 44 | 55 | 763 | -5 | 0 | -9 | 1268 | 1.0 | 414.8 | 65.3 | 0.0 | 415.8 | 1 |
| 1 | 55 | 62 | 867 | -5 | 0 | -9 | 1557 | 1.1 | 508.3 | 74.3 | 0.0 | 509.4 | 1 |
| 5 | 55 | -416 | 220 | -59 | 0 | -260 | 368 | 7.7 | 352.3 | 18.9 | 0.0 | 360.0 | 1 |
| 6 | 55 | 458 | 221 | -59 | 0 | -261 | 367 | 8.4 | 352.5 | 18.9 | 0.0 | 360.9 | 1 |
| 7 | 55 | -413 | 220 | 74 | 0 | 263 | 367 | 7.6 | 354.2 | 18.9 | 0.0 | 361.8 | 1 |
| 8 | 55 | 460 | 221 | 75 | 0 | 262 | 367 | 8.5 | 353.6 | 18.9 | 0.0 | 362.1 | 1 |
| 9 | 55 | -1426 | 306 | -21 | 0 | -80 | 516 | 26.3 | 238.1 | 26.2 | 0.0 | 264.4 | 1 |
| 10 | 55 | 1485 | 308 | -20 | 0 | -82 | 514 | 27.3 | 238.6 | 26.4 | 0.0 | 266.0 | 1 |
| 11 | 55 | -1425 | 306 | 20 | 0 | 77 | 516 | 26.2 | 234.9 | 26.3 | 0.0 | 261.2 | 1 |
| 12 | 55 | 1478 | 221 | 22 | 0 | 76 | 365 | 27.2 | 186.1 | 19.0 | 0.0 | 213.3 | 1 |
| 13 | 55 | 54 | 726 | -4 | 0 | -8 | 1294 | 1.0 | 422.3 | 62.2 | 0.0 | 423.3 | 1 |
| 14 | 55 | -1 | -190 | 3 | 0 | 3 | -397 | 0.0 | 130.0 | 16.2 | 0.0 | 130.0 | 1 |
| 15 | 55 | 55 | 757 | -5 | 0 | -8 | 1351 | 1.0 | 441.0 | 64.8 | 0.0 | 442.0 | 1 |
| 1 | 66 | 62 | 861 | -5 | 0 | -9 | 1652 | 1.1 | 538.1 | 73.8 | 0.0 | 539.2 | 1 |
| 5 | 66 | -416 | 215 | -59 | 0 | -254 | 391 | 7.7 | 354.2 | 18.5 | 0.0 | 361.8 | 1 |
| 6 | 66 | 458 | 216 | -59 | 0 | -254 | 391 | 8.4 | 354.4 | 18.5 | 0.0 | 362.8 | 1 |
| 7 | 66 | -413 | 215 | 74 | 0 | 254 | 391 | 7.6 | 354.5 | 18.5 | 0.0 | 362.1 | 1 |
| 8 | 66 | 460 | 216 | 75 | 0 | 254 | 390 | 8.5 | 353.9 | 18.5 | 0.0 | 362.4 | 1 |
| 9 | 66 | -1426 | 300 | -21 | 0 | -78 | 549 | 26.3 | 246.7 | 25.7 | 0.0 | 273.0 | 1 |
| 10 | 66 | 1485 | 302 | -20 | 0 | -80 | 547 | 27.3 | 247.4 | 25.9 | 0.0 | 274.8 | 1 |
| 11 | 66 | -1425 | 300 | 20 | 0 | 75 | 549 | 26.2 | 243.6 | 25.7 | 0.0 | 269.8 | 1 |
| 12 | 66 | 1478 | 217 | 22 | 0 | 74 | 389 | 27.2 | 191.6 | 18.6 | 0.0 | 218.8 | 1 |
| 13 | 66 | 54 | 720 | -4 | 0 | -7 | 1373 | 1.0 | 447.2 | 61.7 | 0.0 | 448.2 | 1 |
| 14 | 66 | -1 | -194 | 3 | 0 | 2 | -418 | 0.0 | 136.5 | 16.6 | 0.0 | 136.5 | 1 |
| 15 | 66 | 55 | 750 | -5 | 0 | -8 | 1433 | 1.0 | 467.0 | 64.3 | 0.0 | 468.0 | 1 |
| 1 | 76 | 62 | 855 | -5 | 0 | -8 | 1746 | 1.1 | 567.7 | 73.3 | 0.0 | 568.8 | 1 |
| 5 | 76 | -416 | 211 | -59 | 0 | -248 | 415 | 7.7 | 355.9 | 18.1 | 0.0 | 363.5 | 1 |
| 6 | 76 | 458 | 211 | -59 | 0 | -248 | 414 | 8.4 | 356.1 | 18.1 | 0.0 | 364.5 | 1 |
| 7 | 76 | -413 | 211 | 74 | 0 | 246 | 414 | 7.6 | 354.7 | 18.1 | 0.0 | 362.3 | 1 |
| 8 | 76 | 460 | 211 | 75 | 0 | 246 | 414 | 8.5 | 354.0 | 18.1 | 0.0 | 362.5 | 1 |
| 9 | 76 | -1426 | 294 | -21 | 0 | -76 | 582 | 26.3 | 255.1 | 25.2 | 0.0 | 281.3 | 1 |
| 10 | 76 | 1485 | 296 | -20 | 0 | -78 | 580 | 27.3 | 256.0 | 25.4 | 0.0 | 283.3 | 1 |
| 11 | 76 | -1425 | 294 | 20 | 0 | 73 | 582 | 26.2 | 252.0 | 25.2 | 0.0 | 278.3 | 1 |
| 12 | 76 | 1478 | 212 | 22 | 0 | 72 | 413 | 27.2 | 196.9 | 18.2 | 0.0 | 224.1 | 1 |
| 13 | 76 | 54 | 714 | -4 | 0 | -7 | 1451 | 1.0 | 471.9 | 61.1 | 0.0 | 472.9 | 1 |
| 14 | 76 | -1 | -199 | 3 | 0 | 2 | -440 | 0.0 | 143.1 | 17.0 | 0.0 | 143.2 | 1 |
| 15 | 76 | 55 | 744 | -5 | 0 | -7 | 1515 | 1.0 | 492.7 | 63.8 | 0.0 | 493.7 | 1 |
| 1 | 87 | 62 | 849 | -5 | 0 | -8 | 1839 | 1.1 | 597.1 | 72.8 | 0.0 | 598.2 | 1 |
| 5 | 87 | -416 | 206 | -59 | 0 | -241 | 437 | 7.7 | 357.4 | 17.7 | 0.0 | 365.0 | 1 |
| 6 | 87 | 458 | 207 | -59 | 0 | -242 | 437 | 8.4 | 357.7 | 17.7 | 0.0 | 366.1 | 1 |
| 7 | 87 | -413 | 206 | 74 | 0 | 238 | 437 | 7.6 | 354.7 | 17.7 | 0.0 | 362.3 | 1 |
| 8 | 87 | 460 | 207 | 75 | 0 | 238 | 437 | 8.5 | 354.0 | 17.7 | 0.0 | 362.5 | 1 |
| 9 | 87 | -1426 | 288 | -21 | 0 | -74 | 614 | 26.3 | 263.2 | 24.7 | 0.0 | 289.5 | 1 |
| 10 | 87 | 1485 | 290 | -20 | 0 | -75 | 612 | 27.3 | 264.3 | 24.8 | 0.0 | 291.6 | 1 |
| 11 | 87 | -1425 | 288 | 20 | 0 | 70 | 614 | 26.2 | 260.2 | 24.7 | 0.0 | 286.5 | 1 |
| 12 | 87 | 1478 | 207 | 22 | 0 | 69 | 436 | 27.2 | 202.1 | 17.8 | 0.0 | 229.3 | 1 |
| 13 | 87 | 54 | 708 | -4 | 0 | -6 | 1529 | 1.0 | 496.4 | 60.6 | 0.0 | 497.4 | 1 |
| 14 | 87 | -1 | -204 | 3 | 0 | 2 | -462 | 0.0 | 150.0 | 17.4 | 0.0 | 150.0 | 1 |
| 15 | 87 | 55 | 738 | -5 | 0 | -7 | 1596 | 1.0 | 518.3 | 63.3 | 0.0 | 519.3 | 1 |
| 1 | 98 | 62 | 843 | -5 | 0 | -7 | 1931 | 1.1 | 626.2 | 72.2 | 0.0 | 627.4 | 1 |
| 5 | 98 | -416 | 201 | -59 | 0 | -235 | 460 | 7.7 | 358.7 | 17.3 | 0.0 | 366.4 | 1 |
| 6 | 98 | 458 | 202 | -59 | 0 | -235 | 459 | 8.4 | 359.1 | 17.3 | 0.0 | 367.5 | 1 |
| 7 | 98 | -413 | 201 | 74 | 0 | 230 | 459 | 7.6 | 354.5 | 17.3 | 0.0 | 362.1 | 1 |
| 8 | 98 | 460 | 202 | 75 | 0 | 229 | 459 | 8.5 | 353.8 | 17.3 | 0.0 | 362.3 | 1 |
| 9 | 98 | -1426 | 282 | -21 | 0 | -71 | 645 | 26.3 | 271.1 | 24.2 | 0.0 | 297.4 | 1 |
| 10 | 98 | 1485 | 284 | -20 | 0 | -73 | 643 | 27.3 | 272.4 | 24.3 | 0.0 | 299.8 | 1 |
| 11 | 98 | -1425 | 282 | 20 | 0 | 68 | 645 | 26.2 | 268.3 | 24.2 | 0.0 | 294.5 | 1 |
| 12 | 98 | 1478 | 203 | 22 | 0 | 67 | 458 | 27.2 | 207.1 | 17.4 | 0.0 | 234.3 | 1 |
| 13 | 98 | 54 | 701 | -4 | 0 | -6 | 1606 | 1.0 | 520.7 | 60.1 | 0.0 | 521.7 | 1 |
| 14 | 98 | -1 | -208 | 3 | 0 | 2 | -484 | 0.0 | 156.9 | 17.8 | 0.0 | 157.0 | 1 |
| 15 | 98 | 55 | 732 | -5 | 0 | -6 | 1676 | 1.0 | 543.6 | 62.7 | 0.0 | 544.6 | 1 |
| 1 | 109 | 62 | 837 | -5 | 0 | -6 | 2023 | 1.1 | 655.2 | 71.7 | 0.0 | 656.3 | 1 |
| 5 | 109 | -416 | 197 | -59 | 0 | -228 | 481 | 7.7 | 359.9 | 16.9 | 0.0 | 367.6 | 1 |
| 6 | 109 | 458 | 197 | -59 | 0 | -229 | 481 | 8.4 | 360.3 | 16.9 | 0.0 | 368.7 | 1 |
| 7 | 109 | -413 | 197 | 74 | 0 | 222 | 481 | 7.6 | 354.2 | 16.9 | 0.0 | 361.8 | 1 |
| 8 | 109 | 460 | 197 | 75 | 0 | 221 | 481 | 8.5 | 353.5 | 16.9 | 0.0 | 361.9 | 1 |
| 9 | 109 | -1426 | 276 | -21 | 0 | -69 | 675 | 26.3 | 278.9 | 23.7 | 0.0 | 305.1 | 1 |
| 10 | 109 | 1485 | 278 | -20 | 0 | -71 | 674 | 27.3 | 280.3 | 23.8 | 0.0 | 307.7 | 1 |
| 11 | 109 | -1425 | 276 | 20 | 0 | 66 | 675 | 26.2 | 276.1 | 23.7 | 0.0 | 302.3 | 1 |
| 12 | 109 | 1478 | 198 | 22 | 0 | 64 | 480 | 27.2 | 211.9 | 17.0 | 0.0 | 239.2 | 1 |
| 13 | 109 | 54 | 695 | -4 | 0 | -5 | 1682 | 1.0 | 544.8 | 59.6 | 0.0 | 545.8 | 1 |
| 14 | 109 | -1 | -213 | 3 | 0 | 1 | -507 | 0.0 | 164.1 | 18.2 | 0.0 | 164.1 | 1 |
| 15 | 109 | 55 | 726 | -5 | 0 | -6 | 1756 | 1.0 | 568.7 | 62.2 | 0.0 | 569.7 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|------|--------|-------|---------------------|---------|------|----------|------|
| | | cm | daN*m | daN/cm ² | | cm | | |

| | | | | | | | |
|----|---------|-----|------|-------|----|------|-----------|
| 1 | -- | 109 | 2023 | 649.4 | -- | -- | -- |
| -- | Rara | 50 | 3 | -- | 52 | 0.00 | 1 / 99999 |
| -- | Freq. | 50 | 3 | -- | 52 | 0.00 | 1 / 99999 |
| -- | Q.Perm. | 50 | 3 | -- | 52 | 0.00 | 1 / 99999 |
| -- | Rara | 50 | 3 | -- | 52 | 0.00 | 1 / 99999 |
| -- | Rara | 50 | 3 | -- | 52 | 0.00 | 1 / 99999 |
| -- | Freq. | 50 | 3 | -- | 52 | 0.00 | 1 / 99999 |
| -- | Freq. | 50 | 3 | -- | 52 | 0.00 | 1 / 99999 |

ASTA NUM. 40 NI 127 NF 110 Lungh. 94.0 cm SEZ. 6 Ps HEB 160

categoria: p.p. y qy tot.

qy medio: 0.4263 0.4263 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|-------|------|-------|------|------|---------|--------|--------|-------|--------|------|------|
| -- | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | 62 | -2126 | -7 | 0 | -6 | 2023 | 1.1 | 655.2 | 182.2 | 0.0 | 656.3 | 1 | |
| 5 | 0 | -566 | -492 | -243 | 0 | -228 | 482 | 10.4 | 359.9 | 42.2 | 0.0 | 370.4 | 1 | |
| 6 | 0 | 600 | -492 | -243 | 0 | -229 | 481 | 11.0 | 360.3 | 42.1 | 0.0 | 371.3 | 1 | |
| 7 | 0 | -555 | -492 | 236 | 0 | 222 | 481 | 10.2 | 354.2 | 42.1 | 0.0 | 364.4 | 1 | |
| 8 | 0 | 611 | -491 | 235 | 0 | 221 | 481 | 11.3 | 353.5 | 42.1 | 0.0 | 364.7 | 1 | |
| 9 | 0 | -1915 | -692 | -73 | 0 | -69 | 675 | 35.3 | 278.9 | 59.3 | 0.0 | 314.2 | 1 | |
| 10 | 0 | 1971 | -691 | -76 | 0 | -71 | 674 | 36.3 | 280.3 | 59.2 | 0.0 | 316.6 | 1 | |
| 11 | 0 | -1912 | -692 | 70 | 0 | 66 | 675 | 35.2 | 276.1 | 59.3 | 0.0 | 311.3 | 1 | |
| 12 | 0 | 1967 | -491 | 68 | 0 | 64 | 480 | 36.2 | 212.0 | 42.0 | 0.0 | 248.2 | 1 | |
| 13 | 0 | 54 | -1763 | -6 | 0 | -5 | 1682 | 1.0 | 544.8 | 151.1 | 0.0 | 545.8 | 1 | |
| 14 | 0 | -1 | 560 | 1 | 0 | 1 | -507 | 0.0 | 164.1 | 48.0 | 0.0 | 164.1 | 1 | |
| 15 | 0 | 55 | -1842 | -6 | 0 | -6 | 1757 | 1.0 | 569.1 | 157.8 | 0.0 | 570.1 | 1 | |
| 1 | 9 | 62 | -2131 | -7 | 0 | -6 | 1823 | 1.1 | 590.4 | 182.6 | 0.0 | 591.5 | 1 | |
| 5 | 9 | -566 | -496 | -243 | 0 | -205 | 435 | 10.4 | 324.5 | 42.5 | 0.0 | 334.9 | 1 | |
| 6 | 9 | 600 | -496 | -243 | 0 | -206 | 435 | 11.0 | 324.8 | 42.5 | 0.0 | 335.9 | 1 | |
| 7 | 9 | -555 | -496 | 236 | 0 | 200 | 435 | 10.2 | 319.3 | 42.5 | 0.0 | 329.5 | 1 | |
| 8 | 9 | 611 | -495 | 235 | 0 | 199 | 434 | 11.3 | 318.7 | 42.4 | 0.0 | 329.9 | 1 | |
| 9 | 9 | -1915 | -698 | -73 | 0 | -62 | 610 | 35.3 | 251.7 | 59.8 | 0.0 | 287.0 | 1 | |
| 10 | 9 | 1971 | -696 | -76 | 0 | -64 | 609 | 36.3 | 253.0 | 59.6 | 0.0 | 289.3 | 1 | |
| 11 | 9 | -1912 | -697 | 70 | 0 | 59 | 610 | 35.2 | 249.2 | 59.8 | 0.0 | 284.4 | 1 | |
| 12 | 9 | 1967 | -495 | 68 | 0 | 58 | 434 | 36.2 | 191.3 | 42.4 | 0.0 | 227.6 | 1 | |
| 13 | 9 | 54 | -1768 | -6 | 0 | -5 | 1516 | 1.0 | 491.0 | 151.5 | 0.0 | 492.0 | 1 | |
| 14 | 9 | -1 | 556 | 1 | 0 | 1 | -455 | 0.0 | 147.2 | 47.6 | 0.0 | 147.2 | 1 | |
| 15 | 9 | 55 | -1847 | -6 | 0 | -5 | 1584 | 1.0 | 512.9 | 158.3 | 0.0 | 513.9 | 1 | |
| 1 | 19 | 62 | -2136 | -7 | 0 | -5 | 1622 | 1.1 | 525.4 | 183.1 | 0.0 | 526.6 | 1 | |
| 5 | 19 | -566 | -500 | -243 | 0 | -183 | 388 | 10.4 | 288.9 | 42.8 | 0.0 | 299.3 | 1 | |
| 6 | 19 | 600 | -500 | -243 | 0 | -183 | 388 | 11.0 | 289.2 | 42.8 | 0.0 | 300.3 | 1 | |
| 7 | 19 | -555 | -500 | 236 | 0 | 178 | 388 | 10.2 | 284.3 | 42.8 | 0.0 | 294.5 | 1 | |
| 8 | 19 | 611 | -499 | 235 | 0 | 177 | 388 | 11.3 | 283.8 | 42.8 | 0.0 | 295.0 | 1 | |
| 9 | 19 | -1915 | -703 | -73 | 0 | -55 | 544 | 35.3 | 224.4 | 60.2 | 0.0 | 259.6 | 1 | |
| 10 | 19 | 1971 | -701 | -76 | 0 | -57 | 543 | 36.3 | 225.5 | 60.1 | 0.0 | 261.8 | 1 | |
| 11 | 19 | -1912 | -703 | 70 | 0 | 53 | 544 | 35.2 | 222.1 | 60.2 | 0.0 | 257.4 | 1 | |
| 12 | 19 | 1967 | -499 | 68 | 0 | 51 | 387 | 36.2 | 170.6 | 42.7 | 0.0 | 206.8 | 1 | |
| 13 | 19 | 54 | -1773 | -6 | 0 | -4 | 1350 | 1.0 | 437.1 | 152.0 | 0.0 | 438.1 | 1 | |
| 14 | 19 | -1 | 552 | 1 | 0 | 1 | -403 | 0.0 | 130.3 | 47.3 | 0.0 | 130.8 | 3 | |
| 15 | 19 | 55 | -1852 | -6 | 0 | -4 | 1410 | 1.0 | 456.5 | 158.7 | 0.0 | 457.5 | 1 | |
| 1 | 28 | 62 | -2142 | -7 | 0 | -4 | 1421 | 1.1 | 460.3 | 183.5 | 0.0 | 477.4 | 3 | |
| 5 | 28 | -566 | -504 | -243 | 0 | -160 | 341 | 10.4 | 253.2 | 43.2 | 0.0 | 263.7 | 1 | |
| 6 | 28 | 600 | -504 | -243 | 0 | -160 | 341 | 11.0 | 253.5 | 43.1 | 0.0 | 264.5 | 1 | |
| 7 | 28 | -555 | -504 | 236 | 0 | 155 | 341 | 10.2 | 249.2 | 43.2 | 0.0 | 259.4 | 1 | |
| 8 | 28 | 611 | -503 | 235 | 0 | 155 | 341 | 11.3 | 248.7 | 43.1 | 0.0 | 260.0 | 1 | |
| 9 | 28 | -1915 | -708 | -73 | 0 | -48 | 478 | 35.3 | 196.9 | 60.7 | 0.0 | 232.1 | 1 | |
| 10 | 28 | 1971 | -706 | -76 | 0 | -50 | 477 | 36.3 | 197.9 | 60.5 | 0.0 | 234.2 | 1 | |
| 11 | 28 | -1912 | -708 | 70 | 0 | 46 | 478 | 35.2 | 194.9 | 60.7 | 0.0 | 230.1 | 1 | |
| 12 | 28 | 1967 | -503 | 68 | 0 | 45 | 340 | 36.2 | 149.7 | 43.1 | 0.0 | 185.9 | 1 | |
| 13 | 28 | 54 | -1779 | -6 | 0 | -4 | 1183 | 1.0 | 383.0 | 152.4 | 0.0 | 397.0 | 3 | |
| 14 | 28 | -1 | 548 | 1 | 0 | 1 | -351 | 0.0 | 113.6 | 46.9 | 0.0 | 119.2 | 3 | |
| 15 | 28 | 55 | -1858 | -6 | 0 | -4 | 1235 | 1.0 | 400.0 | 159.2 | 0.0 | 414.6 | 3 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|-------|-------|------|---|------|------|------|-------|-------|-----|-------|---|
| 1 | 38 | 62 | -2147 | -7 | 0 | -4 | 1220 | 1.1 | 395.0 | 184.0 | 0.0 | 435.5 | 3 |
| 5 | 38 | -566 | -508 | -243 | 0 | -137 | 293 | 10.4 | 217.4 | 43.5 | 0.0 | 227.8 | 1 |
| 6 | 38 | 600 | -508 | -243 | 0 | -137 | 293 | 11.0 | 217.6 | 43.5 | 0.0 | 228.7 | 1 |
| 7 | 38 | -555 | -508 | 236 | 0 | 133 | 293 | 10.2 | 214.0 | 43.5 | 0.0 | 224.2 | 1 |
| 8 | 38 | 611 | -507 | 235 | 0 | 133 | 293 | 11.3 | 213.5 | 43.5 | 0.0 | 224.8 | 1 |
| 9 | 38 | -1915 | -713 | -73 | 0 | -41 | 411 | 35.3 | 169.2 | 61.1 | 0.0 | 204.5 | 1 |
| 10 | 38 | 1971 | -711 | -76 | 0 | -43 | 410 | 36.3 | 170.1 | 61.0 | 0.0 | 206.4 | 1 |
| 11 | 38 | -1912 | -713 | 70 | 0 | 40 | 411 | 35.2 | 167.6 | 61.1 | 0.0 | 202.8 | 1 |
| 12 | 38 | 1967 | -507 | 68 | 0 | 39 | 293 | 36.2 | 128.6 | 43.4 | 0.0 | 164.9 | 1 |
| 13 | 38 | 54 | -1784 | -6 | 0 | -3 | 1015 | 1.0 | 328.7 | 152.9 | 0.0 | 362.3 | 3 |
| 14 | 38 | -1 | 544 | 1 | 0 | 1 | -300 | 0.0 | 97.0 | 46.6 | 0.0 | 108.3 | 3 |
| 15 | 38 | 55 | -1863 | -6 | 0 | -3 | 1060 | 1.0 | 343.3 | 159.6 | 0.0 | 378.3 | 3 |
| | | | | | | | | | | | | | |
| 1 | 47 | 62 | -2152 | -7 | 0 | -3 | 1018 | 1.1 | 329.6 | 184.4 | 0.0 | 396.6 | 3 |
| 5 | 47 | -566 | -512 | -243 | 0 | -114 | 245 | 10.4 | 181.5 | 43.9 | 0.0 | 191.9 | 1 |
| 6 | 47 | 600 | -512 | -243 | 0 | -114 | 245 | 11.0 | 181.7 | 43.8 | 0.0 | 192.7 | 1 |
| 7 | 47 | -555 | -512 | 236 | 0 | 111 | 245 | 10.2 | 178.6 | 43.9 | 0.0 | 188.8 | 1 |
| 8 | 47 | 611 | -511 | 235 | 0 | 111 | 245 | 11.3 | 178.3 | 43.8 | 0.0 | 189.5 | 1 |
| 9 | 47 | -1915 | -718 | -73 | 0 | -34 | 344 | 35.3 | 141.4 | 61.6 | 0.0 | 176.7 | 1 |
| 10 | 47 | 1971 | -717 | -76 | 0 | -36 | 343 | 36.3 | 142.1 | 61.4 | 0.0 | 178.4 | 1 |
| 11 | 47 | -1912 | -718 | 70 | 0 | 33 | 344 | 35.2 | 140.0 | 61.5 | 0.0 | 175.2 | 1 |
| 12 | 47 | 1967 | -511 | 68 | 0 | 32 | 245 | 36.2 | 107.5 | 43.8 | 0.0 | 143.7 | 1 |
| 13 | 47 | 54 | -1789 | -6 | 0 | -3 | 847 | 1.0 | 274.3 | 153.3 | 0.0 | 329.9 | 3 |
| 14 | 47 | -1 | 540 | 1 | 0 | 1 | -249 | 0.0 | 80.5 | 46.2 | 0.0 | 98.1 | 3 |
| 15 | 47 | 55 | -1868 | -6 | 0 | -3 | 885 | 1.0 | 286.5 | 160.1 | 0.0 | 344.5 | 3 |
| | | | | | | | | | | | | | |
| 1 | 56 | 62 | -2157 | -7 | 0 | -3 | 815 | 1.1 | 264.0 | 184.9 | 0.0 | 361.5 | 3 |
| 5 | 56 | -566 | -516 | -243 | 0 | -91 | 197 | 10.4 | 145.4 | 44.2 | 0.0 | 155.9 | 1 |
| 6 | 56 | 600 | -516 | -243 | 0 | -92 | 197 | 11.0 | 145.6 | 44.2 | 0.0 | 156.6 | 1 |
| 7 | 56 | -555 | -516 | 236 | 0 | 89 | 197 | 10.2 | 143.1 | 44.2 | 0.0 | 153.4 | 1 |
| 8 | 56 | 611 | -515 | 235 | 0 | 89 | 197 | 11.3 | 142.8 | 44.2 | 0.0 | 154.1 | 1 |
| 9 | 56 | -1915 | -724 | -73 | 0 | -28 | 276 | 35.3 | 113.4 | 62.0 | 0.0 | 148.7 | 1 |
| 10 | 56 | 1971 | -722 | -76 | 0 | -28 | 275 | 36.3 | 114.0 | 61.9 | 0.0 | 150.3 | 1 |
| 11 | 56 | -1912 | -723 | 70 | 0 | 26 | 276 | 35.2 | 112.3 | 62.0 | 0.0 | 147.5 | 1 |
| 12 | 56 | 1967 | -515 | 68 | 0 | 26 | 197 | 36.2 | 86.2 | 44.1 | 0.0 | 122.5 | 1 |
| 13 | 56 | 54 | -1794 | -6 | 0 | -2 | 679 | 1.0 | 219.8 | 153.7 | 0.0 | 300.8 | 3 |
| 14 | 56 | -1 | 536 | 1 | 0 | 1 | -198 | 0.0 | 64.2 | 45.9 | 0.0 | 88.9 | 3 |
| 15 | 56 | 55 | -1873 | -6 | 0 | -2 | 709 | 1.0 | 229.5 | 160.5 | 0.0 | 314.1 | 3 |
| | | | | | | | | | | | | | |
| 1 | 66 | 62 | -2162 | -7 | 0 | -2 | 612 | 1.1 | 198.2 | 185.3 | 0.0 | 331.6 | 3 |
| 5 | 66 | -566 | -520 | -243 | 0 | -68 | 148 | 10.4 | 109.2 | 44.6 | 0.0 | 119.7 | 1 |
| 6 | 66 | 600 | -520 | -243 | 0 | -69 | 148 | 11.0 | 109.4 | 44.5 | 0.0 | 120.4 | 1 |
| 7 | 66 | -555 | -520 | 236 | 0 | 67 | 148 | 10.2 | 107.5 | 44.5 | 0.0 | 117.8 | 1 |
| 8 | 66 | 611 | -519 | 235 | 0 | 66 | 148 | 11.3 | 107.3 | 44.5 | 0.0 | 118.6 | 1 |
| 9 | 66 | -1915 | -729 | -73 | 0 | -21 | 208 | 35.3 | 85.3 | 62.4 | 0.0 | 133.7 | 3 |
| 10 | 66 | 1971 | -727 | -76 | 0 | -21 | 207 | 36.3 | 85.8 | 62.3 | 0.0 | 134.2 | 3 |
| 11 | 66 | -1912 | -729 | 70 | 0 | 20 | 208 | 35.2 | 84.5 | 62.4 | 0.0 | 133.6 | 3 |
| 12 | 66 | 1967 | -519 | 68 | 0 | 19 | 148 | 36.2 | 64.9 | 44.4 | 0.0 | 103.3 | 3 |
| 13 | 66 | 54 | -1799 | -6 | 0 | -2 | 510 | 1.0 | 165.1 | 154.2 | 0.0 | 276.0 | 3 |
| 14 | 66 | -1 | 532 | 1 | 0 | 0 | -148 | 0.0 | 48.0 | 45.5 | 0.0 | 81.1 | 3 |
| 15 | 66 | 55 | -1878 | -6 | 0 | -2 | 532 | 1.0 | 172.4 | 161.0 | 0.0 | 288.2 | 3 |
| | | | | | | | | | | | | | |
| 1 | 75 | 62 | -2168 | -7 | 0 | -1 | 409 | 1.1 | 132.3 | 185.7 | 0.0 | 321.7 | 4 |
| 5 | 75 | -566 | -524 | -243 | 0 | -46 | 99 | 10.4 | 73.0 | 44.9 | 0.0 | 83.4 | 1 |
| 6 | 75 | 600 | -524 | -243 | 0 | -46 | 99 | 11.0 | 73.0 | 44.9 | 0.0 | 84.1 | 1 |
| 7 | 75 | -555 | -524 | 236 | 0 | 44 | 99 | 10.2 | 71.8 | 44.9 | 0.0 | 82.0 | 1 |
| 8 | 75 | 611 | -523 | 235 | 0 | 44 | 99 | 11.3 | 71.7 | 44.8 | 0.0 | 82.9 | 1 |
| 9 | 75 | -1915 | -734 | -73 | 0 | -14 | 139 | 35.3 | 57.0 | 62.9 | 0.0 | 122.0 | 3 |
| 10 | 75 | 1971 | -732 | -76 | 0 | -14 | 139 | 36.3 | 57.3 | 62.8 | 0.0 | 122.4 | 3 |
| 11 | 75 | -1912 | -734 | 70 | 0 | 13 | 139 | 35.2 | 56.5 | 62.9 | 0.0 | 122.0 | 3 |
| 12 | 75 | 1967 | -523 | 68 | 0 | 13 | 99 | 36.2 | 43.4 | 44.8 | 0.0 | 94.1 | 3 |
| 13 | 75 | 54 | -1805 | -6 | 0 | -1 | 340 | 1.0 | 110.2 | 154.6 | 0.0 | 267.8 | 4 |
| 14 | 75 | -1 | 528 | 1 | 0 | 0 | -98 | 0.0 | 31.9 | 45.2 | 0.0 | 78.3 | 4 |
| 15 | 75 | 55 | -1884 | -6 | 0 | -1 | 355 | 1.0 | 115.1 | 161.4 | 0.0 | 279.6 | 4 |
| | | | | | | | | | | | | | |
| 1 | 85 | 62 | -2173 | -7 | 0 | -1 | 205 | 1.1 | 66.2 | 186.2 | 0.0 | 322.5 | 4 |
| 5 | 85 | -566 | -528 | -243 | 0 | -23 | 50 | 10.4 | 36.5 | 45.3 | 0.0 | 79.2 | 4 |
| 6 | 85 | 600 | -528 | -243 | 0 | -23 | 50 | 11.0 | 36.6 | 45.2 | 0.0 | 79.2 | 4 |
| 7 | 85 | -555 | -528 | 236 | 0 | 22 | 50 | 10.2 | 36.0 | 45.2 | 0.0 | 79.2 | 4 |
| 8 | 85 | 611 | -527 | 235 | 0 | 22 | 50 | 11.3 | 35.9 | 45.2 | 0.0 | 79.2 | 4 |
| 9 | 85 | -1915 | -739 | -73 | 0 | -7 | 70 | 35.3 | 28.6 | 63.3 | 0.0 | 115.3 | 4 |
| 10 | 85 | 1971 | -737 | -76 | 0 | -7 | 70 | 36.3 | 28.7 | 63.2 | 0.0 | 115.4 | 4 |
| 11 | 85 | -1912 | -739 | 70 | 0 | 7 | 70 | 35.2 | 28.3 | 63.3 | 0.0 | 115.3 | 4 |
| 12 | 85 | 1967 | -527 | 68 | 0 | 6 | 50 | 36.2 | 21.7 | 45.1 | 0.0 | 86.3 | 4 |
| 13 | 85 | 54 | -1810 | -6 | 0 | -1 | 170 | 1.0 | 55.2 | 155.1 | 0.0 | 268.6 | 4 |
| 14 | 85 | -1 | 524 | 1 | 0 | 0 | -49 | 0.0 | 15.9 | 44.9 | 0.0 | 77.7 | 4 |
| 15 | 85 | 55 | -1889 | -6 | 0 | -1 | 178 | 1.0 | 57.6 | 161.9 | 0.0 | 280.3 | 4 |
| | | | | | | | | | | | | | |
| 1 | 94 | 62 | -2178 | -7 | 0 | -0 | 0 | 1.1 | 0.0 | 186.6 | 0.0 | 323.3 | 4 |
| 5 | 94 | -566 | -532 | -243 | 0 | -0 | 0 | 10.4 | 0.0 | 45.6 | 0.0 | 79.7 | 4 |
| 6 | 94 | 600 | -532 | -243 | 0 | -0 | 0 | 11.0 | 0.0 | 45.6 | 0.0 | 79.7 | 4 |
| 7 | 94 | -555 | -532 | 236 | 0 | -0 | 0 | 10.2 | 0.0 | 45.6 | 0.0 | 79.6 | 4 |
| 8 | 94 | 611 | -531 | 235 | 0 | -0 | 0 | 11.3 | 0.0 | 45.5 | 0.0 | 79.7 | 4 |
| 9 | 94 | -1915 | -744 | -73 | 0 | -0 | 0 | 35.3 | 0.0 | 63.8 | 0.0 | 116.0 | 4 |
| 10 | 94 | 1971 | -743 | -76 | 0 | -0 | 0 | 36.3 | 0.0 | 63.6 | 0.0 | 116.1 | 4 |
| 11 | 94 | -1912 | -744 | 70 | 0 | -0 | 0 | 35.2 | 0.0 | 63.8 | 0.0 | 115.9 | 4 |
| 12 | 94 | 1967 | -531 | 68 | 0 | -0 | 0 | 36.2 | 0.0 | 45.5 | 0.0 | 86.7 | 4 |
| 13 | 94 | 54 | -1815 | -6 | 0 | -0 | 0 | 1.0 | 0.0 | 155.5 | 0.0 | 269.4 | 4 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|----|-------|----|---|----|---|-----|-----|-------|-----|-------|---|
| 14 | 94 | -1 | 520 | 1 | 0 | 0 | 0 | 0.0 | 0.0 | 44.5 | 0.0 | 77.1 | 4 |
| 15 | 94 | 55 | -1894 | -6 | 0 | -0 | 0 | 1.0 | 0.0 | 162.3 | 0.0 | 281.1 | 4 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x | Mmax | Mmax | Sf (M) | x | fmax. | fmax | fmax / l | Nota |
|----|---------|----|-------|--------|--------|------|-----------|------|----------|------|
| | | cm | daN*m | daN/cm | | cm | | | | |
| 1 | -- | 0 | 2023 | 649.4 | -- | -- | -- | -- | -- | |
| -- | Rara | 59 | 3 | -- | 52 | 0.00 | 1 / 99999 | | | |
| -- | Freq. | 59 | 3 | -- | 52 | 0.00 | 1 / 99999 | | | |
| -- | Q.Perm. | 59 | 3 | -- | 52 | 0.00 | 1 / 99999 | | | |
| -- | Rara | 59 | 3 | -- | 52 | 0.00 | 1 / 99999 | | | |
| -- | Rara | 59 | 3 | -- | 52 | 0.00 | 1 / 99999 | | | |
| -- | Freq. | 59 | 3 | -- | 52 | 0.00 | 1 / 99999 | | | |
| -- | Freq. | 59 | 3 | -- | 52 | 0.00 | 1 / 99999 | | | |

Verifica di STABILITA' e/o SVERGOLAMENTO

| n.comb | Fx | My eq. | Mz eq. | Sn. omega | Sn.yx | Sn.zx | OMEGA | OMEGA1 | Sf | Nota |
|--------|-------|--------|--------|-----------|-------|-------|-------|--------|--------|------|
| | daN | daN*m | | | | | | | daN/cm | |
| 1 | 62 | 0 | 0 | 116 | 70 | 116 | 1.00 | 1.00 | 1.3 | |
| 5 | -566 | 0 | 0 | 116 | 70 | 116 | 2.40 | 1.00 | 25.1 | |
| 6 | 600 | 0 | 0 | 116 | 70 | 116 | 1.00 | 1.00 | 11.1 | |
| 7 | -555 | 0 | 0 | 116 | 70 | 116 | 2.40 | 1.00 | 24.6 | |
| 8 | 611 | 0 | 0 | 116 | 70 | 116 | 1.00 | 1.00 | 11.3 | |
| 9 | -1915 | 0 | 0 | 116 | 70 | 116 | 2.40 | 1.00 | 84.7 | |
| 10 | 1971 | 0 | 0 | 116 | 70 | 116 | 1.00 | 1.00 | 36.4 | |
| 11 | -1912 | 0 | 0 | 116 | 70 | 116 | 2.40 | 1.00 | 84.6 | |
| 12 | 1967 | 0 | 0 | 116 | 70 | 116 | 1.00 | 1.00 | 36.3 | |
| 13 | 54 | 0 | 0 | 116 | 70 | 116 | 1.00 | 1.00 | 1.1 | |
| 14 | -1 | 0 | 0 | 116 | 70 | 116 | 2.40 | 1.00 | 0.1 | |
| 15 | 55 | 0 | 0 | 116 | 70 | 116 | 1.00 | 1.00 | 1.1 | |

86
ASTA NUM. 57 NI 36 NF 32 Lungh. 30.0 cm SEZ. 6 Ps HEB 160

categoria: p.p. y qy tot.

qy medio: 0.4263 0.4263 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|-------|------|-------|-------|-------|---------|--------|--------|--------|--------|------|------|
| | cm | daN | daN | daN | daN*m | daN*m | daN*m | daN/cm | daN/cm | daN/cm | daN/cm | daN/cm | | |
| 1 | 0 | -31 | -5125 | -127 | 0 | -37 | 0 | 0.6 | 33.3 | 439.2 | 0.0 | 760.7 | 4 | |
| 5 | 0 | -1364 | -1684 | -268 | 0 | -79 | 0 | 25.1 | 70.7 | 144.3 | 0.0 | 251.6 | 4 | |
| 6 | 0 | -1354 | -1682 | -260 | 0 | -79 | 0 | 24.9 | 70.8 | 144.1 | 0.0 | 251.3 | 4 | |
| 7 | 0 | 38 | -914 | 213 | 0 | 65 | 0 | 0.7 | 58.6 | 78.3 | 0.0 | 135.6 | 4 | |
| 8 | 0 | 42 | -912 | 221 | 0 | 65 | 0 | 0.8 | 58.5 | 78.2 | 0.0 | 135.4 | 4 | |
| 9 | 0 | -406 | -1930 | -128 | 0 | -34 | 0 | 7.5 | 30.2 | 165.4 | 0.0 | 286.6 | 4 | |
| 10 | 0 | -374 | -1925 | -101 | 0 | -34 | 0 | 6.9 | 30.7 | 165.0 | 0.0 | 285.8 | 4 | |
| 11 | 0 | -3 | -1694 | 18 | 0 | 10 | 0 | 0.1 | 8.9 | 145.2 | 0.0 | 251.4 | 4 | |
| 12 | 0 | 14 | -1178 | 57 | 0 | 13 | 0 | 0.3 | 11.7 | 100.9 | 0.0 | 174.8 | 4 | |
| 13 | 0 | -26 | -4286 | -105 | 0 | -31 | 0 | 0.5 | 27.7 | 367.3 | 0.0 | 636.1 | 4 | |
| 14 | 0 | -15 | 1141 | 32 | 0 | 9 | 0 | 0.3 | 8.4 | 97.8 | 0.0 | 169.4 | 4 | |
| 15 | 0 | -27 | -4468 | -110 | 0 | -32 | 0 | 0.5 | 28.9 | 382.9 | 0.0 | 663.2 | 4 | |
| 1 | 3 | -31 | -5127 | -127 | 0 | -33 | -154 | 0.6 | 79.2 | 439.3 | 0.0 | 760.9 | 4 | |
| 5 | 3 | -1364 | -1685 | -268 | 0 | -71 | -51 | 25.1 | 79.7 | 144.4 | 0.0 | 251.7 | 4 | |
| 6 | 3 | -1354 | -1683 | -260 | 0 | -71 | -50 | 24.9 | 80.0 | 144.2 | 0.0 | 251.4 | 4 | |
| 7 | 3 | 38 | -915 | 213 | 0 | 59 | -27 | 0.7 | 61.6 | 78.4 | 0.0 | 135.8 | 4 | |
| 8 | 3 | 42 | -913 | 221 | 0 | 58 | -27 | 0.8 | 61.3 | 78.3 | 0.0 | 135.6 | 4 | |
| 9 | 3 | -406 | -1932 | -128 | 0 | -30 | -58 | 7.5 | 45.4 | 165.5 | 0.0 | 286.8 | 4 | |
| 10 | 3 | -374 | -1927 | -101 | 0 | -31 | -58 | 6.9 | 46.5 | 165.1 | 0.0 | 286.1 | 4 | |
| 11 | 3 | -3 | -1696 | 18 | 0 | 9 | -51 | 0.1 | 24.7 | 145.3 | 0.0 | 251.7 | 4 | |
| 12 | 3 | 14 | -1179 | 57 | 0 | 11 | -35 | 0.3 | 21.6 | 101.1 | 0.0 | 175.0 | 4 | |
| 13 | 3 | -26 | -4288 | -105 | 0 | -28 | -129 | 0.5 | 66.1 | 367.4 | 0.0 | 636.4 | 4 | |
| 14 | 3 | -15 | 1140 | 32 | 0 | 8 | 34 | 0.3 | 18.6 | 97.7 | 0.0 | 169.2 | 4 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|-------|-------|------|---|-----|-------|------|-------|-------|-----|-------|---|
| 15 | 3 | -27 | -4470 | -110 | 0 | -29 | -134 | 0.5 | 69.0 | 383.0 | 0.0 | 663.4 | 4 |
| 1 | 6 | -31 | -5128 | -127 | 0 | -29 | -308 | 0.6 | 125.2 | 439.5 | 0.0 | 761.2 | 4 |
| 5 | 6 | -1364 | -1686 | -268 | 0 | -62 | -101 | 25.1 | 88.7 | 144.5 | 0.0 | 251.9 | 4 |
| 6 | 6 | -1354 | -1685 | -260 | 0 | -63 | -101 | 24.9 | 89.2 | 144.4 | 0.0 | 251.6 | 4 |
| 7 | 6 | 38 | -916 | 213 | 0 | 52 | -55 | 0.7 | 64.7 | 78.5 | 0.0 | 136.0 | 4 |
| 8 | 6 | 42 | -915 | 221 | 0 | 52 | -55 | 0.8 | 64.1 | 78.4 | 0.0 | 135.8 | 4 |
| 9 | 6 | -406 | -1933 | -128 | 0 | -26 | -116 | 7.5 | 60.5 | 165.7 | 0.0 | 287.1 | 4 |
| 10 | 6 | -374 | -1928 | -101 | 0 | -28 | -116 | 6.9 | 62.3 | 165.2 | 0.0 | 286.3 | 4 |
| 11 | 6 | -3 | -1697 | 18 | 0 | 9 | -102 | 0.1 | 40.6 | 145.4 | 0.0 | 251.9 | 4 |
| 12 | 6 | 14 | -1181 | 57 | 0 | 10 | -71 | 0.3 | 31.4 | 101.2 | 0.0 | 175.2 | 4 |
| 13 | 6 | -26 | -4289 | -105 | 0 | -24 | -257 | 0.5 | 104.6 | 367.6 | 0.0 | 636.6 | 4 |
| 14 | 6 | -15 | 1138 | 32 | 0 | 7 | 68 | 0.3 | 28.7 | 97.6 | 0.0 | 169.0 | 4 |
| 15 | 6 | -27 | -4471 | -110 | 0 | -26 | -268 | 0.5 | 109.1 | 383.2 | 0.0 | 663.7 | 4 |
| 1 | 9 | -31 | -5130 | -127 | 0 | -26 | -461 | 0.6 | 171.2 | 439.6 | 0.0 | 761.4 | 4 |
| 5 | 9 | -1364 | -1688 | -268 | 0 | -54 | -152 | 25.1 | 97.7 | 144.6 | 0.0 | 252.0 | 4 |
| 6 | 9 | -1354 | -1686 | -260 | 0 | -55 | -152 | 24.9 | 98.4 | 144.5 | 0.0 | 251.7 | 4 |
| 7 | 9 | 38 | -917 | 213 | 0 | 46 | -82 | 0.7 | 67.8 | 78.6 | 0.0 | 136.2 | 4 |
| 8 | 9 | 42 | -916 | 221 | 0 | 45 | -82 | 0.8 | 67.0 | 78.5 | 0.0 | 136.0 | 4 |
| 9 | 9 | -406 | -1935 | -128 | 0 | -22 | -174 | 7.5 | 75.7 | 165.8 | 0.0 | 287.3 | 4 |
| 10 | 9 | -374 | -1930 | -101 | 0 | -25 | -173 | 6.9 | 78.1 | 165.4 | 0.0 | 286.5 | 4 |
| 11 | 9 | -3 | -1699 | 18 | 0 | 8 | -153 | 0.1 | 56.4 | 145.6 | 0.0 | 252.1 | 4 |
| 12 | 9 | 14 | -1182 | 57 | 0 | 8 | -106 | 0.3 | 41.2 | 101.3 | 0.0 | 175.4 | 4 |
| 13 | 9 | -26 | -4291 | -105 | 0 | -21 | -386 | 0.5 | 143.0 | 367.7 | 0.0 | 636.9 | 4 |
| 14 | 9 | -15 | 1137 | 32 | 0 | 7 | 102 | 0.3 | 38.8 | 97.4 | 0.0 | 168.8 | 4 |
| 15 | 9 | -27 | -4473 | -110 | 0 | -22 | -402 | 0.5 | 149.2 | 383.3 | 0.0 | 663.9 | 4 |
| 1 | 12 | -31 | -5132 | -127 | 0 | -22 | -615 | 0.6 | 217.2 | 439.8 | 0.0 | 761.7 | 4 |
| 5 | 12 | -1364 | -1689 | -268 | 0 | -46 | -202 | 25.1 | 106.7 | 144.7 | 0.0 | 252.1 | 4 |
| 6 | 12 | -1354 | -1687 | -260 | 0 | -47 | -202 | 24.9 | 107.6 | 144.6 | 0.0 | 251.9 | 4 |
| 7 | 12 | 38 | -919 | 213 | 0 | 40 | -110 | 0.7 | 70.9 | 78.7 | 0.0 | 136.4 | 4 |
| 8 | 12 | 42 | -917 | 221 | 0 | 38 | -110 | 0.8 | 69.8 | 78.6 | 0.0 | 136.2 | 4 |
| 9 | 12 | -406 | -1936 | -128 | 0 | -18 | -232 | 7.5 | 90.9 | 165.9 | 0.0 | 287.5 | 4 |
| 10 | 12 | -374 | -1931 | -101 | 0 | -22 | -231 | 6.9 | 94.0 | 165.5 | 0.0 | 286.8 | 4 |
| 11 | 12 | -3 | -1700 | 18 | 0 | 8 | -204 | 0.1 | 72.3 | 145.7 | 0.0 | 252.4 | 4 |
| 12 | 12 | 14 | -1183 | 57 | 0 | 6 | -142 | 0.3 | 51.1 | 101.4 | 0.0 | 175.6 | 4 |
| 13 | 12 | -26 | -4293 | -105 | 0 | -18 | -515 | 0.5 | 181.5 | 367.9 | 0.0 | 637.2 | 4 |
| 14 | 12 | -15 | 1136 | 32 | 0 | 6 | 137 | 0.3 | 48.9 | 97.3 | 0.0 | 168.6 | 4 |
| 15 | 12 | -27 | -4475 | -110 | 0 | -19 | -537 | 0.5 | 189.3 | 383.5 | 0.0 | 664.2 | 4 |
| 1 | 15 | -31 | -5134 | -127 | 0 | -18 | -769 | 0.6 | 263.2 | 439.9 | 0.0 | 761.9 | 4 |
| 5 | 15 | -1364 | -1690 | -268 | 0 | -38 | -253 | 25.1 | 115.7 | 144.8 | 0.0 | 252.3 | 4 |
| 6 | 15 | -1354 | -1689 | -260 | 0 | -40 | -253 | 24.9 | 116.8 | 144.7 | 0.0 | 252.0 | 4 |
| 7 | 15 | 38 | -920 | 213 | 0 | 33 | -138 | 0.7 | 74.0 | 78.8 | 0.0 | 136.6 | 4 |
| 8 | 15 | 42 | -919 | 221 | 0 | 32 | -137 | 0.8 | 72.7 | 78.7 | 0.0 | 136.3 | 4 |
| 9 | 15 | -406 | -1938 | -128 | 0 | -14 | -290 | 7.5 | 106.1 | 166.1 | 0.0 | 287.8 | 4 |
| 10 | 15 | -374 | -1933 | -101 | 0 | -19 | -289 | 6.9 | 109.9 | 165.6 | 0.0 | 287.0 | 4 |
| 11 | 15 | -3 | -1702 | 18 | 0 | 7 | -255 | 0.1 | 88.2 | 145.8 | 0.0 | 252.6 | 4 |
| 12 | 15 | 14 | -1185 | 57 | 0 | 5 | -177 | 0.3 | 61.0 | 101.5 | 0.0 | 175.8 | 4 |
| 13 | 15 | -26 | -4295 | -105 | 0 | -15 | -643 | 0.5 | 220.0 | 368.0 | 0.0 | 637.4 | 4 |
| 14 | 15 | -15 | 1135 | 32 | 0 | 5 | 171 | 0.3 | 58.9 | 97.2 | 0.0 | 168.4 | 4 |
| 15 | 15 | -27 | -4477 | -110 | 0 | -16 | -671 | 0.5 | 229.4 | 383.6 | 0.0 | 664.4 | 4 |
| 1 | 18 | -31 | -5135 | -127 | 0 | -14 | -923 | 0.6 | 309.2 | 440.0 | 0.0 | 762.2 | 4 |
| 5 | 18 | -1364 | -1691 | -268 | 0 | -30 | -304 | 25.1 | 124.7 | 144.9 | 0.0 | 252.4 | 4 |
| 6 | 18 | -1354 | -1690 | -260 | 0 | -32 | -303 | 24.9 | 126.0 | 144.8 | 0.0 | 252.2 | 4 |
| 7 | 18 | 38 | -921 | 213 | 0 | 27 | -165 | 0.7 | 77.1 | 78.9 | 0.0 | 136.8 | 4 |
| 8 | 18 | 42 | -920 | 221 | 0 | 25 | -165 | 0.8 | 75.6 | 78.8 | 0.0 | 136.5 | 4 |
| 9 | 18 | -406 | -1940 | -128 | 0 | -11 | -348 | 7.5 | 121.4 | 166.2 | 0.0 | 288.0 | 4 |
| 10 | 18 | -374 | -1935 | -101 | 0 | -16 | -347 | 6.9 | 125.7 | 165.8 | 0.0 | 287.2 | 4 |
| 11 | 18 | -3 | -1704 | 18 | 0 | 7 | -306 | 0.1 | 104.1 | 146.0 | 0.0 | 252.9 | 4 |
| 12 | 18 | 14 | -1186 | 57 | 0 | 3 | -213 | 0.3 | 70.8 | 101.6 | 0.0 | 176.0 | 4 |
| 13 | 18 | -26 | -4296 | -105 | 0 | -12 | -772 | 0.5 | 258.5 | 368.2 | 0.0 | 637.7 | 4 |
| 14 | 18 | -15 | 1133 | 32 | 0 | 4 | 205 | 0.3 | 69.0 | 97.1 | 0.0 | 168.2 | 4 |
| 15 | 18 | -27 | -4478 | -110 | 0 | -12 | -805 | 0.5 | 269.6 | 383.7 | 0.0 | 664.7 | 4 |
| 1 | 21 | -31 | -5137 | -127 | 0 | -10 | -1077 | 0.6 | 355.3 | 440.2 | 0.0 | 762.4 | 4 |
| 5 | 21 | -1364 | -1692 | -268 | 0 | -22 | -354 | 25.1 | 133.8 | 145.0 | 0.0 | 256.0 | 3 |
| 6 | 21 | -1354 | -1691 | -260 | 0 | -24 | -354 | 24.9 | 135.3 | 144.9 | 0.0 | 255.8 | 3 |
| 7 | 21 | 38 | -923 | 213 | 0 | 20 | -193 | 0.7 | 80.2 | 79.1 | 0.0 | 136.9 | 4 |
| 8 | 21 | 42 | -921 | 221 | 0 | 19 | -193 | 0.8 | 78.5 | 78.9 | 0.0 | 136.7 | 4 |
| 9 | 21 | -406 | -1941 | -128 | 0 | -7 | -406 | 7.5 | 136.6 | 166.3 | 0.0 | 288.2 | 4 |
| 10 | 21 | -374 | -1936 | -101 | 0 | -13 | -405 | 6.9 | 141.7 | 165.9 | 0.0 | 287.5 | 4 |
| 11 | 21 | -3 | -1705 | 18 | 0 | 6 | -357 | 0.1 | 120.1 | 146.1 | 0.0 | 253.1 | 4 |
| 12 | 21 | 14 | -1187 | 57 | 0 | 1 | -248 | 0.3 | 80.7 | 101.7 | 0.0 | 176.2 | 4 |
| 13 | 21 | -26 | -4298 | -105 | 0 | -9 | -901 | 0.5 | 297.1 | 368.3 | 0.0 | 637.9 | 4 |
| 14 | 21 | -15 | 1132 | 32 | 0 | 3 | 239 | 0.3 | 79.0 | 97.0 | 0.0 | 168.0 | 4 |
| 15 | 21 | -27 | -4480 | -110 | 0 | -9 | -940 | 0.5 | 309.8 | 383.9 | 0.0 | 664.9 | 4 |
| 1 | 24 | -31 | -5139 | -127 | 0 | -7 | -1232 | 0.6 | 401.3 | 440.3 | 0.0 | 762.7 | 4 |
| 5 | 24 | -1364 | -1694 | -268 | 0 | -14 | -405 | 25.1 | 142.8 | 145.1 | 0.0 | 262.7 | 3 |
| 6 | 24 | -1354 | -1692 | -260 | 0 | -16 | -405 | 24.9 | 144.6 | 145.0 | 0.0 | 262.5 | 3 |
| 7 | 24 | 38 | -924 | 213 | 0 | 14 | -220 | 0.7 | 83.3 | 79.2 | 0.0 | 137.5 | 3 |
| 8 | 24 | 42 | -922 | 221 | 0 | 12 | -220 | 0.8 | 81.4 | 79.0 | 0.0 | 137.3 | 3 |
| 9 | 24 | -406 | -1943 | -128 | 0 | -3 | -465 | 7.5 | 151.8 | 166.5 | 0.0 | 290.2 | 3 |
| 10 | 24 | -374 | -1938 | -101 | 0 | -10 | -464 | 6.9 | 157.6 | 166.1 | 0.0 | 289.3 | 3 |
| 11 | 24 | -3 | -1707 | 18 | 0 | 6 | -408 | 0.1 | 136.0 | 146.3 | 0.0 | 253.3 | 4 |
| 12 | 24 | 14 | -1188 | 57 | 0 | -1 | -284 | 0.3 | 91.7 | 101.8 | 0.0 | 176.4 | 4 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|-------|-------|------|---|----|-------|------|-------|-------|-----|-------|---|
| 13 | 24 | -26 | -4300 | -105 | 0 | -5 | -1030 | 0.5 | 335.6 | 368.4 | 0.0 | 638.2 | 4 |
| 14 | 24 | -15 | 1131 | 32 | 0 | 2 | 273 | 0.3 | 89.1 | 96.9 | 0.0 | 167.8 | 4 |
| 15 | 24 | -27 | -4482 | -110 | 0 | -6 | -1074 | 0.5 | 349.9 | 384.0 | 0.0 | 665.2 | 4 |
| 1 | 27 | -31 | -5140 | -127 | 0 | -3 | -1386 | 0.6 | 447.4 | 440.5 | 0.0 | 778.2 | 3 |
| 5 | 27 | -1364 | -1695 | -268 | 0 | -6 | -456 | 25.1 | 151.9 | 145.2 | 0.0 | 269.9 | 3 |
| 6 | 27 | -1354 | -1694 | -260 | 0 | -8 | -456 | 24.9 | 153.8 | 145.1 | 0.0 | 269.7 | 3 |
| 7 | 27 | 38 | -925 | 213 | 0 | 8 | -248 | 0.7 | 86.5 | 79.3 | 0.0 | 141.0 | 3 |
| 8 | 27 | 42 | -924 | 221 | 0 | 5 | -248 | 0.8 | 84.3 | 79.1 | 0.0 | 140.8 | 3 |
| 9 | 27 | -406 | -1944 | -128 | 0 | 1 | -523 | 7.5 | 168.7 | 166.6 | 0.0 | 297.8 | 3 |
| 10 | 27 | -374 | -1939 | -101 | 0 | -7 | -522 | 6.9 | 173.5 | 166.2 | 0.0 | 296.9 | 3 |
| 11 | 27 | -3 | -1708 | 18 | 0 | 5 | -459 | 0.1 | 152.0 | 146.4 | 0.0 | 258.5 | 3 |
| 12 | 27 | 14 | -1190 | 57 | 0 | -2 | -320 | 0.3 | 104.7 | 101.9 | 0.0 | 180.1 | 3 |
| 13 | 27 | -26 | -4301 | -105 | 0 | -2 | -1159 | 0.5 | 374.2 | 368.6 | 0.0 | 651.1 | 3 |
| 14 | 27 | -15 | 1129 | 32 | 0 | 1 | 306 | 0.3 | 99.1 | 96.8 | 0.0 | 171.3 | 3 |
| 15 | 27 | -27 | -4483 | -110 | 0 | -2 | -1208 | 0.5 | 390.1 | 384.2 | 0.0 | 678.7 | 3 |
| 1 | 30 | -31 | -5142 | -127 | 0 | 1 | -1540 | 0.6 | 495.3 | 440.6 | 0.0 | 799.0 | 3 |
| 5 | 30 | -1364 | -1696 | -268 | 0 | 2 | -507 | 25.1 | 164.5 | 145.3 | 0.0 | 277.7 | 3 |
| 6 | 30 | -1354 | -1695 | -260 | 0 | -1 | -507 | 24.9 | 163.1 | 145.2 | 0.0 | 277.3 | 3 |
| 7 | 30 | 38 | -926 | 213 | 0 | 1 | -276 | 0.7 | 89.7 | 79.4 | 0.0 | 144.7 | 3 |
| 8 | 30 | 42 | -925 | 221 | 0 | -1 | -276 | 0.8 | 89.7 | 79.3 | 0.0 | 144.6 | 3 |
| 9 | 30 | -406 | -1946 | -128 | 0 | 5 | -581 | 7.5 | 190.9 | 166.8 | 0.0 | 306.2 | 3 |
| 10 | 30 | -374 | -1941 | -101 | 0 | -4 | -580 | 6.9 | 189.5 | 166.3 | 0.0 | 305.1 | 3 |
| 11 | 30 | -3 | -1710 | 18 | 0 | 4 | -511 | 0.1 | 167.9 | 146.5 | 0.0 | 265.5 | 3 |
| 12 | 30 | 14 | -1191 | 57 | 0 | -4 | -355 | 0.3 | 117.7 | 102.1 | 0.0 | 185.1 | 3 |
| 13 | 30 | -26 | -4303 | -105 | 0 | 1 | -1288 | 0.5 | 414.2 | 368.7 | 0.0 | 668.6 | 3 |
| 14 | 30 | -15 | 1128 | 32 | 0 | -0 | 340 | 0.3 | 109.4 | 96.7 | 0.0 | 175.7 | 3 |
| 15 | 30 | -27 | -4485 | -110 | 0 | 1 | -1343 | 0.5 | 431.9 | 384.3 | 0.0 | 696.9 | 3 |

ASTA NUM. 56 NI 32 NF 64 Lungh. 30.0 cm SEZ. 6 Ps HEB 160

categoria: p.p. y qy tot.

qy medio: 0.4263 0.4263 daN/cm

88

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-----|-------|------|-------|-----|-------|---------|--------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -87 | 5561 | -120 | 0 | 1 | -1666 | 1.6 | 535.7 | 476.5 | 0.0 | 864.7 | 3 | |
| 5 | 0 | 448 | 1032 | -259 | 0 | 2 | -308 | 8.3 | 100.5 | 88.4 | 0.0 | 165.4 | 3 | |
| 6 | 0 | 450 | 1034 | -267 | 0 | -1 | -308 | 8.3 | 99.5 | 88.6 | 0.0 | 165.7 | 3 | |
| 7 | 0 | -85 | 1769 | 223 | 0 | 1 | -529 | 1.6 | 170.9 | 151.6 | 0.0 | 275.8 | 3 | |
| 8 | 0 | -81 | 1770 | 215 | 0 | -1 | -529 | 1.5 | 171.0 | 151.7 | 0.0 | 275.9 | 3 | |
| 9 | 0 | 101 | 1838 | -99 | 0 | 5 | -549 | 1.9 | 180.4 | 157.5 | 0.0 | 286.4 | 3 | |
| 10 | 0 | 108 | 1843 | -125 | 0 | -4 | -550 | 2.0 | 180.0 | 157.9 | 0.0 | 287.3 | 3 | |
| 11 | 0 | -53 | 2064 | 47 | 0 | 4 | -617 | 1.0 | 202.0 | 176.9 | 0.0 | 321.0 | 3 | |
| 12 | 0 | -33 | 1516 | 32 | 0 | -4 | -453 | 0.6 | 148.9 | 129.9 | 0.0 | 235.7 | 3 | |
| 13 | 0 | -73 | 4650 | -100 | 0 | 1 | -1393 | 1.3 | 448.0 | 398.5 | 0.0 | 723.1 | 3 | |
| 14 | 0 | 28 | -1234 | 31 | 0 | -0 | 372 | 0.5 | 119.6 | 105.7 | 0.0 | 192.3 | 3 | |
| 15 | 0 | -76 | 4848 | -105 | 0 | 1 | -1452 | 1.4 | 466.9 | 415.4 | 0.0 | 753.8 | 3 | |
| 1 | 3 | -87 | 5559 | -120 | 0 | 5 | -1499 | 1.6 | 485.4 | 476.4 | 0.0 | 842.2 | 3 | |
| 5 | 3 | 448 | 1031 | -259 | 0 | 10 | -277 | 8.3 | 97.5 | 88.3 | 0.0 | 161.0 | 3 | |
| 6 | 3 | 450 | 1033 | -267 | 0 | 7 | -277 | 8.3 | 95.6 | 88.5 | 0.0 | 161.3 | 3 | |
| 7 | 3 | -85 | 1768 | 223 | 0 | -5 | -476 | 1.6 | 157.6 | 151.5 | 0.0 | 268.6 | 3 | |
| 8 | 3 | -81 | 1769 | 215 | 0 | -8 | -476 | 1.5 | 159.8 | 151.6 | 0.0 | 268.8 | 3 | |
| 9 | 3 | 101 | 1836 | -99 | 0 | 8 | -494 | 1.9 | 165.4 | 157.4 | 0.0 | 278.8 | 3 | |
| 10 | 3 | 108 | 1841 | -125 | 0 | 0 | -495 | 2.0 | 159.0 | 157.8 | 0.0 | 279.5 | 3 | |
| 11 | 3 | -53 | 2062 | 47 | 0 | 3 | -555 | 1.0 | 180.8 | 176.7 | 0.0 | 312.4 | 3 | |
| 12 | 3 | -33 | 1515 | 32 | 0 | -5 | -407 | 0.6 | 135.2 | 129.8 | 0.0 | 229.5 | 3 | |
| 13 | 3 | -73 | 4648 | -100 | 0 | 4 | -1253 | 1.3 | 405.9 | 398.3 | 0.0 | 704.2 | 3 | |
| 14 | 3 | 28 | -1235 | 31 | 0 | -1 | 335 | 0.5 | 108.5 | 105.8 | 0.0 | 187.4 | 3 | |
| 15 | 3 | -76 | 4846 | -105 | 0 | 4 | -1307 | 1.4 | 423.1 | 415.3 | 0.0 | 734.1 | 3 | |
| 1 | 6 | -87 | 5558 | -120 | 0 | 8 | -1332 | 1.6 | 435.2 | 476.3 | 0.0 | 824.9 | 4 | |
| 5 | 6 | 448 | 1029 | -259 | 0 | 17 | -246 | 8.3 | 94.6 | 88.2 | 0.0 | 156.8 | 3 | |
| 6 | 6 | 450 | 1031 | -267 | 0 | 15 | -246 | 8.3 | 92.9 | 88.4 | 0.0 | 157.2 | 3 | |
| 7 | 6 | -85 | 1766 | 223 | 0 | -12 | -423 | 1.6 | 146.6 | 151.4 | 0.0 | 262.2 | 4 | |
| 8 | 6 | -81 | 1768 | 215 | 0 | -14 | -423 | 1.5 | 148.6 | 151.5 | 0.0 | 262.4 | 4 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|-----|-------|------|---|-----|-------|-----|-------|-------|-----|-------|---|
| 9 | 6 | 101 | 1835 | -99 | 0 | 11 | -439 | 1.9 | 150.4 | 157.2 | 0.0 | 272.3 | 4 |
| 10 | 6 | 108 | 1840 | -125 | 0 | 4 | -440 | 2.0 | 144.7 | 157.6 | 0.0 | 273.0 | 4 |
| 11 | 6 | -53 | 2061 | 47 | 0 | 2 | -493 | 1.0 | 159.7 | 176.6 | 0.0 | 305.8 | 4 |
| 12 | 6 | -33 | 1513 | 32 | 0 | -6 | -362 | 0.6 | 121.5 | 129.7 | 0.0 | 224.6 | 4 |
| 13 | 6 | -73 | 4647 | -100 | 0 | 7 | -1114 | 1.3 | 363.8 | 398.2 | 0.0 | 689.7 | 4 |
| 14 | 6 | 28 | -1236 | 31 | 0 | -2 | 298 | 0.5 | 97.5 | 105.9 | 0.0 | 183.5 | 4 |
| 15 | 6 | -76 | 4845 | -105 | 0 | 7 | -1161 | 1.4 | 379.2 | 415.2 | 0.0 | 719.1 | 4 |
| | | | | | | | | | | | | | |
| 1 | 9 | -87 | 5556 | -120 | 0 | 12 | -1166 | 1.6 | 384.9 | 476.1 | 0.0 | 824.7 | 4 |
| 5 | 9 | 448 | 1028 | -259 | 0 | 25 | -215 | 8.3 | 91.7 | 88.1 | 0.0 | 153.0 | 3 |
| 6 | 9 | 450 | 1030 | -267 | 0 | 23 | -215 | 8.3 | 90.2 | 88.3 | 0.0 | 153.4 | 3 |
| 7 | 9 | -85 | 1765 | 223 | 0 | -19 | -370 | 1.6 | 135.6 | 151.3 | 0.0 | 262.0 | 4 |
| 8 | 9 | -81 | 1766 | 215 | 0 | -21 | -370 | 1.5 | 137.3 | 151.4 | 0.0 | 262.2 | 4 |
| 9 | 9 | 101 | 1833 | -99 | 0 | 14 | -384 | 1.9 | 135.4 | 157.1 | 0.0 | 272.1 | 4 |
| 10 | 9 | 108 | 1838 | -125 | 0 | 8 | -385 | 2.0 | 130.4 | 157.5 | 0.0 | 272.8 | 4 |
| 11 | 9 | -53 | 2059 | 47 | 0 | 0 | -431 | 1.0 | 138.6 | 176.4 | 0.0 | 305.6 | 4 |
| 12 | 9 | -33 | 1512 | 32 | 0 | -7 | -317 | 0.6 | 107.8 | 129.6 | 0.0 | 224.4 | 4 |
| 13 | 9 | -73 | 4645 | -100 | 0 | 10 | -975 | 1.3 | 321.8 | 398.1 | 0.0 | 689.5 | 4 |
| 14 | 9 | 28 | -1238 | 31 | 0 | -3 | 261 | 0.5 | 86.4 | 106.1 | 0.0 | 183.7 | 4 |
| 15 | 9 | -76 | 4843 | -105 | 0 | 10 | -1016 | 1.4 | 335.4 | 415.0 | 0.0 | 718.8 | 4 |
| | | | | | | | | | | | | | |
| 1 | 12 | -87 | 5555 | -120 | 0 | 15 | -999 | 1.6 | 334.6 | 476.0 | 0.0 | 824.4 | 4 |
| 5 | 12 | 448 | 1027 | -259 | 0 | 33 | -184 | 8.3 | 88.7 | 88.0 | 0.0 | 152.7 | 4 |
| 6 | 12 | 450 | 1029 | -267 | 0 | 31 | -184 | 8.3 | 87.5 | 88.2 | 0.0 | 153.0 | 4 |
| 7 | 12 | -85 | 1764 | 223 | 0 | -26 | -317 | 1.6 | 124.7 | 151.1 | 0.0 | 261.8 | 4 |
| 8 | 12 | -81 | 1765 | 215 | 0 | -27 | -317 | 1.5 | 126.1 | 151.3 | 0.0 | 262.0 | 4 |
| 9 | 12 | 101 | 1831 | -99 | 0 | 17 | -329 | 1.9 | 120.4 | 156.9 | 0.0 | 271.8 | 4 |
| 10 | 12 | 108 | 1836 | -125 | 0 | 11 | -330 | 2.0 | 116.0 | 157.3 | 0.0 | 272.5 | 4 |
| 11 | 12 | -53 | 2057 | 47 | 0 | -1 | -369 | 1.0 | 119.6 | 176.3 | 0.0 | 305.3 | 4 |
| 12 | 12 | -33 | 1511 | 32 | 0 | -8 | -271 | 0.6 | 94.1 | 129.5 | 0.0 | 224.2 | 4 |
| 13 | 12 | -73 | 4644 | -100 | 0 | 13 | -835 | 1.3 | 279.7 | 397.9 | 0.0 | 689.2 | 4 |
| 14 | 12 | 28 | -1239 | 31 | 0 | -4 | 224 | 0.5 | 75.3 | 106.2 | 0.0 | 183.9 | 4 |
| 15 | 12 | -76 | 4842 | -105 | 0 | 13 | -871 | 1.4 | 291.6 | 414.9 | 0.0 | 718.6 | 4 |
| | | | | | | | | | | | | | |
| 1 | 15 | -87 | 5553 | -120 | 0 | 19 | -832 | 1.6 | 284.4 | 475.8 | 0.0 | 824.2 | 4 |
| 5 | 15 | 448 | 1026 | -259 | 0 | 41 | -153 | 8.3 | 85.8 | 87.9 | 0.0 | 152.5 | 4 |
| 6 | 15 | 450 | 1028 | -267 | 0 | 39 | -154 | 8.3 | 84.8 | 88.0 | 0.0 | 152.8 | 4 |
| 7 | 15 | -85 | 1763 | 223 | 0 | -32 | -264 | 1.6 | 113.7 | 151.0 | 0.0 | 261.6 | 4 |
| 8 | 15 | -81 | 1764 | 215 | 0 | -34 | -264 | 1.5 | 114.9 | 151.2 | 0.0 | 261.8 | 4 |
| 9 | 15 | 101 | 1830 | -99 | 0 | 19 | -274 | 1.9 | 105.4 | 156.8 | 0.0 | 271.6 | 4 |
| 10 | 15 | 108 | 1835 | -125 | 0 | 15 | -275 | 2.0 | 101.8 | 157.2 | 0.0 | 272.3 | 4 |
| 11 | 15 | -53 | 2056 | 47 | 0 | -3 | -308 | 1.0 | 101.1 | 176.1 | 0.0 | 305.1 | 4 |
| 12 | 15 | -33 | 1510 | 32 | 0 | -9 | -226 | 0.6 | 80.4 | 129.4 | 0.0 | 224.0 | 4 |
| 13 | 15 | -73 | 4642 | -100 | 0 | 16 | -696 | 1.3 | 237.7 | 397.8 | 0.0 | 689.0 | 4 |
| 14 | 15 | 28 | -1240 | 31 | 0 | -5 | 186 | 0.5 | 64.2 | 106.3 | 0.0 | 184.0 | 4 |
| 15 | 15 | -76 | 4840 | -105 | 0 | 17 | -725 | 1.4 | 247.8 | 414.8 | 0.0 | 718.4 | 4 |
| | | | | | | | | | | | | | |
| 1 | 18 | -87 | 5551 | -120 | 0 | 23 | -666 | 1.6 | 234.2 | 475.7 | 0.0 | 824.0 | 4 |
| 5 | 18 | 448 | 1024 | -259 | 0 | 48 | -123 | 8.3 | 82.9 | 87.8 | 0.0 | 152.4 | 4 |
| 6 | 18 | 450 | 1026 | -267 | 0 | 47 | -123 | 8.3 | 82.1 | 87.9 | 0.0 | 152.7 | 4 |
| 7 | 18 | -85 | 1761 | 223 | 0 | -39 | -211 | 1.6 | 102.7 | 150.9 | 0.0 | 261.4 | 4 |
| 8 | 18 | -81 | 1763 | 215 | 0 | -40 | -211 | 1.5 | 103.8 | 151.1 | 0.0 | 261.7 | 4 |
| 9 | 18 | 101 | 1828 | -99 | 0 | 22 | -219 | 1.9 | 90.5 | 156.6 | 0.0 | 271.3 | 4 |
| 10 | 18 | 108 | 1833 | -125 | 0 | 19 | -220 | 2.0 | 87.5 | 157.1 | 0.0 | 272.0 | 4 |
| 11 | 18 | -53 | 2054 | 47 | 0 | -4 | -246 | 1.0 | 82.6 | 176.0 | 0.0 | 304.8 | 4 |
| 12 | 18 | -33 | 1508 | 32 | 0 | -10 | -181 | 0.6 | 66.8 | 129.2 | 0.0 | 223.9 | 4 |
| 13 | 18 | -73 | 4640 | -100 | 0 | 19 | -557 | 1.3 | 195.7 | 397.6 | 0.0 | 688.7 | 4 |
| 14 | 18 | 28 | -1241 | 31 | 0 | -6 | 149 | 0.5 | 53.1 | 106.4 | 0.0 | 184.2 | 4 |
| 15 | 18 | -76 | 4838 | -105 | 0 | 20 | -580 | 1.4 | 204.0 | 414.6 | 0.0 | 718.1 | 4 |
| | | | | | | | | | | | | | |
| 1 | 21 | -87 | 5550 | -120 | 0 | 26 | -499 | 1.6 | 184.0 | 475.6 | 0.0 | 823.7 | 4 |
| 5 | 21 | 448 | 1023 | -259 | 0 | 56 | -92 | 8.3 | 80.1 | 87.7 | 0.0 | 152.2 | 4 |
| 6 | 21 | 450 | 1025 | -267 | 0 | 55 | -92 | 8.3 | 79.4 | 87.8 | 0.0 | 152.5 | 4 |
| 7 | 21 | -85 | 1760 | 223 | 0 | -46 | -158 | 1.6 | 91.8 | 150.8 | 0.0 | 261.2 | 4 |
| 8 | 21 | -81 | 1762 | 215 | 0 | -46 | -158 | 1.5 | 92.6 | 151.0 | 0.0 | 261.5 | 4 |
| 9 | 21 | 101 | 1826 | -99 | 0 | 25 | -164 | 1.9 | 75.5 | 156.5 | 0.0 | 271.1 | 4 |
| 10 | 21 | 108 | 1831 | -125 | 0 | 23 | -165 | 2.0 | 73.2 | 156.9 | 0.0 | 271.8 | 4 |
| 11 | 21 | -53 | 2052 | 47 | 0 | -5 | -184 | 1.0 | 64.1 | 175.8 | 0.0 | 304.6 | 4 |
| 12 | 21 | -33 | 1507 | 32 | 0 | -11 | -135 | 0.6 | 53.1 | 129.1 | 0.0 | 223.7 | 4 |
| 13 | 21 | -73 | 4639 | -100 | 0 | 22 | -417 | 1.3 | 153.7 | 397.5 | 0.0 | 688.5 | 4 |
| 14 | 21 | 28 | -1242 | 31 | 0 | -7 | 112 | 0.5 | 42.0 | 106.5 | 0.0 | 184.4 | 4 |
| 15 | 21 | -76 | 4837 | -105 | 0 | 23 | -435 | 1.4 | 160.2 | 414.5 | 0.0 | 717.9 | 4 |
| | | | | | | | | | | | | | |
| 1 | 24 | -87 | 5548 | -120 | 0 | 30 | -333 | 1.6 | 133.8 | 475.4 | 0.0 | 823.5 | 4 |
| 5 | 24 | 448 | 1022 | -259 | 0 | 64 | -61 | 8.3 | 77.2 | 87.5 | 0.0 | 152.0 | 4 |
| 6 | 24 | 450 | 1024 | -267 | 0 | 63 | -61 | 8.3 | 76.7 | 87.7 | 0.0 | 152.3 | 4 |
| 7 | 24 | -85 | 1759 | 223 | 0 | -52 | -105 | 1.6 | 80.9 | 150.7 | 0.0 | 261.0 | 4 |
| 8 | 24 | -81 | 1760 | 215 | 0 | -53 | -106 | 1.5 | 81.4 | 150.9 | 0.0 | 261.3 | 4 |
| 9 | 24 | 101 | 1824 | -99 | 0 | 28 | -109 | 1.9 | 60.6 | 156.3 | 0.0 | 270.8 | 4 |
| 10 | 24 | 108 | 1829 | -125 | 0 | 26 | -110 | 2.0 | 59.0 | 156.8 | 0.0 | 271.5 | 4 |
| 11 | 24 | -53 | 2050 | 47 | 0 | -7 | -123 | 1.0 | 45.6 | 175.7 | 0.0 | 304.3 | 4 |
| 12 | 24 | -33 | 1506 | 32 | 0 | -12 | -90 | 0.6 | 39.5 | 129.0 | 0.0 | 223.5 | 4 |
| 13 | 24 | -73 | 4637 | -100 | 0 | 25 | -278 | 1.3 | 111.7 | 397.4 | 0.0 | 688.3 | 4 |
| 14 | 24 | 28 | -1244 | 31 | 0 | -8 | 75 | 0.5 | 30.8 | 106.6 | 0.0 | 184.6 | 4 |
| 15 | 24 | -76 | 4835 | -105 | 0 | 26 | -290 | 1.4 | 116.5 | 414.3 | 0.0 | 717.7 | 4 |
| | | | | | | | | | | | | | |
| 1 | 27 | -87 | 5547 | -120 | 0 | 34 | -166 | 1.6 | 83.6 | 475.3 | 0.0 | 823.3 | 4 |
| 5 | 27 | 448 | 1020 | -259 | 0 | 72 | -31 | 8.3 | 74.3 | 87.4 | 0.0 | 151.9 | 4 |
| 6 | 27 | 450 | 1022 | -267 | 0 | 71 | -31 | 8.3 | 74.1 | 87.6 | 0.0 | 152.2 | 4 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|-----|-------|------|---|-----|------|-----|------|-------|-----|-------|---|
| 7 | 27 | -85 | 1757 | 223 | 0 | -59 | -53 | 1.6 | 70.0 | 150.6 | 0.0 | 260.9 | 4 |
| 8 | 27 | -81 | 1759 | 215 | 0 | -59 | -53 | 1.5 | 70.3 | 150.7 | 0.0 | 261.1 | 4 |
| 9 | 27 | 101 | 1823 | -99 | 0 | 31 | -55 | 1.9 | 45.7 | 156.2 | 0.0 | 270.6 | 4 |
| 10 | 27 | 108 | 1828 | -125 | 0 | 30 | -55 | 2.0 | 44.8 | 156.6 | 0.0 | 271.3 | 4 |
| 11 | 27 | -53 | 2049 | 47 | 0 | -8 | -61 | 1.0 | 27.1 | 175.6 | 0.0 | 304.1 | 4 |
| 12 | 27 | -33 | 1504 | 32 | 0 | -13 | -45 | 0.6 | 25.9 | 128.9 | 0.0 | 223.3 | 4 |
| 13 | 27 | -73 | 4636 | -100 | 0 | 28 | -139 | 1.3 | 69.8 | 397.2 | 0.0 | 688.0 | 4 |
| 14 | 27 | 28 | -1245 | 31 | 0 | -9 | 37 | 0.5 | 19.7 | 106.7 | 0.0 | 184.8 | 4 |
| 15 | 27 | -76 | 4834 | -105 | 0 | 29 | -145 | 1.4 | 72.7 | 414.2 | 0.0 | 717.4 | 4 |
| | | | | | | | | | | | | | |
| 1 | 30 | -87 | 5545 | -120 | 0 | 37 | 0 | 1.6 | 33.4 | 475.2 | 0.0 | 823.0 | 4 |
| 5 | 30 | 448 | 1019 | -259 | 0 | 79 | 0 | 8.3 | 71.5 | 87.3 | 0.0 | 151.7 | 4 |
| 6 | 30 | 450 | 1021 | -267 | 0 | 79 | 0 | 8.3 | 71.4 | 87.5 | 0.0 | 152.0 | 4 |
| 7 | 30 | -85 | 1756 | 223 | 0 | -66 | 0 | 1.6 | 59.1 | 150.5 | 0.0 | 260.7 | 4 |
| 8 | 30 | -81 | 1758 | 215 | 0 | -66 | 0 | 1.5 | 59.2 | 150.6 | 0.0 | 261.0 | 4 |
| 9 | 30 | 101 | 1821 | -99 | 0 | 34 | 0 | 1.9 | 30.8 | 156.0 | 0.0 | 270.3 | 4 |
| 10 | 30 | 108 | 1826 | -125 | 0 | 34 | 0 | 2.0 | 30.6 | 156.5 | 0.0 | 271.0 | 4 |
| 11 | 30 | -53 | 2047 | 47 | 0 | -10 | 0 | 1.0 | 8.7 | 175.4 | 0.0 | 303.8 | 4 |
| 12 | 30 | -33 | 1503 | 32 | 0 | -14 | 0 | 0.6 | 12.2 | 128.8 | 0.0 | 223.1 | 4 |
| 13 | 30 | -73 | 4634 | -100 | 0 | 31 | 0 | 1.3 | 27.8 | 397.1 | 0.0 | 687.8 | 4 |
| 14 | 30 | 28 | -1246 | 31 | 0 | -9 | 0 | 0.5 | 8.5 | 106.8 | 0.0 | 184.9 | 4 |
| 15 | 30 | -76 | 4832 | -105 | 0 | 32 | 0 | 1.4 | 29.0 | 414.1 | 0.0 | 717.2 | 4 |

Verifica di STABILITA' e/o SVERGOLAMENTO

| n.comb | Fx -- daN | My eq. -- daN*m | Mz eq. -- daN*m | Sn. omega | Sn.yx | Sn.zx | OMEGA | OMEGA1 | Sf -- daN/cm ² | Nota |
|--------|-----------------|-----------------------|-----------------------|-----------|-------|-------|-------|--------|---------------------------------|------|
| 1 | -87 | 15 | 0 | 15 | 9 | 15 | 1.00 | 1.00 | 15.0 | |
| 5 | -1364 | 32 | 0 | 15 | 9 | 15 | 1.00 | 1.00 | 53.7 | |
| 6 | -1354 | 32 | 0 | 15 | 9 | 15 | 1.00 | 1.00 | 53.5 | |
| 7 | -85 | 26 | 0 | 15 | 9 | 15 | 1.00 | 1.00 | 25.2 | |
| 8 | -81 | 26 | 0 | 15 | 9 | 15 | 1.00 | 1.00 | 25.2 | |
| 9 | -406 | 14 | 0 | 15 | 9 | 15 | 1.00 | 1.00 | 19.8 | |
| 10 | -374 | 14 | 0 | 15 | 9 | 15 | 1.00 | 1.00 | 19.1 | |
| 11 | -53 | 4 | 0 | 15 | 9 | 15 | 1.00 | 1.00 | 4.5 | |
| 12 | -33 | 5 | 0 | 15 | 9 | 15 | 1.00 | 1.00 | 5.5 | |
| 13 | -73 | 12 | 0 | 15 | 9 | 15 | 1.00 | 1.00 | 12.5 | |
| 14 | -15 | 4 | 0 | 15 | 9 | 15 | 1.00 | 1.00 | 3.7 | |
| 15 | -76 | 13 | 0 | 15 | 9 | 15 | 1.00 | 1.00 | 13.0 | |

90

Luce di calcolo 425+155 cm

Rara $425/0.45 = 944 > 250 \rightarrow$ verificato

Frequente $425/0.26 = 1635 > 250 \rightarrow$ verificato

Quasi permanente $425/0.10 = 4250 > 250 \rightarrow$ verificato

Luce di calcolo 425+155 cm

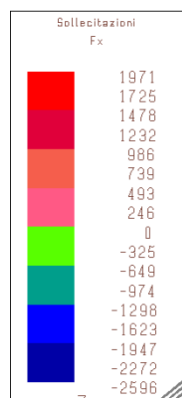
Rara $155/0.18 = 861 > 250 \rightarrow$ verificato

Frequente $155/0.06 = 2583 > 250 \rightarrow$ verificato

Quasi permanente $155/0.02 = 7750 > 250 \rightarrow$ verificato

2.2.2. VERIFICA NODO TRAVE PRINCIPALE – PILASTRI IN C.C.A.

Si esegue la verifica a taglio della trave ancorata al pilastro come semplice appoggio.

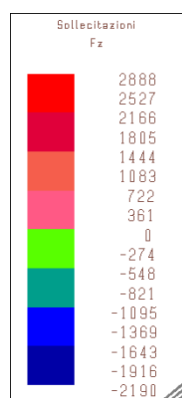


Prospettiva

Max=2 596

Sforzo normale

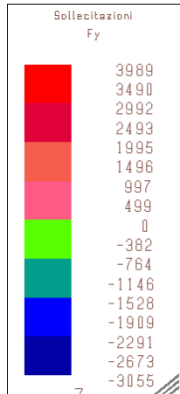
91



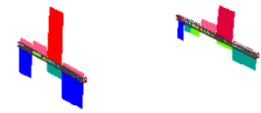
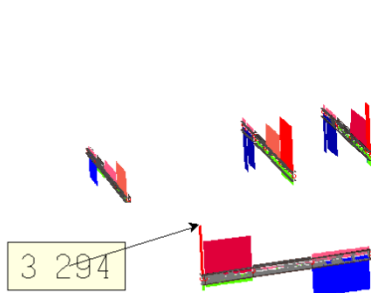
Prospettiva

Max=2 888

Taglio 2



Prospettiva



Taglio 1

92

Vsd max = 4380 daN

Nsd max = 2596 daN

Trave secondaria: IPE 300 S 235 (Fe 360)

[Bulloni] (Classe 8.8)

n. (lato profilo supportato) = 2 n. (lato profilo supportante) = 1 M16

Disposizione a due bulloni Inc.Foro=2.0

[Squadrette] (S 235 (Fe 360))

L119x69x10 h = 100 A = 50 B = 50 C = 30 D = 50 (mm)

[Resistenza a taglio dei bulloni]

Fv,Rd,Tot = 6222.4 kg (trave portata)

I.R. = 0.81

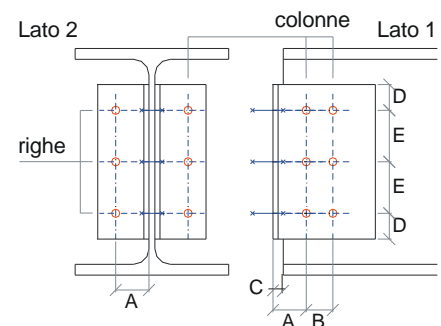
Fv,Rd,Tot = 6222.4 kg (trave portante)

I.R. = 0.35

[Rifollamento]

Fb,Rd = 5690.3 kg (squadretta sulla trave portata)

I.R. = 0.89



$F_{b,Rd} = 4417.6$ kg (trave portata)

I.R. = 2.28

[Verifica della sezione lorda]

$V_{pl,Rd} = 13171.9$ kg (squadretta sul lato della trave portata)

I.R. = 0.17

$V_{pl,Rd} = 33811.9$ kg (trave portata)

I.R. = 0.13

[Verifica della sezione netta]

$V_{pl,Rd} = 13898.8$ kg (squadretta sul lato della trave portata)

I.R. = 0.16

$V_{pl,Rd} = 41343.3$ kg (trave portata)

I.R. = 0.11

[Verifica a Block Shear]

$F_{v,Rd} = 11469.1$ kg (squadretta sul lato della trave portata)

I.R. = 0.19

$F_{v,Rd} = 12495.9$ kg (trave portata)

I.R. = 0.35

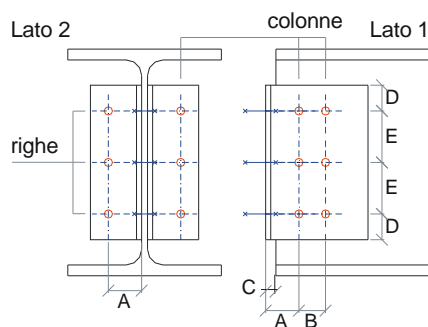
[Verifica a momento flettente]

I.R. (squadretta sul lato della trave portata) = 0.43

I.R. (trave portata) = 0.04

[Resistenza del nodo]

Modalità di collasso: vedi [Rifollamento (trave portata)]



Si ipotizza un ancorante che poi in fase costruttiva potrà essere sostituito con analogo sistema di ancoraggio con caratteristiche analoghe.

Si divide per due le sollecitazioni derivanti dell'asta dato che sono due le piastre di ancoraggio al pilastro.

Basi della progettazione

Ancorante

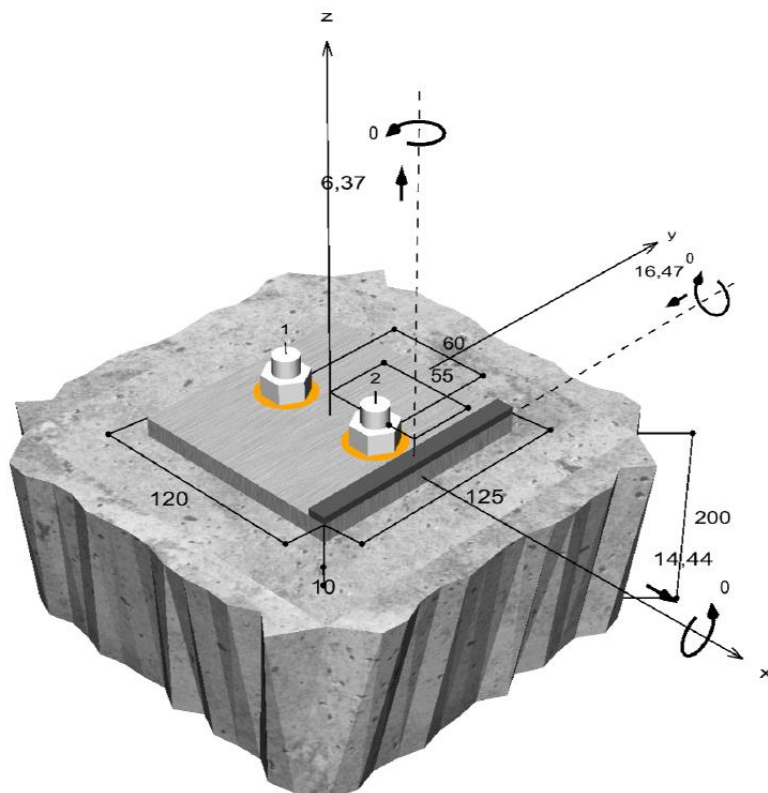
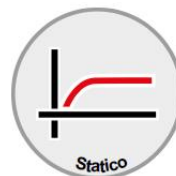
| | |
|--------------------------------|--|
| Sistema | fischer Sistema chimico a iniezione FIS EM |
| Ancorante chimico ad iniezione | FIS EM 390 S |
| Elemento di fissaggio | Barra filettata FIS A M 14 x 1000 8.8, Acciaio zincato, Classe di resistenza 8.8 |
| Profondità di ancoraggio | 75 mm |
| Dati di progetto | Progettazione dell'ancorante in Calcestruzzo secondo Benestare ETA-10/0012, Opzione 1, Validità: 26/06/2013 - 26/06/2018 |



Geometria / Carichi

mm, kN, kNm

Valore di progetto delle azioni (sono inclusi i coefficienti parziali di sicurezza delle azioni)



Non in scala

Risultato dei carichi di trazione e taglio

| Carichi di trazione | Utilizzo β_N % | Carichi di taglio | Utilizzo β_V % |
|---|-------------------------|---|-------------------------|
| Rottura dell'acciaio * | 12,9 | Rottura dell'acciaio senza braccio di leva * | 66,4 |
| Rottura combinata sfilamento e cono di calcestruzzo | 27,6 | Rottura calcestruzzo sul lato opposto al carico | 80,5 |
| Rottura per formazione del cono di calcestruzzo | 36,1 | | |
| Fessurazione | 28,2 | | |

* Ancorante più sfavorevole

Resistenza alla combinazione di trazione e taglio

| | | | |
|---|---|-----------------------------|--|
| $\beta_N = \beta_{N,c;1} = 0,36 \leq 1$ $\beta_V = \beta_{V,cp;1} = 0,80 \leq 1$ $\beta_N^{1,5} + \beta_V^{1,5} = \beta_{N,c;1}^{1,5} + \beta_{V,cp;1}^{1,5} = 0,94 \leq 1$ |  | Verifica soddisfatta | Equazione (5.9a) Equazione (5.9b) Equazione (5.10) |
|---|---|-----------------------------|--|

2.2.1. VERIFICA NODO TRAVE PRINCIPALE UPN200 – PILASTRI IN C.C.A.

Si esegue la verifica a taglio della trave ancorata al pilastro come semplice appoggio.

$$V_{sd} \max = 2351 \text{ daN}$$

$$V_{sd} 2 \max = 401 \text{ daN}$$

$$N_{sd} \max = 1614 \text{ daN}$$

BULLONE DI CONNESSIONE UPN PIASTRA

$$\text{Azione tagliante bullone} = (2351^2 + 1614^2)^{1/2} = 2852 \text{ daN}$$

$$\text{Sforzo normale} = 401 \text{ daN}$$

Bulloneria – classe vite 8.8

| | | | |
|---------------|--|-------------------|-----------------------------------|
| p | 2 | mm | passo della filettatura |
| f_{tb} | 800 | N/mm ² | Resistenza a rottura per trazione |
| A_{res} | 157 | mm ² | Area resistente del bullone |
| d | 14 | mm | Diametro |
| | 1,1 | | |
| γ_{M7} | | | |
| k | 0,2 | | fattore k |
| $F_{p,C}$ | $0,7 \cdot f_{ub} \cdot A_s / \gamma_{M7}$ | 80 kN | Forza di precarico |
| M_s | $k \cdot d \cdot F_{pC}$ | 224 N m | Momento di serraggio |

96

Durante la fase di montaggio delle strutture metalliche il direttore dei lavori dovrà correggere il momento di serraggio del bullone in funzione del valore k che è riportato sulla confezione dei bulloni come prescritto nel C.4.2.8.1.1

4.2.8.1.1

Unioni con bulloni o chiodi soggette a taglio e/o a trazione

| | | |
|---------------|-------|-------------------|
| f_{tk} | 360 | N/mm ² |
| t_p | 5 | mm |
| γ_{M2} | 1,25 | |
| d_m | 12,70 | mm |
| d_0 | 14,00 | mm |

$$F_{tRd} = \frac{0,9 f_{tb} A_{res}}{\gamma_{M2}} = 90432 \text{ N}$$

$$B_{pRd} = 0,6 \pi d_m t_p f_{tk} \gamma_{M2} = 53867 \text{ N}$$

$$F_{vRd} = \frac{0,6 f_{tb} A_{res}}{\gamma_{M2}} = \text{I}$$

60288 N

per ogni piano di taglio

| | | | |
|---------------------------|-------|---|-----------------------|
| SN | 4010 | N | sforzo normale totale |
| V | 28520 | N | taglio totale |
| Numero bulloni | | | 1 |
| Numero sezioni resistenti | | | 1 |
| F _{vSd} | 28520 | N | |
| F _{tSd} | 4010 | N | |

$$\frac{F_{vSd}}{F_{vRd}} + \frac{F_{tSd}}{1,4 \cdot F_{tRd}} \leq 1 \quad 0,35 < 1 \quad \text{Verificato}$$

Rifollamento

| | | |
|----|-------|----|
| e1 | 30 | mm |
| p1 | 30 | mm |
| e2 | 30 | mm |
| p2 | 10000 | mm |

$$\alpha = \min \left\{ \frac{e_1}{3 \cdot d_0}; \frac{p_1}{3 \cdot d_0} - 1/4; \frac{f_{ub}}{f_u}; 1 \right\} \quad 0,46 \text{ a trazione}$$

$$\alpha = \min \left\{ \frac{e_2}{3 \cdot d_0}; \frac{p_2}{3 \cdot d_0} - 1/4; \frac{f_{ub}}{f_u}; 1 \right\} \quad 0,71 \text{ a taglio}$$

$$F_{bRd} = k \alpha f_{tk} d t / \gamma_{M2} \quad 23400,00 \text{ N} \quad \text{SN}$$

$$F_{bRd} = k \alpha f_{tk} d t / \gamma_{M2} \quad 36000,00 \text{ N} \quad \text{V}$$

| | | | | |
|------|---|----------------------------------|----------|------------|
| I.R: | V | $\frac{F_{vSd}}{F_{bRd}} \leq 1$ | 0,79 < 1 | Verificato |
|------|---|----------------------------------|----------|------------|

| | | | | |
|------|----|----------------------------------|----------|------------|
| I.R: | SN | $\frac{F_{tSd}}{F_{bRd}} \leq 1$ | 0,17 < 1 | Verificato |
|------|----|----------------------------------|----------|------------|

VERIFICA CONNESSIONE AL PILASTRO IN CCA.

Basi della progettazione

Ancorante

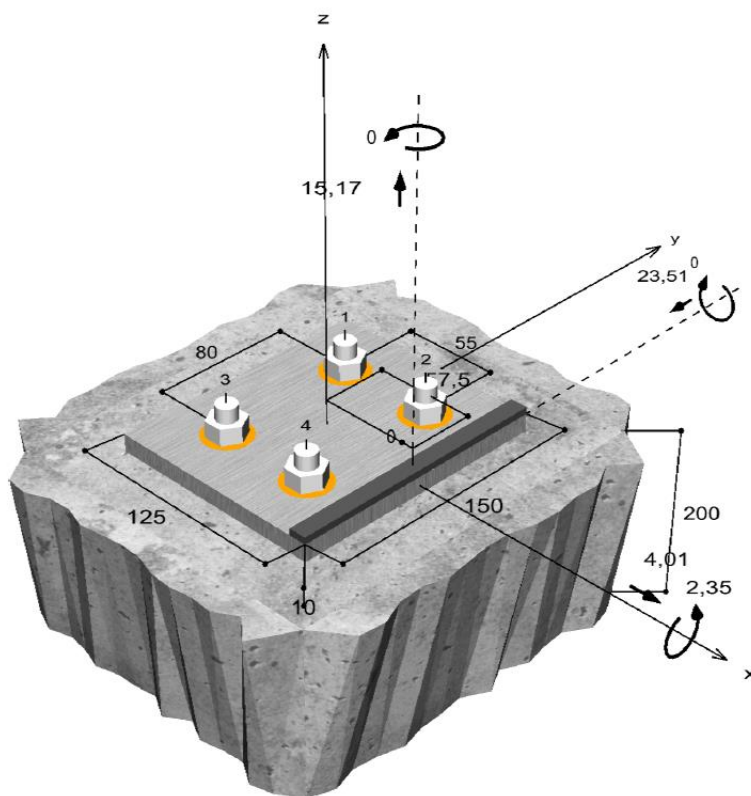
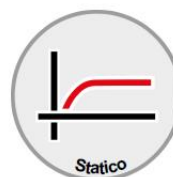
| | |
|--------------------------------|--|
| Sistema | fischer Sistema chimico a iniezione FIS EM |
| Ancorante chimico ad iniezione | FIS EM 390 S |
| Elemento di fissaggio | Barra filettata FIS A M 12 x 160, Acciaio zincato, Classe di resistenza 5.8 |
| Profondità di ancoraggio | 131 mm |
| Dati di progetto | Progettazione dell'ancorante in Calcestruzzo secondo Benestare ETA-10/0012, Opzione 1, Validità: 26/06/2013 - 26/06/2018 |



Geometria / Carichi

mm, kN, kNm

Valore di progetto delle azioni (sono inclusi i coefficienti parziali di sicurezza delle azioni)



Non in scala

Risultato dei carichi di trazione e taglio

| Carichi di trazione | Utilizzo β_N % | Carichi di taglio | Utilizzo β_V % |
|---|-------------------------|---|-------------------------|
| Rottura dell'acciaio * | 63,1 | Rottura dell'acciaio senza braccio di leva * | 70,9 |
| Rottura combinata sfilamento e cono di calcestruzzo | 53,8 | Rottura calcestruzzo sul lato opposto al carico | 32,9 |
| Rottura per formazione del cono di calcestruzzo | 52,7 | | |
| Fessurazione | 47,1 | | |

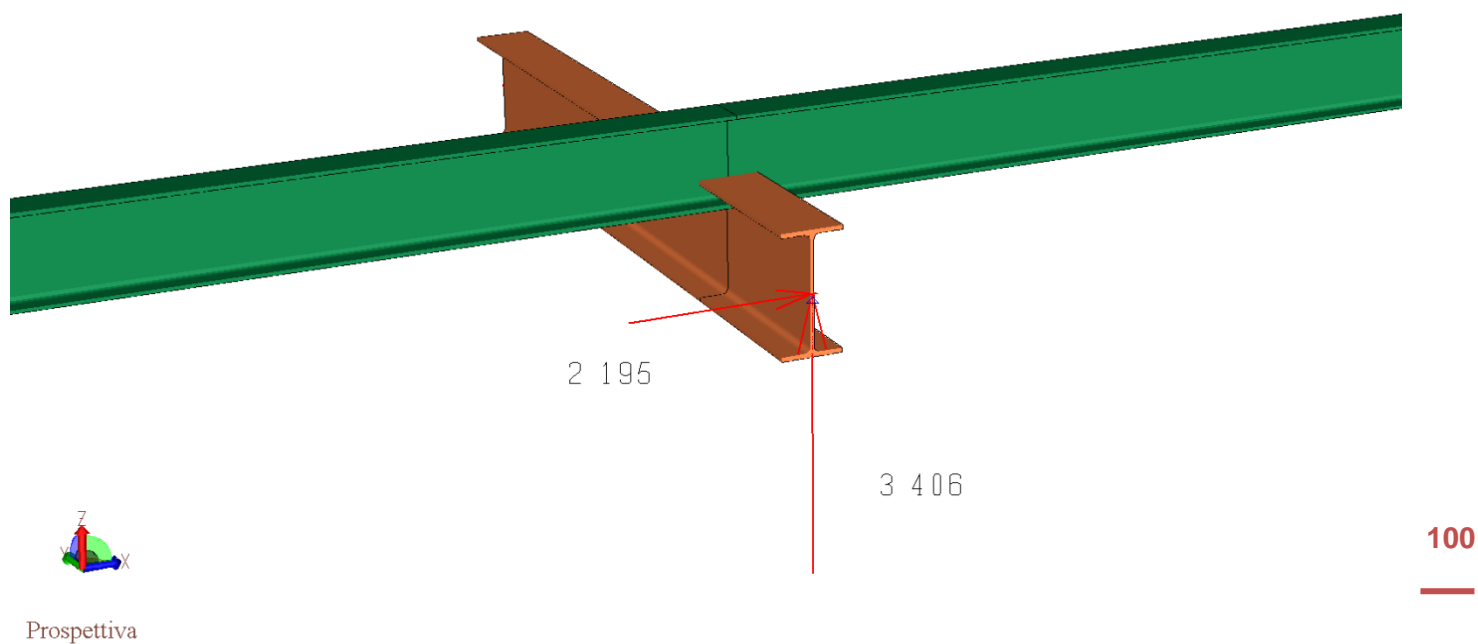
* Ancorante più sfavorevole

Resistenza alla combinazione di trazione e taglio

| | | | |
|---|---|-----------------------------|---|
| $\beta_N = \beta_{N,s;2} = 0,63 \leq 1$ $\beta_V = \beta_{V,s;2} = 0,71 \leq 1$ $\beta_N^{1,5} + \beta_V^{1,5} = \beta_{N,p;1}^{1,5} + \beta_{V,s;2}^{1,5} = 0,99 \leq 1$ |  | Verifica soddisfatta | Equazione (5.9a) Equazione (5.9b) Equazione (5.10) |
|---|---|-----------------------------|---|

2.2.1. VERIFICA NODO TRAVE PRINCIPALE MENSOLA- PILASTRI IN C.C.A.

I carichi gravanti sulla mensola sono



Si pone la forza puntuale in mezzzeria dell'appoggio della trave.

Appoggio trave 15 cm

Quindi le sollecitazioni agenti sulla mensola sono

$$M_{sd} = 51090 \text{ daN cm}$$

$$V_{sd} = 3406 \text{ daN}$$

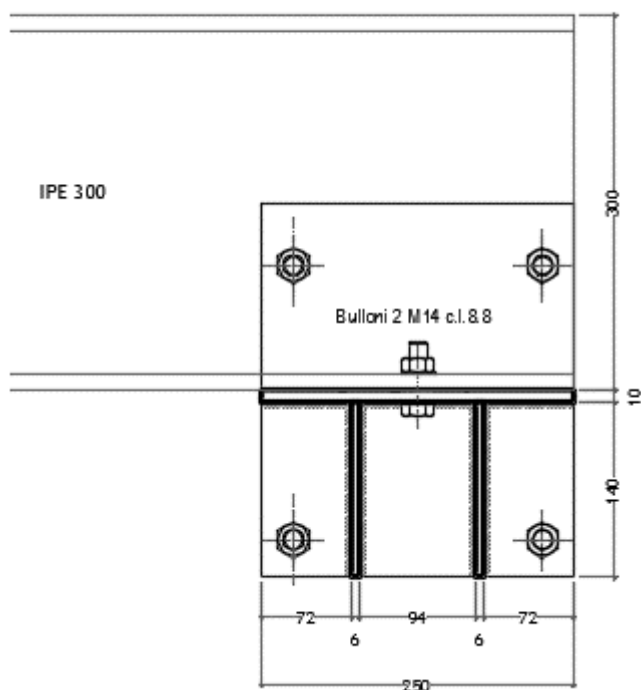
$$V_{sd2} = 2195 \text{ daN}$$

Il materiale utilizzato per eseguire la mensola è

Materiale S275

$$\sigma_{sd} = 275/1.15 = 239.13 \text{ N/mm}^2 = 2391 \text{ daN/cm}^2$$

SEZIONE B-B'



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Come viene illustrato nelle immagini precedenti il carico viene sostenuto dalle due piastre verticali in egual misura.

Quindi il carico agente su ciascuna piastra verticale è :

$$M_{sd} = 51090/2 = 25545 \text{ daN cm}$$

$$V_{sd} = 3406/2 = 1703 \text{ daN}$$

Verifica saldatura verticale

Lato piastra verticale

$$T_{//} = V_{sd} / 2 h a = 1703 / 2 \cdot 14 \cdot 0.4 = 152 \text{ daN/cm}^2$$

$$T_{\perp} = M_{sd} / 15 h^2 a = 25545 / 15 \cdot 14^2 \cdot 0.4 = 21.72 \text{ daN/cm}^2$$

Verifica saldatura orizzontale

$$V_{sd} = 2195 \text{ daN}$$

$$T_{//} = V_{sd} / h a = 2195 / 25 \cdot 0.4 = 219.5 \text{ daN/cm}^2$$

ANCORAGGIO

Basi della progettazione

Ancorante

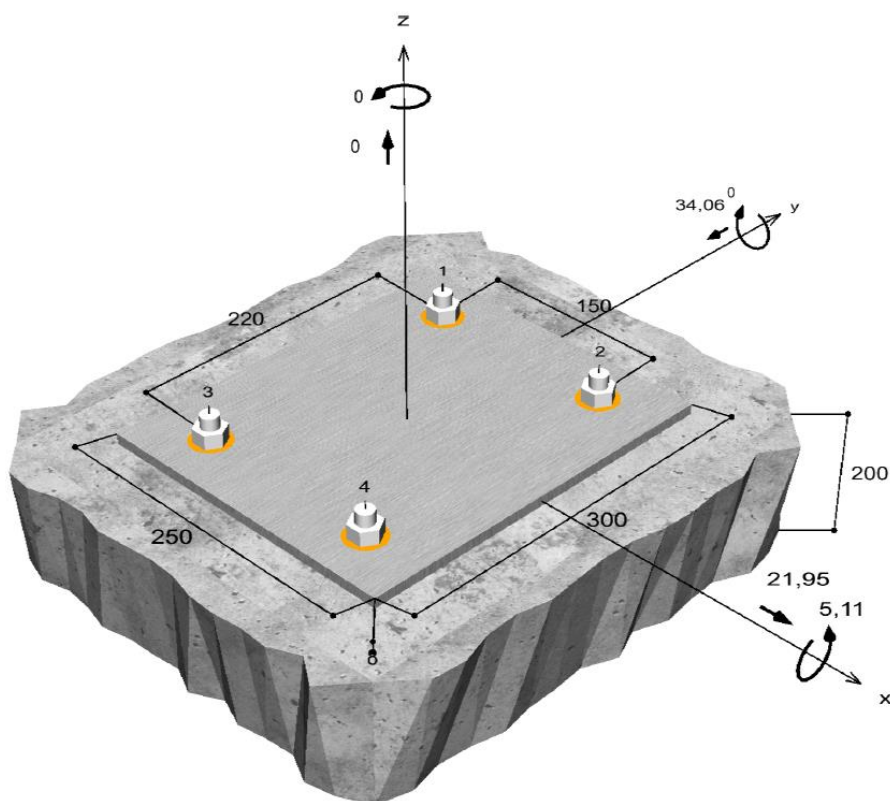
| | |
|--------------------------------|--|
| Sistema | fischer Sistema chimico a iniezione FIS EM |
| Ancorante chimico ad iniezione | FIS EM 390 S |
| Elemento di fissaggio | Barra filettata RG M 14 x 170, Acciaio zincato, Classe di resistenza 5.8 |
| Profondità di ancoraggio | 75 mm |
| Dati di progetto | Progettazione dell'ancorante in Calcestruzzo secondo Benestare ETA-10/0012, Opzione 1, Validità: 26/06/2013 - 26/06/2018 |



Geometria / Carichi

mm, kN, kNm

Valore di progetto delle azioni (sono inclusi i coefficienti parziali di sicurezza delle azioni)



Risultato dei carichi di trazione e taglio

| Carichi di trazione | Utilizzo β_N % | Carichi di taglio | Utilizzo β_V % |
|---|-------------------------|---|-------------------------|
| Rottura dell'acciaio * | 27,2 | Rottura dell'acciaio senza braccio di leva * | 43,7 |
| Rottura combinata sfilamento e cono di calcestruzzo | 41,0 | Rottura calcestruzzo sul lato opposto al carico | 28,1 |
| Rottura per formazione del cono di calcestruzzo | 57,8 | | |
| Fessurazione | 38,4 | | |

* Ancorante più sfavorevole

Resistenza alla combinazione di trazione e taglio

$$\begin{aligned}\beta_N &= \beta_{N,c;1} = 0,58 \leq 1 \\ \beta_V &= \beta_{V;s;1} = 0,44 \leq 1 \\ \beta_N^{1,5} + \beta_V^{1,5} &= \beta_{N,c;1}^{1,5} + \beta_{V;s;1}^{1,5} = 0,73 \leq 1\end{aligned}$$



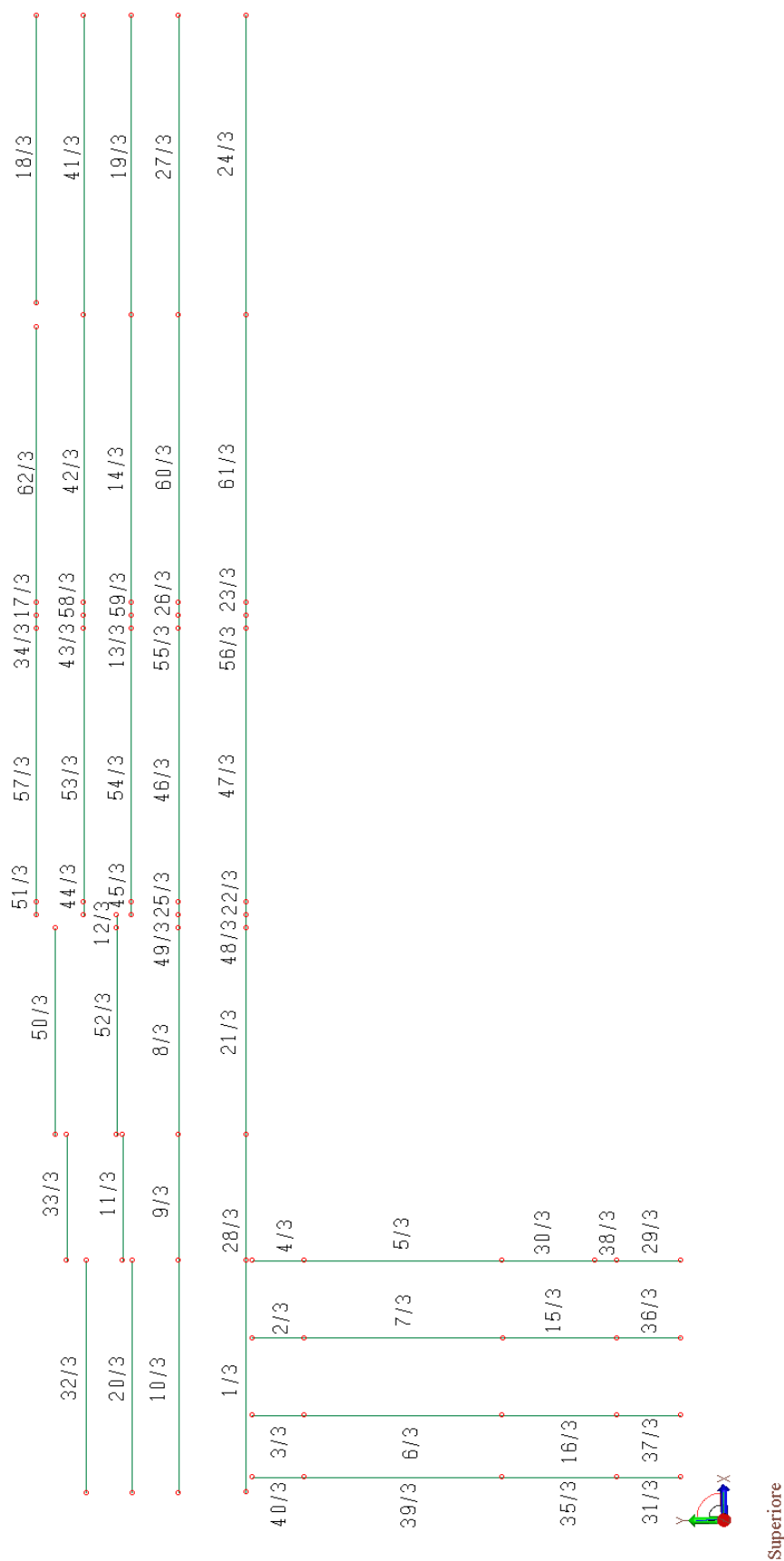
Verifica soddisfatta

Equazione
(5.9a)

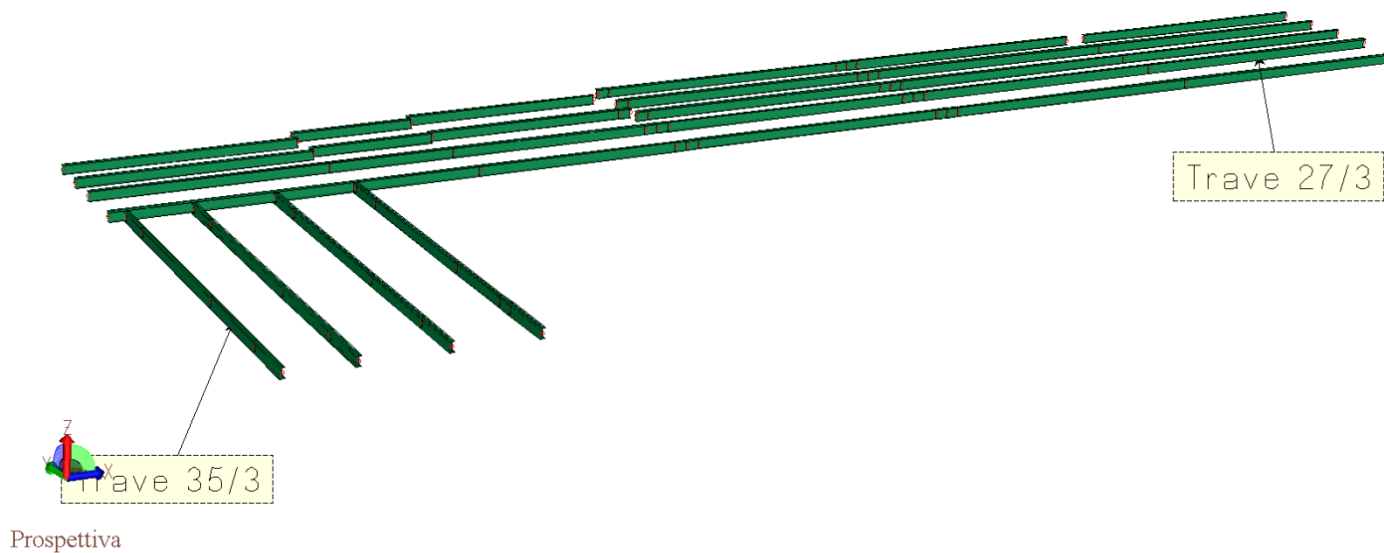
Equazione
(5.9b)

Equazione
(5.10)

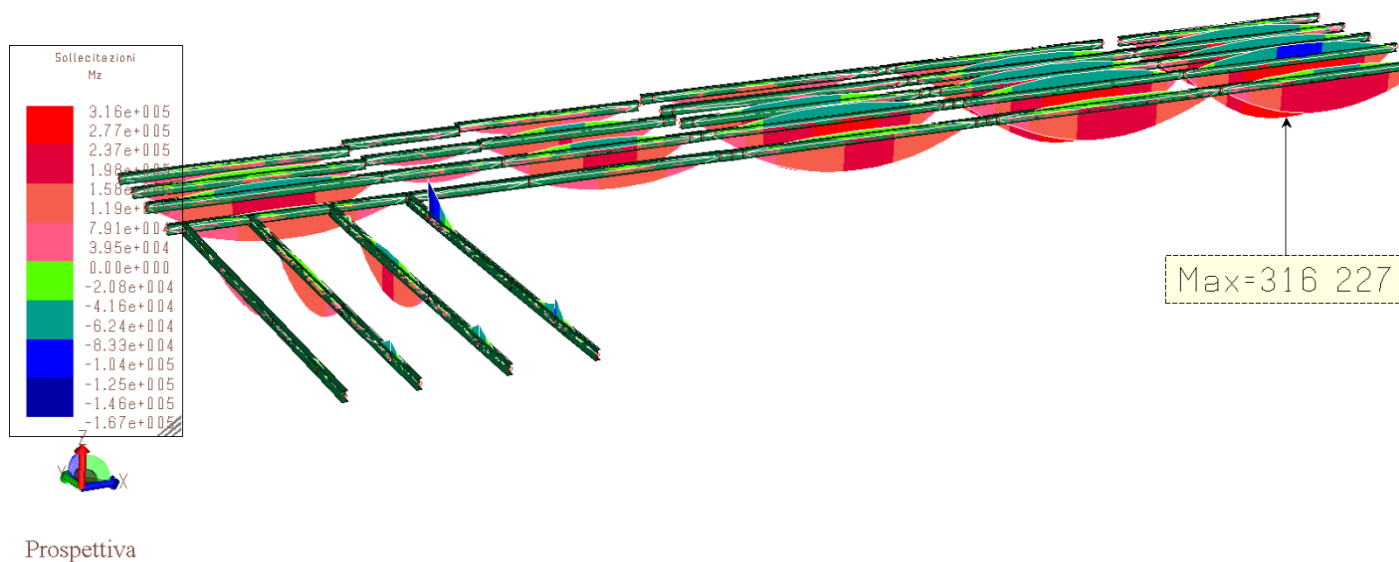
2.3. VERIFICA TRAVI SECONDARIE



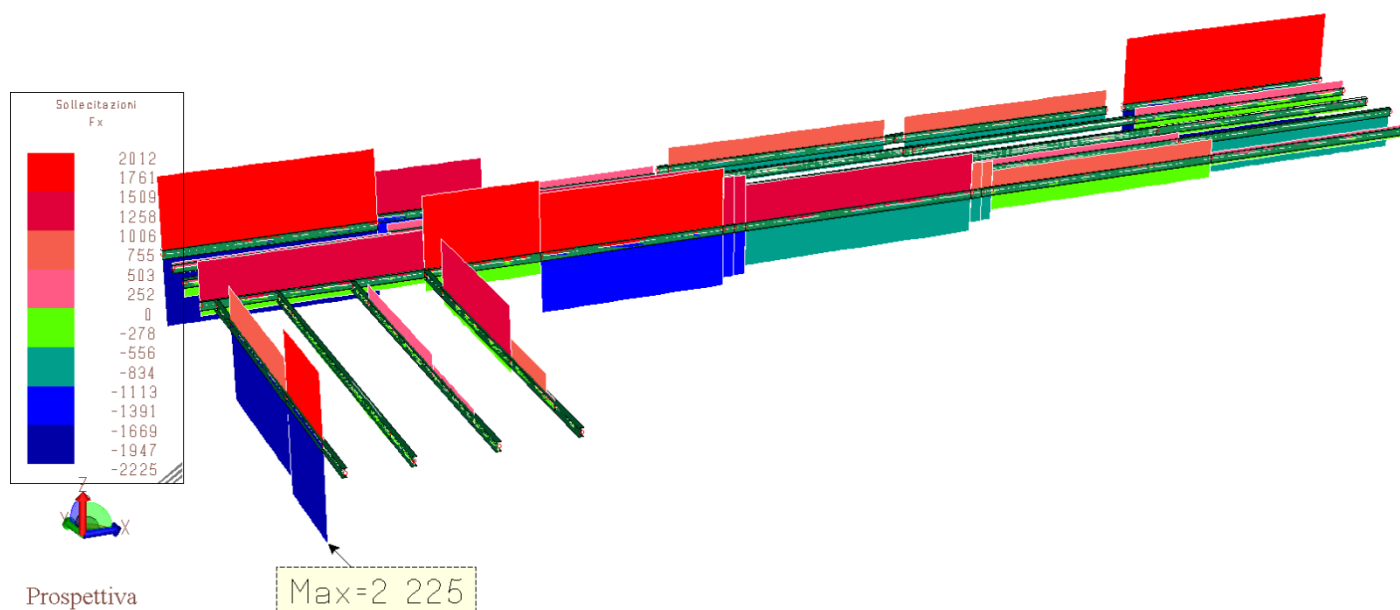
Pianta travatura secondaria con indicato il codice degli elementi asta



105

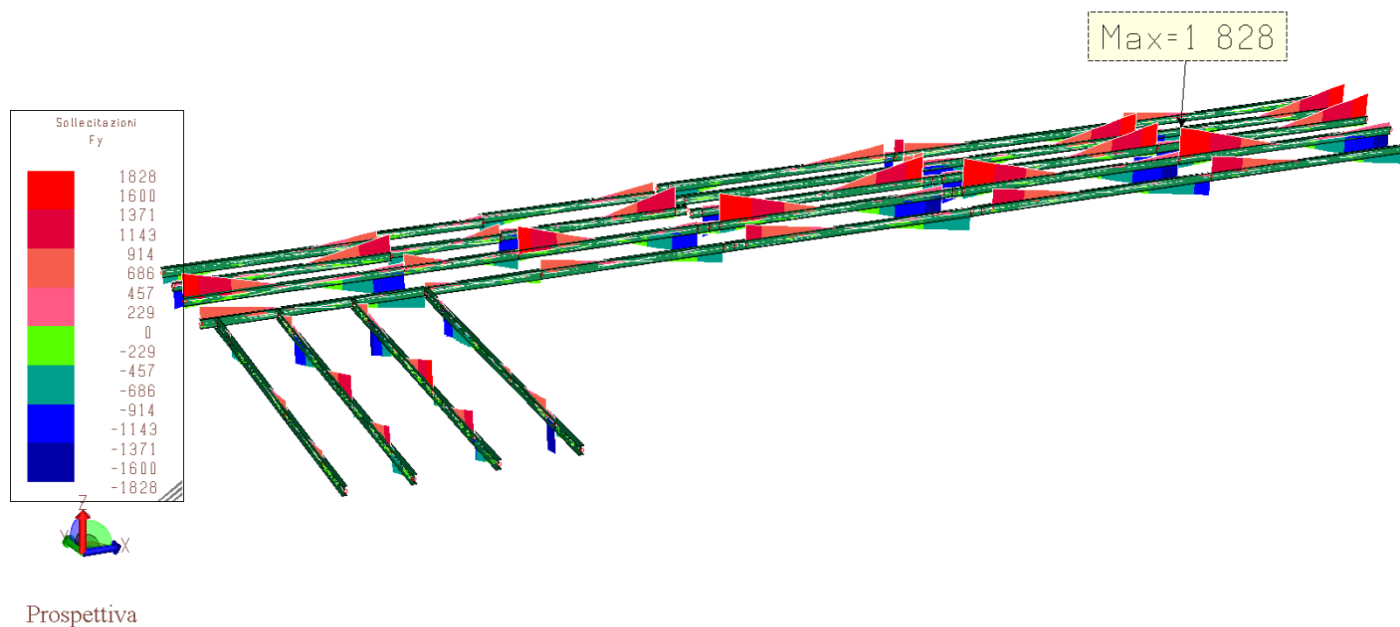


Momento flettente



Sforzo normale

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Taglio

2.3.1. VERIFICA SLU E SLE

Lavoro: **Blocco 1** Intestazione lavoro: **ESECUTIVO**

Elemento: **TRAVE** Metodo di verifica: **Stati limite**

Gruppo: **3** Descrizione: **Trave secondaria**

Tabella: **TABELLA TRAVI SECONDARIE**

Tipo acciaio: **S 275**

ASTA NUM. 27 NI 105 NF 106 Lungh. 692.0 cm SEZ. 8 Ps IPE 220

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

qy medio: 0.2622 0.2643 0.6607 2.2728 1.3214 4.7814 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf(Fx) | Sf(M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|-------|--------|------|------|
| -- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | | |
| cm | | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -61 | 1828 | 0 | 0 | 0 | 0 | 1.8 | 1.3 | 152.7 | 0.0 | 264.5 | 4 | |
| 5 | 0 | -1002 | 411 | -0 | 0 | -0 | 0 | 30.0 | 0.1 | 34.3 | 0.0 | 66.6 | 4 | |
| 6 | 0 | -996 | 411 | 0 | 0 | 0 | 0 | 29.8 | 0.0 | 34.3 | 0.0 | 66.5 | 4 | |
| 7 | 0 | -588 | 411 | 0 | 0 | 0 | 0 | 17.6 | 0.5 | 34.3 | 0.0 | 62.0 | 4 | |
| 8 | 0 | -589 | 411 | 0 | 0 | 0 | 0 | 17.6 | 0.6 | 34.3 | 0.0 | 62.0 | 4 | |
| 9 | 0 | -307 | 580 | 0 | 0 | 0 | 0 | 9.2 | 0.2 | 48.4 | 0.0 | 84.4 | 4 | |
| 10 | 0 | -289 | 580 | 0 | 0 | 0 | 0 | 8.7 | 0.5 | 48.4 | 0.0 | 84.3 | 4 | |
| 11 | 0 | -192 | 580 | 0 | 0 | 0 | 0 | 5.7 | 0.3 | 48.4 | 0.0 | 84.1 | 4 | |
| 12 | 0 | -188 | 411 | 0 | 0 | 0 | 0 | 5.6 | 0.6 | 34.3 | 0.0 | 59.7 | 4 | |
| 13 | 0 | -50 | 1512 | 0 | 0 | 0 | 0 | 1.5 | 1.1 | 126.3 | 0.0 | 218.8 | 4 | |
| 14 | 0 | 0 | -504 | -0 | 0 | -0 | 0 | 0.0 | 0.3 | 42.1 | 0.0 | 72.9 | 4 | |
| 15 | 0 | -53 | 1581 | 0 | 0 | 0 | 0 | 1.6 | 1.1 | 132.1 | 0.0 | 228.8 | 4 | |
| | | | | | | | | | | | | | | |
| 1 | 69 | -61 | 1462 | 0 | 0 | 0 | 1138 | 1.8 | 452.9 | 122.2 | 0.0 | 454.7 | 1 | |
| 5 | 69 | -1002 | 329 | -0 | 0 | -0 | 256 | 30.0 | 101.6 | 27.5 | 0.0 | 131.6 | 1 | |
| 6 | 69 | -996 | 329 | 0 | 0 | 0 | 256 | 29.8 | 101.6 | 27.5 | 0.0 | 131.4 | 1 | |
| 7 | 69 | -588 | 329 | 0 | 0 | 0 | 256 | 17.6 | 101.9 | 27.5 | 0.0 | 119.5 | 1 | |
| 8 | 69 | -589 | 329 | 0 | 0 | 0 | 256 | 17.6 | 102.0 | 27.5 | 0.0 | 119.7 | 1 | |
| 9 | 69 | -307 | 464 | 0 | 0 | 0 | 361 | 9.2 | 143.4 | 38.7 | 0.0 | 152.6 | 1 | |
| 10 | 69 | -289 | 464 | 0 | 0 | 0 | 361 | 8.7 | 143.7 | 38.7 | 0.0 | 152.4 | 1 | |
| 11 | 69 | -192 | 464 | 0 | 0 | 0 | 361 | 5.7 | 143.6 | 38.7 | 0.0 | 149.3 | 1 | |
| 12 | 69 | -188 | 329 | 0 | 0 | 0 | 256 | 5.6 | 102.0 | 27.5 | 0.0 | 107.6 | 1 | |
| 13 | 69 | -50 | 1210 | 0 | 0 | 0 | 942 | 1.5 | 374.8 | 101.1 | 0.0 | 376.3 | 1 | |
| 14 | 69 | 0 | -403 | -0 | 0 | -0 | -314 | 0.0 | 124.8 | 33.7 | 0.0 | 124.8 | 1 | |
| 15 | 69 | -53 | 1265 | 0 | 0 | 0 | 985 | 1.6 | 391.8 | 105.7 | 0.0 | 393.3 | 1 | |
| | | | | | | | | | | | | | | |
| 1 | 138 | -61 | 1097 | 0 | 0 | 0 | 2024 | 1.8 | 804.2 | 91.6 | 0.0 | 806.0 | 1 | |
| 5 | 138 | -1002 | 246 | -0 | 0 | -0 | 455 | 30.0 | 180.5 | 20.6 | 0.0 | 210.5 | 1 | |
| 6 | 138 | -996 | 246 | 0 | 0 | 0 | 455 | 29.8 | 180.5 | 20.6 | 0.0 | 210.3 | 1 | |
| 7 | 138 | -588 | 246 | 0 | 0 | 0 | 455 | 17.6 | 180.8 | 20.6 | 0.0 | 198.5 | 1 | |
| 8 | 138 | -589 | 246 | 0 | 0 | 0 | 455 | 17.6 | 180.9 | 20.6 | 0.0 | 198.6 | 1 | |
| 9 | 138 | -307 | 348 | 0 | 0 | 0 | 642 | 9.2 | 254.8 | 29.1 | 0.0 | 264.0 | 1 | |
| 10 | 138 | -289 | 348 | 0 | 0 | 0 | 642 | 8.7 | 255.1 | 29.1 | 0.0 | 263.8 | 1 | |
| 11 | 138 | -192 | 348 | 0 | 0 | 0 | 642 | 5.7 | 255.0 | 29.1 | 0.0 | 260.7 | 1 | |
| 12 | 138 | -188 | 246 | 0 | 0 | 0 | 455 | 5.6 | 180.9 | 20.6 | 0.0 | 186.5 | 1 | |
| 13 | 138 | -50 | 907 | 0 | 0 | 0 | 1675 | 1.5 | 665.4 | 75.8 | 0.0 | 666.9 | 1 | |
| 14 | 138 | 0 | -302 | -0 | 0 | -0 | -558 | 0.0 | 221.5 | 25.2 | 0.0 | 221.5 | 1 | |
| 15 | 138 | -53 | 949 | 0 | 0 | 0 | 1750 | 1.6 | 695.5 | 79.3 | 0.0 | 697.1 | 1 | |
| | | | | | | | | | | | | | | |
| 1 | 208 | -61 | 731 | 0 | 0 | 0 | 2656 | 1.8 | 1055.0 | 61.1 | 0.0 | 1056.8 | 1 | |
| 5 | 208 | -1002 | 164 | -0 | 0 | -0 | 597 | 30.0 | 236.9 | 13.7 | 0.0 | 266.9 | 1 | |
| 6 | 208 | -996 | 164 | 0 | 0 | 0 | 597 | 29.8 | 236.9 | 13.7 | 0.0 | 266.7 | 1 | |
| 7 | 208 | -588 | 164 | 0 | 0 | 0 | 597 | 17.6 | 237.2 | 13.7 | 0.0 | 254.8 | 1 | |
| 8 | 208 | -589 | 164 | 0 | 0 | 0 | 597 | 17.6 | 237.3 | 13.7 | 0.0 | 254.9 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-------|-------|----|---|----|------|------|--------|-------|-----|--------|---|
| 9 | 208 | -307 | 232 | 0 | 0 | 0 | 842 | 9.2 | 334.4 | 19.4 | 0.0 | 343.6 | 1 |
| 10 | 208 | -289 | 232 | 0 | 0 | 0 | 842 | 8.7 | 334.7 | 19.4 | 0.0 | 343.3 | 1 |
| 11 | 208 | -192 | 232 | 0 | 0 | 0 | 842 | 5.7 | 334.5 | 19.4 | 0.0 | 340.3 | 1 |
| 12 | 208 | -188 | 164 | 0 | 0 | 0 | 597 | 5.6 | 237.3 | 13.7 | 0.0 | 242.9 | 1 |
| 13 | 208 | -50 | 605 | 0 | 0 | 0 | 2198 | 1.5 | 872.9 | 50.5 | 0.0 | 874.4 | 1 |
| 14 | 208 | 0 | -201 | -0 | 0 | -0 | -732 | 0.0 | 290.7 | 16.8 | 0.0 | 290.7 | 1 |
| 15 | 208 | -53 | 632 | 0 | 0 | 0 | 2298 | 1.6 | 912.5 | 52.8 | 0.0 | 914.1 | 1 |
| | | | | | | | | | | | | | |
| 1 | 277 | -61 | 366 | 0 | 0 | 0 | 3036 | 1.8 | 1205.5 | 30.5 | 0.0 | 1207.3 | 1 |
| 5 | 277 | -1002 | 82 | -0 | 0 | -0 | 682 | 30.0 | 270.8 | 6.9 | 0.0 | 300.8 | 1 |
| 6 | 277 | -996 | 82 | 0 | 0 | 0 | 682 | 29.8 | 270.7 | 6.9 | 0.0 | 300.6 | 1 |
| 7 | 277 | -588 | 82 | 0 | 0 | 0 | 682 | 17.6 | 271.0 | 6.9 | 0.0 | 288.6 | 1 |
| 8 | 277 | -589 | 82 | 0 | 0 | 0 | 682 | 17.6 | 271.1 | 6.9 | 0.0 | 288.7 | 1 |
| 9 | 277 | -307 | 116 | 0 | 0 | 0 | 963 | 9.2 | 382.2 | 9.7 | 0.0 | 391.3 | 1 |
| 10 | 277 | -289 | 116 | 0 | 0 | 0 | 963 | 8.7 | 382.4 | 9.7 | 0.0 | 391.0 | 1 |
| 11 | 277 | -192 | 116 | 0 | 0 | 0 | 963 | 5.7 | 382.3 | 9.7 | 0.0 | 388.0 | 1 |
| 12 | 277 | -188 | 82 | 0 | 0 | 0 | 682 | 5.6 | 271.0 | 6.9 | 0.0 | 276.7 | 1 |
| 13 | 277 | -50 | 302 | 0 | 0 | 0 | 2512 | 1.5 | 997.4 | 25.3 | 0.0 | 998.9 | 1 |
| 14 | 277 | 0 | -101 | -0 | 0 | -0 | -836 | 0.0 | 332.1 | 8.4 | 0.0 | 332.1 | 1 |
| 15 | 277 | -53 | 316 | 0 | 0 | 0 | 2626 | 1.6 | 1042.6 | 26.4 | 0.0 | 1044.2 | 1 |
| | | | | | | | | | | | | | |
| 1 | 346 | -61 | 0 | 0 | 0 | 0 | 3162 | 1.8 | 1255.5 | 0.0 | 0.0 | 1257.3 | 1 |
| 5 | 346 | -1002 | 0 | -0 | 0 | -0 | 711 | 30.0 | 282.0 | 0.0 | 0.0 | 312.0 | 1 |
| 6 | 346 | -996 | 0 | 0 | 0 | 0 | 711 | 29.8 | 282.0 | 0.0 | 0.0 | 311.8 | 1 |
| 7 | 346 | -588 | 0 | 0 | 0 | 0 | 711 | 17.6 | 282.2 | 0.0 | 0.0 | 299.8 | 1 |
| 8 | 346 | -589 | 0 | 0 | 0 | 0 | 711 | 17.6 | 282.3 | 0.0 | 0.0 | 299.9 | 1 |
| 9 | 346 | -307 | -0 | 0 | 0 | 0 | 1003 | 9.2 | 398.1 | 0.0 | 0.0 | 407.2 | 1 |
| 10 | 346 | -289 | -0 | 0 | 0 | 0 | 1003 | 8.7 | 398.2 | 0.0 | 0.0 | 406.9 | 1 |
| 11 | 346 | -192 | -0 | 0 | 0 | 0 | 1003 | 5.7 | 398.1 | 0.0 | 0.0 | 403.9 | 1 |
| 12 | 346 | -188 | 0 | 0 | 0 | 0 | 711 | 5.6 | 282.3 | 0.0 | 0.0 | 287.9 | 1 |
| 13 | 346 | -50 | 0 | 0 | 0 | 0 | 2616 | 1.5 | 1038.8 | 0.0 | 0.0 | 1040.3 | 1 |
| 14 | 346 | 0 | 0 | -0 | 0 | -0 | -871 | 0.0 | 345.9 | 0.0 | 0.0 | 345.9 | 1 |
| 15 | 346 | -53 | -0 | 0 | 0 | 0 | 2735 | 1.6 | 1085.9 | 0.0 | 0.0 | 1087.5 | 1 |
| | | | | | | | | | | | | | |
| 1 | 415 | -61 | -366 | 0 | 0 | 0 | 3036 | 1.8 | 1205.2 | 30.5 | 0.0 | 1207.0 | 1 |
| 5 | 415 | -1002 | -82 | -0 | 0 | -0 | 682 | 30.0 | 270.7 | 6.9 | 0.0 | 300.7 | 1 |
| 6 | 415 | -996 | -82 | 0 | 0 | 0 | 682 | 29.8 | 270.7 | 6.9 | 0.0 | 300.6 | 1 |
| 7 | 415 | -588 | -82 | 0 | 0 | 0 | 682 | 17.6 | 270.9 | 6.9 | 0.0 | 288.5 | 1 |
| 8 | 415 | -589 | -82 | 0 | 0 | 0 | 682 | 17.6 | 270.9 | 6.9 | 0.0 | 288.6 | 1 |
| 9 | 415 | -307 | -116 | 0 | 0 | 0 | 963 | 9.2 | 382.1 | 9.7 | 0.0 | 391.3 | 1 |
| 10 | 415 | -289 | -116 | 0 | 0 | 0 | 963 | 8.7 | 382.3 | 9.7 | 0.0 | 390.9 | 1 |
| 11 | 415 | -192 | -116 | 0 | 0 | 0 | 963 | 5.7 | 382.2 | 9.7 | 0.0 | 387.9 | 1 |
| 12 | 415 | -188 | -82 | 0 | 0 | 0 | 682 | 5.6 | 270.9 | 6.9 | 0.0 | 276.6 | 1 |
| 13 | 415 | -50 | -302 | 0 | 0 | 0 | 2512 | 1.5 | 997.2 | 25.3 | 0.0 | 998.7 | 1 |
| 14 | 415 | 0 | 101 | -0 | 0 | -0 | -836 | 0.0 | 332.1 | 8.4 | 0.0 | 332.1 | 1 |
| 15 | 415 | -53 | -316 | 0 | 0 | 0 | 2626 | 1.6 | 1042.4 | 26.4 | 0.0 | 1044.0 | 1 |
| | | | | | | | | | | | | | |
| 1 | 484 | -61 | -731 | 0 | 0 | 0 | 2656 | 1.8 | 1054.5 | 61.1 | 0.0 | 1056.3 | 1 |
| 5 | 484 | -1002 | -164 | -0 | 0 | -0 | 597 | 30.0 | 236.9 | 13.7 | 0.0 | 266.9 | 1 |
| 6 | 484 | -996 | -164 | 0 | 0 | 0 | 597 | 29.8 | 236.9 | 13.7 | 0.0 | 266.7 | 1 |
| 7 | 484 | -588 | -164 | 0 | 0 | 0 | 597 | 17.6 | 237.0 | 13.7 | 0.0 | 254.6 | 1 |
| 8 | 484 | -589 | -164 | 0 | 0 | 0 | 597 | 17.6 | 237.0 | 13.7 | 0.0 | 254.7 | 1 |
| 9 | 484 | -307 | -232 | 0 | 0 | 0 | 842 | 9.2 | 334.3 | 19.4 | 0.0 | 343.5 | 1 |
| 10 | 484 | -289 | -232 | 0 | 0 | 0 | 842 | 8.7 | 334.5 | 19.4 | 0.0 | 343.1 | 1 |
| 11 | 484 | -192 | -232 | 0 | 0 | 0 | 842 | 5.7 | 334.4 | 19.4 | 0.0 | 340.1 | 1 |
| 12 | 484 | -188 | -164 | 0 | 0 | 0 | 597 | 5.6 | 237.0 | 13.7 | 0.0 | 242.7 | 1 |
| 13 | 484 | -50 | -605 | 0 | 0 | 0 | 2198 | 1.5 | 872.5 | 50.5 | 0.0 | 874.0 | 1 |
| 14 | 484 | 0 | 201 | -0 | 0 | -0 | -732 | 0.0 | 290.5 | 16.8 | 0.0 | 290.5 | 1 |
| 15 | 484 | -53 | -632 | 0 | 0 | 0 | 2298 | 1.6 | 912.1 | 52.8 | 0.0 | 913.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 554 | -61 | -1097 | 0 | 0 | 0 | 2024 | 1.8 | 803.4 | 91.6 | 0.0 | 805.2 | 1 |
| 5 | 554 | -1002 | -246 | -0 | 0 | -0 | 455 | 30.0 | 180.5 | 20.6 | 0.0 | 210.5 | 1 |
| 6 | 554 | -996 | -246 | 0 | 0 | 0 | 455 | 29.8 | 180.5 | 20.6 | 0.0 | 210.3 | 1 |
| 7 | 554 | -588 | -246 | 0 | 0 | 0 | 455 | 17.6 | 180.6 | 20.6 | 0.0 | 198.2 | 1 |
| 8 | 554 | -589 | -246 | 0 | 0 | 0 | 455 | 17.6 | 180.6 | 20.6 | 0.0 | 198.2 | 1 |
| 9 | 554 | -307 | -348 | 0 | 0 | 0 | 642 | 9.2 | 254.7 | 29.1 | 0.0 | 263.9 | 1 |
| 10 | 554 | -289 | -348 | 0 | 0 | 0 | 642 | 8.7 | 254.8 | 29.1 | 0.0 | 263.5 | 1 |
| 11 | 554 | -192 | -348 | 0 | 0 | 0 | 642 | 5.7 | 254.8 | 29.1 | 0.0 | 260.5 | 1 |
| 12 | 554 | -188 | -246 | 0 | 0 | 0 | 455 | 5.6 | 180.6 | 20.6 | 0.0 | 186.2 | 1 |
| 13 | 554 | -50 | -907 | 0 | 0 | 0 | 1675 | 1.5 | 664.7 | 75.8 | 0.0 | 666.2 | 1 |
| 14 | 554 | 0 | 302 | -0 | 0 | -0 | -558 | 0.0 | 221.4 | 25.2 | 0.0 | 221.4 | 1 |
| 15 | 554 | -53 | -949 | 0 | 0 | 0 | 1750 | 1.6 | 694.9 | 79.3 | 0.0 | 696.4 | 1 |
| | | | | | | | | | | | | | |
| 1 | 623 | -61 | -1462 | 0 | 0 | 0 | 1138 | 1.8 | 451.9 | 122.2 | 0.0 | 453.7 | 1 |
| 5 | 623 | -1002 | -329 | -0 | 0 | -0 | 256 | 30.0 | 101.5 | 27.5 | 0.0 | 131.5 | 1 |
| 6 | 623 | -996 | -329 | 0 | 0 | 0 | 256 | 29.8 | 101.5 | 27.5 | 0.0 | 131.4 | 1 |
| 7 | 623 | -588 | -329 | 0 | 0 | 0 | 256 | 17.6 | 101.6 | 27.5 | 0.0 | 119.2 | 1 |
| 8 | 623 | -589 | -329 | 0 | 0 | 0 | 256 | 17.6 | 101.6 | 27.5 | 0.0 | 119.2 | 1 |
| 9 | 623 | -307 | -464 | 0 | 0 | 0 | 361 | 9.2 | 143.3 | 38.7 | 0.0 | 152.5 | 1 |
| 10 | 623 | -289 | -464 | 0 | 0 | 0 | 361 | 8.7 | 143.3 | 38.7 | 0.0 | 152.0 | 1 |
| 11 | 623 | -192 | -464 | 0 | 0 | 0 | 361 | 5.7 | 143.3 | 38.7 | 0.0 | 149.0 | 1 |
| 12 | 623 | -188 | -329 | 0 | 0 | 0 | 256 | 5.6 | 101.6 | 27.5 | 0.0 | 107.2 | 1 |
| 13 | 623 | -50 | -1210 | 0 | 0 | 0 | 942 | 1.5 | 373.9 | 101.1 | 0.0 | 375.4 | 1 |
| 14 | 623 | 0 | 403 | -0 | 0 | -0 | -314 | 0.0 | 124.5 | 33.7 | 0.0 | 124.5 | 1 |
| 15 | 623 | -53 | -1265 | 0 | 0 | 0 | 985 | 1.6 | 390.8 | 105.7 | 0.0 | 392.4 | 1 |
| | | | | | | | | | | | | | |
| 1 | 692 | -61 | -1828 | 0 | 0 | 0 | 0 | 1.8 | 0.0 | 152.7 | 0.0 | 264.5 | 4 |
| 5 | 692 | -1002 | -411 | -0 | 0 | 0 | -0 | 30.0 | 0.0 | 34.3 | 0.0 | 66.6 | 4 |
| 6 | 692 | -996 | -411 | 0 | 0 | 0 | -0 | 29.8 | 0.0 | 34.3 | 0.0 | 66.5 | 4 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|-------|----|---|---|----|------|-----|-------|-----|-------|---|
| 7 | 692 | -588 | -411 | 0 | 0 | 0 | -0 | 17.6 | 0.0 | 34.3 | 0.0 | 62.0 | 4 |
| 8 | 692 | -589 | -411 | 0 | 0 | 0 | -0 | 17.6 | 0.0 | 34.3 | 0.0 | 62.0 | 4 |
| 9 | 692 | -307 | -580 | 0 | 0 | 0 | -0 | 9.2 | 0.0 | 48.4 | 0.0 | 84.4 | 4 |
| 10 | 692 | -289 | -580 | 0 | 0 | 0 | -0 | 8.7 | 0.0 | 48.4 | 0.0 | 84.3 | 4 |
| 11 | 692 | -192 | -580 | 0 | 0 | 0 | -0 | 5.7 | 0.0 | 48.4 | 0.0 | 84.1 | 4 |
| 12 | 692 | -188 | -411 | 0 | 0 | 0 | -0 | 5.6 | 0.0 | 34.3 | 0.0 | 59.7 | 4 |
| 13 | 692 | -50 | -1512 | 0 | 0 | 0 | 0 | 1.5 | 0.0 | 126.3 | 0.0 | 218.8 | 4 |
| 14 | 692 | 0 | 504 | -0 | 0 | 0 | 0 | 0.0 | 0.0 | 42.1 | 0.0 | 72.9 | 4 |
| 15 | 692 | -53 | -1581 | 0 | 0 | 0 | -0 | 1.6 | 0.0 | 132.1 | 0.0 | 228.8 | 4 |

ASTA NUM. 35 NI 109 NF 115 Lungh. 266.0 cm SEZ. 8 Ps IPE 220

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

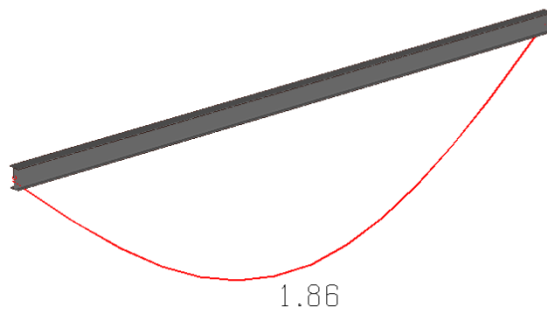
qy medio: 0.2622 0.1428 0.3571 1.2284 0.7142 2.7048 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|-----|-------|------|-----|-------|-----|------|---------|--------|--------|-------|--------|------|------|
| -- | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -1274 | 525 | -11 | 0 | -0 | -332 | 38.1 | 131.5 | 43.9 | 0.0 | 169.7 | 1 | |
| 5 | 0 | 27 | 133 | 28 | 0 | 54 | -84 | 0.8 | 177.6 | 11.1 | 0.0 | 178.4 | 1 | |
| 6 | 0 | -1075 | 133 | 27 | 0 | 54 | -84 | 32.2 | 177.6 | 11.1 | 0.0 | 209.8 | 1 | |
| 7 | 0 | 488 | 133 | -33 | 0 | -54 | -84 | 14.6 | 177.8 | 11.1 | 0.0 | 192.4 | 1 | |
| 8 | 0 | -587 | 133 | -33 | 0 | -54 | -84 | 17.6 | 177.8 | 11.1 | 0.0 | 195.4 | 1 | |
| 9 | 0 | 1424 | 185 | 6 | 0 | 16 | -117 | 42.6 | 89.7 | 15.5 | 0.0 | 132.3 | 1 | |
| 10 | 0 | -2225 | 185 | 4 | 0 | 16 | -117 | 66.6 | 89.7 | 15.5 | 0.0 | 156.3 | 1 | |
| 11 | 0 | 1569 | 185 | -12 | 0 | -16 | -117 | 47.0 | 89.7 | 15.5 | 0.0 | 136.7 | 1 | |
| 12 | 0 | -1950 | 133 | -13 | 0 | -16 | -84 | 58.4 | 76.7 | 11.1 | 0.0 | 135.0 | 1 | |
| 13 | 0 | -1060 | 439 | -9 | 0 | -0 | -277 | 31.7 | 110.0 | 36.7 | 0.0 | 141.8 | 1 | |
| 14 | 0 | 327 | -116 | 3 | 0 | 0 | 73 | 9.8 | 29.1 | 9.7 | 0.0 | 38.9 | 1 | |
| 15 | 0 | -1107 | 458 | -10 | 0 | -0 | -289 | 33.1 | 114.7 | 38.3 | 0.0 | 147.9 | 1 | |
| 1 | 27 | -1274 | 445 | -11 | 0 | 3 | -202 | 38.1 | 88.4 | 37.2 | 0.0 | 126.5 | 1 | |
| 5 | 27 | 27 | 113 | 28 | 0 | 46 | -51 | 0.8 | 144.8 | 9.4 | 0.0 | 145.6 | 1 | |
| 6 | 27 | -1075 | 113 | 27 | 0 | 47 | -51 | 32.2 | 145.3 | 9.4 | 0.0 | 177.5 | 1 | |
| 7 | 27 | 488 | 113 | -33 | 0 | -45 | -51 | 14.6 | 141.5 | 9.4 | 0.0 | 156.1 | 1 | |
| 8 | 27 | -587 | 113 | -33 | 0 | -45 | -51 | 17.6 | 141.0 | 9.4 | 0.0 | 158.6 | 1 | |
| 9 | 27 | 1424 | 157 | 6 | 0 | 14 | -71 | 42.6 | 67.1 | 13.1 | 0.0 | 109.7 | 1 | |
| 10 | 27 | -2225 | 157 | 4 | 0 | 15 | -71 | 66.6 | 68.8 | 13.1 | 0.0 | 135.4 | 1 | |
| 11 | 27 | 1569 | 157 | -12 | 0 | -13 | -71 | 47.0 | 63.2 | 13.1 | 0.0 | 110.2 | 1 | |
| 12 | 27 | -1950 | 113 | -13 | 0 | -13 | -51 | 58.4 | 54.4 | 9.4 | 0.0 | 112.8 | 1 | |
| 13 | 27 | -1060 | 372 | -9 | 0 | 3 | -169 | 31.7 | 73.9 | 31.1 | 0.0 | 105.7 | 1 | |
| 14 | 27 | 327 | -98 | 3 | 0 | -1 | 45 | 9.8 | 19.7 | 8.2 | 0.0 | 29.4 | 1 | |
| 15 | 27 | -1107 | 388 | -10 | 0 | 3 | -177 | 33.1 | 77.1 | 32.4 | 0.0 | 110.2 | 1 | |
| 1 | 53 | -1274 | 365 | -11 | 0 | 6 | -95 | 38.1 | 53.7 | 30.5 | 0.0 | 91.8 | 1 | |
| 5 | 53 | 27 | 92 | 28 | 0 | 39 | -24 | 0.8 | 114.2 | 7.7 | 0.0 | 115.0 | 1 | |
| 6 | 53 | -1075 | 92 | 27 | 0 | 39 | -24 | 32.2 | 115.2 | 7.7 | 0.0 | 147.4 | 1 | |
| 7 | 53 | 488 | 92 | -33 | 0 | -36 | -24 | 14.6 | 107.4 | 7.7 | 0.0 | 122.0 | 1 | |
| 8 | 53 | -587 | 92 | -33 | 0 | -36 | -24 | 17.6 | 106.4 | 7.7 | 0.0 | 123.9 | 1 | |
| 9 | 53 | 1424 | 129 | 6 | 0 | 13 | -33 | 42.6 | 47.5 | 10.8 | 0.0 | 90.1 | 1 | |
| 10 | 53 | -2225 | 129 | 4 | 0 | 14 | -33 | 66.6 | 50.9 | 10.8 | 0.0 | 117.5 | 1 | |
| 11 | 53 | 1569 | 129 | -12 | 0 | -10 | -33 | 47.0 | 39.7 | 10.8 | 0.0 | 86.7 | 1 | |
| 12 | 53 | -1950 | 92 | -13 | 0 | -9 | -24 | 58.4 | 34.2 | 7.7 | 0.0 | 92.6 | 1 | |
| 13 | 53 | -1060 | 305 | -9 | 0 | 5 | -79 | 31.7 | 44.9 | 25.5 | 0.0 | 76.6 | 1 | |
| 14 | 53 | 327 | -81 | 3 | 0 | -1 | 21 | 9.8 | 12.1 | 6.7 | 0.0 | 21.9 | 1 | |
| 15 | 53 | -1107 | 318 | -10 | 0 | 5 | -83 | 33.1 | 46.8 | 26.6 | 0.0 | 80.0 | 1 | |
| 1 | 80 | -1274 | 285 | -11 | 0 | 9 | -8 | 38.1 | 27.5 | 23.8 | 0.0 | 65.6 | 1 | |
| 5 | 80 | 27 | 72 | 28 | 0 | 32 | -2 | 0.8 | 85.6 | 6.0 | 0.0 | 86.4 | 1 | |
| 6 | 80 | -1075 | 72 | 27 | 0 | 32 | -2 | 32.2 | 87.2 | 6.0 | 0.0 | 119.3 | 1 | |
| 7 | 80 | 488 | 72 | -33 | 0 | -28 | -2 | 14.6 | 75.3 | 6.0 | 0.0 | 89.9 | 1 | |
| 8 | 80 | -587 | 72 | -33 | 0 | -27 | -2 | 17.6 | 73.8 | 6.0 | 0.0 | 91.4 | 1 | |
| 9 | 80 | 1424 | 100 | 6 | 0 | 11 | -3 | 42.6 | 30.9 | 8.4 | 0.0 | 73.5 | 1 | |
| 10 | 80 | -2225 | 100 | 4 | 0 | 13 | -3 | 66.6 | 36.0 | 8.4 | 0.0 | 102.6 | 1 | |
| 11 | 80 | 1569 | 100 | -12 | 0 | -7 | -3 | 47.0 | 19.2 | 8.4 | 0.0 | 66.2 | 1 | |
| 12 | 80 | -1950 | 72 | -13 | 0 | -6 | -2 | 58.4 | 16.2 | 6.0 | 0.0 | 74.6 | 1 | |
| 13 | 80 | -1060 | 238 | -9 | 0 | 8 | -7 | 31.7 | 22.9 | 19.9 | 0.0 | 54.7 | 1 | |
| 14 | 80 | 327 | -63 | 3 | 0 | -2 | 2 | 9.8 | 6.4 | 5.3 | 0.0 | 16.1 | 1 | |
| 15 | 80 | -1107 | 248 | -10 | 0 | 8 | -7 | 33.1 | 23.9 | 20.8 | 0.0 | 57.1 | 1 | |
| 1 | 106 | -1274 | 205 | -11 | 0 | 12 | 57 | 38.1 | 54.8 | 17.1 | 0.0 | 92.9 | 1 | |
| 5 | 106 | 27 | 52 | 28 | 0 | 24 | 15 | 0.8 | 70.8 | 4.3 | 0.0 | 71.6 | 1 | |
| 6 | 106 | -1075 | 52 | 27 | 0 | 25 | 15 | 32.2 | 72.8 | 4.3 | 0.0 | 105.0 | 1 | |
| 7 | 106 | 488 | 52 | -33 | 0 | -19 | 14 | 14.6 | 56.7 | 4.3 | 0.0 | 71.4 | 1 | |
| 8 | 106 | -587 | 52 | -33 | 0 | -18 | 14 | 17.6 | 54.7 | 4.3 | 0.0 | 72.3 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-------|------|-----|---|-----|-----|------|-------|------|-----|-------|---|
| 9 | 106 | 1424 | 72 | 6 | 0 | 9 | 20 | 42.6 | 33.2 | 6.0 | 0.0 | 75.8 | 1 |
| 10 | 106 | -2225 | 72 | 4 | 0 | 12 | 20 | 66.6 | 39.9 | 6.0 | 0.0 | 106.5 | 1 |
| 11 | 106 | 1569 | 72 | -12 | 0 | -4 | 20 | 47.0 | 17.6 | 6.0 | 0.0 | 64.6 | 1 |
| 12 | 106 | -1950 | 52 | -13 | 0 | -2 | 14 | 58.4 | 11.7 | 4.3 | 0.0 | 70.1 | 1 |
| 13 | 106 | -1060 | 171 | -9 | 0 | 10 | 48 | 31.7 | 45.8 | 14.3 | 0.0 | 77.5 | 1 |
| 14 | 106 | 327 | -45 | 3 | 0 | -3 | -13 | 9.8 | 12.5 | 3.8 | 0.0 | 22.3 | 1 |
| 15 | 106 | -1107 | 179 | -10 | 0 | 10 | 50 | 33.1 | 47.7 | 14.9 | 0.0 | 80.9 | 1 |
| 1 | 133 | -1274 | 125 | -11 | 0 | 15 | 101 | 38.1 | 80.2 | 10.4 | 0.0 | 118.4 | 1 |
| 5 | 133 | 27 | 31 | 28 | 0 | 17 | 26 | 0.8 | 55.4 | 2.6 | 0.0 | 56.2 | 1 |
| 6 | 133 | -1075 | 31 | 27 | 0 | 18 | 26 | 32.2 | 57.9 | 2.6 | 0.0 | 90.1 | 1 |
| 7 | 133 | 488 | 32 | -33 | 0 | -10 | 25 | 14.6 | 37.8 | 2.6 | 0.0 | 52.4 | 1 |
| 8 | 133 | -587 | 32 | -33 | 0 | -9 | 25 | 17.6 | 35.3 | 2.6 | 0.0 | 52.8 | 1 |
| 9 | 133 | 1424 | 44 | 6 | 0 | 8 | 36 | 42.6 | 34.8 | 3.7 | 0.0 | 77.4 | 1 |
| 10 | 133 | -2225 | 44 | 4 | 0 | 11 | 35 | 66.6 | 43.2 | 3.7 | 0.0 | 109.8 | 1 |
| 11 | 133 | 1569 | 44 | -12 | 0 | -0 | 35 | 47.0 | 15.3 | 3.7 | 0.0 | 62.3 | 1 |
| 12 | 133 | -1950 | 32 | -13 | 0 | 1 | 25 | 58.4 | 13.4 | 2.6 | 0.0 | 71.8 | 1 |
| 13 | 133 | -1060 | 104 | -9 | 0 | 13 | 84 | 31.7 | 67.0 | 8.7 | 0.0 | 98.8 | 1 |
| 14 | 133 | 327 | -28 | 3 | 0 | -3 | -22 | 9.8 | 18.2 | 2.3 | 0.0 | 28.0 | 1 |
| 15 | 133 | -1107 | 109 | -10 | 0 | 13 | 88 | 33.1 | 69.9 | 9.1 | 0.0 | 103.0 | 1 |
| 1 | 160 | -1274 | 44 | -11 | 0 | 18 | 123 | 38.1 | 97.2 | 3.7 | 0.0 | 135.4 | 1 |
| 5 | 160 | 27 | 11 | 28 | 0 | 9 | 31 | 0.8 | 37.8 | 2.1 | 0.0 | 38.6 | 1 |
| 6 | 160 | -1075 | 11 | 27 | 0 | 11 | 31 | 32.2 | 40.8 | 2.0 | 0.0 | 73.0 | 1 |
| 7 | 160 | 488 | 11 | -33 | 0 | -2 | 31 | 14.6 | 16.7 | 2.4 | 0.0 | 31.4 | 1 |
| 8 | 160 | -587 | 11 | -33 | 0 | -1 | 31 | 17.6 | 13.7 | 2.5 | 0.0 | 31.3 | 1 |
| 9 | 160 | 1424 | 16 | 6 | 0 | 6 | 43 | 42.6 | 33.4 | 1.3 | 0.0 | 76.1 | 1 |
| 10 | 160 | -2225 | 16 | 4 | 0 | 10 | 43 | 66.6 | 43.5 | 1.3 | 0.0 | 110.1 | 1 |
| 11 | 160 | 1569 | 16 | -12 | 0 | 3 | 43 | 47.0 | 24.5 | 1.3 | 0.0 | 71.4 | 1 |
| 12 | 160 | -1950 | 11 | -13 | 0 | 5 | 31 | 58.4 | 25.0 | 1.0 | 0.0 | 83.3 | 1 |
| 13 | 160 | -1060 | 37 | -9 | 0 | 15 | 103 | 31.7 | 81.2 | 3.1 | 0.0 | 113.0 | 1 |
| 14 | 160 | 327 | -10 | 3 | 0 | -4 | -27 | 9.8 | 22.1 | 0.8 | 0.0 | 31.8 | 1 |
| 15 | 160 | -1107 | 39 | -10 | 0 | 16 | 107 | 33.1 | 84.7 | 3.2 | 0.0 | 117.8 | 1 |
| 1 | 186 | -1274 | -36 | -11 | 0 | 21 | 124 | 38.1 | 105.8 | 3.0 | 0.0 | 143.9 | 1 |
| 5 | 186 | 27 | -9 | 28 | 0 | 2 | 32 | 0.8 | 18.0 | 2.1 | 0.0 | 18.8 | 1 |
| 6 | 186 | -1075 | -9 | 27 | 0 | 3 | 32 | 32.2 | 21.5 | 2.0 | 0.0 | 53.7 | 1 |
| 7 | 186 | 488 | -9 | -33 | 0 | 7 | 31 | 14.6 | 31.4 | 2.4 | 0.0 | 46.0 | 1 |
| 8 | 186 | -587 | -9 | -33 | 0 | 8 | 31 | 17.6 | 34.9 | 2.5 | 0.0 | 52.5 | 1 |
| 9 | 186 | 1424 | -13 | 6 | 0 | 4 | 44 | 42.6 | 29.1 | 1.1 | 0.0 | 71.7 | 1 |
| 10 | 186 | -2225 | -13 | 4 | 0 | 9 | 44 | 66.6 | 40.8 | 1.1 | 0.0 | 107.5 | 1 |
| 11 | 186 | 1569 | -13 | -12 | 0 | 6 | 44 | 47.0 | 33.1 | 1.0 | 0.0 | 80.0 | 1 |
| 12 | 186 | -1950 | -9 | -13 | 0 | 8 | 31 | 58.4 | 34.4 | 1.0 | 0.0 | 92.8 | 1 |
| 13 | 186 | -1060 | -30 | -9 | 0 | 18 | 104 | 31.7 | 88.3 | 2.5 | 0.0 | 120.1 | 1 |
| 14 | 186 | 327 | 8 | 3 | 0 | -5 | -27 | 9.8 | 24.0 | 0.7 | 0.0 | 33.8 | 1 |
| 15 | 186 | -1107 | -31 | -10 | 0 | 18 | 108 | 33.1 | 92.1 | 2.6 | 0.0 | 125.3 | 1 |
| 1 | 213 | -1274 | -116 | -11 | 0 | 24 | 104 | 38.1 | 105.8 | 9.7 | 0.0 | 144.0 | 1 |
| 5 | 213 | 27 | -29 | 28 | 0 | -5 | 26 | 0.8 | 24.8 | 2.5 | 0.0 | 25.6 | 1 |
| 6 | 213 | -1075 | -29 | 27 | 0 | -4 | 26 | 32.2 | 20.8 | 2.5 | 0.0 | 53.0 | 1 |
| 7 | 213 | 488 | -29 | -33 | 0 | 16 | 26 | 14.6 | 52.7 | 2.4 | 0.0 | 67.3 | 1 |
| 8 | 213 | -587 | -29 | -33 | 0 | 17 | 26 | 17.6 | 56.8 | 2.5 | 0.0 | 74.3 | 1 |
| 9 | 213 | 1424 | -41 | 6 | 0 | 3 | 37 | 42.6 | 21.7 | 3.4 | 0.0 | 64.4 | 1 |
| 10 | 213 | -2225 | -41 | 4 | 0 | 8 | 37 | 66.6 | 35.2 | 3.4 | 0.0 | 101.8 | 1 |
| 11 | 213 | 1569 | -41 | -12 | 0 | 9 | 37 | 47.0 | 38.7 | 3.4 | 0.0 | 85.6 | 1 |
| 12 | 213 | -1950 | -29 | -13 | 0 | 12 | 26 | 58.4 | 41.7 | 2.4 | 0.0 | 100.1 | 1 |
| 13 | 213 | -1060 | -97 | -9 | 0 | 20 | 87 | 31.7 | 88.4 | 8.1 | 0.0 | 120.1 | 1 |
| 14 | 213 | 327 | 26 | 3 | 0 | -6 | -23 | 9.8 | 24.2 | 2.1 | 0.0 | 33.9 | 1 |
| 15 | 213 | -1107 | -101 | -10 | 0 | 21 | 91 | 33.1 | 92.2 | 8.4 | 0.0 | 125.3 | 1 |
| 1 | 239 | -1274 | -196 | -11 | 0 | 27 | 63 | 38.1 | 97.4 | 16.4 | 0.0 | 135.6 | 1 |
| 5 | 239 | 27 | -50 | 28 | 0 | -13 | 16 | 0.8 | 40.5 | 4.2 | 0.0 | 41.3 | 1 |
| 6 | 239 | -1075 | -50 | 27 | 0 | -11 | 16 | 32.2 | 36.0 | 4.1 | 0.0 | 68.2 | 1 |
| 7 | 239 | 488 | -49 | -33 | 0 | 24 | 16 | 14.6 | 71.9 | 4.1 | 0.0 | 86.5 | 1 |
| 8 | 239 | -587 | -49 | -33 | 0 | 26 | 16 | 17.6 | 76.5 | 4.1 | 0.0 | 94.0 | 1 |
| 9 | 239 | 1424 | -69 | 6 | 0 | 1 | 22 | 42.6 | 11.4 | 5.8 | 0.0 | 54.0 | 1 |
| 10 | 239 | -2225 | -69 | 4 | 0 | 7 | 22 | 66.6 | 26.5 | 5.8 | 0.0 | 93.2 | 1 |
| 11 | 239 | 1569 | -69 | -12 | 0 | 12 | 22 | 47.0 | 41.3 | 5.8 | 0.0 | 88.3 | 1 |
| 12 | 239 | -1950 | -50 | -13 | 0 | 15 | 16 | 58.4 | 46.9 | 4.1 | 0.0 | 105.3 | 1 |
| 13 | 239 | -1060 | -164 | -9 | 0 | 23 | 52 | 31.7 | 81.4 | 13.7 | 0.0 | 113.1 | 1 |
| 14 | 239 | 327 | 43 | 3 | 0 | -6 | -14 | 9.8 | 22.4 | 3.6 | 0.0 | 32.2 | 1 |
| 15 | 239 | -1107 | -171 | -10 | 0 | 24 | 55 | 33.1 | 84.9 | 14.3 | 0.0 | 118.0 | 1 |
| 1 | 266 | -1274 | -276 | -11 | 0 | 30 | 0 | 38.1 | 80.6 | 23.1 | 0.0 | 118.7 | 1 |
| 5 | 266 | 27 | -70 | 28 | 0 | -20 | -0 | 0.8 | 54.1 | 5.8 | 0.0 | 54.9 | 1 |
| 6 | 266 | -1075 | -70 | 27 | 0 | -18 | -0 | 32.2 | 49.0 | 5.8 | 0.0 | 81.2 | 1 |
| 7 | 266 | 488 | -70 | -33 | 0 | 33 | -0 | 14.6 | 88.9 | 5.8 | 0.0 | 103.6 | 1 |
| 8 | 266 | -587 | -70 | -33 | 0 | 35 | -0 | 17.6 | 94.0 | 5.8 | 0.0 | 111.6 | 1 |
| 9 | 266 | 1424 | -97 | 6 | 0 | -1 | 0 | 42.6 | 1.9 | 8.1 | 0.0 | 45.0 | 4 |
| 10 | 266 | -2225 | -97 | 4 | 0 | 6 | 0 | 66.6 | 14.9 | 8.1 | 0.0 | 81.5 | 1 |
| 11 | 266 | 1569 | -97 | -12 | 0 | 15 | 0 | 47.0 | 40.9 | 8.1 | 0.0 | 87.9 | 1 |
| 12 | 266 | -1950 | -70 | -13 | 0 | 19 | -0 | 58.4 | 49.9 | 5.8 | 0.0 | 108.3 | 1 |
| 13 | 266 | -1060 | -231 | -9 | 0 | 25 | 0 | 31.7 | 67.3 | 19.3 | 0.0 | 99.0 | 1 |
| 14 | 266 | 327 | 61 | 3 | 0 | -7 | -0 | 9.8 | 18.8 | 5.1 | 0.0 | 28.5 | 1 |
| 15 | 266 | -1107 | -241 | -10 | 0 | 26 | 0 | 33.1 | 70.2 | 20.1 | 0.0 | 103.3 | 1 |

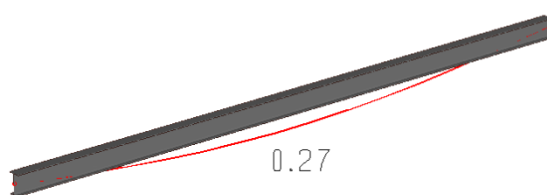
VERIFICA SPOSTAMENTI VERTICALI (RIF.)4.2.4.2.1 DELLE NTC 2008)



Prospettiva

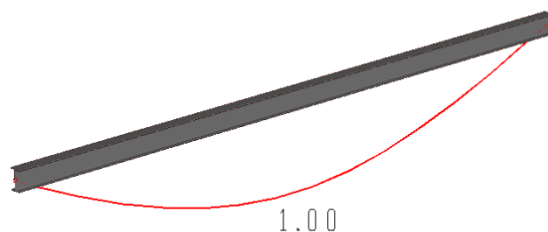
Freccia massima combinazione rara

111



Prospettiva

Freccia massima combinazione quasi permanente



Prospettiva

Freccia massima combinazione frequente

112

Luce di calcolo 692 cm

Rara $690/1.86 = 370 > 250 \rightarrow$ verificato

Frequente $690/1.00 = 690 > 250 \rightarrow$ verificato

Quasi permanente $690/0.27 = 2555 > 250 \rightarrow$ verificato

2.1. VERIFICA TRAVI PORTA LAMIERA ORRIZONTALE

Si dimensiona il profilo che sorregge la lamiera orizzontale.

Peso proprio lamiera = $8 \text{ daN} / \text{m}^2$

Spinta orizzontale vento = $61 \text{ daN} / \text{m}^2$

Luce massima = 4.32 m

Interasse massimo = 1.33 m

Area di influenza = $1.33 / 2 = 0.665 \text{ m}$

Si considera la trave semplicemente appoggiata

SLU

$M_{\text{orizzontale}} = q l^2 / 8 = 142 \text{ daN m}$

$M_{\text{verticale}} = q l^2 / 8 = 16.13 \text{ daN m}$

Intestazione:

Intestazione:

Metodo di verifica: **Stati limite**

Tipologia tabella: **Trave**

Tipo acciaio: **S 235**

Beta piano 'yx': **1.000**

Beta piano 'zx': **1.000**

Coeff. svergolamento: **1.000**

SEZ. Pf OMEGA 80x 80x30x 4.0

| Fx | Fy | Fz | Mx | My | Mz | Sf(Fx) | Sf(M) | taglio | tors. | Sf.id. | Tens.max | Loc. | Nota |
|-----|-----|-----|-------|-------|-------|--------|--------|--------|--------|--------|----------|------|------|
| daN | daN | daN | daN*m | daN*m | daN*m | daN/cm | daN/cm | daN/cm | daN/cm | daN/cm | daN/cm | | |
| 0 | 0 | 0 | 0 | 16 | 142 | 0.0 | 702.2 | 0.0 | 0.0 | 702.2 | 1600.0 | 4 | |

Verifica di **STABILITA'**, Lungh. 432.0 cm

| Fx | My eq. | Mz eq. | Sn. omega | Sn.yx | Sn.zx | Q | OMEGA | Sf | Tens.max | Nota |
|-----|--------|--------|-----------|-------|-------|------|-------|--------|----------|------|
| daN | daN*m | daN*m | | | | | | daN/cm | daN/cm | |
| 0 | 0 | 0 | 145 | 145 | 114 | 1.00 | 1.00 | 0.0 | 2395.5 | |

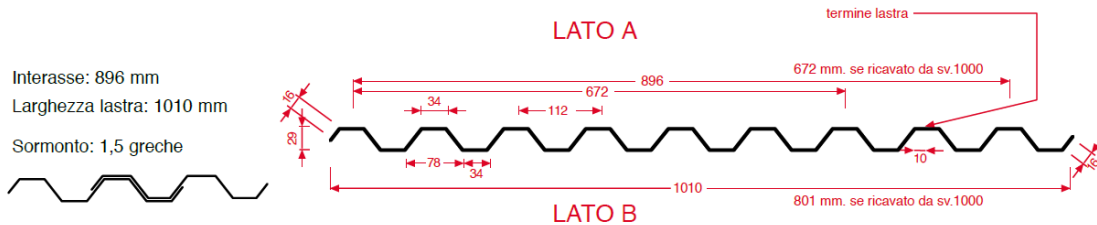
2.1. VERIFICA LAMIERA DI PARETE

Si dimensiona il profilo che sorregge la lamiera orizzontale.

Spinta orizzontale vento = 61 daN / m²

Luce massima = 1.33 m

SLU = 61 * 1.5 = 91.5 daN / m²



| CARATTERISTICHE GEOMETRICHE E CARICHI | | | | | | | | | | | |
|---|---------------------------|--------------------------|--------------------------|--|--------------|------|------|------|------|------|------|
| ALLUMINIO 3103 | | | | | | | | | | | |
| CARATTERISTICHE GEOMETRICHE DELLA SEZIONE | | | | CARICO UTILE MASSIMO kg/m ² (compreso peso proprio) | | | | | | | |
| Spessore mm | Peso (kg/m ²) | Jxx (cm ⁴ /m) | Wxx (cm ³ /m) | Spessore mm | Interasse mt | | | | | | |
| | | | | | 1,00 | 1,20 | 1,40 | 1,60 | 1,80 | 2,00 | 2,20 |
| 0,6 | 2,04 | 8,67 | 5,35 | 0,6 | 388 | 225 | 142 | 95 | 67 | 49 | 36 |
| 0,7 | 2,38 | 10,52 | 6,63 | 0,7 | 472 | 273 | 172 | 115 | 81 | 59 | 44 |
| 0,8 | 2,73 | 12,32 | 7,85 | 0,8 | 552 | 319 | 201 | 135 | 95 | 69 | 52 |
| 1,0 | 3,41 | 16,23 | 10,65 | 1,0 | 727 | 421 | 265 | 177 | 125 | 91 | 68 |

| ACCIAIO (Fe360 - ALUZINC - INOX) | | | | | | | | | | | |
|---|---------------------------|--------------------------|--------------------------|--|--------------|------|------|------|------|------|------|
| CARATTERISTICHE GEOMETRICHE DELLA SEZIONE | | | | CARICO UTILE MASSIMO kg/m ² (compreso peso proprio) | | | | | | | |
| Spessore mm | Peso (kg/m ²) | Jxx (cm ⁴ /m) | Wxx (cm ³ /m) | Spessore mm | Interasse mt | | | | | | |
| | | | | | 1,00 | 1,25 | 1,50 | 1,75 | 2,00 | 2,25 | 2,50 |
| 0,5 | 4,93 | 7,80 | 5,02 | 0,5 | 1048 | 537 | 311 | 196 | 131 | 92 | 67 |
| 0,6 | 5,92 | 9,74 | 6,41 | 0,6 | 1309 | 670 | 388 | 244 | 164 | 115 | 84 |
| 0,7 | 6,91 | 11,69 | 7,84 | 0,7 | 1573 | 805 | 466 | 293 | 197 | 138 | 101 |
| 0,8 | 7,89 | 13,41 | 9,00 | 0,8 | 1804 | 924 | 534 | 337 | 225 | 158 | 115 |

2.1. VERIFICA LAMIERA DI COPERTURA

Si dimensiona il profilo che sorregge la lamiera orizzontale.

Azioni permanenti (cap 2.1)

20 daN / m²

Azioni variabili:

Vento = 96 daN / m²

Neve = 172 daN / m²

Manutenzione = 50 daN / m²

Luce massima = 1.42 m

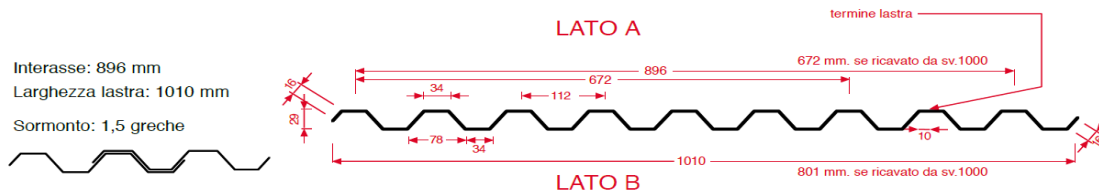
VERIFICA SLU

SLU neve = $96 \cdot 1.5 \cdot 0.6 + 172 \cdot 1.5 + 20 \cdot 1.3 = 370$ daN / m²

SLU vento = $96 \cdot 1.5 + 172 \cdot 0.5 \cdot 1.5 + 20 \cdot 1.3 = 299$ daN / m²

SLU manutenzione = $96 \cdot 1.5 \cdot 0.6 + 172 \cdot 1.5 \cdot 0.5 + 50 \cdot 1.5 + 20 \cdot 1.3 = 316$ daN / m²

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| CARATTERISTICHE GEOMETRICHE E CARICHI | | | | | | | | | | | |
|---|---------------------------|--------------------------|--------------------------|--|--------------|------|------|------|------|------|------|
| ALLUMINIO 3103 | | | | | | | | | | | |
| CARATTERISTICHE GEOMETRICHE DELLA SEZIONE | | | | CARICO UTILE MASSIMO kg/m ² (compreso peso proprio) | | | | | | | |
| Spessore mm | Peso (kg/m ²) | Jxx (cm ⁴ /m) | Wxx (cm ³ /m) | Spessore mm | Interasse mt | | | | | | |
| | | | | | 1,00 | 1,20 | 1,40 | 1,60 | 1,80 | 2,00 | 2,20 |
| 0,6 | 2,04 | 8,67 | 5,35 | 0,6 | 388 | 225 | 142 | 95 | 67 | 49 | 36 |
| 0,7 | 2,38 | 10,52 | 6,63 | 0,7 | 472 | 273 | 172 | 115 | 81 | 59 | 44 |
| 0,8 | 2,73 | 12,32 | 7,85 | 0,8 | 552 | 319 | 201 | 135 | 95 | 69 | 52 |
| 1,0 | 3,41 | 16,23 | 10,65 | 1,0 | 727 | 421 | 265 | 177 | 125 | 91 | 68 |

| ACCIAIO (Fe360 - ALUZINC - INOX) | | | | | | | | | | | |
|---|---------------------------|--------------------------|--------------------------|--|--------------|------|------|------|------|------|------|
| CARATTERISTICHE GEOMETRICHE DELLA SEZIONE | | | | CARICO UTILE MASSIMO kg/m ² (compreso peso proprio) | | | | | | | |
| Spessore mm | Peso (kg/m ²) | Jxx (cm ⁴ /m) | Wxx (cm ³ /m) | Spessore mm | Interasse mt | | | | | | |
| | | | | | 1,00 | 1,25 | 1,50 | 1,75 | 2,00 | 2,25 | 2,50 |
| 0,5 | 4,93 | 7,80 | 5,02 | 0,5 | 1048 | 537 | 311 | 196 | 131 | 92 | 67 |
| 0,6 | 5,92 | 9,74 | 6,41 | 0,6 | 1309 | 670 | 388 | 244 | 164 | 115 | 84 |
| 0,7 | 6,91 | 11,69 | 7,84 | 0,7 | 1573 | 805 | 466 | 293 | 197 | 138 | 101 |
| 0,8 | 7,89 | 13,41 | 9,00 | 0,8 | 1804 | 924 | 534 | 337 | 225 | 158 | 115 |

Il carico utile massimo con una luce di 1,50 è maggiore del carico allo SLU massimo. Risulta quindi compatibile la lamiera grecata utilizzata con i carichi applicati.

SBALZO MASSIMO

Utilizzeremo un fattore di sicurezza pari a 1,5. Tale valore sottostima la resistenza del materiale di calcolo in maniera significativa dato che di solito tale valore viene utilizzato per il calcestruzzo dove l'aleatorietà del lavoro in cantiere è molto grande. In questo caso il pannello è eseguito in stabilimenti dove il controllo sulla qualità è molto elevata.

$$15 \times 1,3 + 15 \times 1,5 + 300 \times 1,5 = 492 \text{ kg/mq} = 492 \text{ kg/ml}$$

$$l = 0.6 \text{ m}$$

$$M_{sd} = 1/8 q l^2 = 373 \text{ Ncm}$$

$$W_{el} = b \cdot h^2 / 6 = 900 \text{ mm}^3$$

$$F_d = 2.35 / 1.5 = 1.57 \text{ N/mm}^2$$

$$M_{rd} = W_{el} f_d / \gamma = 900 \times 1.57 / 1,05 = 1346 \text{ Nmm}$$

$$M_{rd} > M_{sd} : 1346 \text{ Nmm} > 373 \text{ Nmm verificato}$$

Verifica a taglio

Si considera il materiale isotropo

La forza di taglio agente è 2952 N

$$F_{yk} = 2.35 / 1.5 = 1.57 \text{ N/mm}^2$$

$$V_{c,Rd} = \frac{A_v \cdot f_{yk}}{\sqrt{3} \cdot \gamma_{M0}}$$

$$\text{Area } 1012 \text{ mm}^2$$

$$V_{c,Rd} = 1012 \cdot 1.57 / 1.732 \cdot 1.5 = 611.56 \text{ N}$$

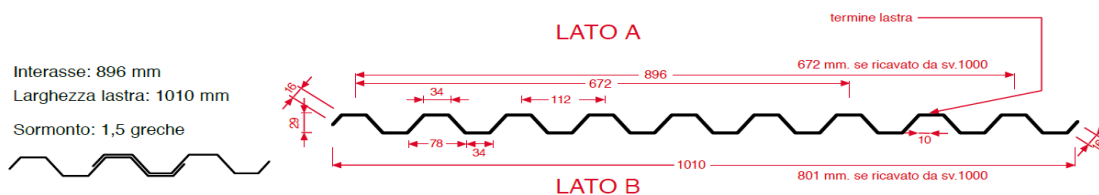
$$I.R. = 0.1 < 1 \text{ verificato}$$

VERIFICA SLE -> RARA

$$SLE_{neve} = 96 \cdot 0.6 + 172 + 20 = 250 \text{ daN / m}^2$$

$$SLE_{vento} = 96 + 172 \cdot 0.5 + 20 = 202 \text{ daN / m}^2$$

$$\text{SLE manutenzione} = 96 \cdot 0.6 + 172 \cdot 0.5 + 50 + 20 = 214 \text{ daN / m}^2$$



| CARATTERISTICHE GEOMETRICHE E CARICHI | | | | | | | | | | | |
|---|---------------------------|--------------------------|--------------------------|--|--------------|------|------|------|------|------|------|
| ALLUMINIO 3103 | | | | | | | | | | | |
| CARATTERISTICHE GEOMETRICHE DELLA SEZIONE | | | | CARICO UTILE MASSIMO kg/m ² (compreso peso proprio) | | | | | | | |
| Spessore mm | Peso (kg/m ²) | Jxx (cm ⁴ /m) | Wxx (cm ³ /m) | Spessore mm | Interasse mt | | | | | | |
| | | | | | 1,00 | 1,20 | 1,40 | 1,60 | 1,80 | 2,00 | 2,20 |
| 0,6 | 2,04 | 8,67 | 5,35 | 0,6 | 388 | 225 | 142 | 95 | 67 | 49 | 36 |
| 0,7 | 2,38 | 10,52 | 6,63 | 0,7 | 472 | 273 | 172 | 115 | 81 | 59 | 44 |
| 0,8 | 2,73 | 12,32 | 7,85 | 0,8 | 552 | 319 | 201 | 135 | 95 | 69 | 52 |
| 1,0 | 3,41 | 16,23 | 10,65 | 1,0 | 727 | 421 | 265 | 177 | 125 | 91 | 68 |

| ACCIAIO (Fe360 - ALUZINC - INOX) | | | | | | | | | | | |
|---|---------------------------|--------------------------|--------------------------|--|--------------|------|------|------|------|------|------|
| CARATTERISTICHE GEOMETRICHE DELLA SEZIONE | | | | CARICO UTILE MASSIMO kg/m ² (compreso peso proprio) | | | | | | | |
| Spessore mm | Peso (kg/m ²) | Jxx (cm ⁴ /m) | Wxx (cm ³ /m) | Spessore mm | Interasse mt | | | | | | |
| | | | | | 1,00 | 1,25 | 1,50 | 1,75 | 2,00 | 2,25 | 2,50 |
| 0,5 | 4,93 | 7,80 | 5,02 | 0,5 | 1048 | 537 | 311 | 196 | 131 | 92 | 67 |
| 0,6 | 5,92 | 9,74 | 6,41 | 0,6 | 1309 | 670 | 388 | 244 | 164 | 115 | 84 |
| 0,7 | 6,91 | 11,69 | 7,84 | 0,7 | 1573 | 805 | 466 | 293 | 197 | 138 | 101 |
| 0,8 | 7,89 | 13,41 | 9,00 | 0,8 | 1804 | 924 | 534 | 337 | 225 | 158 | 115 |

Stati limite di esercizio gli spostamenti verticali (frecce) secondo 4.2.4.2 , secondo tab. 4.2.X

Si verifica lo spostamento δ_{max} nello stato finale per tutti i carichi, inferiore a $1/250 L$, e δ_2 , dovuto ai carichi variabili, inferiore a $1/300L$.

- Carichi complessivi: $96+20+172 = 288 \text{ kg/ml} = 2.88 \text{ kg/cm}$

$$E = 1980000 \text{ daN/cm}^2$$

$$J = 13.41 \text{ cm}^2/\text{m}$$

$$f = 0.0054 q L^4 / EJ = 0.0054 \cdot 2.88 \cdot 142^4 / 2100000 \cdot 13.41 = 0,20 \text{ cm}$$

$$f_{lim} = 1/250 L = 0,64$$

$$0,20 < 0,64 \text{ verificato}$$

- Carichi variabili: $96+172 = 268 \text{ kg/ml} = 2.68 \text{ kg/cm}$

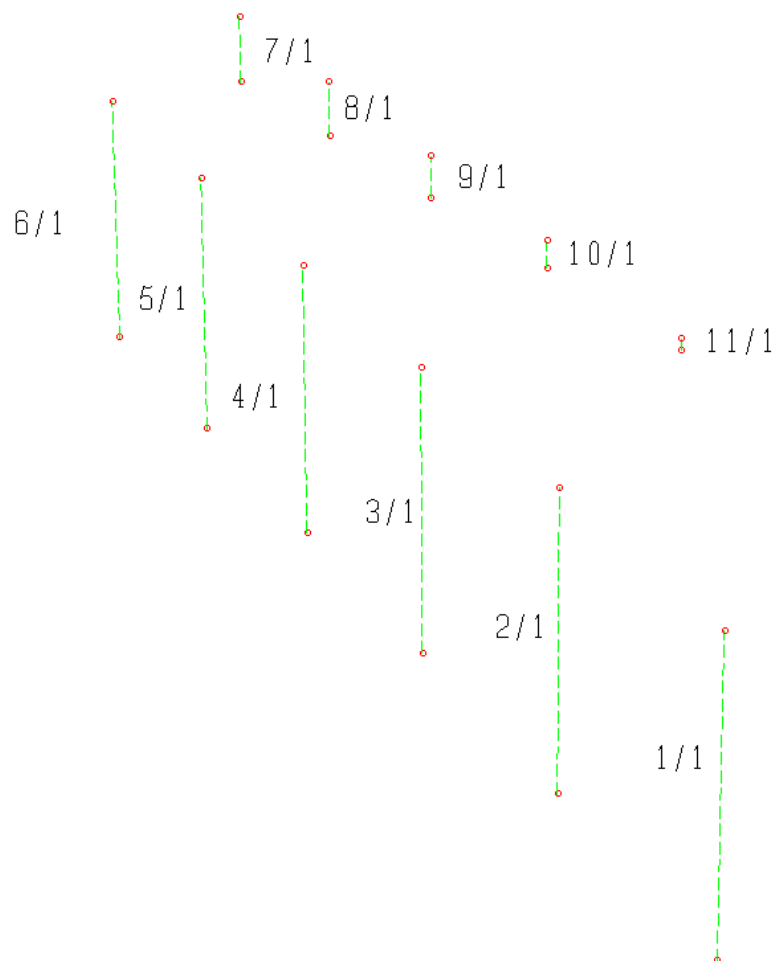
$$f = 0.0054 q L^4 / EJ = 0.0054 \cdot 2.68 \cdot 142^4 / 2100000 \cdot 60,12 = 0,18 \text{ cm}$$

$$f_{lim} = 1/300 L = 0.47$$

$$0,18 < 0,47 \text{ verificato}$$

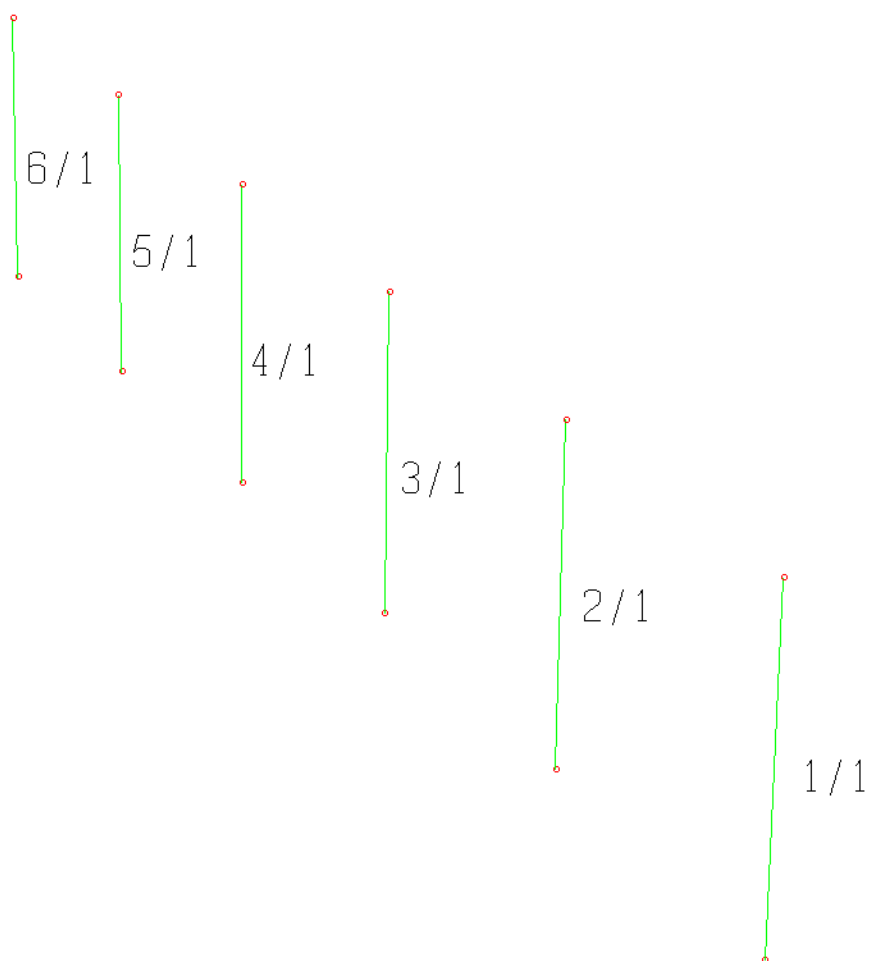
3. CORPO 2 E 3

3.1. VERIFICA COLONNE IN ACCIAIO

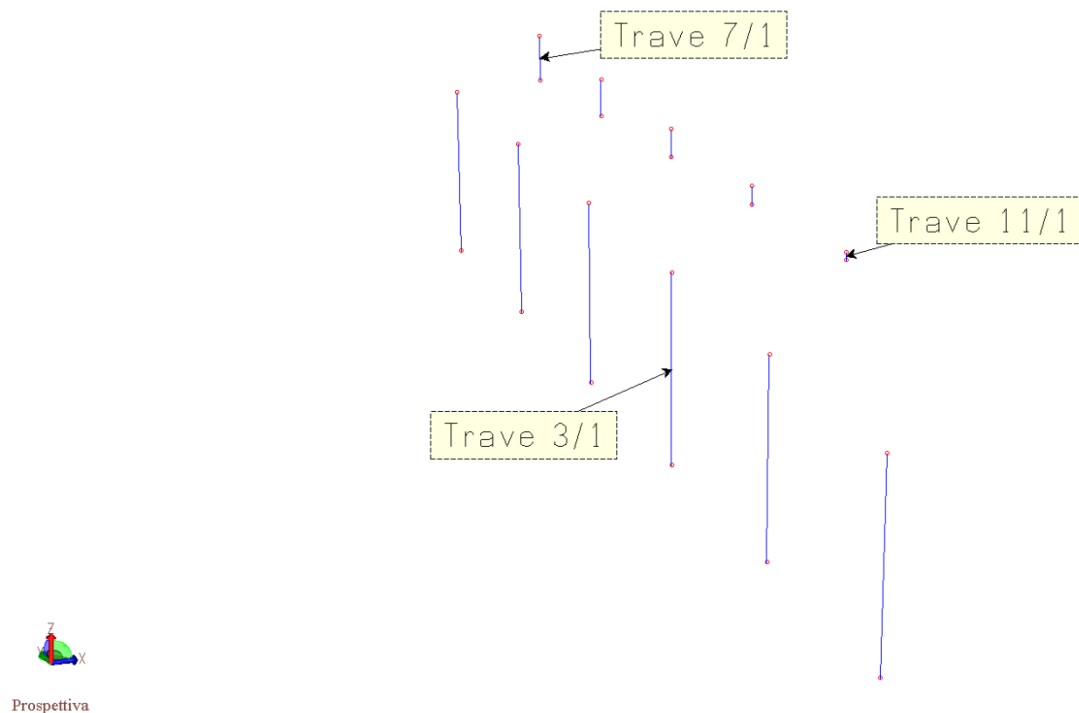


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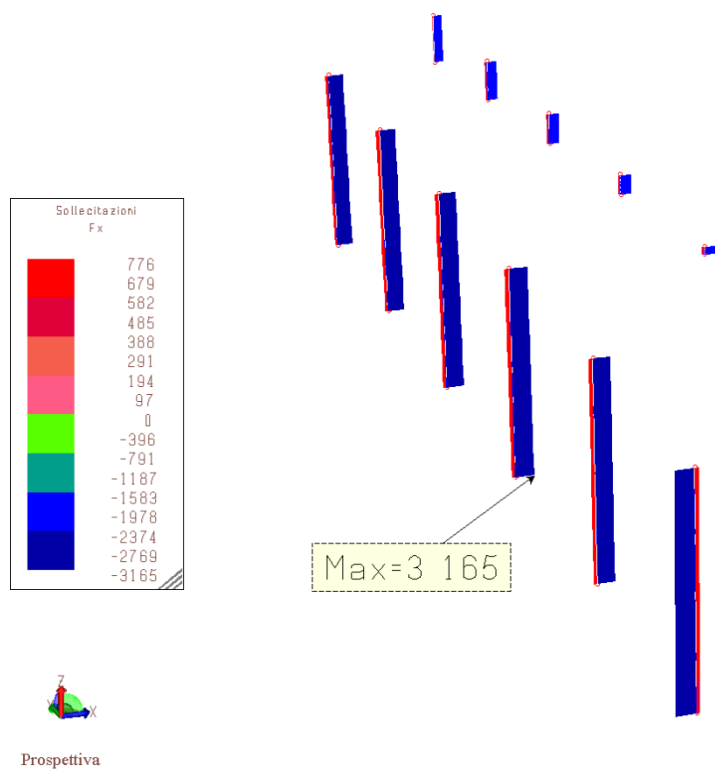
Vista assonometrica colonne corpo 2 con indicato il codice degli elementi asta



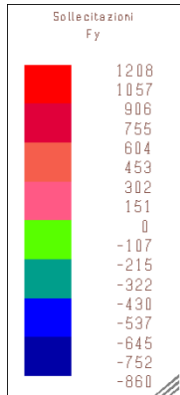
Vista assonometrica colonne corpo 3 con indicato il codice degli elementi asta



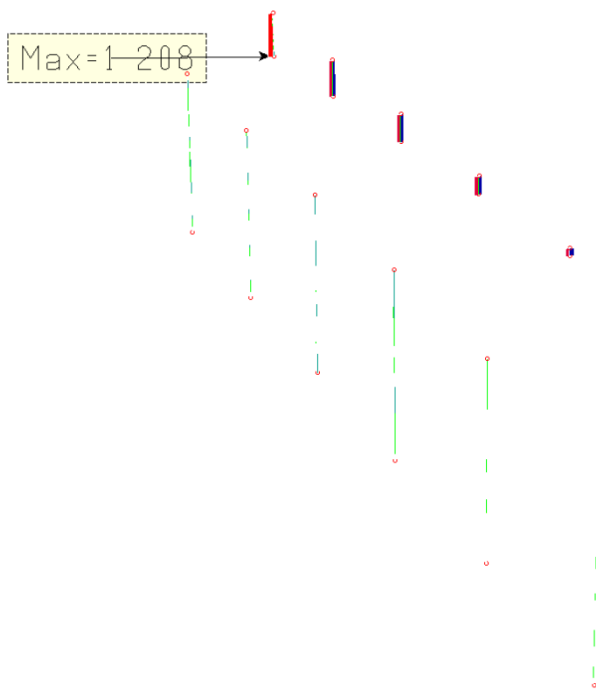
Vista assonometrica colonne maggiormente sollecitate



Sforzo normale

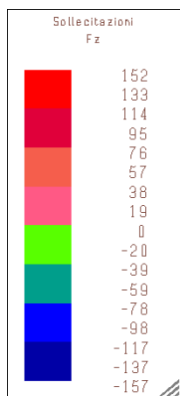


Prospettiva

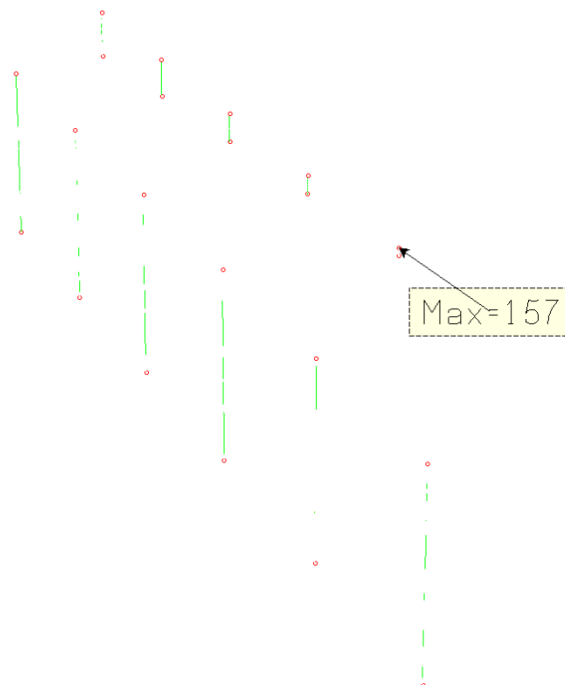


Taglio F_y

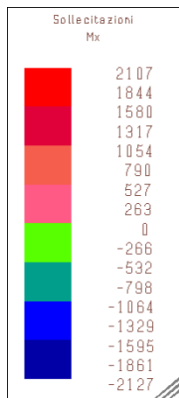
122



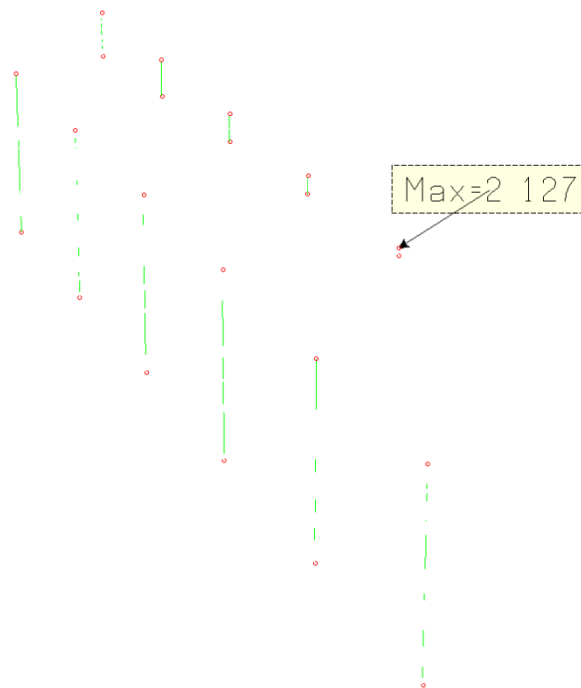
Prospettiva



Taglio F_z

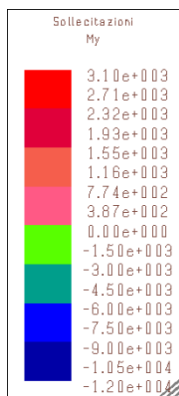


Prospettiva

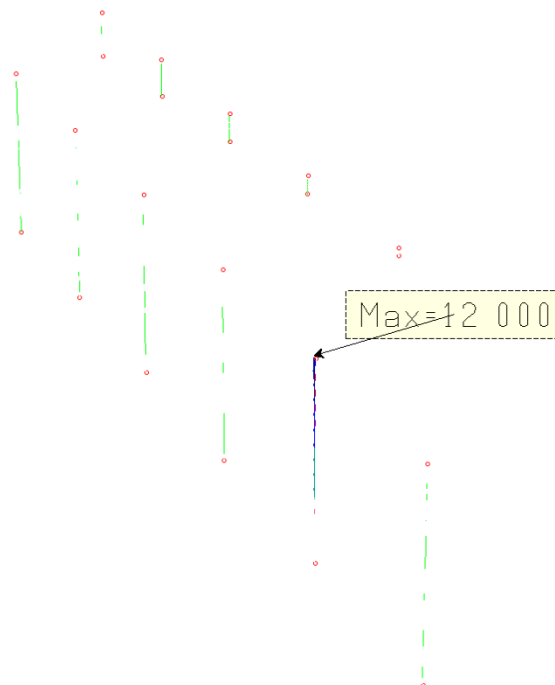


Momento torcente

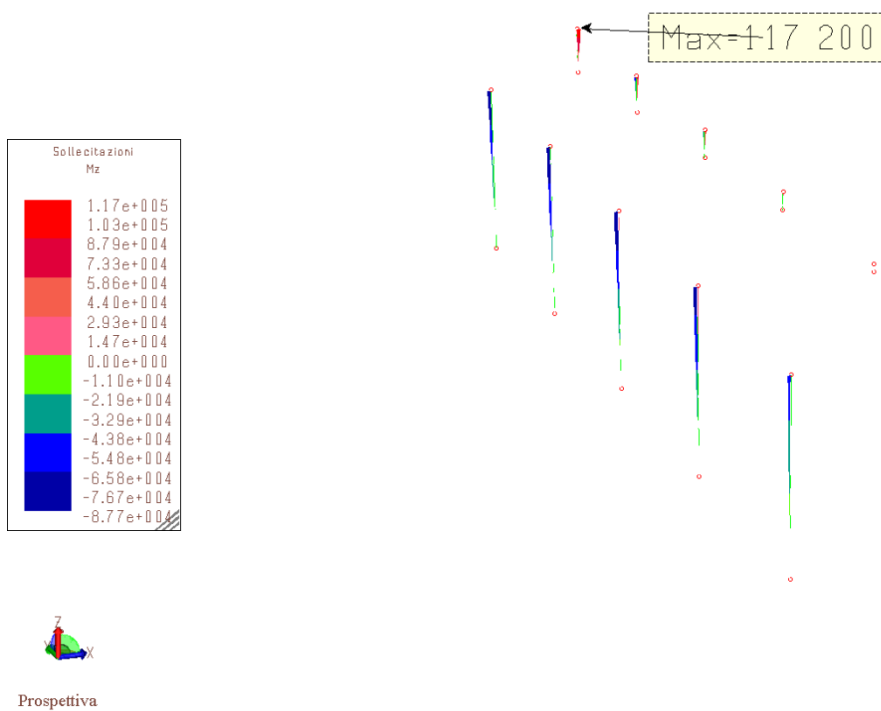
123



Prospettiva



Momento My



Colonne Mz

3.1.1. VERIFICA SLU E SLE

La verifica è stata eseguita delle aste maggiormente sollecitate.

Lavoro: **Blocco 2** Intestazione lavoro: **ESECUTIVO**

Elemento: **TRAVE** Metodo di verifica: **Stati limite**

Gruppo: **1** Descrizione: **colonne acciaio**

Tabella: **Tabella pilastri**

Tipo acciaio: **S 275** Beta piano 'yx': **2.000** Beta piano 'zx': **2.000**

ASTA NUM. 3 NI 8 NF 50 Lungh. 348.0 cm SEZ. 2 Ps HEB 120

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf(Fx) | Sf(M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|-----|-------|------|----|-------|----|------|--------|-------|--------|-------|--------|------|------|
| -- | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -3165 | -239 | 0 | 0 | 0 | 0 | 93.1 | 0.0 | 33.9 | 0.0 | 110.1 | 4 | |
| 5 | 0 | -803 | -50 | 0 | 0 | 0 | 0 | 23.6 | 0.0 | 7.2 | 0.0 | 26.7 | 4 | |
| 6 | 0 | -990 | -50 | -0 | 0 | 0 | 0 | 29.1 | 0.0 | 7.1 | 0.0 | 31.6 | 4 | |
| 7 | 0 | -814 | -59 | 0 | 0 | 0 | 0 | 23.9 | 0.0 | 8.4 | 0.0 | 28.1 | 4 | |
| 8 | 0 | -1002 | -59 | -0 | 0 | 0 | 0 | 29.5 | 0.0 | 8.4 | 0.0 | 32.9 | 4 | |
| 9 | 0 | -1124 | -76 | 1 | 0 | 0 | 0 | 33.1 | 0.0 | 10.8 | 0.0 | 38.0 | 4 | |
| 10 | 0 | -1748 | -76 | -1 | 0 | 0 | 0 | 51.4 | 0.0 | 10.8 | 0.0 | 54.7 | 4 | |
| 11 | 0 | -1127 | -79 | 1 | 0 | 0 | 0 | 33.1 | 0.0 | 11.2 | 0.0 | 38.4 | 4 | |
| 12 | 0 | -1434 | -56 | -1 | 0 | 0 | 0 | 42.2 | 0.0 | 8.0 | 0.0 | 44.4 | 4 | |
| 13 | 0 | -2649 | -198 | 0 | 0 | 0 | 0 | 77.9 | 0.0 | 28.1 | 0.0 | 91.9 | 4 | |
| 14 | 0 | 683 | 64 | -0 | 0 | 0 | 0 | 20.1 | 0.0 | 9.0 | 0.0 | 25.4 | 4 | |
| 15 | 0 | -2762 | -207 | 0 | 0 | 0 | 0 | 81.2 | 0.0 | 29.4 | 0.0 | 95.9 | 4 | |
| 1 | 174 | -3105 | -239 | 0 | 0 | -0 | -416 | 91.3 | 289.3 | 33.9 | 0.0 | 380.6 | 1 | |
| 5 | 174 | -756 | -50 | 0 | 0 | -0 | -88 | 22.2 | 61.7 | 7.2 | 0.0 | 84.0 | 1 | |
| 6 | 174 | -943 | -50 | -0 | 0 | 0 | -88 | 27.7 | 61.4 | 7.1 | 0.0 | 89.1 | 1 | |
| 7 | 174 | -768 | -59 | 0 | 0 | -0 | -104 | 22.6 | 72.7 | 8.4 | 0.0 | 95.3 | 1 | |
| 8 | 174 | -955 | -59 | -0 | 0 | 0 | -103 | 28.1 | 72.4 | 8.4 | 0.0 | 100.5 | 1 | |
| 9 | 174 | -1064 | -76 | 1 | 0 | -1 | -132 | 31.3 | 94.4 | 10.8 | 0.0 | 125.7 | 1 | |
| 10 | 174 | -1688 | -76 | -1 | 0 | 1 | -132 | 49.6 | 93.8 | 10.8 | 0.0 | 143.4 | 1 | |
| 11 | 174 | -1067 | -79 | 1 | 0 | -1 | -137 | 31.4 | 97.7 | 11.2 | 0.0 | 129.1 | 1 | |
| 12 | 174 | -1388 | -56 | -1 | 0 | 1 | -98 | 40.8 | 70.1 | 8.0 | 0.0 | 110.9 | 1 | |
| 13 | 174 | -2589 | -198 | 0 | 0 | -0 | -345 | 76.1 | 239.8 | 28.1 | 0.0 | 316.0 | 1 | |
| 14 | 174 | 729 | 64 | -0 | 0 | 0 | 111 | 21.4 | 76.9 | 9.0 | 0.0 | 98.4 | 1 | |
| 15 | 174 | -2702 | -207 | 0 | 0 | -0 | -360 | 79.5 | 250.6 | 29.4 | 0.0 | 330.1 | 1 | |
| 1 | 348 | -3044 | -239 | 0 | 0 | -1 | -832 | 89.5 | 578.6 | 33.9 | 0.0 | 668.1 | 1 | |
| 5 | 348 | -710 | -50 | 0 | 0 | -1 | -175 | 20.9 | 123.5 | 7.2 | 0.0 | 144.4 | 1 | |
| 6 | 348 | -897 | -50 | -0 | 0 | 1 | -175 | 26.4 | 122.7 | 7.1 | 0.0 | 149.1 | 1 | |
| 7 | 348 | -721 | -59 | 0 | 0 | -1 | -207 | 21.2 | 145.5 | 8.4 | 0.0 | 166.7 | 1 | |
| 8 | 348 | -909 | -59 | -0 | 0 | 1 | -207 | 26.7 | 144.8 | 8.4 | 0.0 | 171.5 | 1 | |
| 9 | 348 | -1003 | -76 | 1 | 0 | -3 | -264 | 29.5 | 188.8 | 10.8 | 0.0 | 218.3 | 1 | |
| 10 | 348 | -1627 | -76 | -1 | 0 | 2 | -264 | 47.9 | 187.5 | 10.8 | 0.0 | 235.4 | 1 | |
| 11 | 348 | -1006 | -79 | 1 | 0 | -3 | -274 | 29.6 | 195.4 | 11.2 | 0.0 | 225.0 | 1 | |
| 12 | 348 | -1342 | -56 | -1 | 0 | 2 | -195 | 39.5 | 140.2 | 8.0 | 0.0 | 179.6 | 1 | |
| 13 | 348 | -2529 | -198 | 0 | 0 | -0 | -689 | 74.4 | 479.7 | 28.1 | 0.0 | 554.1 | 1 | |
| 14 | 348 | 776 | 64 | -0 | 0 | 0 | 221 | 22.8 | 153.8 | 9.0 | 0.0 | 176.6 | 1 | |
| 15 | 348 | -2641 | -207 | 0 | 0 | -1 | -720 | 77.7 | 501.2 | 29.4 | 0.0 | 578.9 | 1 | |

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Verifica di STABILITA' e/o SVERGOLAMENTO

| n.comb | Fx | My eq. | Mz eq. | Sn. omega | Sn. yx | Sn. zx | OMEGA | OMEGA1 | Sf | Nota |
|--------|-------|--------|--------|-----------|--------|--------|-------|--------|--------|-------------|
| -- | daN | daN*m | | | | | | | daN/cm | |
| 1 | -3165 | 0 | 499 | 228 | 139 | 228 | 8.13 | 1.00 | 1137.2 | Sn.zx > 150 |
| 5 | -803 | 1 | 105 | 228 | 139 | 228 | 8.13 | 1.00 | 267.7 | Sn.zx > 150 |
| 6 | -990 | 0 | 105 | 228 | 139 | 228 | 8.13 | 1.00 | 312.4 | Sn.zx > 150 |
| 7 | -814 | 1 | 124 | 228 | 139 | 228 | 8.13 | 1.00 | 284.0 | Sn.zx > 150 |
| 8 | -1002 | 0 | 124 | 228 | 139 | 228 | 8.13 | 1.00 | 328.9 | Sn.zx > 150 |
| 9 | -1124 | 2 | 159 | 228 | 139 | 228 | 8.13 | 1.00 | 385.9 | Sn.zx > 150 |
| 10 | -1748 | 1 | 158 | 228 | 139 | 228 | 8.13 | 1.00 | 536.5 | Sn.zx > 150 |
| 11 | -1127 | 2 | 164 | 228 | 139 | 228 | 8.13 | 1.00 | 390.7 | Sn.zx > 150 |
| 12 | -1434 | 1 | 117 | 228 | 139 | 228 | 8.13 | 1.00 | 430.7 | Sn.zx > 150 |
| 13 | -2649 | 0 | 414 | 228 | 139 | 228 | 8.13 | 1.00 | 943.9 | Sn.zx > 150 |
| 14 | 776 | 0 | 133 | 228 | 139 | 228 | 1.00 | 1.00 | 115.1 | Sn.zx > 150 |
| 15 | -2762 | 0 | 432 | 228 | 139 | 228 | 8.13 | 1.00 | 986.0 | Sn.zx > 150 |

ASTA NUM. 7 NI 5 NF 31 Lungh. 102.0 cm SEZ. 2 Ps HEB 120

categoria: p.p. y Vento qy tot.

qy medio: 0.0000 1.2960 1.2960 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf(Fx) | Sf(M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|-----|-------|------|----|-------|----|------|--------|-------|--------|-------|--------|------|------|
| -- | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -1979 | 1208 | 0 | 0 | 0 | 0 | 58.2 | 0.0 | 171.5 | 0.0 | 302.7 | 4 | |
| 5 | 0 | -553 | 323 | 2 | 0 | 0 | 0 | 16.3 | 0.0 | 45.8 | 0.0 | 81.0 | 4 | |
| 6 | 0 | -553 | 323 | -2 | 0 | 0 | 0 | 16.3 | 0.0 | 45.8 | 0.0 | 81.0 | 4 | |
| 7 | 0 | -544 | 295 | 2 | 0 | 0 | 0 | 16.0 | 0.0 | 41.9 | 0.0 | 74.3 | 4 | |
| 8 | 0 | -544 | 295 | -2 | 0 | 0 | 0 | 16.0 | 0.0 | 41.9 | 0.0 | 74.3 | 4 | |
| 9 | 0 | -759 | 432 | 6 | 0 | 0 | 0 | 22.3 | 0.0 | 61.4 | 0.0 | 108.6 | 4 | |
| 10 | 0 | -759 | 432 | -6 | 0 | 0 | 0 | 22.3 | 0.0 | 61.4 | 0.0 | 108.6 | 4 | |
| 11 | 0 | -757 | 424 | 6 | 0 | 0 | 0 | 22.3 | 0.0 | 60.2 | 0.0 | 106.6 | 4 | |
| 12 | 0 | -547 | 305 | -6 | 0 | 0 | 0 | 16.1 | 0.0 | 43.3 | 0.0 | 76.7 | 4 | |
| 13 | 0 | -1670 | 1065 | 0 | 0 | 0 | 0 | 49.1 | 0.0 | 151.2 | 0.0 | 266.5 | 4 | |
| 14 | 0 | 346 | -317 | -0 | 0 | 0 | 0 | 10.2 | 0.0 | 45.0 | 0.0 | 78.7 | 4 | |
| 15 | 0 | -1737 | 1066 | 0 | 0 | 0 | 0 | 51.1 | 0.0 | 151.4 | 0.0 | 267.1 | 4 | |
| | | | | | | | | | | | | | | |
| 1 | 51 | -1962 | 1149 | 0 | 0 | -0 | 601 | 57.7 | 417.7 | 163.1 | 0.0 | 475.4 | 1 | |
| 5 | 51 | -539 | 323 | 2 | 0 | -1 | 165 | 15.9 | 116.2 | 45.8 | 0.0 | 132.0 | 1 | |
| 6 | 51 | -539 | 323 | -2 | 0 | 1 | 165 | 15.9 | 116.1 | 45.8 | 0.0 | 132.0 | 1 | |
| 7 | 51 | -531 | 295 | 2 | 0 | -1 | 151 | 15.6 | 106.4 | 41.9 | 0.0 | 122.0 | 1 | |
| 8 | 51 | -531 | 295 | -2 | 0 | 1 | 151 | 15.6 | 106.3 | 41.9 | 0.0 | 121.9 | 1 | |
| 9 | 51 | -741 | 432 | 6 | 0 | -3 | 220 | 21.8 | 159.2 | 61.4 | 0.0 | 181.0 | 1 | |
| 10 | 51 | -741 | 432 | -6 | 0 | 3 | 220 | 21.8 | 159.1 | 61.4 | 0.0 | 180.9 | 1 | |
| 11 | 51 | -739 | 424 | 6 | 0 | -3 | 216 | 21.7 | 156.3 | 60.2 | 0.0 | 178.0 | 1 | |
| 12 | 51 | -534 | 305 | -6 | 0 | 3 | 155 | 15.7 | 114.0 | 43.3 | 0.0 | 129.7 | 1 | |
| 13 | 51 | -1653 | 966 | 0 | 0 | -0 | 518 | 48.6 | 359.7 | 137.1 | 0.0 | 408.3 | 1 | |
| 14 | 51 | 359 | -218 | -0 | 0 | 0 | -136 | 10.6 | 94.8 | 31.0 | 0.0 | 105.4 | 1 | |
| 15 | 51 | -1720 | 1006 | 0 | 0 | -0 | 528 | 50.6 | 366.9 | 142.9 | 0.0 | 417.5 | 1 | |
| | | | | | | | | | | | | | | |
| 1 | 102 | -1944 | 1090 | 0 | 0 | -0 | 1172 | 57.2 | 814.3 | 154.8 | 0.0 | 871.4 | 1 | |
| 5 | 102 | -526 | 323 | 2 | 0 | -2 | 329 | 15.5 | 232.3 | 45.8 | 0.0 | 247.8 | 1 | |
| 6 | 102 | -526 | 323 | -2 | 0 | 2 | 329 | 15.5 | 232.2 | 45.8 | 0.0 | 247.7 | 1 | |
| 7 | 102 | -517 | 295 | 2 | 0 | -2 | 301 | 15.2 | 212.8 | 41.9 | 0.0 | 228.0 | 1 | |
| 8 | 102 | -517 | 295 | -2 | 0 | 2 | 301 | 15.2 | 212.6 | 41.9 | 0.0 | 227.8 | 1 | |
| 9 | 102 | -724 | 432 | 6 | 0 | -6 | 441 | 21.3 | 318.4 | 61.4 | 0.0 | 339.7 | 1 | |
| 10 | 102 | -724 | 432 | -6 | 0 | 6 | 441 | 21.3 | 318.2 | 61.4 | 0.0 | 339.4 | 1 | |
| 11 | 102 | -721 | 424 | 6 | 0 | -6 | 432 | 21.2 | 312.5 | 60.2 | 0.0 | 333.7 | 1 | |
| 12 | 102 | -520 | 305 | -6 | 0 | 6 | 311 | 15.3 | 227.9 | 43.3 | 0.0 | 243.2 | 1 | |
| 13 | 102 | -1635 | 867 | 0 | 0 | -0 | 985 | 48.1 | 684.3 | 123.1 | 0.0 | 732.4 | 1 | |
| 14 | 102 | 373 | -119 | -0 | 0 | 0 | -222 | 11.0 | 154.5 | 16.9 | 0.0 | 165.5 | 1 | |
| 15 | 102 | -1702 | 947 | 0 | 0 | -0 | 1026 | 50.1 | 712.8 | 134.4 | 0.0 | 762.9 | 1 | |

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Verifica di STABILITA' e/o SVERGOLAMENTO

| n.comb | Fx | My eq. | Mz eq. | Sn. omega | Sn.yx | Sn.zx | OMEGA | OMEGA1 | Sf | Nota |
|--------|-------|--------|--------|-----------|-------|-------|-------|--------|--------|------|
| -- | daN | daN*m | | | | | | | daN/cm | |
| 1 | -1979 | 0 | 703 | 67 | 41 | 67 | 1.50 | 1.00 | 578.2 | |
| 5 | -553 | 1 | 198 | 67 | 41 | 67 | 1.50 | 1.00 | 164.0 | |
| 6 | -553 | 1 | 198 | 67 | 41 | 67 | 1.50 | 1.00 | 163.9 | |
| 7 | -544 | 1 | 181 | 67 | 41 | 67 | 1.50 | 1.00 | 151.8 | |
| 8 | -544 | 1 | 181 | 67 | 41 | 67 | 1.50 | 1.00 | 151.7 | |
| 9 | -759 | 4 | 265 | 67 | 41 | 67 | 1.50 | 1.00 | 224.9 | |
| 10 | -759 | 4 | 265 | 67 | 41 | 67 | 1.50 | 1.00 | 224.8 | |
| 11 | -757 | 4 | 259 | 67 | 41 | 67 | 1.50 | 1.00 | 221.3 | |
| 12 | -547 | 4 | 187 | 67 | 41 | 67 | 1.50 | 1.00 | 161.1 | |
| 13 | -1670 | 0 | 591 | 67 | 41 | 67 | 1.50 | 1.00 | 485.9 | |
| 14 | 373 | 0 | 133 | 67 | 41 | 67 | 1.00 | 1.00 | 103.7 | |
| 15 | -1737 | 0 | 616 | 67 | 41 | 67 | 1.50 | 1.00 | 506.1 | |

ASTA NUM. 11 NI 2 NF 12 Lungh. 14.0 cm SEZ. 2 Ps HEB 120

categoria: p.p. y Vento qy tot.

qy medio: 0.0000 1.2960 1.2960 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|------|------|-------|-----|------|---------|--------|--------|-------|--------|------|------|
| -- | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -1979 | -227 | -7 | 0 | 0 | 0 | 58.2 | 0.0 | 32.2 | 0.0 | 80.6 | 4 | |
| 5 | 0 | -479 | -860 | 46 | 0 | 0 | 0 | 14.1 | 0.0 | 122.1 | 0.0 | 212.0 | 4 | |
| 6 | 0 | -479 | -860 | -47 | 0 | 0 | 0 | 14.1 | 0.0 | 122.1 | 0.0 | 211.9 | 4 | |
| 7 | 0 | -468 | 756 | 45 | 0 | 0 | 0 | 13.8 | 0.0 | 107.3 | 0.0 | 186.4 | 4 | |
| 8 | 0 | -468 | 756 | -49 | 0 | 0 | 0 | 13.8 | 0.0 | 107.3 | 0.0 | 186.4 | 4 | |
| 9 | 0 | -666 | -316 | 153 | 0 | 0 | 0 | 19.6 | 0.0 | 44.9 | 0.0 | 80.1 | 4 | |
| 10 | 0 | -666 | -315 | -157 | 0 | 0 | 0 | 19.6 | 0.0 | 44.7 | 0.0 | 79.9 | 4 | |
| 11 | 0 | -662 | 169 | 152 | 0 | 0 | 0 | 19.5 | 0.0 | 24.0 | 0.0 | 45.9 | 4 | |
| 12 | 0 | -472 | 191 | -156 | 0 | 0 | 0 | 13.9 | 0.0 | 27.1 | 0.0 | 48.9 | 4 | |
| 13 | 0 | -1647 | -188 | -6 | 0 | 0 | 0 | 48.4 | 0.0 | 26.7 | 0.0 | 67.0 | 4 | |
| 14 | 0 | 490 | 60 | 1 | 0 | 0 | 0 | 14.4 | 0.0 | 8.6 | 0.0 | 20.7 | 4 | |
| 15 | 0 | -1719 | -196 | -6 | 0 | 0 | 0 | 50.6 | 0.0 | 27.9 | 0.0 | 69.9 | 4 | |
| | | | | | | | | | | | | | | |
| 1 | 7 | -1982 | -235 | -7 | 0 | 1 | -16 | 58.3 | 12.2 | 33.3 | 0.0 | 85.3 | 3 | |
| 5 | 7 | -481 | -860 | 46 | 0 | -3 | -60 | 14.2 | 47.9 | 122.1 | 0.0 | 212.0 | 4 | |
| 6 | 7 | -481 | -860 | -47 | 0 | 3 | -60 | 14.2 | 48.1 | 122.1 | 0.0 | 211.9 | 4 | |
| 7 | 7 | -470 | 756 | 45 | 0 | -3 | 53 | 13.8 | 42.7 | 107.3 | 0.0 | 186.4 | 4 | |
| 8 | 7 | -470 | 756 | -49 | 0 | 3 | 53 | 13.8 | 43.2 | 107.3 | 0.0 | 186.4 | 4 | |
| 9 | 7 | -668 | -316 | 153 | 0 | -11 | -22 | 19.6 | 35.5 | 44.9 | 0.0 | 80.4 | 4 | |
| 10 | 7 | -668 | -315 | -157 | 0 | 11 | -22 | 19.7 | 36.0 | 44.7 | 0.0 | 80.2 | 4 | |
| 11 | 7 | -664 | 169 | 152 | 0 | -11 | 12 | 19.5 | 28.3 | 24.0 | 0.0 | 48.7 | 3 | |
| 12 | 7 | -474 | 191 | -156 | 0 | 11 | 13 | 13.9 | 29.9 | 27.1 | 0.0 | 50.4 | 3 | |
| 13 | 7 | -1650 | -202 | -6 | 0 | 0 | -14 | 48.5 | 10.3 | 28.6 | 0.0 | 71.9 | 3 | |
| 14 | 7 | 488 | 74 | 1 | 0 | -0 | 5 | 14.4 | 3.4 | 10.5 | 0.0 | 23.7 | 3 | |
| 15 | 7 | -1722 | -204 | -6 | 0 | 0 | -14 | 50.6 | 10.6 | 29.0 | 0.0 | 74.1 | 3 | |
| | | | | | | | | | | | | | | |
| 1 | 14 | -1984 | -243 | -7 | 0 | 1 | -33 | 58.4 | 24.7 | 34.5 | 0.0 | 94.1 | 3 | |
| 5 | 14 | -483 | -860 | 46 | 0 | -6 | -120 | 14.2 | 95.8 | 122.1 | 0.0 | 212.0 | 4 | |
| 6 | 14 | -483 | -860 | -47 | 0 | 7 | -120 | 14.2 | 96.1 | 122.1 | 0.0 | 212.0 | 4 | |
| 7 | 14 | -472 | 756 | 45 | 0 | -6 | 106 | 13.9 | 85.4 | 107.3 | 0.0 | 186.4 | 4 | |
| 8 | 14 | -472 | 756 | -49 | 0 | 7 | 106 | 13.9 | 86.3 | 107.3 | 0.0 | 186.5 | 4 | |
| 9 | 14 | -670 | -316 | 153 | 0 | -21 | -44 | 19.7 | 71.0 | 44.9 | 0.0 | 90.7 | 1 | |
| 10 | 14 | -671 | -315 | -157 | 0 | 22 | -44 | 19.7 | 72.0 | 44.7 | 0.0 | 91.7 | 1 | |
| 11 | 14 | -667 | 169 | 152 | 0 | -21 | 24 | 19.6 | 56.6 | 24.0 | 0.0 | 76.2 | 1 | |
| 12 | 14 | -476 | 191 | -156 | 0 | 22 | 27 | 14.0 | 59.8 | 27.1 | 0.0 | 73.8 | 1 | |
| 13 | 14 | -1652 | -215 | -6 | 0 | 1 | -28 | 48.6 | 21.2 | 30.6 | 0.0 | 80.4 | 3 | |
| 14 | 14 | 487 | 88 | 1 | 0 | -0 | 10 | 14.3 | 7.4 | 12.4 | 0.0 | 28.0 | 3 | |
| 15 | 14 | -1724 | -213 | -6 | 0 | 1 | -29 | 50.7 | 21.5 | 30.2 | 0.0 | 82.0 | 3 | |

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Verifica di STABILITA' e/o SVERGOLAMENTO

| n.comb | Fx | My eq. | Mz eq. | Sn. omega | Sn.yx | Sn.zx | OMEGA | OMEGA1 | Sf | Nota |
|--------|-------|--------|--------|-----------|-------|-------|-------|--------|--------|------|
| -- | daN | daN*m | | | | | | | daN/cm | |
| 1 | -1984 | 1 | 20 | 10 | 6 | 10 | 1.00 | 1.00 | 73.2 | |
| 5 | -483 | 4 | 72 | 10 | 6 | 10 | 1.00 | 1.00 | 71.7 | |
| 6 | -483 | 4 | 72 | 10 | 6 | 10 | 1.00 | 1.00 | 71.9 | |
| 7 | -472 | 4 | 63 | 10 | 6 | 10 | 1.00 | 1.00 | 65.1 | |
| 8 | -472 | 4 | 63 | 10 | 6 | 10 | 1.00 | 1.00 | 65.7 | |
| 9 | -670 | 13 | 27 | 10 | 6 | 10 | 1.00 | 1.00 | 62.3 | |
| 10 | -671 | 13 | 26 | 10 | 6 | 10 | 1.00 | 1.00 | 62.9 | |
| 11 | -667 | 13 | 14 | 10 | 6 | 10 | 1.00 | 1.00 | 53.6 | |
| 12 | -476 | 13 | 16 | 10 | 6 | 10 | 1.00 | 1.00 | 49.9 | |
| 13 | -1652 | 1 | 17 | 10 | 6 | 10 | 1.00 | 1.00 | 61.3 | |
| 14 | 490 | 0 | 6 | 10 | 6 | 10 | 1.00 | 1.00 | 18.9 | |
| 15 | -1724 | 1 | 17 | 10 | 6 | 10 | 1.00 | 1.00 | 63.6 | |

3.1.2. VERIFICA NODO DI BASE

Viene verificato un nodo fittizio imponendo come sollecitazioni le maggiori di tutti i nodi della medesima tipologia.

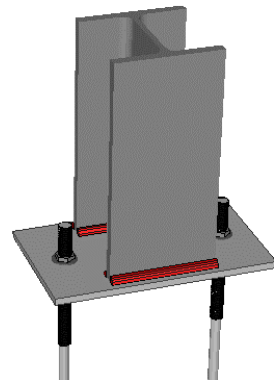
SN = 776 daN

T = 1208 daN

TX = 137 daN

MF = 0 daN cm

MT = 2127 daN cm



[Verifica piastra di base] (S 235 (Fe 360), Rck 300)

250x150x10 Tipologia n. 1 A = 180 (mm)

[Verifica saldatura profilo]

Saldatura a cordone d'angolo (doppia sull'ala): verificata

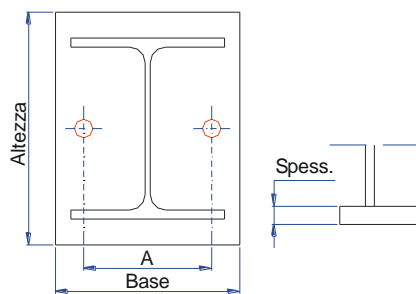
Lunghezza1: 120 (mm) Altezza di gola1: 8 (mm)

Lunghezza2: 74 (mm) Altezza di gola2: 5 (mm)

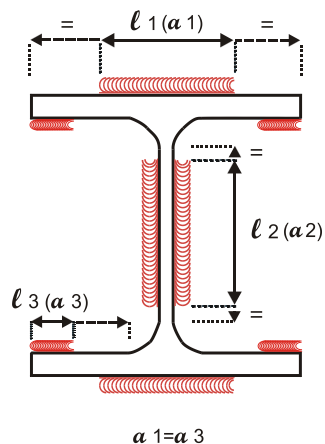
Lunghezza3: 45 (mm) Altezza di gola3: 8 (mm)

Sigma perp. = 19.9 daN/cm² Tens par. = 179.4 daN/cm²

I.R. = 0.15



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Si ipotizza un ancorante che poi in fase costruttiva potrà essere sostituito con analogo sistema di ancoraggio con caratteristiche analoghe.

Basi della progettazione

Ancorante

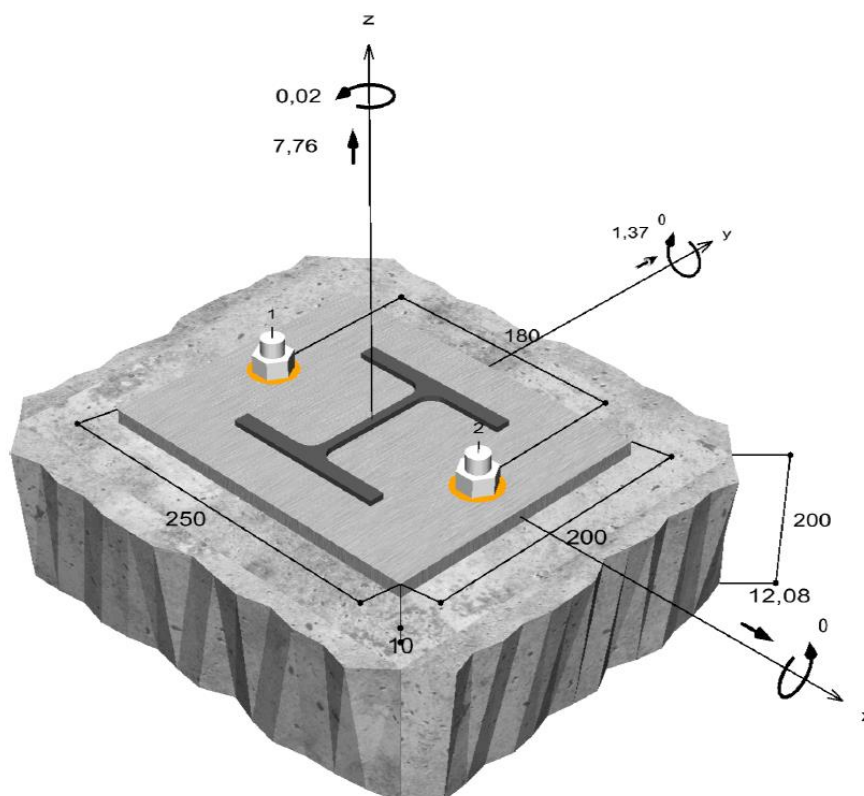
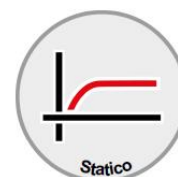
| | |
|--------------------------------|--|
| Sistema | fischer Sistema chimico a iniezione FIS EM |
| Ancorante chimico ad iniezione | FIS EM 390 S |
| Elemento di fissaggio | Barra filettata FIS A M 16 x 130, Acciaio zincato, Classe di resistenza 5.8 |
| Profondità di ancoraggio | 80 mm |
| Dati di progetto | Progettazione dell'ancorante in Calcestruzzo secondo Benestare ETA-10/0012, Opzione 1, Validità: 26/06/2013 - 26/06/2018 |



Geometria / Carichi

mm, kN, kNm

Valore di progetto delle azioni (sono inclusi i coefficienti parziali di sicurezza delle azioni)



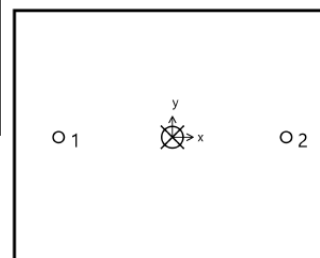
Carichi di progetto ^{*)}

| # | N _{Sd} kN | V _{Sd,x} kN | V _{Sd,y} kN | M _{Sd,x} kNm | M _{Sd,y} kNm | M _{T,Sd} kNm | Tipo di carico |
|---|-----------------------|-------------------------|-------------------------|--------------------------|--------------------------|--------------------------|----------------|
| 1 | 7,76 | 12,08 | 1,37 | 0,00 | 0,00 | 0,02 | Statico |

^{*)} I coefficienti parziali di sicurezza per le azioni sono inclusi.

Forze risultanti sull'ancoraggio

| Ancorante n° | Forza di trazione kN | Forza di taglio kN | Forza di taglio x kN | Forza di taglio y kN |
|-----------------|----------------------------|-----------------------|-------------------------|-------------------------|
| 1 | 3,88 | 6,07 | 6,04 | 0,57 |
| 2 | 3,88 | 6,09 | 6,04 | 0,80 |



max. deformazione a compressione del calcestruzzo :

0,00 ‰

max. tensione di compressione del calcestruzzo :

0,0 N/mm²

Forza risultante di trazione :

7,76 kN , Coordinate x/y (0 / 0)

Forza risultante di compressione :

0,00 kN , Coordinate x/y (0 / 0)

Resistenza alla combinazione di trazione e taglio

$$\beta_N = \beta_{N,c;1} = 0,17 \leq 1$$

$$\beta_V = \beta_{V;s;2} = 0,20 \leq 1$$

$$\beta_N^{1,5} + \beta_V^{1,5} = \beta_{N,c;1}^{1,5} + \beta_{V;s;2}^{1,5} = 0,16 \leq 1$$



Verifica soddisfatta

Equazione
(5.9a)

Equazione
(5.9b)

Equazione
(5.10)

3.1.3. VERIFICA NODO COLONNA - TRAVE PRINCIPALE

Viene verificato un nodo fittizio imponendo come sollecitazioni le maggiori di tutti i nodi della medesima tipologia.

SN = 776 daN

T = 1208 daN

TX = 137 daN

MFz = 12000 daN cm

MFy = 117200 daN cm

MT = 2127 daN cm

Colonna: HEB 120

Trave: HEB 120 S 235 (Fe 360)

[Verifica] Banca n. 0: Banche generali AMV

[Verifica flangia] (S 235 (Fe 360))

Flangia tipo 1: 120x260x10 A = 70 B = 160 C = 40 G = 0 (mm)

n. 0 file intermedie di bulloni per infittimento

Mensola di rinforzo: h = 120 l = 120 s = 6 t = 11 (mm)

Diam. bulloni M16 Incremento foro: 2.0 (mm) (Classe 8.8)

[Resistenza zona a taglio]

F_{Rd} = 12740.1 daN (resistenza anima colonna)

[Resistenza zona a compressione]

F_{Rd} = 16170.6 daN (resistenza anima colonna)

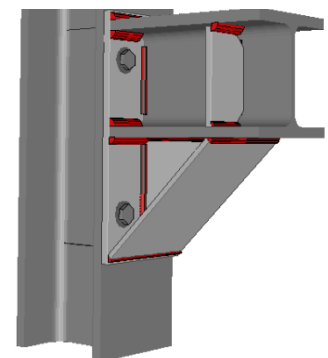
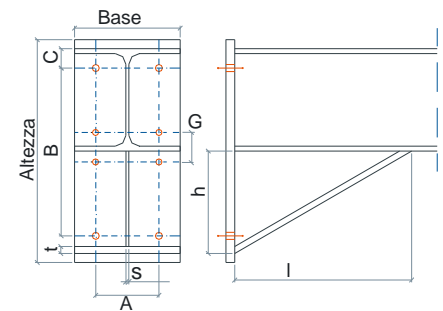
F_{Rd} = 36846.3 daN (resistenza ala trave)

F_{Rd} = 20890.0 daN (resistenza flangia mensola)

[Resistenza zona a trazione]

[Seconda fila di bulloni]

F_{Rd} = 13151.5 daN (resistenza ala colonna)



$F_{Rd} = 12431.6 \text{ daN}$ (resistenza flangia di estremità)

$F_{Rd} = 13543.1 \text{ daN}$ (resistenza anima colonna)

$F_{t2,Rd,ult} = 12431.6 \text{ daN}$ (resistenza efficace seconda fila)

[Momento resistente]

$M_{j,Rd} = 241794.0 \text{ daN*cm}$

[Rigidità rotazionale] (calcolata per N trascurabile)

$S_{j} = 91979256.0 \text{ daN*cm/rad}$ (rigidità del giunto)

[Resistenza assiale profilo]

$N_{pl,Rd} = 76095.3 \text{ daN}$

$|N| \leq 0.05 N_{pl,Rd}$ (trascurabile)

[Verifica a presso-tensoflessione del giunto]

I.R. = 0.48

[Verifica a taglio del nodo]

$F_{v,Rd} = 6104.2 \text{ daN}$ (resistenza dei bulloni a taglio)

$F_{t,Rd} = 9156.2 \text{ daN}$ (resistenza dei bulloni a trazione)

I.R. = 0.30

[Verifica di rifollamento]

$F_{b,Rd} = 10666.7 \text{ daN}$ (resistenza a rifollamento)

I.R. = 0.02

[Verifica saldatura profilo con rinforzo]

Saldatura a cordone d'angolo (doppia sull'ala): verificata

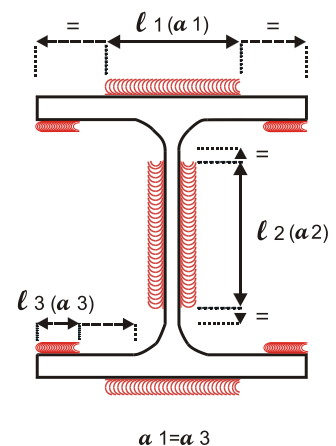
Lunghezza1: 120 (mm) Altezza di gola1: 8 (mm)

Lunghezza2: 194 (mm) Altezza di gola2: 4 (mm)

Lunghezza3: 45 (mm) Altezza di gola3: 8 (mm)

$\sigma_{\text{perp.}} = 297.0 \text{ daN/cm}^2$ Tens par. = 213.1 daN/cm²

I.R. = 0.23



3.1. VERIFICA TRAVE PRINCIPALE

31/2 19/2 20/2 21/2
○ — ○ — ○ — ○

16/2 17/2 18/2
○ — ○ — ○

13/2 14/2 15/2
○ — ○ — ○

10/2 11/2 12/2
○ — ○ — ○

7/2 8/2 9/2
○ — ○ — ○

○ — ○ — ○
4/2 5/2 6/2

22/2 26/2 23/2 27/2
○ — ○ — ○ — ○
29/2 25/2 24/2 28/2
○ — ○ — ○ — ○

3/2
○ — ○ — ○ — ○
1/2 30/2 2/2

Pianta travatura principale blocco 2 con indicato il codice degli elementi asta

33/2 34/2 35/2 36/2

24/2 23/2 26/2
21/2 22/2 25/2

2/2 3/2 4/2

29/2 32/2
27/2 28/2 31/2

1/2 5/2 6/2

18/2 16/2 19/2
15/2 17/2 20/2

7/2 9/2 10/2

14/2 13/2 12/2 11/2

Pianta travatura principale blocco 3 con indicato il codice degli elementi asta

Sezioni
6 Ps HEB 160 ycap+No



Prospettiva

HEB120

Sezioni
5 Ps UNP 140 ycap+No

135



Prospettiva

UPN140

Sezioni
2 Ps HEB 120 ycap+No



Prospettiva

HEB160

3.1.1. VERIFICA SLU E SLE HEB120

SI RIPORTANO LE TRAVI PIU' SOLLECITATE

Lavoro: **Blocco 2** Intestazione lavoro: **ESECUTIVO**

Elemento: **TRAVE** Metodo di verifica: **Stati limite**

Gruppo: **2** Descrizione: **Travi principali**

Tabella: **Tabella travi**

Tipo acciaio: **S 235** Beta piano 'yx': **1.000** Beta piano 'zx': **1.000**

ASTA NUM. 4 NI 51 NF 52 Lungh. 142.4 cm SEZ. 2 Ps HEB 120

categoria: p.p. y qy tot.

qy medio: 0.2669 0.2669 daN/cm

137

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|------|------|-------|-----|------|---------|--------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -177 | 1452 | 6 | 0 | 0 | -614 | 5.2 | 426.3 | 206.2 | 0.0 | 478.1 | 3 | |
| 5 | 0 | -248 | 335 | -53 | 0 | -0 | -139 | 7.3 | 96.8 | 47.6 | 0.0 | 113.9 | 3 | |
| 6 | 0 | -249 | 336 | 56 | 0 | 0 | -140 | 7.3 | 97.2 | 47.7 | 0.0 | 114.3 | 3 | |
| 7 | 0 | 169 | 346 | -53 | 0 | -0 | -141 | 5.0 | 98.1 | 49.1 | 0.0 | 114.5 | 3 | |
| 8 | 0 | 168 | 346 | 56 | 0 | 0 | -142 | 4.9 | 98.6 | 49.2 | 0.0 | 114.9 | 3 | |
| 9 | 0 | -118 | 475 | -179 | 0 | -1 | -196 | 3.5 | 137.1 | 67.5 | 0.0 | 156.8 | 3 | |
| 10 | 0 | -121 | 478 | 184 | 0 | 1 | -198 | 3.6 | 138.5 | 67.9 | 0.0 | 158.1 | 3 | |
| 11 | 0 | 7 | 479 | -179 | 0 | -1 | -197 | 0.2 | 137.5 | 68.0 | 0.0 | 155.1 | 3 | |
| 12 | 0 | 21 | 344 | 183 | 0 | 1 | -141 | 0.6 | 99.2 | 48.8 | 0.0 | 112.5 | 3 | |
| 13 | 0 | -147 | 1206 | 5 | 0 | 0 | -509 | 4.3 | 353.2 | 171.2 | 0.0 | 396.6 | 3 | |
| 14 | 0 | 47 | -372 | -2 | 0 | -0 | 165 | 1.4 | 114.3 | 52.8 | 0.0 | 125.7 | 3 | |
| 15 | 0 | -153 | 1259 | 5 | 0 | 0 | -532 | 4.5 | 369.2 | 178.8 | 0.0 | 414.3 | 3 | |
| 1 | 14 | -177 | 1447 | 6 | 0 | -1 | -407 | 5.2 | 284.4 | 205.5 | 0.0 | 398.7 | 3 | |
| 5 | 14 | -248 | 331 | -53 | 0 | 7 | -91 | 7.3 | 77.5 | 47.0 | 0.0 | 95.0 | 3 | |
| 6 | 14 | -249 | 332 | 56 | 0 | -8 | -92 | 7.3 | 78.5 | 47.1 | 0.0 | 95.3 | 3 | |
| 7 | 14 | 169 | 342 | -53 | 0 | 7 | -92 | 5.0 | 77.8 | 48.5 | 0.0 | 95.5 | 3 | |
| 8 | 14 | 168 | 343 | 56 | 0 | -8 | -92 | 4.9 | 78.9 | 48.6 | 0.0 | 95.9 | 3 | |
| 9 | 14 | -118 | 470 | -179 | 0 | 25 | -129 | 3.5 | 136.2 | 66.8 | 0.0 | 139.7 | 1 | |
| 10 | 14 | -121 | 473 | 184 | 0 | -26 | -130 | 3.6 | 138.7 | 67.2 | 0.0 | 142.2 | 1 | |
| 11 | 14 | 7 | 474 | -179 | 0 | 25 | -129 | 0.2 | 136.3 | 67.3 | 0.0 | 136.5 | 1 | |
| 12 | 14 | 21 | 340 | 183 | 0 | -26 | -93 | 0.6 | 112.4 | 48.2 | 0.0 | 113.1 | 1 | |
| 13 | 14 | -147 | 1201 | 5 | 0 | -1 | -337 | 4.3 | 235.4 | 170.5 | 0.0 | 330.6 | 3 | |
| 14 | 14 | 47 | -376 | -2 | 0 | 0 | 111 | 1.4 | 77.7 | 53.4 | 0.0 | 105.5 | 3 | |
| 15 | 14 | -153 | 1254 | 5 | 0 | -1 | -353 | 4.5 | 246.1 | 178.1 | 0.0 | 345.3 | 3 | |
| 1 | 28 | -177 | 1442 | 6 | 0 | -2 | -202 | 5.2 | 143.1 | 204.8 | 0.0 | 354.7 | 4 | |
| 5 | 28 | -248 | 327 | -53 | 0 | 15 | -45 | 7.3 | 59.2 | 46.5 | 0.0 | 81.0 | 4 | |
| 6 | 28 | -249 | 328 | 56 | 0 | -16 | -45 | 7.3 | 60.8 | 46.6 | 0.0 | 81.2 | 4 | |
| 7 | 28 | 169 | 338 | -53 | 0 | 15 | -44 | 5.0 | 58.5 | 48.0 | 0.0 | 83.4 | 4 | |
| 8 | 28 | 168 | 339 | 56 | 0 | -16 | -44 | 4.9 | 60.2 | 48.1 | 0.0 | 83.6 | 4 | |
| 9 | 28 | -118 | 466 | -179 | 0 | 50 | -62 | 3.5 | 137.9 | 66.1 | 0.0 | 141.4 | 1 | |
| 10 | 28 | -121 | 468 | 184 | 0 | -52 | -63 | 3.6 | 141.5 | 66.5 | 0.0 | 145.1 | 1 | |
| 11 | 28 | 7 | 469 | -179 | 0 | 50 | -62 | 0.2 | 137.7 | 66.6 | 0.0 | 137.9 | 1 | |
| 12 | 28 | 21 | 336 | 183 | 0 | -52 | -44 | 0.6 | 128.3 | 47.7 | 0.0 | 128.9 | 1 | |
| 13 | 28 | -147 | 1196 | 5 | 0 | -1 | -167 | 4.3 | 118.2 | 169.8 | 0.0 | 294.2 | 4 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|------|------|---|------|------|-----|-------|-------|-----|-------|---|
| 14 | 28 | 47 | -380 | -2 | 0 | 0 | 58 | 1.4 | 40.8 | 53.9 | 0.0 | 93.4 | 4 |
| 15 | 28 | -153 | 1249 | 5 | 0 | -1 | -174 | 4.5 | 123.7 | 177.4 | 0.0 | 307.3 | 4 |
| 1 | 43 | -177 | 1437 | 6 | 0 | -2 | 3 | 5.2 | 6.7 | 204.0 | 0.0 | 353.5 | 4 |
| 5 | 43 | -248 | 324 | -53 | 0 | 22 | 2 | 7.3 | 43.7 | 45.9 | 0.0 | 80.2 | 4 |
| 6 | 43 | -249 | 324 | 56 | 0 | -24 | 2 | 7.3 | 45.7 | 46.1 | 0.0 | 80.4 | 4 |
| 7 | 43 | 169 | 334 | -53 | 0 | 22 | 4 | 5.0 | 45.4 | 47.4 | 0.0 | 82.5 | 4 |
| 8 | 43 | 168 | 335 | 56 | 0 | -24 | 4 | 4.9 | 47.5 | 47.6 | 0.0 | 82.7 | 4 |
| 9 | 43 | -118 | 461 | -179 | 0 | 76 | 4 | 3.5 | 145.6 | 65.4 | 0.0 | 149.1 | 1 |
| 10 | 43 | -121 | 463 | 184 | 0 | -78 | 3 | 3.6 | 149.3 | 65.8 | 0.0 | 152.8 | 1 |
| 11 | 43 | 7 | 464 | -179 | 0 | 76 | 5 | 0.2 | 146.2 | 65.9 | 0.0 | 146.4 | 1 |
| 12 | 43 | 21 | 332 | 183 | 0 | -78 | 3 | 0.6 | 148.9 | 47.2 | 0.0 | 149.5 | 1 |
| 13 | 43 | -147 | 1191 | 5 | 0 | -2 | 3 | 4.3 | 6.0 | 169.1 | 0.0 | 292.9 | 4 |
| 14 | 43 | 47 | -384 | -2 | 0 | 1 | 3 | 1.4 | 3.5 | 54.5 | 0.0 | 94.4 | 4 |
| 15 | 43 | -153 | 1244 | 5 | 0 | -2 | 3 | 4.5 | 6.1 | 176.7 | 0.0 | 306.1 | 4 |
| 1 | 57 | -177 | 1432 | 6 | 0 | -3 | 207 | 5.2 | 150.0 | 203.3 | 0.0 | 352.2 | 4 |
| 5 | 57 | -248 | 320 | -53 | 0 | 30 | 48 | 7.3 | 89.7 | 45.4 | 0.0 | 97.0 | 1 |
| 6 | 57 | -249 | 321 | 56 | 0 | -32 | 47 | 7.3 | 92.5 | 45.5 | 0.0 | 99.9 | 1 |
| 7 | 57 | 169 | 330 | -53 | 0 | 30 | 52 | 5.0 | 92.4 | 46.9 | 0.0 | 97.4 | 1 |
| 8 | 57 | 168 | 331 | 56 | 0 | -32 | 51 | 4.9 | 95.4 | 47.0 | 0.0 | 100.3 | 1 |
| 9 | 57 | -118 | 456 | -179 | 0 | 101 | 69 | 3.5 | 238.9 | 64.7 | 0.0 | 242.4 | 1 |
| 10 | 57 | -121 | 458 | 184 | 0 | -104 | 69 | 3.6 | 244.3 | 65.1 | 0.0 | 247.8 | 1 |
| 11 | 57 | 7 | 459 | -179 | 0 | 101 | 70 | 0.2 | 239.7 | 65.2 | 0.0 | 240.0 | 1 |
| 12 | 57 | 21 | 328 | 183 | 0 | -104 | 50 | 0.6 | 230.8 | 46.6 | 0.0 | 231.4 | 1 |
| 13 | 57 | -147 | 1186 | 5 | 0 | -3 | 172 | 4.3 | 124.7 | 168.4 | 0.0 | 291.7 | 4 |
| 14 | 57 | 47 | -387 | -2 | 0 | 1 | -52 | 1.4 | 37.6 | 55.0 | 0.0 | 95.3 | 4 |
| 15 | 57 | -153 | 1239 | 5 | 0 | -3 | 180 | 4.5 | 130.2 | 176.0 | 0.0 | 304.9 | 4 |
| 1 | 71 | -177 | 1427 | 6 | 0 | -4 | 411 | 5.2 | 292.9 | 202.6 | 0.0 | 396.5 | 3 |
| 5 | 71 | -248 | 316 | -53 | 0 | 38 | 93 | 7.3 | 135.4 | 44.9 | 0.0 | 142.7 | 1 |
| 6 | 71 | -249 | 317 | 56 | 0 | -40 | 93 | 7.3 | 139.0 | 45.0 | 0.0 | 146.4 | 1 |
| 7 | 71 | 169 | 327 | -53 | 0 | 38 | 98 | 5.0 | 139.1 | 46.4 | 0.0 | 144.1 | 1 |
| 8 | 71 | 168 | 327 | 56 | 0 | -40 | 98 | 4.9 | 143.0 | 46.5 | 0.0 | 147.9 | 1 |
| 9 | 71 | -118 | 451 | -179 | 0 | 127 | 134 | 3.5 | 331.7 | 64.0 | 0.0 | 335.2 | 1 |
| 10 | 71 | -121 | 454 | 184 | 0 | -130 | 134 | 3.6 | 338.7 | 64.4 | 0.0 | 342.3 | 1 |
| 11 | 71 | 7 | 454 | -179 | 0 | 127 | 135 | 0.2 | 332.8 | 64.5 | 0.0 | 333.0 | 1 |
| 12 | 71 | 21 | 325 | 183 | 0 | -130 | 97 | 0.6 | 312.4 | 46.1 | 0.0 | 313.0 | 1 |
| 13 | 71 | -147 | 1181 | 5 | 0 | -3 | 341 | 4.3 | 243.0 | 167.7 | 0.0 | 328.4 | 3 |
| 14 | 71 | 47 | -391 | -2 | 0 | 1 | -107 | 1.4 | 76.6 | 55.5 | 0.0 | 106.8 | 3 |
| 15 | 71 | -153 | 1235 | 5 | 0 | -3 | 356 | 4.5 | 253.8 | 175.3 | 0.0 | 343.2 | 3 |
| 1 | 85 | -177 | 1422 | 6 | 0 | -5 | 614 | 5.2 | 435.3 | 201.9 | 0.0 | 474.0 | 3 |
| 5 | 85 | -248 | 312 | -53 | 0 | 45 | 138 | 7.3 | 180.7 | 44.3 | 0.0 | 188.0 | 1 |
| 6 | 85 | -249 | 313 | 56 | 0 | -47 | 138 | 7.3 | 185.2 | 44.4 | 0.0 | 192.5 | 1 |
| 7 | 85 | 169 | 323 | -53 | 0 | 45 | 144 | 5.0 | 185.5 | 45.8 | 0.0 | 190.4 | 1 |
| 8 | 85 | 168 | 324 | 56 | 0 | -48 | 145 | 4.9 | 190.2 | 45.9 | 0.0 | 195.1 | 1 |
| 9 | 85 | -118 | 446 | -179 | 0 | 152 | 198 | 3.5 | 424.0 | 63.3 | 0.0 | 427.5 | 1 |
| 10 | 85 | -121 | 449 | 184 | 0 | -156 | 198 | 3.6 | 432.7 | 63.7 | 0.0 | 436.3 | 1 |
| 11 | 85 | 7 | 449 | -179 | 0 | 152 | 200 | 0.2 | 425.4 | 63.7 | 0.0 | 425.7 | 1 |
| 12 | 85 | 21 | 321 | 183 | 0 | -156 | 143 | 0.6 | 393.6 | 45.5 | 0.0 | 394.2 | 1 |
| 13 | 85 | -147 | 1176 | 5 | 0 | -4 | 509 | 4.3 | 360.8 | 167.0 | 0.0 | 392.5 | 3 |
| 14 | 85 | 47 | -395 | -2 | 0 | 1 | -163 | 1.4 | 115.9 | 56.1 | 0.0 | 128.5 | 3 |
| 15 | 85 | -153 | 1230 | 5 | 0 | -4 | 531 | 4.5 | 376.9 | 174.6 | 0.0 | 410.2 | 3 |
| 1 | 100 | -177 | 1417 | 6 | 0 | -6 | 816 | 5.2 | 577.2 | 201.2 | 0.0 | 582.4 | 1 |
| 5 | 100 | -248 | 308 | -53 | 0 | 53 | 182 | 7.3 | 225.6 | 43.8 | 0.0 | 232.9 | 1 |
| 6 | 100 | -249 | 309 | 56 | 0 | -55 | 182 | 7.3 | 230.9 | 43.9 | 0.0 | 238.3 | 1 |
| 7 | 100 | 169 | 319 | -53 | 0 | 53 | 190 | 5.0 | 231.4 | 45.3 | 0.0 | 236.4 | 1 |
| 8 | 100 | 168 | 320 | 56 | 0 | -56 | 190 | 4.9 | 237.0 | 45.4 | 0.0 | 241.9 | 1 |
| 9 | 100 | -118 | 441 | -179 | 0 | 177 | 261 | 3.5 | 515.8 | 62.6 | 0.0 | 519.3 | 1 |
| 10 | 100 | -121 | 444 | 184 | 0 | -183 | 261 | 3.6 | 526.2 | 63.0 | 0.0 | 529.8 | 1 |
| 11 | 100 | 7 | 444 | -179 | 0 | 177 | 263 | 0.2 | 517.6 | 63.0 | 0.0 | 517.8 | 1 |
| 12 | 100 | 21 | 317 | 183 | 0 | -182 | 188 | 0.6 | 474.4 | 45.0 | 0.0 | 475.0 | 1 |
| 13 | 100 | -147 | 1171 | 5 | 0 | -5 | 676 | 4.3 | 478.1 | 166.3 | 0.0 | 482.4 | 1 |
| 14 | 100 | 47 | -399 | -2 | 0 | 2 | -220 | 1.4 | 155.6 | 56.6 | 0.0 | 156.9 | 1 |
| 15 | 100 | -153 | 1225 | 5 | 0 | -5 | 706 | 4.5 | 499.5 | 173.9 | 0.0 | 504.0 | 1 |
| 1 | 114 | -177 | 1412 | 6 | 0 | -6 | 1017 | 5.2 | 718.6 | 200.5 | 0.0 | 723.8 | 1 |
| 5 | 114 | -248 | 305 | -53 | 0 | 60 | 225 | 7.3 | 270.2 | 43.3 | 0.0 | 277.5 | 1 |
| 6 | 114 | -249 | 305 | 56 | 0 | -63 | 226 | 7.3 | 276.3 | 43.4 | 0.0 | 283.6 | 1 |
| 7 | 114 | 169 | 315 | -53 | 0 | 60 | 235 | 5.0 | 277.0 | 44.7 | 0.0 | 282.0 | 1 |
| 8 | 114 | 168 | 316 | 56 | 0 | -63 | 236 | 4.9 | 283.4 | 44.9 | 0.0 | 288.3 | 1 |
| 9 | 114 | -118 | 436 | -179 | 0 | 203 | 323 | 3.5 | 607.1 | 61.9 | 0.0 | 610.6 | 1 |
| 10 | 114 | -121 | 439 | 184 | 0 | -209 | 324 | 3.6 | 619.2 | 62.3 | 0.0 | 622.8 | 1 |
| 11 | 114 | 7 | 439 | -179 | 0 | 203 | 326 | 0.2 | 609.2 | 62.3 | 0.0 | 609.4 | 1 |
| 12 | 114 | 21 | 313 | 183 | 0 | -208 | 233 | 0.6 | 554.8 | 44.5 | 0.0 | 555.4 | 1 |
| 13 | 114 | -147 | 1166 | 5 | 0 | -5 | 842 | 4.3 | 594.9 | 165.6 | 0.0 | 599.2 | 1 |
| 14 | 114 | 47 | -403 | -2 | 0 | 2 | -277 | 1.4 | 195.6 | 57.2 | 0.0 | 197.0 | 1 |
| 15 | 114 | -153 | 1220 | 5 | 0 | -6 | 880 | 4.5 | 621.7 | 173.2 | 0.0 | 626.2 | 1 |
| 1 | 128 | -177 | 1407 | 6 | 0 | -7 | 1218 | 5.2 | 859.5 | 199.8 | 0.0 | 864.7 | 1 |
| 5 | 128 | -248 | 301 | -53 | 0 | 68 | 268 | 7.3 | 314.4 | 42.7 | 0.0 | 321.7 | 1 |
| 6 | 128 | -249 | 302 | 56 | 0 | -71 | 269 | 7.3 | 321.3 | 42.8 | 0.0 | 328.6 | 1 |
| 7 | 128 | 169 | 311 | -53 | 0 | 68 | 280 | 5.0 | 322.2 | 44.2 | 0.0 | 327.2 | 1 |
| 8 | 128 | 168 | 312 | 56 | 0 | -71 | 280 | 4.9 | 329.5 | 44.3 | 0.0 | 334.4 | 1 |
| 9 | 128 | -118 | 431 | -179 | 0 | 228 | 385 | 3.5 | 697.9 | 61.2 | 0.0 | 701.4 | 1 |
| 10 | 128 | -121 | 434 | 184 | 0 | -235 | 386 | 3.6 | 711.8 | 61.6 | 0.0 | 715.3 | 1 |
| 11 | 128 | 7 | 434 | -179 | 0 | 228 | 388 | 0.2 | 700.3 | 61.6 | 0.0 | 700.5 | 1 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|------|------|---|------|------|-----|-------|-------|-----|--------|---|
| 12 | 128 | 21 | 309 | 183 | 0 | -234 | 277 | 0.6 | 634.9 | 43.9 | 0.0 | 635.5 | 1 |
| 13 | 128 | -147 | 1161 | 5 | 0 | -6 | 1008 | 4.3 | 711.3 | 164.9 | 0.0 | 715.6 | 1 |
| 14 | 128 | 47 | -406 | -2 | 0 | 2 | -334 | 1.4 | 236.0 | 57.7 | 0.0 | 237.4 | 1 |
| 15 | 128 | -153 | 1215 | 5 | 0 | -6 | 1053 | 4.5 | 743.3 | 172.5 | 0.0 | 747.8 | 1 |
| | | | | | | | | | | | | | |
| 1 | 142 | -177 | 1402 | 6 | 0 | -8 | 1418 | 5.2 | 999.9 | 199.1 | 0.0 | 1005.1 | 1 |
| 5 | 142 | -248 | 297 | -53 | 0 | 75 | 311 | 7.3 | 358.2 | 42.2 | 0.0 | 365.5 | 1 |
| 6 | 142 | -249 | 298 | 56 | 0 | -79 | 312 | 7.3 | 365.9 | 42.3 | 0.0 | 373.2 | 1 |
| 7 | 142 | 169 | 308 | -53 | 0 | 75 | 324 | 5.0 | 367.0 | 43.7 | 0.0 | 372.0 | 1 |
| 8 | 142 | 168 | 308 | 56 | 0 | -79 | 325 | 4.9 | 375.2 | 43.8 | 0.0 | 380.1 | 1 |
| 9 | 142 | -118 | 426 | -179 | 0 | 254 | 446 | 3.5 | 788.3 | 60.5 | 0.0 | 791.7 | 1 |
| 10 | 142 | -121 | 429 | 184 | 0 | -261 | 448 | 3.6 | 803.8 | 60.9 | 0.0 | 807.4 | 1 |
| 11 | 142 | 7 | 429 | -179 | 0 | 254 | 450 | 0.2 | 791.0 | 60.9 | 0.0 | 791.2 | 1 |
| 12 | 142 | 21 | 306 | 183 | 0 | -261 | 321 | 0.6 | 714.5 | 43.4 | 0.0 | 715.2 | 1 |
| 13 | 142 | -147 | 1156 | 5 | 0 | -7 | 1173 | 4.3 | 827.1 | 164.1 | 0.0 | 831.4 | 1 |
| 14 | 142 | 47 | -410 | -2 | 0 | 2 | -392 | 1.4 | 276.9 | 58.2 | 0.0 | 278.2 | 1 |
| 15 | 142 | -153 | 1210 | 5 | 0 | -7 | 1226 | 4.5 | 864.5 | 171.8 | 0.0 | 869.0 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x | Mmax | Mmax | Sf (M) | x | fmax. | fmax | fmax / l | Nota |
|----|---------|-----|-------|--------|--------|------|-----------|------|----------|------|
| | | cm | daN*m | daN/cm | | cm | | | | |
| 1 | -- | 142 | 1418 | 984.7 | -- | -- | -- | -- | -- | |
| -- | Rara | 56 | 4 | -- | 64 | 0.00 | 1 / 99999 | | | |
| -- | Freq. | 56 | 4 | -- | 64 | 0.00 | 1 / 99999 | | | |
| -- | Q.Perm. | 56 | 4 | -- | 64 | 0.00 | 1 / 99999 | | | |
| -- | Rara | 56 | 4 | -- | 64 | 0.00 | 1 / 99999 | | | |
| -- | Rara | 56 | 4 | -- | 64 | 0.00 | 1 / 99999 | | | |
| -- | Freq. | 56 | 4 | -- | 64 | 0.00 | 1 / 99999 | | | |
| -- | Freq. | 56 | 4 | -- | 64 | 0.00 | 1 / 99999 | | | |

ASTA NUM. 5 NI 52 NF 53 Lungh. 142.1 cm SEZ. 2 Ps HEB 120

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categoria: p.p. y qy tot.

qy medio: 0.2669 0.2669 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|------|------|-------|-------|-------|---------|--------|--------|--------|--------|------|------|
| | cm | daN | daN | daN | daN*m | daN*m | daN*m | daN/cm | daN/cm | daN/cm | daN/cm | daN/cm | | |
| 1 | 0 | -179 | -883 | -6 | 0 | -8 | 1418 | 5.3 | 999.9 | 125.4 | 0.0 | 1005.2 | 1 | |
| 5 | 0 | -604 | -188 | 34 | 0 | 75 | 291 | 17.8 | 344.2 | 26.7 | 0.0 | 362.0 | 1 | |
| 6 | 0 | -605 | -189 | -37 | 0 | -79 | 292 | 17.8 | 352.0 | 26.8 | 0.0 | 369.8 | 1 | |
| 7 | 0 | 523 | -178 | 34 | 0 | 75 | 344 | 15.4 | 381.1 | 25.2 | 0.0 | 396.5 | 1 | |
| 8 | 0 | 522 | -178 | -37 | 0 | -79 | 345 | 15.4 | 389.2 | 25.3 | 0.0 | 404.5 | 1 | |
| 9 | 0 | -225 | -262 | 115 | 0 | 254 | 440 | 6.6 | 784.1 | 37.2 | 0.0 | 790.7 | 1 | |
| 10 | 0 | -228 | -263 | -120 | 0 | -261 | 442 | 6.7 | 799.6 | 37.4 | 0.0 | 806.3 | 1 | |
| 11 | 0 | 113 | -259 | 115 | 0 | 254 | 456 | 3.3 | 795.1 | 36.7 | 0.0 | 798.5 | 1 | |
| 12 | 0 | 127 | -183 | -120 | 0 | -261 | 327 | 3.7 | 718.7 | 25.9 | 0.0 | 722.4 | 1 | |
| 13 | 0 | -148 | -726 | -5 | 0 | -7 | 1173 | 4.4 | 827.1 | 103.0 | 0.0 | 831.5 | 1 | |
| 14 | 0 | 48 | 272 | 2 | 0 | 2 | -392 | 1.4 | 276.8 | 38.7 | 0.0 | 278.2 | 1 | |
| 15 | 0 | -155 | -760 | -5 | 0 | -7 | 1226 | 4.6 | 864.5 | 107.9 | 0.0 | 869.0 | 1 | |
| | | | | | | | | | | | | | | |
| 1 | 14 | -179 | -888 | -6 | 0 | -7 | 1292 | 5.3 | 911.0 | 126.1 | 0.0 | 916.3 | 1 | |
| 5 | 14 | -604 | -192 | 34 | 0 | 71 | 264 | 17.8 | 316.3 | 27.3 | 0.0 | 334.1 | 1 | |
| 6 | 14 | -605 | -192 | -37 | 0 | -74 | 264 | 17.8 | 323.3 | 27.3 | 0.0 | 341.1 | 1 | |
| 7 | 14 | 523 | -182 | 34 | 0 | 70 | 319 | 15.4 | 354.2 | 25.8 | 0.0 | 369.6 | 1 | |
| 8 | 14 | 522 | -182 | -37 | 0 | -74 | 319 | 15.4 | 361.6 | 25.8 | 0.0 | 376.9 | 1 | |
| 9 | 14 | -225 | -267 | 115 | 0 | 237 | 402 | 6.6 | 727.1 | 37.9 | 0.0 | 733.7 | 1 | |
| 10 | 14 | -228 | -268 | -120 | 0 | -244 | 404 | 6.7 | 741.2 | 38.1 | 0.0 | 747.9 | 1 | |
| 11 | 14 | 113 | -264 | 115 | 0 | 237 | 419 | 3.3 | 738.5 | 37.4 | 0.0 | 741.8 | 1 | |
| 12 | 14 | 127 | -186 | -120 | 0 | -244 | 301 | 3.7 | 668.4 | 26.5 | 0.0 | 672.1 | 1 | |
| 13 | 14 | -148 | -731 | -5 | 0 | -6 | 1069 | 4.4 | 754.0 | 103.7 | 0.0 | 758.3 | 1 | |
| 14 | 14 | 48 | 269 | 2 | 0 | 2 | -354 | 1.4 | 249.6 | 38.1 | 0.0 | 251.0 | 1 | |
| 15 | 14 | -155 | -765 | -5 | 0 | -6 | 1118 | 4.6 | 788.0 | 108.6 | 0.0 | 792.5 | 1 | |
| | | | | | | | | | | | | | | |
| 1 | 28 | -179 | -893 | -6 | 0 | -6 | 1166 | 5.3 | 821.7 | 126.8 | 0.0 | 826.9 | 1 | |
| 5 | 28 | -604 | -196 | 34 | 0 | 66 | 236 | 17.8 | 288.1 | 27.8 | 0.0 | 305.9 | 1 | |
| 6 | 28 | -605 | -196 | -37 | 0 | -69 | 237 | 17.8 | 294.3 | 27.9 | 0.0 | 312.1 | 1 | |
| 7 | 28 | 523 | -185 | 34 | 0 | 66 | 292 | 15.4 | 327.0 | 26.3 | 0.0 | 342.4 | 1 | |
| 8 | 28 | 522 | -186 | -37 | 0 | -69 | 293 | 15.4 | 333.6 | 26.4 | 0.0 | 348.9 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|------|------|---|------|------|------|-------|-------|-----|-------|---|
| 9 | 28 | -225 | -272 | 115 | 0 | 221 | 364 | 6.6 | 669.7 | 38.6 | 0.0 | 676.3 | 1 |
| 10 | 28 | -228 | -273 | -120 | 0 | -227 | 366 | 6.7 | 682.2 | 38.8 | 0.0 | 688.9 | 1 |
| 11 | 28 | 113 | -269 | 115 | 0 | 221 | 381 | 3.3 | 681.3 | 38.1 | 0.0 | 684.7 | 1 |
| 12 | 28 | 127 | -190 | -120 | 0 | -227 | 274 | 3.7 | 617.7 | 27.0 | 0.0 | 621.5 | 1 |
| 13 | 28 | -148 | -735 | -5 | 0 | -5 | 965 | 4.4 | 680.4 | 104.4 | 0.0 | 684.7 | 1 |
| 14 | 28 | 48 | 265 | 2 | 0 | 2 | -316 | 1.4 | 222.9 | 37.6 | 0.0 | 224.3 | 1 |
| 15 | 28 | -155 | -770 | -5 | 0 | -6 | 1009 | 4.6 | 710.9 | 109.3 | 0.0 | 715.5 | 1 |
| 1 | 43 | -179 | -898 | -6 | 0 | -6 | 1038 | 5.3 | 731.8 | 127.5 | 0.0 | 737.0 | 1 |
| 5 | 43 | -604 | -200 | 34 | 0 | 61 | 208 | 17.8 | 259.5 | 28.4 | 0.0 | 277.2 | 1 |
| 6 | 43 | -605 | -200 | -37 | 0 | -64 | 209 | 17.8 | 264.8 | 28.4 | 0.0 | 282.6 | 1 |
| 7 | 43 | 523 | -189 | 34 | 0 | 61 | 266 | 15.4 | 299.4 | 26.9 | 0.0 | 314.8 | 1 |
| 8 | 43 | 522 | -190 | -37 | 0 | -64 | 266 | 15.4 | 305.2 | 26.9 | 0.0 | 320.6 | 1 |
| 9 | 43 | -225 | -277 | 115 | 0 | 205 | 325 | 6.6 | 611.7 | 39.3 | 0.0 | 618.3 | 1 |
| 10 | 43 | -228 | -278 | -120 | 0 | -210 | 326 | 6.7 | 622.8 | 39.5 | 0.0 | 629.5 | 1 |
| 11 | 43 | 113 | -274 | 115 | 0 | 205 | 342 | 3.3 | 623.7 | 38.8 | 0.0 | 627.0 | 1 |
| 12 | 43 | 127 | -194 | -120 | 0 | -210 | 247 | 3.7 | 566.7 | 27.5 | 0.0 | 570.4 | 1 |
| 13 | 43 | -148 | -740 | -5 | 0 | -5 | 860 | 4.4 | 606.3 | 105.1 | 0.0 | 610.6 | 1 |
| 14 | 43 | 48 | 261 | 2 | 0 | 2 | -279 | 1.4 | 196.5 | 37.1 | 0.0 | 197.9 | 1 |
| 15 | 43 | -155 | -775 | -5 | 0 | -5 | 899 | 4.6 | 633.4 | 110.0 | 0.0 | 638.0 | 1 |
| 1 | 57 | -179 | -903 | -6 | 0 | -5 | 910 | 5.3 | 641.4 | 128.2 | 0.0 | 646.7 | 1 |
| 5 | 57 | -604 | -203 | 34 | 0 | 56 | 180 | 17.8 | 230.5 | 28.9 | 0.0 | 248.3 | 1 |
| 6 | 57 | -605 | -204 | -37 | 0 | -58 | 180 | 17.8 | 235.1 | 28.9 | 0.0 | 252.9 | 1 |
| 7 | 57 | 523 | -193 | 34 | 0 | 56 | 239 | 15.4 | 271.4 | 27.4 | 0.0 | 286.8 | 1 |
| 8 | 57 | 522 | -193 | -37 | 0 | -59 | 239 | 15.4 | 276.5 | 27.5 | 0.0 | 291.8 | 1 |
| 9 | 57 | -225 | -282 | 115 | 0 | 188 | 285 | 6.6 | 553.3 | 40.0 | 0.0 | 559.9 | 1 |
| 10 | 57 | -228 | -283 | -120 | 0 | -193 | 286 | 6.7 | 562.8 | 40.2 | 0.0 | 569.5 | 1 |
| 11 | 57 | 113 | -278 | 115 | 0 | 188 | 303 | 3.3 | 565.6 | 39.5 | 0.0 | 568.9 | 1 |
| 12 | 57 | 127 | -198 | -120 | 0 | -193 | 219 | 3.7 | 515.2 | 28.1 | 0.0 | 519.0 | 1 |
| 13 | 57 | -148 | -745 | -5 | 0 | -4 | 755 | 4.4 | 531.7 | 105.8 | 0.0 | 536.1 | 1 |
| 14 | 57 | 48 | 257 | 2 | 0 | 1 | -242 | 1.4 | 170.5 | 36.5 | 0.0 | 171.9 | 1 |
| 15 | 57 | -155 | -780 | -5 | 0 | -4 | 788 | 4.6 | 555.4 | 110.7 | 0.0 | 560.0 | 1 |
| 1 | 71 | -179 | -907 | -6 | 0 | -4 | 782 | 5.3 | 550.6 | 128.9 | 0.0 | 555.8 | 1 |
| 5 | 71 | -604 | -207 | 34 | 0 | 51 | 150 | 17.8 | 201.1 | 29.4 | 0.0 | 218.9 | 1 |
| 6 | 71 | -605 | -208 | -37 | 0 | -53 | 151 | 17.8 | 204.9 | 29.5 | 0.0 | 222.7 | 1 |
| 7 | 71 | 523 | -197 | 34 | 0 | 51 | 211 | 15.4 | 243.1 | 27.9 | 0.0 | 258.5 | 1 |
| 8 | 71 | 522 | -197 | -37 | 0 | -53 | 211 | 15.4 | 247.3 | 28.0 | 0.0 | 262.7 | 1 |
| 9 | 71 | -225 | -287 | 115 | 0 | 172 | 245 | 6.6 | 494.4 | 40.7 | 0.0 | 501.0 | 1 |
| 10 | 71 | -228 | -288 | -120 | 0 | -176 | 246 | 6.7 | 502.4 | 40.9 | 0.0 | 509.1 | 1 |
| 11 | 71 | 113 | -283 | 115 | 0 | 172 | 263 | 3.3 | 507.0 | 40.2 | 0.0 | 510.3 | 1 |
| 12 | 71 | 127 | -201 | -120 | 0 | -176 | 190 | 3.7 | 463.4 | 28.6 | 0.0 | 467.2 | 1 |
| 13 | 71 | -148 | -750 | -5 | 0 | -3 | 648 | 4.4 | 456.6 | 106.5 | 0.0 | 461.0 | 1 |
| 14 | 71 | 48 | 253 | 2 | 0 | 1 | -205 | 1.4 | 144.8 | 36.0 | 0.0 | 146.2 | 1 |
| 15 | 71 | -155 | -784 | -5 | 0 | -4 | 677 | 4.6 | 477.0 | 111.4 | 0.0 | 481.5 | 1 |
| 1 | 85 | -179 | -912 | -6 | 0 | -3 | 652 | 5.3 | 459.2 | 129.6 | 0.0 | 464.5 | 1 |
| 5 | 85 | -604 | -211 | 34 | 0 | 46 | 121 | 17.8 | 171.4 | 30.0 | 0.0 | 189.1 | 1 |
| 6 | 85 | -605 | -211 | -37 | 0 | -48 | 121 | 17.8 | 174.4 | 30.0 | 0.0 | 192.2 | 1 |
| 7 | 85 | 523 | -201 | 34 | 0 | 46 | 183 | 15.4 | 214.4 | 28.5 | 0.0 | 229.7 | 1 |
| 8 | 85 | 522 | -201 | -37 | 0 | -48 | 183 | 15.4 | 217.9 | 28.5 | 0.0 | 233.2 | 1 |
| 9 | 85 | -225 | -291 | 115 | 0 | 156 | 204 | 6.6 | 435.0 | 41.4 | 0.0 | 441.6 | 1 |
| 10 | 85 | -228 | -293 | -120 | 0 | -159 | 205 | 6.7 | 441.5 | 41.6 | 0.0 | 448.2 | 1 |
| 11 | 85 | 113 | -288 | 115 | 0 | 155 | 222 | 3.3 | 447.9 | 40.9 | 0.0 | 451.2 | 1 |
| 12 | 85 | 127 | -205 | -120 | 0 | -158 | 162 | 3.7 | 411.3 | 29.1 | 0.0 | 415.0 | 1 |
| 13 | 85 | -148 | -755 | -5 | 0 | -3 | 541 | 4.4 | 381.1 | 107.2 | 0.0 | 385.4 | 1 |
| 14 | 85 | 48 | 250 | 2 | 0 | 1 | -170 | 1.4 | 119.5 | 35.4 | 0.0 | 120.9 | 1 |
| 15 | 85 | -155 | -789 | -5 | 0 | -3 | 565 | 4.6 | 398.0 | 112.1 | 0.0 | 402.6 | 1 |
| 1 | 99 | -179 | -917 | -6 | 0 | -2 | 522 | 5.3 | 367.4 | 130.3 | 0.0 | 372.7 | 1 |
| 5 | 99 | -604 | -215 | 34 | 0 | 42 | 90 | 17.8 | 141.3 | 30.5 | 0.0 | 159.0 | 1 |
| 6 | 99 | -605 | -215 | -37 | 0 | -43 | 91 | 17.8 | 143.4 | 30.6 | 0.0 | 161.2 | 1 |
| 7 | 99 | 523 | -204 | 34 | 0 | 41 | 154 | 15.4 | 185.3 | 29.0 | 0.0 | 200.7 | 1 |
| 8 | 99 | 522 | -205 | -37 | 0 | -43 | 154 | 15.4 | 188.0 | 29.1 | 0.0 | 203.3 | 1 |
| 9 | 99 | -225 | -296 | 115 | 0 | 139 | 162 | 6.6 | 375.1 | 42.1 | 0.0 | 381.7 | 1 |
| 10 | 99 | -228 | -298 | -120 | 0 | -142 | 163 | 6.7 | 380.1 | 42.3 | 0.0 | 386.8 | 1 |
| 11 | 99 | 113 | -293 | 115 | 0 | 139 | 181 | 3.3 | 388.3 | 41.6 | 0.0 | 391.6 | 1 |
| 12 | 99 | 127 | -209 | -120 | 0 | -141 | 132 | 3.7 | 358.7 | 29.7 | 0.0 | 362.4 | 1 |
| 13 | 99 | -148 | -760 | -5 | 0 | -2 | 434 | 4.4 | 305.0 | 107.9 | 0.0 | 309.4 | 1 |
| 14 | 99 | 48 | 246 | 2 | 0 | 1 | -135 | 1.4 | 94.6 | 34.9 | 0.0 | 96.0 | 1 |
| 15 | 99 | -155 | -794 | -5 | 0 | -2 | 453 | 4.6 | 318.6 | 112.8 | 0.0 | 323.1 | 1 |
| 1 | 114 | -179 | -922 | -6 | 0 | -2 | 392 | 5.3 | 275.1 | 131.0 | 0.0 | 306.0 | 3 |
| 5 | 114 | -604 | -219 | 34 | 0 | 37 | 60 | 17.8 | 110.8 | 31.0 | 0.0 | 128.5 | 1 |
| 6 | 114 | -605 | -219 | -37 | 0 | -37 | 60 | 17.8 | 112.2 | 31.1 | 0.0 | 130.0 | 1 |
| 7 | 114 | 523 | -208 | 34 | 0 | 37 | 125 | 15.4 | 155.8 | 29.5 | 0.0 | 171.2 | 1 |
| 8 | 114 | 522 | -209 | -37 | 0 | -38 | 125 | 15.4 | 157.7 | 29.6 | 0.0 | 173.1 | 1 |
| 9 | 114 | -225 | -301 | 115 | 0 | 123 | 120 | 6.6 | 314.7 | 42.8 | 0.0 | 321.3 | 1 |
| 10 | 114 | -228 | -303 | -120 | 0 | -125 | 120 | 6.7 | 318.2 | 43.0 | 0.0 | 324.9 | 1 |
| 11 | 114 | 113 | -298 | 115 | 0 | 123 | 139 | 3.3 | 328.2 | 42.3 | 0.0 | 331.5 | 1 |
| 12 | 114 | 127 | -213 | -120 | 0 | -124 | 102 | 3.7 | 305.8 | 30.2 | 0.0 | 309.5 | 1 |
| 13 | 114 | -148 | -765 | -5 | 0 | -1 | 325 | 4.4 | 228.5 | 108.6 | 0.0 | 254.0 | 3 |
| 14 | 114 | 48 | 242 | 2 | 0 | 0 | -100 | 1.4 | 70.1 | 34.4 | 0.0 | 79.1 | 3 |
| 15 | 114 | -155 | -799 | -5 | 0 | -1 | 340 | 4.6 | 238.6 | 113.5 | 0.0 | 265.3 | 3 |
| 1 | 128 | -179 | -927 | -6 | 0 | -1 | 260 | 5.3 | 182.3 | 131.7 | 0.0 | 256.3 | 3 |
| 5 | 128 | -604 | -222 | 34 | 0 | 32 | 28 | 17.8 | 79.9 | 31.6 | 0.0 | 97.7 | 1 |
| 6 | 128 | -605 | -223 | -37 | 0 | -32 | 28 | 17.8 | 80.5 | 31.6 | 0.0 | 98.3 | 1 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|------|------|---|------|-----|------|-------|-------|-----|-------|---|
| 7 | 128 | 523 | -212 | 34 | 0 | 32 | 95 | 15.4 | 125.9 | 30.1 | 0.0 | 141.3 | 1 |
| 8 | 128 | 522 | -212 | -37 | 0 | -32 | 95 | 15.4 | 127.1 | 30.1 | 0.0 | 142.5 | 1 |
| 9 | 128 | -225 | -306 | 115 | 0 | 106 | 76 | 6.6 | 253.8 | 43.5 | 0.0 | 260.5 | 1 |
| 10 | 128 | -228 | -308 | -120 | 0 | -107 | 76 | 6.7 | 255.9 | 43.7 | 0.0 | 262.6 | 1 |
| 11 | 128 | 113 | -303 | 115 | 0 | 106 | 96 | 3.3 | 267.7 | 43.0 | 0.0 | 271.0 | 1 |
| 12 | 128 | 127 | -217 | -120 | 0 | -107 | 72 | 3.7 | 252.5 | 30.8 | 0.0 | 256.2 | 1 |
| 13 | 128 | -148 | -770 | -5 | 0 | -1 | 216 | 4.4 | 151.5 | 109.3 | 0.0 | 212.9 | 3 |
| 14 | 128 | 48 | 238 | 2 | 0 | 0 | -66 | 1.4 | 46.0 | 33.8 | 0.0 | 65.5 | 3 |
| 15 | 128 | -155 | -804 | -5 | 0 | -1 | 226 | 4.6 | 158.2 | 114.2 | 0.0 | 222.3 | 3 |
| | | | | | | | | | | | | | |
| 1 | 142 | -179 | -932 | -6 | 0 | -0 | 128 | 5.3 | 89.0 | 132.4 | 0.0 | 229.3 | 4 |
| 5 | 142 | -604 | -226 | 34 | 0 | 27 | -4 | 17.8 | 53.7 | 32.1 | 0.0 | 71.5 | 1 |
| 6 | 142 | -605 | -227 | -37 | 0 | -27 | -4 | 17.8 | 53.6 | 32.2 | 0.0 | 71.4 | 1 |
| 7 | 142 | 523 | -216 | 34 | 0 | 27 | 65 | 15.4 | 95.7 | 30.6 | 0.0 | 111.1 | 1 |
| 8 | 142 | 522 | -216 | -37 | 0 | -27 | 64 | 15.4 | 96.1 | 30.7 | 0.0 | 111.5 | 1 |
| 9 | 142 | -225 | -311 | 115 | 0 | 90 | 33 | 6.6 | 192.5 | 44.2 | 0.0 | 199.1 | 1 |
| 10 | 142 | -228 | -313 | -120 | 0 | -90 | 32 | 6.7 | 193.0 | 44.4 | 0.0 | 199.7 | 1 |
| 11 | 142 | 113 | -308 | 115 | 0 | 90 | 53 | 3.3 | 206.6 | 43.7 | 0.0 | 210.0 | 1 |
| 12 | 142 | 127 | -220 | -120 | 0 | -90 | 41 | 3.7 | 198.8 | 31.3 | 0.0 | 202.5 | 1 |
| 13 | 142 | -148 | -775 | -5 | 0 | -0 | 106 | 4.4 | 74.0 | 110.0 | 0.0 | 190.6 | 4 |
| 14 | 142 | 48 | 235 | 2 | 0 | -0 | -32 | 1.4 | 22.4 | 33.3 | 0.0 | 57.7 | 4 |
| 15 | 142 | -155 | -809 | -5 | 0 | -0 | 111 | 4.6 | 77.3 | 114.9 | 0.0 | 199.0 | 4 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|--------|-------|---------------------|---------|------|-----------|------|
| | | cm | daN*m | daN/cm ² | | cm | | |
| 1 | -- | 0 | 1418 | 984.7 | -- | -- | -- | |
| -- | Rara | 77 | 2 | -- | 76 | 0.00 | 1 / 99999 | |
| -- | Freq. | 77 | 2 | -- | 76 | 0.00 | 1 / 99999 | |
| -- | Q.Perm. | 77 | 2 | -- | 76 | 0.00 | 1 / 99999 | |
| -- | Rara | 77 | 2 | -- | 76 | 0.00 | 1 / 99999 | |
| -- | Rara | 77 | 2 | -- | 76 | 0.00 | 1 / 99999 | |
| -- | Freq. | 77 | 2 | -- | 76 | 0.00 | 1 / 99999 | |
| -- | Freq. | 77 | 2 | -- | 76 | 0.00 | 1 / 99999 | |

141
ASTA NUM. 6 NI 53 NF 54 Lungh. 6.5 cm SEZ. 2 Ps HEB 120

categoria: p.p. y qy tot.

qy medio: 0.2669 0.2669 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|-------|-------|----|-------|-----|---------|--------|---------------------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | daN/cm ² | | | | |
| 1 | 0 | -181 | -2130 | -1 | 0 | -0 | 128 | 5.3 | 88.8 | 302.4 | 0.0 | 523.9 | 4 | |
| 5 | 0 | -802 | -509 | 417 | 0 | 27 | -15 | 23.6 | 61.6 | 72.3 | 0.0 | 128.0 | 4 | |
| 6 | 0 | -805 | -510 | -416 | 0 | -27 | -15 | 23.7 | 61.6 | 72.4 | 0.0 | 128.1 | 4 | |
| 7 | 0 | 722 | -499 | 415 | 0 | 27 | 76 | 21.2 | 103.6 | 70.8 | 0.0 | 135.6 | 3 | |
| 8 | 0 | 719 | -499 | -419 | 0 | -27 | 76 | 21.2 | 103.9 | 70.9 | 0.0 | 135.7 | 3 | |
| 9 | 0 | -282 | -708 | 1386 | 0 | 90 | 29 | 8.3 | 190.2 | 100.6 | 0.0 | 210.9 | 3 | |
| 10 | 0 | -291 | -710 | -1390 | 0 | -90 | 29 | 8.6 | 190.5 | 100.8 | 0.0 | 211.4 | 3 | |
| 11 | 0 | 175 | -705 | 1385 | 0 | 90 | 56 | 5.1 | 209.0 | 100.1 | 0.0 | 214.2 | 1 | |
| 12 | 0 | 183 | -503 | -1391 | 0 | -90 | 44 | 5.4 | 201.0 | 79.0 | 0.0 | 206.4 | 1 | |
| 13 | 0 | -150 | -1771 | -1 | 0 | -0 | 106 | 4.4 | 73.9 | 251.5 | 0.0 | 435.6 | 4 | |
| 14 | 0 | 48 | 539 | -1 | 0 | -0 | -32 | 1.4 | 22.4 | 76.5 | 0.0 | 132.4 | 4 | |
| 15 | 0 | -157 | -1849 | -1 | 0 | -0 | 111 | 4.6 | 77.1 | 262.5 | 0.0 | 454.8 | 4 | |
| | | | | | | | | | | | | | | |
| 1 | 3 | -181 | -2132 | -1 | 0 | -0 | 58 | 5.3 | 40.7 | 302.7 | 0.0 | 524.2 | 4 | |
| 5 | 3 | -802 | -510 | 417 | 0 | 14 | -32 | 23.6 | 47.5 | 72.4 | 0.0 | 127.9 | 4 | |
| 6 | 3 | -805 | -510 | -416 | 0 | -14 | -32 | 23.7 | 47.5 | 72.5 | 0.0 | 128.0 | 4 | |
| 7 | 3 | 722 | -499 | 415 | 0 | 13 | 60 | 21.2 | 66.8 | 70.9 | 0.0 | 130.9 | 3 | |
| 8 | 3 | 719 | -500 | -419 | 0 | -14 | 59 | 21.2 | 67.0 | 71.0 | 0.0 | 131.0 | 3 | |
| 9 | 3 | -282 | -710 | 1386 | 0 | 45 | 6 | 8.3 | 89.2 | 100.7 | 0.0 | 208.9 | 3 | |
| 10 | 3 | -291 | -711 | -1390 | 0 | -45 | 6 | 8.6 | 89.2 | 100.9 | 0.0 | 209.4 | 3 | |
| 11 | 3 | 175 | -706 | 1385 | 0 | 45 | 33 | 5.1 | 108.2 | 100.3 | 0.0 | 209.7 | 3 | |
| 12 | 3 | 183 | -504 | -1391 | 0 | -45 | 27 | 5.4 | 104.3 | 79.0 | 0.0 | 178.6 | 3 | |
| 13 | 3 | -150 | -1772 | -1 | 0 | -0 | 49 | 4.4 | 33.8 | 251.6 | 0.0 | 435.8 | 4 | |
| 14 | 3 | 48 | 538 | -1 | 0 | -0 | -15 | 1.4 | 10.2 | 76.3 | 0.0 | 132.2 | 4 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|---|------|-------|-------|---|----|-----|------|------|-------|-----|-------|---|
| 15 | 3 | -157 | -1850 | -1 | 0 | -0 | 51 | 4.6 | 35.3 | 262.7 | 0.0 | 455.0 | 4 |
| 1 | 6 | -181 | -2133 | -1 | 0 | 0 | -11 | 5.3 | 7.5 | 302.9 | 0.0 | 524.6 | 4 |
| 5 | 6 | -802 | -511 | 417 | 0 | 0 | -48 | 23.6 | 33.4 | 72.5 | 0.0 | 130.9 | 3 |
| 6 | 6 | -805 | -511 | -416 | 0 | 0 | -48 | 23.7 | 33.5 | 72.6 | 0.0 | 131.0 | 3 |
| 7 | 6 | 722 | -500 | 415 | 0 | -0 | 43 | 21.2 | 30.1 | 71.0 | 0.0 | 126.8 | 3 |
| 8 | 6 | 719 | -501 | -419 | 0 | -0 | 43 | 21.2 | 30.0 | 71.1 | 0.0 | 127.0 | 3 |
| 9 | 6 | -282 | -711 | 1386 | 0 | 0 | -17 | 8.3 | 11.8 | 100.9 | 0.0 | 209.2 | 3 |
| 10 | 6 | -291 | -712 | -1390 | 0 | 0 | -17 | 8.6 | 12.1 | 101.1 | 0.0 | 209.8 | 3 |
| 11 | 6 | 175 | -708 | 1385 | 0 | -0 | 11 | 5.1 | 7.3 | 100.5 | 0.0 | 208.2 | 3 |
| 12 | 6 | 183 | -505 | -1391 | 0 | -0 | 11 | 5.4 | 7.6 | 79.0 | 0.0 | 177.3 | 3 |
| 13 | 6 | -150 | -1773 | -1 | 0 | 0 | -9 | 4.4 | 6.2 | 251.8 | 0.0 | 436.1 | 4 |
| 14 | 6 | 48 | 537 | -1 | 0 | -0 | 3 | 1.4 | 2.0 | 76.2 | 0.0 | 132.0 | 4 |
| 15 | 6 | -157 | -1851 | -1 | 0 | 0 | -9 | 4.6 | 6.5 | 262.8 | 0.0 | 455.3 | 4 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x | Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|----|------|-------|--------|---------|-----------|----------|------|
| | | cm | | daN*m | daN/cm | cm | | | |
| 1 | -- | 0 | 128 | 88.7 | -- | -- | -- | -- | |
| -- | Rara | 3 | 0 | -- | 5 | -0.00 | 1 / 99999 | | |
| -- | Freq. | 3 | 0 | -- | 5 | -0.00 | 1 / 99999 | | |
| -- | Q.Perm. | 3 | 0 | -- | 5 | -0.00 | 1 / 99999 | | |
| -- | Rara | 3 | 0 | -- | 5 | -0.00 | 1 / 99999 | | |
| -- | Rara | 3 | 0 | -- | 5 | -0.00 | 1 / 99999 | | |
| -- | Freq. | 3 | 0 | -- | 5 | -0.00 | 1 / 99999 | | |
| -- | Freq. | 3 | 0 | -- | 5 | -0.00 | 1 / 99999 | | |

Verifica di STABILITA' e/o SVERGOLAMENTO

| n.comb | Fx | My eq. | Mz eq. | Sn. omega | Sn.yx | Sn.zx | OMEGA | OMEGA1 | Sf | Nota |
|--------|------|--------|--------|-----------|-------|-------|-------|--------|--------|------|
| | daN | daN*m | | | | | | | daN/cm | |
| 1 | -181 | 0 | 373 | 96 | 58 | 96 | 1.92 | 1.00 | 269.3 | |
| 5 | -802 | 0 | 103 | 96 | 58 | 96 | 1.92 | 1.00 | 117.0 | |
| 6 | -805 | 0 | 103 | 96 | 58 | 96 | 1.92 | 1.00 | 117.5 | |
| 7 | 722 | 0 | 67 | 96 | 58 | 96 | 1.00 | 1.00 | 68.1 | |
| 8 | 719 | 0 | 68 | 96 | 58 | 96 | 1.00 | 1.00 | 68.3 | |
| 9 | -282 | 0 | 124 | 96 | 58 | 96 | 1.92 | 1.00 | 103.0 | |
| 10 | -291 | 0 | 126 | 96 | 58 | 96 | 1.92 | 1.00 | 104.6 | |
| 11 | 175 | 0 | 114 | 96 | 58 | 96 | 1.00 | 1.00 | 84.7 | |
| 12 | 183 | 0 | 80 | 96 | 58 | 96 | 1.00 | 1.00 | 61.8 | |
| 13 | -150 | 0 | 309 | 96 | 58 | 96 | 1.92 | 1.00 | 223.1 | |
| 14 | 48 | 0 | 100 | 96 | 58 | 96 | 1.00 | 1.00 | 70.8 | |
| 15 | -157 | 0 | 323 | 96 | 58 | 96 | 1.92 | 1.00 | 233.1 | |

ASTA NUM. 7 NI 50 NF 49 Lungh. 142.4 cm SEZ. 2 Ps HEB 120

categoria: p.p. y qy tot.

qy medio: 0.2669 0.2669 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|------|------|----|-------|------|---------|--------|--------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | daN/cm | | | | |
| 1 | 0 | -235 | 1789 | -0 | 0 | -0 | -846 | 6.9 | 587.5 | 254.0 | 0.0 | 628.0 | 3 | |
| 5 | 0 | -272 | 413 | -49 | 0 | -0 | -191 | 8.0 | 132.9 | 58.7 | 0.0 | 148.2 | 3 | |
| 6 | 0 | -272 | 413 | 50 | 0 | 0 | -191 | 8.0 | 132.7 | 58.7 | 0.0 | 148.1 | 3 | |
| 7 | 0 | 164 | 425 | -49 | 0 | -0 | -198 | 4.8 | 137.5 | 60.3 | 0.0 | 150.3 | 3 | |
| 8 | 0 | 164 | 425 | 50 | 0 | 0 | -197 | 4.8 | 137.3 | 60.3 | 0.0 | 150.2 | 3 | |
| 9 | 0 | -142 | 587 | -164 | 0 | -0 | -273 | 4.2 | 190.1 | 83.3 | 0.0 | 206.1 | 3 | |
| 10 | 0 | -141 | 587 | 166 | 0 | 0 | -272 | 4.1 | 189.5 | 83.3 | 0.0 | 205.6 | 3 | |
| 11 | 0 | -11 | 590 | -164 | 0 | -0 | -275 | 0.3 | 191.5 | 83.8 | 0.0 | 204.5 | 3 | |
| 12 | 0 | 12 | 421 | 166 | 0 | 0 | -195 | 0.4 | 135.8 | 59.7 | 0.0 | 145.7 | 3 | |
| 13 | 0 | -195 | 1485 | -0 | 0 | -0 | -701 | 5.7 | 487.1 | 210.9 | 0.0 | 520.9 | 3 | |
| 14 | 0 | 62 | -460 | 0 | 0 | 0 | 225 | 1.8 | 156.1 | 65.3 | 0.0 | 164.8 | 3 | |
| 15 | 0 | -203 | 1551 | -0 | 0 | -0 | -733 | 6.0 | 508.9 | 220.2 | 0.0 | 544.1 | 3 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|------|------|---|------|------|-----|-------|-------|-----|-------|---|
| 1 | 14 | -235 | 1784 | -0 | 0 | -0 | -592 | 6.9 | 410.8 | 253.3 | 0.0 | 523.4 | 3 |
| 5 | 14 | -272 | 409 | -49 | 0 | 7 | -133 | 8.0 | 105.1 | 58.1 | 0.0 | 123.7 | 3 |
| 6 | 14 | -272 | 409 | 50 | 0 | -7 | -132 | 8.0 | 105.0 | 58.1 | 0.0 | 123.6 | 3 |
| 7 | 14 | 164 | 421 | -49 | 0 | 7 | -137 | 4.8 | 108.5 | 59.8 | 0.0 | 125.4 | 3 |
| 8 | 14 | 164 | 421 | 50 | 0 | -7 | -137 | 4.8 | 108.4 | 59.8 | 0.0 | 125.3 | 3 |
| 9 | 14 | -142 | 582 | -164 | 0 | 23 | -189 | 4.2 | 174.9 | 82.6 | 0.0 | 179.0 | 1 |
| 10 | 14 | -141 | 582 | 166 | 0 | -23 | -189 | 4.1 | 174.8 | 82.6 | 0.0 | 178.9 | 1 |
| 11 | 14 | -11 | 585 | -164 | 0 | 23 | -191 | 0.3 | 175.9 | 83.1 | 0.0 | 176.2 | 1 |
| 12 | 14 | 12 | 417 | 166 | 0 | -23 | -135 | 0.4 | 137.5 | 59.2 | 0.0 | 137.8 | 1 |
| 13 | 14 | -195 | 1480 | -0 | 0 | -0 | -490 | 5.7 | 340.4 | 210.2 | 0.0 | 434.0 | 3 |
| 14 | 14 | 62 | -464 | 0 | 0 | -0 | 159 | 1.8 | 110.5 | 65.9 | 0.0 | 138.1 | 3 |
| 15 | 14 | -203 | 1546 | -0 | 0 | -0 | -512 | 6.0 | 355.7 | 219.5 | 0.0 | 453.4 | 3 |
| | | | | | | | | | | | | | |
| 1 | 28 | -235 | 1779 | -0 | 0 | 0 | -338 | 6.9 | 234.7 | 252.6 | 0.0 | 441.8 | 3 |
| 5 | 28 | -272 | 406 | -49 | 0 | 14 | -75 | 8.0 | 78.0 | 57.6 | 0.0 | 103.9 | 3 |
| 6 | 28 | -272 | 406 | 50 | 0 | -14 | -74 | 8.0 | 78.0 | 57.6 | 0.0 | 103.8 | 3 |
| 7 | 28 | 164 | 417 | -49 | 0 | 14 | -78 | 4.8 | 80.3 | 59.2 | 0.0 | 105.5 | 3 |
| 8 | 28 | 164 | 417 | 50 | 0 | -14 | -78 | 4.8 | 80.4 | 59.2 | 0.0 | 105.4 | 3 |
| 9 | 28 | -142 | 577 | -164 | 0 | 46 | -107 | 4.2 | 161.6 | 81.9 | 0.0 | 165.8 | 1 |
| 10 | 28 | -141 | 577 | 166 | 0 | -47 | -106 | 4.1 | 162.0 | 81.9 | 0.0 | 166.2 | 1 |
| 11 | 28 | -11 | 581 | -164 | 0 | 46 | -108 | 0.3 | 162.3 | 82.4 | 0.0 | 162.6 | 1 |
| 12 | 28 | 12 | 413 | 166 | 0 | -47 | -76 | 0.4 | 141.0 | 58.6 | 0.0 | 141.4 | 1 |
| 13 | 28 | -195 | 1475 | -0 | 0 | 0 | -280 | 5.7 | 194.3 | 209.5 | 0.0 | 366.3 | 3 |
| 14 | 28 | 62 | -468 | 0 | 0 | -0 | 93 | 1.8 | 64.5 | 66.4 | 0.0 | 117.2 | 3 |
| 15 | 28 | -203 | 1541 | -0 | 0 | 0 | -292 | 6.0 | 203.0 | 218.8 | 0.0 | 382.7 | 3 |
| | | | | | | | | | | | | | |
| 1 | 43 | -235 | 1774 | -0 | 0 | 0 | -85 | 6.9 | 59.1 | 251.9 | 0.0 | 436.4 | 4 |
| 5 | 43 | -272 | 402 | -49 | 0 | 21 | -17 | 8.0 | 51.4 | 57.1 | 0.0 | 99.3 | 4 |
| 6 | 43 | -272 | 402 | 50 | 0 | -21 | -17 | 8.0 | 51.4 | 57.1 | 0.0 | 99.3 | 4 |
| 7 | 43 | 164 | 413 | -49 | 0 | 21 | -19 | 4.8 | 52.5 | 58.7 | 0.0 | 101.9 | 4 |
| 8 | 43 | 164 | 413 | 50 | 0 | -21 | -18 | 4.8 | 52.7 | 58.7 | 0.0 | 101.9 | 4 |
| 9 | 43 | -142 | 572 | -164 | 0 | 70 | -25 | 4.2 | 148.9 | 81.2 | 0.0 | 153.0 | 1 |
| 10 | 43 | -141 | 572 | 166 | 0 | -70 | -24 | 4.1 | 149.8 | 81.2 | 0.0 | 153.9 | 1 |
| 11 | 43 | -11 | 576 | -164 | 0 | 70 | -26 | 0.3 | 149.2 | 81.7 | 0.0 | 149.5 | 1 |
| 12 | 43 | 12 | 409 | 166 | 0 | -70 | -17 | 0.4 | 145.0 | 58.1 | 0.0 | 145.3 | 1 |
| 13 | 43 | -195 | 1470 | -0 | 0 | 0 | -70 | 5.7 | 48.7 | 208.8 | 0.0 | 361.6 | 4 |
| 14 | 43 | 62 | -472 | 0 | 0 | -0 | 26 | 1.8 | 18.1 | 66.9 | 0.0 | 116.0 | 4 |
| 15 | 43 | -203 | 1536 | -0 | 0 | 0 | -73 | 6.0 | 50.9 | 218.1 | 0.0 | 377.9 | 4 |
| | | | | | | | | | | | | | |
| 1 | 57 | -235 | 1769 | -0 | 0 | 0 | 167 | 6.9 | 116.3 | 251.2 | 0.0 | 435.1 | 4 |
| 5 | 57 | -272 | 398 | -49 | 0 | 28 | 40 | 8.0 | 80.5 | 56.5 | 0.0 | 98.5 | 4 |
| 6 | 57 | -272 | 398 | 50 | 0 | -28 | 40 | 8.0 | 81.0 | 56.5 | 0.0 | 98.5 | 4 |
| 7 | 57 | 164 | 410 | -49 | 0 | 28 | 40 | 4.8 | 80.4 | 58.2 | 0.0 | 101.0 | 4 |
| 8 | 57 | 164 | 410 | 50 | 0 | -28 | 40 | 4.8 | 81.2 | 58.1 | 0.0 | 101.0 | 4 |
| 9 | 57 | -142 | 567 | -164 | 0 | 93 | 56 | 4.2 | 214.3 | 80.5 | 0.0 | 218.5 | 1 |
| 10 | 57 | -141 | 567 | 166 | 0 | -94 | 57 | 4.1 | 216.8 | 80.5 | 0.0 | 220.9 | 1 |
| 11 | 57 | -11 | 571 | -164 | 0 | 93 | 56 | 0.3 | 214.3 | 81.0 | 0.0 | 214.6 | 1 |
| 12 | 57 | 12 | 405 | 166 | 0 | -94 | 41 | 0.4 | 205.7 | 57.5 | 0.0 | 206.1 | 1 |
| 13 | 57 | -195 | 1465 | -0 | 0 | 0 | 139 | 5.7 | 96.5 | 208.1 | 0.0 | 360.4 | 4 |
| 14 | 57 | 62 | -475 | 0 | 0 | -0 | -42 | 1.8 | 29.1 | 67.5 | 0.0 | 116.9 | 4 |
| 15 | 57 | -203 | 1531 | -0 | 0 | 0 | 145 | 6.0 | 100.9 | 217.4 | 0.0 | 376.7 | 4 |
| | | | | | | | | | | | | | |
| 1 | 71 | -235 | 1764 | -0 | 0 | 0 | 419 | 6.9 | 291.0 | 250.5 | 0.0 | 461.4 | 3 |
| 5 | 71 | -272 | 394 | -49 | 0 | 35 | 96 | 8.0 | 133.0 | 56.0 | 0.0 | 141.0 | 1 |
| 6 | 71 | -272 | 394 | 50 | 0 | -35 | 97 | 8.0 | 133.5 | 56.0 | 0.0 | 141.5 | 1 |
| 7 | 71 | 164 | 406 | -49 | 0 | 35 | 98 | 4.8 | 134.0 | 57.6 | 0.0 | 138.8 | 1 |
| 8 | 71 | 164 | 406 | 50 | 0 | -35 | 98 | 4.8 | 134.9 | 57.6 | 0.0 | 139.7 | 1 |
| 9 | 71 | -142 | 562 | -164 | 0 | 116 | 136 | 4.2 | 314.2 | 79.8 | 0.0 | 318.4 | 1 |
| 10 | 71 | -141 | 562 | 166 | 0 | -118 | 137 | 4.1 | 317.1 | 79.8 | 0.0 | 321.3 | 1 |
| 11 | 71 | -11 | 566 | -164 | 0 | 116 | 137 | 0.3 | 314.6 | 80.3 | 0.0 | 314.9 | 1 |
| 12 | 71 | 12 | 402 | 166 | 0 | -118 | 98 | 0.4 | 290.2 | 57.0 | 0.0 | 290.5 | 1 |
| 13 | 71 | -195 | 1461 | -0 | 0 | 0 | 347 | 5.7 | 241.2 | 207.4 | 0.0 | 382.2 | 3 |
| 14 | 71 | 62 | -479 | 0 | 0 | -0 | -109 | 1.8 | 76.3 | 68.0 | 0.0 | 124.1 | 3 |
| 15 | 71 | -203 | 1527 | -0 | 0 | 0 | 363 | 6.0 | 252.2 | 216.8 | 0.0 | 399.5 | 3 |
| | | | | | | | | | | | | | |
| 1 | 85 | -235 | 1759 | -0 | 0 | 0 | 670 | 6.9 | 465.2 | 249.8 | 0.0 | 549.4 | 3 |
| 5 | 85 | -272 | 390 | -49 | 0 | 42 | 152 | 8.0 | 185.0 | 55.4 | 0.0 | 193.0 | 1 |
| 6 | 85 | -272 | 390 | 50 | 0 | -42 | 152 | 8.0 | 185.7 | 55.4 | 0.0 | 193.7 | 1 |
| 7 | 85 | 164 | 402 | -49 | 0 | 42 | 155 | 4.8 | 187.2 | 57.1 | 0.0 | 192.0 | 1 |
| 8 | 85 | 164 | 402 | 50 | 0 | -42 | 156 | 4.8 | 188.2 | 57.1 | 0.0 | 193.0 | 1 |
| 9 | 85 | -142 | 557 | -164 | 0 | 140 | 216 | 4.2 | 413.6 | 79.1 | 0.0 | 417.8 | 1 |
| 10 | 85 | -141 | 557 | 166 | 0 | -141 | 217 | 4.1 | 417.0 | 79.1 | 0.0 | 421.1 | 1 |
| 11 | 85 | -11 | 561 | -164 | 0 | 140 | 217 | 0.3 | 414.3 | 79.6 | 0.0 | 414.6 | 1 |
| 12 | 85 | 12 | 398 | 166 | 0 | -141 | 155 | 0.4 | 374.2 | 56.5 | 0.0 | 374.6 | 1 |
| 13 | 85 | -195 | 1456 | -0 | 0 | 0 | 555 | 5.7 | 385.4 | 206.7 | 0.0 | 454.9 | 3 |
| 14 | 85 | 62 | -483 | 0 | 0 | -0 | -178 | 1.8 | 124.0 | 68.6 | 0.0 | 148.5 | 3 |
| 15 | 85 | -203 | 1522 | -0 | 0 | 0 | 580 | 6.0 | 402.9 | 216.1 | 0.0 | 475.5 | 3 |
| | | | | | | | | | | | | | |
| 1 | 100 | -235 | 1754 | -0 | 0 | 0 | 920 | 6.9 | 639.0 | 249.1 | 0.0 | 656.4 | 3 |
| 5 | 100 | -272 | 387 | -49 | 0 | 49 | 207 | 8.0 | 236.7 | 54.9 | 0.0 | 244.7 | 1 |
| 6 | 100 | -272 | 387 | 50 | 0 | -49 | 208 | 8.0 | 237.4 | 54.9 | 0.0 | 245.4 | 1 |
| 7 | 100 | 164 | 398 | -49 | 0 | 49 | 212 | 4.8 | 240.0 | 56.5 | 0.0 | 244.8 | 1 |
| 8 | 100 | 164 | 398 | 50 | 0 | -50 | 213 | 4.8 | 241.1 | 56.5 | 0.0 | 246.0 | 1 |
| 9 | 100 | -142 | 552 | -164 | 0 | 163 | 295 | 4.2 | 512.5 | 78.4 | 0.0 | 516.7 | 1 |
| 10 | 100 | -141 | 552 | 166 | 0 | -165 | 296 | 4.1 | 516.4 | 78.4 | 0.0 | 520.5 | 1 |
| 11 | 100 | -11 | 556 | -164 | 0 | 163 | 297 | 0.3 | 513.6 | 78.9 | 0.0 | 513.9 | 1 |
| 12 | 100 | 12 | 394 | 166 | 0 | -165 | 211 | 0.4 | 457.9 | 55.9 | 0.0 | 458.3 | 1 |
| 13 | 100 | -195 | 1451 | -0 | 0 | 0 | 762 | 5.7 | 529.1 | 206.0 | 0.0 | 543.3 | 3 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|------|------|---|------|------|-----|--------|-------|-----|--------|---|
| 14 | 100 | 62 | -487 | 0 | 0 | -0 | -247 | 1.8 | 172.0 | 69.1 | 0.0 | 178.3 | 3 |
| 15 | 100 | -203 | 1517 | -0 | 0 | 0 | 796 | 6.0 | 553.1 | 215.4 | 0.0 | 568.0 | 3 |
| 1 | 114 | -235 | 1749 | -0 | 0 | 0 | 1169 | 6.9 | 812.2 | 248.3 | 0.0 | 819.1 | 1 |
| 5 | 114 | -272 | 383 | -49 | 0 | 56 | 262 | 8.0 | 288.0 | 54.4 | 0.0 | 296.0 | 1 |
| 6 | 114 | -272 | 383 | 50 | 0 | -56 | 262 | 8.0 | 288.8 | 54.4 | 0.0 | 296.8 | 1 |
| 7 | 114 | 164 | 394 | -49 | 0 | 56 | 269 | 4.8 | 292.4 | 56.0 | 0.0 | 297.2 | 1 |
| 8 | 114 | 164 | 394 | 50 | 0 | -57 | 269 | 4.8 | 293.7 | 56.0 | 0.0 | 298.5 | 1 |
| 9 | 114 | -142 | 547 | -164 | 0 | 186 | 373 | 4.2 | 611.0 | 77.7 | 0.0 | 615.1 | 1 |
| 10 | 114 | -141 | 547 | 166 | 0 | -188 | 374 | 4.1 | 615.3 | 77.7 | 0.0 | 619.4 | 1 |
| 11 | 114 | -11 | 551 | -164 | 0 | 186 | 375 | 0.3 | 612.3 | 78.2 | 0.0 | 612.7 | 1 |
| 12 | 114 | 12 | 390 | 166 | 0 | -189 | 267 | 0.4 | 541.3 | 55.4 | 0.0 | 541.6 | 1 |
| 13 | 114 | -195 | 1446 | -0 | 0 | 0 | 968 | 5.7 | 672.3 | 205.3 | 0.0 | 678.0 | 1 |
| 14 | 114 | 62 | -491 | 0 | 0 | -0 | -317 | 1.8 | 220.3 | 69.6 | 0.0 | 222.2 | 1 |
| 15 | 114 | -203 | 1512 | -0 | 0 | 0 | 1012 | 6.0 | 702.9 | 214.7 | 0.0 | 708.9 | 1 |
| 1 | 128 | -235 | 1744 | -0 | 0 | 0 | 1418 | 6.9 | 985.0 | 247.6 | 0.0 | 991.9 | 1 |
| 5 | 128 | -272 | 379 | -49 | 0 | 63 | 317 | 8.0 | 338.9 | 53.8 | 0.0 | 346.9 | 1 |
| 6 | 128 | -272 | 379 | 50 | 0 | -64 | 317 | 8.0 | 339.8 | 53.8 | 0.0 | 347.8 | 1 |
| 7 | 128 | 164 | 391 | -49 | 0 | 63 | 325 | 4.8 | 344.4 | 55.5 | 0.0 | 349.3 | 1 |
| 8 | 128 | 164 | 391 | 50 | 0 | -64 | 325 | 4.8 | 345.9 | 55.4 | 0.0 | 350.7 | 1 |
| 9 | 128 | -142 | 543 | -164 | 0 | 210 | 451 | 4.2 | 708.9 | 77.0 | 0.0 | 713.1 | 1 |
| 10 | 128 | -141 | 542 | 166 | 0 | -212 | 451 | 4.1 | 713.7 | 77.0 | 0.0 | 717.8 | 1 |
| 11 | 128 | -11 | 546 | -164 | 0 | 210 | 453 | 0.3 | 710.6 | 77.5 | 0.0 | 710.9 | 1 |
| 12 | 128 | 12 | 386 | 166 | 0 | -212 | 322 | 0.4 | 624.2 | 54.9 | 0.0 | 624.6 | 1 |
| 13 | 128 | -195 | 1441 | -0 | 0 | 0 | 1173 | 5.7 | 815.0 | 204.6 | 0.0 | 820.7 | 1 |
| 14 | 128 | 62 | -494 | 0 | 0 | -0 | -387 | 1.8 | 269.1 | 70.2 | 0.0 | 270.9 | 1 |
| 15 | 128 | -203 | 1507 | -0 | 0 | 0 | 1227 | 6.0 | 852.2 | 214.0 | 0.0 | 858.2 | 1 |
| 1 | 142 | -235 | 1739 | -0 | 0 | 0 | 1666 | 6.9 | 1157.3 | 246.9 | 0.0 | 1164.2 | 1 |
| 5 | 142 | -272 | 375 | -49 | 0 | 70 | 370 | 8.0 | 389.5 | 53.3 | 0.0 | 397.5 | 1 |
| 6 | 142 | -272 | 375 | 50 | 0 | -71 | 370 | 8.0 | 390.4 | 53.3 | 0.0 | 398.4 | 1 |
| 7 | 142 | 164 | 387 | -49 | 0 | 70 | 380 | 4.8 | 396.1 | 54.9 | 0.0 | 400.9 | 1 |
| 8 | 142 | 164 | 387 | 50 | 0 | -71 | 380 | 4.8 | 397.7 | 54.9 | 0.0 | 402.5 | 1 |
| 9 | 142 | -142 | 538 | -164 | 0 | 233 | 528 | 4.2 | 806.3 | 76.3 | 0.0 | 810.5 | 1 |
| 10 | 142 | -141 | 537 | 166 | 0 | -236 | 528 | 4.1 | 811.6 | 76.3 | 0.0 | 815.7 | 1 |
| 11 | 142 | -11 | 541 | -164 | 0 | 233 | 531 | 0.3 | 808.4 | 76.8 | 0.0 | 808.7 | 1 |
| 12 | 142 | 12 | 383 | 166 | 0 | -236 | 377 | 0.4 | 706.8 | 54.3 | 0.0 | 707.1 | 1 |
| 13 | 142 | -195 | 1436 | -0 | 0 | 0 | 1378 | 5.7 | 957.2 | 203.9 | 0.0 | 962.9 | 1 |
| 14 | 142 | 62 | -498 | 0 | 0 | -0 | -457 | 1.8 | 318.2 | 70.7 | 0.0 | 320.0 | 1 |
| 15 | 142 | -203 | 1502 | -0 | 0 | 0 | 1441 | 6.0 | 1001.0 | 213.3 | 0.0 | 1006.9 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|--------|-------|---------------------|---------|------|-----------|------|
| | | cm | daN*m | daN/cm ² | cm | | | |
| 1 | -- | 142 | 1666 | 1156.9 | -- | -- | -- | |
| -- | Rara | 55 | 4 | -- | 64 | 0.00 | 1 / 99999 | |
| -- | Freq. | 55 | 4 | -- | 64 | 0.00 | 1 / 99999 | |
| -- | Q.Perm. | 55 | 4 | -- | 64 | 0.00 | 1 / 99999 | |
| -- | Rara | 55 | 4 | -- | 64 | 0.00 | 1 / 99999 | |
| -- | Rara | 55 | 4 | -- | 64 | 0.00 | 1 / 99999 | |
| -- | Freq. | 55 | 4 | -- | 64 | 0.00 | 1 / 99999 | |
| -- | Freq. | 55 | 4 | -- | 64 | 0.00 | 1 / 99999 | |

ASTA NUM. 8 NI 49 NF 48 Lungh. 142.1 cm SEZ. 2 Ps HEB 120

categoria: p.p. y qy tot.

qy medio: 0.2669 0.2669 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|------|------|----|-------|------|---------|--------|---------------------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | daN/cm ² | | | | |
| 1 | 0 | -231 | -664 | -2 | 0 | 0 | 1666 | 6.8 | 1157.3 | 94.3 | 0.0 | 1164.1 | 1 | |
| 5 | 0 | -646 | -136 | 65 | 0 | 70 | 349 | 19.0 | 374.7 | 19.3 | 0.0 | 393.7 | 1 | |
| 6 | 0 | -646 | -136 | -66 | 0 | -71 | 349 | 19.0 | 375.6 | 19.3 | 0.0 | 394.6 | 1 | |
| 7 | 0 | 540 | -124 | 65 | 0 | 70 | 401 | 15.9 | 410.9 | 17.7 | 0.0 | 426.8 | 1 | |
| 8 | 0 | 540 | -125 | -67 | 0 | -71 | 402 | 15.9 | 412.5 | 17.7 | 0.0 | 428.4 | 1 | |
| 9 | 0 | -253 | -189 | 218 | 0 | 233 | 521 | 7.4 | 801.9 | 26.8 | 0.0 | 809.3 | 1 | |
| 10 | 0 | -252 | -189 | -221 | 0 | -236 | 522 | 7.4 | 807.2 | 26.8 | 0.0 | 814.6 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|------|------|------|---|------|------|------|--------|------|-----|--------|---|
| 11 | 0 | 103 | -185 | 218 | 0 | 233 | 537 | 3.0 | 812.9 | 26.3 | 0.0 | 815.9 | 1 |
| 12 | 0 | 125 | -129 | -221 | 0 | -236 | 384 | 3.7 | 711.2 | 18.3 | 0.0 | 714.9 | 1 |
| 13 | 0 | -191 | -544 | -2 | 0 | 0 | 1379 | 5.6 | 957.9 | 77.2 | 0.0 | 963.5 | 1 |
| 14 | 0 | 61 | 220 | -0 | 0 | -0 | -457 | 1.8 | 318.2 | 31.2 | 0.0 | 320.0 | 1 |
| 15 | 0 | -200 | -570 | -2 | 0 | 0 | 1441 | 5.9 | 1001.0 | 80.9 | 0.0 | 1006.8 | 1 |
| 1 | 14 | -231 | -669 | -2 | 0 | 0 | 1571 | 6.8 | 1092.0 | 95.0 | 0.0 | 1098.8 | 1 |
| 5 | 14 | -646 | -140 | 65 | 0 | 61 | 329 | 19.0 | 343.6 | 19.8 | 0.0 | 362.6 | 1 |
| 6 | 14 | -646 | -140 | -66 | 0 | -61 | 329 | 19.0 | 344.2 | 19.9 | 0.0 | 363.2 | 1 |
| 7 | 14 | 540 | -128 | 65 | 0 | 61 | 383 | 15.9 | 380.9 | 18.2 | 0.0 | 396.8 | 1 |
| 8 | 14 | 540 | -128 | -67 | 0 | -61 | 384 | 15.9 | 382.2 | 18.2 | 0.0 | 398.1 | 1 |
| 9 | 14 | -253 | -193 | 218 | 0 | 202 | 494 | 7.4 | 724.7 | 27.5 | 0.0 | 732.1 | 1 |
| 10 | 14 | -252 | -194 | -221 | 0 | -204 | 495 | 7.4 | 729.2 | 27.5 | 0.0 | 736.6 | 1 |
| 11 | 14 | 103 | -190 | 218 | 0 | 202 | 511 | 3.0 | 736.0 | 27.0 | 0.0 | 739.0 | 1 |
| 12 | 14 | 125 | -132 | -221 | 0 | -204 | 365 | 3.7 | 639.2 | 18.8 | 0.0 | 642.9 | 1 |
| 13 | 14 | -191 | -549 | -2 | 0 | 0 | 1301 | 5.6 | 904.4 | 77.9 | 0.0 | 910.0 | 1 |
| 14 | 14 | 61 | 216 | -0 | 0 | -0 | -426 | 1.8 | 296.7 | 30.7 | 0.0 | 298.5 | 1 |
| 15 | 14 | -200 | -575 | -2 | 0 | 0 | 1360 | 5.9 | 944.9 | 81.6 | 0.0 | 950.8 | 1 |
| 1 | 28 | -231 | -674 | -2 | 0 | 1 | 1476 | 6.8 | 1026.2 | 95.7 | 0.0 | 1033.0 | 1 |
| 5 | 28 | -646 | -144 | 65 | 0 | 52 | 309 | 19.0 | 312.1 | 20.4 | 0.0 | 331.1 | 1 |
| 6 | 28 | -646 | -144 | -66 | 0 | -52 | 309 | 19.0 | 312.4 | 20.4 | 0.0 | 331.4 | 1 |
| 7 | 28 | 540 | -132 | 65 | 0 | 51 | 365 | 15.9 | 350.5 | 18.7 | 0.0 | 366.4 | 1 |
| 8 | 28 | 540 | -132 | -67 | 0 | -52 | 365 | 15.9 | 351.5 | 18.8 | 0.0 | 367.4 | 1 |
| 9 | 28 | -253 | -198 | 218 | 0 | 171 | 466 | 7.4 | 647.0 | 28.2 | 0.0 | 654.5 | 1 |
| 10 | 28 | -252 | -199 | -221 | 0 | -173 | 467 | 7.4 | 650.6 | 28.2 | 0.0 | 658.0 | 1 |
| 11 | 28 | 103 | -195 | 218 | 0 | 171 | 483 | 3.0 | 658.7 | 27.7 | 0.0 | 661.7 | 1 |
| 12 | 28 | 125 | -136 | -221 | 0 | -173 | 346 | 3.7 | 566.8 | 19.4 | 0.0 | 570.5 | 1 |
| 13 | 28 | -191 | -554 | -2 | 0 | 1 | 1223 | 5.6 | 850.4 | 78.6 | 0.0 | 856.0 | 1 |
| 14 | 28 | 61 | 212 | -0 | 0 | -0 | -396 | 1.8 | 275.6 | 30.1 | 0.0 | 277.4 | 1 |
| 15 | 28 | -200 | -580 | -2 | 0 | 1 | 1278 | 5.9 | 888.4 | 82.3 | 0.0 | 894.3 | 1 |
| 1 | 43 | -231 | -679 | -2 | 0 | 1 | 1380 | 6.8 | 959.9 | 96.4 | 0.0 | 966.7 | 1 |
| 5 | 43 | -646 | -147 | 65 | 0 | 42 | 289 | 19.0 | 280.2 | 20.9 | 0.0 | 299.2 | 1 |
| 6 | 43 | -646 | -147 | -66 | 0 | -42 | 289 | 19.0 | 280.2 | 20.9 | 0.0 | 299.2 | 1 |
| 7 | 43 | 540 | -136 | 65 | 0 | 42 | 346 | 15.9 | 319.8 | 19.3 | 0.0 | 335.7 | 1 |
| 8 | 43 | 540 | -136 | -67 | 0 | -42 | 346 | 15.9 | 320.4 | 19.3 | 0.0 | 336.3 | 1 |
| 9 | 43 | -253 | -203 | 218 | 0 | 140 | 438 | 7.4 | 568.9 | 28.9 | 0.0 | 576.3 | 1 |
| 10 | 43 | -252 | -203 | -221 | 0 | -142 | 438 | 7.4 | 571.6 | 28.9 | 0.0 | 579.0 | 1 |
| 11 | 43 | 103 | -200 | 218 | 0 | 140 | 455 | 3.0 | 580.8 | 28.4 | 0.0 | 583.9 | 1 |
| 12 | 43 | 125 | -140 | -221 | 0 | -142 | 326 | 3.7 | 494.0 | 19.9 | 0.0 | 497.7 | 1 |
| 13 | 43 | -191 | -558 | -2 | 0 | 1 | 1144 | 5.6 | 795.9 | 79.3 | 0.0 | 801.6 | 1 |
| 14 | 43 | 61 | 208 | -0 | 0 | -0 | -366 | 1.8 | 254.8 | 29.6 | 0.0 | 256.6 | 1 |
| 15 | 43 | -200 | -585 | -2 | 0 | 1 | 1195 | 5.9 | 831.4 | 83.0 | 0.0 | 837.3 | 1 |
| 1 | 57 | -231 | -684 | -2 | 0 | 1 | 1283 | 6.8 | 893.1 | 97.1 | 0.0 | 899.9 | 1 |
| 5 | 57 | -646 | -151 | 65 | 0 | 33 | 267 | 19.0 | 247.9 | 21.5 | 0.0 | 266.9 | 1 |
| 6 | 57 | -646 | -151 | -66 | 0 | -33 | 267 | 19.0 | 247.7 | 21.5 | 0.0 | 266.7 | 1 |
| 7 | 57 | 540 | -140 | 65 | 0 | 33 | 326 | 15.9 | 288.7 | 19.8 | 0.0 | 304.6 | 1 |
| 8 | 57 | 540 | -140 | -67 | 0 | -33 | 327 | 15.9 | 289.0 | 19.8 | 0.0 | 304.9 | 1 |
| 9 | 57 | -253 | -208 | 218 | 0 | 109 | 409 | 7.4 | 490.2 | 29.6 | 0.0 | 497.7 | 1 |
| 10 | 57 | -252 | -208 | -221 | 0 | -110 | 409 | 7.4 | 492.1 | 29.6 | 0.0 | 499.5 | 1 |
| 11 | 57 | 103 | -205 | 218 | 0 | 109 | 426 | 3.0 | 502.5 | 29.1 | 0.0 | 505.5 | 1 |
| 12 | 57 | 125 | -144 | -221 | 0 | -110 | 306 | 3.7 | 420.8 | 20.4 | 0.0 | 424.5 | 1 |
| 13 | 57 | -191 | -563 | -2 | 0 | 1 | 1064 | 5.6 | 741.0 | 80.0 | 0.0 | 746.6 | 1 |
| 14 | 57 | 61 | 205 | -0 | 0 | -0 | -337 | 1.8 | 234.4 | 29.0 | 0.0 | 236.2 | 1 |
| 15 | 57 | -200 | -590 | -2 | 0 | 1 | 1111 | 5.9 | 773.9 | 83.7 | 0.0 | 779.8 | 1 |
| 1 | 71 | -231 | -689 | -2 | 0 | 2 | 1185 | 6.8 | 825.9 | 97.8 | 0.0 | 832.6 | 1 |
| 5 | 71 | -646 | -155 | 65 | 0 | 24 | 246 | 19.0 | 215.3 | 22.0 | 0.0 | 234.3 | 1 |
| 6 | 71 | -646 | -155 | -66 | 0 | -23 | 246 | 19.0 | 214.8 | 22.0 | 0.0 | 233.8 | 1 |
| 7 | 71 | 540 | -143 | 65 | 0 | 24 | 306 | 15.9 | 257.2 | 20.4 | 0.0 | 273.1 | 1 |
| 8 | 71 | 540 | -143 | -67 | 0 | -24 | 306 | 15.9 | 257.1 | 20.4 | 0.0 | 273.0 | 1 |
| 9 | 71 | -253 | -213 | 218 | 0 | 78 | 379 | 7.4 | 411.1 | 30.3 | 0.0 | 418.5 | 1 |
| 10 | 71 | -252 | -213 | -221 | 0 | -79 | 379 | 7.4 | 412.1 | 30.3 | 0.0 | 419.5 | 1 |
| 11 | 71 | 103 | -210 | 218 | 0 | 78 | 397 | 3.0 | 423.7 | 29.8 | 0.0 | 426.7 | 1 |
| 12 | 71 | 125 | -148 | -221 | 0 | -79 | 285 | 3.7 | 347.3 | 21.0 | 0.0 | 351.0 | 1 |
| 13 | 71 | -191 | -568 | -2 | 0 | 1 | 984 | 5.6 | 685.5 | 80.7 | 0.0 | 691.2 | 1 |
| 14 | 71 | 61 | 201 | -0 | 0 | -0 | -308 | 1.8 | 214.4 | 28.5 | 0.0 | 216.2 | 1 |
| 15 | 71 | -200 | -595 | -2 | 0 | 1 | 1027 | 5.9 | 715.9 | 84.4 | 0.0 | 721.8 | 1 |
| 1 | 85 | -231 | -694 | -2 | 0 | 2 | 1087 | 6.8 | 758.1 | 98.5 | 0.0 | 764.9 | 1 |
| 5 | 85 | -646 | -159 | 65 | 0 | 14 | 223 | 19.0 | 182.3 | 22.5 | 0.0 | 201.3 | 1 |
| 6 | 85 | -646 | -159 | -66 | 0 | -14 | 223 | 19.0 | 181.5 | 22.5 | 0.0 | 200.5 | 1 |
| 7 | 85 | 540 | -147 | 65 | 0 | 14 | 286 | 15.9 | 225.3 | 20.9 | 0.0 | 241.2 | 1 |
| 8 | 85 | 540 | -147 | -67 | 0 | -14 | 286 | 15.9 | 224.9 | 20.9 | 0.0 | 240.8 | 1 |
| 9 | 85 | -253 | -218 | 218 | 0 | 48 | 348 | 7.4 | 331.5 | 31.0 | 0.0 | 338.9 | 1 |
| 10 | 85 | -252 | -218 | -221 | 0 | -47 | 348 | 7.4 | 331.6 | 31.0 | 0.0 | 339.0 | 1 |
| 11 | 85 | 103 | -215 | 218 | 0 | 48 | 367 | 3.0 | 344.4 | 30.5 | 0.0 | 347.4 | 1 |
| 12 | 85 | 125 | -151 | -221 | 0 | -48 | 264 | 3.7 | 273.4 | 21.5 | 0.0 | 277.1 | 1 |
| 13 | 85 | -191 | -573 | -2 | 0 | 2 | 902 | 5.6 | 629.6 | 81.4 | 0.0 | 635.2 | 1 |
| 14 | 85 | 61 | 197 | -0 | 0 | -0 | -280 | 1.8 | 194.8 | 28.0 | 0.0 | 196.6 | 1 |
| 15 | 85 | -200 | -599 | -2 | 0 | 2 | 942 | 5.9 | 657.5 | 85.1 | 0.0 | 663.3 | 1 |
| 1 | 99 | -231 | -699 | -2 | 0 | 2 | 988 | 6.8 | 689.9 | 99.2 | 0.0 | 696.7 | 1 |
| 5 | 99 | -646 | -163 | 65 | 0 | 5 | 200 | 19.0 | 148.9 | 23.1 | 0.0 | 167.9 | 1 |
| 6 | 99 | -646 | -163 | -66 | 0 | -5 | 201 | 19.0 | 147.8 | 23.1 | 0.0 | 166.8 | 1 |
| 7 | 99 | 540 | -151 | 65 | 0 | 5 | 264 | 15.9 | 193.1 | 21.4 | 0.0 | 209.0 | 1 |
| 8 | 99 | 540 | -151 | -67 | 0 | -5 | 265 | 15.9 | 192.4 | 21.4 | 0.0 | 208.2 | 1 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|------|------|---|-----|------|------|-------|-------|-----|-------|---|
| 9 | 99 | -253 | -223 | 218 | 0 | 17 | 317 | 7.4 | 251.4 | 31.7 | 0.0 | 258.8 | 1 |
| 10 | 99 | -252 | -223 | -221 | 0 | -16 | 317 | 7.4 | 250.6 | 31.7 | 0.0 | 258.0 | 1 |
| 11 | 99 | 103 | -220 | 218 | 0 | 17 | 336 | 3.0 | 264.6 | 31.2 | 0.0 | 267.7 | 1 |
| 12 | 99 | 125 | -155 | -221 | 0 | -16 | 242 | 3.7 | 199.1 | 22.0 | 0.0 | 202.8 | 1 |
| 13 | 99 | -191 | -578 | -2 | 0 | 2 | 821 | 5.6 | 573.2 | 82.1 | 0.0 | 578.8 | 1 |
| 14 | 99 | 61 | 193 | -0 | 0 | -0 | -252 | 1.8 | 175.5 | 27.4 | 0.0 | 177.4 | 1 |
| 15 | 99 | -200 | -604 | -2 | 0 | 2 | 857 | 5.9 | 598.5 | 85.8 | 0.0 | 604.4 | 1 |
| | | | | | | | | | | | | | |
| 1 | 114 | -231 | -704 | -2 | 0 | 2 | 888 | 6.8 | 621.2 | 99.9 | 0.0 | 627.9 | 1 |
| 5 | 114 | -646 | -166 | 65 | 0 | -4 | 177 | 19.0 | 130.8 | 23.6 | 0.0 | 149.8 | 1 |
| 6 | 114 | -646 | -166 | -66 | 0 | 5 | 177 | 19.0 | 132.3 | 23.6 | 0.0 | 151.3 | 1 |
| 7 | 114 | 540 | -155 | 65 | 0 | -4 | 243 | 15.9 | 176.7 | 22.0 | 0.0 | 192.5 | 1 |
| 8 | 114 | 540 | -155 | -67 | 0 | 5 | 243 | 15.9 | 177.8 | 22.0 | 0.0 | 193.7 | 1 |
| 9 | 114 | -253 | -228 | 218 | 0 | -14 | 285 | 7.4 | 224.7 | 32.4 | 0.0 | 232.2 | 1 |
| 10 | 114 | -252 | -228 | -221 | 0 | 15 | 285 | 7.4 | 226.7 | 32.4 | 0.0 | 234.1 | 1 |
| 11 | 114 | 103 | -224 | 218 | 0 | -14 | 304 | 3.0 | 238.4 | 31.9 | 0.0 | 241.4 | 1 |
| 12 | 114 | 125 | -159 | -221 | 0 | 15 | 220 | 3.7 | 181.1 | 22.6 | 0.0 | 184.8 | 1 |
| 13 | 114 | -191 | -583 | -2 | 0 | 2 | 738 | 5.6 | 516.3 | 82.8 | 0.0 | 521.9 | 1 |
| 14 | 114 | 61 | 189 | -0 | 0 | -0 | -225 | 1.8 | 156.7 | 26.9 | 0.0 | 158.5 | 1 |
| 15 | 114 | -200 | -609 | -2 | 0 | 2 | 771 | 5.9 | 539.1 | 86.5 | 0.0 | 544.9 | 1 |
| | | | | | | | | | | | | | |
| 1 | 128 | -231 | -709 | -2 | 0 | 3 | 788 | 6.8 | 552.0 | 100.6 | 0.0 | 558.7 | 1 |
| 5 | 128 | -646 | -170 | 65 | 0 | -13 | 153 | 19.0 | 131.7 | 24.2 | 0.0 | 150.7 | 1 |
| 6 | 128 | -646 | -170 | -66 | 0 | 14 | 153 | 19.0 | 133.5 | 24.2 | 0.0 | 152.5 | 1 |
| 7 | 128 | 540 | -159 | 65 | 0 | -14 | 220 | 15.9 | 178.7 | 22.5 | 0.0 | 194.6 | 1 |
| 8 | 128 | 540 | -159 | -67 | 0 | 14 | 221 | 15.9 | 180.2 | 22.5 | 0.0 | 196.1 | 1 |
| 9 | 128 | -253 | -233 | 218 | 0 | -45 | 252 | 7.4 | 260.3 | 33.1 | 0.0 | 267.8 | 1 |
| 10 | 128 | -252 | -233 | -221 | 0 | 47 | 252 | 7.4 | 263.1 | 33.1 | 0.0 | 270.5 | 1 |
| 11 | 128 | 103 | -229 | 218 | 0 | -45 | 272 | 3.0 | 274.4 | 32.6 | 0.0 | 277.4 | 1 |
| 12 | 128 | 125 | -163 | -221 | 0 | 46 | 197 | 3.7 | 224.4 | 23.1 | 0.0 | 228.1 | 1 |
| 13 | 128 | -191 | -588 | -2 | 0 | 2 | 655 | 5.6 | 458.9 | 83.5 | 0.0 | 464.5 | 1 |
| 14 | 128 | 61 | 186 | -0 | 0 | -0 | -198 | 1.8 | 138.2 | 26.4 | 0.0 | 140.0 | 1 |
| 15 | 128 | -200 | -614 | -2 | 0 | 2 | 684 | 5.9 | 479.1 | 87.2 | 0.0 | 485.0 | 1 |
| | | | | | | | | | | | | | |
| 1 | 142 | -231 | -714 | -2 | 0 | 3 | 687 | 6.8 | 482.3 | 101.3 | 0.0 | 489.0 | 1 |
| 5 | 142 | -646 | -174 | 65 | 0 | -23 | 129 | 19.0 | 132.2 | 24.7 | 0.0 | 151.2 | 1 |
| 6 | 142 | -646 | -174 | -66 | 0 | 24 | 129 | 19.0 | 134.4 | 24.7 | 0.0 | 153.3 | 1 |
| 7 | 142 | 540 | -162 | 65 | 0 | -23 | 198 | 15.9 | 180.4 | 23.0 | 0.0 | 196.3 | 1 |
| 8 | 142 | 540 | -162 | -67 | 0 | 24 | 198 | 15.9 | 182.2 | 23.1 | 0.0 | 198.1 | 1 |
| 9 | 142 | -253 | -238 | 218 | 0 | -76 | 219 | 7.4 | 295.5 | 33.8 | 0.0 | 302.9 | 1 |
| 10 | 142 | -252 | -238 | -221 | 0 | 78 | 219 | 7.4 | 299.0 | 33.8 | 0.0 | 306.4 | 1 |
| 11 | 142 | 103 | -234 | 218 | 0 | -76 | 239 | 3.0 | 309.8 | 33.3 | 0.0 | 312.9 | 1 |
| 12 | 142 | 125 | -167 | -221 | 0 | 78 | 174 | 3.7 | 267.3 | 23.7 | 0.0 | 271.0 | 1 |
| 13 | 142 | -191 | -593 | -2 | 0 | 2 | 571 | 5.6 | 401.0 | 84.2 | 0.0 | 406.6 | 1 |
| 14 | 142 | 61 | 182 | -0 | 0 | -0 | -172 | 1.8 | 120.0 | 25.8 | 0.0 | 121.8 | 1 |
| 15 | 142 | -200 | -619 | -2 | 0 | 3 | 596 | 5.9 | 418.7 | 87.9 | 0.0 | 424.6 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|--------|-------|--------|---------|------|-----------|------|
| | | cm | daN*m | daN/cm | cm | | | |
| 1 | -- | 0 | 1666 | 1156.9 | -- | -- | -- | |
| -- | Rara | 79 | 2 | -- | 77 | 0.00 | 1 / 99999 | |
| -- | Freq. | 79 | 2 | -- | 77 | 0.00 | 1 / 99999 | |
| -- | Q.Perm. | 79 | 2 | -- | 77 | 0.00 | 1 / 99999 | |
| -- | Rara | 79 | 2 | -- | 77 | 0.00 | 1 / 99999 | |
| -- | Rara | 79 | 2 | -- | 77 | 0.00 | 1 / 99999 | |
| -- | Freq. | 79 | 2 | -- | 77 | 0.00 | 1 / 99999 | |
| -- | Freq. | 79 | 2 | -- | 77 | 0.00 | 1 / 99999 | |

ASTA NUM. 9 NI 48 NF 2 Lungh. 35.5 cm SEZ. 2 Ps HEB 120

categoria: p.p. y qy tot.

qy medio: 0.2669 0.2669 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|----|-----|----|----|-------|----|---------|--------|--------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | | | | | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|------|-------|------|---|-----|------|------|-------|-------|-----|-------|---|
| 1 | 0 | -227 | -1967 | 7 | 0 | 3 | 687 | 6.7 | 482.5 | 279.3 | 0.0 | 589.7 | 3 |
| 5 | 0 | -857 | -470 | -46 | 0 | -23 | 117 | 25.2 | 124.0 | 66.7 | 0.0 | 149.3 | 1 |
| 6 | 0 | -857 | -470 | 49 | 0 | 24 | 117 | 25.2 | 126.2 | 66.7 | 0.0 | 151.4 | 1 |
| 7 | 0 | 753 | -458 | -47 | 0 | -23 | 210 | 22.1 | 188.8 | 65.1 | 0.0 | 210.9 | 1 |
| 8 | 0 | 753 | -458 | 49 | 0 | 24 | 210 | 22.1 | 190.5 | 65.1 | 0.0 | 212.7 | 1 |
| 9 | 0 | -315 | -653 | -155 | 0 | -76 | 215 | 9.3 | 293.0 | 92.7 | 0.0 | 302.3 | 1 |
| 10 | 0 | -314 | -654 | 160 | 0 | 78 | 215 | 9.2 | 296.7 | 92.8 | 0.0 | 305.9 | 1 |
| 11 | 0 | 168 | -650 | -155 | 0 | -76 | 243 | 4.9 | 312.5 | 92.3 | 0.0 | 317.4 | 1 |
| 12 | 0 | 190 | -463 | 159 | 0 | 78 | 177 | 5.6 | 269.8 | 65.7 | 0.0 | 275.4 | 1 |
| 13 | 0 | -188 | -1635 | 6 | 0 | 2 | 571 | 5.5 | 401.3 | 232.2 | 0.0 | 490.2 | 3 |
| 14 | 0 | 60 | 500 | -1 | 0 | -0 | -172 | 1.8 | 120.1 | 71.0 | 0.0 | 148.9 | 3 |
| 15 | 0 | -196 | -1707 | 6 | 0 | 3 | 596 | 5.8 | 419.0 | 242.4 | 0.0 | 511.8 | 3 |
| | | | | | | | | | | | | | |
| 1 | 4 | -227 | -1968 | 7 | 0 | 3 | 617 | 6.7 | 433.5 | 279.5 | 0.0 | 564.0 | 3 |
| 5 | 4 | -857 | -471 | -46 | 0 | -21 | 100 | 25.2 | 109.4 | 66.8 | 0.0 | 134.6 | 1 |
| 6 | 4 | -857 | -471 | 49 | 0 | 22 | 100 | 25.2 | 111.3 | 66.9 | 0.0 | 136.5 | 1 |
| 7 | 4 | 753 | -459 | -47 | 0 | -21 | 193 | 22.1 | 174.3 | 65.2 | 0.0 | 196.5 | 1 |
| 8 | 4 | 753 | -459 | 49 | 0 | 22 | 193 | 22.1 | 176.0 | 65.2 | 0.0 | 198.1 | 1 |
| 9 | 4 | -315 | -654 | -155 | 0 | -71 | 192 | 9.3 | 266.5 | 92.9 | 0.0 | 275.8 | 1 |
| 10 | 4 | -314 | -655 | 160 | 0 | 72 | 192 | 9.2 | 269.8 | 93.0 | 0.0 | 279.1 | 1 |
| 11 | 4 | 168 | -651 | -155 | 0 | -71 | 220 | 4.9 | 286.1 | 92.4 | 0.0 | 291.0 | 1 |
| 12 | 4 | 190 | -464 | 159 | 0 | 72 | 161 | 5.6 | 247.7 | 65.8 | 0.0 | 253.3 | 1 |
| 13 | 4 | -188 | -1636 | 6 | 0 | 2 | 513 | 5.5 | 360.6 | 232.3 | 0.0 | 468.9 | 3 |
| 14 | 4 | 60 | 499 | -1 | 0 | -0 | -154 | 1.8 | 107.7 | 70.8 | 0.0 | 142.2 | 3 |
| 15 | 4 | -196 | -1708 | 6 | 0 | 2 | 536 | 5.8 | 376.5 | 242.6 | 0.0 | 489.6 | 3 |
| | | | | | | | | | | | | | |
| 1 | 7 | -227 | -1969 | 7 | 0 | 2 | 547 | 6.7 | 384.5 | 279.6 | 0.0 | 540.0 | 3 |
| 5 | 7 | -857 | -472 | -46 | 0 | -19 | 83 | 25.2 | 94.6 | 67.0 | 0.0 | 128.6 | 3 |
| 6 | 7 | -857 | -472 | 49 | 0 | 20 | 84 | 25.2 | 96.4 | 67.0 | 0.0 | 128.7 | 3 |
| 7 | 7 | 753 | -460 | -47 | 0 | -20 | 177 | 22.1 | 159.9 | 65.3 | 0.0 | 182.0 | 1 |
| 8 | 7 | 753 | -460 | 49 | 0 | 20 | 177 | 22.1 | 161.4 | 65.4 | 0.0 | 183.5 | 1 |
| 9 | 7 | -315 | -656 | -155 | 0 | -65 | 169 | 9.3 | 240.0 | 93.1 | 0.0 | 249.3 | 1 |
| 10 | 7 | -314 | -656 | 160 | 0 | 67 | 169 | 9.2 | 243.0 | 93.1 | 0.0 | 252.2 | 1 |
| 11 | 7 | 168 | -652 | -155 | 0 | -65 | 197 | 4.9 | 259.6 | 92.6 | 0.0 | 264.5 | 1 |
| 12 | 7 | 190 | -465 | 159 | 0 | 66 | 144 | 5.6 | 225.6 | 66.0 | 0.0 | 231.2 | 1 |
| 13 | 7 | -188 | -1637 | 6 | 0 | 2 | 455 | 5.5 | 319.8 | 232.5 | 0.0 | 449.0 | 3 |
| 14 | 7 | 60 | 498 | -1 | 0 | -0 | -137 | 1.8 | 95.4 | 70.7 | 0.0 | 136.0 | 3 |
| 15 | 7 | -196 | -1709 | 6 | 0 | 2 | 475 | 5.8 | 333.9 | 242.7 | 0.0 | 468.7 | 3 |
| | | | | | | | | | | | | | |
| 1 | 11 | -227 | -1971 | 7 | 0 | 2 | 477 | 6.7 | 335.4 | 279.8 | 0.0 | 517.9 | 3 |
| 5 | 11 | -857 | -473 | -46 | 0 | -18 | 67 | 25.2 | 79.9 | 67.1 | 0.0 | 123.4 | 3 |
| 6 | 11 | -857 | -473 | 49 | 0 | 19 | 67 | 25.2 | 81.4 | 67.1 | 0.0 | 123.5 | 3 |
| 7 | 11 | 753 | -461 | -47 | 0 | -18 | 161 | 22.1 | 145.4 | 65.5 | 0.0 | 167.5 | 1 |
| 8 | 11 | 753 | -461 | 49 | 0 | 19 | 161 | 22.1 | 146.7 | 65.5 | 0.0 | 168.9 | 1 |
| 9 | 11 | -315 | -657 | -155 | 0 | -60 | 145 | 9.3 | 213.4 | 93.3 | 0.0 | 222.7 | 1 |
| 10 | 11 | -314 | -657 | 160 | 0 | 61 | 146 | 9.2 | 216.1 | 93.3 | 0.0 | 225.3 | 1 |
| 11 | 11 | 168 | -653 | -155 | 0 | -60 | 174 | 4.9 | 233.1 | 92.8 | 0.0 | 238.0 | 1 |
| 12 | 11 | 190 | -465 | 159 | 0 | 61 | 128 | 5.6 | 203.5 | 66.1 | 0.0 | 209.1 | 1 |
| 13 | 11 | -188 | -1639 | 6 | 0 | 2 | 397 | 5.5 | 279.0 | 232.7 | 0.0 | 430.6 | 3 |
| 14 | 11 | 60 | 497 | -1 | 0 | -0 | -119 | 1.8 | 83.1 | 70.6 | 0.0 | 130.2 | 3 |
| 15 | 11 | -196 | -1711 | 6 | 0 | 2 | 414 | 5.8 | 291.3 | 242.9 | 0.0 | 449.6 | 3 |
| | | | | | | | | | | | | | |
| 1 | 14 | -227 | -1972 | 7 | 0 | 2 | 407 | 6.7 | 286.3 | 280.0 | 0.0 | 497.9 | 3 |
| 5 | 14 | -857 | -474 | -46 | 0 | -16 | 50 | 25.2 | 65.2 | 67.2 | 0.0 | 119.5 | 4 |
| 6 | 14 | -857 | -474 | 49 | 0 | 17 | 50 | 25.2 | 66.5 | 67.3 | 0.0 | 119.6 | 4 |
| 7 | 14 | 753 | -462 | -47 | 0 | -16 | 144 | 22.1 | 130.9 | 65.6 | 0.0 | 153.0 | 1 |
| 8 | 14 | 753 | -462 | 49 | 0 | 17 | 144 | 22.1 | 132.1 | 65.6 | 0.0 | 154.2 | 1 |
| 9 | 14 | -315 | -658 | -155 | 0 | -54 | 122 | 9.3 | 186.8 | 93.4 | 0.0 | 196.1 | 1 |
| 10 | 14 | -314 | -658 | 160 | 0 | 55 | 122 | 9.2 | 189.2 | 93.5 | 0.0 | 198.4 | 1 |
| 11 | 14 | 168 | -655 | -155 | 0 | -54 | 150 | 4.9 | 206.6 | 93.0 | 0.0 | 211.5 | 1 |
| 12 | 14 | 190 | -466 | 159 | 0 | 55 | 111 | 5.6 | 181.4 | 66.2 | 0.0 | 186.9 | 1 |
| 13 | 14 | -188 | -1640 | 6 | 0 | 2 | 339 | 5.5 | 238.2 | 232.8 | 0.0 | 414.1 | 3 |
| 14 | 14 | 60 | 496 | -1 | 0 | -0 | -101 | 1.8 | 70.8 | 70.4 | 0.0 | 125.0 | 3 |
| 15 | 14 | -196 | -1712 | 6 | 0 | 2 | 354 | 5.8 | 248.7 | 243.1 | 0.0 | 432.3 | 3 |
| | | | | | | | | | | | | | |
| 1 | 18 | -227 | -1973 | 7 | 0 | 2 | 337 | 6.7 | 237.2 | 280.2 | 0.0 | 485.3 | 4 |
| 5 | 18 | -857 | -475 | -46 | 0 | -15 | 33 | 25.2 | 50.4 | 67.4 | 0.0 | 119.7 | 4 |
| 6 | 18 | -857 | -475 | 49 | 0 | 15 | 33 | 25.2 | 51.5 | 67.4 | 0.0 | 119.8 | 4 |
| 7 | 18 | 753 | -463 | -47 | 0 | -15 | 128 | 22.1 | 116.4 | 65.7 | 0.0 | 140.8 | 3 |
| 8 | 18 | 753 | -463 | 49 | 0 | 15 | 128 | 22.1 | 117.4 | 65.8 | 0.0 | 140.9 | 3 |
| 9 | 18 | -315 | -659 | -155 | 0 | -49 | 99 | 9.3 | 160.2 | 93.6 | 0.0 | 169.5 | 1 |
| 10 | 18 | -314 | -660 | 160 | 0 | 50 | 99 | 9.2 | 162.2 | 93.7 | 0.0 | 171.5 | 1 |
| 11 | 18 | 168 | -656 | -155 | 0 | -49 | 127 | 4.9 | 180.0 | 93.1 | 0.0 | 184.9 | 1 |
| 12 | 18 | 190 | -467 | 159 | 0 | 49 | 95 | 5.6 | 159.2 | 66.4 | 0.0 | 164.8 | 1 |
| 13 | 18 | -188 | -1641 | 6 | 0 | 1 | 281 | 5.5 | 197.3 | 233.0 | 0.0 | 403.6 | 4 |
| 14 | 18 | 60 | 495 | -1 | 0 | -0 | -84 | 1.8 | 58.5 | 70.3 | 0.0 | 121.8 | 4 |
| 15 | 18 | -196 | -1713 | 6 | 0 | 1 | 293 | 5.8 | 206.0 | 243.2 | 0.0 | 421.3 | 4 |
| | | | | | | | | | | | | | |
| 1 | 21 | -227 | -1974 | 7 | 0 | 1 | 267 | 6.7 | 188.0 | 280.3 | 0.0 | 485.6 | 4 |
| 5 | 21 | -857 | -476 | -46 | 0 | -13 | 16 | 25.2 | 35.6 | 67.5 | 0.0 | 119.9 | 4 |
| 6 | 21 | -857 | -476 | 49 | 0 | 13 | 16 | 25.2 | 36.5 | 67.5 | 0.0 | 119.9 | 4 |
| 7 | 21 | 753 | -464 | -47 | 0 | -13 | 111 | 22.1 | 101.8 | 65.9 | 0.0 | 134.7 | 3 |
| 8 | 21 | 753 | -464 | 49 | 0 | 13 | 111 | 22.1 | 102.7 | 65.9 | 0.0 | 134.7 | 3 |
| 9 | 21 | -315 | -661 | -155 | 0 | -43 | 75 | 9.3 | 133.5 | 93.8 | 0.0 | 163.0 | 4 |
| 10 | 21 | -314 | -661 | 160 | 0 | 44 | 75 | 9.2 | 135.2 | 93.8 | 0.0 | 163.1 | 4 |
| 11 | 21 | 168 | -657 | -155 | 0 | -43 | 104 | 4.9 | 153.4 | 93.3 | 0.0 | 161.9 | 4 |
| 12 | 21 | 190 | -468 | 159 | 0 | 44 | 78 | 5.6 | 137.0 | 66.5 | 0.0 | 142.6 | 1 |
| 13 | 21 | -188 | -1642 | 6 | 0 | 1 | 222 | 5.5 | 156.5 | 233.2 | 0.0 | 403.9 | 4 |
| 14 | 21 | 60 | 494 | -1 | 0 | -0 | -66 | 1.8 | 46.3 | 70.2 | 0.0 | 121.5 | 4 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|------|-------|------|---|-----|-----|------|-------|-------|-----|-------|---|
| 15 | 21 | -196 | -1714 | 6 | 0 | 1 | 232 | 5.8 | 163.3 | 243.4 | 0.0 | 421.6 | 4 |
| 1 | 25 | -227 | -1975 | 7 | 0 | 1 | 197 | 6.7 | 138.9 | 280.5 | 0.0 | 485.9 | 4 |
| 5 | 25 | -857 | -476 | -46 | 0 | -11 | -1 | 25.2 | 21.7 | 67.7 | 0.0 | 120.1 | 4 |
| 6 | 25 | -857 | -477 | 49 | 0 | 12 | -1 | 25.2 | 22.4 | 67.7 | 0.0 | 120.1 | 4 |
| 7 | 25 | 753 | -465 | -47 | 0 | -11 | 95 | 22.1 | 87.2 | 66.0 | 0.0 | 128.9 | 3 |
| 8 | 25 | 753 | -465 | 49 | 0 | 12 | 95 | 22.1 | 87.9 | 66.0 | 0.0 | 129.0 | 3 |
| 9 | 25 | -315 | -662 | -155 | 0 | -38 | 52 | 9.3 | 106.8 | 94.0 | 0.0 | 163.3 | 4 |
| 10 | 25 | -314 | -662 | 160 | 0 | 38 | 52 | 9.2 | 108.2 | 94.0 | 0.0 | 163.4 | 4 |
| 11 | 25 | 168 | -658 | -155 | 0 | -38 | 80 | 4.9 | 126.8 | 93.5 | 0.0 | 162.1 | 4 |
| 12 | 25 | 190 | -469 | 159 | 0 | 38 | 62 | 5.6 | 114.8 | 66.6 | 0.0 | 120.4 | 1 |
| 13 | 25 | -188 | -1643 | 6 | 0 | 1 | 164 | 5.5 | 115.5 | 233.4 | 0.0 | 404.2 | 4 |
| 14 | 25 | 60 | 493 | -1 | 0 | -0 | -49 | 1.8 | 34.0 | 70.0 | 0.0 | 121.3 | 4 |
| 15 | 25 | -196 | -1715 | 6 | 0 | 1 | 171 | 5.8 | 120.6 | 243.6 | 0.0 | 421.9 | 4 |
| 1 | 28 | -227 | -1977 | 7 | 0 | 1 | 127 | 6.7 | 89.6 | 280.7 | 0.0 | 486.2 | 4 |
| 5 | 28 | -857 | -477 | -46 | 0 | -10 | -18 | 25.2 | 30.3 | 67.8 | 0.0 | 120.3 | 4 |
| 6 | 28 | -857 | -478 | 49 | 0 | 10 | -18 | 25.2 | 30.9 | 67.8 | 0.0 | 120.3 | 4 |
| 7 | 28 | 753 | -466 | -47 | 0 | -10 | 78 | 22.1 | 72.7 | 66.2 | 0.0 | 123.6 | 3 |
| 8 | 28 | 753 | -466 | 49 | 0 | 10 | 78 | 22.1 | 73.2 | 66.2 | 0.0 | 123.6 | 3 |
| 9 | 28 | -315 | -663 | -155 | 0 | -32 | 28 | 9.3 | 80.1 | 94.1 | 0.0 | 163.5 | 4 |
| 10 | 28 | -314 | -663 | 160 | 0 | 33 | 28 | 9.2 | 81.2 | 94.2 | 0.0 | 163.6 | 4 |
| 11 | 28 | 168 | -660 | -155 | 0 | -32 | 57 | 4.9 | 100.2 | 93.7 | 0.0 | 162.4 | 4 |
| 12 | 28 | 190 | -470 | 159 | 0 | 33 | 45 | 5.6 | 92.6 | 66.8 | 0.0 | 116.0 | 4 |
| 13 | 28 | -188 | -1645 | 6 | 0 | 1 | 106 | 5.5 | 74.6 | 233.5 | 0.0 | 404.5 | 4 |
| 14 | 28 | 60 | 492 | -1 | 0 | -0 | -31 | 1.8 | 21.8 | 69.9 | 0.0 | 121.1 | 4 |
| 15 | 28 | -196 | -1717 | 6 | 0 | 1 | 110 | 5.8 | 77.9 | 243.7 | 0.0 | 422.2 | 4 |
| 1 | 32 | -227 | -1978 | 7 | 0 | 1 | 57 | 6.7 | 40.4 | 280.8 | 0.0 | 486.5 | 4 |
| 5 | 32 | -857 | -478 | -46 | 0 | -8 | -35 | 25.2 | 39.0 | 67.9 | 0.0 | 120.5 | 4 |
| 6 | 32 | -857 | -478 | 49 | 0 | 8 | -35 | 25.2 | 39.4 | 67.9 | 0.0 | 120.5 | 4 |
| 7 | 32 | 753 | -467 | -47 | 0 | -8 | 62 | 22.1 | 58.0 | 66.3 | 0.0 | 118.8 | 3 |
| 8 | 32 | 753 | -467 | 49 | 0 | 8 | 62 | 22.1 | 58.4 | 66.3 | 0.0 | 118.9 | 3 |
| 9 | 32 | -315 | -664 | -155 | 0 | -27 | 5 | 9.3 | 53.4 | 94.3 | 0.0 | 163.8 | 4 |
| 10 | 32 | -314 | -665 | 160 | 0 | 27 | 5 | 9.2 | 54.1 | 94.4 | 0.0 | 163.9 | 4 |
| 11 | 32 | 168 | -661 | -155 | 0 | -27 | 34 | 4.9 | 73.5 | 93.8 | 0.0 | 162.7 | 4 |
| 12 | 32 | 190 | -471 | 159 | 0 | 27 | 28 | 5.6 | 70.3 | 66.9 | 0.0 | 116.2 | 4 |
| 13 | 32 | -188 | -1646 | 6 | 0 | 0 | 47 | 5.5 | 33.6 | 233.7 | 0.0 | 404.8 | 4 |
| 14 | 32 | 60 | 491 | -1 | 0 | -0 | -14 | 1.8 | 9.7 | 69.8 | 0.0 | 120.8 | 4 |
| 15 | 32 | -196 | -1718 | 6 | 0 | 0 | 49 | 5.8 | 35.1 | 243.9 | 0.0 | 422.5 | 4 |
| 1 | 35 | -227 | -1979 | 7 | 0 | 0 | -14 | 6.7 | 10.0 | 281.0 | 0.0 | 486.8 | 4 |
| 5 | 35 | -857 | -479 | -46 | 0 | -6 | -52 | 25.2 | 47.7 | 68.1 | 0.0 | 120.7 | 4 |
| 6 | 35 | -857 | -479 | 49 | 0 | 6 | -52 | 25.2 | 47.9 | 68.1 | 0.0 | 120.7 | 4 |
| 7 | 35 | 753 | -468 | -47 | 0 | -6 | 45 | 22.1 | 43.4 | 66.4 | 0.0 | 117.3 | 4 |
| 8 | 35 | 753 | -468 | 49 | 0 | 6 | 45 | 22.1 | 43.6 | 66.4 | 0.0 | 117.3 | 4 |
| 9 | 35 | -315 | -666 | -155 | 0 | -21 | -19 | 9.3 | 52.9 | 94.5 | 0.0 | 164.1 | 4 |
| 10 | 35 | -314 | -666 | 160 | 0 | 21 | -19 | 9.2 | 53.3 | 94.5 | 0.0 | 164.1 | 4 |
| 11 | 35 | 168 | -662 | -155 | 0 | -21 | 10 | 4.9 | 46.8 | 94.0 | 0.0 | 163.0 | 4 |
| 12 | 35 | 190 | -472 | 159 | 0 | 21 | 11 | 5.6 | 48.0 | 67.0 | 0.0 | 116.4 | 4 |
| 13 | 35 | -188 | -1647 | 6 | 0 | 0 | -11 | 5.5 | 8.3 | 233.9 | 0.0 | 405.1 | 4 |
| 14 | 35 | 60 | 490 | -1 | 0 | -0 | 4 | 1.8 | 2.6 | 69.6 | 0.0 | 120.6 | 4 |
| 15 | 35 | -196 | -1719 | 6 | 0 | 0 | -12 | 5.8 | 8.7 | 244.1 | 0.0 | 422.8 | 4 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|--------|-------|---------------------|---------|-------|-----------|------|
| | | cm | daN*m | daN/cm ² | cm | | | |
| 1 | -- | 0 | 687 | 477.0 | -- | -- | -- | |
| -- | Rara | 18 | 0 | -- | 17 | -0.00 | 1 / 99999 | |
| -- | Freq. | 18 | 0 | -- | 17 | -0.00 | 1 / 99999 | |
| -- | Q.Perm. | 18 | 0 | -- | 17 | -0.00 | 1 / 99999 | |
| -- | Rara | 18 | 0 | -- | 17 | -0.00 | 1 / 99999 | |
| -- | Rara | 18 | 0 | -- | 17 | -0.00 | 1 / 99999 | |
| -- | Freq. | 18 | 0 | -- | 17 | -0.00 | 1 / 99999 | |
| -- | Freq. | 18 | 0 | -- | 17 | -0.00 | 1 / 99999 | |

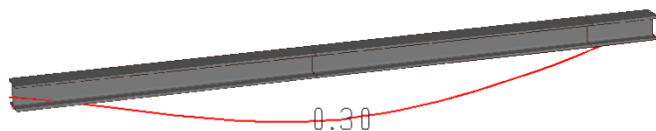
Verifica di STABILITA' e/o SVERGOLAMENTO

| n.comb | Fx | My eq. | Mz eq. | Sn. omega | Sn.yx | Sn.zx | OMEGA | OMEGA1 | Sf | Nota |
|--------|------|--------|--------|-----------|-------|-------|-------|--------|---------------------|------|
| | daN | daN*m | | | | | | | daN/cm ² | |
| 1 | -235 | 0 | 513 | 105 | 64 | 105 | 2.12 | 1.00 | 371.7 | |
| 5 | -857 | 4 | 135 | 105 | 64 | 105 | 2.12 | 1.00 | 155.2 | |
| 6 | -857 | 4 | 135 | 105 | 64 | 105 | 2.12 | 1.00 | 155.2 | |
| 7 | 753 | 4 | 100 | 105 | 64 | 105 | 1.00 | 1.00 | 99.2 | |
| 8 | 753 | 4 | 100 | 105 | 64 | 105 | 1.00 | 1.00 | 99.2 | |
| 9 | -315 | 13 | 171 | 105 | 64 | 105 | 2.12 | 1.00 | 163.0 | |
| 10 | -314 | 13 | 171 | 105 | 64 | 105 | 2.12 | 1.00 | 162.8 | |

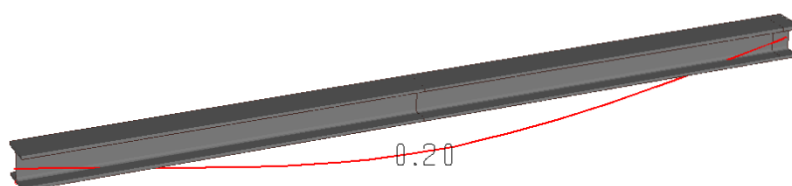
REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | |
|----|------|----|-----|-----|----|-----|------|------|-------|
| 11 | -11 | 13 | 161 | 105 | 64 | 105 | 2.12 | 1.00 | 136.5 |
| 12 | 190 | 13 | 112 | 105 | 64 | 105 | 1.00 | 1.00 | 107.8 |
| 13 | -195 | 0 | 425 | 105 | 64 | 105 | 2.12 | 1.00 | 308.1 |
| 14 | 62 | 0 | 136 | 105 | 64 | 105 | 1.00 | 1.00 | 96.5 |
| 15 | -203 | 0 | 444 | 105 | 64 | 105 | 2.12 | 1.00 | 321.9 |

Verifica spostamenti verticali (rif.)4.2.4.2.1 delle NTC 2008)

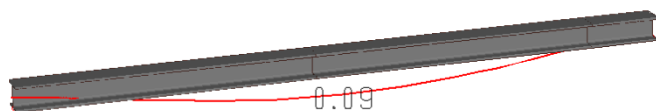


Prospettiva

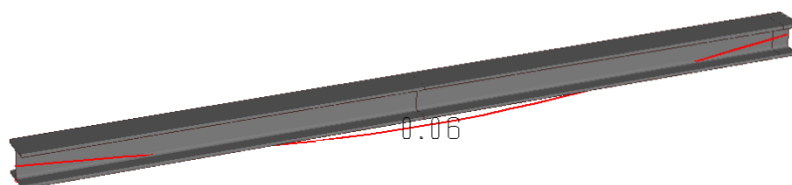


Freccia massima combinazione frequente

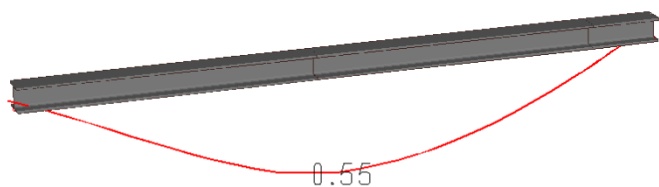
150



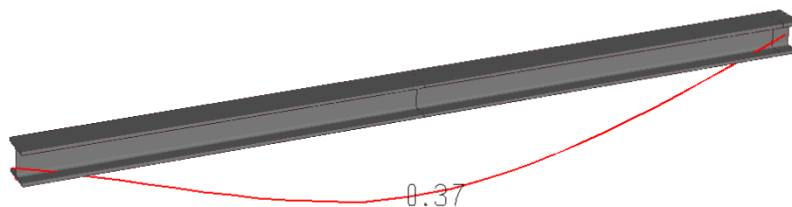
Prospettiva



Freccia massima combinazione quasi permanente



Prospettiva



151

Freccia massima combinazione rara

Luce di calcolo 320 cm

| | |
|------------------|---|
| Rara | $320/0.55 = 582 > 250 \rightarrow \text{verificato}$ |
| Frequente | $320/0.30 = 1067 > 250 \rightarrow \text{verificato}$ |
| Quasi permanente | $320/0.09 = 3556 > 250 \rightarrow \text{verificato}$ |

3.1.1. VERIFICA SLU E SLE HEB160

Lavoro: **Blocco 2** Intestazione lavoro: **ESECUTIVO**

Elemento: **TRAVE** Metodo di verifica: **Stati limite**

Gruppo: **2** Descrizione: **Travi principali**

Tabella: **Tabella travi**

Tipo acciaio: **S 235** Beta piano 'yx': **1.000** Beta piano 'zx': **1.000**

ASTA NUM. 1 NI 47 NF 3 Lungh. 172.0 cm SEZ. 6 Ps HEB 160

categoria: p.p. y qy tot.

qy medio: 0.4263 0.4263 daN/cm

152

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-----|-----|------|-------|-----|-----|---------|--------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -0 | 752 | 13 | 0 | 0 | 0 | 0.0 | 0.0 | 64.4 | 0.0 | 111.6 | 4 | |
| 5 | 0 | -19 | 235 | -69 | 0 | 0 | 0 | 0.3 | 0.0 | 20.2 | 0.0 | 34.9 | 4 | |
| 6 | 0 | -19 | 235 | 71 | 0 | 0 | 0 | 0.3 | 0.0 | 20.1 | 0.0 | 34.9 | 4 | |
| 7 | 0 | 19 | 238 | -69 | 0 | 0 | 0 | 0.3 | 0.0 | 20.4 | 0.0 | 35.3 | 4 | |
| 8 | 0 | 19 | 238 | 71 | 0 | 0 | 0 | 0.3 | 0.0 | 20.4 | 0.0 | 35.3 | 4 | |
| 9 | 0 | -6 | 323 | -232 | 0 | 0 | 0 | 0.1 | 0.0 | 27.7 | 0.0 | 48.0 | 4 | |
| 10 | 0 | -6 | 322 | 231 | 0 | 0 | 0 | 0.1 | 0.0 | 27.6 | 0.0 | 47.9 | 4 | |
| 11 | 0 | 6 | 324 | -232 | 0 | 0 | 0 | 0.1 | 0.0 | 27.8 | 0.0 | 48.1 | 4 | |
| 12 | 0 | 6 | 237 | 230 | 0 | 0 | 0 | 0.1 | 0.0 | 20.3 | 0.0 | 35.1 | 4 | |
| 13 | 0 | 0 | 643 | 10 | 0 | 0 | 0 | 0.0 | 0.0 | 55.1 | 0.0 | 95.5 | 4 | |
| 14 | 0 | 0 | -77 | -1 | 0 | 0 | 0 | 0.0 | 0.0 | 6.6 | 0.0 | 11.5 | 4 | |
| 15 | 0 | -0 | 667 | 11 | 0 | 0 | 0 | 0.0 | 0.0 | 57.2 | 0.0 | 99.0 | 4 | |
| 1 | 17 | -0 | 742 | 13 | 0 | -2 | 128 | 0.0 | 43.2 | 63.6 | 0.0 | 110.2 | 4 | |
| 5 | 17 | -19 | 228 | -69 | 0 | 12 | 40 | 0.3 | 23.5 | 19.5 | 0.0 | 33.9 | 4 | |
| 6 | 17 | -19 | 228 | 71 | 0 | -12 | 40 | 0.3 | 23.7 | 19.5 | 0.0 | 33.8 | 4 | |
| 7 | 17 | 19 | 231 | -69 | 0 | 12 | 40 | 0.3 | 23.7 | 19.8 | 0.0 | 34.2 | 4 | |
| 8 | 17 | 19 | 230 | 71 | 0 | -12 | 40 | 0.3 | 23.9 | 19.7 | 0.0 | 34.2 | 4 | |
| 9 | 17 | -6 | 314 | -232 | 0 | 40 | 55 | 0.1 | 53.5 | 26.9 | 0.0 | 53.6 | 1 | |
| 10 | 17 | -6 | 313 | 231 | 0 | -40 | 55 | 0.1 | 53.3 | 26.8 | 0.0 | 53.4 | 1 | |
| 11 | 17 | 6 | 315 | -232 | 0 | 40 | 55 | 0.1 | 53.5 | 27.0 | 0.0 | 53.6 | 1 | |
| 12 | 17 | 6 | 229 | 230 | 0 | -40 | 40 | 0.1 | 48.4 | 19.6 | 0.0 | 48.5 | 1 | |
| 13 | 17 | 0 | 634 | 10 | 0 | -2 | 110 | 0.0 | 36.9 | 54.3 | 0.0 | 94.1 | 4 | |
| 14 | 17 | 0 | -85 | -1 | 0 | 0 | -14 | 0.0 | 4.7 | 7.3 | 0.0 | 12.6 | 4 | |
| 15 | 17 | -0 | 657 | 11 | 0 | -2 | 114 | 0.0 | 38.2 | 56.3 | 0.0 | 97.6 | 4 | |
| 1 | 34 | -0 | 733 | 13 | 0 | -4 | 255 | 0.0 | 85.8 | 62.8 | 0.0 | 119.2 | 3 | |
| 5 | 34 | -19 | 221 | -69 | 0 | 24 | 78 | 0.3 | 46.6 | 18.9 | 0.0 | 47.0 | 1 | |
| 6 | 34 | -19 | 220 | 71 | 0 | -24 | 78 | 0.3 | 47.1 | 18.9 | 0.0 | 47.4 | 1 | |
| 7 | 34 | 19 | 223 | -69 | 0 | 24 | 79 | 0.3 | 47.0 | 19.1 | 0.0 | 47.3 | 1 | |
| 8 | 34 | 19 | 223 | 71 | 0 | -24 | 79 | 0.3 | 47.5 | 19.1 | 0.0 | 47.8 | 1 | |
| 9 | 34 | -6 | 304 | -232 | 0 | 80 | 108 | 0.1 | 106.4 | 26.1 | 0.0 | 106.5 | 1 | |
| 10 | 34 | -6 | 303 | 231 | 0 | -79 | 108 | 0.1 | 106.0 | 26.0 | 0.0 | 106.1 | 1 | |
| 11 | 34 | 6 | 305 | -232 | 0 | 80 | 108 | 0.1 | 106.5 | 26.1 | 0.0 | 106.6 | 1 | |
| 12 | 34 | 6 | 222 | 230 | 0 | -79 | 79 | 0.1 | 96.5 | 19.0 | 0.0 | 96.6 | 1 | |
| 13 | 34 | 0 | 624 | 10 | 0 | -4 | 218 | 0.0 | 73.2 | 53.5 | 0.0 | 101.7 | 3 | |
| 14 | 34 | 0 | -92 | -1 | 0 | 0 | -29 | 0.0 | 9.8 | 7.9 | 0.0 | 14.5 | 3 | |
| 15 | 34 | -0 | 648 | 11 | 0 | -4 | 226 | 0.0 | 76.0 | 55.5 | 0.0 | 105.5 | 3 | |
| 1 | 52 | -0 | 723 | 13 | 0 | -6 | 381 | 0.0 | 128.0 | 62.0 | 0.0 | 140.5 | 3 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-----|------|------|---|------|------|-----|-------|------|-----|-------|---|
| 5 | 52 | -19 | 213 | -69 | 0 | 36 | 116 | 0.3 | 69.3 | 18.3 | 0.0 | 69.7 | 1 |
| 6 | 52 | -19 | 213 | 71 | 0 | -37 | 116 | 0.3 | 70.0 | 18.3 | 0.0 | 70.3 | 1 |
| 7 | 52 | 19 | 216 | -69 | 0 | 36 | 117 | 0.3 | 69.9 | 18.5 | 0.0 | 70.2 | 1 |
| 8 | 52 | 19 | 216 | 71 | 0 | -37 | 117 | 0.3 | 70.6 | 18.5 | 0.0 | 70.9 | 1 |
| 9 | 52 | -6 | 295 | -232 | 0 | 120 | 159 | 0.1 | 158.8 | 25.3 | 0.0 | 158.9 | 1 |
| 10 | 52 | -6 | 294 | 231 | 0 | -119 | 159 | 0.1 | 158.2 | 25.2 | 0.0 | 158.3 | 1 |
| 11 | 52 | 6 | 296 | -232 | 0 | 120 | 160 | 0.1 | 159.0 | 25.3 | 0.0 | 159.1 | 1 |
| 12 | 52 | 6 | 215 | 230 | 0 | -119 | 116 | 0.1 | 144.1 | 18.4 | 0.0 | 144.2 | 1 |
| 13 | 52 | 0 | 615 | 10 | 0 | -5 | 325 | 0.0 | 109.1 | 52.7 | 0.0 | 119.7 | 3 |
| 14 | 52 | 0 | -99 | -1 | 0 | 1 | -46 | 0.0 | 15.3 | 8.5 | 0.0 | 18.0 | 3 |
| 15 | 52 | -0 | 638 | 11 | 0 | -6 | 337 | 0.0 | 113.1 | 54.7 | 0.0 | 124.2 | 3 |
| | | | | | | | | | | | | | |
| 1 | 69 | -0 | 714 | 13 | 0 | -9 | 504 | 0.0 | 169.6 | 61.1 | 0.0 | 169.6 | 1 |
| 5 | 69 | -19 | 206 | -69 | 0 | 48 | 152 | 0.3 | 91.7 | 17.7 | 0.0 | 92.0 | 1 |
| 6 | 69 | -19 | 206 | 71 | 0 | -49 | 152 | 0.3 | 92.5 | 17.6 | 0.0 | 92.8 | 1 |
| 7 | 69 | 19 | 209 | -69 | 0 | 48 | 154 | 0.3 | 92.3 | 17.9 | 0.0 | 92.7 | 1 |
| 8 | 69 | 19 | 208 | 71 | 0 | -49 | 153 | 0.3 | 93.3 | 17.9 | 0.0 | 93.7 | 1 |
| 9 | 69 | -6 | 285 | -232 | 0 | 159 | 209 | 0.1 | 210.7 | 24.4 | 0.0 | 210.8 | 1 |
| 10 | 69 | -6 | 284 | 231 | 0 | -159 | 209 | 0.1 | 209.9 | 24.4 | 0.0 | 210.0 | 1 |
| 11 | 69 | 6 | 286 | -232 | 0 | 160 | 210 | 0.1 | 210.9 | 24.5 | 0.0 | 211.0 | 1 |
| 12 | 69 | 6 | 207 | 230 | 0 | -158 | 153 | 0.1 | 191.3 | 17.8 | 0.0 | 191.4 | 1 |
| 13 | 69 | 0 | 605 | 10 | 0 | -7 | 430 | 0.0 | 144.4 | 51.9 | 0.0 | 144.4 | 1 |
| 14 | 69 | 0 | -107 | -1 | 0 | 1 | -63 | 0.0 | 21.2 | 9.1 | 0.0 | 22.2 | 3 |
| 15 | 69 | -0 | 629 | 11 | 0 | -7 | 446 | 0.0 | 149.8 | 53.9 | 0.0 | 149.8 | 1 |
| | | | | | | | | | | | | | |
| 1 | 86 | -0 | 704 | 13 | 0 | -11 | 626 | 0.0 | 210.6 | 60.3 | 0.0 | 210.6 | 1 |
| 5 | 86 | -19 | 199 | -69 | 0 | 60 | 187 | 0.3 | 113.6 | 17.0 | 0.0 | 113.9 | 1 |
| 6 | 86 | -19 | 198 | 71 | 0 | -61 | 186 | 0.3 | 114.6 | 17.0 | 0.0 | 114.9 | 1 |
| 7 | 86 | 19 | 201 | -69 | 0 | 60 | 189 | 0.3 | 114.4 | 17.3 | 0.0 | 114.8 | 1 |
| 8 | 86 | 19 | 201 | 71 | 0 | -61 | 189 | 0.3 | 115.6 | 17.2 | 0.0 | 116.0 | 1 |
| 9 | 86 | -6 | 276 | -232 | 0 | 199 | 258 | 0.1 | 262.1 | 23.6 | 0.0 | 262.2 | 1 |
| 10 | 86 | -6 | 275 | 231 | 0 | -199 | 257 | 0.1 | 261.0 | 23.5 | 0.0 | 261.2 | 1 |
| 11 | 86 | 6 | 276 | -232 | 0 | 199 | 258 | 0.1 | 262.3 | 23.7 | 0.0 | 262.4 | 1 |
| 12 | 86 | 6 | 200 | 230 | 0 | -198 | 188 | 0.1 | 238.1 | 17.1 | 0.0 | 238.2 | 1 |
| 13 | 86 | 0 | 596 | 10 | 0 | -9 | 533 | 0.0 | 179.2 | 51.1 | 0.0 | 179.2 | 1 |
| 14 | 86 | 0 | -114 | -1 | 0 | 1 | -82 | 0.0 | 27.5 | 9.8 | 0.0 | 27.5 | 1 |
| 15 | 86 | -0 | 619 | 11 | 0 | -9 | 553 | 0.0 | 185.9 | 53.1 | 0.0 | 185.9 | 1 |
| | | | | | | | | | | | | | |
| 1 | 103 | -0 | 695 | 13 | 0 | -13 | 746 | 0.0 | 251.2 | 59.5 | 0.0 | 251.2 | 1 |
| 5 | 103 | -19 | 191 | -69 | 0 | 72 | 220 | 0.3 | 135.1 | 16.4 | 0.0 | 135.4 | 1 |
| 6 | 103 | -19 | 191 | 71 | 0 | -73 | 220 | 0.3 | 136.3 | 16.4 | 0.0 | 136.7 | 1 |
| 7 | 103 | 19 | 194 | -69 | 0 | 72 | 223 | 0.3 | 136.1 | 16.6 | 0.0 | 136.4 | 1 |
| 8 | 103 | 19 | 194 | 71 | 0 | -73 | 223 | 0.3 | 137.6 | 16.6 | 0.0 | 137.9 | 1 |
| 9 | 103 | -6 | 266 | -232 | 0 | 239 | 304 | 0.1 | 312.9 | 22.8 | 0.0 | 313.0 | 1 |
| 10 | 103 | -6 | 265 | 231 | 0 | -238 | 303 | 0.1 | 311.7 | 22.7 | 0.0 | 311.8 | 1 |
| 11 | 103 | 6 | 267 | -232 | 0 | 239 | 305 | 0.1 | 313.2 | 22.9 | 0.0 | 313.3 | 1 |
| 12 | 103 | 6 | 193 | 230 | 0 | -237 | 221 | 0.1 | 284.5 | 16.5 | 0.0 | 284.6 | 1 |
| 13 | 103 | 0 | 586 | 10 | 0 | -11 | 635 | 0.0 | 213.4 | 50.2 | 0.0 | 213.4 | 1 |
| 14 | 103 | 0 | -121 | -1 | 0 | 1 | -103 | 0.0 | 34.2 | 10.4 | 0.0 | 34.2 | 1 |
| 15 | 103 | -0 | 610 | 11 | 0 | -11 | 659 | 0.0 | 221.6 | 52.3 | 0.0 | 221.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 120 | -0 | 685 | 13 | 0 | -15 | 865 | 0.0 | 291.2 | 58.7 | 0.0 | 291.2 | 1 |
| 5 | 120 | -19 | 184 | -69 | 0 | 83 | 253 | 0.3 | 156.1 | 15.8 | 0.0 | 156.5 | 1 |
| 6 | 120 | -19 | 184 | 71 | 0 | -85 | 252 | 0.3 | 157.6 | 15.7 | 0.0 | 158.0 | 1 |
| 7 | 120 | 19 | 187 | -69 | 0 | 84 | 256 | 0.3 | 157.3 | 16.0 | 0.0 | 157.7 | 1 |
| 8 | 120 | 19 | 186 | 71 | 0 | -86 | 255 | 0.3 | 159.1 | 16.0 | 0.0 | 159.4 | 1 |
| 9 | 120 | -6 | 257 | -232 | 0 | 279 | 349 | 0.1 | 363.2 | 22.0 | 0.0 | 363.3 | 1 |
| 10 | 120 | -6 | 256 | 231 | 0 | -278 | 348 | 0.1 | 361.8 | 21.9 | 0.0 | 361.9 | 1 |
| 11 | 120 | 6 | 257 | -232 | 0 | 279 | 350 | 0.1 | 363.6 | 22.1 | 0.0 | 363.7 | 1 |
| 12 | 120 | 6 | 185 | 230 | 0 | -277 | 254 | 0.1 | 330.5 | 15.9 | 0.0 | 330.6 | 1 |
| 13 | 120 | 0 | 577 | 10 | 0 | -13 | 735 | 0.0 | 247.2 | 49.4 | 0.0 | 247.2 | 1 |
| 14 | 120 | 0 | -129 | -1 | 0 | 2 | -124 | 0.0 | 41.3 | 11.0 | 0.0 | 41.3 | 1 |
| 15 | 120 | -0 | 600 | 11 | 0 | -13 | 763 | 0.0 | 256.6 | 51.4 | 0.0 | 256.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 138 | -0 | 675 | 13 | 0 | -17 | 982 | 0.0 | 330.7 | 57.9 | 0.0 | 330.7 | 1 |
| 5 | 138 | -19 | 177 | -69 | 0 | 95 | 284 | 0.3 | 176.8 | 15.1 | 0.0 | 177.2 | 1 |
| 6 | 138 | -19 | 176 | 71 | 0 | -97 | 283 | 0.3 | 178.5 | 15.1 | 0.0 | 178.8 | 1 |
| 7 | 138 | 19 | 179 | -69 | 0 | 96 | 287 | 0.3 | 178.2 | 15.4 | 0.0 | 178.5 | 1 |
| 8 | 138 | 19 | 179 | 71 | 0 | -98 | 287 | 0.3 | 180.2 | 15.3 | 0.0 | 180.5 | 1 |
| 9 | 138 | -6 | 247 | -232 | 0 | 319 | 392 | 0.1 | 413.0 | 21.2 | 0.0 | 413.1 | 1 |
| 10 | 138 | -6 | 246 | 231 | 0 | -318 | 391 | 0.1 | 411.4 | 21.1 | 0.0 | 411.5 | 1 |
| 11 | 138 | 6 | 248 | -232 | 0 | 319 | 393 | 0.1 | 413.4 | 21.2 | 0.0 | 413.5 | 1 |
| 12 | 138 | 6 | 178 | 230 | 0 | -316 | 285 | 0.1 | 376.1 | 15.2 | 0.0 | 376.2 | 1 |
| 13 | 138 | 0 | 567 | 10 | 0 | -14 | 833 | 0.0 | 280.4 | 48.6 | 0.0 | 280.4 | 1 |
| 14 | 138 | 0 | -136 | -1 | 0 | 2 | -147 | 0.0 | 48.8 | 11.7 | 0.0 | 48.8 | 1 |
| 15 | 138 | -0 | 591 | 11 | 0 | -15 | 865 | 0.0 | 291.2 | 50.6 | 0.0 | 291.2 | 1 |
| | | | | | | | | | | | | | |
| 1 | 155 | -0 | 666 | 13 | 0 | -19 | 1097 | 0.0 | 369.7 | 57.1 | 0.0 | 369.7 | 1 |
| 5 | 155 | -19 | 169 | -69 | 0 | 107 | 313 | 0.3 | 197.1 | 14.5 | 0.0 | 197.5 | 1 |
| 6 | 155 | -19 | 169 | 71 | 0 | -110 | 313 | 0.3 | 199.0 | 14.5 | 0.0 | 199.3 | 1 |
| 7 | 155 | 19 | 172 | -69 | 0 | 108 | 317 | 0.3 | 198.7 | 14.7 | 0.0 | 199.0 | 1 |
| 8 | 155 | 19 | 172 | 71 | 0 | -110 | 317 | 0.3 | 200.9 | 14.7 | 0.0 | 201.2 | 1 |
| 9 | 155 | -6 | 238 | -232 | 0 | 359 | 434 | 0.1 | 462.3 | 20.4 | 0.0 | 462.4 | 1 |
| 10 | 155 | -6 | 237 | 231 | 0 | -357 | 433 | 0.1 | 460.4 | 20.3 | 0.0 | 460.5 | 1 |
| 11 | 155 | 6 | 238 | -232 | 0 | 359 | 435 | 0.1 | 462.7 | 20.4 | 0.0 | 462.8 | 1 |
| 12 | 155 | 6 | 171 | 230 | 0 | -356 | 315 | 0.1 | 421.3 | 14.6 | 0.0 | 421.4 | 1 |
| 13 | 155 | 0 | 558 | 10 | 0 | -16 | 930 | 0.0 | 313.0 | 47.8 | 0.0 | 313.0 | 1 |
| 14 | 155 | 0 | -143 | -1 | 0 | 2 | -171 | 0.0 | 56.8 | 12.3 | 0.0 | 56.8 | 1 |
| 15 | 155 | -0 | 581 | 11 | 0 | -17 | 966 | 0.0 | 325.2 | 49.8 | 0.0 | 325.2 | 1 |

| | | | | | | | | | | | | | |
|----|-----|-----|------|------|---|------|------|-----|-------|------|-----|-------|---|
| 1 | 172 | -0 | 656 | 13 | 0 | -21 | 1211 | 0.0 | 408.1 | 56.2 | 0.0 | 408.1 | 1 |
| 5 | 172 | -19 | 162 | -69 | 0 | 119 | 342 | 0.3 | 217.0 | 13.9 | 0.0 | 217.3 | 1 |
| 6 | 172 | -19 | 162 | 71 | 0 | -122 | 341 | 0.3 | 219.1 | 13.9 | 0.0 | 219.4 | 1 |
| 7 | 172 | 19 | 165 | -69 | 0 | 120 | 346 | 0.3 | 218.7 | 14.1 | 0.0 | 219.1 | 1 |
| 8 | 172 | 19 | 164 | 71 | 0 | -122 | 346 | 0.3 | 221.2 | 14.1 | 0.0 | 221.5 | 1 |
| 9 | 172 | -6 | 228 | -232 | 0 | 399 | 474 | 0.1 | 511.0 | 19.5 | 0.0 | 511.1 | 1 |
| 10 | 172 | -6 | 227 | 231 | 0 | -397 | 473 | 0.1 | 508.9 | 19.5 | 0.0 | 509.0 | 1 |
| 11 | 172 | 6 | 229 | -232 | 0 | 399 | 475 | 0.1 | 511.5 | 19.6 | 0.0 | 511.6 | 1 |
| 12 | 172 | 6 | 163 | 230 | 0 | -395 | 344 | 0.1 | 466.1 | 14.0 | 0.0 | 466.2 | 1 |
| 13 | 172 | 0 | 548 | 10 | 0 | -18 | 1025 | 0.0 | 345.2 | 47.0 | 0.0 | 345.2 | 1 |
| 14 | 172 | 0 | -151 | -1 | 0 | 2 | -196 | 0.0 | 65.1 | 12.9 | 0.0 | 65.1 | 1 |
| 15 | 172 | -0 | 572 | 11 | 0 | -19 | 1065 | 0.0 | 358.7 | 49.0 | 0.0 | 358.7 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|--------|-------|--------|---------|------|-----------|------|
| | | cm | daN*m | daN/cm | cm | | | |
| 1 | -- | 172 | 1211 | 388.8 | -- | -- | -- | |
| -- | Rara | 69 | 10 | -- | 78 | 0.00 | 1 / 99999 | |
| -- | Freq. | 69 | 10 | -- | 78 | 0.00 | 1 / 99999 | |
| -- | Q.Perm. | 69 | 10 | -- | 78 | 0.00 | 1 / 99999 | |
| -- | Rara | 69 | 10 | -- | 78 | 0.00 | 1 / 99999 | |
| -- | Rara | 69 | 10 | -- | 78 | 0.00 | 1 / 99999 | |
| -- | Freq. | 69 | 10 | -- | 78 | 0.00 | 1 / 99999 | |
| -- | Freq. | 69 | 10 | -- | 78 | 0.00 | 1 / 99999 | |

ASTA NUM. 30 NI 3 NF 6 Lungh. 142.4 cm SEZ. 6 Ps HEB 160

categoria: p.p. y qy tot.

qy medio: 0.4263 0.4263 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|-----|-----|----|-------|------|---------|--------|--------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | daN/cm | | | | |
| 1 | 0 | -0 | 90 | -17 | 0 | -21 | 1211 | 0.0 | 408.1 | 7.7 | 0.0 | 408.1 | 1 | |
| 5 | 0 | -144 | 28 | 7 | 0 | 119 | 336 | 2.6 | 215.2 | 2.4 | 0.0 | 217.9 | 1 | |
| 6 | 0 | -144 | 28 | -11 | 0 | -122 | 336 | 2.6 | 217.3 | 2.4 | 0.0 | 220.0 | 1 | |
| 7 | 0 | 144 | 31 | 7 | 0 | 120 | 352 | 2.6 | 220.4 | 2.7 | 0.0 | 223.1 | 1 | |
| 8 | 0 | 144 | 31 | -12 | 0 | -122 | 351 | 2.6 | 222.9 | 2.6 | 0.0 | 225.5 | 1 | |
| 9 | 0 | -43 | 41 | 27 | 0 | 399 | 472 | 0.8 | 510.4 | 3.5 | 0.0 | 511.2 | 1 | |
| 10 | 0 | -43 | 39 | -30 | 0 | -397 | 471 | 0.8 | 508.4 | 3.3 | 0.0 | 509.2 | 1 | |
| 11 | 0 | 43 | 41 | 27 | 0 | 399 | 477 | 0.8 | 512.0 | 3.6 | 0.0 | 512.8 | 1 | |
| 12 | 0 | 43 | 29 | -29 | 0 | -395 | 345 | 0.8 | 466.6 | 2.5 | 0.0 | 467.4 | 1 | |
| 13 | 0 | -0 | 78 | -14 | 0 | -18 | 1025 | 0.0 | 345.2 | 6.7 | 0.0 | 345.2 | 1 | |
| 14 | 0 | 0 | -7 | 3 | 0 | 2 | -196 | 0.0 | 65.1 | 0.6 | 0.0 | 65.1 | 1 | |
| 15 | 0 | -0 | 80 | -14 | 0 | -19 | 1065 | 0.0 | 358.7 | 6.9 | 0.0 | 358.7 | 1 | |
| 1 | 14 | -0 | 82 | -17 | 0 | -19 | 1223 | 0.0 | 409.9 | 7.1 | 0.0 | 409.9 | 1 | |
| 5 | 14 | -144 | 22 | 7 | 0 | 118 | 340 | 2.6 | 215.5 | 1.9 | 0.0 | 218.1 | 1 | |
| 6 | 14 | -144 | 22 | -11 | 0 | -120 | 339 | 2.6 | 217.1 | 1.9 | 0.0 | 219.7 | 1 | |
| 7 | 14 | 144 | 25 | 7 | 0 | 119 | 356 | 2.6 | 220.8 | 2.1 | 0.0 | 223.5 | 1 | |
| 8 | 14 | 144 | 25 | -12 | 0 | -121 | 355 | 2.6 | 222.7 | 2.1 | 0.0 | 225.3 | 1 | |
| 9 | 14 | -43 | 33 | 27 | 0 | 395 | 478 | 0.8 | 508.7 | 2.8 | 0.0 | 509.5 | 1 | |
| 10 | 14 | -43 | 31 | -30 | 0 | -393 | 476 | 0.8 | 506.2 | 2.7 | 0.0 | 507.0 | 1 | |
| 11 | 14 | 43 | 34 | 27 | 0 | 395 | 482 | 0.8 | 510.3 | 2.9 | 0.0 | 511.1 | 1 | |
| 12 | 14 | 43 | 23 | -29 | 0 | -391 | 349 | 0.8 | 464.1 | 2.0 | 0.0 | 464.9 | 1 | |
| 13 | 14 | -0 | 70 | -14 | 0 | -16 | 1035 | 0.0 | 346.8 | 6.0 | 0.0 | 346.8 | 1 | |
| 14 | 14 | 0 | -13 | 3 | 0 | 2 | -198 | 0.0 | 65.1 | 1.1 | 0.0 | 65.1 | 1 | |
| 15 | 14 | -0 | 72 | -14 | 0 | -17 | 1076 | 0.0 | 360.4 | 6.2 | 0.0 | 360.4 | 1 | |
| 1 | 28 | -0 | 74 | -17 | 0 | -17 | 1234 | 0.0 | 411.4 | 6.4 | 0.0 | 411.4 | 1 | |
| 5 | 28 | -144 | 16 | 7 | 0 | 117 | 343 | 2.6 | 215.4 | 1.4 | 0.0 | 218.1 | 1 | |
| 6 | 28 | -144 | 16 | -11 | 0 | -119 | 342 | 2.6 | 216.6 | 1.4 | 0.0 | 219.3 | 1 | |
| 7 | 28 | 144 | 19 | 7 | 0 | 118 | 359 | 2.6 | 221.0 | 1.6 | 0.0 | 223.6 | 1 | |
| 8 | 28 | 144 | 18 | -12 | 0 | -119 | 358 | 2.6 | 222.2 | 1.6 | 0.0 | 224.8 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|-----|-----|---|------|------|-----|-------|-----|-----|-------|---|
| 9 | 28 | -43 | 25 | 27 | 0 | 391 | 482 | 0.8 | 506.6 | 2.1 | 0.0 | 507.4 | 1 |
| 10 | 28 | -43 | 23 | -30 | 0 | -389 | 480 | 0.8 | 503.6 | 2.0 | 0.0 | 504.4 | 1 |
| 11 | 28 | 43 | 26 | 27 | 0 | 391 | 487 | 0.8 | 508.3 | 2.2 | 0.0 | 509.1 | 1 |
| 12 | 28 | 43 | 17 | -29 | 0 | -387 | 352 | 0.8 | 461.3 | 1.5 | 0.0 | 462.1 | 1 |
| 13 | 28 | -0 | 62 | -14 | 0 | -14 | 1045 | 0.0 | 348.0 | 5.3 | 0.0 | 348.0 | 1 |
| 14 | 28 | 0 | -19 | 3 | 0 | 1 | -200 | 0.0 | 65.4 | 1.6 | 0.0 | 65.4 | 1 |
| 15 | 28 | -0 | 65 | -14 | 0 | -15 | 1086 | 0.0 | 361.7 | 5.5 | 0.0 | 361.7 | 1 |
| | | | | | | | | | | | | | |
| 1 | 43 | -0 | 67 | -17 | 0 | -14 | 1244 | 0.0 | 412.5 | 5.7 | 0.0 | 412.5 | 1 |
| 5 | 43 | -144 | 10 | 7 | 0 | 116 | 345 | 2.6 | 215.1 | 0.9 | 0.0 | 217.7 | 1 |
| 6 | 43 | -144 | 10 | -11 | 0 | -117 | 344 | 2.6 | 215.8 | 0.8 | 0.0 | 218.5 | 1 |
| 7 | 43 | 144 | 13 | 7 | 0 | 117 | 361 | 2.6 | 220.8 | 1.1 | 0.0 | 223.5 | 1 |
| 8 | 43 | 144 | 12 | -12 | 0 | -118 | 360 | 2.6 | 221.4 | 1.1 | 0.0 | 224.1 | 1 |
| 9 | 43 | -43 | 17 | 27 | 0 | 387 | 485 | 0.8 | 504.1 | 1.5 | 0.0 | 504.9 | 1 |
| 10 | 43 | -43 | 15 | -30 | 0 | -384 | 482 | 0.8 | 500.7 | 1.3 | 0.0 | 501.5 | 1 |
| 11 | 43 | 43 | 18 | 27 | 0 | 387 | 490 | 0.8 | 505.9 | 1.5 | 0.0 | 506.7 | 1 |
| 12 | 43 | 43 | 11 | -29 | 0 | -383 | 354 | 0.8 | 458.3 | 1.0 | 0.0 | 459.1 | 1 |
| 13 | 43 | -0 | 54 | -14 | 0 | -12 | 1053 | 0.0 | 348.9 | 4.6 | 0.0 | 348.9 | 1 |
| 14 | 43 | 0 | -25 | 3 | 0 | 1 | -203 | 0.0 | 66.0 | 2.2 | 0.0 | 66.0 | 1 |
| 15 | 43 | -0 | 57 | -14 | 0 | -13 | 1094 | 0.0 | 362.6 | 4.9 | 0.0 | 362.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 57 | -0 | 59 | -17 | 0 | -12 | 1253 | 0.0 | 413.2 | 5.0 | 0.0 | 413.2 | 1 |
| 5 | 57 | -144 | 4 | 7 | 0 | 115 | 346 | 2.6 | 214.5 | 0.4 | 0.0 | 217.1 | 1 |
| 6 | 57 | -144 | 4 | -11 | 0 | -116 | 345 | 2.6 | 214.8 | 0.4 | 0.0 | 217.4 | 1 |
| 7 | 57 | 144 | 7 | 7 | 0 | 116 | 363 | 2.6 | 220.4 | 0.6 | 0.0 | 223.0 | 1 |
| 8 | 57 | 144 | 6 | -12 | 0 | -116 | 362 | 2.6 | 220.4 | 0.5 | 0.0 | 223.0 | 1 |
| 9 | 57 | -43 | 9 | 27 | 0 | 384 | 487 | 0.8 | 501.3 | 1.0 | 0.0 | 502.1 | 1 |
| 10 | 57 | -43 | 7 | -30 | 0 | -380 | 484 | 0.8 | 497.4 | 1.1 | 0.0 | 498.2 | 1 |
| 11 | 57 | 43 | 10 | 27 | 0 | 384 | 492 | 0.8 | 503.1 | 1.0 | 0.0 | 503.9 | 1 |
| 12 | 57 | 43 | 5 | -29 | 0 | -379 | 355 | 0.8 | 455.0 | 1.0 | 0.0 | 455.8 | 1 |
| 13 | 57 | -0 | 46 | -14 | 0 | -10 | 1060 | 0.0 | 349.4 | 3.9 | 0.0 | 349.4 | 1 |
| 14 | 57 | 0 | -31 | 3 | 0 | 0 | -207 | 0.0 | 66.8 | 2.7 | 0.0 | 66.8 | 1 |
| 15 | 57 | -0 | 49 | -14 | 0 | -11 | 1102 | 0.0 | 363.2 | 4.2 | 0.0 | 363.2 | 1 |
| | | | | | | | | | | | | | |
| 1 | 71 | -0 | 51 | -17 | 0 | -10 | 1261 | 0.0 | 413.6 | 4.4 | 0.0 | 413.6 | 1 |
| 5 | 71 | -144 | -2 | 7 | 0 | 114 | 346 | 2.6 | 213.6 | 0.3 | 0.0 | 216.2 | 1 |
| 6 | 71 | -144 | -2 | -11 | 0 | -114 | 345 | 2.6 | 213.5 | 0.4 | 0.0 | 216.1 | 1 |
| 7 | 71 | 144 | 1 | 7 | 0 | 115 | 363 | 2.6 | 219.7 | 0.2 | 0.0 | 222.3 | 1 |
| 8 | 71 | 144 | 0 | -12 | 0 | -114 | 362 | 2.6 | 219.1 | 0.4 | 0.0 | 221.7 | 1 |
| 9 | 71 | -43 | 1 | 27 | 0 | 380 | 487 | 0.8 | 498.1 | 1.0 | 0.0 | 498.9 | 1 |
| 10 | 71 | -43 | -0 | -30 | 0 | -376 | 485 | 0.8 | 493.7 | 1.1 | 0.0 | 494.5 | 1 |
| 11 | 71 | 43 | 2 | 27 | 0 | 380 | 492 | 0.8 | 500.0 | 1.0 | 0.0 | 500.8 | 1 |
| 12 | 71 | 43 | -1 | -29 | 0 | -375 | 355 | 0.8 | 451.4 | 1.0 | 0.0 | 452.2 | 1 |
| 13 | 71 | -0 | 38 | -14 | 0 | -8 | 1066 | 0.0 | 349.6 | 3.3 | 0.0 | 349.6 | 1 |
| 14 | 71 | 0 | -37 | 3 | 0 | -0 | -212 | 0.0 | 68.2 | 3.2 | 0.0 | 68.2 | 1 |
| 15 | 71 | -0 | 41 | -14 | 0 | -9 | 1108 | 0.0 | 363.4 | 3.5 | 0.0 | 363.4 | 1 |
| | | | | | | | | | | | | | |
| 1 | 85 | -0 | 43 | -17 | 0 | -7 | 1268 | 0.0 | 413.6 | 3.7 | 0.0 | 413.6 | 1 |
| 5 | 85 | -144 | -8 | 7 | 0 | 113 | 345 | 2.6 | 212.4 | 0.7 | 0.0 | 215.1 | 1 |
| 6 | 85 | -144 | -8 | -11 | 0 | -113 | 344 | 2.6 | 211.9 | 0.7 | 0.0 | 214.5 | 1 |
| 7 | 85 | 144 | -5 | 7 | 0 | 114 | 363 | 2.6 | 218.7 | 0.5 | 0.0 | 221.3 | 1 |
| 8 | 85 | 144 | -6 | -12 | 0 | -113 | 362 | 2.6 | 217.5 | 0.5 | 0.0 | 220.1 | 1 |
| 9 | 85 | -43 | -7 | 27 | 0 | 376 | 487 | 0.8 | 494.6 | 1.0 | 0.0 | 495.4 | 1 |
| 10 | 85 | -43 | -8 | -30 | 0 | -372 | 484 | 0.8 | 489.7 | 1.1 | 0.0 | 490.5 | 1 |
| 11 | 85 | 43 | -6 | 27 | 0 | 376 | 492 | 0.8 | 496.5 | 1.0 | 0.0 | 497.3 | 1 |
| 12 | 85 | 43 | -7 | -29 | 0 | -371 | 355 | 0.8 | 447.5 | 1.0 | 0.0 | 448.3 | 1 |
| 13 | 85 | -0 | 30 | -14 | 0 | -6 | 1071 | 0.0 | 349.4 | 2.6 | 0.0 | 349.4 | 1 |
| 14 | 85 | 0 | -43 | 3 | 0 | -1 | -218 | 0.0 | 70.5 | 3.7 | 0.0 | 70.5 | 1 |
| 15 | 85 | -0 | 33 | -14 | 0 | -6 | 1113 | 0.0 | 363.2 | 2.8 | 0.0 | 363.2 | 1 |
| | | | | | | | | | | | | | |
| 1 | 100 | -0 | 35 | -17 | 0 | -5 | 1273 | 0.0 | 413.2 | 3.0 | 0.0 | 413.2 | 1 |
| 5 | 100 | -144 | -14 | 7 | 0 | 112 | 344 | 2.6 | 211.0 | 1.2 | 0.0 | 213.6 | 1 |
| 6 | 100 | -144 | -14 | -11 | 0 | -111 | 343 | 2.6 | 210.0 | 1.2 | 0.0 | 212.6 | 1 |
| 7 | 100 | 144 | -11 | 7 | 0 | 113 | 362 | 2.6 | 217.4 | 1.0 | 0.0 | 220.1 | 1 |
| 8 | 100 | 144 | -12 | -12 | 0 | -111 | 361 | 2.6 | 215.6 | 1.0 | 0.0 | 218.3 | 1 |
| 9 | 100 | -43 | -15 | 27 | 0 | 372 | 485 | 0.8 | 490.7 | 1.2 | 0.0 | 491.5 | 1 |
| 10 | 100 | -43 | -16 | -30 | 0 | -367 | 482 | 0.8 | 485.3 | 1.4 | 0.0 | 486.1 | 1 |
| 11 | 100 | 43 | -14 | 27 | 0 | 372 | 491 | 0.8 | 492.6 | 1.2 | 0.0 | 493.4 | 1 |
| 12 | 100 | 43 | -13 | -29 | 0 | -367 | 353 | 0.8 | 443.4 | 1.1 | 0.0 | 444.2 | 1 |
| 13 | 100 | -0 | 22 | -14 | 0 | -4 | 1075 | 0.0 | 348.8 | 1.9 | 0.0 | 348.8 | 1 |
| 14 | 100 | 0 | -50 | 3 | 0 | -1 | -224 | 0.0 | 73.0 | 4.2 | 0.0 | 73.0 | 1 |
| 15 | 100 | -0 | 25 | -14 | 0 | -4 | 1117 | 0.0 | 362.7 | 2.2 | 0.0 | 362.7 | 1 |
| | | | | | | | | | | | | | |
| 1 | 114 | -0 | 27 | -17 | 0 | -3 | 1278 | 0.0 | 412.5 | 2.3 | 0.0 | 412.5 | 1 |
| 5 | 114 | -144 | -20 | 7 | 0 | 111 | 341 | 2.6 | 209.3 | 1.7 | 0.0 | 211.9 | 1 |
| 6 | 114 | -144 | -21 | -11 | 0 | -110 | 340 | 2.6 | 207.8 | 1.8 | 0.0 | 210.5 | 1 |
| 7 | 114 | 144 | -17 | 7 | 0 | 112 | 359 | 2.6 | 215.9 | 1.5 | 0.0 | 218.5 | 1 |
| 8 | 114 | 144 | -18 | -12 | 0 | -109 | 358 | 2.6 | 213.5 | 1.5 | 0.0 | 216.1 | 1 |
| 9 | 114 | -43 | -22 | 27 | 0 | 368 | 483 | 0.8 | 486.4 | 1.9 | 0.0 | 487.2 | 1 |
| 10 | 114 | -43 | -24 | -30 | 0 | -363 | 479 | 0.8 | 480.6 | 2.1 | 0.0 | 481.4 | 1 |
| 11 | 114 | 43 | -22 | 27 | 0 | 369 | 488 | 0.8 | 488.4 | 1.9 | 0.0 | 489.2 | 1 |
| 12 | 114 | 43 | -19 | -29 | 0 | -363 | 351 | 0.8 | 439.0 | 1.7 | 0.0 | 439.8 | 1 |
| 13 | 114 | -0 | 15 | -14 | 0 | -2 | 1077 | 0.0 | 347.9 | 1.2 | 0.0 | 347.9 | 1 |
| 14 | 114 | 0 | -56 | 3 | 0 | -2 | -232 | 0.0 | 75.9 | 4.8 | 0.0 | 75.9 | 1 |
| 15 | 114 | -0 | 17 | -14 | 0 | -2 | 1120 | 0.0 | 361.8 | 1.5 | 0.0 | 361.8 | 1 |
| | | | | | | | | | | | | | |
| 1 | 128 | -0 | 19 | -17 | 0 | -0 | 1281 | 0.0 | 411.4 | 1.7 | 0.0 | 411.4 | 1 |
| 5 | 128 | -144 | -26 | 7 | 0 | 110 | 338 | 2.6 | 207.3 | 2.2 | 0.0 | 209.9 | 1 |
| 6 | 128 | -144 | -27 | -11 | 0 | -108 | 337 | 2.6 | 205.4 | 2.3 | 0.0 | 208.0 | 1 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|-----|-----|---|------|------|-----|-------|-----|-----|-------|---|
| 7 | 128 | 144 | -24 | 7 | 0 | 111 | 357 | 2.6 | 214.1 | 2.0 | 0.0 | 216.7 | 1 |
| 8 | 128 | 144 | -24 | -12 | 0 | -108 | 355 | 2.6 | 211.1 | 2.1 | 0.0 | 213.7 | 1 |
| 9 | 128 | -43 | -30 | 27 | 0 | 365 | 479 | 0.8 | 481.8 | 2.6 | 0.0 | 482.6 | 1 |
| 10 | 128 | -43 | -32 | -30 | 0 | -359 | 475 | 0.8 | 475.5 | 2.7 | 0.0 | 476.3 | 1 |
| 11 | 128 | 43 | -30 | 27 | 0 | 365 | 485 | 0.8 | 483.9 | 2.5 | 0.0 | 484.6 | 1 |
| 12 | 128 | 43 | -26 | -29 | 0 | -359 | 348 | 0.8 | 434.3 | 2.2 | 0.0 | 435.1 | 1 |
| 13 | 128 | -0 | 7 | -14 | 0 | -0 | 1079 | 0.0 | 346.6 | 0.6 | 0.0 | 346.6 | 1 |
| 14 | 128 | 0 | -62 | 3 | 0 | -2 | -240 | 0.0 | 79.0 | 5.3 | 0.0 | 79.0 | 1 |
| 15 | 128 | -0 | 9 | -14 | 0 | -0 | 1122 | 0.0 | 360.6 | 0.8 | 0.0 | 360.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 142 | -0 | 11 | -17 | 0 | 2 | 1283 | 0.0 | 413.8 | 1.0 | 0.0 | 413.8 | 1 |
| 5 | 142 | -144 | -32 | 7 | 0 | 109 | 334 | 2.6 | 205.0 | 2.8 | 0.0 | 207.7 | 1 |
| 6 | 142 | -144 | -33 | -11 | 0 | -107 | 333 | 2.6 | 202.7 | 2.8 | 0.0 | 205.3 | 1 |
| 7 | 142 | 144 | -30 | 7 | 0 | 110 | 353 | 2.6 | 212.0 | 2.5 | 0.0 | 214.6 | 1 |
| 8 | 142 | 144 | -30 | -12 | 0 | -106 | 352 | 2.6 | 208.4 | 2.6 | 0.0 | 211.0 | 1 |
| 9 | 142 | -43 | -38 | 27 | 0 | 361 | 474 | 0.8 | 476.8 | 3.3 | 0.0 | 477.6 | 1 |
| 10 | 142 | -43 | -40 | -30 | 0 | -355 | 470 | 0.8 | 470.0 | 3.4 | 0.0 | 470.8 | 1 |
| 11 | 142 | 43 | -37 | 27 | 0 | 361 | 480 | 0.8 | 478.9 | 3.2 | 0.0 | 479.7 | 1 |
| 12 | 142 | 43 | -32 | -29 | 0 | -355 | 344 | 0.8 | 429.3 | 2.7 | 0.0 | 430.1 | 1 |
| 13 | 142 | -0 | -1 | -14 | 0 | 2 | 1079 | 0.0 | 347.8 | 0.5 | 0.0 | 347.8 | 1 |
| 14 | 142 | 0 | -68 | 3 | 0 | -3 | -249 | 0.0 | 82.4 | 5.8 | 0.0 | 82.4 | 1 |
| 15 | 142 | -0 | 1 | -14 | 0 | 2 | 1123 | 0.0 | 362.0 | 0.5 | 0.0 | 362.0 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|--------|-------|--------|---------|------|-----------|------|
| | | cm | daN*m | daN/cm | | cm | | |
| 1 | -- | 142 | 1283 | 411.9 | -- | -- | -- | |
| -- | Rara | 84 | 3 | -- | 86 | 0.00 | 1 / 99999 | |
| -- | Freq. | 84 | 3 | -- | 86 | 0.00 | 1 / 99999 | |
| -- | Q.Perm. | 84 | 3 | -- | 86 | 0.00 | 1 / 99999 | |
| -- | Rara | 84 | 3 | -- | 86 | 0.00 | 1 / 99999 | |
| -- | Rara | 84 | 3 | -- | 86 | 0.00 | 1 / 99999 | |
| -- | Freq. | 84 | 3 | -- | 86 | 0.00 | 1 / 99999 | |
| -- | Freq. | 84 | 3 | -- | 86 | 0.00 | 1 / 99999 | |

ASTA NUM. 2 NI 6 NF 10 Lungh. 112.0 cm SEZ. 6 Ps HEB 160
156

categoria: p.p. y qy tot.

qy medio: 0.4263 0.4263 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|------|------|----|-------|------|---------|--------|--------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | daN/cm | | | | |
| 1 | 0 | -0 | -969 | 4 | 0 | 2 | 1283 | 0.0 | 413.8 | 83.0 | 0.0 | 413.8 | 1 | |
| 5 | 0 | -317 | -244 | 77 | 0 | 109 | 325 | 5.8 | 202.2 | 20.9 | 0.0 | 208.1 | 1 | |
| 6 | 0 | -317 | -243 | -75 | 0 | -107 | 324 | 5.8 | 199.9 | 20.8 | 0.0 | 205.7 | 1 | |
| 7 | 0 | 317 | -242 | 78 | 0 | 110 | 362 | 5.8 | 214.8 | 20.7 | 0.0 | 220.6 | 1 | |
| 8 | 0 | 316 | -240 | -74 | 0 | -106 | 360 | 5.8 | 211.2 | 20.6 | 0.0 | 217.0 | 1 | |
| 9 | 0 | -95 | -340 | 256 | 0 | 361 | 472 | 1.7 | 476.0 | 29.2 | 0.0 | 477.7 | 1 | |
| 10 | 0 | -95 | -337 | -250 | 0 | -355 | 468 | 1.8 | 469.2 | 28.8 | 0.0 | 471.0 | 1 | |
| 11 | 0 | 95 | -340 | 256 | 0 | 361 | 483 | 1.7 | 479.8 | 29.1 | 0.0 | 481.5 | 1 | |
| 12 | 0 | 95 | -240 | -250 | 0 | -355 | 346 | 1.7 | 430.1 | 20.6 | 0.0 | 431.9 | 1 | |
| 13 | 0 | -0 | -809 | 4 | 0 | 2 | 1079 | 0.0 | 347.8 | 69.3 | 0.0 | 347.8 | 1 | |
| 14 | 0 | 0 | 220 | -3 | 0 | -3 | -250 | 0.0 | 82.4 | 18.8 | 0.0 | 82.4 | 1 | |
| 15 | 0 | -0 | -844 | 4 | 0 | 2 | 1124 | 0.0 | 362.4 | 72.3 | 0.0 | 362.4 | 1 | |
| | | | | | | | | | | | | | | |
| 1 | 11 | -0 | -975 | 4 | 0 | 2 | 1174 | 0.0 | 378.4 | 83.5 | 0.0 | 378.4 | 1 | |
| 5 | 11 | -317 | -249 | 77 | 0 | 100 | 297 | 5.8 | 185.6 | 21.3 | 0.0 | 191.4 | 1 | |
| 6 | 11 | -317 | -248 | -75 | 0 | -98 | 296 | 5.8 | 183.5 | 21.2 | 0.0 | 189.3 | 1 | |
| 7 | 11 | 317 | -246 | 78 | 0 | 101 | 334 | 5.8 | 198.2 | 21.1 | 0.0 | 204.0 | 1 | |
| 8 | 11 | 316 | -245 | -74 | 0 | -98 | 333 | 5.8 | 195.0 | 21.0 | 0.0 | 200.8 | 1 | |
| 9 | 11 | -95 | -347 | 256 | 0 | 332 | 433 | 1.7 | 437.9 | 29.7 | 0.0 | 439.6 | 1 | |
| 10 | 11 | -95 | -343 | -250 | 0 | -327 | 430 | 1.8 | 431.9 | 29.4 | 0.0 | 433.6 | 1 | |
| 11 | 11 | 95 | -346 | 256 | 0 | 332 | 444 | 1.7 | 441.7 | 29.6 | 0.0 | 443.4 | 1 | |
| 12 | 11 | 95 | -245 | -250 | 0 | -327 | 319 | 1.7 | 396.3 | 21.0 | 0.0 | 398.0 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|------|-------|------|---|------|------|-----|-------|------|-----|-------|---|
| 13 | 11 | -0 | -815 | 4 | 0 | 1 | 988 | 0.0 | 318.2 | 69.9 | 0.0 | 318.2 | 1 |
| 14 | 11 | 0 | 215 | -3 | 0 | -2 | -225 | 0.0 | 74.3 | 18.4 | 0.0 | 74.3 | 1 |
| 15 | 11 | -0 | -850 | 4 | 0 | 1 | 1029 | 0.0 | 331.5 | 72.8 | 0.0 | 331.5 | 1 |
| 1 | 22 | -0 | -981 | 4 | 0 | 1 | 1065 | 0.0 | 342.8 | 84.1 | 0.0 | 342.8 | 1 |
| 5 | 22 | -317 | -254 | 77 | 0 | 91 | 269 | 5.8 | 168.7 | 21.7 | 0.0 | 174.6 | 1 |
| 6 | 22 | -317 | -253 | -75 | 0 | -90 | 268 | 5.8 | 167.0 | 21.6 | 0.0 | 172.8 | 1 |
| 7 | 22 | 317 | -251 | 78 | 0 | 92 | 306 | 5.8 | 181.3 | 21.5 | 0.0 | 187.2 | 1 |
| 8 | 22 | 316 | -250 | -74 | 0 | -89 | 305 | 5.8 | 178.6 | 21.4 | 0.0 | 184.4 | 1 |
| 9 | 22 | -95 | -353 | 256 | 0 | 303 | 394 | 1.7 | 399.5 | 30.2 | 0.0 | 401.3 | 1 |
| 10 | 22 | -95 | -349 | -250 | 0 | -299 | 391 | 1.8 | 394.3 | 29.9 | 0.0 | 396.0 | 1 |
| 11 | 22 | 95 | -352 | 256 | 0 | 304 | 405 | 1.7 | 403.3 | 30.2 | 0.0 | 405.1 | 1 |
| 12 | 22 | 95 | -249 | -250 | 0 | -299 | 291 | 1.7 | 362.2 | 21.4 | 0.0 | 363.9 | 1 |
| 13 | 22 | -0 | -822 | 4 | 0 | 1 | 896 | 0.0 | 288.5 | 70.4 | 0.0 | 288.5 | 1 |
| 14 | 22 | 0 | 210 | -3 | 0 | -2 | -201 | 0.0 | 66.4 | 18.0 | 0.0 | 66.4 | 1 |
| 15 | 22 | -0 | -856 | 4 | 0 | 1 | 934 | 0.0 | 300.4 | 73.4 | 0.0 | 300.4 | 1 |
| 1 | 34 | -0 | -987 | 4 | 0 | 1 | 955 | 0.0 | 307.0 | 84.6 | 0.0 | 307.0 | 1 |
| 5 | 34 | -317 | -259 | 77 | 0 | 83 | 241 | 5.8 | 151.7 | 22.2 | 0.0 | 157.6 | 1 |
| 6 | 34 | -317 | -257 | -75 | 0 | -81 | 240 | 5.8 | 150.3 | 22.0 | 0.0 | 156.1 | 1 |
| 7 | 34 | 317 | -256 | 78 | 0 | 83 | 278 | 5.8 | 164.3 | 21.9 | 0.0 | 170.2 | 1 |
| 8 | 34 | 316 | -255 | -74 | 0 | -81 | 277 | 5.8 | 162.0 | 21.8 | 0.0 | 167.8 | 1 |
| 9 | 34 | -95 | -359 | 256 | 0 | 275 | 354 | 1.7 | 361.0 | 30.8 | 0.0 | 362.7 | 1 |
| 10 | 34 | -95 | -355 | -250 | 0 | -271 | 352 | 1.8 | 356.4 | 30.4 | 0.0 | 358.2 | 1 |
| 11 | 34 | 95 | -358 | 256 | 0 | 275 | 365 | 1.7 | 364.8 | 30.7 | 0.0 | 366.5 | 1 |
| 12 | 34 | 95 | -254 | -250 | 0 | -271 | 263 | 1.7 | 328.0 | 21.8 | 0.0 | 329.7 | 1 |
| 13 | 34 | -0 | -828 | 4 | 0 | 0 | 804 | 0.0 | 258.4 | 70.9 | 0.0 | 258.5 | 1 |
| 14 | 34 | 0 | 205 | -3 | 0 | -2 | -178 | 0.0 | 58.6 | 17.6 | 0.0 | 58.6 | 1 |
| 15 | 34 | -0 | -862 | 4 | 0 | 0 | 837 | 0.0 | 269.1 | 73.9 | 0.0 | 269.1 | 1 |
| 1 | 45 | -0 | -994 | 4 | 0 | 0 | 844 | 0.0 | 270.9 | 85.1 | 0.0 | 270.9 | 1 |
| 5 | 45 | -317 | -263 | 77 | 0 | 74 | 211 | 5.8 | 134.6 | 22.6 | 0.0 | 140.4 | 1 |
| 6 | 45 | -317 | -262 | -75 | 0 | -73 | 211 | 5.8 | 133.4 | 22.5 | 0.0 | 139.2 | 1 |
| 7 | 45 | 317 | -261 | 78 | 0 | 75 | 249 | 5.8 | 147.2 | 22.3 | 0.0 | 153.0 | 1 |
| 8 | 45 | 316 | -259 | -74 | 0 | -73 | 248 | 5.8 | 145.3 | 22.2 | 0.0 | 151.1 | 1 |
| 9 | 45 | -95 | -365 | 256 | 0 | 246 | 314 | 1.7 | 322.2 | 31.3 | 0.0 | 323.9 | 1 |
| 10 | 45 | -95 | -361 | -250 | 0 | -243 | 311 | 1.8 | 318.4 | 31.0 | 0.0 | 320.1 | 1 |
| 11 | 45 | 95 | -364 | 256 | 0 | 246 | 325 | 1.7 | 326.0 | 31.2 | 0.0 | 327.7 | 1 |
| 12 | 45 | 95 | -259 | -250 | 0 | -243 | 234 | 1.7 | 293.5 | 22.2 | 0.0 | 295.3 | 1 |
| 13 | 45 | -0 | -834 | 4 | 0 | -0 | 711 | 0.0 | 228.3 | 71.5 | 0.0 | 228.3 | 1 |
| 14 | 45 | 0 | 201 | -3 | 0 | -1 | -155 | 0.0 | 51.0 | 17.2 | 0.0 | 51.0 | 1 |
| 15 | 45 | -0 | -869 | 4 | 0 | -0 | 740 | 0.0 | 237.6 | 74.4 | 0.0 | 237.6 | 1 |
| 1 | 56 | -0 | -1000 | 4 | 0 | -0 | 732 | 0.0 | 235.4 | 85.7 | 0.0 | 237.5 | 3 |
| 5 | 56 | -317 | -268 | 77 | 0 | 65 | 182 | 5.8 | 117.2 | 23.0 | 0.0 | 123.0 | 1 |
| 6 | 56 | -317 | -267 | -75 | 0 | -65 | 181 | 5.8 | 116.4 | 22.9 | 0.0 | 122.2 | 1 |
| 7 | 56 | 317 | -265 | 78 | 0 | 66 | 220 | 5.8 | 129.8 | 22.7 | 0.0 | 135.7 | 1 |
| 8 | 56 | 316 | -264 | -74 | 0 | -64 | 219 | 5.8 | 128.4 | 22.6 | 0.0 | 134.2 | 1 |
| 9 | 56 | -95 | -371 | 256 | 0 | 218 | 272 | 1.7 | 283.2 | 31.8 | 0.0 | 284.9 | 1 |
| 10 | 56 | -95 | -368 | -250 | 0 | -215 | 271 | 1.8 | 280.1 | 31.5 | 0.0 | 281.9 | 1 |
| 11 | 56 | 95 | -371 | 256 | 0 | 218 | 284 | 1.7 | 287.0 | 31.8 | 0.0 | 288.7 | 1 |
| 12 | 56 | 95 | -264 | -250 | 0 | -215 | 205 | 1.7 | 259.0 | 22.6 | 0.0 | 260.7 | 1 |
| 13 | 56 | -0 | -840 | 4 | 0 | -0 | 617 | 0.0 | 198.5 | 72.0 | 0.0 | 200.0 | 3 |
| 14 | 56 | 0 | 196 | -3 | 0 | -1 | -133 | 0.0 | 43.6 | 16.8 | 0.0 | 44.3 | 3 |
| 15 | 56 | -0 | -875 | 4 | 0 | -0 | 643 | 0.0 | 206.7 | 75.0 | 0.0 | 208.2 | 3 |
| 1 | 67 | -0 | -1006 | 4 | 0 | -1 | 620 | 0.0 | 199.9 | 86.2 | 0.0 | 213.7 | 3 |
| 5 | 67 | -317 | -273 | 77 | 0 | 57 | 151 | 5.8 | 99.7 | 23.4 | 0.0 | 105.5 | 1 |
| 6 | 67 | -317 | -272 | -75 | 0 | -56 | 151 | 5.8 | 99.1 | 23.3 | 0.0 | 105.0 | 1 |
| 7 | 67 | 317 | -270 | 78 | 0 | 57 | 190 | 5.8 | 112.3 | 23.2 | 0.0 | 118.2 | 1 |
| 8 | 67 | 316 | -269 | -74 | 0 | -56 | 189 | 5.8 | 111.3 | 23.1 | 0.0 | 117.1 | 1 |
| 9 | 67 | -95 | -378 | 256 | 0 | 189 | 230 | 1.7 | 243.9 | 32.4 | 0.0 | 245.7 | 1 |
| 10 | 67 | -95 | -374 | -250 | 0 | -187 | 229 | 1.8 | 241.6 | 32.0 | 0.0 | 243.4 | 1 |
| 11 | 67 | 95 | -377 | 256 | 0 | 189 | 242 | 1.7 | 247.7 | 32.3 | 0.0 | 249.5 | 1 |
| 12 | 67 | 95 | -269 | -250 | 0 | -187 | 175 | 1.7 | 224.2 | 23.0 | 0.0 | 226.0 | 1 |
| 13 | 67 | -0 | -846 | 4 | 0 | -1 | 523 | 0.0 | 168.6 | 72.5 | 0.0 | 180.0 | 3 |
| 14 | 67 | 0 | 191 | -3 | 0 | -1 | -112 | 0.0 | 36.4 | 16.4 | 0.0 | 39.3 | 3 |
| 15 | 67 | -0 | -881 | 4 | 0 | -1 | 544 | 0.0 | 175.5 | 75.5 | 0.0 | 187.4 | 3 |
| 1 | 78 | -0 | -1012 | 4 | 0 | -1 | 507 | 0.0 | 164.0 | 86.7 | 0.0 | 191.5 | 3 |
| 5 | 78 | -317 | -278 | 77 | 0 | 48 | 120 | 5.8 | 82.0 | 23.8 | 0.0 | 87.8 | 1 |
| 6 | 78 | -317 | -276 | -75 | 0 | -48 | 120 | 5.8 | 81.7 | 23.7 | 0.0 | 87.6 | 1 |
| 7 | 78 | 317 | -275 | 78 | 0 | 48 | 159 | 5.8 | 94.6 | 23.6 | 0.0 | 100.5 | 1 |
| 8 | 78 | 316 | -274 | -74 | 0 | -48 | 159 | 5.8 | 94.0 | 23.5 | 0.0 | 99.9 | 1 |
| 9 | 78 | -95 | -384 | 256 | 0 | 160 | 188 | 1.7 | 204.5 | 32.9 | 0.0 | 206.2 | 1 |
| 10 | 78 | -95 | -380 | -250 | 0 | -159 | 187 | 1.8 | 202.9 | 32.6 | 0.0 | 204.7 | 1 |
| 11 | 78 | 95 | -383 | 256 | 0 | 160 | 199 | 1.7 | 208.3 | 32.8 | 0.0 | 210.0 | 1 |
| 12 | 78 | 95 | -273 | -250 | 0 | -159 | 145 | 1.7 | 189.3 | 23.4 | 0.0 | 191.0 | 1 |
| 13 | 78 | -0 | -853 | 4 | 0 | -1 | 428 | 0.0 | 138.4 | 73.1 | 0.0 | 161.4 | 3 |
| 14 | 78 | 0 | 186 | -3 | 0 | -0 | -90 | 0.0 | 29.3 | 16.0 | 0.0 | 34.7 | 3 |
| 15 | 78 | -0 | -887 | 4 | 0 | -1 | 445 | 0.0 | 144.0 | 76.0 | 0.0 | 168.0 | 3 |
| 1 | 90 | -0 | -1018 | 4 | 0 | -2 | 393 | 0.0 | 128.0 | 87.3 | 0.0 | 171.8 | 3 |
| 5 | 90 | -317 | -282 | 77 | 0 | 39 | 89 | 5.8 | 64.1 | 24.2 | 0.0 | 70.0 | 1 |
| 6 | 90 | -317 | -281 | -75 | 0 | -40 | 89 | 5.8 | 64.2 | 24.1 | 0.0 | 70.0 | 1 |
| 7 | 90 | 317 | -280 | 78 | 0 | 40 | 128 | 5.8 | 76.8 | 24.0 | 0.0 | 82.6 | 1 |
| 8 | 90 | 316 | -279 | -74 | 0 | -40 | 128 | 5.8 | 76.6 | 23.9 | 0.0 | 82.4 | 1 |
| 9 | 90 | -95 | -390 | 256 | 0 | 132 | 144 | 1.7 | 164.8 | 33.4 | 0.0 | 166.5 | 1 |
| 10 | 90 | -95 | -386 | -250 | 0 | -131 | 144 | 1.8 | 164.0 | 33.1 | 0.0 | 165.7 | 1 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|-------|------|---|------|-----|-----|-------|------|-----|-------|---|
| 11 | 90 | 95 | -389 | 256 | 0 | 132 | 156 | 1.7 | 168.6 | 33.4 | 0.0 | 170.3 | 1 |
| 12 | 90 | 95 | -278 | -250 | 0 | -131 | 114 | 1.7 | 154.2 | 23.8 | 0.0 | 155.9 | 1 |
| 13 | 90 | -0 | -859 | 4 | 0 | -2 | 332 | 0.0 | 108.0 | 73.6 | 0.0 | 144.9 | 3 |
| 14 | 90 | 0 | 181 | -3 | 0 | 0 | -70 | 0.0 | 22.4 | 15.5 | 0.0 | 30.6 | 3 |
| 15 | 90 | -0 | -893 | 4 | 0 | -2 | 345 | 0.0 | 112.4 | 76.6 | 0.0 | 150.7 | 3 |
| 1 | 101 | -0 | -1025 | 4 | 0 | -2 | 279 | 0.0 | 91.8 | 87.8 | 0.0 | 155.5 | 3 |
| 5 | 101 | -317 | -287 | 77 | 0 | 31 | 57 | 5.8 | 46.1 | 24.6 | 0.0 | 51.9 | 1 |
| 6 | 101 | -317 | -286 | -75 | 0 | -31 | 57 | 5.8 | 46.4 | 24.5 | 0.0 | 52.3 | 1 |
| 7 | 101 | 317 | -285 | 78 | 0 | 31 | 96 | 5.8 | 58.8 | 24.4 | 0.0 | 64.6 | 1 |
| 8 | 101 | 316 | -283 | -74 | 0 | -31 | 96 | 5.8 | 59.0 | 24.3 | 0.0 | 64.8 | 1 |
| 9 | 101 | -95 | -396 | 256 | 0 | 103 | 100 | 1.7 | 124.9 | 34.0 | 0.0 | 126.6 | 1 |
| 10 | 101 | -95 | -392 | -250 | 0 | -103 | 100 | 1.8 | 124.8 | 33.6 | 0.0 | 126.6 | 1 |
| 11 | 101 | 95 | -395 | 256 | 0 | 103 | 112 | 1.7 | 128.7 | 33.9 | 0.0 | 130.4 | 1 |
| 12 | 101 | 95 | -283 | -250 | 0 | -103 | 83 | 1.7 | 118.9 | 24.2 | 0.0 | 120.7 | 1 |
| 13 | 101 | -0 | -865 | 4 | 0 | -2 | 235 | 0.0 | 77.4 | 74.1 | 0.0 | 131.2 | 3 |
| 14 | 101 | 0 | 177 | -3 | 0 | 0 | -50 | 0.0 | 16.3 | 15.1 | 0.0 | 27.0 | 3 |
| 15 | 101 | -0 | -900 | 4 | 0 | -2 | 245 | 0.0 | 80.5 | 77.1 | 0.0 | 136.5 | 3 |
| 1 | 112 | -0 | -1031 | 4 | 0 | -3 | 164 | 0.0 | 55.3 | 88.3 | 0.0 | 153.0 | 4 |
| 5 | 112 | -317 | -292 | 77 | 0 | 22 | 25 | 5.8 | 27.9 | 25.0 | 0.0 | 43.9 | 4 |
| 6 | 112 | -317 | -291 | -75 | 0 | -23 | 25 | 5.8 | 28.5 | 24.9 | 0.0 | 43.7 | 4 |
| 7 | 112 | 317 | -289 | 78 | 0 | 22 | 64 | 5.8 | 40.6 | 24.8 | 0.0 | 46.4 | 1 |
| 8 | 112 | 316 | -288 | -74 | 0 | -23 | 64 | 5.8 | 41.2 | 24.7 | 0.0 | 47.1 | 1 |
| 9 | 112 | -95 | -403 | 256 | 0 | 74 | 56 | 1.7 | 84.7 | 34.5 | 0.0 | 86.5 | 1 |
| 10 | 112 | -95 | -399 | -250 | 0 | -75 | 56 | 1.8 | 85.4 | 34.1 | 0.0 | 87.2 | 1 |
| 11 | 112 | 95 | -402 | 256 | 0 | 74 | 67 | 1.7 | 88.6 | 34.4 | 0.0 | 90.3 | 1 |
| 12 | 112 | 95 | -288 | -250 | 0 | -75 | 51 | 1.7 | 83.5 | 24.7 | 0.0 | 85.2 | 1 |
| 13 | 112 | -0 | -871 | 4 | 0 | -2 | 138 | 0.0 | 46.5 | 74.7 | 0.0 | 129.3 | 4 |
| 14 | 112 | 0 | 172 | -3 | 0 | 1 | -30 | 0.0 | 10.3 | 14.7 | 0.0 | 25.5 | 4 |
| 15 | 112 | -0 | -906 | 4 | 0 | -3 | 144 | 0.0 | 48.4 | 77.6 | 0.0 | 134.5 | 4 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|--------|-------|--------|---------|------|-----------|------|
| | | cm | daN*m | daN/cm | | cm | | |
| 1 | -- | 0 | 1283 | 411.9 | -- | -- | -- | |
| -- | Rara | 57 | 2 | -- | 57 | 0.00 | 1 / 99999 | |
| -- | Freq. | 57 | 2 | -- | 57 | 0.00 | 1 / 99999 | |
| -- | Q.Perm. | 57 | 2 | -- | 57 | 0.00 | 1 / 99999 | |
| -- | Rara | 57 | 2 | -- | 57 | 0.00 | 1 / 99999 | |
| -- | Rara | 57 | 2 | -- | 57 | 0.00 | 1 / 99999 | |
| -- | Freq. | 57 | 2 | -- | 57 | 0.00 | 1 / 99999 | |
| -- | Freq. | 57 | 2 | -- | 57 | 0.00 | 1 / 99999 | |

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ASTA NUM. 3 NI 10 NF 21 Lungh. 11.0 cm SEZ. 6 Ps HEB 160

categoria: p.p. y qy tot.

qy medio: 0.4263 0.4263 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|-------|------|----|-------|-----|---------|--------|--------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | daN/cm | | | | |
| 1 | 0 | -0 | -1486 | -27 | 0 | -3 | 164 | 0.0 | 55.2 | 127.3 | 0.0 | 220.6 | 4 | |
| 5 | 0 | -405 | -404 | 201 | 0 | 22 | 20 | 7.5 | 26.4 | 34.6 | 0.0 | 60.5 | 4 | |
| 6 | 0 | -405 | -405 | -207 | 0 | -23 | 20 | 7.5 | 27.1 | 34.7 | 0.0 | 60.7 | 4 | |
| 7 | 0 | 405 | -401 | 202 | 0 | 22 | 69 | 7.5 | 42.0 | 34.4 | 0.0 | 61.0 | 3 | |
| 8 | 0 | 405 | -402 | -208 | 0 | -23 | 69 | 7.5 | 42.7 | 34.5 | 0.0 | 61.2 | 3 | |
| 9 | 0 | -121 | -556 | 676 | 0 | 74 | 54 | 2.2 | 84.3 | 47.7 | 0.0 | 87.4 | 3 | |
| 10 | 0 | -122 | -560 | -681 | 0 | -75 | 55 | 2.2 | 85.0 | 48.0 | 0.0 | 88.1 | 3 | |
| 11 | 0 | 122 | -555 | 676 | 0 | 74 | 69 | 2.2 | 89.0 | 47.6 | 0.0 | 91.2 | 1 | |
| 12 | 0 | 121 | -405 | -679 | 0 | -75 | 52 | 2.2 | 83.9 | 34.7 | 0.0 | 86.1 | 1 | |
| 13 | 0 | -0 | -1251 | -22 | 0 | -2 | 138 | 0.0 | 46.5 | 107.2 | 0.0 | 185.7 | 4 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|------|-------|------|---|-----|-----|-----|------|-------|-----|-------|---|
| 14 | 0 | 0 | 277 | 6 | 0 | 1 | -30 | 0.0 | 10.3 | 23.7 | 0.0 | 41.1 | 4 |
| 15 | 0 | -0 | -1302 | -23 | 0 | -3 | 144 | 0.0 | 48.4 | 111.6 | 0.0 | 193.2 | 4 |
| 1 | 6 | -0 | -1489 | -27 | 0 | -1 | 82 | 0.0 | 27.6 | 127.6 | 0.0 | 221.0 | 4 |
| 5 | 6 | -405 | -406 | 201 | 0 | 11 | -2 | 7.5 | 10.6 | 34.8 | 0.0 | 60.8 | 4 |
| 6 | 6 | -405 | -407 | -207 | 0 | -11 | -2 | 7.5 | 10.9 | 34.9 | 0.0 | 61.0 | 4 |
| 7 | 6 | 405 | -403 | 202 | 0 | 11 | 47 | 7.5 | 24.9 | 34.6 | 0.0 | 60.4 | 4 |
| 8 | 6 | 405 | -405 | -208 | 0 | -11 | 47 | 7.5 | 25.3 | 34.7 | 0.0 | 60.6 | 4 |
| 9 | 6 | -121 | -559 | 676 | 0 | 37 | 24 | 2.2 | 41.0 | 47.9 | 0.0 | 86.0 | 3 |
| 10 | 6 | -122 | -563 | -681 | 0 | -37 | 24 | 2.2 | 41.3 | 48.3 | 0.0 | 86.7 | 3 |
| 11 | 6 | 122 | -558 | 676 | 0 | 37 | 38 | 2.2 | 45.7 | 47.9 | 0.0 | 86.5 | 3 |
| 12 | 6 | 121 | -407 | -679 | 0 | -37 | 30 | 2.2 | 43.1 | 34.9 | 0.0 | 69.7 | 3 |
| 13 | 6 | -0 | -1254 | -22 | 0 | -1 | 69 | 0.0 | 23.3 | 107.5 | 0.0 | 186.1 | 4 |
| 14 | 6 | 0 | 274 | 6 | 0 | 0 | -15 | 0.0 | 5.1 | 23.5 | 0.0 | 40.7 | 4 |
| 15 | 6 | -0 | -1305 | -23 | 0 | -1 | 72 | 0.0 | 24.2 | 111.8 | 0.0 | 193.7 | 4 |
| 1 | 11 | -0 | -1492 | -27 | 0 | 0 | -0 | 0.0 | 0.0 | 127.9 | 0.0 | 221.4 | 4 |
| 5 | 11 | -405 | -408 | 201 | 0 | 0 | -24 | 7.5 | 7.8 | 35.0 | 0.0 | 61.1 | 4 |
| 6 | 11 | -405 | -410 | -207 | 0 | 0 | -24 | 7.5 | 7.8 | 35.1 | 0.0 | 61.2 | 4 |
| 7 | 11 | 405 | -406 | 202 | 0 | 0 | 24 | 7.5 | 7.8 | 34.8 | 0.0 | 60.7 | 4 |
| 8 | 11 | 405 | -407 | -208 | 0 | 0 | 24 | 7.5 | 7.8 | 34.9 | 0.0 | 60.9 | 4 |
| 9 | 11 | -121 | -562 | 676 | 0 | 0 | -7 | 2.2 | 2.3 | 48.2 | 0.0 | 85.9 | 3 |
| 10 | 11 | -122 | -566 | -681 | 0 | 0 | -7 | 2.2 | 2.4 | 48.5 | 0.0 | 86.5 | 3 |
| 11 | 11 | 122 | -562 | 676 | 0 | 0 | 7 | 2.2 | 2.3 | 48.1 | 0.0 | 85.8 | 3 |
| 12 | 11 | 121 | -409 | -679 | 0 | 0 | 7 | 2.2 | 2.3 | 35.1 | 0.0 | 69.1 | 3 |
| 13 | 11 | -0 | -1257 | -22 | 0 | 0 | 0 | 0.0 | 0.0 | 107.7 | 0.0 | 186.6 | 4 |
| 14 | 11 | 0 | 272 | 6 | 0 | 0 | 0 | 0.0 | 0.0 | 23.3 | 0.0 | 40.4 | 4 |
| 15 | 11 | -0 | -1308 | -23 | 0 | 0 | -0 | 0.0 | 0.0 | 112.1 | 0.0 | 194.1 | 4 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|--------|-------|---------------------|---------|-------|-----------|------|
| | | cm | daN*m | daN/cm ² | cm | | | |
| 1 | -- | 0 | 164 | 52.6 | -- | -- | -- | |
| -- | Rara | 6 | 0 | -- | 7 | -0.00 | 1 / 99999 | |
| -- | Freq. | 6 | 0 | -- | 7 | -0.00 | 1 / 99999 | |
| -- | Q.Perm. | 6 | 0 | -- | 7 | -0.00 | 1 / 99999 | |
| -- | Rara | 6 | 0 | -- | 7 | -0.00 | 1 / 99999 | |
| -- | Rara | 6 | 0 | -- | 7 | -0.00 | 1 / 99999 | |
| -- | Freq. | 6 | 0 | -- | 7 | -0.00 | 1 / 99999 | |
| -- | Freq. | 6 | 0 | -- | 7 | -0.00 | 1 / 99999 | |

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Verifica di STABILITA' e/o SVERGOLAMENTO

| n.comb | Fx | My eq. | Mz eq. | Sn. omega | Sn.yx | Sn.zx | OMEGA | OMEGA1 | Sf | Nota |
|--------|------|--------|--------|-----------|-------|-------|-------|--------|---------------------|------|
| | daN | daN*m | | | | | | | daN/cm ² | |
| 1 | -0 | 0 | 0 | 109 | 65 | 109 | 2.22 | 1.00 | 0.0 | |
| 5 | -405 | 0 | 15 | 109 | 65 | 109 | 2.22 | 1.00 | 21.3 | |
| 6 | -405 | 0 | 15 | 109 | 65 | 109 | 2.22 | 1.00 | 21.3 | |
| 7 | 405 | 0 | 15 | 109 | 65 | 109 | 1.00 | 1.00 | 12.1 | |
| 8 | 405 | 0 | 15 | 109 | 65 | 109 | 1.00 | 1.00 | 12.1 | |
| 9 | -121 | 0 | 4 | 109 | 65 | 109 | 2.22 | 1.00 | 6.4 | |
| 10 | -122 | 0 | 4 | 109 | 65 | 109 | 2.22 | 1.00 | 6.4 | |
| 11 | 122 | 0 | 4 | 109 | 65 | 109 | 1.00 | 1.00 | 3.6 | |
| 12 | 121 | 0 | 4 | 109 | 65 | 109 | 1.00 | 1.00 | 3.6 | |
| 13 | -0 | 0 | 0 | 109 | 65 | 109 | 2.22 | 1.00 | 0.0 | |
| 14 | 0 | 0 | 0 | 109 | 65 | 109 | 1.00 | 1.00 | 0.0 | |
| 15 | -0 | 0 | 0 | 109 | 65 | 109 | 2.22 | 1.00 | 0.0 | |

ASTA NUM. 31 NI 30 NF 34 Lungh. 172.0 cm SEZ. 6 Ps HEB 160

categoria: p.p. y qy tot.

qy medio: 0.4263 0.4263 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf(Fx) | Sf(M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|------|------|-------|-----|-----|--------|-------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -1097 | 786 | 9 | 0 | 0 | -66 | 20.2 | 21.1 | 67.3 | 0.0 | 118.3 | 4 | |
| 5 | 0 | 150 | 236 | -39 | 0 | -0 | 10 | 2.8 | 3.2 | 20.2 | 0.0 | 35.1 | 4 | |
| 6 | 0 | 150 | 236 | 43 | 0 | -0 | 10 | 2.8 | 3.2 | 20.2 | 0.0 | 35.1 | 4 | |
| 7 | 0 | -771 | 244 | -40 | 0 | 0 | -47 | 14.2 | 15.2 | 20.9 | 0.0 | 42.3 | 3 | |
| 8 | 0 | -771 | 244 | 43 | 0 | 0 | -47 | 14.2 | 15.2 | 20.9 | 0.0 | 42.3 | 3 | |
| 9 | 0 | -293 | 328 | -130 | 0 | 0 | -17 | 5.4 | 5.5 | 28.1 | 0.0 | 48.9 | 4 | |
| 10 | 0 | -293 | 328 | 140 | 0 | 0 | -17 | 5.4 | 5.5 | 28.1 | 0.0 | 48.9 | 4 | |
| 11 | 0 | -569 | 330 | -130 | 0 | 0 | -34 | 10.5 | 11.1 | 28.3 | 0.0 | 50.1 | 4 | |
| 12 | 0 | -449 | 241 | 140 | 0 | 0 | -27 | 8.3 | 8.8 | 20.7 | 0.0 | 36.8 | 4 | |
| 13 | 0 | -872 | 670 | 7 | 0 | 0 | -52 | 16.1 | 16.8 | 57.4 | 0.0 | 100.8 | 4 | |
| 14 | 0 | 120 | -95 | -0 | 0 | -0 | 7 | 2.2 | 2.3 | 8.1 | 0.0 | 14.2 | 4 | |
| 15 | 0 | -953 | 695 | 8 | 0 | 0 | -57 | 17.6 | 18.4 | 59.6 | 0.0 | 104.7 | 4 | |
| 1 | 17 | -1097 | 776 | 9 | 0 | -2 | 68 | 20.2 | 23.3 | 66.5 | 0.0 | 116.9 | 4 | |
| 5 | 17 | 150 | 229 | -39 | 0 | 7 | 50 | 2.8 | 22.1 | 19.6 | 0.0 | 34.6 | 3 | |
| 6 | 17 | 150 | 229 | 43 | 0 | -7 | 50 | 2.8 | 22.8 | 19.6 | 0.0 | 34.7 | 3 | |
| 7 | 17 | -771 | 237 | -40 | 0 | 7 | -6 | 14.2 | 8.1 | 20.3 | 0.0 | 38.0 | 4 | |
| 8 | 17 | -771 | 237 | 43 | 0 | -7 | -6 | 14.2 | 8.6 | 20.3 | 0.0 | 38.1 | 4 | |
| 9 | 17 | -293 | 318 | -130 | 0 | 22 | 38 | 5.4 | 32.4 | 27.3 | 0.0 | 47.6 | 4 | |
| 10 | 17 | -293 | 318 | 140 | 0 | -24 | 38 | 5.4 | 34.0 | 27.3 | 0.0 | 47.7 | 4 | |
| 11 | 17 | -569 | 321 | -130 | 0 | 22 | 21 | 10.5 | 27.0 | 27.5 | 0.0 | 48.9 | 4 | |
| 12 | 17 | -449 | 234 | 139 | 0 | -24 | 14 | 8.3 | 26.0 | 20.1 | 0.0 | 36.0 | 4 | |
| 13 | 17 | -872 | 661 | 7 | 0 | -1 | 62 | 16.1 | 21.1 | 56.6 | 0.0 | 99.4 | 4 | |
| 14 | 17 | 120 | -102 | -0 | 0 | 0 | -10 | 2.2 | 3.2 | 8.7 | 0.0 | 15.3 | 4 | |
| 15 | 17 | -953 | 686 | 8 | 0 | -1 | 62 | 17.6 | 21.0 | 58.8 | 0.0 | 103.3 | 4 | |
| 1 | 34 | -1097 | 766 | 9 | 0 | -3 | 201 | 20.2 | 67.3 | 65.7 | 0.0 | 126.1 | 3 | |
| 5 | 34 | 150 | 221 | -39 | 0 | 13 | 89 | 2.8 | 40.6 | 19.0 | 0.0 | 43.3 | 1 | |
| 6 | 34 | 150 | 221 | 43 | 0 | -15 | 89 | 2.8 | 41.9 | 19.0 | 0.0 | 44.6 | 1 | |
| 7 | 34 | -771 | 230 | -40 | 0 | 14 | 34 | 14.2 | 23.2 | 19.7 | 0.0 | 38.9 | 3 | |
| 8 | 34 | -771 | 230 | 43 | 0 | -15 | 34 | 14.2 | 24.4 | 19.7 | 0.0 | 38.9 | 3 | |
| 9 | 34 | -293 | 309 | -130 | 0 | 45 | 92 | 5.4 | 69.8 | 26.4 | 0.0 | 75.2 | 1 | |
| 10 | 34 | -293 | 309 | 140 | 0 | -48 | 92 | 5.4 | 73.0 | 26.4 | 0.0 | 78.4 | 1 | |
| 11 | 34 | -569 | 311 | -130 | 0 | 45 | 76 | 10.5 | 64.6 | 26.7 | 0.0 | 75.1 | 1 | |
| 12 | 34 | -449 | 227 | 140 | 0 | -48 | 53 | 8.3 | 60.3 | 19.4 | 0.0 | 68.5 | 1 | |
| 13 | 34 | -872 | 651 | 7 | 0 | -3 | 175 | 16.1 | 58.5 | 55.8 | 0.0 | 107.2 | 3 | |
| 14 | 34 | 120 | -109 | -0 | 0 | 0 | -28 | 2.2 | 9.1 | 9.4 | 0.0 | 17.5 | 3 | |
| 15 | 34 | -953 | 676 | 8 | 0 | -3 | 179 | 17.6 | 59.8 | 57.9 | 0.0 | 111.3 | 3 | |
| 1 | 52 | -1097 | 757 | 9 | 0 | -5 | 332 | 20.2 | 110.7 | 64.9 | 0.0 | 148.8 | 3 | |
| 5 | 52 | 150 | 214 | -39 | 0 | 20 | 126 | 2.8 | 58.6 | 18.3 | 0.0 | 61.4 | 1 | |
| 6 | 52 | 150 | 214 | 43 | 0 | -22 | 126 | 2.8 | 60.6 | 18.3 | 0.0 | 63.3 | 1 | |
| 7 | 52 | -771 | 222 | -40 | 0 | 20 | 73 | 14.2 | 41.8 | 19.1 | 0.0 | 56.0 | 1 | |
| 8 | 52 | -771 | 222 | 43 | 0 | -22 | 73 | 14.2 | 43.5 | 19.1 | 0.0 | 57.8 | 1 | |
| 9 | 52 | -293 | 299 | -130 | 0 | 67 | 144 | 5.4 | 106.7 | 25.6 | 0.0 | 112.1 | 1 | |
| 10 | 52 | -293 | 299 | 140 | 0 | -72 | 144 | 5.4 | 111.5 | 25.6 | 0.0 | 116.9 | 1 | |
| 11 | 52 | -569 | 302 | -130 | 0 | 67 | 128 | 10.5 | 101.7 | 25.8 | 0.0 | 112.2 | 1 | |
| 12 | 52 | -449 | 219 | 139 | 0 | -72 | 92 | 8.3 | 94.2 | 18.8 | 0.0 | 102.5 | 1 | |
| 13 | 52 | -872 | 642 | 7 | 0 | -4 | 286 | 16.1 | 95.3 | 55.0 | 0.0 | 126.3 | 3 | |
| 14 | 52 | 120 | -117 | -0 | 0 | 0 | -47 | 2.2 | 15.4 | 10.0 | 0.0 | 21.5 | 3 | |
| 15 | 52 | -953 | 667 | 8 | 0 | -4 | 294 | 17.6 | 98.0 | 57.1 | 0.0 | 131.2 | 3 | |
| 1 | 69 | -1097 | 747 | 9 | 0 | -6 | 461 | 20.2 | 153.6 | 64.0 | 0.0 | 175.3 | 3 | |
| 5 | 69 | 150 | 207 | -39 | 0 | 27 | 162 | 2.8 | 76.3 | 17.7 | 0.0 | 79.0 | 1 | |
| 6 | 69 | 150 | 207 | 43 | 0 | -30 | 162 | 2.8 | 78.9 | 17.7 | 0.0 | 81.6 | 1 | |
| 7 | 69 | -771 | 215 | -40 | 0 | 27 | 111 | 14.2 | 60.0 | 18.4 | 0.0 | 74.3 | 1 | |
| 8 | 69 | -771 | 215 | 43 | 0 | -30 | 111 | 14.2 | 62.3 | 18.4 | 0.0 | 76.5 | 1 | |
| 9 | 69 | -293 | 289 | -130 | 0 | 89 | 195 | 5.4 | 143.1 | 24.8 | 0.0 | 148.5 | 1 | |
| 10 | 69 | -293 | 289 | 140 | 0 | -97 | 195 | 5.4 | 149.5 | 24.8 | 0.0 | 154.9 | 1 | |
| 11 | 69 | -569 | 292 | -130 | 0 | 90 | 180 | 10.5 | 138.2 | 25.0 | 0.0 | 148.7 | 1 | |
| 12 | 69 | -449 | 212 | 140 | 0 | -96 | 129 | 8.3 | 127.7 | 18.2 | 0.0 | 136.0 | 1 | |
| 13 | 69 | -872 | 632 | 7 | 0 | -5 | 396 | 16.1 | 131.7 | 54.2 | 0.0 | 148.7 | 3 | |
| 14 | 69 | 120 | -124 | -0 | 0 | 0 | -68 | 2.2 | 22.1 | 10.6 | 0.0 | 26.3 | 3 | |
| 15 | 69 | -953 | 657 | 8 | 0 | -5 | 408 | 17.6 | 135.8 | 56.3 | 0.0 | 154.5 | 3 | |

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REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-------|------|------|---|------|------|------|-------|------|-----|-------|---|
| 1 | 86 | -1097 | 738 | 9 | 0 | -8 | 589 | 20.2 | 196.0 | 63.2 | 0.0 | 216.2 | 1 |
| 5 | 86 | 150 | 199 | -39 | 0 | 34 | 197 | 2.8 | 93.5 | 17.1 | 0.0 | 96.3 | 1 |
| 6 | 86 | 150 | 199 | 43 | 0 | -37 | 197 | 2.8 | 96.7 | 17.1 | 0.0 | 99.5 | 1 |
| 7 | 86 | -771 | 208 | -40 | 0 | 34 | 147 | 14.2 | 77.9 | 17.8 | 0.0 | 92.1 | 1 |
| 8 | 86 | -771 | 208 | 43 | 0 | -37 | 147 | 14.2 | 80.7 | 17.8 | 0.0 | 94.9 | 1 |
| 9 | 86 | -293 | 280 | -130 | 0 | 112 | 244 | 5.4 | 178.9 | 24.0 | 0.0 | 184.3 | 1 |
| 10 | 86 | -293 | 280 | 140 | 0 | -121 | 244 | 5.4 | 186.9 | 24.0 | 0.0 | 192.3 | 1 |
| 11 | 86 | -569 | 282 | -130 | 0 | 112 | 229 | 10.5 | 174.2 | 24.2 | 0.0 | 184.7 | 1 |
| 12 | 86 | -449 | 205 | 140 | 0 | -120 | 165 | 8.3 | 160.8 | 17.5 | 0.0 | 169.1 | 1 |
| 13 | 86 | -872 | 623 | 7 | 0 | -6 | 504 | 16.1 | 167.5 | 53.4 | 0.0 | 183.5 | 1 |
| 14 | 86 | 120 | -131 | -0 | 0 | 0 | -90 | 2.2 | 29.2 | 11.2 | 0.0 | 31.6 | 3 |
| 15 | 86 | -953 | 648 | 8 | 0 | -7 | 520 | 17.6 | 173.0 | 55.5 | 0.0 | 190.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 103 | -1097 | 728 | 9 | 0 | -9 | 715 | 20.2 | 237.8 | 62.4 | 0.0 | 258.0 | 1 |
| 5 | 103 | 150 | 192 | -39 | 0 | 40 | 231 | 2.8 | 110.4 | 16.4 | 0.0 | 113.1 | 1 |
| 6 | 103 | 150 | 192 | 43 | 0 | -45 | 231 | 2.8 | 114.2 | 16.4 | 0.0 | 117.0 | 1 |
| 7 | 103 | -771 | 200 | -40 | 0 | 41 | 182 | 14.2 | 95.3 | 17.2 | 0.0 | 109.5 | 1 |
| 8 | 103 | -771 | 200 | 43 | 0 | -45 | 182 | 14.2 | 98.7 | 17.2 | 0.0 | 112.9 | 1 |
| 9 | 103 | -293 | 270 | -130 | 0 | 134 | 291 | 5.4 | 214.2 | 23.2 | 0.0 | 219.6 | 1 |
| 10 | 103 | -293 | 270 | 140 | 0 | -145 | 291 | 5.4 | 223.8 | 23.2 | 0.0 | 229.2 | 1 |
| 11 | 103 | -569 | 273 | -130 | 0 | 134 | 277 | 10.5 | 209.7 | 23.4 | 0.0 | 220.2 | 1 |
| 12 | 103 | -449 | 197 | 140 | 0 | -144 | 199 | 8.3 | 193.5 | 16.9 | 0.0 | 201.8 | 1 |
| 13 | 103 | -872 | 613 | 7 | 0 | -8 | 610 | 16.1 | 202.7 | 52.5 | 0.0 | 218.8 | 1 |
| 14 | 103 | 120 | -139 | -0 | 0 | 0 | -113 | 2.2 | 36.8 | 11.9 | 0.0 | 39.0 | 1 |
| 15 | 103 | -953 | 638 | 8 | 0 | -8 | 631 | 17.6 | 209.7 | 54.7 | 0.0 | 227.3 | 1 |
| | | | | | | | | | | | | | |
| 1 | 120 | -1097 | 719 | 9 | 0 | -11 | 840 | 20.2 | 279.1 | 61.6 | 0.0 | 299.3 | 1 |
| 5 | 120 | 150 | 185 | -39 | 0 | 47 | 263 | 2.8 | 126.8 | 15.8 | 0.0 | 129.6 | 1 |
| 6 | 120 | 150 | 185 | 43 | 0 | -52 | 263 | 2.8 | 131.3 | 15.8 | 0.0 | 134.1 | 1 |
| 7 | 120 | -771 | 193 | -40 | 0 | 48 | 216 | 14.2 | 112.2 | 16.5 | 0.0 | 126.5 | 1 |
| 8 | 120 | -771 | 193 | 43 | 0 | -52 | 216 | 14.2 | 116.2 | 16.5 | 0.0 | 130.4 | 1 |
| 9 | 120 | -293 | 261 | -130 | 0 | 156 | 337 | 5.4 | 249.0 | 22.4 | 0.0 | 254.4 | 1 |
| 10 | 120 | -293 | 261 | 140 | 0 | -169 | 337 | 5.4 | 260.2 | 22.4 | 0.0 | 265.6 | 1 |
| 11 | 120 | -569 | 263 | -130 | 0 | 157 | 323 | 10.5 | 244.7 | 22.6 | 0.0 | 255.2 | 1 |
| 12 | 120 | -449 | 190 | 140 | 0 | -168 | 232 | 8.3 | 225.8 | 16.3 | 0.0 | 234.1 | 1 |
| 13 | 120 | -872 | 604 | 7 | 0 | -9 | 715 | 16.1 | 237.5 | 51.7 | 0.0 | 253.5 | 1 |
| 14 | 120 | 120 | -146 | -0 | 0 | 1 | -138 | 2.2 | 44.7 | 12.5 | 0.0 | 46.9 | 1 |
| 15 | 120 | -953 | 628 | 8 | 0 | -9 | 740 | 17.6 | 245.9 | 53.9 | 0.0 | 263.4 | 1 |
| | | | | | | | | | | | | | |
| 1 | 138 | -1097 | 709 | 9 | 0 | -12 | 962 | 20.2 | 319.9 | 60.8 | 0.0 | 340.1 | 1 |
| 5 | 138 | 150 | 177 | -39 | 0 | 54 | 294 | 2.8 | 142.9 | 15.2 | 0.0 | 145.6 | 1 |
| 6 | 138 | 150 | 177 | 43 | 0 | -59 | 294 | 2.8 | 148.0 | 15.2 | 0.0 | 150.7 | 1 |
| 7 | 138 | -771 | 186 | -40 | 0 | 55 | 248 | 14.2 | 128.8 | 15.9 | 0.0 | 143.0 | 1 |
| 8 | 138 | -771 | 186 | 43 | 0 | -60 | 248 | 14.2 | 133.4 | 15.9 | 0.0 | 147.6 | 1 |
| 9 | 138 | -293 | 251 | -130 | 0 | 179 | 381 | 5.4 | 283.2 | 21.5 | 0.0 | 288.6 | 1 |
| 10 | 138 | -293 | 251 | 140 | 0 | -193 | 381 | 5.4 | 296.1 | 21.5 | 0.0 | 301.5 | 1 |
| 11 | 138 | -569 | 254 | -130 | 0 | 179 | 367 | 10.5 | 279.1 | 21.8 | 0.0 | 289.6 | 1 |
| 12 | 138 | -449 | 183 | 140 | 0 | -192 | 264 | 8.3 | 257.7 | 15.7 | 0.0 | 266.0 | 1 |
| 13 | 138 | -872 | 594 | 7 | 0 | -10 | 818 | 16.1 | 271.7 | 50.9 | 0.0 | 287.7 | 1 |
| 14 | 138 | 120 | -153 | -0 | 0 | 1 | -163 | 2.2 | 53.0 | 13.1 | 0.0 | 55.2 | 1 |
| 15 | 138 | -953 | 619 | 8 | 0 | -11 | 847 | 17.6 | 281.5 | 53.0 | 0.0 | 299.1 | 1 |
| | | | | | | | | | | | | | |
| 1 | 155 | -1097 | 700 | 9 | 0 | -14 | 1083 | 20.2 | 360.1 | 60.0 | 0.0 | 380.4 | 1 |
| 5 | 155 | 150 | 170 | -39 | 0 | 60 | 324 | 2.8 | 158.5 | 14.6 | 0.0 | 161.3 | 1 |
| 6 | 155 | 150 | 170 | 43 | 0 | -67 | 324 | 2.8 | 164.3 | 14.6 | 0.0 | 167.0 | 1 |
| 7 | 155 | -771 | 178 | -40 | 0 | 61 | 280 | 14.2 | 145.0 | 15.3 | 0.0 | 159.2 | 1 |
| 8 | 155 | -771 | 178 | 43 | 0 | -67 | 280 | 14.2 | 150.1 | 15.3 | 0.0 | 164.3 | 1 |
| 9 | 155 | -293 | 242 | -130 | 0 | 201 | 424 | 5.4 | 317.0 | 20.7 | 0.0 | 322.4 | 1 |
| 10 | 155 | -293 | 242 | 140 | 0 | -217 | 424 | 5.4 | 331.4 | 20.7 | 0.0 | 336.8 | 1 |
| 11 | 155 | -569 | 244 | -130 | 0 | 202 | 410 | 10.5 | 313.0 | 20.9 | 0.0 | 323.5 | 1 |
| 12 | 155 | -449 | 175 | 140 | 0 | -216 | 295 | 8.3 | 289.2 | 15.0 | 0.0 | 297.4 | 1 |
| 13 | 155 | -872 | 585 | 7 | 0 | -11 | 919 | 16.1 | 305.4 | 50.1 | 0.0 | 321.4 | 1 |
| 14 | 155 | 120 | -161 | -0 | 0 | 1 | -190 | 2.2 | 61.8 | 13.8 | 0.0 | 64.0 | 1 |
| 15 | 155 | -953 | 609 | 8 | 0 | -12 | 953 | 17.6 | 316.6 | 52.2 | 0.0 | 334.2 | 1 |
| | | | | | | | | | | | | | |
| 1 | 172 | -1097 | 690 | 9 | 0 | -15 | 1203 | 20.2 | 399.9 | 59.1 | 0.0 | 420.1 | 1 |
| 5 | 172 | 150 | 163 | -39 | 0 | 67 | 353 | 2.8 | 173.7 | 13.9 | 0.0 | 176.5 | 1 |
| 6 | 172 | 150 | 163 | 43 | 0 | -74 | 353 | 2.8 | 180.1 | 13.9 | 0.0 | 182.9 | 1 |
| 7 | 172 | -771 | 171 | -40 | 0 | 68 | 310 | 14.2 | 160.8 | 14.7 | 0.0 | 175.0 | 1 |
| 8 | 172 | -771 | 171 | 43 | 0 | -75 | 310 | 14.2 | 166.5 | 14.7 | 0.0 | 180.7 | 1 |
| 9 | 172 | -293 | 232 | -130 | 0 | 224 | 464 | 5.4 | 350.2 | 19.9 | 0.0 | 355.6 | 1 |
| 10 | 172 | -293 | 232 | 140 | 0 | -241 | 464 | 5.4 | 366.2 | 19.9 | 0.0 | 371.6 | 1 |
| 11 | 172 | -569 | 235 | -130 | 0 | 224 | 451 | 10.5 | 346.4 | 20.1 | 0.0 | 356.9 | 1 |
| 12 | 172 | -449 | 168 | 140 | 0 | -240 | 325 | 8.3 | 320.2 | 14.4 | 0.0 | 328.5 | 1 |
| 13 | 172 | -872 | 575 | 7 | 0 | -13 | 1019 | 16.1 | 338.5 | 49.3 | 0.0 | 354.6 | 1 |
| 14 | 172 | 120 | -168 | -0 | 0 | 1 | -219 | 2.2 | 70.9 | 14.4 | 0.0 | 73.1 | 1 |
| 15 | 172 | -953 | 600 | 8 | 0 | -13 | 1057 | 17.6 | 351.2 | 51.4 | 0.0 | 368.8 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|------|--------|-------|---------------------|---------|------|----------|------|
| | | cm | daN*m | daN/cm ² | | cm | | |
| 1 | -- | 172 | 1203 | 386.2 | -- | -- | -- | |

| | | | | | | | |
|----|---------|----|----|----|----|------|-----------|
| -- | Rara | 70 | 10 | -- | 79 | 0.00 | 1 / 99999 |
| -- | Freq. | 70 | 10 | -- | 79 | 0.00 | 1 / 99999 |
| -- | Q.Perm. | 70 | 10 | -- | 79 | 0.00 | 1 / 99999 |
| -- | Rara | 70 | 10 | -- | 79 | 0.00 | 1 / 99999 |
| -- | Rara | 70 | 10 | -- | 79 | 0.00 | 1 / 99999 |
| -- | Freq. | 70 | 10 | -- | 79 | 0.00 | 1 / 99999 |
| -- | Freq. | 70 | 10 | -- | 79 | 0.00 | 1 / 99999 |

ASTA NUM. 19 NI 34 NF 35 Lungh. 142.4 cm SEZ. 6 Ps HEB 160

categoria: p.p. y qy tot.

qy medio: 0.4263 0.4263 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|-----|------|-------|------|------|---------|--------|--------|-------|--------|------|------|
| -- | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -1094 | 62 | -11 | 0 | -15 | 1204 | 20.1 | 400.2 | 5.3 | 0.0 | 420.4 | 1 | |
| 5 | 0 | 14 | 14 | -66 | 0 | 67 | 347 | 0.3 | 171.8 | 2.4 | 0.0 | 172.1 | 1 | |
| 6 | 0 | 14 | 14 | 59 | 0 | -74 | 347 | 0.3 | 178.2 | 2.1 | 0.0 | 178.5 | 1 | |
| 7 | 0 | -635 | 23 | -65 | 0 | 68 | 316 | 11.7 | 162.8 | 2.3 | 0.0 | 174.5 | 1 | |
| 8 | 0 | -635 | 23 | 59 | 0 | -75 | 316 | 11.7 | 168.5 | 2.1 | 0.0 | 180.2 | 1 | |
| 9 | 0 | -333 | 24 | -218 | 0 | 224 | 463 | 6.1 | 349.6 | 7.9 | 0.0 | 355.8 | 1 | |
| 10 | 0 | -333 | 24 | 202 | 0 | -241 | 463 | 6.1 | 365.7 | 7.3 | 0.0 | 371.8 | 1 | |
| 11 | 0 | -527 | 27 | -218 | 0 | 224 | 453 | 9.7 | 347.0 | 7.9 | 0.0 | 356.7 | 1 | |
| 12 | 0 | -408 | 20 | 203 | 0 | -240 | 327 | 7.5 | 320.9 | 7.3 | 0.0 | 328.4 | 1 | |
| 13 | 0 | -870 | 53 | -9 | 0 | -13 | 1019 | 16.0 | 338.5 | 4.6 | 0.0 | 354.6 | 1 | |
| 14 | 0 | 119 | -9 | 1 | 0 | 1 | -219 | 2.2 | 70.9 | 0.7 | 0.0 | 73.1 | 1 | |
| 15 | 0 | -951 | 55 | -9 | 0 | -13 | 1057 | 17.5 | 351.2 | 4.7 | 0.0 | 368.8 | 1 | |
| 1 | 14 | -1094 | 55 | -11 | 0 | -14 | 1212 | 20.1 | 401.5 | 4.7 | 0.0 | 421.6 | 1 | |
| 5 | 14 | 14 | 8 | -66 | 0 | 77 | 348 | 0.3 | 180.7 | 2.4 | 0.0 | 181.0 | 1 | |
| 6 | 14 | 14 | 8 | 59 | 0 | -83 | 348 | 0.3 | 186.3 | 2.1 | 0.0 | 186.6 | 1 | |
| 7 | 14 | -635 | 17 | -65 | 0 | 77 | 319 | 11.7 | 172.0 | 2.3 | 0.0 | 183.7 | 1 | |
| 8 | 14 | -635 | 17 | 59 | 0 | -83 | 319 | 11.7 | 177.0 | 2.1 | 0.0 | 188.7 | 1 | |
| 9 | 14 | -333 | 16 | -218 | 0 | 255 | 465 | 6.1 | 378.5 | 7.9 | 0.0 | 384.6 | 1 | |
| 10 | 14 | -333 | 16 | 202 | 0 | -270 | 465 | 6.1 | 392.5 | 7.3 | 0.0 | 398.6 | 1 | |
| 11 | 14 | -527 | 19 | -218 | 0 | 255 | 457 | 9.7 | 376.0 | 7.9 | 0.0 | 385.7 | 1 | |
| 12 | 14 | -408 | 14 | 203 | 0 | -269 | 329 | 7.5 | 347.7 | 7.3 | 0.0 | 355.2 | 1 | |
| 13 | 14 | -870 | 45 | -9 | 0 | -11 | 1026 | 16.0 | 339.7 | 3.9 | 0.0 | 355.7 | 1 | |
| 14 | 14 | 119 | -15 | 1 | 0 | 1 | -220 | 2.2 | 71.3 | 1.3 | 0.0 | 73.5 | 1 | |
| 15 | 14 | -951 | 47 | -9 | 0 | -12 | 1064 | 17.5 | 352.4 | 4.1 | 0.0 | 369.9 | 1 | |
| 1 | 28 | -1094 | 47 | -11 | 0 | -12 | 1219 | 20.1 | 402.4 | 4.0 | 0.0 | 422.5 | 1 | |
| 5 | 28 | 14 | 2 | -66 | 0 | 86 | 349 | 0.3 | 189.4 | 2.4 | 0.0 | 189.7 | 1 | |
| 6 | 28 | 14 | 2 | 59 | 0 | -91 | 349 | 0.3 | 194.1 | 2.1 | 0.0 | 194.4 | 1 | |
| 7 | 28 | -635 | 11 | -65 | 0 | 87 | 321 | 11.7 | 181.0 | 2.3 | 0.0 | 192.6 | 1 | |
| 8 | 28 | -635 | 11 | 59 | 0 | -91 | 321 | 11.7 | 185.3 | 2.1 | 0.0 | 197.0 | 1 | |
| 9 | 28 | -333 | 9 | -218 | 0 | 286 | 467 | 6.1 | 407.0 | 7.9 | 0.0 | 413.1 | 1 | |
| 10 | 28 | -333 | 9 | 202 | 0 | -299 | 467 | 6.1 | 419.0 | 7.3 | 0.0 | 425.1 | 1 | |
| 11 | 28 | -527 | 11 | -218 | 0 | 286 | 459 | 9.7 | 404.5 | 7.9 | 0.0 | 414.2 | 1 | |
| 12 | 28 | -408 | 8 | 203 | 0 | -298 | 331 | 7.5 | 374.2 | 7.3 | 0.0 | 381.7 | 1 | |
| 13 | 28 | -870 | 38 | -9 | 0 | -10 | 1032 | 16.0 | 340.4 | 3.2 | 0.0 | 356.5 | 1 | |
| 14 | 28 | 119 | -21 | 1 | 0 | 1 | -223 | 2.2 | 72.0 | 1.8 | 0.0 | 74.2 | 1 | |
| 15 | 28 | -951 | 39 | -9 | 0 | -11 | 1070 | 17.5 | 353.1 | 3.4 | 0.0 | 370.7 | 1 | |
| 1 | 43 | -1094 | 39 | -11 | 0 | -11 | 1225 | 20.1 | 402.9 | 3.3 | 0.0 | 423.1 | 1 | |
| 5 | 43 | 14 | -4 | -66 | 0 | 95 | 349 | 0.3 | 197.8 | 2.4 | 0.0 | 198.0 | 1 | |
| 6 | 43 | 14 | -4 | 59 | 0 | -100 | 349 | 0.3 | 201.7 | 2.1 | 0.0 | 202.0 | 1 | |
| 7 | 43 | -635 | 5 | -65 | 0 | 96 | 322 | 11.7 | 189.6 | 2.3 | 0.0 | 201.3 | 1 | |
| 8 | 43 | -635 | 5 | 59 | 0 | -100 | 322 | 11.7 | 193.2 | 2.1 | 0.0 | 204.9 | 1 | |
| 9 | 43 | -333 | 1 | -218 | 0 | 317 | 468 | 6.1 | 435.2 | 7.9 | 0.0 | 441.3 | 1 | |
| 10 | 43 | -333 | 1 | 202 | 0 | -328 | 468 | 6.1 | 445.2 | 7.3 | 0.0 | 451.3 | 1 | |
| 11 | 43 | -527 | 3 | -218 | 0 | 317 | 460 | 9.7 | 432.8 | 7.9 | 0.0 | 442.5 | 1 | |
| 12 | 43 | -408 | 2 | 203 | 0 | -327 | 331 | 7.5 | 400.5 | 7.3 | 0.0 | 408.0 | 1 | |
| 13 | 43 | -870 | 30 | -9 | 0 | -9 | 1037 | 16.0 | 340.8 | 2.5 | 0.0 | 356.9 | 1 | |
| 14 | 43 | 119 | -27 | 1 | 0 | 0 | -226 | 2.2 | 73.0 | 2.3 | 0.0 | 75.2 | 1 | |
| 15 | 43 | -951 | 31 | -9 | 0 | -9 | 1075 | 17.5 | 353.6 | 2.7 | 0.0 | 371.1 | 1 | |
| 1 | 57 | -1094 | 31 | -11 | 0 | -9 | 1230 | 20.1 | 403.1 | 2.6 | 0.0 | 423.3 | 1 | |
| 5 | 57 | 14 | -10 | -66 | 0 | 105 | 348 | 0.3 | 205.9 | 2.4 | 0.0 | 206.1 | 1 | |
| 6 | 57 | 14 | -10 | 59 | 0 | -108 | 348 | 0.3 | 209.0 | 2.1 | 0.0 | 209.2 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-------|-----|------|---|------|------|------|-------|-----|-----|-------|---|
| 7 | 57 | -635 | -1 | -65 | 0 | 105 | 322 | 11.7 | 198.0 | 2.3 | 0.0 | 209.7 | 1 |
| 8 | 57 | -635 | -1 | 59 | 0 | -108 | 322 | 11.7 | 200.9 | 2.1 | 0.0 | 212.6 | 1 |
| 9 | 57 | -333 | -7 | -218 | 0 | 348 | 467 | 6.1 | 463.0 | 7.9 | 0.0 | 469.1 | 1 |
| 10 | 57 | -333 | -7 | 202 | 0 | -357 | 467 | 6.1 | 470.9 | 7.3 | 0.0 | 477.1 | 1 |
| 11 | 57 | -527 | -5 | -218 | 0 | 348 | 460 | 9.7 | 460.6 | 7.9 | 0.0 | 470.3 | 1 |
| 12 | 57 | -408 | -4 | 203 | 0 | -356 | 331 | 7.5 | 426.5 | 7.3 | 0.0 | 434.0 | 1 |
| 13 | 57 | -870 | 22 | -9 | 0 | -8 | 1040 | 16.0 | 340.9 | 1.9 | 0.0 | 356.9 | 1 |
| 14 | 57 | 119 | -33 | 1 | 0 | 0 | -230 | 2.2 | 74.2 | 2.8 | 0.0 | 76.4 | 1 |
| 15 | 57 | -951 | 24 | -9 | 0 | -8 | 1079 | 17.5 | 353.6 | 2.0 | 0.0 | 371.1 | 1 |
| | | | | | | | | | | | | | |
| 1 | 71 | -1094 | 23 | -11 | 0 | -8 | 1234 | 20.1 | 403.0 | 2.0 | 0.0 | 423.1 | 1 |
| 5 | 71 | 14 | -16 | -66 | 0 | 114 | 346 | 0.3 | 213.7 | 2.4 | 0.0 | 214.0 | 1 |
| 6 | 71 | 14 | -16 | 59 | 0 | -116 | 346 | 0.3 | 216.0 | 2.1 | 0.0 | 216.2 | 1 |
| 7 | 71 | -635 | -8 | -65 | 0 | 114 | 321 | 11.7 | 206.1 | 2.3 | 0.0 | 217.7 | 1 |
| 8 | 71 | -635 | -8 | 59 | 0 | -117 | 321 | 11.7 | 208.3 | 2.1 | 0.0 | 220.0 | 1 |
| 9 | 71 | -333 | -15 | -218 | 0 | 379 | 466 | 6.1 | 490.4 | 7.9 | 0.0 | 496.5 | 1 |
| 10 | 71 | -333 | -15 | 202 | 0 | -385 | 466 | 6.1 | 496.4 | 7.3 | 0.0 | 502.5 | 1 |
| 11 | 71 | -527 | -13 | -218 | 0 | 379 | 458 | 9.7 | 488.1 | 7.9 | 0.0 | 497.8 | 1 |
| 12 | 71 | -408 | -10 | 203 | 0 | -385 | 330 | 7.5 | 452.2 | 7.3 | 0.0 | 459.8 | 1 |
| 13 | 71 | -870 | 14 | -9 | 0 | -6 | 1043 | 16.0 | 340.5 | 1.2 | 0.0 | 356.6 | 1 |
| 14 | 71 | 119 | -39 | 1 | 0 | 0 | -236 | 2.2 | 75.7 | 3.3 | 0.0 | 77.9 | 1 |
| 15 | 71 | -951 | 16 | -9 | 0 | -7 | 1082 | 17.5 | 353.3 | 1.3 | 0.0 | 370.8 | 1 |
| | | | | | | | | | | | | | |
| 1 | 85 | -1094 | 15 | -11 | 0 | -6 | 1237 | 20.1 | 402.4 | 1.3 | 0.0 | 422.6 | 1 |
| 5 | 85 | 14 | -22 | -66 | 0 | 123 | 344 | 0.3 | 221.3 | 2.4 | 0.0 | 221.5 | 1 |
| 6 | 85 | 14 | -22 | 59 | 0 | -125 | 344 | 0.3 | 222.7 | 2.1 | 0.0 | 223.0 | 1 |
| 7 | 85 | -635 | -14 | -65 | 0 | 124 | 320 | 11.7 | 213.9 | 2.3 | 0.0 | 225.6 | 1 |
| 8 | 85 | -635 | -14 | 59 | 0 | -125 | 320 | 11.7 | 215.4 | 2.1 | 0.0 | 227.1 | 1 |
| 9 | 85 | -333 | -23 | -218 | 0 | 410 | 463 | 6.1 | 517.4 | 7.9 | 0.0 | 523.6 | 1 |
| 10 | 85 | -333 | -23 | 202 | 0 | -414 | 463 | 6.1 | 521.4 | 7.3 | 0.0 | 527.5 | 1 |
| 11 | 85 | -527 | -21 | -218 | 0 | 410 | 456 | 9.7 | 515.3 | 7.9 | 0.0 | 525.0 | 1 |
| 12 | 85 | -408 | -17 | 203 | 0 | -414 | 328 | 7.5 | 477.7 | 7.3 | 0.0 | 485.2 | 1 |
| 13 | 85 | -870 | 6 | -9 | 0 | -5 | 1044 | 16.0 | 339.9 | 0.5 | 0.0 | 355.9 | 1 |
| 14 | 85 | 119 | -45 | 1 | 0 | -0 | -242 | 2.2 | 77.6 | 3.9 | 0.0 | 79.8 | 1 |
| 15 | 85 | -951 | 8 | -9 | 0 | -5 | 1084 | 17.5 | 352.6 | 0.7 | 0.0 | 370.1 | 1 |
| | | | | | | | | | | | | | |
| 1 | 100 | -1094 | 7 | -11 | 0 | -5 | 1238 | 20.1 | 401.6 | 0.6 | 0.0 | 421.7 | 1 |
| 5 | 100 | 14 | -28 | -66 | 0 | 133 | 340 | 0.3 | 228.5 | 2.4 | 0.0 | 228.8 | 1 |
| 6 | 100 | 14 | -28 | 59 | 0 | -133 | 340 | 0.3 | 229.1 | 2.4 | 0.0 | 229.4 | 1 |
| 7 | 100 | -635 | -20 | -65 | 0 | 133 | 318 | 11.7 | 221.4 | 2.3 | 0.0 | 233.1 | 1 |
| 8 | 100 | -635 | -20 | 59 | 0 | -134 | 318 | 11.7 | 222.3 | 2.1 | 0.0 | 234.0 | 1 |
| 9 | 100 | -333 | -31 | -218 | 0 | 441 | 459 | 6.1 | 544.2 | 7.9 | 0.0 | 550.3 | 1 |
| 10 | 100 | -333 | -31 | 202 | 0 | -443 | 459 | 6.1 | 546.1 | 7.3 | 0.0 | 552.2 | 1 |
| 11 | 100 | -527 | -28 | -218 | 0 | 441 | 453 | 9.7 | 542.0 | 7.9 | 0.0 | 551.8 | 1 |
| 12 | 100 | -408 | -23 | 203 | 0 | -443 | 325 | 7.5 | 502.9 | 7.3 | 0.0 | 510.4 | 1 |
| 13 | 100 | -870 | -2 | -9 | 0 | -4 | 1045 | 16.0 | 338.8 | 0.3 | 0.0 | 354.8 | 1 |
| 14 | 100 | 119 | -51 | 1 | 0 | -0 | -248 | 2.2 | 79.9 | 4.4 | 0.0 | 82.1 | 1 |
| 15 | 100 | -951 | -0 | -9 | 0 | -4 | 1084 | 17.5 | 351.6 | 0.3 | 0.0 | 369.1 | 1 |
| | | | | | | | | | | | | | |
| 1 | 114 | -1094 | -1 | -11 | 0 | -3 | 1239 | 20.1 | 400.3 | 0.4 | 0.0 | 420.4 | 1 |
| 5 | 114 | 14 | -34 | -66 | 0 | 142 | 336 | 0.3 | 235.5 | 2.9 | 0.0 | 235.8 | 1 |
| 6 | 114 | 14 | -34 | 59 | 0 | -142 | 336 | 0.3 | 235.3 | 2.9 | 0.0 | 235.6 | 1 |
| 7 | 114 | -635 | -26 | -65 | 0 | 142 | 314 | 11.7 | 228.7 | 2.3 | 0.0 | 240.4 | 1 |
| 8 | 114 | -635 | -26 | 59 | 0 | -142 | 314 | 11.7 | 228.9 | 2.2 | 0.0 | 240.6 | 1 |
| 9 | 114 | -333 | -39 | -218 | 0 | 472 | 454 | 6.1 | 570.5 | 7.9 | 0.0 | 576.6 | 1 |
| 10 | 114 | -333 | -39 | 202 | 0 | -472 | 454 | 6.1 | 570.5 | 7.3 | 0.0 | 576.6 | 1 |
| 11 | 114 | -527 | -36 | -218 | 0 | 472 | 448 | 9.7 | 568.5 | 7.9 | 0.0 | 578.2 | 1 |
| 12 | 114 | -408 | -29 | 203 | 0 | -472 | 322 | 7.5 | 527.8 | 7.3 | 0.0 | 535.3 | 1 |
| 13 | 114 | -870 | -10 | -9 | 0 | -3 | 1044 | 16.0 | 337.4 | 0.8 | 0.0 | 353.4 | 1 |
| 14 | 114 | 119 | -57 | 1 | 0 | -0 | -256 | 2.2 | 82.5 | 4.9 | 0.0 | 84.7 | 1 |
| 15 | 114 | -951 | -8 | -9 | 0 | -3 | 1084 | 17.5 | 350.2 | 0.7 | 0.0 | 367.7 | 1 |
| | | | | | | | | | | | | | |
| 1 | 128 | -1094 | -9 | -11 | 0 | -1 | 1238 | 20.1 | 398.7 | 0.7 | 0.0 | 418.8 | 1 |
| 5 | 128 | 14 | -40 | -66 | 0 | 151 | 330 | 0.3 | 242.2 | 3.4 | 0.0 | 242.5 | 1 |
| 6 | 128 | 14 | -40 | 59 | 0 | -150 | 330 | 0.3 | 241.2 | 3.4 | 0.0 | 241.5 | 1 |
| 7 | 128 | -635 | -32 | -65 | 0 | 151 | 310 | 11.7 | 235.6 | 2.7 | 0.0 | 247.3 | 1 |
| 8 | 128 | -635 | -32 | 59 | 0 | -151 | 310 | 11.7 | 235.2 | 2.7 | 0.0 | 246.9 | 1 |
| 9 | 128 | -333 | -47 | -218 | 0 | 503 | 448 | 6.1 | 596.5 | 7.9 | 0.0 | 602.6 | 1 |
| 10 | 128 | -333 | -47 | 202 | 0 | -501 | 448 | 6.1 | 594.4 | 7.3 | 0.0 | 600.6 | 1 |
| 11 | 128 | -527 | -44 | -218 | 0 | 503 | 442 | 9.7 | 594.5 | 7.9 | 0.0 | 604.2 | 1 |
| 12 | 128 | -408 | -35 | 203 | 0 | -501 | 317 | 7.5 | 552.4 | 7.3 | 0.0 | 559.9 | 1 |
| 13 | 128 | -870 | -18 | -9 | 0 | -1 | 1042 | 16.0 | 335.6 | 1.5 | 0.0 | 351.7 | 1 |
| 14 | 128 | 119 | -63 | 1 | 0 | -0 | -265 | 2.2 | 85.4 | 5.4 | 0.0 | 87.6 | 1 |
| 15 | 128 | -951 | -16 | -9 | 0 | -1 | 1082 | 17.5 | 348.5 | 1.4 | 0.0 | 366.0 | 1 |
| | | | | | | | | | | | | | |
| 1 | 142 | -1094 | -17 | -11 | 0 | 0 | 1236 | 20.1 | 396.9 | 1.4 | 0.0 | 417.0 | 1 |
| 5 | 142 | 14 | -46 | -66 | 0 | 161 | 324 | 0.3 | 248.7 | 4.0 | 0.0 | 249.0 | 1 |
| 6 | 142 | 14 | -46 | 59 | 0 | -159 | 324 | 0.3 | 246.8 | 4.0 | 0.0 | 247.1 | 1 |
| 7 | 142 | -635 | -38 | -65 | 0 | 160 | 305 | 11.7 | 242.4 | 3.2 | 0.0 | 254.0 | 1 |
| 8 | 142 | -635 | -38 | 59 | 0 | -159 | 305 | 11.7 | 241.2 | 3.2 | 0.0 | 252.9 | 1 |
| 9 | 142 | -333 | -55 | -218 | 0 | 534 | 441 | 6.1 | 622.1 | 7.9 | 0.0 | 628.2 | 1 |
| 10 | 142 | -333 | -55 | 202 | 0 | -530 | 441 | 6.1 | 618.1 | 7.3 | 0.0 | 624.2 | 1 |
| 11 | 142 | -527 | -52 | -218 | 0 | 534 | 435 | 9.7 | 620.2 | 7.9 | 0.0 | 629.9 | 1 |
| 12 | 142 | -408 | -41 | 203 | 0 | -530 | 312 | 7.5 | 576.7 | 7.3 | 0.0 | 584.2 | 1 |
| 13 | 142 | -870 | -26 | -9 | 0 | 0 | 1039 | 16.0 | 333.6 | 2.2 | 0.0 | 349.6 | 1 |
| 14 | 142 | 119 | -69 | 1 | 0 | -1 | -274 | 2.2 | 88.6 | 5.9 | 0.0 | 90.8 | 1 |
| 15 | 142 | -951 | -24 | -9 | 0 | 0 | 1079 | 17.5 | 346.4 | 2.0 | 0.0 | 363.9 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x | Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|-----|-------|--------|--------|---------|-----------|----------|------|
| | | cm | daN*m | daN/cm | | cm | | | |
| 1 | -- | 114 | 1239 | 397.6 | -- | -- | -- | -- | |
| -- | Rara | 81 | 2 | -- | 87 | -0.00 | 1 / 99999 | | |
| -- | Freq. | 81 | 2 | -- | 87 | -0.00 | 1 / 99999 | | |
| -- | Q.Perm. | 81 | 2 | -- | 87 | -0.00 | 1 / 99999 | | |
| -- | Rara | 81 | 2 | -- | 87 | -0.00 | 1 / 99999 | | |
| -- | Rara | 81 | 2 | -- | 87 | -0.00 | 1 / 99999 | | |
| -- | Freq. | 81 | 2 | -- | 87 | -0.00 | 1 / 99999 | | |
| -- | Freq. | 81 | 2 | -- | 87 | -0.00 | 1 / 99999 | | |

ASTA NUM. 20 NI 35 NF 36 Lungh. 142.1 cm SEZ. 6 Ps HEB 160

categoria: p.p. y qy tot.

qy medio: 0.4263 0.4263 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|-------|------|----|-------|------|---------|--------|--------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | daN/cm | | | | |
| 1 | 0 | -1092 | -1218 | -0 | 0 | 0 | 1237 | 20.1 | 397.2 | 104.4 | 0.0 | 417.3 | 1 | |
| 5 | 0 | -195 | -302 | 115 | 0 | 161 | 314 | 3.6 | 245.3 | 25.9 | 0.0 | 248.8 | 1 | |
| 6 | 0 | -195 | -302 | -113 | 0 | -159 | 314 | 3.6 | 243.4 | 25.9 | 0.0 | 247.0 | 1 | |
| 7 | 0 | -424 | -294 | 115 | 0 | 160 | 316 | 7.8 | 245.9 | 25.2 | 0.0 | 253.7 | 1 | |
| 8 | 0 | -424 | -294 | -114 | 0 | -159 | 316 | 7.8 | 244.7 | 25.2 | 0.0 | 252.5 | 1 | |
| 9 | 0 | -395 | -418 | 382 | 0 | 534 | 438 | 7.3 | 621.1 | 35.8 | 0.0 | 628.4 | 1 | |
| 10 | 0 | -395 | -418 | -379 | 0 | -530 | 438 | 7.3 | 617.1 | 35.8 | 0.0 | 624.3 | 1 | |
| 11 | 0 | -463 | -415 | 382 | 0 | 534 | 439 | 8.5 | 621.3 | 35.6 | 0.0 | 629.9 | 1 | |
| 12 | 0 | -344 | -296 | -379 | 0 | -530 | 315 | 6.3 | 577.8 | 25.4 | 0.0 | 584.1 | 1 | |
| 13 | 0 | -868 | -1015 | -0 | 0 | 0 | 1039 | 16.0 | 333.6 | 87.0 | 0.0 | 349.6 | 1 | |
| 14 | 0 | 119 | 290 | -0 | 0 | -1 | -274 | 2.2 | 88.6 | 24.8 | 0.0 | 90.8 | 1 | |
| 15 | 0 | -949 | -1060 | -0 | 0 | 0 | 1080 | 17.5 | 346.7 | 90.8 | 0.0 | 364.2 | 1 | |
| 1 | 14 | -1092 | -1226 | -0 | 0 | 0 | 1063 | 20.1 | 341.4 | 105.1 | 0.0 | 361.5 | 1 | |
| 5 | 14 | -195 | -308 | 115 | 0 | 144 | 270 | 3.6 | 216.7 | 26.4 | 0.0 | 220.2 | 1 | |
| 6 | 14 | -195 | -308 | -113 | 0 | -142 | 270 | 3.6 | 214.9 | 26.4 | 0.0 | 218.5 | 1 | |
| 7 | 14 | -424 | -300 | 115 | 0 | 144 | 274 | 7.8 | 217.7 | 25.7 | 0.0 | 225.5 | 1 | |
| 8 | 14 | -424 | -300 | -114 | 0 | -143 | 274 | 7.8 | 216.6 | 25.7 | 0.0 | 224.4 | 1 | |
| 9 | 14 | -395 | -425 | 382 | 0 | 480 | 378 | 7.3 | 553.1 | 36.5 | 0.0 | 560.4 | 1 | |
| 10 | 14 | -395 | -425 | -379 | 0 | -476 | 378 | 7.3 | 549.4 | 36.5 | 0.0 | 556.7 | 1 | |
| 11 | 14 | -463 | -423 | 382 | 0 | 480 | 379 | 8.5 | 553.4 | 36.2 | 0.0 | 561.9 | 1 | |
| 12 | 14 | -344 | -302 | -379 | 0 | -476 | 273 | 6.3 | 515.7 | 25.9 | 0.0 | 522.0 | 1 | |
| 13 | 14 | -868 | -1023 | -0 | 0 | 0 | 894 | 16.0 | 287.1 | 87.7 | 0.0 | 303.1 | 1 | |
| 14 | 14 | 119 | 284 | -0 | 0 | -1 | -233 | 2.2 | 75.5 | 24.3 | 0.0 | 77.6 | 1 | |
| 15 | 14 | -949 | -1068 | -0 | 0 | 0 | 929 | 17.5 | 298.2 | 91.5 | 0.0 | 315.7 | 1 | |
| 1 | 28 | -1092 | -1234 | -0 | 0 | 0 | 888 | 20.1 | 285.3 | 105.7 | 0.0 | 306.5 | 3 | |
| 5 | 28 | -195 | -314 | 115 | 0 | 128 | 226 | 3.6 | 187.8 | 26.9 | 0.0 | 191.4 | 1 | |
| 6 | 28 | -195 | -314 | -113 | 0 | -126 | 226 | 3.6 | 186.3 | 26.9 | 0.0 | 189.8 | 1 | |
| 7 | 28 | -424 | -306 | 115 | 0 | 128 | 231 | 7.8 | 189.2 | 26.2 | 0.0 | 197.0 | 1 | |
| 8 | 28 | -424 | -306 | -114 | 0 | -127 | 231 | 7.8 | 188.2 | 26.2 | 0.0 | 196.1 | 1 | |
| 9 | 28 | -395 | -433 | 382 | 0 | 425 | 317 | 7.3 | 484.7 | 37.1 | 0.0 | 492.0 | 1 | |
| 10 | 28 | -395 | -433 | -379 | 0 | -422 | 317 | 7.3 | 481.4 | 37.1 | 0.0 | 488.7 | 1 | |
| 11 | 28 | -463 | -431 | 382 | 0 | 425 | 319 | 8.5 | 485.1 | 36.9 | 0.0 | 493.6 | 1 | |
| 12 | 28 | -344 | -309 | -379 | 0 | -422 | 229 | 6.3 | 453.3 | 26.4 | 0.0 | 459.6 | 1 | |
| 13 | 28 | -868 | -1031 | -0 | 0 | 0 | 748 | 16.0 | 240.2 | 88.3 | 0.0 | 256.7 | 3 | |
| 14 | 28 | 119 | 278 | -0 | 0 | -0 | -194 | 2.2 | 62.6 | 23.8 | 0.0 | 65.6 | 3 | |
| 15 | 28 | -949 | -1076 | -0 | 0 | 0 | 776 | 17.5 | 249.3 | 92.2 | 0.0 | 267.6 | 3 | |
| 1 | 43 | -1092 | -1242 | -0 | 0 | 0 | 712 | 20.1 | 228.8 | 106.4 | 0.0 | 268.3 | 3 | |
| 5 | 43 | -195 | -320 | 115 | 0 | 112 | 181 | 3.6 | 158.6 | 27.4 | 0.0 | 162.2 | 1 | |
| 6 | 43 | -195 | -320 | -113 | 0 | -110 | 181 | 3.6 | 157.3 | 27.4 | 0.0 | 160.9 | 1 | |
| 7 | 43 | -424 | -312 | 115 | 0 | 112 | 187 | 7.8 | 160.5 | 26.7 | 0.0 | 168.3 | 1 | |
| 8 | 43 | -424 | -312 | -114 | 0 | -111 | 187 | 7.8 | 159.6 | 26.7 | 0.0 | 167.4 | 1 | |
| 9 | 43 | -395 | -441 | 382 | 0 | 371 | 255 | 7.3 | 415.9 | 37.8 | 0.0 | 423.2 | 1 | |
| 10 | 43 | -395 | -441 | -379 | 0 | -368 | 255 | 7.3 | 413.0 | 37.8 | 0.0 | 420.3 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-------|-------|------|---|------|------|------|-------|-------|-----|-------|---|
| 11 | 43 | -463 | -439 | 382 | 0 | 371 | 257 | 8.5 | 416.5 | 37.6 | 0.0 | 425.0 | 1 |
| 12 | 43 | -344 | -315 | -379 | 0 | -368 | 185 | 6.3 | 390.7 | 27.0 | 0.0 | 397.0 | 1 |
| 13 | 43 | -868 | -1039 | -0 | 0 | 0 | 601 | 16.0 | 193.0 | 89.0 | 0.0 | 224.9 | 3 |
| 14 | 43 | 119 | 272 | -0 | 0 | -0 | -155 | 2.2 | 50.0 | 23.3 | 0.0 | 56.7 | 3 |
| 15 | 43 | -949 | -1083 | -0 | 0 | 0 | 623 | 17.5 | 200.1 | 92.8 | 0.0 | 234.4 | 3 |
| | | | | | | | | | | | | | |
| 1 | 57 | -1092 | -1250 | -0 | 0 | 0 | 535 | 20.1 | 171.9 | 107.1 | 0.0 | 233.4 | 3 |
| 5 | 57 | -195 | -326 | 115 | 0 | 95 | 135 | 3.6 | 129.2 | 27.9 | 0.0 | 132.8 | 1 |
| 6 | 57 | -195 | -326 | -113 | 0 | -94 | 135 | 3.6 | 128.0 | 27.9 | 0.0 | 131.6 | 1 |
| 7 | 57 | -424 | -318 | 115 | 0 | 95 | 142 | 7.8 | 131.4 | 27.2 | 0.0 | 139.2 | 1 |
| 8 | 57 | -424 | -318 | -114 | 0 | -94 | 142 | 7.8 | 130.7 | 27.2 | 0.0 | 138.5 | 1 |
| 9 | 57 | -395 | -449 | 382 | 0 | 317 | 192 | 7.3 | 346.8 | 38.5 | 0.0 | 354.0 | 1 |
| 10 | 57 | -395 | -449 | -379 | 0 | -314 | 192 | 7.3 | 344.3 | 38.5 | 0.0 | 351.6 | 1 |
| 11 | 57 | -463 | -447 | 382 | 0 | 317 | 194 | 8.5 | 347.4 | 38.3 | 0.0 | 356.0 | 1 |
| 12 | 57 | -344 | -321 | -379 | 0 | -314 | 140 | 6.3 | 327.7 | 27.5 | 0.0 | 334.1 | 1 |
| 13 | 57 | -868 | -1047 | -0 | 0 | 0 | 453 | 16.0 | 145.4 | 89.7 | 0.0 | 195.7 | 3 |
| 14 | 57 | 119 | 265 | -0 | 0 | -0 | -116 | 2.2 | 37.7 | 22.7 | 0.0 | 48.6 | 3 |
| 15 | 57 | -949 | -1091 | -0 | 0 | 0 | 469 | 17.5 | 150.5 | 93.5 | 0.0 | 203.9 | 3 |
| | | | | | | | | | | | | | |
| 1 | 71 | -1092 | -1258 | -0 | 0 | 0 | 357 | 20.1 | 114.7 | 107.8 | 0.0 | 203.4 | 3 |
| 5 | 71 | -195 | -332 | 115 | 0 | 79 | 88 | 3.6 | 99.5 | 28.5 | 0.0 | 103.1 | 1 |
| 6 | 71 | -195 | -332 | -113 | 0 | -78 | 88 | 3.6 | 98.5 | 28.5 | 0.0 | 102.1 | 1 |
| 7 | 71 | -424 | -324 | 115 | 0 | 79 | 97 | 7.8 | 102.1 | 27.7 | 0.0 | 109.9 | 1 |
| 8 | 71 | -424 | -324 | -114 | 0 | -78 | 97 | 7.8 | 101.5 | 27.7 | 0.0 | 109.3 | 1 |
| 9 | 71 | -395 | -457 | 382 | 0 | 263 | 127 | 7.3 | 277.3 | 39.2 | 0.0 | 284.6 | 1 |
| 10 | 71 | -395 | -457 | -379 | 0 | -260 | 127 | 7.3 | 275.2 | 39.2 | 0.0 | 282.5 | 1 |
| 11 | 71 | -463 | -454 | 382 | 0 | 263 | 130 | 8.5 | 278.1 | 38.9 | 0.0 | 286.6 | 1 |
| 12 | 71 | -344 | -327 | -379 | 0 | -261 | 94 | 6.3 | 264.6 | 28.0 | 0.0 | 270.9 | 1 |
| 13 | 71 | -868 | -1055 | -0 | 0 | 0 | 303 | 16.0 | 97.5 | 90.4 | 0.0 | 170.7 | 3 |
| 14 | 71 | 119 | 259 | -0 | 0 | -0 | -79 | 2.2 | 25.7 | 22.2 | 0.0 | 41.7 | 3 |
| 15 | 71 | -949 | -1099 | -0 | 0 | 0 | 313 | 17.5 | 100.5 | 94.2 | 0.0 | 177.8 | 3 |
| | | | | | | | | | | | | | |
| 1 | 85 | -1092 | -1265 | -0 | 0 | 0 | 178 | 20.1 | 57.2 | 108.4 | 0.0 | 188.9 | 4 |
| 5 | 85 | -195 | -338 | 115 | 0 | 63 | 41 | 3.6 | 69.5 | 29.0 | 0.0 | 73.1 | 1 |
| 6 | 85 | -195 | -338 | -113 | 0 | -62 | 41 | 3.6 | 68.7 | 29.0 | 0.0 | 72.3 | 1 |
| 7 | 85 | -424 | -330 | 115 | 0 | 63 | 50 | 7.8 | 72.6 | 28.3 | 0.0 | 80.4 | 1 |
| 8 | 85 | -424 | -330 | -114 | 0 | -62 | 50 | 7.8 | 72.1 | 28.3 | 0.0 | 79.9 | 1 |
| 9 | 85 | -395 | -465 | 382 | 0 | 208 | 62 | 7.3 | 207.4 | 39.8 | 0.0 | 214.7 | 1 |
| 10 | 85 | -395 | -465 | -379 | 0 | -207 | 62 | 7.3 | 205.8 | 39.8 | 0.0 | 213.0 | 1 |
| 11 | 85 | -463 | -462 | 382 | 0 | 208 | 65 | 8.5 | 208.4 | 39.6 | 0.0 | 216.9 | 1 |
| 12 | 85 | -344 | -333 | -379 | 0 | -207 | 47 | 6.3 | 201.1 | 28.5 | 0.0 | 207.4 | 1 |
| 13 | 85 | -868 | -1062 | -0 | 0 | 0 | 153 | 16.0 | 49.2 | 91.0 | 0.0 | 158.5 | 4 |
| 14 | 85 | 119 | 253 | -0 | 0 | -0 | -43 | 2.2 | 13.9 | 21.7 | 0.0 | 37.7 | 4 |
| 15 | 85 | -949 | -1107 | -0 | 0 | 0 | 156 | 17.5 | 50.2 | 94.8 | 0.0 | 165.2 | 4 |
| | | | | | | | | | | | | | |
| 1 | 99 | -1092 | -1273 | -0 | 0 | 0 | -3 | 20.1 | 0.9 | 109.1 | 0.0 | 190.1 | 4 |
| 5 | 99 | -195 | -344 | 115 | 0 | 46 | -8 | 3.6 | 44.3 | 29.5 | 0.0 | 51.4 | 4 |
| 6 | 99 | -195 | -344 | -113 | 0 | -46 | -8 | 3.6 | 43.7 | 29.5 | 0.0 | 51.4 | 4 |
| 7 | 99 | -424 | -336 | 115 | 0 | 46 | 3 | 7.8 | 42.7 | 28.8 | 0.0 | 50.8 | 4 |
| 8 | 99 | -424 | -336 | -114 | 0 | -46 | 3 | 7.8 | 42.3 | 28.8 | 0.0 | 50.8 | 4 |
| 9 | 99 | -395 | -473 | 382 | 0 | 154 | -5 | 7.3 | 140.4 | 40.5 | 0.0 | 147.6 | 1 |
| 10 | 99 | -395 | -473 | -379 | 0 | -153 | -5 | 7.3 | 139.1 | 40.5 | 0.0 | 146.4 | 1 |
| 11 | 99 | -463 | -470 | 382 | 0 | 154 | -2 | 8.5 | 139.3 | 40.3 | 0.0 | 147.8 | 1 |
| 12 | 99 | -344 | -339 | -379 | 0 | -153 | -1 | 6.3 | 137.8 | 29.0 | 0.0 | 144.2 | 1 |
| 13 | 99 | -868 | -1070 | -0 | 0 | 0 | 1 | 16.0 | 0.5 | 91.7 | 0.0 | 159.7 | 4 |
| 14 | 99 | 119 | 247 | -0 | 0 | -0 | -7 | 2.2 | 2.5 | 21.2 | 0.0 | 36.8 | 4 |
| 15 | 99 | -949 | -1115 | -0 | 0 | 0 | -2 | 17.5 | 0.7 | 95.5 | 0.0 | 166.4 | 4 |
| | | | | | | | | | | | | | |
| 1 | 114 | -1092 | -1281 | -0 | 0 | 0 | -184 | 20.1 | 59.2 | 109.8 | 0.0 | 191.2 | 4 |
| 5 | 114 | -195 | -350 | 115 | 0 | 30 | -57 | 3.6 | 45.5 | 30.0 | 0.0 | 52.2 | 4 |
| 6 | 114 | -195 | -350 | -113 | 0 | -30 | -57 | 3.6 | 45.1 | 30.0 | 0.0 | 52.2 | 4 |
| 7 | 114 | -424 | -342 | 115 | 0 | 30 | -45 | 7.8 | 41.5 | 29.3 | 0.0 | 51.6 | 4 |
| 8 | 114 | -424 | -342 | -114 | 0 | -30 | -45 | 7.8 | 41.2 | 29.3 | 0.0 | 51.6 | 4 |
| 9 | 114 | -395 | -481 | 382 | 0 | 100 | -73 | 7.3 | 113.3 | 41.2 | 0.0 | 120.6 | 1 |
| 10 | 114 | -395 | -481 | -379 | 0 | -99 | -73 | 7.3 | 112.5 | 41.2 | 0.0 | 119.7 | 1 |
| 11 | 114 | -463 | -478 | 382 | 0 | 100 | -69 | 8.5 | 112.1 | 41.0 | 0.0 | 120.6 | 1 |
| 12 | 114 | -344 | -345 | -379 | 0 | -99 | -49 | 6.3 | 105.0 | 29.6 | 0.0 | 111.3 | 1 |
| 13 | 114 | -868 | -1078 | -0 | 0 | 0 | -151 | 16.0 | 48.6 | 92.4 | 0.0 | 160.8 | 4 |
| 14 | 114 | 119 | 241 | -0 | 0 | -0 | 28 | 2.2 | 9.0 | 20.7 | 0.0 | 35.9 | 4 |
| 15 | 114 | -949 | -1122 | -0 | 0 | 0 | -161 | 17.5 | 51.7 | 96.2 | 0.0 | 167.5 | 4 |
| | | | | | | | | | | | | | |
| 1 | 128 | -1092 | -1289 | -0 | 0 | 0 | -367 | 20.1 | 117.9 | 110.5 | 0.0 | 208.4 | 3 |
| 5 | 128 | -195 | -356 | 115 | 0 | 14 | -108 | 3.6 | 46.9 | 30.5 | 0.0 | 58.2 | 3 |
| 6 | 128 | -195 | -356 | -113 | 0 | -14 | -108 | 3.6 | 46.7 | 30.5 | 0.0 | 58.2 | 3 |
| 7 | 128 | -424 | -348 | 115 | 0 | 14 | -94 | 7.8 | 42.6 | 29.8 | 0.0 | 57.7 | 3 |
| 8 | 128 | -424 | -348 | -114 | 0 | -14 | -94 | 7.8 | 42.4 | 29.8 | 0.0 | 57.7 | 3 |
| 9 | 128 | -395 | -488 | 382 | 0 | 46 | -142 | 7.3 | 86.6 | 41.9 | 0.0 | 93.9 | 1 |
| 10 | 128 | -395 | -489 | -379 | 0 | -45 | -142 | 7.3 | 86.1 | 41.9 | 0.0 | 93.4 | 1 |
| 11 | 128 | -463 | -486 | 382 | 0 | 46 | -137 | 8.5 | 85.3 | 41.6 | 0.0 | 93.8 | 1 |
| 12 | 128 | -344 | -351 | -379 | 0 | -45 | -99 | 6.3 | 72.4 | 30.1 | 0.0 | 78.8 | 1 |
| 13 | 128 | -868 | -1086 | -0 | 0 | 0 | -305 | 16.0 | 98.0 | 93.1 | 0.0 | 174.4 | 3 |
| 14 | 128 | 119 | 235 | -0 | 0 | -0 | 61 | 2.2 | 19.8 | 20.2 | 0.0 | 36.4 | 3 |
| 15 | 128 | -949 | -1130 | -0 | 0 | 0 | -321 | 17.5 | 103.1 | 96.8 | 0.0 | 182.5 | 3 |
| | | | | | | | | | | | | | |
| 1 | 142 | -1092 | -1297 | -0 | 0 | 0 | -551 | 20.1 | 176.9 | 111.1 | 0.0 | 240.8 | 3 |
| 5 | 142 | -195 | -362 | 115 | 0 | -3 | -159 | 3.6 | 53.2 | 31.1 | 0.0 | 67.2 | 3 |
| 6 | 142 | -195 | -362 | -113 | 0 | 3 | -159 | 3.6 | 53.2 | 31.1 | 0.0 | 67.2 | 3 |
| 7 | 142 | -424 | -354 | 115 | 0 | -3 | -144 | 7.8 | 48.5 | 30.3 | 0.0 | 66.6 | 3 |
| 8 | 142 | -424 | -354 | -114 | 0 | 3 | -144 | 7.8 | 48.6 | 30.3 | 0.0 | 66.6 | 3 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|-------|------|---|----|------|------|-------|------|-----|-------|---|
| 9 | 142 | -395 | -496 | 382 | 0 | -9 | -212 | 7.3 | 75.6 | 42.5 | 0.0 | 95.3 | 3 |
| 10 | 142 | -395 | -496 | -379 | 0 | 9 | -212 | 7.3 | 75.6 | 42.5 | 0.0 | 95.2 | 3 |
| 11 | 142 | -463 | -494 | 382 | 0 | -9 | -207 | 8.5 | 74.1 | 42.3 | 0.0 | 95.1 | 3 |
| 12 | 142 | -344 | -357 | -379 | 0 | 9 | -149 | 6.3 | 55.6 | 30.6 | 0.0 | 70.7 | 3 |
| 13 | 142 | -868 | -1094 | -0 | 0 | 0 | -460 | 16.0 | 147.8 | 93.7 | 0.0 | 201.6 | 3 |
| 14 | 142 | 119 | 229 | -0 | 0 | 0 | 94 | 2.2 | 30.3 | 19.6 | 0.0 | 41.1 | 3 |
| 15 | 142 | -949 | -1138 | -0 | 0 | 0 | -482 | 17.5 | 154.9 | 97.5 | 0.0 | 210.9 | 3 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|--------|-------|--------|---------|------|-----------|------|
| | | cm | daN*m | daN/cm | | cm | | |
| 1 | -- | 0 | 1237 | 397.1 | -- | -- | -- | |
| -- | Rara | 71 | 5 | -- | 71 | 0.00 | 1 / 99999 | |
| -- | Freq. | 71 | 5 | -- | 71 | 0.00 | 1 / 99999 | |
| -- | Q.Perm. | 71 | 5 | -- | 71 | 0.00 | 1 / 99999 | |
| -- | Rara | 71 | 5 | -- | 71 | 0.00 | 1 / 99999 | |
| -- | Rara | 71 | 5 | -- | 71 | 0.00 | 1 / 99999 | |
| -- | Freq. | 71 | 5 | -- | 71 | 0.00 | 1 / 99999 | |
| -- | Freq. | 71 | 5 | -- | 71 | 0.00 | 1 / 99999 | |

ASTA NUM. 21 NI 36 NF 31 Lungh. 35.5 cm SEZ. 6 Ps HEB 160

categoria: p.p. y qy tot.

qy medio: 0.4263 0.4263 daN/cm

166

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|-------|-----|----|-------|------|---------|--------|--------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | daN/cm | | | | |
| 1 | 0 | -1090 | -1924 | 0 | 0 | 0 | -551 | 20.1 | 176.9 | 164.9 | 0.0 | 305.9 | 3 | |
| 5 | 0 | -315 | -510 | -4 | 0 | -3 | -165 | 5.8 | 55.1 | 43.7 | 0.0 | 84.3 | 3 | |
| 6 | 0 | -315 | -510 | 4 | 0 | 3 | -165 | 5.8 | 55.1 | 43.7 | 0.0 | 84.3 | 3 | |
| 7 | 0 | -303 | -502 | -4 | 0 | -3 | -138 | 5.6 | 46.6 | 43.0 | 0.0 | 79.2 | 3 | |
| 8 | 0 | -303 | -502 | 4 | 0 | 3 | -138 | 5.6 | 46.7 | 43.0 | 0.0 | 79.2 | 3 | |
| 9 | 0 | -430 | -704 | -14 | 0 | -9 | -213 | 7.9 | 76.1 | 60.3 | 0.0 | 114.3 | 3 | |
| 10 | 0 | -430 | -704 | 14 | 0 | 9 | -213 | 7.9 | 76.2 | 60.3 | 0.0 | 114.3 | 3 | |
| 11 | 0 | -426 | -702 | -14 | 0 | -9 | -205 | 7.8 | 73.6 | 60.1 | 0.0 | 112.7 | 3 | |
| 12 | 0 | -307 | -505 | 14 | 0 | 9 | -147 | 5.7 | 55.0 | 43.3 | 0.0 | 81.1 | 3 | |
| 13 | 0 | -867 | -1615 | 0 | 0 | 0 | -460 | 16.0 | 147.8 | 138.4 | 0.0 | 256.0 | 3 | |
| 14 | 0 | 119 | 388 | 0 | 0 | 0 | 94 | 2.2 | 30.3 | 33.3 | 0.0 | 58.5 | 3 | |
| 15 | 0 | -947 | -1682 | 0 | 0 | 0 | -482 | 17.4 | 154.9 | 144.1 | 0.0 | 267.5 | 3 | |
| 1 | 4 | -1090 | -1926 | 0 | 0 | 0 | -619 | 20.1 | 198.9 | 165.0 | 0.0 | 316.6 | 3 | |
| 5 | 4 | -315 | -512 | -4 | 0 | -2 | -183 | 5.8 | 60.8 | 43.9 | 0.0 | 87.5 | 3 | |
| 6 | 4 | -315 | -512 | 4 | 0 | 2 | -183 | 5.8 | 60.8 | 43.9 | 0.0 | 87.5 | 3 | |
| 7 | 4 | -303 | -504 | -4 | 0 | -2 | -156 | 5.6 | 52.2 | 43.1 | 0.0 | 82.1 | 3 | |
| 8 | 4 | -303 | -504 | 4 | 0 | 2 | -156 | 5.6 | 52.3 | 43.1 | 0.0 | 82.1 | 3 | |
| 9 | 4 | -430 | -706 | -14 | 0 | -8 | -238 | 7.9 | 83.7 | 60.5 | 0.0 | 118.5 | 3 | |
| 10 | 4 | -430 | -706 | 14 | 0 | 8 | -238 | 7.9 | 83.8 | 60.5 | 0.0 | 118.5 | 3 | |
| 11 | 4 | -426 | -703 | -14 | 0 | -8 | -230 | 7.8 | 81.2 | 60.3 | 0.0 | 116.8 | 3 | |
| 12 | 4 | -307 | -507 | 14 | 0 | 8 | -165 | 5.7 | 60.3 | 43.4 | 0.0 | 84.1 | 3 | |
| 13 | 4 | -867 | -1617 | 0 | 0 | 0 | -518 | 16.0 | 166.2 | 138.6 | 0.0 | 264.9 | 3 | |
| 14 | 4 | 119 | 387 | 0 | 0 | 0 | 108 | 2.2 | 34.7 | 33.1 | 0.0 | 60.1 | 3 | |
| 15 | 4 | -947 | -1684 | 0 | 0 | 0 | -542 | 17.4 | 174.1 | 144.3 | 0.0 | 276.9 | 3 | |
| 1 | 7 | -1090 | -1928 | 0 | 0 | 0 | -688 | 20.1 | 220.8 | 165.2 | 0.0 | 328.0 | 3 | |
| 5 | 7 | -315 | -513 | -4 | 0 | -2 | -201 | 5.8 | 66.5 | 44.0 | 0.0 | 90.8 | 3 | |
| 6 | 7 | -315 | -513 | 4 | 0 | 2 | -201 | 5.8 | 66.5 | 44.0 | 0.0 | 90.8 | 3 | |
| 7 | 7 | -303 | -505 | -4 | 0 | -2 | -174 | 5.6 | 57.8 | 43.3 | 0.0 | 85.1 | 3 | |
| 8 | 7 | -303 | -505 | 4 | 0 | 2 | -174 | 5.6 | 57.9 | 43.3 | 0.0 | 85.1 | 3 | |
| 9 | 7 | -430 | -708 | -14 | 0 | -8 | -263 | 7.9 | 91.3 | 60.7 | 0.0 | 122.9 | 3 | |
| 10 | 7 | -430 | -708 | 14 | 0 | 8 | -263 | 7.9 | 91.4 | 60.7 | 0.0 | 122.9 | 3 | |
| 11 | 7 | -426 | -705 | -14 | 0 | -8 | -255 | 7.8 | 88.7 | 60.5 | 0.0 | 121.2 | 3 | |
| 12 | 7 | -307 | -508 | 14 | 0 | 8 | -183 | 5.7 | 65.6 | 43.5 | 0.0 | 87.2 | 3 | |
| 13 | 7 | -867 | -1619 | 0 | 0 | 0 | -575 | 16.0 | 184.7 | 138.7 | 0.0 | 274.5 | 3 | |
| 14 | 7 | 119 | 385 | 0 | 0 | 0 | 122 | 2.2 | 39.1 | 33.0 | 0.0 | 62.0 | 3 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|-------|-------|-----|---|----|-------|------|-------|-------|-----|-------|---|
| 15 | 7 | -947 | -1686 | 0 | 0 | 0 | -602 | 17.4 | 193.3 | 144.5 | 0.0 | 286.9 | 3 |
| 1 | 11 | -1090 | -1930 | 0 | 0 | 0 | -756 | 20.1 | 242.8 | 165.4 | 0.0 | 340.0 | 3 |
| 5 | 11 | -315 | -515 | -4 | 0 | -2 | -219 | 5.8 | 72.2 | 44.1 | 0.0 | 94.2 | 3 |
| 6 | 11 | -315 | -515 | 4 | 0 | 2 | -219 | 5.8 | 72.3 | 44.1 | 0.0 | 94.2 | 3 |
| 7 | 11 | -303 | -507 | -4 | 0 | -2 | -192 | 5.6 | 63.5 | 43.4 | 0.0 | 88.3 | 3 |
| 8 | 11 | -303 | -507 | 4 | 0 | 2 | -192 | 5.6 | 63.5 | 43.4 | 0.0 | 88.3 | 3 |
| 9 | 11 | -430 | -710 | -14 | 0 | -7 | -289 | 7.9 | 99.0 | 60.8 | 0.0 | 127.5 | 3 |
| 10 | 11 | -430 | -710 | 14 | 0 | 7 | -289 | 7.9 | 99.0 | 60.8 | 0.0 | 127.5 | 3 |
| 11 | 11 | -426 | -707 | -14 | 0 | -7 | -280 | 7.8 | 96.3 | 60.6 | 0.0 | 125.7 | 3 |
| 12 | 11 | -307 | -510 | 14 | 0 | 7 | -201 | 5.7 | 71.0 | 43.7 | 0.0 | 90.5 | 3 |
| 13 | 11 | -867 | -1621 | 0 | 0 | 0 | -633 | 16.0 | 203.1 | 138.9 | 0.0 | 284.5 | 3 |
| 14 | 11 | 119 | 384 | 0 | 0 | 0 | 136 | 2.2 | 43.5 | 32.9 | 0.0 | 63.9 | 3 |
| 15 | 11 | -947 | -1688 | 0 | 0 | 0 | -662 | 17.4 | 212.5 | 144.6 | 0.0 | 297.4 | 3 |
| 1 | 14 | -1090 | -1932 | 0 | 0 | 0 | -825 | 20.1 | 264.8 | 165.6 | 0.0 | 352.6 | 3 |
| 5 | 14 | -315 | -516 | -4 | 0 | -2 | -237 | 5.8 | 78.0 | 44.3 | 0.0 | 97.8 | 3 |
| 6 | 14 | -315 | -516 | 4 | 0 | 2 | -237 | 5.8 | 78.0 | 44.3 | 0.0 | 97.8 | 3 |
| 7 | 14 | -303 | -508 | -4 | 0 | -2 | -210 | 5.6 | 69.1 | 43.5 | 0.0 | 91.7 | 3 |
| 8 | 14 | -303 | -508 | 4 | 0 | 2 | -210 | 5.6 | 69.1 | 43.5 | 0.0 | 91.7 | 3 |
| 9 | 14 | -430 | -712 | -14 | 0 | -7 | -314 | 7.9 | 106.6 | 61.0 | 0.0 | 132.4 | 3 |
| 10 | 14 | -430 | -712 | 14 | 0 | 7 | -314 | 7.9 | 106.7 | 61.0 | 0.0 | 132.4 | 3 |
| 11 | 14 | -426 | -709 | -14 | 0 | -7 | -306 | 7.8 | 104.0 | 60.8 | 0.0 | 130.5 | 3 |
| 12 | 14 | -307 | -511 | 14 | 0 | 7 | -219 | 5.7 | 76.4 | 43.8 | 0.0 | 94.0 | 3 |
| 13 | 14 | -867 | -1623 | 0 | 0 | 0 | -690 | 16.0 | 221.6 | 139.1 | 0.0 | 295.1 | 3 |
| 14 | 14 | 119 | 382 | 0 | 0 | 0 | 149 | 2.2 | 47.9 | 32.7 | 0.0 | 66.1 | 3 |
| 15 | 14 | -947 | -1690 | 0 | 0 | 0 | -722 | 17.4 | 231.8 | 144.8 | 0.0 | 308.4 | 3 |
| 1 | 18 | -1090 | -1934 | 0 | 0 | 0 | -893 | 20.1 | 286.8 | 165.7 | 0.0 | 365.6 | 3 |
| 5 | 18 | -315 | -518 | -4 | 0 | -2 | -256 | 5.8 | 83.7 | 44.4 | 0.0 | 101.5 | 3 |
| 6 | 18 | -315 | -518 | 4 | 0 | 2 | -256 | 5.8 | 83.8 | 44.4 | 0.0 | 101.5 | 3 |
| 7 | 18 | -303 | -510 | -4 | 0 | -2 | -228 | 5.6 | 74.8 | 43.7 | 0.0 | 95.2 | 3 |
| 8 | 18 | -303 | -510 | 4 | 0 | 2 | -228 | 5.6 | 74.8 | 43.7 | 0.0 | 95.2 | 3 |
| 9 | 18 | -430 | -714 | -14 | 0 | -6 | -339 | 7.9 | 114.3 | 61.2 | 0.0 | 137.4 | 3 |
| 10 | 18 | -430 | -714 | 14 | 0 | 6 | -339 | 7.9 | 114.4 | 61.2 | 0.0 | 137.4 | 3 |
| 11 | 18 | -426 | -711 | -14 | 0 | -6 | -331 | 7.8 | 111.6 | 61.0 | 0.0 | 135.5 | 3 |
| 12 | 18 | -307 | -513 | 14 | 0 | 6 | -238 | 5.7 | 81.8 | 43.9 | 0.0 | 97.5 | 3 |
| 13 | 18 | -867 | -1625 | 0 | 0 | 0 | -748 | 16.0 | 240.1 | 139.2 | 0.0 | 306.1 | 3 |
| 14 | 18 | 119 | 381 | 0 | 0 | 0 | 163 | 2.2 | 52.2 | 32.6 | 0.0 | 68.3 | 3 |
| 15 | 18 | -947 | -1692 | 0 | 0 | 0 | -782 | 17.4 | 251.0 | 145.0 | 0.0 | 319.9 | 3 |
| 1 | 21 | -1090 | -1936 | 0 | 0 | 0 | -962 | 20.1 | 308.8 | 165.9 | 0.0 | 379.2 | 3 |
| 5 | 21 | -315 | -519 | -4 | 0 | -2 | -274 | 5.8 | 89.5 | 44.5 | 0.0 | 105.3 | 3 |
| 6 | 21 | -315 | -519 | 4 | 0 | 2 | -274 | 5.8 | 89.5 | 44.5 | 0.0 | 105.3 | 3 |
| 7 | 21 | -303 | -511 | -4 | 0 | -2 | -246 | 5.6 | 80.5 | 43.8 | 0.0 | 98.8 | 3 |
| 8 | 21 | -303 | -511 | 4 | 0 | 2 | -246 | 5.6 | 80.5 | 43.8 | 0.0 | 98.8 | 3 |
| 9 | 21 | -430 | -716 | -14 | 0 | -6 | -365 | 7.9 | 122.0 | 61.3 | 0.0 | 142.5 | 3 |
| 10 | 21 | -430 | -716 | 14 | 0 | 6 | -365 | 7.9 | 122.1 | 61.3 | 0.0 | 142.5 | 3 |
| 11 | 21 | -426 | -713 | -14 | 0 | -6 | -356 | 7.8 | 119.3 | 61.1 | 0.0 | 140.6 | 3 |
| 12 | 21 | -307 | -514 | 14 | 0 | 6 | -256 | 5.7 | 87.2 | 44.1 | 0.0 | 101.2 | 3 |
| 13 | 21 | -867 | -1627 | 0 | 0 | 0 | -805 | 16.0 | 258.6 | 139.4 | 0.0 | 317.4 | 3 |
| 14 | 21 | 119 | 379 | 0 | 0 | 0 | 176 | 2.2 | 56.6 | 32.5 | 0.0 | 70.6 | 3 |
| 15 | 21 | -947 | -1694 | 0 | 0 | 0 | -842 | 17.4 | 270.3 | 145.2 | 0.0 | 331.8 | 3 |
| 1 | 25 | -1090 | -1938 | 0 | 0 | 0 | -1030 | 20.1 | 330.9 | 166.1 | 0.0 | 393.1 | 3 |
| 5 | 25 | -315 | -521 | -4 | 0 | -2 | -293 | 5.8 | 95.3 | 44.6 | 0.0 | 109.3 | 3 |
| 6 | 25 | -315 | -521 | 4 | 0 | 2 | -293 | 5.8 | 95.3 | 44.6 | 0.0 | 109.3 | 3 |
| 7 | 25 | -303 | -513 | -4 | 0 | -2 | -264 | 5.6 | 86.2 | 43.9 | 0.0 | 102.5 | 3 |
| 8 | 25 | -303 | -513 | 4 | 0 | 2 | -264 | 5.6 | 86.2 | 43.9 | 0.0 | 102.5 | 3 |
| 9 | 25 | -430 | -718 | -14 | 0 | -5 | -390 | 7.9 | 129.7 | 61.5 | 0.0 | 147.9 | 3 |
| 10 | 25 | -430 | -718 | 14 | 0 | 5 | -390 | 7.9 | 129.8 | 61.5 | 0.0 | 147.9 | 3 |
| 11 | 25 | -426 | -715 | -14 | 0 | -5 | -381 | 7.8 | 127.0 | 61.3 | 0.0 | 145.8 | 3 |
| 12 | 25 | -307 | -516 | 14 | 0 | 5 | -274 | 5.7 | 92.6 | 44.2 | 0.0 | 105.0 | 3 |
| 13 | 25 | -867 | -1629 | 0 | 0 | 0 | -863 | 16.0 | 277.2 | 139.6 | 0.0 | 329.2 | 3 |
| 14 | 25 | 119 | 378 | 0 | 0 | 0 | 190 | 2.2 | 60.9 | 32.4 | 0.0 | 73.1 | 3 |
| 15 | 25 | -947 | -1696 | 0 | 0 | 0 | -902 | 17.4 | 289.6 | 145.3 | 0.0 | 344.0 | 3 |
| 1 | 28 | -1090 | -1940 | 0 | 0 | 0 | -1099 | 20.1 | 352.9 | 166.2 | 0.0 | 407.4 | 3 |
| 5 | 28 | -315 | -522 | -4 | 0 | -1 | -311 | 5.8 | 101.1 | 44.8 | 0.0 | 113.3 | 3 |
| 6 | 28 | -315 | -522 | 4 | 0 | 1 | -311 | 5.8 | 101.1 | 44.8 | 0.0 | 113.3 | 3 |
| 7 | 28 | -303 | -514 | -4 | 0 | -1 | -282 | 5.6 | 91.9 | 44.1 | 0.0 | 106.4 | 3 |
| 8 | 28 | -303 | -514 | 4 | 0 | 1 | -282 | 5.6 | 91.9 | 44.1 | 0.0 | 106.4 | 3 |
| 9 | 28 | -430 | -720 | -14 | 0 | -5 | -416 | 7.9 | 137.5 | 61.7 | 0.0 | 153.3 | 3 |
| 10 | 28 | -430 | -720 | 14 | 0 | 5 | -416 | 7.9 | 137.5 | 61.7 | 0.0 | 153.3 | 3 |
| 11 | 28 | -426 | -717 | -14 | 0 | -5 | -407 | 7.8 | 134.7 | 61.5 | 0.0 | 151.2 | 3 |
| 12 | 28 | -307 | -517 | 14 | 0 | 5 | -292 | 5.7 | 98.0 | 44.3 | 0.0 | 108.9 | 3 |
| 13 | 28 | -867 | -1631 | 0 | 0 | 0 | -921 | 16.0 | 295.7 | 139.8 | 0.0 | 341.2 | 3 |
| 14 | 28 | 119 | 376 | 0 | 0 | 0 | 203 | 2.2 | 65.2 | 32.2 | 0.0 | 75.6 | 3 |
| 15 | 28 | -947 | -1698 | 0 | 0 | 0 | -962 | 17.4 | 309.0 | 145.5 | 0.0 | 356.6 | 3 |
| 1 | 32 | -1090 | -1942 | 0 | 0 | 0 | -1168 | 20.1 | 375.0 | 166.4 | 0.0 | 422.1 | 3 |
| 5 | 32 | -315 | -524 | -4 | 0 | -1 | -330 | 5.8 | 107.0 | 44.9 | 0.0 | 117.4 | 3 |
| 6 | 32 | -315 | -524 | 4 | 0 | 1 | -330 | 5.8 | 107.0 | 44.9 | 0.0 | 117.4 | 3 |
| 7 | 32 | -303 | -516 | -4 | 0 | -1 | -301 | 5.6 | 97.6 | 44.2 | 0.0 | 110.3 | 3 |
| 8 | 32 | -303 | -516 | 4 | 0 | 1 | -301 | 5.6 | 97.6 | 44.2 | 0.0 | 110.3 | 3 |
| 9 | 32 | -430 | -722 | -14 | 0 | -4 | -441 | 7.9 | 145.3 | 61.8 | 0.0 | 158.9 | 3 |
| 10 | 32 | -430 | -722 | 14 | 0 | 4 | -441 | 7.9 | 145.3 | 61.8 | 0.0 | 158.9 | 3 |
| 11 | 32 | -426 | -719 | -14 | 0 | -4 | -432 | 7.8 | 142.4 | 61.6 | 0.0 | 156.7 | 3 |
| 12 | 32 | -307 | -519 | 14 | 0 | 4 | -311 | 5.7 | 103.5 | 44.4 | 0.0 | 112.9 | 3 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|-------|-------|-----|---|----|-------|------|-------|-------|-----|-------|---|
| 13 | 32 | -867 | -1633 | 0 | 0 | 0 | -979 | 16.0 | 314.3 | 139.9 | 0.0 | 353.5 | 3 |
| 14 | 32 | 119 | 375 | 0 | 0 | 0 | 216 | 2.2 | 69.4 | 32.1 | 0.0 | 78.2 | 3 |
| 15 | 32 | -947 | -1700 | 0 | 0 | 0 | -1023 | 17.4 | 328.3 | 145.7 | 0.0 | 369.4 | 3 |
| | | | | | | | | | | | | | |
| 1 | 35 | -1090 | -1944 | 0 | 0 | 0 | -1237 | 20.1 | 397.2 | 166.6 | 0.0 | 437.1 | 3 |
| 5 | 35 | -315 | -526 | -4 | 0 | -1 | -348 | 5.8 | 112.8 | 45.0 | 0.0 | 121.6 | 3 |
| 6 | 35 | -315 | -526 | 4 | 0 | 1 | -348 | 5.8 | 112.8 | 45.0 | 0.0 | 121.6 | 3 |
| 7 | 35 | -303 | -517 | -4 | 0 | -1 | -319 | 5.6 | 103.4 | 44.3 | 0.0 | 114.3 | 3 |
| 8 | 35 | -303 | -517 | 4 | 0 | 1 | -319 | 5.6 | 103.4 | 44.3 | 0.0 | 114.3 | 3 |
| 9 | 35 | -430 | -724 | -14 | 0 | -4 | -467 | 7.9 | 153.1 | 62.0 | 0.0 | 164.6 | 3 |
| 10 | 35 | -430 | -724 | 14 | 0 | 4 | -467 | 7.9 | 153.1 | 62.0 | 0.0 | 164.6 | 3 |
| 11 | 35 | -426 | -721 | -14 | 0 | -4 | -458 | 7.8 | 150.2 | 61.8 | 0.0 | 162.4 | 3 |
| 12 | 35 | -307 | -520 | 14 | 0 | 4 | -329 | 5.7 | 109.0 | 44.6 | 0.0 | 116.9 | 3 |
| 13 | 35 | -867 | -1635 | 0 | 0 | 0 | -1037 | 16.0 | 332.9 | 140.1 | 0.0 | 366.1 | 3 |
| 14 | 35 | 119 | 373 | 0 | 0 | 0 | 230 | 2.2 | 73.7 | 32.0 | 0.0 | 80.9 | 3 |
| 15 | 35 | -947 | -1702 | 0 | 0 | 0 | -1083 | 17.4 | 347.7 | 145.8 | 0.0 | 382.6 | 3 |

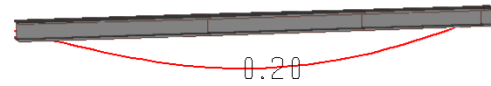
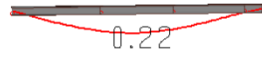
MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|-------|---------|--------|-------|---------------------|---------|------|-----------|------|
| | | cm | daN*m | daN/cm ² | cm | | | |
| ----- | | | | | | | | |
| 14 | -- | 35 | 230 | 73.7 | -- | -- | -- | |
| -- | Rara | 35 | 0 | -- | 26 | 0.00 | 1 / 99999 | |
| -- | Freq. | 35 | 0 | -- | 26 | 0.00 | 1 / 99999 | |
| -- | Q.Perm. | 35 | 0 | -- | 26 | 0.00 | 1 / 99999 | |
| -- | Rara | 35 | 0 | -- | 26 | 0.00 | 1 / 99999 | |
| -- | Rara | 35 | 0 | -- | 26 | 0.00 | 1 / 99999 | |
| -- | Freq. | 35 | 0 | -- | 26 | 0.00 | 1 / 99999 | |
| -- | Freq. | 35 | 0 | -- | 26 | 0.00 | 1 / 99999 | |

Verifica di STABILITA' e/o SVERGOLAMENTO

| n.comb | Fx | My eq. | Mz eq. | Sn. omega | Sn.yx | Sn.zx | OMEGA | OMEGA1 | Sf | Nota |
|--------|-------|--------|--------|-----------|-------|-------|-------|--------|---------------------|------|
| | daN | daN*m | | | | | | | daN/cm ² | |
| ----- | | | | | | | | | | |
| 1 | -1097 | 0 | 769 | 122 | 73 | 122 | 2.56 | 1.00 | 299.8 | |
| 5 | -315 | 1 | 205 | 122 | 73 | 122 | 2.56 | 1.00 | 81.3 | |
| 6 | -315 | 1 | 205 | 122 | 73 | 122 | 2.56 | 1.00 | 81.4 | |
| 7 | -771 | 1 | 210 | 122 | 73 | 122 | 2.56 | 1.00 | 104.7 | |
| 8 | -771 | 1 | 210 | 122 | 73 | 122 | 2.56 | 1.00 | 104.7 | |
| 9 | -430 | 2 | 287 | 122 | 73 | 122 | 2.56 | 1.00 | 114.5 | |
| 10 | -430 | 2 | 287 | 122 | 73 | 122 | 2.56 | 1.00 | 114.5 | |
| 11 | -569 | 2 | 289 | 122 | 73 | 122 | 2.56 | 1.00 | 121.6 | |
| 12 | -449 | 2 | 208 | 122 | 73 | 122 | 2.56 | 1.00 | 90.2 | |
| 13 | -872 | 0 | 643 | 122 | 73 | 122 | 2.56 | 1.00 | 248.5 | |
| 14 | 120 | 0 | 141 | 122 | 73 | 122 | 1.00 | 1.00 | 47.4 | |
| 15 | -953 | 0 | 673 | 122 | 73 | 122 | 2.56 | 1.00 | 261.9 | |

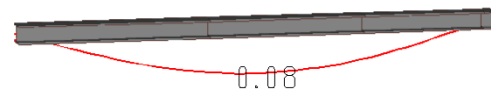
Verifica spostamenti verticali



Prospettiva

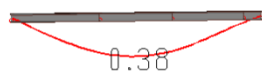
Freccia massima combinazione frequente

169

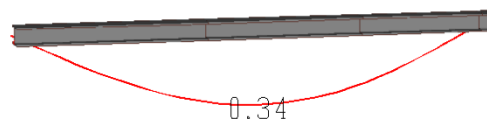


Prospettiva

Freccia massima combinazione quasi permanente



Prospettiva



Freccia massima combinazione rara

Luce di calcolo 320 cm

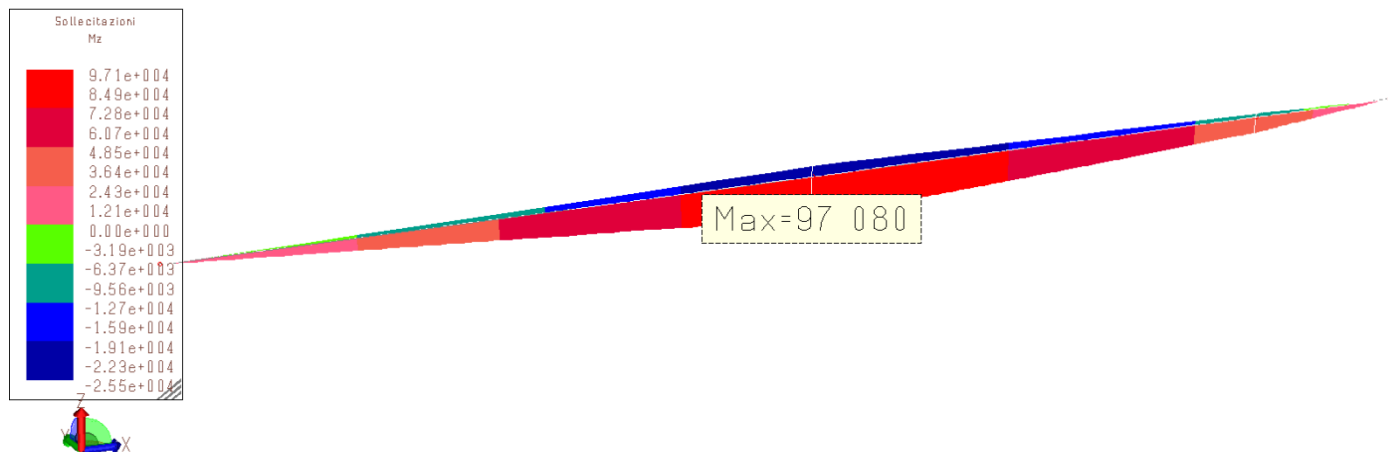
Rara $437/0.38 = 1150 > 250 \rightarrow$ verificato

Frequente $437/0.22 = 1986 > 250 \rightarrow$ verificato

Quasi permanente $437/0.09 = 4856 > 250 \rightarrow$ verificato

170

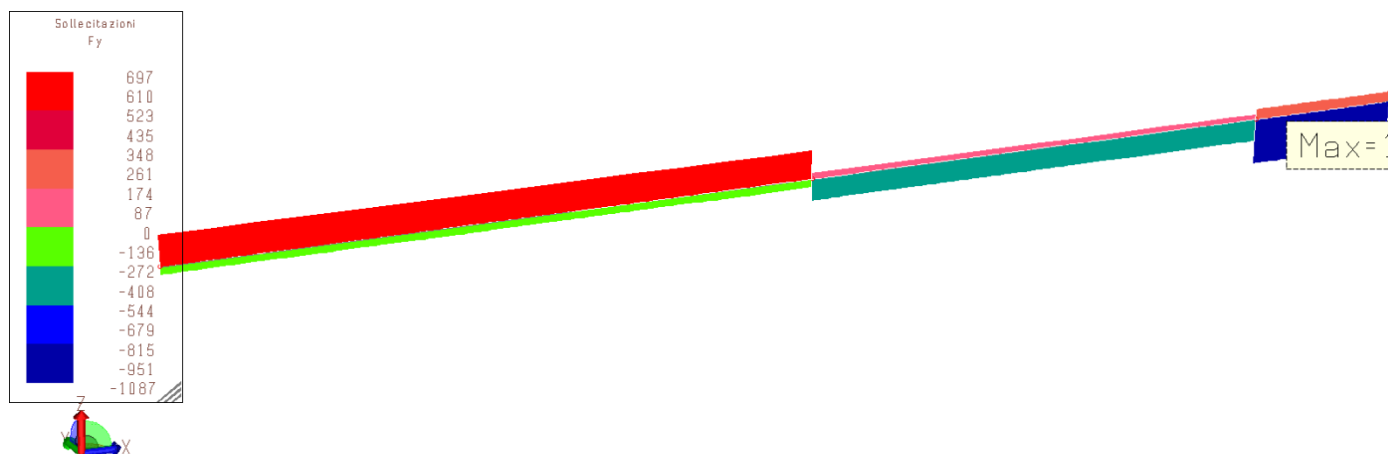
3.1.1. VERIFICA SLU E SLE UPN140



Prospettiva

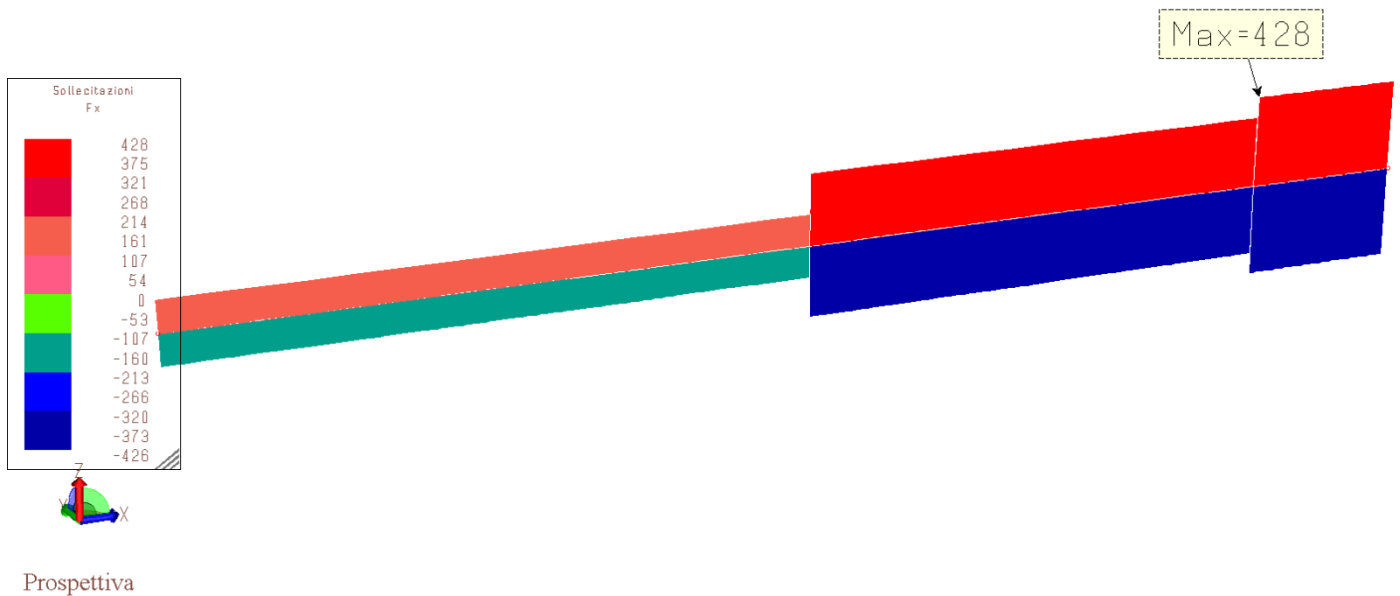
Momento flettente

171



Prospettiva

Taglio



Sforzo normale

Lavoro: **Blocco 2** Intestazione lavoro: **ESECUTIVO**

Elemento: **TRAVE** Metodo di verifica: **Stati limite**

Gruppo: **2** Descrizione: **Travi principali**

Tabella: **Tabella travi**

Tipo acciaio: **S 235** Beta piano 'yx': **1.000** Beta piano 'zx': **1.000**

ASTA NUM. 24 NI 17 NF 24 Lungh. 112.0 cm SEZ. 5 Ps UNP 140

categoria: p.p. y qy tot.

qy medio: 0.1601 0.1601 daN/cm

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf(Fx) | Sf(M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|-------|-------|-------|-------|-------|---------------------|--------|--------|-------|--------|-------|-------|
| -- | -- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- |
| cm | | daN | | | daN*m | | | daN/cm ² | | | | | | |
| 1 | 0 | 1 | -501 | -13 | 0 | -7 | 971 | 0.1 | 1173.2 | 61.0 | 0.0 | 1173.2 | 1 | |
| 5 | 0 | -326 | -105 | 26 | 0 | 14 | 224 | 16.0 | 351.5 | 12.8 | 0.0 | 367.5 | 1 | |
| 6 | 0 | -289 | -106 | -30 | 0 | -16 | 225 | 14.2 | 367.2 | 12.9 | 0.0 | 353.0 | 1 | |
| 7 | 0 | 291 | -105 | 26 | 0 | 13 | 224 | 14.3 | 349.8 | 12.8 | 0.0 | 335.5 | 1 | |
| 8 | 0 | 328 | -106 | -30 | 0 | -16 | 225 | 16.1 | 369.3 | 12.9 | 0.0 | 385.4 | 1 | |
| 9 | 0 | -153 | -148 | 90 | 0 | 47 | 315 | 7.5 | 683.4 | 18.0 | 0.0 | 690.9 | 1 | |
| 10 | 0 | -27 | -152 | -95 | 0 | -50 | 317 | 1.3 | 707.7 | 18.5 | 0.0 | 706.4 | 1 | |
| 11 | 0 | 32 | -148 | 90 | 0 | 47 | 315 | 1.6 | 682.9 | 18.0 | 0.0 | 681.3 | 1 | |
| 12 | 0 | 158 | -107 | -94 | 0 | -50 | 226 | 7.7 | 598.5 | 13.1 | 0.0 | 606.3 | 1 | |
| 13 | 0 | 1 | -412 | -11 | 0 | -6 | 805 | 0.1 | 973.0 | 50.2 | 0.0 | 973.0 | 1 | |
| 14 | 0 | -1 | 152 | 4 | 0 | 2 | -255 | 0.1 | 309.5 | 18.5 | 0.0 | 309.6 | 1 | |
| 15 | 0 | 1 | -432 | -11 | 0 | -6 | 841 | 0.1 | 1016.5 | 52.6 | 0.0 | 1016.6 | 1 | |
| | | | | | | | | | | | | | | |
| 1 | 11 | 1 | -503 | -13 | 0 | -6 | 914 | 0.1 | 1098.2 | 61.3 | 0.0 | 1098.3 | 1 | |
| 5 | 11 | -326 | -107 | 26 | 0 | 11 | 212 | 16.0 | 318.1 | 13.0 | 0.0 | 334.1 | 1 | |
| 6 | 11 | -289 | -108 | -30 | 0 | -12 | 213 | 14.2 | 330.8 | 13.1 | 0.0 | 316.6 | 1 | |
| 7 | 11 | 291 | -107 | 26 | 0 | 10 | 212 | 14.3 | 316.6 | 13.0 | 0.0 | 302.3 | 1 | |
| 8 | 11 | 328 | -108 | -30 | 0 | -13 | 213 | 16.1 | 332.7 | 13.1 | 0.0 | 348.8 | 1 | |
| 9 | 11 | -153 | -150 | 90 | 0 | 37 | 298 | 7.5 | 595.9 | 18.3 | 0.0 | 603.4 | 1 | |
| 10 | 11 | -27 | -154 | -95 | 0 | -40 | 300 | 1.3 | 616.0 | 18.8 | 0.0 | 614.6 | 1 | |
| 11 | 11 | 32 | -150 | 90 | 0 | 37 | 298 | 1.6 | 595.5 | 18.3 | 0.0 | 593.9 | 1 | |
| 12 | 11 | 158 | -109 | -94 | 0 | -39 | 214 | 7.7 | 513.3 | 13.3 | 0.0 | 521.0 | 1 | |
| 13 | 11 | 1 | -415 | -11 | 0 | -5 | 759 | 0.1 | 911.2 | 50.5 | 0.0 | 911.3 | 1 | |
| 14 | 11 | -1 | 150 | 4 | 0 | 2 | -238 | 0.1 | 287.2 | 18.3 | 0.0 | 287.3 | 1 | |
| 15 | 11 | 1 | -434 | -11 | 0 | -5 | 793 | 0.1 | 951.9 | 52.9 | 0.0 | 952.0 | 1 | |
| | | | | | | | | | | | | | | |
| 1 | 22 | 1 | -506 | -13 | 0 | -4 | 858 | 0.1 | 1022.9 | 61.6 | 0.0 | 1023.0 | 1 | |
| 5 | 22 | -326 | -108 | 26 | 0 | 8 | 200 | 16.0 | 284.5 | 13.2 | 0.0 | 300.5 | 1 | |
| 6 | 22 | -289 | -110 | -30 | 0 | -9 | 201 | 14.2 | 294.1 | 13.4 | 0.0 | 280.0 | 1 | |
| 7 | 22 | 291 | -108 | 26 | 0 | 8 | 200 | 14.3 | 283.1 | 13.2 | 0.0 | 268.8 | 1 | |
| 8 | 22 | 328 | -110 | -30 | 0 | -9 | 201 | 16.1 | 295.7 | 13.4 | 0.0 | 311.8 | 1 | |
| 9 | 22 | -153 | -153 | 90 | 0 | 27 | 281 | 7.5 | 508.1 | 18.6 | 0.0 | 515.6 | 1 | |
| 10 | 22 | -27 | -156 | -95 | 0 | -29 | 283 | 1.3 | 523.9 | 19.1 | 0.0 | 522.6 | 1 | |
| 11 | 22 | 32 | -153 | 90 | 0 | 27 | 281 | 1.6 | 507.7 | 18.6 | 0.0 | 506.1 | 1 | |
| 12 | 22 | 158 | -111 | -94 | 0 | -29 | 202 | 7.7 | 427.8 | 13.5 | 0.0 | 435.6 | 1 | |
| 13 | 22 | 1 | -417 | -11 | 0 | -4 | 712 | 0.1 | 849.2 | 50.8 | 0.0 | 849.2 | 1 | |
| 14 | 22 | -1 | 148 | 4 | 0 | 1 | -221 | 0.1 | 265.1 | 18.1 | 0.0 | 265.2 | 1 | |
| 15 | 22 | 1 | -436 | -11 | 0 | -4 | 744 | 0.1 | 887.0 | 53.1 | 0.0 | 887.0 | 1 | |
| | | | | | | | | | | | | | | |
| 1 | 34 | 1 | -508 | -13 | 0 | -3 | 801 | 0.1 | 947.4 | 61.9 | 0.0 | 947.4 | 1 | |
| 5 | 34 | -326 | -110 | 26 | 0 | 5 | 188 | 16.0 | 250.6 | 13.4 | 0.0 | 266.6 | 1 | |
| 6 | 34 | -289 | -111 | -30 | 0 | -6 | 189 | 14.2 | 257.2 | 13.6 | 0.0 | 248.5 | 3 | |
| 7 | 34 | 291 | -110 | 26 | 0 | 5 | 188 | 14.3 | 249.4 | 13.4 | 0.0 | 245.1 | 3 | |
| 8 | 34 | 328 | -111 | -30 | 0 | -6 | 189 | 16.1 | 258.6 | 13.6 | 0.0 | 274.7 | 1 | |
| 9 | 34 | -153 | -155 | 90 | 0 | 17 | 264 | 7.5 | 420.1 | 18.9 | 0.0 | 427.5 | 1 | |
| 10 | 34 | -27 | -159 | -95 | 0 | -18 | 265 | 1.3 | 431.5 | 19.3 | 0.0 | 430.2 | 1 | |
| 11 | 34 | 32 | -155 | 90 | 0 | 17 | 264 | 1.6 | 419.7 | 18.9 | 0.0 | 418.1 | 1 | |
| 12 | 34 | 158 | -113 | -94 | 0 | -18 | 189 | 7.7 | 342.1 | 13.7 | 0.0 | 349.9 | 1 | |
| 13 | 34 | 1 | -419 | -11 | 0 | -2 | 665 | 0.1 | 786.8 | 51.1 | 0.0 | 786.9 | 1 | |
| 14 | 34 | -1 | 146 | 4 | 0 | 1 | -205 | 0.1 | 243.2 | 17.8 | 0.0 | 243.3 | 1 | |
| 15 | 34 | 1 | -438 | -11 | 0 | -3 | 695 | 0.1 | 821.8 | 53.4 | 0.0 | 821.8 | 1 | |
| | | | | | | | | | | | | | | |
| 1 | 45 | 1 | -510 | -13 | 0 | -2 | 744 | 0.1 | 871.5 | 62.2 | 0.0 | 871.6 | 1 | |
| 5 | 45 | -326 | -112 | 26 | 0 | 2 | 176 | 16.0 | 216.5 | 13.6 | 0.0 | 232.5 | 1 | |
| 6 | 45 | -289 | -113 | -30 | 0 | -2 | 176 | 14.2 | 220.1 | 13.8 | 0.0 | 224.6 | 3 | |
| 7 | 45 | 291 | -112 | 26 | 0 | 2 | 176 | 14.3 | 215.4 | 13.6 | 0.0 | 222.6 | 3 | |
| 8 | 45 | 328 | -113 | -30 | 0 | -3 | 176 | 16.1 | 221.2 | 13.8 | 0.0 | 237.3 | 1 | |
| 9 | 45 | -153 | -157 | 90 | 0 | 7 | 246 | 7.5 | 331.7 | 19.2 | 0.0 | 339.1 | 1 | |
| 10 | 45 | -27 | -161 | -95 | 0 | -8 | 247 | 1.3 | 338.9 | 19.6 | 0.0 | 337.5 | 1 | |
| 11 | 45 | 32 | -157 | 90 | 0 | 7 | 246 | 1.6 | 331.3 | 19.2 | 0.0 | 329.7 | 1 | |
| 12 | 45 | 158 | -114 | -94 | 0 | -8 | 176 | 7.7 | 256.2 | 13.9 | 0.0 | 264.0 | 1 | |
| 13 | 45 | 1 | -422 | -11 | 0 | -1 | 618 | 0.1 | 724.2 | 51.4 | 0.0 | 724.2 | 1 | |
| 14 | 45 | -1 | 145 | 4 | 0 | 1 | -188 | 0.1 | 221.6 | 17.6 | 0.0 | 221.7 | 1 | |
| 15 | 45 | 1 | -441 | -11 | 0 | -1 | 646 | 0.1 | 756.2 | 53.7 | 0.0 | 756.3 | 1 | |
| | | | | | | | | | | | | | | |
| 1 | 56 | 1 | -513 | -13 | 0 | -0 | 687 | 0.1 | 795.3 | 62.5 | 0.0 | 795.4 | 1 | |
| 5 | 56 | -326 | -114 | 26 | 0 | -1 | 163 | 16.0 | 195.1 | 13.9 | 0.0 | 207.3 | 3 | |
| 6 | 56 | -289 | -115 | -30 | 0 | 1 | 163 | 14.2 | 194.8 | 14.0 | 0.0 | 209.0 | 1 | |
| 7 | 56 | 291 | -114 | 26 | 0 | -1 | 163 | 14.3 | 196.1 | 13.9 | 0.0 | 210.3 | 1 | |
| 8 | 56 | 328 | -115 | -30 | 0 | 1 | 163 | 16.1 | 194.0 | 14.0 | 0.0 | 207.1 | 3 | |
| 9 | 56 | -153 | -160 | 90 | 0 | -3 | 229 | 7.5 | 286.0 | 19.5 | 0.0 | 280.9 | 3 | |
| 10 | 56 | -27 | -163 | -95 | 0 | 3 | 229 | 1.3 | 284.2 | 19.9 | 0.0 | 285.5 | 1 | |
| 11 | 56 | 32 | -160 | 90 | 0 | -3 | 229 | 1.6 | 286.2 | 19.5 | 0.0 | 287.8 | 1 | |
| 12 | 56 | 158 | -116 | -94 | 0 | 3 | 163 | 7.7 | 208.1 | 14.2 | 0.0 | 204.7 | 3 | |
| 13 | 56 | 1 | -424 | -11 | 0 | -0 | 571 | 0.1 | 661.2 | 51.6 | 0.0 | 661.3 | 1 | |
| 14 | 56 | -1 | 143 | 4 | 0 | 0 | -172 | 0.1 | 200.2 | 17.4 | 0.0 | 200.3 | 1 | |
| 15 | 56 | 1 | -443 | -11 | 0 | -0 | 596 | 0.1 | 690.4 | 54.0 | 0.0 | 690.4 | 1 | |
| | | | | | | | | | | | | | | |
| 1 | 67 | 1 | -515 | -13 | 0 | 1 | 629 | 0.1 | 737.1 | 62.7 | 0.0 | 737.0 | 1 | |
| 5 | 67 | -326 | -116 | 26 | 0 | -4 | 150 | 16.0 | 200.0 | 14.1 | 0.0 | 200.7 | 3 | |
| 6 | 67 | -289 | -117 | -30 | 0 | 4 | 150 | 14.2 | 202.4 | 14.2 | 0.0 | 216.5 | 1 | |
| 7 | 67 | 291 | -116 | 26 | 0 | -4 | 150 | 14.3 | 200.7 | 14.1 | 0.0 | 215.0 | 1 | |
| 8 | 67 | 328 | -117 | -30 | 0 | 4 | 150 | 16.1 | 201.9 | 14.2 | 0.0 | 201.5 | 3 | |
| 9 | 67 | -153 | -162 | 90 | 0 | -13 | 211 | 7.5 | 333.3 | 19.7 | 0.0 | 325.8 | 1 | |
| 10 | 67 | -27 | -166 | -95 | 0 | 13 | 211 | 1.3 | 334.8 | 20.2 | 0.0 | 336.1 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|------|-----|---|-----|------|------|-------|------|-----|-------|---|
| 11 | 67 | 32 | -162 | 90 | 0 | -13 | 211 | 1.6 | 333.5 | 19.7 | 0.0 | 335.1 | 1 |
| 12 | 67 | 158 | -118 | -94 | 0 | 13 | 150 | 7.7 | 264.1 | 14.4 | 0.0 | 256.3 | 1 |
| 13 | 67 | 1 | -426 | -11 | 0 | 1 | 523 | 0.1 | 613.2 | 51.9 | 0.0 | 613.2 | 1 |
| 14 | 67 | -1 | 141 | 4 | 0 | -0 | -157 | 0.1 | 183.1 | 17.2 | 0.0 | 183.0 | 1 |
| 15 | 67 | 1 | -445 | -11 | 0 | 1 | 546 | 0.1 | 640.1 | 54.3 | 0.0 | 640.1 | 1 |
| | | | | | | | | | | | | | |
| 1 | 78 | 1 | -517 | -13 | 0 | 3 | 571 | 0.1 | 680.1 | 63.0 | 0.0 | 680.0 | 1 |
| 5 | 78 | -326 | -117 | 26 | 0 | -7 | 137 | 16.0 | 204.6 | 14.3 | 0.0 | 193.7 | 3 |
| 6 | 78 | -289 | -119 | -30 | 0 | 8 | 137 | 14.2 | 209.7 | 14.4 | 0.0 | 223.9 | 1 |
| 7 | 78 | 291 | -117 | 26 | 0 | -7 | 137 | 14.3 | 205.2 | 14.3 | 0.0 | 219.4 | 1 |
| 8 | 78 | 328 | -119 | -30 | 0 | 8 | 137 | 16.1 | 209.5 | 14.4 | 0.0 | 195.8 | 3 |
| 9 | 78 | -153 | -164 | 90 | 0 | -23 | 192 | 7.5 | 380.3 | 20.0 | 0.0 | 372.8 | 1 |
| 10 | 78 | -27 | -168 | -95 | 0 | 24 | 192 | 1.3 | 385.1 | 20.5 | 0.0 | 386.5 | 1 |
| 11 | 78 | 32 | -164 | 90 | 0 | -23 | 192 | 1.6 | 380.5 | 20.0 | 0.0 | 382.1 | 1 |
| 12 | 78 | 158 | -120 | -94 | 0 | 24 | 137 | 7.7 | 319.9 | 14.6 | 0.0 | 312.1 | 1 |
| 13 | 78 | 1 | -429 | -11 | 0 | 2 | 476 | 0.1 | 566.0 | 52.2 | 0.0 | 566.0 | 1 |
| 14 | 78 | -1 | 139 | 4 | 0 | -1 | -141 | 0.1 | 167.7 | 17.0 | 0.0 | 167.6 | 1 |
| 15 | 78 | 1 | -448 | -11 | 0 | 2 | 496 | 0.1 | 590.8 | 54.6 | 0.0 | 590.7 | 1 |
| | | | | | | | | | | | | | |
| 1 | 90 | 1 | -520 | -13 | 0 | 4 | 513 | 0.1 | 622.8 | 63.3 | 0.0 | 622.8 | 1 |
| 5 | 90 | -326 | -119 | 26 | 0 | -10 | 124 | 16.0 | 208.9 | 14.5 | 0.0 | 192.9 | 1 |
| 6 | 90 | -289 | -120 | -30 | 0 | 11 | 124 | 14.2 | 216.8 | 14.7 | 0.0 | 231.0 | 1 |
| 7 | 90 | 291 | -119 | 26 | 0 | -10 | 124 | 14.3 | 209.4 | 14.5 | 0.0 | 223.6 | 1 |
| 8 | 90 | 328 | -120 | -30 | 0 | 11 | 124 | 16.1 | 216.9 | 14.7 | 0.0 | 200.8 | 1 |
| 9 | 90 | -153 | -167 | 90 | 0 | -33 | 174 | 7.5 | 427.0 | 20.3 | 0.0 | 419.5 | 1 |
| 10 | 90 | -27 | -170 | -95 | 0 | 35 | 173 | 1.3 | 435.1 | 20.8 | 0.0 | 436.5 | 1 |
| 11 | 90 | 32 | -167 | 90 | 0 | -33 | 174 | 1.6 | 427.1 | 20.3 | 0.0 | 428.7 | 1 |
| 12 | 90 | 158 | -122 | -94 | 0 | 34 | 123 | 7.7 | 375.4 | 14.8 | 0.0 | 367.7 | 1 |
| 13 | 90 | 1 | -431 | -11 | 0 | 4 | 427 | 0.1 | 518.5 | 52.5 | 0.0 | 518.5 | 1 |
| 14 | 90 | -1 | 137 | 4 | 0 | -1 | -125 | 0.1 | 152.5 | 16.8 | 0.0 | 152.5 | 1 |
| 15 | 90 | 1 | -450 | -11 | 0 | 4 | 446 | 0.1 | 541.2 | 54.8 | 0.0 | 541.1 | 1 |
| | | | | | | | | | | | | | |
| 1 | 101 | 1 | -522 | -13 | 0 | 6 | 455 | 0.1 | 565.3 | 63.6 | 0.0 | 565.2 | 1 |
| 5 | 101 | -326 | -121 | 26 | 0 | -13 | 110 | 16.0 | 213.0 | 14.7 | 0.0 | 197.0 | 1 |
| 6 | 101 | -289 | -122 | -30 | 0 | 14 | 110 | 14.2 | 223.7 | 14.9 | 0.0 | 237.8 | 1 |
| 7 | 101 | 291 | -121 | 26 | 0 | -13 | 110 | 14.3 | 213.3 | 14.7 | 0.0 | 227.6 | 1 |
| 8 | 101 | 328 | -122 | -30 | 0 | 14 | 110 | 16.1 | 224.0 | 14.9 | 0.0 | 207.9 | 1 |
| 9 | 101 | -153 | -169 | 90 | 0 | -43 | 155 | 7.5 | 473.5 | 20.6 | 0.0 | 466.0 | 1 |
| 10 | 101 | -27 | -173 | -95 | 0 | 45 | 154 | 1.3 | 484.9 | 21.1 | 0.0 | 486.2 | 1 |
| 11 | 101 | 32 | -169 | 90 | 0 | -43 | 155 | 1.6 | 473.5 | 20.6 | 0.0 | 475.1 | 1 |
| 12 | 101 | 158 | -123 | -94 | 0 | 45 | 110 | 7.7 | 430.7 | 15.0 | 0.0 | 423.0 | 1 |
| 13 | 101 | 1 | -433 | -11 | 0 | 5 | 379 | 0.1 | 470.7 | 52.8 | 0.0 | 470.7 | 1 |
| 14 | 101 | -1 | 136 | 4 | 0 | -2 | -110 | 0.1 | 137.6 | 16.5 | 0.0 | 137.5 | 1 |
| 15 | 101 | 1 | -452 | -11 | 0 | 5 | 396 | 0.1 | 491.2 | 55.1 | 0.0 | 491.2 | 1 |
| | | | | | | | | | | | | | |
| 1 | 112 | 1 | -524 | -13 | 0 | 7 | 396 | 0.1 | 507.4 | 63.9 | 0.0 | 507.3 | 1 |
| 5 | 112 | -326 | -123 | 26 | 0 | -15 | 97 | 16.0 | 216.9 | 15.0 | 0.0 | 200.9 | 1 |
| 6 | 112 | -289 | -124 | -30 | 0 | 18 | 96 | 14.2 | 230.3 | 15.1 | 0.0 | 244.5 | 1 |
| 7 | 112 | 291 | -123 | 26 | 0 | -15 | 97 | 14.3 | 217.1 | 15.0 | 0.0 | 231.4 | 1 |
| 8 | 112 | 328 | -124 | -30 | 0 | 18 | 96 | 16.1 | 230.9 | 15.1 | 0.0 | 214.8 | 1 |
| 9 | 112 | -153 | -171 | 90 | 0 | -53 | 136 | 7.5 | 519.6 | 20.9 | 0.0 | 512.1 | 1 |
| 10 | 112 | -27 | -175 | -95 | 0 | 56 | 134 | 1.3 | 534.3 | 21.3 | 0.0 | 535.6 | 1 |
| 11 | 112 | 32 | -171 | 90 | 0 | -53 | 136 | 1.6 | 519.6 | 20.9 | 0.0 | 521.2 | 1 |
| 12 | 112 | 158 | -125 | -94 | 0 | 55 | 96 | 7.7 | 485.8 | 15.3 | 0.0 | 478.1 | 1 |
| 13 | 112 | 1 | -436 | -11 | 0 | 6 | 330 | 0.1 | 422.6 | 53.1 | 0.0 | 422.6 | 1 |
| 14 | 112 | -1 | 134 | 4 | 0 | -2 | -95 | 0.1 | 122.9 | 16.3 | 0.0 | 122.8 | 1 |
| 15 | 112 | 1 | -455 | -11 | 0 | 6 | 345 | 0.1 | 441.0 | 55.4 | 0.0 | 440.9 | 1 |

174
Verifica di STABILITA' e/o SVERGOLAMENTO

| n.comb | Fx -- daN | My eq. ----- daN*m | Mz eq. ----- daN*m | Sn. omega | Sn.yx | Sn.zx | OMEGA | OMEGA1 | Sf -- daN/cm ² | Nota |
|--------|-----------------|--------------------------|--------------------------|-----------|-------|-------|-------|--------|---------------------------------|------|
| 1 | 1 | 3 | 741 | 64 | 21 | 64 | 1.00 | 1.00 | 877.4 | |
| 5 | -326 | 6 | 173 | 64 | 21 | 64 | 1.38 | 1.00 | 264.8 | |
| 6 | -289 | 7 | 174 | 64 | 21 | 64 | 1.38 | 1.00 | 268.1 | |
| 7 | 291 | 6 | 173 | 64 | 21 | 64 | 1.00 | 1.00 | 256.8 | |
| 8 | 328 | 7 | 174 | 64 | 21 | 64 | 1.00 | 1.00 | 264.7 | |
| 9 | -153 | 21 | 243 | 64 | 21 | 64 | 1.38 | 1.00 | 436.9 | |
| 10 | -27 | 22 | 244 | 64 | 21 | 64 | 1.38 | 1.00 | 435.9 | |
| 11 | 32 | 21 | 243 | 64 | 21 | 64 | 1.00 | 1.00 | 427.9 | |
| 12 | 158 | 22 | 174 | 64 | 21 | 64 | 1.00 | 1.00 | 359.0 | |
| 13 | 1 | 2 | 615 | 64 | 21 | 64 | 1.00 | 1.00 | 728.5 | |
| 14 | -1 | 1 | 191 | 64 | 21 | 64 | 1.38 | 1.00 | 226.8 | |
| 15 | 1 | 3 | 643 | 64 | 21 | 64 | 1.00 | 1.00 | 760.8 | |

ASTA NUM. 25 NI 46 NF 17 Lungh. 142.4 cm SEZ. 5 Ps UNP 140

categoria: p.p. y qy tot.

qy medio: 0.1601 0.1601 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|------|-----|-------|-----|-----|---------|--------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | 1 | 697 | 9 | 0 | 5 | 0 | 0.1 | 32.8 | 84.9 | 0.0 | 147.6 | 5 | |
| 5 | 0 | -142 | 169 | -11 | 0 | -2 | 0 | 7.0 | 16.7 | 20.6 | 0.0 | 38.3 | 5 | |
| 6 | 0 | -105 | 170 | 13 | 0 | 3 | 0 | 5.1 | 22.2 | 20.7 | 0.0 | 36.0 | 5 | |
| 7 | 0 | 107 | 169 | -10 | 0 | -1 | 0 | 5.2 | 8.2 | 20.6 | 0.0 | 35.7 | 5 | |
| 8 | 0 | 144 | 170 | 14 | 0 | 4 | 0 | 7.1 | 30.5 | 20.7 | 0.0 | 40.8 | 5 | |
| 9 | 0 | -97 | 236 | -39 | 0 | -8 | 0 | 4.8 | 56.0 | 28.7 | 0.0 | 57.1 | 5 | |
| 10 | 0 | 28 | 238 | 43 | 0 | 11 | 0 | 1.4 | 74.6 | 29.0 | 0.0 | 73.3 | 1 | |
| 11 | 0 | -23 | 236 | -39 | 0 | -8 | 0 | 1.1 | 53.4 | 28.7 | 0.0 | 55.0 | 5 | |
| 12 | 0 | 103 | 170 | 43 | 0 | 11 | 0 | 5.0 | 74.4 | 20.7 | 0.0 | 69.3 | 1 | |
| 13 | 0 | 1 | 580 | 7 | 0 | 4 | 0 | 0.1 | 26.7 | 70.7 | 0.0 | 123.0 | 5 | |
| 14 | 0 | -1 | -168 | -3 | 0 | -2 | 0 | 0.1 | 11.8 | 20.4 | 0.0 | 35.7 | 5 | |
| 15 | 0 | 1 | 606 | 7 | 0 | 4 | 0 | 0.1 | 28.0 | 73.8 | 0.0 | 128.4 | 5 | |
| | | | | | | | | | | | | | | |
| 1 | 14 | 1 | 694 | 9 | 0 | 4 | 99 | 0.1 | 139.0 | 84.5 | 0.0 | 152.1 | 4 | |
| 5 | 14 | -142 | 167 | -11 | 0 | -1 | 24 | 7.0 | 33.4 | 20.3 | 0.0 | 41.7 | 4 | |
| 6 | 14 | -105 | 167 | 13 | 0 | 1 | 24 | 5.1 | 37.0 | 20.4 | 0.0 | 42.1 | 1 | |
| 7 | 14 | 107 | 167 | -10 | 0 | 0 | 24 | 5.2 | 29.3 | 20.3 | 0.0 | 39.6 | 4 | |
| 8 | 14 | 144 | 167 | 14 | 0 | 2 | 24 | 7.1 | 44.3 | 20.4 | 0.0 | 44.0 | 4 | |
| 9 | 14 | -97 | 233 | -39 | 0 | -3 | 33 | 4.8 | 57.1 | 28.4 | 0.0 | 56.5 | 4 | |
| 10 | 14 | 28 | 235 | 43 | 0 | 5 | 34 | 1.4 | 72.0 | 28.6 | 0.0 | 70.6 | 1 | |
| 11 | 14 | -23 | 233 | -39 | 0 | -2 | 33 | 1.1 | 54.8 | 28.4 | 0.0 | 53.7 | 1 | |
| 12 | 14 | 103 | 168 | 43 | 0 | 5 | 24 | 5.0 | 61.1 | 20.5 | 0.0 | 56.0 | 1 | |
| 13 | 14 | 1 | 577 | 7 | 0 | 3 | 82 | 0.1 | 115.2 | 70.4 | 0.0 | 126.5 | 4 | |
| 14 | 14 | -1 | -170 | -3 | 0 | -1 | -24 | 0.1 | 37.0 | 20.7 | 0.0 | 37.7 | 4 | |
| 15 | 14 | 1 | 603 | 7 | 0 | 3 | 86 | 0.1 | 120.4 | 73.4 | 0.0 | 132.1 | 4 | |
| | | | | | | | | | | | | | | |
| 1 | 28 | 1 | 691 | 9 | 0 | 2 | 198 | 0.1 | 244.7 | 84.2 | 0.0 | 244.6 | 1 | |
| 5 | 28 | -142 | 164 | -11 | 0 | 1 | 47 | 7.0 | 60.0 | 20.0 | 0.0 | 66.9 | 1 | |
| 6 | 28 | -105 | 165 | 13 | 0 | -1 | 48 | 5.1 | 58.7 | 20.1 | 0.0 | 61.7 | 3 | |
| 7 | 28 | 107 | 164 | -10 | 0 | 2 | 47 | 5.2 | 66.4 | 20.0 | 0.0 | 64.9 | 3 | |
| 8 | 28 | 144 | 165 | 14 | 0 | 0 | 48 | 7.1 | 57.7 | 20.1 | 0.0 | 63.2 | 3 | |
| 9 | 28 | -97 | 230 | -39 | 0 | 3 | 66 | 4.8 | 95.8 | 28.0 | 0.0 | 100.6 | 1 | |
| 10 | 28 | 28 | 232 | 43 | 0 | -1 | 67 | 1.4 | 85.8 | 28.3 | 0.0 | 87.2 | 1 | |
| 11 | 28 | -23 | 230 | -39 | 0 | 3 | 66 | 1.1 | 97.8 | 28.0 | 0.0 | 98.9 | 1 | |
| 12 | 28 | 103 | 166 | 43 | 0 | -1 | 48 | 5.0 | 63.2 | 20.2 | 0.0 | 68.3 | 1 | |
| 13 | 28 | 1 | 574 | 7 | 0 | 2 | 164 | 0.1 | 203.3 | 70.0 | 0.0 | 203.2 | 1 | |
| 14 | 28 | -1 | -172 | -3 | 0 | -1 | -48 | 0.1 | 62.5 | 21.0 | 0.0 | 62.4 | 1 | |
| 15 | 28 | 1 | 600 | 7 | 0 | 2 | 172 | 0.1 | 212.3 | 73.1 | 0.0 | 212.2 | 1 | |
| | | | | | | | | | | | | | | |
| 1 | 43 | 1 | 688 | 9 | 0 | 1 | 296 | 0.1 | 349.9 | 83.8 | 0.0 | 349.9 | 1 | |
| 5 | 43 | -142 | 162 | -11 | 0 | 2 | 71 | 7.0 | 97.7 | 19.8 | 0.0 | 104.7 | 1 | |
| 6 | 43 | -105 | 163 | 13 | 0 | -2 | 71 | 5.1 | 98.6 | 19.8 | 0.0 | 94.1 | 3 | |
| 7 | 43 | 107 | 162 | -10 | 0 | 3 | 71 | 5.2 | 103.2 | 19.8 | 0.0 | 97.9 | 1 | |
| 8 | 43 | 144 | 163 | 14 | 0 | -2 | 71 | 7.1 | 93.4 | 19.8 | 0.0 | 100.5 | 1 | |
| 9 | 43 | -97 | 227 | -39 | 0 | 8 | 99 | 4.8 | 171.0 | 27.7 | 0.0 | 175.8 | 1 | |
| 10 | 43 | 28 | 229 | 43 | 0 | -7 | 100 | 1.4 | 165.2 | 27.9 | 0.0 | 166.6 | 1 | |
| 11 | 43 | -23 | 227 | -39 | 0 | 9 | 99 | 1.1 | 172.6 | 27.7 | 0.0 | 173.8 | 1 | |
| 12 | 43 | 103 | 163 | 43 | 0 | -7 | 71 | 5.0 | 131.5 | 19.9 | 0.0 | 136.5 | 1 | |
| 13 | 43 | 1 | 572 | 7 | 0 | 1 | 246 | 0.1 | 290.9 | 69.6 | 0.0 | 290.8 | 1 | |
| 14 | 43 | -1 | -174 | -3 | 0 | -1 | -73 | 0.1 | 88.4 | 21.3 | 0.0 | 88.4 | 1 | |
| 15 | 43 | 1 | 597 | 7 | 0 | 1 | 257 | 0.1 | 303.7 | 72.7 | 0.0 | 303.7 | 1 | |
| | | | | | | | | | | | | | | |
| 1 | 57 | 1 | 685 | 9 | 0 | -0 | 393 | 0.1 | 455.6 | 83.4 | 0.0 | 455.7 | 1 | |
| 5 | 57 | -142 | 160 | -11 | 0 | 4 | 94 | 7.0 | 135.1 | 19.5 | 0.0 | 142.1 | 1 | |
| 6 | 57 | -105 | 160 | 13 | 0 | -4 | 94 | 5.1 | 138.1 | 19.5 | 0.0 | 133.0 | 1 | |
| 7 | 57 | 107 | 160 | -10 | 0 | 5 | 94 | 5.2 | 139.5 | 19.5 | 0.0 | 134.3 | 1 | |
| 8 | 57 | 144 | 160 | 14 | 0 | -4 | 94 | 7.1 | 134.0 | 19.5 | 0.0 | 141.1 | 1 | |
| 9 | 57 | -97 | 224 | -39 | 0 | 14 | 131 | 4.8 | 245.7 | 27.3 | 0.0 | 250.5 | 1 | |
| 10 | 57 | 28 | 226 | 43 | 0 | -13 | 132 | 1.4 | 244.2 | 27.5 | 0.0 | 245.6 | 1 | |
| 11 | 57 | -23 | 224 | -39 | 0 | 14 | 131 | 1.1 | 247.0 | 27.3 | 0.0 | 248.1 | 1 | |
| 12 | 57 | 103 | 161 | 43 | 0 | -13 | 94 | 5.0 | 199.3 | 19.6 | 0.0 | 204.3 | 1 | |
| 13 | 57 | 1 | 569 | 7 | 0 | -0 | 327 | 0.1 | 379.1 | 69.3 | 0.0 | 379.2 | 1 | |
| 14 | 57 | -1 | -177 | -3 | 0 | -0 | -98 | 0.1 | 114.7 | 21.5 | 0.0 | 114.6 | 1 | |
| 15 | 57 | 1 | 594 | 7 | 0 | -0 | 342 | 0.1 | 395.8 | 72.4 | 0.0 | 395.8 | 1 | |
| | | | | | | | | | | | | | | |
| 1 | 71 | 1 | 682 | 9 | 0 | -1 | 491 | 0.1 | 576.5 | 83.1 | 0.0 | 576.6 | 1 | |
| 5 | 71 | -142 | 158 | -11 | 0 | 6 | 116 | 7.0 | 172.1 | 19.2 | 0.0 | 179.1 | 1 | |
| 6 | 71 | -105 | 158 | 13 | 0 | -6 | 117 | 5.1 | 177.3 | 19.3 | 0.0 | 172.1 | 1 | |
| 7 | 71 | 107 | 158 | -10 | 0 | 6 | 116 | 5.2 | 175.5 | 19.2 | 0.0 | 170.3 | 1 | |
| 8 | 71 | 144 | 158 | 14 | 0 | -6 | 117 | 7.1 | 174.2 | 19.3 | 0.0 | 181.2 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|------|-----|---|-----|------|-----|--------|------|-----|--------|---|
| 9 | 71 | -97 | 221 | -39 | 0 | 19 | 163 | 4.8 | 319.9 | 26.9 | 0.0 | 324.7 | 1 |
| 10 | 71 | 28 | 223 | 43 | 0 | -20 | 164 | 1.4 | 322.7 | 27.2 | 0.0 | 324.1 | 1 |
| 11 | 71 | -23 | 221 | -39 | 0 | 20 | 163 | 1.1 | 320.9 | 26.9 | 0.0 | 322.0 | 1 |
| 12 | 71 | 103 | 159 | 43 | 0 | -19 | 117 | 5.0 | 266.8 | 19.3 | 0.0 | 271.8 | 1 |
| 13 | 71 | 1 | 566 | 7 | 0 | -1 | 408 | 0.1 | 479.4 | 68.9 | 0.0 | 479.4 | 1 |
| 14 | 71 | -1 | -179 | -3 | 0 | 0 | -123 | 0.1 | 144.2 | 21.8 | 0.0 | 144.2 | 1 |
| 15 | 71 | 1 | 591 | 7 | 0 | -1 | 426 | 0.1 | 500.5 | 72.0 | 0.0 | 500.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 85 | 1 | 679 | 9 | 0 | -3 | 588 | 0.1 | 696.9 | 82.7 | 0.0 | 696.9 | 1 |
| 5 | 85 | -142 | 155 | -11 | 0 | 7 | 138 | 7.0 | 208.7 | 18.9 | 0.0 | 215.7 | 1 |
| 6 | 85 | -105 | 156 | 13 | 0 | -8 | 139 | 5.1 | 216.0 | 19.0 | 0.0 | 210.9 | 1 |
| 7 | 85 | 107 | 155 | -10 | 0 | 8 | 138 | 5.2 | 211.1 | 18.9 | 0.0 | 205.9 | 1 |
| 8 | 85 | 144 | 156 | 14 | 0 | -8 | 139 | 7.1 | 214.0 | 19.0 | 0.0 | 221.0 | 1 |
| 9 | 85 | -97 | 218 | -39 | 0 | 25 | 194 | 4.8 | 393.6 | 26.6 | 0.0 | 398.4 | 1 |
| 10 | 85 | 28 | 220 | 43 | 0 | -26 | 196 | 1.4 | 400.7 | 26.8 | 0.0 | 402.1 | 1 |
| 11 | 85 | -23 | 218 | -39 | 0 | 25 | 194 | 1.1 | 394.3 | 26.6 | 0.0 | 395.4 | 1 |
| 12 | 85 | 103 | 157 | 43 | 0 | -25 | 139 | 5.0 | 333.9 | 19.1 | 0.0 | 338.9 | 1 |
| 13 | 85 | 1 | 563 | 7 | 0 | -2 | 488 | 0.1 | 579.1 | 68.6 | 0.0 | 579.2 | 1 |
| 14 | 85 | -1 | -181 | -3 | 0 | 1 | -149 | 0.1 | 176.5 | 22.1 | 0.0 | 176.5 | 1 |
| 15 | 85 | 1 | 588 | 7 | 0 | -2 | 510 | 0.1 | 604.7 | 71.6 | 0.0 | 604.8 | 1 |
| | | | | | | | | | | | | | |
| 1 | 100 | 1 | 676 | 9 | 0 | -4 | 684 | 0.1 | 816.8 | 82.4 | 0.0 | 816.8 | 1 |
| 5 | 100 | -142 | 153 | -11 | 0 | 9 | 160 | 7.0 | 245.0 | 18.6 | 0.0 | 252.0 | 1 |
| 6 | 100 | -105 | 154 | 13 | 0 | -10 | 161 | 5.1 | 254.4 | 18.7 | 0.0 | 249.3 | 1 |
| 7 | 100 | 107 | 153 | -10 | 0 | 9 | 160 | 5.2 | 246.4 | 18.6 | 0.0 | 241.1 | 1 |
| 8 | 100 | 144 | 154 | 14 | 0 | -10 | 161 | 7.1 | 253.4 | 18.7 | 0.0 | 260.5 | 1 |
| 9 | 100 | -97 | 215 | -39 | 0 | 30 | 225 | 4.8 | 466.8 | 26.2 | 0.0 | 471.6 | 1 |
| 10 | 100 | 28 | 217 | 43 | 0 | -32 | 227 | 1.4 | 478.2 | 26.4 | 0.0 | 479.6 | 1 |
| 11 | 100 | -23 | 215 | -39 | 0 | 31 | 225 | 1.1 | 467.2 | 26.2 | 0.0 | 468.3 | 1 |
| 12 | 100 | 103 | 154 | 43 | 0 | -31 | 162 | 5.0 | 400.6 | 18.8 | 0.0 | 405.6 | 1 |
| 13 | 100 | 1 | 560 | 7 | 0 | -3 | 568 | 0.1 | 678.4 | 68.2 | 0.0 | 678.4 | 1 |
| 14 | 100 | -1 | -184 | -3 | 0 | 1 | -175 | 0.1 | 209.2 | 22.4 | 0.0 | 209.2 | 1 |
| 15 | 100 | 1 | 585 | 7 | 0 | -3 | 593 | 0.1 | 708.5 | 71.3 | 0.0 | 708.5 | 1 |
| | | | | | | | | | | | | | |
| 1 | 114 | 1 | 673 | 9 | 0 | -5 | 780 | 0.1 | 936.2 | 82.0 | 0.0 | 936.2 | 1 |
| 5 | 114 | -142 | 151 | -11 | 0 | 10 | 182 | 7.0 | 280.9 | 18.4 | 0.0 | 287.8 | 1 |
| 6 | 114 | -105 | 151 | 13 | 0 | -12 | 183 | 5.1 | 292.4 | 18.4 | 0.0 | 287.3 | 1 |
| 7 | 114 | 107 | 151 | -10 | 0 | 10 | 182 | 5.2 | 281.2 | 18.4 | 0.0 | 276.0 | 1 |
| 8 | 114 | 144 | 151 | 14 | 0 | -12 | 183 | 7.1 | 292.5 | 18.4 | 0.0 | 299.5 | 1 |
| 9 | 114 | -97 | 212 | -39 | 0 | 36 | 255 | 4.8 | 539.6 | 25.9 | 0.0 | 544.3 | 1 |
| 10 | 114 | 28 | 214 | 43 | 0 | -38 | 257 | 1.4 | 555.3 | 26.1 | 0.0 | 556.6 | 1 |
| 11 | 114 | -23 | 212 | -39 | 0 | 36 | 255 | 1.1 | 539.6 | 25.9 | 0.0 | 540.8 | 1 |
| 12 | 114 | 103 | 152 | 43 | 0 | -38 | 183 | 5.0 | 466.9 | 18.5 | 0.0 | 472.0 | 1 |
| 13 | 114 | 1 | 557 | 7 | 0 | -4 | 648 | 0.1 | 777.1 | 67.8 | 0.0 | 777.2 | 1 |
| 14 | 114 | -1 | -186 | -3 | 0 | 1 | -201 | 0.1 | 242.3 | 22.6 | 0.0 | 242.3 | 1 |
| 15 | 114 | 1 | 582 | 7 | 0 | -4 | 676 | 0.1 | 811.7 | 70.9 | 0.0 | 811.8 | 1 |
| | | | | | | | | | | | | | |
| 1 | 128 | 1 | 670 | 9 | 0 | -6 | 876 | 0.1 | 1055.1 | 81.6 | 0.0 | 1055.2 | 1 |
| 5 | 128 | -142 | 148 | -11 | 0 | 12 | 203 | 7.0 | 316.4 | 18.1 | 0.0 | 323.3 | 1 |
| 6 | 128 | -105 | 149 | 13 | 0 | -14 | 204 | 5.1 | 330.0 | 18.2 | 0.0 | 324.9 | 1 |
| 7 | 128 | 107 | 148 | -10 | 0 | 12 | 203 | 5.2 | 315.7 | 18.1 | 0.0 | 310.5 | 1 |
| 8 | 128 | 144 | 149 | 14 | 0 | -14 | 204 | 7.1 | 331.2 | 18.2 | 0.0 | 338.2 | 1 |
| 9 | 128 | -97 | 209 | -39 | 0 | 42 | 285 | 4.8 | 611.8 | 25.5 | 0.0 | 616.6 | 1 |
| 10 | 128 | 28 | 211 | 43 | 0 | -44 | 288 | 1.4 | 631.8 | 25.7 | 0.0 | 633.2 | 1 |
| 11 | 128 | -23 | 209 | -39 | 0 | 42 | 285 | 1.1 | 611.6 | 25.5 | 0.0 | 612.7 | 1 |
| 12 | 128 | 103 | 150 | 43 | 0 | -44 | 205 | 5.0 | 532.9 | 18.2 | 0.0 | 537.9 | 1 |
| 13 | 128 | 1 | 554 | 7 | 0 | -5 | 727 | 0.1 | 875.4 | 67.5 | 0.0 | 875.5 | 1 |
| 14 | 128 | -1 | -188 | -3 | 0 | 2 | -228 | 0.1 | 275.7 | 22.9 | 0.0 | 275.8 | 1 |
| 15 | 128 | 1 | 579 | 7 | 0 | -5 | 759 | 0.1 | 914.5 | 70.6 | 0.0 | 914.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 142 | 1 | 667 | 9 | 0 | -7 | 971 | 0.1 | 1173.5 | 81.3 | 0.0 | 1173.6 | 1 |
| 5 | 142 | -142 | 146 | -11 | 0 | 14 | 224 | 7.0 | 351.5 | 17.8 | 0.0 | 358.5 | 1 |
| 6 | 142 | -105 | 147 | 13 | 0 | -16 | 225 | 5.1 | 367.3 | 17.9 | 0.0 | 362.2 | 1 |
| 7 | 142 | 107 | 146 | -10 | 0 | 13 | 224 | 5.2 | 349.8 | 17.8 | 0.0 | 344.6 | 1 |
| 8 | 142 | 144 | 147 | 14 | 0 | -16 | 225 | 7.1 | 369.5 | 17.9 | 0.0 | 376.5 | 1 |
| 9 | 142 | -97 | 206 | -39 | 0 | 47 | 315 | 4.8 | 683.6 | 25.1 | 0.0 | 688.3 | 1 |
| 10 | 142 | 28 | 208 | 43 | 0 | -50 | 317 | 1.4 | 707.9 | 25.4 | 0.0 | 709.2 | 1 |
| 11 | 142 | -23 | 206 | -39 | 0 | 47 | 315 | 1.1 | 683.0 | 25.1 | 0.0 | 684.1 | 1 |
| 12 | 142 | 103 | 147 | 43 | 0 | -50 | 226 | 5.0 | 598.5 | 18.0 | 0.0 | 603.5 | 1 |
| 13 | 142 | 1 | 551 | 7 | 0 | -6 | 805 | 0.1 | 973.2 | 67.1 | 0.0 | 973.3 | 1 |
| 14 | 142 | -1 | -190 | -3 | 0 | 2 | -255 | 0.1 | 309.5 | 23.2 | 0.0 | 309.6 | 1 |
| 15 | 142 | 1 | 576 | 7 | 0 | -6 | 841 | 0.1 | 1016.8 | 70.2 | 0.0 | 1016.8 | 1 |

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Verifica di STABILITA' e/o SVERGOLAMENTO

| n.comb | Fx -- daN | My eq. ----- daN*m | Mz eq. ----- daN*m | Sn. omega | Sn.yx | Sn.zx | OMEGA | OMEGA1 | Sf -- daN/cm ² | Nota |
|--------|-----------------|--------------------------|--------------------------|-----------|-------|-------|-------|--------|---------------------------------|------|
| 1 | 1 | 3 | 582 | 82 | 27 | 82 | 1.00 | 1.00 | 694.1 | |
| 5 | -142 | 7 | 135 | 82 | 27 | 82 | 1.66 | 1.00 | 215.9 | |
| 6 | -105 | 8 | 135 | 82 | 27 | 82 | 1.66 | 1.00 | 220.1 | |
| 7 | 107 | 8 | 135 | 82 | 27 | 82 | 1.00 | 1.00 | 211.8 | |
| 8 | 144 | 8 | 135 | 82 | 27 | 82 | 1.00 | 1.00 | 216.5 | |
| 9 | -97 | 25 | 189 | 82 | 27 | 82 | 1.66 | 1.00 | 396.0 | |
| 10 | 28 | 26 | 190 | 82 | 27 | 82 | 1.00 | 1.00 | 396.2 | |
| 11 | -23 | 25 | 189 | 82 | 27 | 82 | 1.66 | 1.00 | 390.4 | |
| 12 | 103 | 25 | 136 | 82 | 27 | 82 | 1.00 | 1.00 | 334.4 | |

| | | | | | | | | | |
|----|----|---|-----|----|----|----|------|------|-------|
| 13 | 1 | 2 | 483 | 82 | 27 | 82 | 1.00 | 1.00 | 575.7 |
| 14 | -1 | 1 | 153 | 82 | 27 | 82 | 1.66 | 1.00 | 182.9 |
| 15 | 1 | 3 | 505 | 82 | 27 | 82 | 1.00 | 1.00 | 601.4 |

ASTA NUM. 28 NI 24 NF 28 Lungh. 36.6 cm SEZ. 5 Ps UNP 140

categoria: p.p. y qy tot.

qy medio: 0.1601 0.1601 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|-------|------|-------|-----|-----|---------|--------|--------|-------|--------|------|------|
| -- | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | 1 | -1079 | 20 | 0 | 7 | 397 | 0.1 | 507.6 | 131.5 | 0.0 | 507.5 | 1 | |
| 5 | 0 | -424 | -262 | -42 | 0 | -15 | 97 | 20.8 | 217.0 | 31.9 | 0.0 | 196.2 | 1 | |
| 6 | 0 | -386 | -260 | 48 | 0 | 18 | 96 | 18.9 | 230.3 | 31.7 | 0.0 | 249.3 | 1 | |
| 7 | 0 | 388 | -262 | -42 | 0 | -15 | 97 | 19.0 | 217.1 | 31.9 | 0.0 | 236.1 | 1 | |
| 8 | 0 | 425 | -260 | 48 | 0 | 18 | 96 | 20.9 | 231.0 | 31.7 | 0.0 | 210.1 | 1 | |
| 9 | 0 | -182 | -367 | -146 | 0 | -53 | 136 | 8.9 | 519.6 | 44.8 | 0.0 | 510.7 | 1 | |
| 10 | 0 | -56 | -363 | 153 | 0 | 56 | 134 | 2.8 | 534.4 | 44.2 | 0.0 | 537.2 | 1 | |
| 11 | 0 | 62 | -367 | -146 | 0 | -53 | 136 | 3.0 | 519.6 | 44.8 | 0.0 | 522.6 | 1 | |
| 12 | 0 | 187 | -259 | 151 | 0 | 55 | 96 | 9.2 | 485.9 | 31.5 | 0.0 | 476.7 | 1 | |
| 13 | 0 | 1 | -899 | 16 | 0 | 6 | 331 | 0.1 | 422.9 | 109.5 | 0.0 | 422.8 | 1 | |
| 14 | 0 | -1 | 262 | -5 | 0 | -2 | -95 | 0.1 | 123.0 | 32.0 | 0.0 | 122.9 | 1 | |
| 15 | 0 | 1 | -938 | 17 | 0 | 6 | 345 | 0.1 | 441.2 | 114.3 | 0.0 | 441.2 | 1 | |
| 1 | 4 | 1 | -1080 | 20 | 0 | 6 | 357 | 0.1 | 457.0 | 131.6 | 0.0 | 456.9 | 1 | |
| 5 | 4 | -424 | -262 | -42 | 0 | -14 | 87 | 20.8 | 195.4 | 31.9 | 0.0 | 174.6 | 1 | |
| 6 | 4 | -386 | -261 | 48 | 0 | 16 | 87 | 18.9 | 207.4 | 31.8 | 0.0 | 226.4 | 1 | |
| 7 | 4 | 388 | -262 | -42 | 0 | -14 | 87 | 19.0 | 195.5 | 31.9 | 0.0 | 214.5 | 1 | |
| 8 | 4 | 425 | -261 | 48 | 0 | 16 | 87 | 20.9 | 208.0 | 31.8 | 0.0 | 187.1 | 1 | |
| 9 | 4 | -182 | -368 | -146 | 0 | -48 | 122 | 8.9 | 467.8 | 44.9 | 0.0 | 458.8 | 1 | |
| 10 | 4 | -56 | -364 | 153 | 0 | 50 | 121 | 2.8 | 481.1 | 44.3 | 0.0 | 483.9 | 1 | |
| 11 | 4 | 62 | -368 | -146 | 0 | -48 | 122 | 3.0 | 467.8 | 44.9 | 0.0 | 470.8 | 1 | |
| 12 | 4 | 187 | -259 | 151 | 0 | 50 | 86 | 9.2 | 437.4 | 31.6 | 0.0 | 428.3 | 1 | |
| 13 | 4 | 1 | -900 | 16 | 0 | 5 | 298 | 0.1 | 380.7 | 109.6 | 0.0 | 380.7 | 1 | |
| 14 | 4 | -1 | 262 | -5 | 0 | -2 | -85 | 0.1 | 110.6 | 31.9 | 0.0 | 110.5 | 1 | |
| 15 | 4 | 1 | -939 | 17 | 0 | 6 | 311 | 0.1 | 397.2 | 114.4 | 0.0 | 397.2 | 1 | |
| 1 | 7 | 1 | -1081 | 20 | 0 | 6 | 318 | 0.1 | 406.3 | 131.7 | 0.0 | 406.3 | 1 | |
| 5 | 7 | -424 | -263 | -42 | 0 | -12 | 78 | 20.8 | 173.8 | 32.0 | 0.0 | 153.0 | 1 | |
| 6 | 7 | -386 | -261 | 48 | 0 | 14 | 77 | 18.9 | 184.5 | 31.8 | 0.0 | 203.4 | 1 | |
| 7 | 7 | 388 | -263 | -42 | 0 | -12 | 78 | 19.0 | 173.9 | 32.0 | 0.0 | 192.9 | 1 | |
| 8 | 7 | 425 | -261 | 48 | 0 | 14 | 77 | 20.9 | 185.0 | 31.8 | 0.0 | 164.1 | 1 | |
| 9 | 7 | -182 | -369 | -146 | 0 | -43 | 109 | 8.9 | 415.9 | 44.9 | 0.0 | 407.0 | 1 | |
| 10 | 7 | -56 | -365 | 153 | 0 | 45 | 108 | 2.8 | 427.8 | 44.4 | 0.0 | 430.5 | 1 | |
| 11 | 7 | 62 | -369 | -146 | 0 | -43 | 109 | 3.0 | 415.9 | 44.9 | 0.0 | 418.9 | 1 | |
| 12 | 7 | 187 | -260 | 151 | 0 | 44 | 77 | 9.2 | 388.9 | 31.7 | 0.0 | 379.8 | 1 | |
| 13 | 7 | 1 | -900 | 16 | 0 | 5 | 265 | 0.1 | 338.5 | 109.7 | 0.0 | 338.5 | 1 | |
| 14 | 7 | -1 | 261 | -5 | 0 | -2 | -76 | 0.1 | 98.2 | 31.8 | 0.0 | 98.1 | 1 | |
| 15 | 7 | 1 | -940 | 17 | 0 | 5 | 276 | 0.1 | 353.2 | 114.5 | 0.0 | 353.2 | 1 | |
| 1 | 11 | 1 | -1081 | 20 | 0 | 5 | 278 | 0.1 | 355.7 | 131.8 | 0.0 | 355.6 | 1 | |
| 5 | 11 | -424 | -263 | -42 | 0 | -11 | 68 | 20.8 | 152.1 | 32.1 | 0.0 | 131.4 | 1 | |
| 6 | 11 | -386 | -262 | 48 | 0 | 12 | 68 | 18.9 | 161.5 | 31.9 | 0.0 | 180.4 | 1 | |
| 7 | 11 | 388 | -263 | -42 | 0 | -11 | 68 | 19.0 | 152.2 | 32.1 | 0.0 | 171.3 | 1 | |
| 8 | 11 | 425 | -262 | 48 | 0 | 12 | 68 | 20.9 | 161.9 | 31.9 | 0.0 | 141.1 | 1 | |
| 9 | 11 | -182 | -370 | -146 | 0 | -37 | 95 | 8.9 | 364.0 | 45.0 | 0.0 | 355.1 | 1 | |
| 10 | 11 | -56 | -365 | 153 | 0 | 39 | 94 | 2.8 | 374.4 | 44.5 | 0.0 | 377.2 | 1 | |
| 11 | 11 | 62 | -370 | -146 | 0 | -37 | 95 | 3.0 | 364.0 | 45.0 | 0.0 | 367.1 | 1 | |
| 12 | 11 | 187 | -260 | 151 | 0 | 39 | 67 | 9.2 | 340.4 | 31.7 | 0.0 | 331.2 | 1 | |
| 13 | 11 | 1 | -901 | 16 | 0 | 4 | 232 | 0.1 | 296.3 | 109.8 | 0.0 | 296.3 | 1 | |
| 14 | 11 | -1 | 261 | -5 | 0 | -1 | -66 | 0.1 | 85.8 | 31.7 | 0.0 | 85.8 | 1 | |
| 15 | 11 | 1 | -940 | 17 | 0 | 4 | 242 | 0.1 | 309.2 | 114.6 | 0.0 | 309.1 | 1 | |
| 1 | 15 | 1 | -1082 | 20 | 0 | 4 | 238 | 0.1 | 304.9 | 131.9 | 0.0 | 304.9 | 1 | |
| 5 | 15 | -424 | -264 | -42 | 0 | -9 | 58 | 20.8 | 130.5 | 32.1 | 0.0 | 114.4 | 3 | |
| 6 | 15 | -386 | -263 | 48 | 0 | 11 | 58 | 18.9 | 138.5 | 32.0 | 0.0 | 157.4 | 1 | |
| 7 | 15 | 388 | -264 | -42 | 0 | -9 | 58 | 19.0 | 130.6 | 32.1 | 0.0 | 149.6 | 1 | |
| 8 | 15 | 425 | -263 | 48 | 0 | 11 | 58 | 20.9 | 138.9 | 32.0 | 0.0 | 118.0 | 1 | |
| 9 | 15 | -182 | -370 | -146 | 0 | -32 | 82 | 8.9 | 312.1 | 45.1 | 0.0 | 303.2 | 1 | |
| 10 | 15 | -56 | -366 | 153 | 0 | 34 | 81 | 2.8 | 321.0 | 44.6 | 0.0 | 323.8 | 1 | |
| 11 | 15 | 62 | -370 | -146 | 0 | -32 | 82 | 3.0 | 312.1 | 45.1 | 0.0 | 315.1 | 1 | |
| 12 | 15 | 187 | -261 | 151 | 0 | 33 | 58 | 9.2 | 291.8 | 31.8 | 0.0 | 282.7 | 1 | |
| 13 | 15 | 1 | -902 | 16 | 0 | 4 | 199 | 0.1 | 254.1 | 109.9 | 0.0 | 254.0 | 1 | |
| 14 | 15 | -1 | 260 | -5 | 0 | -1 | -57 | 0.1 | 73.5 | 31.7 | 0.0 | 73.4 | 1 | |

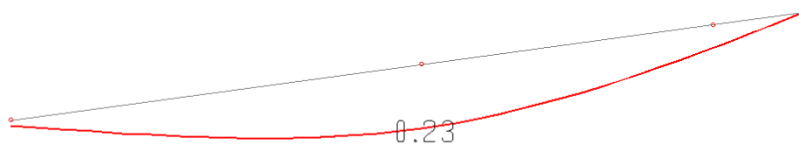
REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|------|-------|------|---|-----|-----|------|-------|-------|-----|-------|---|
| 15 | 15 | 1 | -941 | 17 | 0 | 4 | 207 | 0.1 | 265.1 | 114.7 | 0.0 | 265.1 | 1 |
| 1 | 18 | 1 | -1083 | 20 | 0 | 4 | 199 | 0.1 | 254.2 | 132.0 | 0.0 | 266.7 | 4 |
| 5 | 18 | -424 | -264 | -42 | 0 | -8 | 49 | 20.8 | 108.8 | 32.2 | 0.0 | 98.9 | 3 |
| 6 | 18 | -386 | -263 | 48 | 0 | 9 | 48 | 18.9 | 115.5 | 32.1 | 0.0 | 134.4 | 1 |
| 7 | 18 | 388 | -264 | -42 | 0 | -8 | 49 | 19.0 | 108.9 | 32.2 | 0.0 | 127.9 | 1 |
| 8 | 18 | 425 | -263 | 48 | 0 | 9 | 48 | 20.9 | 115.8 | 32.1 | 0.0 | 101.7 | 3 |
| 9 | 18 | -182 | -371 | -146 | 0 | -27 | 68 | 8.9 | 260.2 | 45.2 | 0.0 | 251.3 | 1 |
| 10 | 18 | -56 | -367 | 153 | 0 | 28 | 68 | 2.8 | 267.6 | 44.7 | 0.0 | 270.4 | 1 |
| 11 | 18 | 62 | -371 | -146 | 0 | -27 | 68 | 3.0 | 260.2 | 45.2 | 0.0 | 263.2 | 1 |
| 12 | 18 | 187 | -262 | 151 | 0 | 28 | 48 | 9.2 | 243.3 | 31.9 | 0.0 | 234.1 | 1 |
| 13 | 18 | 1 | -903 | 16 | 0 | 3 | 166 | 0.1 | 211.8 | 110.0 | 0.0 | 222.3 | 4 |
| 14 | 18 | -1 | 259 | -5 | 0 | -1 | -47 | 0.1 | 61.2 | 31.6 | 0.0 | 63.8 | 4 |
| 15 | 18 | 1 | -942 | 17 | 0 | 3 | 173 | 0.1 | 221.0 | 114.8 | 0.0 | 231.9 | 4 |
| 1 | 22 | 1 | -1084 | 20 | 0 | 3 | 159 | 0.1 | 203.4 | 132.1 | 0.0 | 237.3 | 4 |
| 5 | 22 | -424 | -265 | -42 | 0 | -6 | 39 | 20.8 | 87.1 | 32.3 | 0.0 | 83.3 | 3 |
| 6 | 22 | -386 | -264 | 48 | 0 | 7 | 39 | 18.9 | 92.4 | 32.1 | 0.0 | 111.4 | 1 |
| 7 | 22 | 388 | -265 | -42 | 0 | -6 | 39 | 19.0 | 87.1 | 32.3 | 0.0 | 106.2 | 1 |
| 8 | 22 | 425 | -264 | 48 | 0 | 7 | 39 | 20.9 | 92.7 | 32.1 | 0.0 | 85.6 | 3 |
| 9 | 22 | -182 | -372 | -146 | 0 | -21 | 55 | 8.9 | 208.2 | 45.3 | 0.0 | 199.3 | 1 |
| 10 | 22 | -56 | -368 | 153 | 0 | 22 | 54 | 2.8 | 214.1 | 44.8 | 0.0 | 216.9 | 1 |
| 11 | 22 | 62 | -372 | -146 | 0 | -21 | 55 | 3.0 | 208.2 | 45.3 | 0.0 | 211.2 | 1 |
| 12 | 22 | 187 | -262 | 151 | 0 | 22 | 39 | 9.2 | 194.7 | 32.0 | 0.0 | 185.5 | 1 |
| 13 | 22 | 1 | -903 | 16 | 0 | 2 | 133 | 0.1 | 169.5 | 110.1 | 0.0 | 197.8 | 4 |
| 14 | 22 | -1 | 259 | -5 | 0 | -1 | -38 | 0.1 | 48.9 | 31.5 | 0.0 | 56.7 | 4 |
| 15 | 22 | 1 | -943 | 17 | 0 | 2 | 138 | 0.1 | 176.9 | 114.8 | 0.0 | 206.4 | 4 |
| 1 | 26 | 1 | -1085 | 20 | 0 | 2 | 119 | 0.1 | 152.6 | 132.1 | 0.0 | 229.0 | 5 |
| 5 | 26 | -424 | -266 | -42 | 0 | -5 | 29 | 20.8 | 65.4 | 32.4 | 0.0 | 71.6 | 4 |
| 6 | 26 | -386 | -264 | 48 | 0 | 5 | 29 | 18.9 | 69.4 | 32.2 | 0.0 | 88.3 | 1 |
| 7 | 26 | 388 | -266 | -42 | 0 | -5 | 29 | 19.0 | 65.4 | 32.4 | 0.0 | 84.4 | 1 |
| 8 | 26 | 425 | -264 | 48 | 0 | 5 | 29 | 20.9 | 69.5 | 32.2 | 0.0 | 72.3 | 4 |
| 9 | 26 | -182 | -373 | -146 | 0 | -16 | 41 | 8.9 | 156.2 | 45.4 | 0.0 | 147.3 | 1 |
| 10 | 26 | -56 | -368 | 153 | 0 | 17 | 41 | 2.8 | 160.7 | 44.9 | 0.0 | 163.4 | 1 |
| 11 | 26 | 62 | -373 | -146 | 0 | -16 | 41 | 3.0 | 156.2 | 45.4 | 0.0 | 159.2 | 1 |
| 12 | 26 | 187 | -263 | 151 | 0 | 17 | 29 | 9.2 | 146.0 | 32.0 | 0.0 | 136.9 | 1 |
| 13 | 26 | 1 | -904 | 16 | 0 | 2 | 99 | 0.1 | 127.2 | 110.2 | 0.0 | 190.9 | 5 |
| 14 | 26 | -1 | 258 | -5 | 0 | -1 | -28 | 0.1 | 36.6 | 31.5 | 0.0 | 54.5 | 5 |
| 15 | 26 | 1 | -943 | 17 | 0 | 2 | 104 | 0.1 | 132.7 | 114.9 | 0.0 | 199.1 | 5 |
| 1 | 29 | 1 | -1085 | 20 | 0 | 1 | 80 | 0.1 | 101.8 | 132.2 | 0.0 | 229.1 | 5 |
| 5 | 29 | -424 | -266 | -42 | 0 | -3 | 20 | 20.8 | 43.6 | 32.4 | 0.0 | 63.4 | 5 |
| 6 | 29 | -386 | -265 | 48 | 0 | 4 | 19 | 18.9 | 46.3 | 32.3 | 0.0 | 65.2 | 1 |
| 7 | 29 | 388 | -266 | -42 | 0 | -3 | 20 | 19.0 | 43.6 | 32.4 | 0.0 | 62.6 | 1 |
| 8 | 29 | 425 | -265 | 48 | 0 | 4 | 19 | 20.9 | 46.4 | 32.3 | 0.0 | 63.8 | 5 |
| 9 | 29 | -182 | -373 | -146 | 0 | -11 | 27 | 8.9 | 104.2 | 45.5 | 0.0 | 95.3 | 1 |
| 10 | 29 | -56 | -369 | 153 | 0 | 11 | 27 | 2.8 | 107.1 | 45.0 | 0.0 | 109.9 | 1 |
| 11 | 29 | 62 | -373 | -146 | 0 | -11 | 27 | 3.0 | 104.2 | 45.5 | 0.0 | 107.2 | 1 |
| 12 | 29 | 187 | -263 | 151 | 0 | 11 | 19 | 9.2 | 97.4 | 32.1 | 0.0 | 88.2 | 1 |
| 13 | 29 | 1 | -905 | 16 | 0 | 1 | 66 | 0.1 | 84.8 | 110.3 | 0.0 | 191.0 | 5 |
| 14 | 29 | -1 | 258 | -5 | 0 | -0 | -19 | 0.1 | 24.4 | 31.4 | 0.0 | 54.4 | 5 |
| 15 | 29 | 1 | -944 | 17 | 0 | 1 | 69 | 0.1 | 88.5 | 115.0 | 0.0 | 199.3 | 5 |
| 1 | 33 | 1 | -1086 | 20 | 0 | 1 | 40 | 0.1 | 50.9 | 132.3 | 0.0 | 229.2 | 5 |
| 5 | 33 | -424 | -267 | -42 | 0 | -2 | 10 | 20.8 | 21.8 | 32.5 | 0.0 | 61.6 | 5 |
| 6 | 33 | -386 | -266 | 48 | 0 | 2 | 10 | 18.9 | 23.1 | 32.4 | 0.0 | 57.8 | 5 |
| 7 | 33 | 388 | -267 | -42 | 0 | -2 | 10 | 19.0 | 21.8 | 32.5 | 0.0 | 58.2 | 5 |
| 8 | 33 | 425 | -265 | 48 | 0 | 2 | 10 | 20.9 | 23.2 | 32.3 | 0.0 | 61.7 | 5 |
| 9 | 33 | -182 | -374 | -146 | 0 | -5 | 14 | 8.9 | 52.1 | 45.6 | 0.0 | 82.5 | 5 |
| 10 | 33 | -56 | -370 | 153 | 0 | 6 | 14 | 2.8 | 53.6 | 45.1 | 0.0 | 79.2 | 5 |
| 11 | 33 | 62 | -374 | -146 | 0 | -5 | 14 | 3.0 | 52.1 | 45.6 | 0.0 | 79.9 | 5 |
| 12 | 33 | 187 | -264 | 151 | 0 | 6 | 10 | 9.2 | 48.7 | 32.2 | 0.0 | 61.0 | 5 |
| 13 | 33 | 1 | -906 | 16 | 0 | 1 | 33 | 0.1 | 42.4 | 110.3 | 0.0 | 191.1 | 5 |
| 14 | 33 | -1 | 257 | -5 | 0 | -0 | -9 | 0.1 | 12.2 | 31.3 | 0.0 | 54.3 | 5 |
| 15 | 33 | 1 | -945 | 17 | 0 | 1 | 35 | 0.1 | 44.3 | 115.1 | 0.0 | 199.4 | 5 |
| 1 | 37 | 1 | -1087 | 20 | 0 | -0 | 0 | 0.1 | 0.0 | 132.4 | 0.0 | 229.4 | 5 |
| 5 | 37 | -424 | -267 | -42 | 0 | 0 | 0 | 20.8 | 0.0 | 32.6 | 0.0 | 60.1 | 5 |
| 6 | 37 | -386 | -266 | 48 | 0 | 0 | 0 | 18.9 | 0.0 | 32.4 | 0.0 | 59.3 | 5 |
| 7 | 37 | 388 | -267 | -42 | 0 | 0 | 0 | 19.0 | 0.0 | 32.6 | 0.0 | 59.5 | 5 |
| 8 | 37 | 425 | -266 | 48 | 0 | 0 | 0 | 20.9 | 0.0 | 32.4 | 0.0 | 59.9 | 5 |
| 9 | 37 | -182 | -375 | -146 | 0 | 0 | 0 | 8.9 | 0.0 | 45.7 | 0.0 | 79.6 | 5 |
| 10 | 37 | -56 | -371 | 153 | 0 | 0 | 0 | 2.8 | 0.0 | 45.2 | 0.0 | 78.3 | 5 |
| 11 | 37 | 62 | -375 | -146 | 0 | 0 | 0 | 3.0 | 0.0 | 45.7 | 0.0 | 79.2 | 5 |
| 12 | 37 | 187 | -265 | 151 | 0 | 0 | 0 | 9.2 | 0.0 | 32.2 | 0.0 | 56.6 | 5 |
| 13 | 37 | 1 | -906 | 16 | 0 | -0 | 0 | 0.1 | 0.0 | 110.4 | 0.0 | 191.3 | 5 |
| 14 | 37 | -1 | 257 | -5 | 0 | 0 | 0 | 0.1 | 0.0 | 31.3 | 0.0 | 54.1 | 5 |
| 15 | 37 | 1 | -946 | 17 | 0 | -0 | 0 | 0.1 | 0.0 | 115.2 | 0.0 | 199.6 | 5 |

Verifica di STABILITA' e/o SVERGOLAMENTO

| n.comb | Fx -- daN | My eq. ----- daN*m | Mz eq. ----- daN*m | Sn. omega | Sn.yx | Sn.zx | OMEGA | OMEGA1 | Sf -- daN/cm ² | Nota |
|--------|-----------------|--------------------------|--------------------------|-----------|-------|-------|-------|--------|---------------------------------|------|
| 1 | 1 | 4 | 238 | 21 | 7 | 21 | 1.00 | 1.00 | 304.6 | |
| 5 | -424 | 9 | 58 | 21 | 7 | 21 | 1.01 | 1.00 | 151.2 | |
| 6 | -386 | 11 | 58 | 21 | 7 | 21 | 1.01 | 1.00 | 157.4 | |
| 7 | 388 | 9 | 58 | 21 | 7 | 21 | 1.00 | 1.00 | 149.3 | |
| 8 | 425 | 11 | 58 | 21 | 7 | 21 | 1.00 | 1.00 | 159.4 | |
| 9 | -182 | 32 | 82 | 21 | 7 | 21 | 1.01 | 1.00 | 320.8 | |
| 10 | -56 | 34 | 81 | 21 | 7 | 21 | 1.01 | 1.00 | 323.4 | |
| 11 | 62 | 32 | 82 | 21 | 7 | 21 | 1.00 | 1.00 | 314.8 | |
| 12 | 187 | 33 | 57 | 21 | 7 | 21 | 1.00 | 1.00 | 300.7 | |
| 13 | 1 | 4 | 198 | 21 | 7 | 21 | 1.00 | 1.00 | 253.8 | |
| 14 | -1 | 1 | 57 | 21 | 7 | 21 | 1.01 | 1.00 | 73.9 | |
| 15 | 1 | 4 | 207 | 21 | 7 | 21 | 1.00 | 1.00 | 264.8 | |

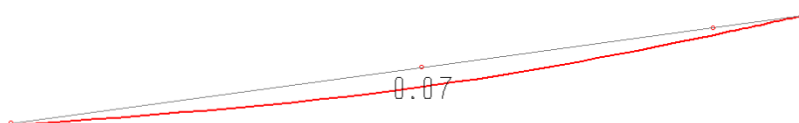
Verifica spostamenti verticali (rif.)4.2.4.2.1 delle NTC 2008)



Prospettiva

Freccia massima combinazione frequente

180

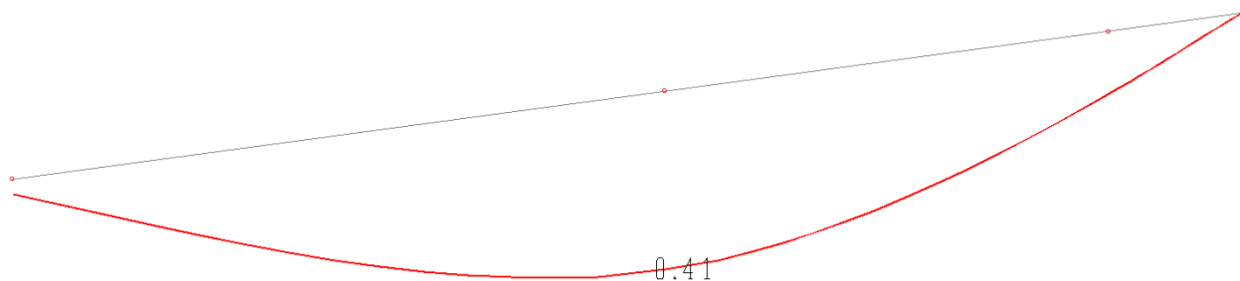


Prospettiva

Freccia massima combinazione quasi permanente



Prospettiva



Freccia massima combinazione rara

Luce di calcolo 320 cm

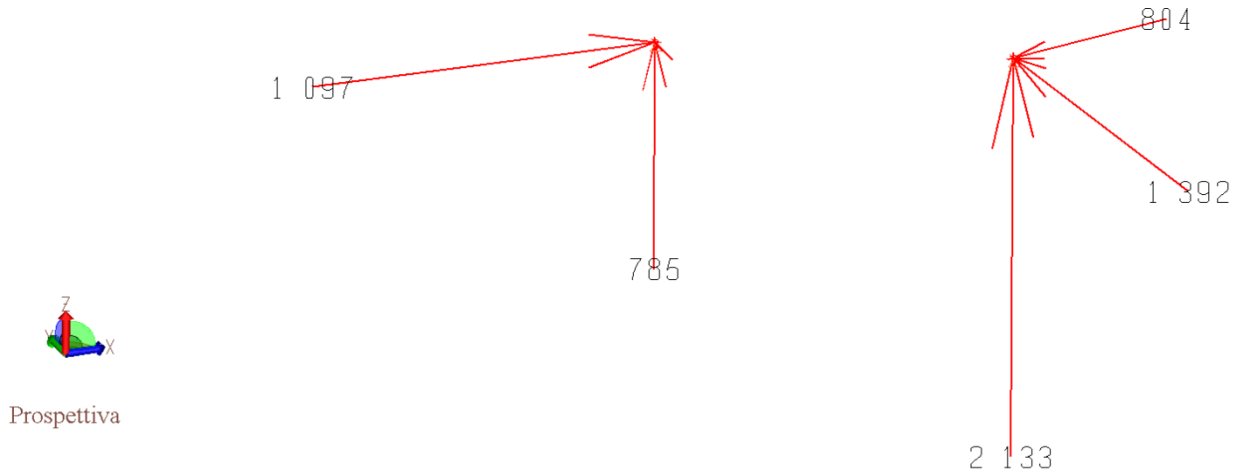
| | |
|------------------|--|
| Rara | $290/0.41 = 707 > 250 \rightarrow$ verificato |
| Frequente | $290/0.23 = 1260 > 250 \rightarrow$ verificato |
| Quasi permanente | $290/0.07 = 4143 > 250 \rightarrow$ verificato |

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3.1.2. VERIFICA NODO TRAVE PRINCIPALE – PILASTRI IN C.C.A.

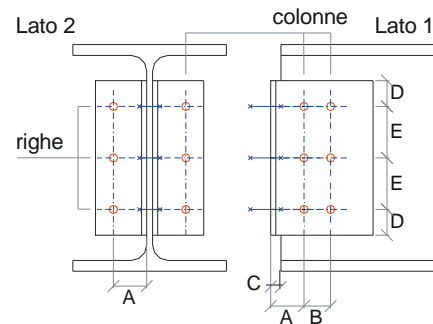
Si esegue la verifica a taglio della trave ancorata al pilastro come semplice appoggio.

Verifica a taglio con la sollecitazione maggiore del blocco 2 e 3.



$V_{sd\ max} = 2133\ daN$

$N_{sd\ max} = 1097\ daN$



Trave secondaria: HEB 120 S 235 (Fe 360)

[Progetto] Banca n. 0: Banche generali AMV

[Squadrette] (S 235 (Fe 360))

L119x59x9 h = 70 A = 40 B = 60 C = 9 D = 35 (mm)

[Resistenza a taglio dei bulloni]

$F_v, R_d, Tot = 6222.4\ kg$ (trave portata)

I.R. = 0.33

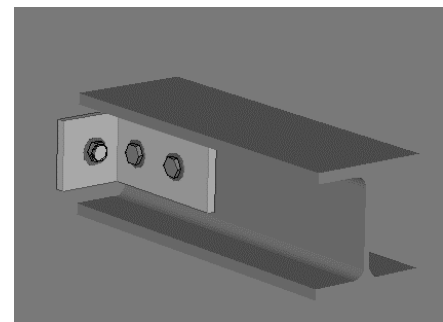
[Rifollamento]

$F_b, R_d = 3584.9\ kg$ (squadretta sulla trave portata)

I.R. = 0.57

$F_b, R_d = 4947.3\ kg$ (trave portata)

I.R. = 0.83



[Verifica della sezione lorda]

$V_{pl,Rd} = 8298.3 \text{ kg}$ (squadretta sul lato della trave portata) I.R. = 0.13

$V_{pl,Rd} = 14429.8 \text{ kg}$ (trave portata) I.R. = 0.15

[Verifica della sezione netta]

$V_{pl,Rd} = 7932.5 \text{ kg}$ (squadretta sul lato della trave portata) I.R. = 0.13

$V_{pl,Rd} = 16585.3 \text{ kg}$ (trave portata) I.R. = 0.13

[Verifica a Block Shear]

$F_{v,Rd} = 8298.3 \text{ kg}$ (squadretta sul lato della trave portata) I.R. = 0.13

$F_{v,Rd} = 10274.1 \text{ kg}$ (trave portata) I.R. = 0.21

[Verifica a momento flettente]

I.R. (squadretta sul lato della trave portata) = 0.39

I.R. (trave portata) = 0.05

[Resistenza del nodo]

Modalità di collasso: nessuna, situazione più gravosa [Rifollamento (trave portata)]

Si ipotizza un ancorante che poi in fase costruttiva potrà essere sostituita con analogo sistema di ancoraggio con caratteristiche analoghe.

Ancorante

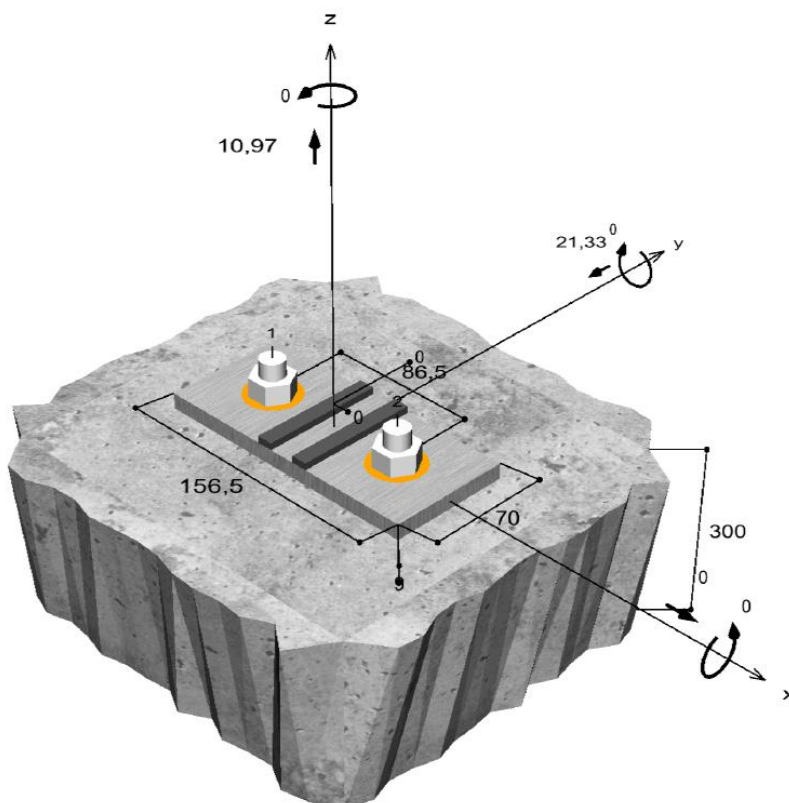
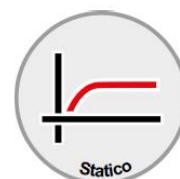
| | |
|--------------------------------|--|
| Sistema | fischer Sistema chimico a iniezione FIS EM |
| Ancorante chimico ad iniezione | FIS EM 390 S |
| Elemento di fissaggio | Barra filettata RG M 14 x 170, Acciaio zincato, Classe di resistenza 5.8 |
| Profondità di ancoraggio | 75 mm |
| Dati di progetto | Progettazione dell'ancorante in Calcestruzzo secondo Benestare ETA-10/0012, Opzione 1, Validità: 26/06/2013 - 26/06/2018 |



Geometria / Carichi

mm, kN, kNm

Valore di progetto delle azioni (sono inclusi i coefficienti parziali di sicurezza delle azioni)



Risultato dei carichi di trazione e taglio

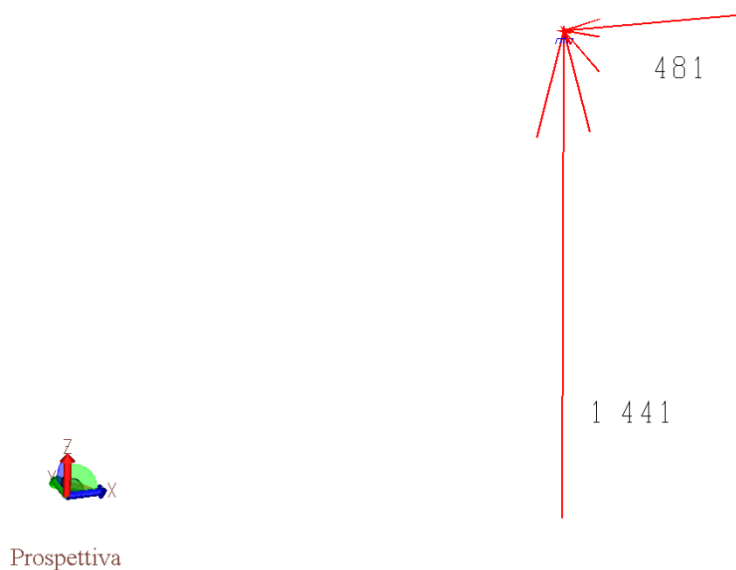
| Carichi di trazione | Utilizzo β_N % | Carichi di taglio | Utilizzo β_V % |
|---|-------------------------|---|-------------------------|
| Rottura dell'acciaio * | 14,2 | Rottura dell'acciaio senza braccio di leva * | 46,0 |
| Rottura combinata sfilamento e cono di calcestruzzo | 25,2 | Rottura calcestruzzo sul lato opposto al carico | 32,2 |
| Rottura per formazione del cono di calcestruzzo | 33,1 | | |

* Ancorante più sfavorevole

Resistenza alla combinazione di trazione e taglio

| | | | |
|---|---|-----------------------------|---------------------|
| $\beta_N = \beta_{N,c;1} = 0,33 \leq 1$ $\beta_V = \beta_{V;s;1} = 0,46 \leq 1$ $\beta_N^{1,5} + \beta_V^{1,5} = \beta_{N,c;1}^{1,5} + \beta_{V;s;1}^{1,5} = 0,50 \leq 1$ |  | Verifica soddisfatta | Equazione (5.9a) |
| | | | Equazione (5.9b) |
| | | | Equazione (5.10) |

3.1.1. VERIFICA NODO TRAVE PRINCIPALE UPN - PILASTRI IN C.C.A.



Sforzo tagliante al bullone è pari a $(481^2 + 1441^2)^{1/2} = 1520$ daN

186

Bulloneria – classe vite 8.8

| | | | |
|---------------|--|-------------------|-----------------------------------|
| p | 2 | mm | passo della filettatura |
| f_{tb} | 800 | N/mm ² | Resistenza a rottura per trazione |
| A_{res} | 157 | mm ² | Area resistente del bullone |
| d | 14 | mm | Diametro |
| γ_{M7} | 1,1 | | |
| k | $0,7 \cdot f_{ub} \cdot A_s / \gamma_{M7}$ | | fattore k |
| F_p | $k \cdot d \cdot F_{pC}$ | 80 kN | Forza di precarico |
| M_s | 224 | N m | Momento di serraggio |

Durante la fase di montaggio delle strutture metalliche il direttore dei lavori dovrà correggere il momento di serraggio del bullone in funzione del valore k che è riportato sulla confezione dei bulloni come prescritto nel C.4.2.8.1.1

4.2.8.1.1

Unioni con bulloni o chiodi soggette a taglio e/o a trazione

| | | |
|---------------|-------|-------------------|
| f_{tk} | 360 | N/mm ² |
| t_p | 5 | mm |
| γ_{M2} | 1,25 | |
| d_m | 12,70 | mm |
| d_0 | 14,00 | mm |

$$F_{tRd} = \frac{0,9 f_{tb} A_{res}}{\gamma_{M2}} \quad 90432 \text{ N}$$

$$B_{pRd} = 0,6 \pi d_m t_p f_{tk} \gamma_{M2} \quad 53867 \text{ N}$$

$$F_{vRd} = \frac{0,6 f_{tb} A_{res}}{\gamma_{M2}} \quad 60288 \text{ N} \quad \text{per ogni piano di taglio}$$

SN 0 N sforzo normale totale
V 15200 N taglio totale

Numero bulloni 1

Numero sezioni resistenti 1

F_{vSd} 15200 N

F_{tSd} 0 N

$$\frac{F_{vSd}}{F_{vRd}} + \frac{F_{tSd}}{1,4 \cdot F_{tRd}} \leq 1 \quad 0,17 < 1 \quad \text{Verificato}$$

Rifollamento

e1 30 mm

p1 30 mm

e2 30 mm

p2 10000 mm

$$\alpha = \min \left\{ \frac{e_1}{3 \cdot d_0}; \frac{p_1}{3 \cdot d_0} - 1/4; \frac{f_{ub}}{f_u}; 1 \right\} \quad 0,46 \text{ a trazione}$$

$$\alpha = \min \left\{ \frac{e_2}{3 \cdot d_0}; \frac{p_2}{3 \cdot d_0} - 1/4; \frac{f_{ub}}{f_u}; 1 \right\} \quad 0,71 \text{ a taglio}$$

$$F_{bRd} = k \alpha f_{tk} d t / \gamma_{M2}$$

$$F_{bRd} = k \alpha f_{tk} d t / \gamma_{M2}$$

23400,00 N

36000,00 N

SN

V

$$\frac{F_{vSd}}{F_{bRd}} \leq 1$$

I.R: V 0,42 < 1

Verificato

$$\frac{F_{tSd}}{F_{bRd}} \leq 1$$

I.R: SN 0,00 < 1

Verificato

Basi della progettazione

Ancorante

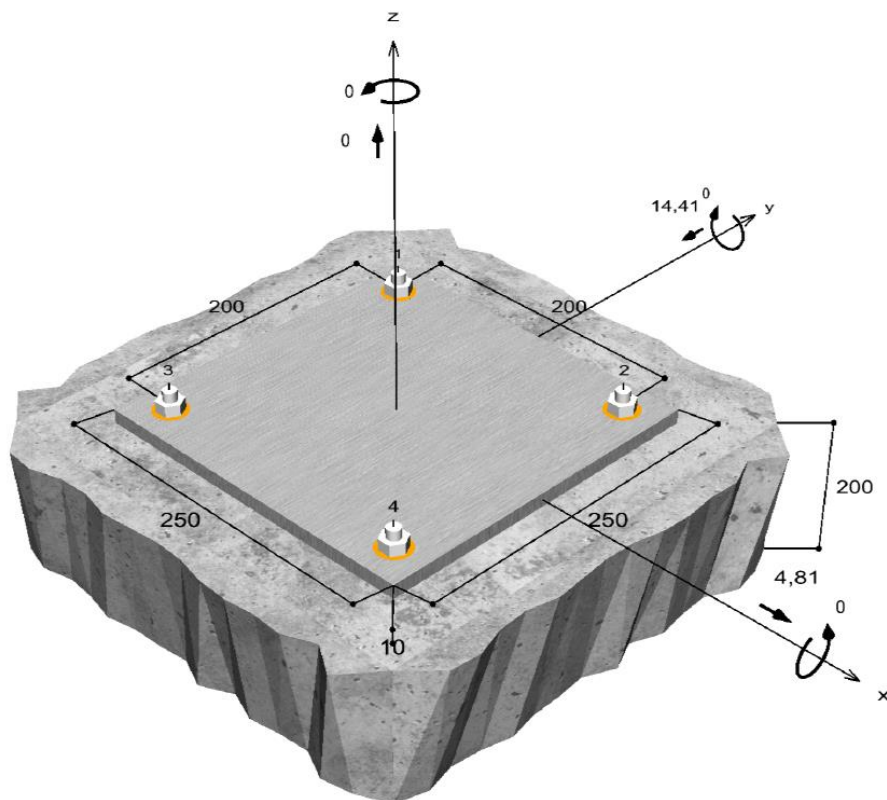
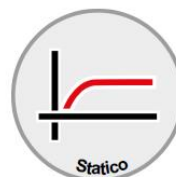
| | |
|--------------------------------|--|
| Sistema | fischer Sistema chimico a iniezione FIS EM |
| Ancorante chimico ad iniezione | FIS EM 390 S |
| Elemento di fissaggio | Barra filettata FIS A M 10 x 110, Acciaio zincato, Classe di resistenza 5.8 |
| Profondità di ancoraggio | 60 mm |
| Dati di progetto | Progettazione dell'ancorante in Calcestruzzo secondo Benestare ETA-10/0012, Opzione 1, Validità: 26/06/2013 - 26/06/2018 |



Geometria / Carichi

mm, kN, kNm

Valore di progetto delle azioni (sono inclusi i coefficienti parziali di sicurezza delle azioni)



| Ancorante n° | $\beta_{V,cp}$ % | Gruppo n° | Beta decisivo |
|--------------|---------------------|-----------|------------------|
| 1 | 12,1 | 1 | $\beta_{V,cp;1}$ |
| 2 | 12,1 | 2 | $\beta_{V,cp;2}$ |
| 3 | 12,1 | 3 | $\beta_{V,cp;3}$ |
| 4 | 12,1 | 4 | $\beta_{V,cp;4}$ |

Resistenza alla combinazione di trazione e taglio

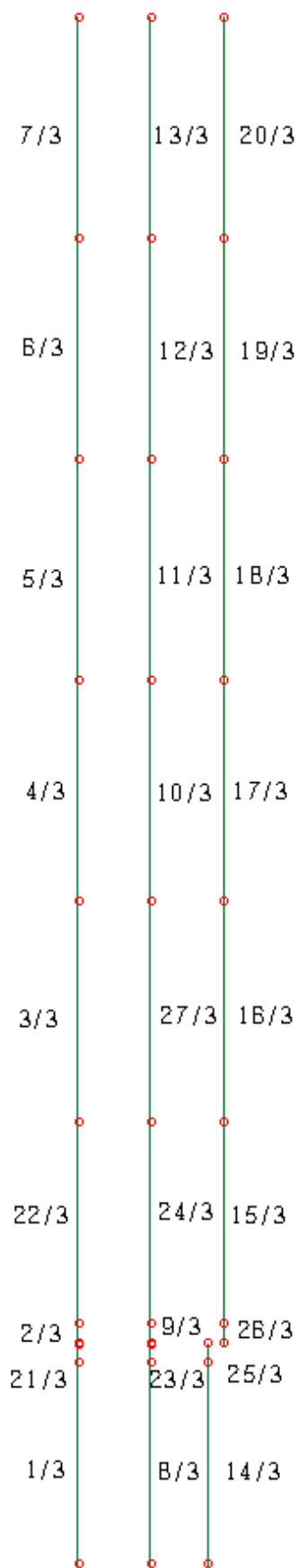
$$\beta_V = \beta_{Vs;1} = 0,32 \leq 1$$



Verifica soddisfatta

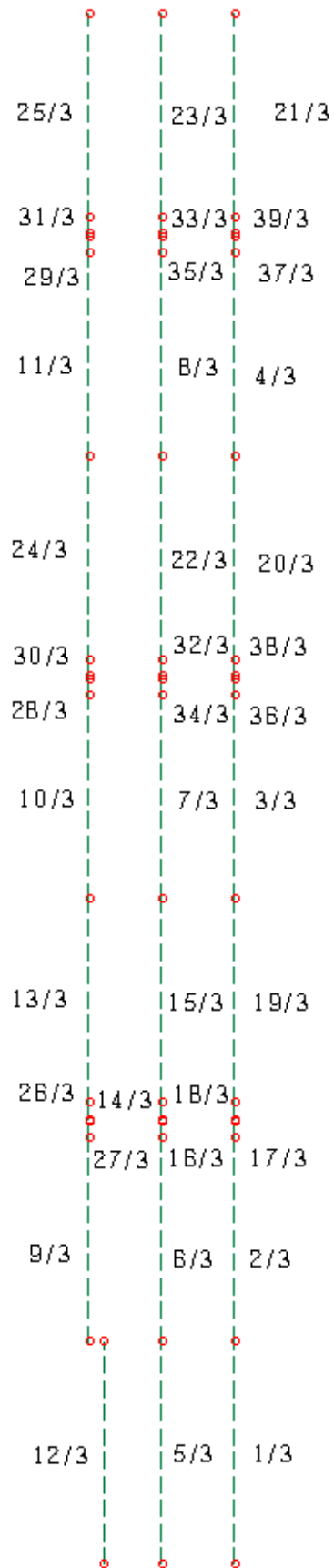
(5.9b)

3.2. VERIFICA TRAVI SECONDARIE

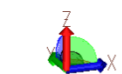
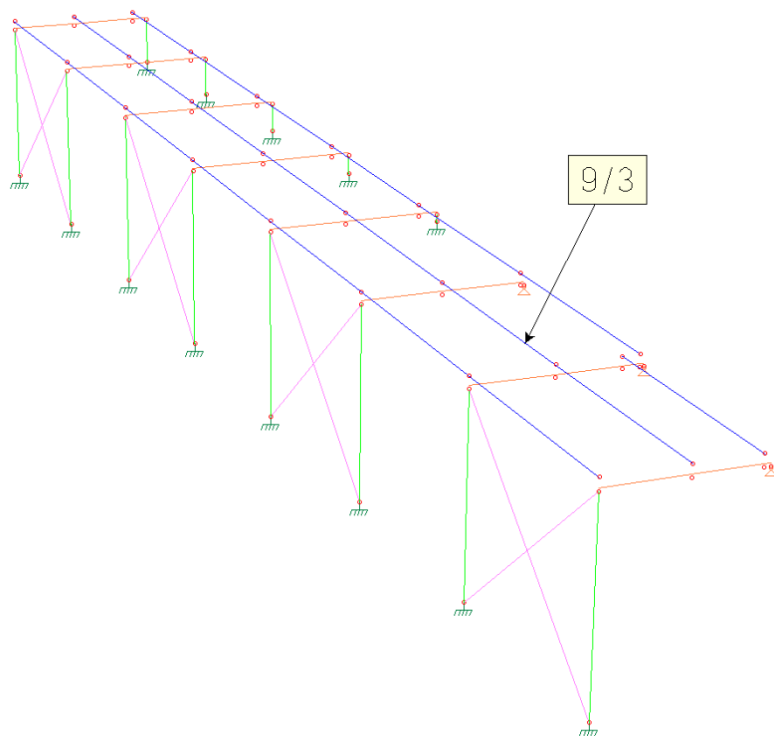


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Pianta travatura secondaria blocco 2 con indicato il codice degli elementi asta



Pianta travatura secondaria blocco 3 con indicato il codice degli elementi asta



Prospettiva

3.2.1. VERIFICA SLU E SLE

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Lavoro: **Blocco 2** Intestazione lavoro: **ESECUTIVO**

Elemento: **TRAVE** Metodo di verifica: **Stati limite**

Gruppo: **2** Descrizione: **Travi principali**

Tabella: **TABELLA TRAVI SECONDARIE**

Tipo acciaio: **S 235**

ASTA NUM. 34 NI 62 NF 63 Lungh. 432.0 cm SEZ. 4 Ps IPE 180

categoria: p.p. y qy tot.

qy medio: 0.1876 0.1876 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|-----|-----|-----|----|-------|----|------|---------|--------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cmq | | | | | | |
| 1 | 0 | -2 | 135 | 1 | 0 | 1 | -357 | 0.1 | 246.6 | 15.6 | 0.0 | 246.7 | 1 | |
| 5 | 0 | -28 | 62 | -0 | 0 | -1 | -90 | 1.2 | 63.9 | 7.2 | 0.0 | 65.0 | 1 | |
| 6 | 0 | 26 | 59 | -0 | 0 | -1 | -84 | 1.1 | 59.8 | 6.8 | 0.0 | 60.9 | 1 | |
| 7 | 0 | -28 | 62 | 1 | 0 | 1 | -87 | 1.2 | 63.6 | 7.1 | 0.0 | 64.7 | 1 | |
| 8 | 0 | 27 | 58 | 1 | 0 | 1 | -81 | 1.1 | 59.5 | 6.7 | 0.0 | 60.6 | 1 | |
| 9 | 0 | -92 | 86 | 0 | 0 | -0 | -130 | 3.9 | 88.9 | 9.9 | 0.0 | 92.8 | 1 | |
| 10 | 0 | 88 | 75 | 0 | 0 | -0 | -110 | 3.7 | 75.3 | 8.6 | 0.0 | 79.0 | 1 | |
| 11 | 0 | -92 | 86 | 0 | 0 | 0 | -129 | 3.9 | 90.4 | 9.9 | 0.0 | 94.2 | 1 | |
| 12 | 0 | 88 | 54 | 0 | 0 | 0 | -75 | 3.7 | 53.0 | 6.3 | 0.0 | 56.7 | 1 | |
| 13 | 0 | -2 | 122 | 1 | 0 | 1 | -297 | 0.1 | 205.2 | 14.0 | 0.0 | 205.3 | 1 | |
| 14 | 0 | 1 | 20 | -0 | 0 | -0 | 88 | 0.0 | 61.0 | 2.3 | 0.0 | 61.0 | 1 | |
| 15 | 0 | -2 | 125 | 1 | 0 | 1 | -310 | 0.1 | 214.2 | 14.3 | 0.0 | 214.3 | 1 | |
| 1 | 43 | -2 | 125 | 1 | 0 | 0 | -300 | 0.1 | 206.7 | 14.4 | 0.0 | 206.8 | 1 | |
| 5 | 43 | -28 | 54 | -0 | 0 | -0 | -64 | 1.2 | 46.3 | 6.3 | 0.0 | 47.5 | 1 | |
| 6 | 43 | 26 | 51 | -0 | 0 | -0 | -60 | 1.1 | 43.2 | 5.8 | 0.0 | 44.3 | 1 | |
| 7 | 43 | -28 | 54 | 1 | 0 | 1 | -62 | 1.2 | 45.5 | 6.2 | 0.0 | 46.6 | 1 | |
| 8 | 43 | 27 | 50 | 1 | 0 | 1 | -58 | 1.1 | 42.4 | 5.8 | 0.0 | 43.5 | 1 | |
| 9 | 43 | -92 | 76 | 0 | 0 | -0 | -95 | 3.9 | 65.3 | 8.7 | 0.0 | 69.1 | 1 | |
| 10 | 43 | 88 | 64 | 0 | 0 | -0 | -80 | 3.7 | 55.1 | 7.4 | 0.0 | 58.7 | 1 | |
| 11 | 43 | -92 | 76 | 0 | 0 | 0 | -94 | 3.9 | 65.8 | 8.7 | 0.0 | 69.6 | 1 | |
| 12 | 43 | 88 | 46 | 0 | 0 | 0 | -53 | 3.7 | 37.6 | 5.3 | 0.0 | 41.3 | 1 | |
| 13 | 43 | -2 | 111 | 1 | 0 | 0 | -246 | 0.1 | 169.6 | 12.8 | 0.0 | 169.7 | 1 | |
| 14 | 43 | 1 | 12 | -0 | 0 | -0 | 95 | 0.0 | 65.3 | 1.4 | 0.0 | 65.3 | 1 | |
| 15 | 43 | -2 | 114 | 1 | 0 | 0 | -258 | 0.1 | 177.7 | 13.1 | 0.0 | 177.8 | 1 | |
| 1 | 86 | -2 | 114 | 1 | 0 | -0 | -249 | 0.1 | 170.1 | 13.2 | 0.0 | 170.2 | 1 | |
| 5 | 86 | -28 | 46 | -0 | 0 | -0 | -43 | 1.2 | 31.1 | 5.3 | 0.0 | 32.3 | 1 | |
| 6 | 86 | 26 | 43 | -0 | 0 | -0 | -40 | 1.1 | 29.1 | 4.9 | 0.0 | 30.2 | 1 | |
| 7 | 86 | -28 | 46 | 1 | 0 | 0 | -41 | 1.2 | 29.8 | 5.3 | 0.0 | 30.9 | 1 | |
| 8 | 86 | 27 | 42 | 1 | 0 | 0 | -38 | 1.1 | 27.7 | 4.8 | 0.0 | 28.9 | 1 | |
| 9 | 86 | -92 | 65 | 0 | 0 | -0 | -65 | 3.9 | 44.7 | 7.5 | 0.0 | 48.6 | 1 | |
| 10 | 86 | 88 | 54 | 0 | 0 | -0 | -55 | 3.7 | 37.9 | 6.2 | 0.0 | 41.6 | 1 | |
| 11 | 86 | -92 | 65 | 0 | 0 | 0 | -64 | 3.9 | 44.3 | 7.5 | 0.0 | 48.2 | 1 | |
| 12 | 86 | 88 | 38 | 0 | 0 | 0 | -35 | 3.7 | 24.5 | 4.4 | 0.0 | 28.2 | 1 | |
| 13 | 86 | -2 | 100 | 1 | 0 | -0 | -201 | 0.1 | 137.3 | 11.6 | 0.0 | 137.4 | 1 | |
| 14 | 86 | 1 | 4 | -0 | 0 | 0 | 98 | 0.0 | 67.3 | 0.4 | 0.0 | 67.3 | 1 | |
| 15 | 86 | -2 | 103 | 1 | 0 | -0 | -211 | 0.1 | 144.4 | 11.9 | 0.0 | 144.5 | 1 | |
| 1 | 130 | -2 | 104 | 1 | 0 | -0 | -202 | 0.1 | 139.4 | 12.0 | 0.0 | 139.5 | 1 | |
| 5 | 130 | -28 | 38 | -0 | 0 | -0 | -25 | 1.2 | 18.3 | 4.4 | 0.0 | 19.5 | 1 | |
| 6 | 130 | 26 | 35 | -0 | 0 | -0 | -23 | 1.1 | 17.3 | 4.0 | 0.0 | 18.4 | 1 | |
| 7 | 130 | -28 | 37 | 1 | 0 | 0 | -23 | 1.2 | 16.5 | 4.3 | 0.0 | 17.6 | 1 | |
| 8 | 130 | 27 | 34 | 1 | 0 | 0 | -21 | 1.1 | 15.5 | 3.9 | 0.0 | 16.6 | 1 | |
| 9 | 130 | -92 | 55 | 0 | 0 | -0 | -39 | 3.9 | 27.3 | 6.3 | 0.0 | 31.2 | 1 | |
| 10 | 130 | 88 | 43 | 0 | 0 | -0 | -34 | 3.7 | 24.0 | 5.0 | 0.0 | 27.6 | 1 | |
| 11 | 130 | -92 | 55 | 0 | 0 | -0 | -38 | 3.9 | 26.3 | 6.3 | 0.0 | 30.1 | 1 | |
| 12 | 130 | 88 | 30 | 0 | 0 | -0 | -20 | 3.7 | 13.9 | 3.5 | 0.0 | 17.6 | 1 | |
| 13 | 130 | -2 | 90 | 1 | 0 | -0 | -160 | 0.1 | 110.5 | 10.4 | 0.0 | 110.5 | 1 | |
| 14 | 130 | 1 | -4 | -0 | 0 | 0 | 98 | 0.0 | 67.6 | 0.5 | 0.0 | 67.7 | 1 | |
| 15 | 130 | -2 | 93 | 1 | 0 | -0 | -169 | 0.1 | 116.8 | 10.7 | 0.0 | 116.8 | 1 | |
| 1 | 173 | -2 | 93 | 1 | 0 | -1 | -159 | 0.1 | 111.8 | 10.7 | 0.0 | 111.9 | 1 | |
| 5 | 173 | -28 | 30 | -0 | 0 | -0 | -10 | 1.2 | 8.0 | 3.5 | 0.0 | 9.1 | 1 | |
| 6 | 173 | 26 | 26 | -0 | 0 | -0 | -10 | 1.1 | 8.0 | 3.0 | 0.0 | 9.1 | 1 | |
| 7 | 173 | -28 | 29 | 1 | 0 | -0 | -8 | 1.2 | 6.0 | 3.4 | 0.0 | 7.9 | 3 | |
| 8 | 173 | 27 | 26 | 1 | 0 | -0 | -9 | 1.1 | 6.1 | 3.0 | 0.0 | 7.6 | 3 | |
| 9 | 173 | -92 | 44 | 0 | 0 | -0 | -17 | 3.9 | 13.0 | 5.1 | 0.0 | 16.8 | 1 | |
| 10 | 173 | 88 | 33 | 0 | 0 | -0 | -17 | 3.7 | 13.1 | 3.7 | 0.0 | 16.8 | 1 | |
| 11 | 173 | -92 | 44 | 0 | 0 | -0 | -17 | 3.9 | 12.4 | 5.1 | 0.0 | 16.3 | 1 | |
| 12 | 173 | 88 | 22 | 0 | 0 | -0 | -9 | 3.7 | 6.8 | 2.5 | 0.0 | 10.5 | 1 | |
| 13 | 173 | -2 | 79 | 1 | 0 | -1 | -123 | 0.1 | 86.7 | 9.1 | 0.0 | 86.8 | 1 | |
| 14 | 173 | 1 | -12 | -0 | 0 | 0 | 95 | 0.0 | 65.6 | 1.4 | 0.0 | 65.6 | 1 | |
| 15 | 173 | -2 | 82 | 1 | 0 | -1 | -131 | 0.1 | 92.2 | 9.5 | 0.0 | 92.3 | 1 | |
| 1 | 216 | -2 | 83 | 1 | 0 | -1 | -121 | 0.1 | 87.4 | 9.5 | 0.0 | 87.5 | 1 | |
| 5 | 216 | -28 | 22 | -0 | 0 | -0 | 1 | 1.2 | 1.7 | 2.5 | 0.0 | 4.5 | 4 | |
| 6 | 216 | 26 | 18 | -0 | 0 | -0 | -0 | 1.1 | 1.0 | 2.1 | 0.0 | 3.8 | 4 | |
| 7 | 216 | -28 | 21 | 1 | 0 | -0 | 2 | 1.2 | 3.0 | 2.5 | 0.0 | 4.4 | 4 | |
| 8 | 216 | 27 | 18 | 1 | 0 | -0 | 1 | 1.1 | 1.9 | 2.0 | 0.0 | 3.7 | 4 | |
| 9 | 216 | -92 | 34 | 0 | 0 | -0 | -0 | 3.9 | 1.8 | 3.9 | 0.0 | 7.8 | 4 | |
| 10 | 216 | 88 | 22 | 0 | 0 | -0 | -6 | 3.7 | 5.3 | 2.5 | 0.0 | 9.0 | 1 | |
| 11 | 216 | -92 | 33 | 0 | 0 | -0 | -0 | 3.9 | 1.7 | 3.9 | 0.0 | 7.8 | 4 | |
| 12 | 216 | 88 | 14 | 0 | 0 | -0 | -1 | 3.7 | 2.0 | 1.6 | 0.0 | 5.7 | 1 | |
| 13 | 216 | -2 | 69 | 1 | 0 | -1 | -91 | 0.1 | 66.1 | 7.9 | 0.0 | 66.2 | 1 | |
| 14 | 216 | 1 | -20 | -0 | 0 | 0 | 88 | 0.0 | 61.1 | 2.4 | 0.0 | 61.2 | 1 | |
| 15 | 216 | -2 | 72 | 1 | 0 | -1 | -98 | 0.1 | 70.8 | 8.3 | 0.0 | 70.8 | 1 | |
| 1 | 259 | -2 | 72 | 1 | 0 | -1 | -88 | 0.1 | 66.0 | 8.3 | 0.0 | 66.1 | 1 | |
| 5 | 259 | -28 | 14 | -0 | 0 | -0 | 9 | 1.2 | 6.6 | 1.6 | 0.0 | 7.8 | 1 | |
| 6 | 259 | 26 | 10 | -0 | 0 | -0 | 6 | 1.1 | 4.5 | 1.2 | 0.0 | 5.6 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-----|-----|----|---|----|-----|-----|------|-----|-----|------|---|
| 7 | 259 | -28 | 13 | 1 | 0 | -1 | 10 | 1.2 | 9.1 | 1.5 | 0.0 | 10.3 | 1 |
| 8 | 259 | 27 | 10 | 1 | 0 | -1 | 7 | 1.1 | 7.0 | 1.1 | 0.0 | 8.1 | 1 |
| 9 | 259 | -92 | 23 | 0 | 0 | -0 | 12 | 3.9 | 9.8 | 2.7 | 0.0 | 13.6 | 1 |
| 10 | 259 | 88 | 11 | 0 | 0 | -0 | 2 | 3.7 | 2.7 | 1.3 | 0.0 | 6.4 | 1 |
| 11 | 259 | -92 | 23 | 0 | 0 | -1 | 12 | 3.9 | 10.5 | 2.6 | 0.0 | 14.4 | 1 |
| 12 | 259 | 88 | 6 | 0 | 0 | -0 | 3 | 3.7 | 3.6 | 0.7 | 0.0 | 7.3 | 1 |
| 13 | 259 | -2 | 58 | 1 | 0 | -1 | -64 | 0.1 | 48.6 | 6.7 | 0.0 | 48.7 | 1 |
| 14 | 259 | 1 | -29 | -0 | 0 | 0 | 77 | 0.0 | 54.3 | 3.3 | 0.0 | 54.3 | 1 |
| 15 | 259 | -2 | 61 | 1 | 0 | -1 | -69 | 0.1 | 52.4 | 7.1 | 0.0 | 52.5 | 1 |
| | | | | | | | | | | | | | |
| 1 | 302 | -2 | 62 | 1 | 0 | -2 | -59 | 0.1 | 47.8 | 7.1 | 0.0 | 47.9 | 1 |
| 5 | 302 | -28 | 6 | -0 | 0 | -0 | 13 | 1.2 | 9.1 | 0.6 | 0.0 | 10.3 | 1 |
| 6 | 302 | 26 | 2 | -0 | 0 | -0 | 9 | 1.1 | 5.9 | 0.2 | 0.0 | 7.0 | 1 |
| 7 | 302 | -28 | 5 | 1 | 0 | -1 | 14 | 1.2 | 12.8 | 0.6 | 0.0 | 14.0 | 1 |
| 8 | 302 | 27 | 2 | 1 | 0 | -1 | 9 | 1.1 | 9.7 | 0.2 | 0.0 | 10.8 | 1 |
| 9 | 302 | -92 | 13 | 0 | 0 | -0 | 19 | 3.9 | 15.3 | 1.5 | 0.0 | 19.2 | 1 |
| 10 | 302 | 88 | 1 | 0 | 0 | -0 | 4 | 3.7 | 4.8 | 0.1 | 0.0 | 8.5 | 1 |
| 11 | 302 | -92 | 12 | 0 | 0 | -1 | 20 | 3.9 | 16.4 | 1.4 | 0.0 | 20.3 | 1 |
| 12 | 302 | 88 | -2 | 0 | 0 | -0 | 4 | 3.7 | 4.7 | 0.3 | 0.0 | 8.4 | 1 |
| 13 | 302 | -2 | 48 | 1 | 0 | -1 | -41 | 0.1 | 34.2 | 5.5 | 0.0 | 34.3 | 1 |
| 14 | 302 | 1 | -37 | -0 | 0 | 0 | 63 | 0.0 | 45.0 | 4.2 | 0.0 | 45.1 | 1 |
| 15 | 302 | -2 | 51 | 1 | 0 | -1 | -45 | 0.1 | 37.2 | 5.8 | 0.0 | 37.3 | 1 |
| | | | | | | | | | | | | | |
| 1 | 346 | -2 | 51 | 1 | 0 | -2 | -34 | 0.1 | 32.7 | 5.9 | 0.0 | 32.8 | 1 |
| 5 | 346 | -28 | -2 | -0 | 0 | 0 | 14 | 1.2 | 9.7 | 0.3 | 0.0 | 10.8 | 1 |
| 6 | 346 | 26 | -6 | -0 | 0 | 0 | 8 | 1.1 | 5.5 | 0.7 | 0.0 | 6.6 | 1 |
| 7 | 346 | -28 | -3 | 1 | 0 | -1 | 14 | 1.2 | 14.2 | 0.3 | 0.0 | 15.3 | 1 |
| 8 | 346 | 27 | -7 | 1 | 0 | -1 | 8 | 1.1 | 10.0 | 0.8 | 0.0 | 11.1 | 1 |
| 9 | 346 | -92 | 2 | 0 | 0 | -1 | 23 | 3.9 | 17.8 | 0.2 | 0.0 | 21.6 | 1 |
| 10 | 346 | 88 | -10 | 0 | 0 | -0 | 2 | 3.7 | 3.8 | 1.1 | 0.0 | 7.5 | 1 |
| 11 | 346 | -92 | 2 | 0 | 0 | -1 | 23 | 3.9 | 19.3 | 0.2 | 0.0 | 23.1 | 1 |
| 12 | 346 | 88 | -10 | 0 | 0 | -1 | 1 | 3.7 | 3.3 | 1.2 | 0.0 | 7.0 | 1 |
| 13 | 346 | -2 | 37 | 1 | 0 | -2 | -22 | 0.1 | 22.9 | 4.3 | 0.0 | 23.0 | 1 |
| 14 | 346 | 1 | -45 | -0 | 0 | 1 | 45 | 0.0 | 33.4 | 5.2 | 0.0 | 33.5 | 1 |
| 15 | 346 | -2 | 40 | 1 | 0 | -2 | -25 | 0.1 | 25.1 | 4.6 | 0.0 | 25.2 | 1 |
| | | | | | | | | | | | | | |
| 1 | 389 | -2 | 41 | 1 | 0 | -2 | -14 | 0.1 | 20.7 | 4.7 | 0.0 | 20.8 | 1 |
| 5 | 389 | -28 | -11 | -0 | 0 | 0 | 11 | 1.2 | 8.1 | 1.2 | 0.0 | 9.3 | 1 |
| 6 | 389 | 26 | -14 | -0 | 0 | 0 | 3 | 1.1 | 2.9 | 1.6 | 0.0 | 4.0 | 1 |
| 7 | 389 | -28 | -11 | 1 | 0 | -1 | 11 | 1.2 | 13.1 | 1.3 | 0.0 | 14.3 | 1 |
| 8 | 389 | 27 | -15 | 1 | 0 | -1 | 4 | 1.1 | 7.9 | 1.7 | 0.0 | 9.0 | 1 |
| 9 | 389 | -92 | -8 | 0 | 0 | -1 | 21 | 3.9 | 17.1 | 1.0 | 0.0 | 21.0 | 1 |
| 10 | 389 | 88 | -20 | 0 | 0 | -1 | -4 | 3.7 | 5.3 | 2.3 | 0.0 | 9.0 | 1 |
| 11 | 389 | -92 | -9 | 0 | 0 | -1 | 21 | 3.9 | 19.0 | 1.0 | 0.0 | 22.8 | 1 |
| 12 | 389 | 88 | -19 | 0 | 0 | -1 | -5 | 3.7 | 7.0 | 2.1 | 0.0 | 10.7 | 1 |
| 13 | 389 | -2 | 27 | 1 | 0 | -2 | -9 | 0.1 | 14.7 | 3.1 | 0.0 | 14.8 | 1 |
| 14 | 389 | 1 | -53 | -0 | 0 | 1 | 24 | 0.0 | 19.4 | 6.1 | 0.0 | 19.4 | 1 |
| 15 | 389 | -2 | 30 | 1 | 0 | -2 | -10 | 0.1 | 16.1 | 3.4 | 0.0 | 16.2 | 1 |
| | | | | | | | | | | | | | |
| 1 | 432 | -2 | 30 | 1 | 0 | -3 | 1 | 0.1 | 12.9 | 3.5 | 0.0 | 13.0 | 1 |
| 5 | 432 | -28 | -19 | -0 | 0 | 0 | 5 | 1.2 | 4.1 | 2.2 | 0.0 | 5.3 | 1 |
| 6 | 432 | 26 | -22 | -0 | 0 | 0 | -4 | 1.1 | 4.0 | 2.6 | 0.0 | 5.2 | 3 |
| 7 | 432 | -28 | -19 | 1 | 0 | -1 | 5 | 1.2 | 9.7 | 2.2 | 0.0 | 10.9 | 1 |
| 8 | 432 | 27 | -23 | 1 | 0 | -1 | -4 | 1.1 | 9.6 | 2.6 | 0.0 | 10.7 | 1 |
| 9 | 432 | -92 | -19 | 0 | 0 | -1 | 15 | 3.9 | 13.3 | 2.2 | 0.0 | 17.2 | 1 |
| 10 | 432 | 88 | -31 | 0 | 0 | -1 | -15 | 3.7 | 13.1 | 3.5 | 0.0 | 16.8 | 1 |
| 11 | 432 | -92 | -19 | 0 | 0 | -1 | 15 | 3.9 | 15.6 | 2.2 | 0.0 | 19.4 | 1 |
| 12 | 432 | 88 | -27 | 0 | 0 | -1 | -15 | 3.7 | 14.2 | 3.1 | 0.0 | 17.9 | 1 |
| 13 | 432 | -2 | 16 | 1 | 0 | -2 | 1 | 0.1 | 10.5 | 1.9 | 0.0 | 10.6 | 1 |
| 14 | 432 | 1 | -61 | -0 | 0 | 1 | -0 | 0.0 | 3.5 | 7.0 | 0.0 | 12.2 | 4 |
| 15 | 432 | -2 | 19 | 1 | 0 | -2 | 1 | 0.1 | 11.1 | 2.2 | 0.0 | 11.2 | 1 |

ASTA NUM. 35 NI 61 NF 64 Lungh. 432.0 cm SEZ. 4 Ps IPE 180

categoria: p.p. y qy tot.

qy medio: 0.1876 0.1876 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf(Fx) | Sf(M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|----|----|-------|----|----|---------|-------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cmq | | | | | | |
| 1 | 0 | -0 | 53 | 1 | 0 | 0 | -1 | 0.0 | 2.1 | 6.1 | 0.0 | 10.5 | 4 | |
| 5 | 0 | 255 | 40 | -0 | 0 | -0 | 1 | 10.7 | 2.4 | 4.6 | 0.0 | 13.4 | 4 | |
| 6 | 0 | -254 | 42 | -0 | 0 | -0 | -1 | 10.6 | 2.7 | 4.8 | 0.0 | 13.5 | 4 | |
| 7 | 0 | 255 | 40 | 0 | 0 | 1 | 1 | 10.7 | 3.2 | 4.6 | 0.0 | 13.8 | 1 | |

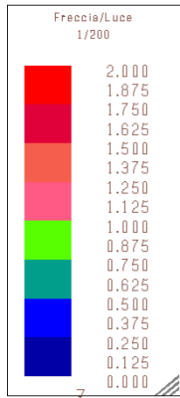
REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|-----|----|---|----|----|------|------|-----|-----|------|---|
| 8 | 0 | -255 | 42 | 0 | 0 | 1 | -1 | 10.7 | 3.4 | 4.8 | 0.0 | 14.1 | 1 |
| 9 | 0 | 848 | 49 | 0 | 0 | -0 | 4 | 35.5 | 2.6 | 5.7 | 0.0 | 38.5 | 3 |
| 10 | 0 | -847 | 56 | 0 | 0 | -0 | -4 | 35.5 | 3.0 | 6.4 | 0.0 | 39.1 | 3 |
| 11 | 0 | 848 | 49 | 0 | 0 | 0 | 4 | 35.5 | 3.6 | 5.7 | 0.0 | 39.1 | 1 |
| 12 | 0 | -848 | 44 | 0 | 0 | 0 | -4 | 35.5 | 3.8 | 5.0 | 0.0 | 39.3 | 1 |
| 13 | 0 | -0 | 53 | 1 | 0 | 0 | -1 | 0.0 | 1.7 | 6.1 | 0.0 | 10.5 | 4 |
| 14 | 0 | -1 | 41 | -0 | 0 | -0 | 0 | 0.1 | 0.6 | 4.7 | 0.0 | 8.1 | 4 |
| 15 | 0 | -0 | 53 | 1 | 0 | 0 | -1 | 0.0 | 1.8 | 6.1 | 0.0 | 10.5 | 4 |
| | | | | | | | | | | | | | |
| 1 | 43 | -0 | 42 | 1 | 0 | 0 | 20 | 0.0 | 13.6 | 4.9 | 0.0 | 13.9 | 3 |
| 5 | 43 | 255 | 31 | -0 | 0 | -0 | 16 | 10.7 | 12.7 | 3.6 | 0.0 | 23.4 | 1 |
| 6 | 43 | -254 | 33 | -0 | 0 | -0 | 15 | 10.6 | 11.7 | 3.8 | 0.0 | 22.3 | 1 |
| 7 | 43 | 255 | 31 | 0 | 0 | 0 | 16 | 10.7 | 12.8 | 3.6 | 0.0 | 23.4 | 1 |
| 8 | 43 | -255 | 33 | 0 | 0 | 0 | 15 | 10.7 | 11.7 | 3.8 | 0.0 | 22.4 | 1 |
| 9 | 43 | 848 | 39 | 0 | 0 | -0 | 23 | 35.5 | 16.0 | 4.5 | 0.0 | 51.5 | 1 |
| 10 | 43 | -847 | 45 | 0 | 0 | -0 | 18 | 35.5 | 12.5 | 5.2 | 0.0 | 48.0 | 1 |
| 11 | 43 | 848 | 39 | 0 | 0 | 0 | 23 | 35.5 | 16.1 | 4.5 | 0.0 | 51.5 | 1 |
| 12 | 43 | -848 | 36 | 0 | 0 | 0 | 13 | 35.5 | 9.4 | 4.1 | 0.0 | 44.9 | 1 |
| 13 | 43 | -0 | 42 | 1 | 0 | 0 | 20 | 0.0 | 13.7 | 4.9 | 0.0 | 14.0 | 3 |
| 14 | 43 | -1 | 32 | -0 | 0 | -0 | 16 | 0.1 | 11.0 | 3.7 | 0.0 | 11.2 | 3 |
| 15 | 43 | -0 | 42 | 1 | 0 | 0 | 20 | 0.0 | 13.7 | 4.9 | 0.0 | 14.0 | 3 |
| | | | | | | | | | | | | | |
| 1 | 86 | -0 | 32 | 1 | 0 | -0 | 36 | 0.0 | 25.7 | 3.6 | 0.0 | 25.7 | 1 |
| 5 | 86 | 255 | 23 | -0 | 0 | -0 | 28 | 10.7 | 20.6 | 2.7 | 0.0 | 31.3 | 1 |
| 6 | 86 | -254 | 25 | -0 | 0 | -0 | 28 | 10.6 | 20.1 | 2.9 | 0.0 | 30.8 | 1 |
| 7 | 86 | 255 | 23 | 0 | 0 | 0 | 28 | 10.7 | 20.0 | 2.7 | 0.0 | 30.6 | 1 |
| 8 | 86 | -255 | 25 | 0 | 0 | 0 | 28 | 10.7 | 19.5 | 2.9 | 0.0 | 30.2 | 1 |
| 9 | 86 | 848 | 28 | 0 | 0 | -0 | 37 | 35.5 | 26.2 | 3.3 | 0.0 | 61.7 | 1 |
| 10 | 86 | -847 | 35 | 0 | 0 | -0 | 35 | 35.5 | 24.7 | 4.0 | 0.0 | 60.1 | 1 |
| 11 | 86 | 848 | 28 | 0 | 0 | -0 | 37 | 35.5 | 25.6 | 3.3 | 0.0 | 61.1 | 1 |
| 12 | 86 | -848 | 28 | 0 | 0 | 0 | 27 | 35.5 | 18.3 | 3.2 | 0.0 | 53.7 | 1 |
| 13 | 86 | -0 | 32 | 1 | 0 | -0 | 36 | 0.0 | 25.5 | 3.6 | 0.0 | 25.5 | 1 |
| 14 | 86 | -1 | 24 | -0 | 0 | 0 | 28 | 0.1 | 19.6 | 2.8 | 0.0 | 19.7 | 1 |
| 15 | 86 | -0 | 32 | 1 | 0 | -0 | 36 | 0.0 | 25.6 | 3.6 | 0.0 | 25.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 130 | -0 | 21 | 1 | 0 | -1 | 47 | 0.0 | 34.9 | 2.4 | 0.0 | 34.9 | 1 |
| 5 | 130 | 255 | 15 | -0 | 0 | -0 | 36 | 10.7 | 26.1 | 1.8 | 0.0 | 36.8 | 1 |
| 6 | 130 | -254 | 17 | -0 | 0 | -0 | 37 | 10.6 | 26.2 | 2.0 | 0.0 | 36.8 | 1 |
| 7 | 130 | 255 | 15 | 0 | 0 | -0 | 37 | 10.7 | 25.1 | 1.8 | 0.0 | 35.7 | 1 |
| 8 | 130 | -255 | 17 | 0 | 0 | -0 | 37 | 10.7 | 25.2 | 2.0 | 0.0 | 35.9 | 1 |
| 9 | 130 | 848 | 18 | 0 | 0 | -0 | 47 | 35.5 | 33.4 | 2.1 | 0.0 | 68.8 | 1 |
| 10 | 130 | -847 | 24 | 0 | 0 | -0 | 48 | 35.5 | 33.7 | 2.8 | 0.0 | 69.2 | 1 |
| 11 | 130 | 848 | 18 | 0 | 0 | -0 | 47 | 35.5 | 33.0 | 2.1 | 0.0 | 68.5 | 1 |
| 12 | 130 | -848 | 19 | 0 | 0 | -0 | 37 | 35.5 | 25.7 | 2.2 | 0.0 | 61.2 | 1 |
| 13 | 130 | -0 | 21 | 1 | 0 | -0 | 47 | 0.0 | 34.5 | 2.4 | 0.0 | 34.5 | 1 |
| 14 | 130 | -1 | 16 | -0 | 0 | 0 | 37 | 0.1 | 25.9 | 1.9 | 0.0 | 26.0 | 1 |
| 15 | 130 | -0 | 21 | 1 | 0 | -1 | 47 | 0.0 | 34.6 | 2.4 | 0.0 | 34.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 173 | -0 | 11 | 1 | 0 | -1 | 54 | 0.0 | 41.0 | 1.2 | 0.0 | 41.0 | 1 |
| 5 | 173 | 255 | 7 | -0 | 0 | -0 | 41 | 10.7 | 29.2 | 0.8 | 0.0 | 39.9 | 1 |
| 6 | 173 | -254 | 9 | -0 | 0 | -0 | 42 | 10.6 | 29.9 | 1.0 | 0.0 | 40.5 | 1 |
| 7 | 173 | 255 | 7 | 0 | 0 | -0 | 41 | 10.7 | 29.3 | 0.8 | 0.0 | 39.9 | 1 |
| 8 | 173 | -255 | 9 | 0 | 0 | -0 | 42 | 10.7 | 29.9 | 1.0 | 0.0 | 40.6 | 1 |
| 9 | 173 | 848 | 7 | 0 | 0 | -0 | 53 | 35.5 | 37.4 | 0.8 | 0.0 | 72.9 | 1 |
| 10 | 173 | -847 | 14 | 0 | 0 | -0 | 56 | 35.5 | 39.7 | 1.6 | 0.0 | 75.2 | 1 |
| 11 | 173 | 848 | 7 | 0 | 0 | -0 | 53 | 35.5 | 37.4 | 0.8 | 0.0 | 72.9 | 1 |
| 12 | 173 | -848 | 11 | 0 | 0 | -0 | 44 | 35.5 | 30.7 | 1.3 | 0.0 | 66.2 | 1 |
| 13 | 173 | -0 | 11 | 1 | 0 | -1 | 54 | 0.0 | 40.3 | 1.2 | 0.0 | 40.4 | 1 |
| 14 | 173 | -1 | 8 | -0 | 0 | 0 | 42 | 0.1 | 29.9 | 0.9 | 0.0 | 29.9 | 1 |
| 15 | 173 | -0 | 11 | 1 | 0 | -1 | 54 | 0.0 | 40.5 | 1.2 | 0.0 | 40.5 | 1 |
| | | | | | | | | | | | | | |
| 1 | 216 | -0 | 0 | 1 | 0 | -1 | 56 | 0.0 | 44.0 | 0.1 | 0.0 | 44.0 | 1 |
| 5 | 216 | 255 | -1 | -0 | 0 | -0 | 43 | 10.7 | 29.9 | 0.1 | 0.0 | 40.6 | 1 |
| 6 | 216 | -254 | 1 | -0 | 0 | -0 | 45 | 10.6 | 31.2 | 0.1 | 0.0 | 41.8 | 1 |
| 7 | 216 | 255 | -1 | 0 | 0 | -0 | 43 | 10.7 | 31.0 | 0.1 | 0.0 | 41.7 | 1 |
| 8 | 216 | -255 | 1 | 0 | 0 | -0 | 45 | 10.7 | 32.3 | 0.1 | 0.0 | 43.0 | 1 |
| 9 | 216 | 848 | -3 | 0 | 0 | -0 | 54 | 35.5 | 38.3 | 0.4 | 0.0 | 73.8 | 1 |
| 10 | 216 | -847 | 3 | 0 | 0 | -0 | 60 | 35.5 | 42.5 | 0.4 | 0.0 | 78.0 | 1 |
| 11 | 216 | 848 | -3 | 0 | 0 | -0 | 54 | 35.5 | 38.6 | 0.4 | 0.0 | 74.1 | 1 |
| 12 | 216 | -848 | 3 | 0 | 0 | -0 | 47 | 35.5 | 33.4 | 0.4 | 0.0 | 68.9 | 1 |
| 13 | 216 | -0 | 0 | 1 | 0 | -1 | 56 | 0.0 | 43.1 | 0.1 | 0.0 | 43.1 | 1 |
| 14 | 216 | -1 | -0 | -0 | 0 | 0 | 44 | 0.1 | 31.4 | 0.0 | 0.0 | 31.5 | 1 |
| 15 | 216 | -0 | 0 | 1 | 0 | -1 | 56 | 0.0 | 43.3 | 0.1 | 0.0 | 43.3 | 1 |
| | | | | | | | | | | | | | |
| 1 | 259 | -0 | -11 | 1 | 0 | -2 | 54 | 0.0 | 43.9 | 1.2 | 0.0 | 43.9 | 1 |
| 5 | 259 | 255 | -9 | -0 | 0 | -0 | 40 | 10.7 | 28.2 | 1.0 | 0.0 | 38.9 | 1 |
| 6 | 259 | -254 | -7 | -0 | 0 | -0 | 43 | 10.6 | 30.1 | 0.8 | 0.0 | 40.7 | 1 |
| 7 | 259 | 255 | -9 | 0 | 0 | -1 | 40 | 10.7 | 30.4 | 1.0 | 0.0 | 41.1 | 1 |
| 8 | 259 | -255 | -7 | 0 | 0 | -1 | 43 | 10.7 | 32.3 | 0.8 | 0.0 | 42.9 | 1 |
| 9 | 259 | 848 | -14 | 0 | 0 | -0 | 50 | 35.5 | 36.1 | 1.6 | 0.0 | 71.6 | 1 |
| 10 | 259 | -847 | -7 | 0 | 0 | -0 | 59 | 35.5 | 42.3 | 0.8 | 0.0 | 77.7 | 1 |
| 11 | 259 | 848 | -14 | 0 | 0 | -1 | 50 | 35.5 | 36.8 | 1.6 | 0.0 | 72.2 | 1 |
| 12 | 259 | -848 | -5 | 0 | 0 | -0 | 46 | 35.5 | 33.7 | 0.6 | 0.0 | 69.1 | 1 |
| 13 | 259 | -0 | -11 | 1 | 0 | -1 | 54 | 0.0 | 42.7 | 1.2 | 0.0 | 42.7 | 1 |
| 14 | 259 | -1 | -8 | -0 | 0 | 0 | 42 | 0.1 | 30.6 | 0.9 | 0.0 | 30.7 | 1 |
| 15 | 259 | -0 | -11 | 1 | 0 | -1 | 54 | 0.0 | 43.0 | 1.2 | 0.0 | 43.0 | 1 |
| | | | | | | | | | | | | | |
| 1 | 302 | -0 | -21 | 1 | 0 | -2 | 47 | 0.0 | 40.7 | 2.4 | 0.0 | 40.7 | 1 |
| 5 | 302 | 255 | -17 | -0 | 0 | -0 | 35 | 10.7 | 24.2 | 2.0 | 0.0 | 34.9 | 1 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|-----|----|---|----|-----|------|------|-----|-----|------|---|
| 6 | 302 | -254 | -15 | -0 | 0 | -0 | 38 | 10.6 | 26.6 | 1.8 | 0.0 | 37.2 | 1 |
| 7 | 302 | 255 | -17 | 0 | 0 | -1 | 35 | 10.7 | 27.4 | 2.0 | 0.0 | 38.1 | 1 |
| 8 | 302 | -255 | -15 | 0 | 0 | -1 | 38 | 10.7 | 29.8 | 1.8 | 0.0 | 40.5 | 1 |
| 9 | 302 | 848 | -24 | 0 | 0 | -1 | 42 | 35.5 | 30.8 | 2.8 | 0.0 | 66.3 | 1 |
| 10 | 302 | -847 | -18 | 0 | 0 | -1 | 54 | 35.5 | 38.9 | 2.1 | 0.0 | 74.3 | 1 |
| 11 | 302 | 848 | -24 | 0 | 0 | -1 | 42 | 35.5 | 31.8 | 2.8 | 0.0 | 67.2 | 1 |
| 12 | 302 | -848 | -13 | 0 | 0 | -1 | 43 | 35.5 | 31.5 | 1.5 | 0.0 | 67.0 | 1 |
| 13 | 302 | -0 | -21 | 1 | 0 | -2 | 47 | 0.0 | 39.3 | 2.4 | 0.0 | 39.3 | 1 |
| 14 | 302 | -1 | -16 | -0 | 0 | 0 | 37 | 0.1 | 27.4 | 1.9 | 0.0 | 27.4 | 1 |
| 15 | 302 | -0 | -21 | 1 | 0 | -2 | 47 | 0.0 | 39.6 | 2.4 | 0.0 | 39.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 346 | -0 | -32 | 1 | 0 | -2 | 36 | 0.0 | 34.4 | 3.6 | 0.0 | 34.4 | 1 |
| 5 | 346 | 255 | -25 | -0 | 0 | -0 | 26 | 10.7 | 17.7 | 2.9 | 0.0 | 28.4 | 1 |
| 6 | 346 | -254 | -23 | -0 | 0 | -0 | 30 | 10.6 | 20.7 | 2.7 | 0.0 | 31.3 | 1 |
| 7 | 346 | 255 | -25 | 0 | 0 | -1 | 26 | 10.7 | 22.0 | 2.9 | 0.0 | 32.7 | 1 |
| 8 | 346 | -255 | -23 | 0 | 0 | -1 | 30 | 10.7 | 25.0 | 2.7 | 0.0 | 35.7 | 1 |
| 9 | 346 | 848 | -35 | 0 | 0 | -1 | 29 | 35.5 | 22.4 | 4.0 | 0.0 | 57.9 | 1 |
| 10 | 346 | -847 | -28 | 0 | 0 | -1 | 44 | 35.5 | 32.4 | 3.3 | 0.0 | 67.8 | 1 |
| 11 | 346 | 848 | -35 | 0 | 0 | -1 | 29 | 35.5 | 23.7 | 4.0 | 0.0 | 59.1 | 1 |
| 12 | 346 | -848 | -21 | 0 | 0 | -1 | 35 | 35.5 | 27.0 | 2.4 | 0.0 | 62.5 | 1 |
| 13 | 346 | -0 | -32 | 1 | 0 | -2 | 36 | 0.0 | 32.7 | 3.6 | 0.0 | 32.7 | 1 |
| 14 | 346 | -1 | -24 | -0 | 0 | 1 | 28 | 0.1 | 21.7 | 2.8 | 0.0 | 21.8 | 1 |
| 15 | 346 | -0 | -32 | 1 | 0 | -2 | 36 | 0.0 | 33.1 | 3.6 | 0.0 | 33.1 | 1 |
| | | | | | | | | | | | | | |
| 1 | 389 | -0 | -42 | 1 | 0 | -3 | 20 | 0.0 | 24.9 | 4.9 | 0.0 | 24.9 | 1 |
| 5 | 389 | 255 | -33 | -0 | 0 | 0 | 13 | 10.7 | 8.9 | 3.8 | 0.0 | 19.6 | 1 |
| 6 | 389 | -254 | -31 | -0 | 0 | 0 | 18 | 10.6 | 12.5 | 3.6 | 0.0 | 23.1 | 1 |
| 7 | 389 | 255 | -33 | 0 | 0 | -1 | 13 | 10.7 | 14.2 | 3.8 | 0.0 | 24.9 | 1 |
| 8 | 389 | -255 | -31 | 0 | 0 | -1 | 18 | 10.7 | 17.8 | 3.6 | 0.0 | 28.5 | 1 |
| 9 | 389 | 848 | -45 | 0 | 0 | -1 | 12 | 35.5 | 10.9 | 5.2 | 0.0 | 46.3 | 1 |
| 10 | 389 | -847 | -39 | 0 | 0 | -1 | 29 | 35.5 | 22.8 | 4.5 | 0.0 | 58.2 | 1 |
| 11 | 389 | 848 | -45 | 0 | 0 | -1 | 12 | 35.5 | 12.5 | 5.2 | 0.0 | 47.9 | 1 |
| 12 | 389 | -848 | -29 | 0 | 0 | -1 | 24 | 35.5 | 20.1 | 3.4 | 0.0 | 55.6 | 1 |
| 13 | 389 | -0 | -42 | 1 | 0 | -2 | 20 | 0.0 | 23.0 | 4.9 | 0.0 | 23.0 | 1 |
| 14 | 389 | -1 | -32 | -0 | 0 | 1 | 16 | 0.1 | 13.7 | 3.7 | 0.0 | 13.8 | 1 |
| 15 | 389 | -0 | -42 | 1 | 0 | -2 | 20 | 0.0 | 23.5 | 4.9 | 0.0 | 23.5 | 1 |
| | | | | | | | | | | | | | |
| 1 | 432 | -0 | -53 | 1 | 0 | -3 | -1 | 0.0 | 13.3 | 6.1 | 0.0 | 13.3 | 1 |
| 5 | 432 | 255 | -42 | -0 | 0 | 0 | -3 | 10.7 | 2.4 | 4.8 | 0.0 | 14.2 | 3 |
| 6 | 432 | -254 | -40 | -0 | 0 | 0 | 3 | 10.6 | 2.2 | 4.6 | 0.0 | 13.9 | 3 |
| 7 | 432 | 255 | -42 | 0 | 0 | -1 | -3 | 10.7 | 8.4 | 4.8 | 0.0 | 19.1 | 1 |
| 8 | 432 | -255 | -40 | 0 | 0 | -1 | 3 | 10.7 | 8.2 | 4.6 | 0.0 | 18.9 | 1 |
| 9 | 432 | 848 | -56 | 0 | 0 | -1 | -10 | 35.5 | 10.3 | 6.4 | 0.0 | 45.8 | 1 |
| 10 | 432 | -847 | -49 | 0 | 0 | -1 | 10 | 35.5 | 10.1 | 5.7 | 0.0 | 45.5 | 1 |
| 11 | 432 | 848 | -56 | 0 | 0 | -1 | -10 | 35.5 | 12.3 | 6.4 | 0.0 | 47.7 | 1 |
| 12 | 432 | -848 | -37 | 0 | 0 | -1 | 10 | 35.5 | 10.8 | 4.3 | 0.0 | 46.3 | 1 |
| 13 | 432 | -0 | -53 | 1 | 0 | -2 | -1 | 0.0 | 10.9 | 6.1 | 0.0 | 10.9 | 1 |
| 14 | 432 | -1 | -41 | -0 | 0 | 1 | 0 | 0.1 | 3.3 | 4.7 | 0.0 | 8.1 | 4 |
| 15 | 432 | -0 | -53 | 1 | 0 | -2 | -1 | 0.0 | 11.5 | 6.1 | 0.0 | 11.5 | 1 |

Freccia/luce



Prospettiva

Risulta quindi verificata lo spostamento veritcale

3.2.2. VERIFICA NODO TRAVE SECONDARIA – TRAVE PRINCIPALE

Si considera lo SN massimo pari a 2225 daN.

Ogni bullone quindi deve resistere a taglio 11125 N

Bulloneria – classe vite 8.8

| | | | | |
|------------------|--|-------------------|-----------------------------------|----------------------|
| p | 2 | mm | passo della filettatura | |
| f _{tb} | 800 | N/mm ² | Resistenza a rottura per trazione | |
| A _{res} | 157 | mm ² | Area resistente del bullone | |
| d | 16 | mm | Diametro | |
| γ _{M7} | 1,1 | | | |
| k | 0,2 | | fattore k | |
| F _{p,C} | $0,7 \cdot f_{ub} \cdot A_s / \gamma_{M7}$ | 80 | kN | Forza di precarico |
| Ms | $k \cdot d \cdot F_{pC}$ | 256 | N m | Momento di serraggio |

Durante la fase di montaggio delle strutture metalliche il direttore dei lavori dovrà correggere il momento di serraggio del bullone in funzione del valore k che è riportato sulla confezione dei bulloni come prescritto nel C.4.2.8.1.1

4.2.8.1.1

Unioni con bulloni o chiodi soggette a taglio e/o a trazione

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| | | |
|---------------|-------|-------------------|
| f_{tk} | 360 | N/mm ² |
| t_p | 5 | mm |
| γ_{M2} | 1,25 | |
| d_m | 14,70 | mm |
| d_0 | 16,00 | mm |

$$F_{tRd} = \frac{0,9 f_{tb} A_{res}}{\gamma_{M2}} \quad 90432 \text{ N}$$

$$B_{pRd} = 0,6 \pi d_m t_p f_{tk} \gamma_{M2} \quad 62349 \text{ N}$$

$$F_{vRd} = \frac{0,6 f_{tb} A_{res}}{\gamma_{M2}} \quad 60288 \text{ N} \quad \text{per ogni piano di taglio}$$

| | | | |
|---------------------------|-------|---|-----------------------|
| SN | 0 | N | sforzo normale totale |
| V | 11125 | N | taglio totale |
| Numero bulloni | | 1 | |
| Numero sezioni resistenti | | 1 | |
| Fvsd | 11125 | N | |
| Ftsd | 0 | N | |

$$\frac{F_{vSd}}{F_{vRd}} + \frac{F_{tSd}}{1,4 \cdot F_{tRd}} \leq 1$$

0,12 < 1

Verificato

Rifollamento

e1 30 mm
p1 30 mm
e2 30 mm
10000

p2 mm

$$\alpha = \min \left\{ \frac{e_1}{3 \cdot d_0}; \frac{p_1}{3 \cdot d_0} - 1/4; \frac{f_{ub}}{f_u}; 1 \right\}$$

0,38 a trazione

$$\alpha = \min \left\{ \frac{e_2}{3 \cdot d_0}; \frac{p_2}{3 \cdot d_0} - 1/4; \frac{f_{ub}}{f_u}; 1 \right\}$$

0,63 a taglio

$$F_{bRd} = k \alpha f_{tk} d t / \gamma_{M2}$$

$$F_{bRd} = k \alpha f_{tk} d t / \gamma_{M2}$$

21600,00 N

SN

36000,00 N

V

I.R: $\frac{F_{vSd}}{F_{bRd}} \leq 1$

0,31 < 1

Verificato

I.R: $\frac{F_{tSd}}{F_{bRd}} \leq 1$

0,00 < 1

Verificato

3.3. VERIFICA TRAVI PORTA LAMIERA ORRIZONTALE

Si dimensiona il profilo che sorregge la lamiera orizzontale.

Peso proprio lamiera = 8 daN / m²

Spinta orizzontale vento = 61 daN / m²

Luce massima = 4.32 m

Interasse massimo = 1.33 m

Area di influenza = 1.33 / 2 = 0.665 m

Si considera la trave semplicemente appoggiata

SLU

$M_{orizzontale} = q l^2 / 8 = 142 \text{ daN m}$

$M_{verticale} = q l^2 / 8 = 16.13 \text{ daN m}$

Intestazione:

Intestazione:

Metodo di verifica: **Stati limite**

Tipologia tabella: **Trave**

Tipo acciaio: **S 235**

Beta piano 'yx': **1.000**

Beta piano 'zx': **1.000**

Coeff. svergolamento: **1.000**

SEZ. Pf OMEGA 80x 80x30x 4.0

| Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Tens.max | Loc. | Nota |
|-----|----|----|-------|----|-----|---------|--------|--------|-------|--------|----------|------|------|
| daN | | | daN*m | | | daN/cm | | | | | | | |
| 0 | 0 | 0 | 0 | 16 | 142 | 0.0 | 702.2 | 0.0 | 0.0 | 702.2 | 1600.0 | 4 | |

Verifica di STABILITA', Lungh. 432.0 cm

| Fx | My eq. | Mz eq. | Sn. omega | Sn.yx | Sn.zx | Q | OMEGA | Sf | Tens.max | Nota |
|-----|--------|--------|-----------|-------|-------|------|-------|--------|----------|------|
| daN | daN*m | | | | | | | daN/cm | | |
| 0 | 0 | 0 | 145 | 145 | 114 | 1.00 | 1.00 | 0.0 | 2395.5 | |

3.5. VERIFICA LAMIERA DI COPERTURA

Si dimensiona il profilo che sorregge la lamiera orizzontale.

Azioni permanenti (cap 2.1)

20 daN / m²

Azioni variabili:

Vento = 96 daN / m²

Neve = 172 daN / m²

Manutenzione = 50 daN / m²

Luce massima = 1.42 m

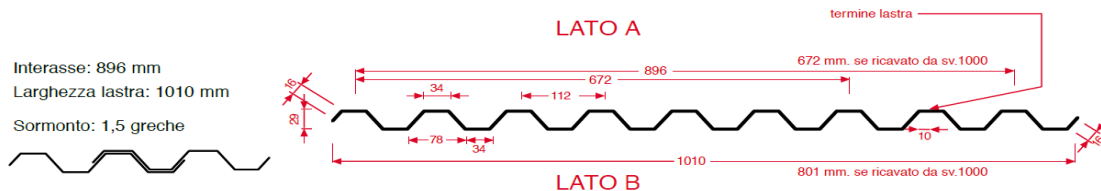
VERIFICA SLU

SLU neve = $96 \cdot 1.5 \cdot 0.6 + 172 \cdot 1.5 + 20 \cdot 1.3 = 370$ daN / m²

SLU vento = $96 \cdot 1.5 + 172 \cdot 0.5 \cdot 1.5 + 20 \cdot 1.3 = 299$ daN / m²

SLU manutenzione = $96 \cdot 1.5 \cdot 0.6 + 172 \cdot 1.5 \cdot 0.5 + 50 \cdot 1.5 + 20 \cdot 1.3 = 316$ daN / m²

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| CARATTERISTICHE GEOMETRICHE E CARICHI | | | | | | | | | | | |
|---|---------------------------|--------------------------|--------------------------|--|--------------|------|------|------|------|------|------|
| ALLUMINIO 3103 | | | | | | | | | | | |
| CARATTERISTICHE GEOMETRICHE DELLA SEZIONE | | | | CARICO UTILE MASSIMO kg/m ² (compreso peso proprio) | | | | | | | |
| Spessore mm | Peso (kg/m ²) | Jxx (cm ⁴ /m) | Wxx (cm ³ /m) | Spessore mm | Interasse mt | | | | | | |
| | | | | | 1,00 | 1,20 | 1,40 | 1,60 | 1,80 | 2,00 | 2,20 |
| 0,6 | 2,04 | 8,67 | 5,35 | 0,6 | 388 | 225 | 142 | 95 | 67 | 49 | 36 |
| 0,7 | 2,38 | 10,52 | 6,63 | 0,7 | 472 | 273 | 172 | 115 | 81 | 59 | 44 |
| 0,8 | 2,73 | 12,32 | 7,85 | 0,8 | 552 | 319 | 201 | 135 | 95 | 69 | 52 |
| 1,0 | 3,41 | 16,23 | 10,65 | 1,0 | 727 | 421 | 265 | 177 | 125 | 91 | 68 |

| ACCIAIO (Fe360 - ALUZINC - INOX) | | | | | | | | | | | |
|---|---------------------------|--------------------------|--------------------------|--|--------------|------|------|------|------|------|------|
| CARATTERISTICHE GEOMETRICHE DELLA SEZIONE | | | | CARICO UTILE MASSIMO kg/m ² (compreso peso proprio) | | | | | | | |
| Spessore mm | Peso (kg/m ²) | Jxx (cm ⁴ /m) | Wxx (cm ³ /m) | Spessore mm | Interasse mt | | | | | | |
| | | | | | 1,00 | 1,25 | 1,50 | 1,75 | 2,00 | 2,25 | 2,50 |
| 0,5 | 4,93 | 7,80 | 5,02 | 0,5 | 1048 | 537 | 311 | 196 | 131 | 92 | 67 |
| 0,6 | 5,92 | 9,74 | 6,41 | 0,6 | 1309 | 670 | 388 | 244 | 164 | 115 | 84 |
| 0,7 | 6,91 | 11,69 | 7,84 | 0,7 | 1573 | 805 | 466 | 293 | 197 | 138 | 101 |
| 0,8 | 7,89 | 13,41 | 9,00 | 0,8 | 1804 | 924 | 534 | 337 | 225 | 158 | 115 |

Il carico utile massimo con una luce di 1,50 è maggiore del carico allo SLU massimo. Risulta quindi compatibile la lamiera grecata utilizzata con i carichi applicati.

SBALZO MASSIMO

Utilizzeremo un fattore di sicurezza pari a 1,5. Tale valore sottostima la resistenza del materiale di calcolo in maniera significativa dato che di solito tale valore viene utilizzato per il calcestruzzo dove l'aleatorietà del lavoro in cantiere è molto grande. In questo caso il pannello è eseguito in stabilimenti dove il controllo sulla qualità è molto elevata.

$$15 \times 1,3 + 15 \times 1,5 + 300 \times 1,5 = 492 \text{ kg/mq} = 492 \text{ kg/ml}$$

$$l = 0.6 \text{ m}$$

$$M_{sd} = 1/8 q l^2 = 373 \text{ Ncm}$$

$$W_{el} = b \cdot h^2 / 6 = 900 \text{ mm}^3$$

$$f_d = 2.35 / 1.5 = 1.57 \text{ N/mm}^2$$

$$M_{rd} = W_{el} f_d / \gamma = 900 \times 1.57 / 1,05 = 1346 \text{ Nmm}$$

$$M_{rd} > M_{sd} : 1346 \text{ Nmm} > 373 \text{ Nmm verificato}$$

Verifica a taglio

Si considera il materiale isotropo

La forza di taglio agente è 2952 N

$$f_{yk} = 2.35 / 1.5 = 1.57 \text{ N/mm}^2$$

$$V_{c,Rd} = \frac{A_v \cdot f_{yk}}{\sqrt{3} \cdot \gamma_{M0}}$$

$$\text{Area } 1012 \text{ mm}^2$$

$$V_{c,Rd} = 1012 \cdot 1.57 / 1.732 \cdot 1.5 = 611.56 \text{ N}$$

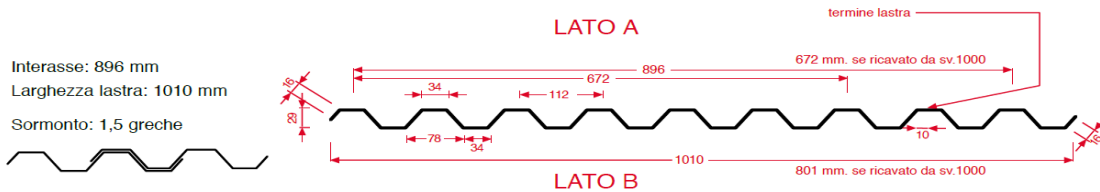
$$I.R. = 0.1 < 1 \text{ verificato}$$

VERIFICA SLE -> RARA

$$SLE_{neve} = 96 \cdot 0.6 + 172 + 20 = 250 \text{ daN / m}^2$$

$$SLE_{vento} = 96 + 172 \cdot 0.5 + 20 = 202 \text{ daN / m}^2$$

$$\text{SLE manutenzione} = 96 \cdot 0.6 + 172 \cdot 0.5 + 50 + 20 = 214 \text{ daN} / \text{m}^2$$



| CARATTERISTICHE GEOMETRICHE E CARICHI | | | | | | | | | | | |
|---|---------------------------|--------------------------|--------------------------|--|--------------|------|------|------|------|------|------|
| ALLUMINIO 3103 | | | | | | | | | | | |
| CARATTERISTICHE GEOMETRICHE DELLA SEZIONE | | | | CARICO UTILE MASSIMO kg/m ² (compreso peso proprio) | | | | | | | |
| Spessore mm | Peso (kg/m ²) | Jxx (cm ⁴ /m) | Wxx (cm ³ /m) | Spessore mm | Interasse mt | | | | | | |
| | | | | | 1,00 | 1,20 | 1,40 | 1,60 | 1,80 | 2,00 | 2,20 |
| 0,6 | 2,04 | 8,67 | 5,35 | 0,6 | 388 | 225 | 142 | 95 | 67 | 49 | 36 |
| 0,7 | 2,38 | 10,52 | 6,63 | 0,7 | 472 | 273 | 172 | 115 | 81 | 59 | 44 |
| 0,8 | 2,73 | 12,32 | 7,85 | 0,8 | 552 | 319 | 201 | 135 | 95 | 69 | 52 |
| 1,0 | 3,41 | 16,23 | 10,65 | 1,0 | 727 | 421 | 265 | 177 | 125 | 91 | 68 |

| ACCIAIO (Fe360 - ALUZINC - INOX) | | | | | | | | | | | |
|---|---------------------------|--------------------------|--------------------------|--|--------------|------|------|------|------|------|------|
| CARATTERISTICHE GEOMETRICHE DELLA SEZIONE | | | | CARICO UTILE MASSIMO kg/m ² (compreso peso proprio) | | | | | | | |
| Spessore mm | Peso (kg/m ²) | Jxx (cm ⁴ /m) | Wxx (cm ³ /m) | Spessore mm | Interasse mt | | | | | | |
| | | | | | 1,00 | 1,25 | 1,50 | 1,75 | 2,00 | 2,25 | 2,50 |
| 0,5 | 4,93 | 7,80 | 5,02 | 0,5 | 1048 | 537 | 311 | 196 | 131 | 92 | 67 |
| 0,6 | 5,92 | 9,74 | 6,41 | 0,6 | 1309 | 670 | 388 | 244 | 164 | 115 | 84 |
| 0,7 | 6,91 | 11,69 | 7,84 | 0,7 | 1573 | 805 | 466 | 293 | 197 | 138 | 101 |
| 0,8 | 7,89 | 13,41 | 9,00 | 0,8 | 1804 | 924 | 534 | 337 | 225 | 158 | 115 |

Stati limite di esercizio gli spostamenti verticali (frecce) secondo 4.2.4.2 , secondo tab. 4.2.X

Si verifica lo spostamento δ_{\max} nello stato finale per tutti i carichi, inferiore a $1/250 L$, e δ_2 , dovuto ai carichi variabili, inferiore a $1/300L$.

- Carichi complessivi: $96+20+172 = 288 \text{ kg/ml} = 2.88 \text{ kg/cm}$

$$E = 1980000 \text{ daN/cm}^2$$

$$J = 13.41 \text{ cm}^2/\text{m}$$

$$f = 0.0054 q L^4 / EJ = 0.0054 \cdot 2.88 \cdot 142^4 / 2100000 \cdot 13.41 = 0,20 \text{ cm}$$

$$f_{\lim} = 1/250 L = 0,64$$

$$0,20 < 0,64 \text{ verificato}$$

- Carichi variabili: $96+172 = 268 \text{ kg/ml} = 2.68 \text{ kg/cm}$

$$f = 0.0054 q L^4 / EJ = 0.0054 \cdot 2.68 \cdot 142^4 / 2100000 \cdot 60,12 = 0,18 \text{ cm}$$

$$f_{\lim} = 1/300 L = 0.47$$

$$0,18 < 0,47 \text{ verificato}$$

3.1. VERIFICA CONTROVENTO M10

Tutte le istruzioni, in particolare i valori statici, si riferiscono al sistema HALFEN.

Le capacità portanti dei prodotti apparentemente simili, ma non HALFEN, possono deviare in modo significativo e portare a sovraccarichi e danni.

HALFEN GmbH non garantisce per prodotti di terzi.

Norma : Certific. prodotto ETA - 05 / 0207 (NAD Italy)

Materiale : S 355 ; $\gamma_{M1} = 1,05$, $\gamma_{M2} = 1,25$; Finitura : grezzo

$f_{y,k} = 355 \text{ N/mm}^2$; $f_{u,k} = 510 \text{ N/mm}^2$; E-Modul = 210.000 N/mm^2

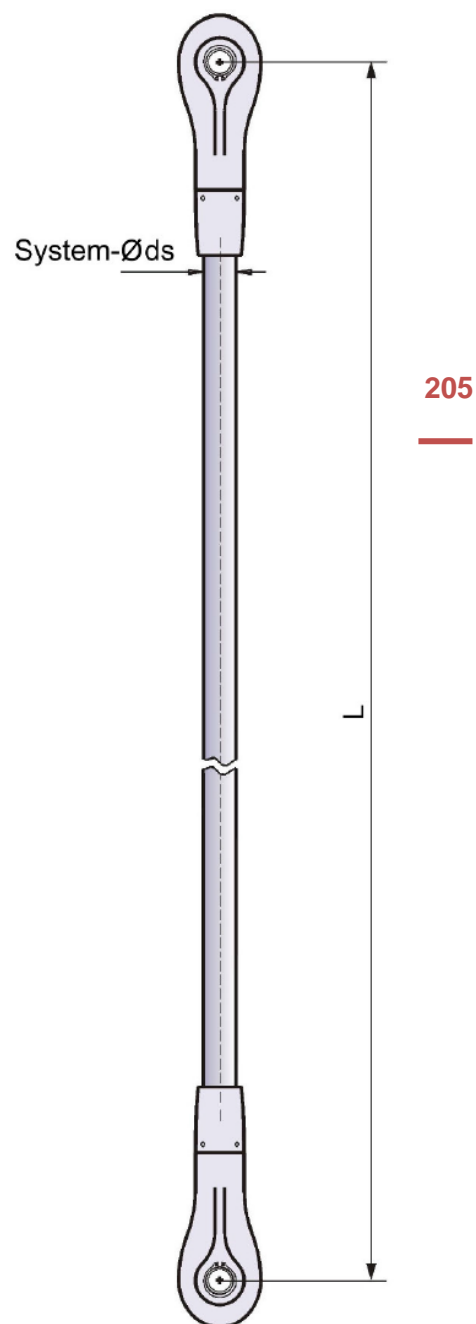
Forza di trazione : $N_{S,d} = 12,70 \text{ kN}$; $\gamma_f = 1,00$; $N_{z,d} = 12,70 \text{ kN}$

Lunghezza del sistema $L = 1.000 \text{ mm}$

Forchetta : M10 ; System - $\varnothing ds = 10 \text{ mm}$

Carico effettivo : $N_{R,d} = 21,28 \text{ kN}$

Carico 59,68 %

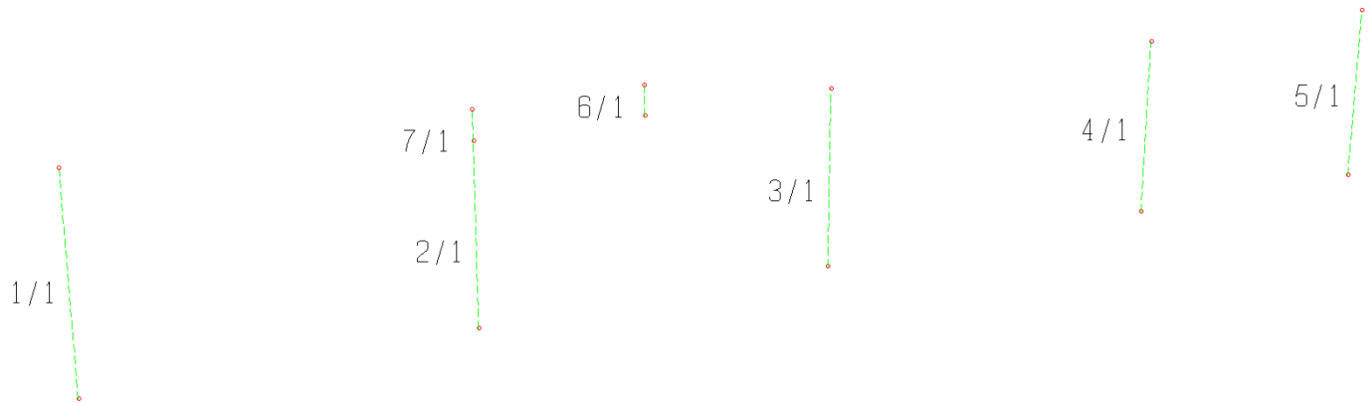


Verifica angolare

L'angolare è il medesimo del controvento M12. Avendo maggiori sollecitazioni M12 risulta verificato il nodo con il controvento M10

4. CORPO 4

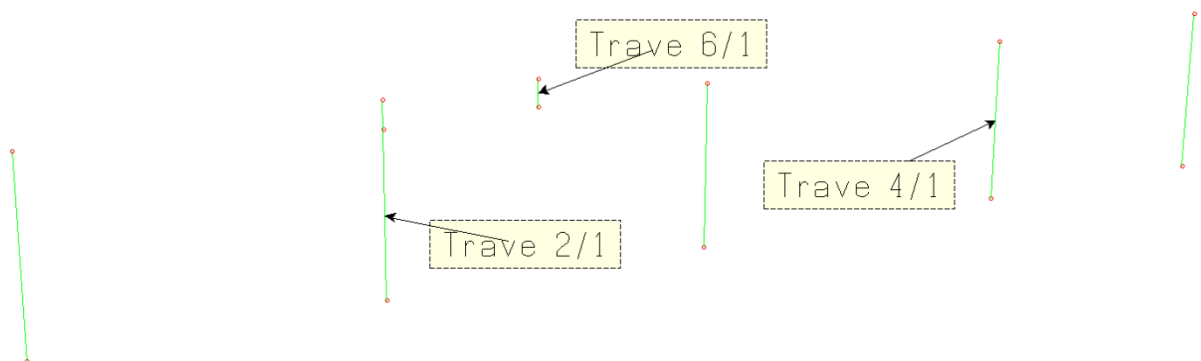
4.1. VERIFICA COLONNE IN ACCIAIO



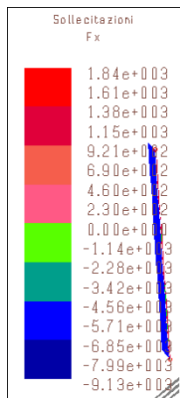
Prospettiva

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Vista assonometrica colonne corpo 4 con indicato il codice degli elementi asta



Prospettiva



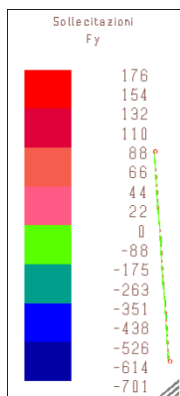
Max=9 129



Prospettiva

Sforzo normale

208

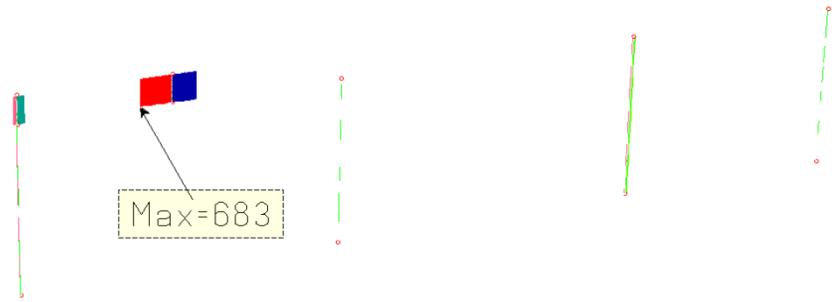
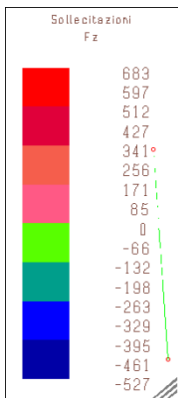


Max=701



Prospettiva

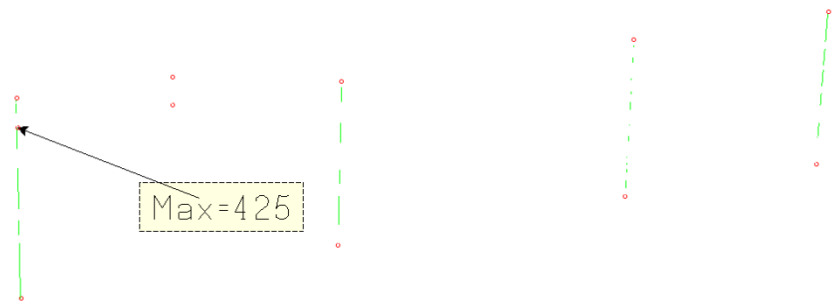
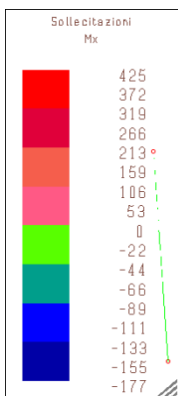
Taglio Fy



Prospettiva

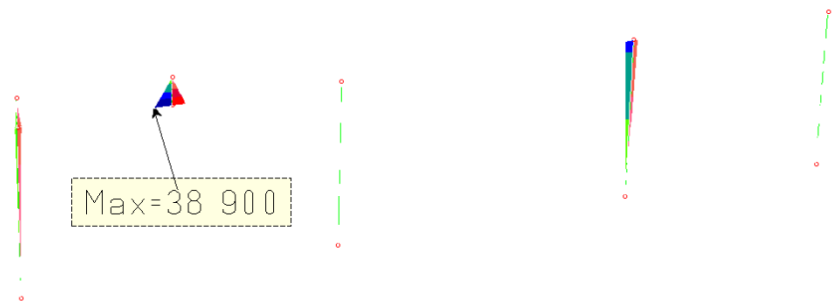
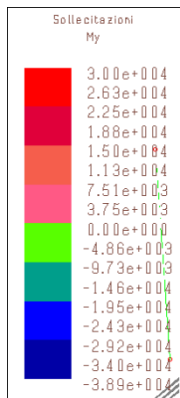
Taglio Fz

209



Prospettiva

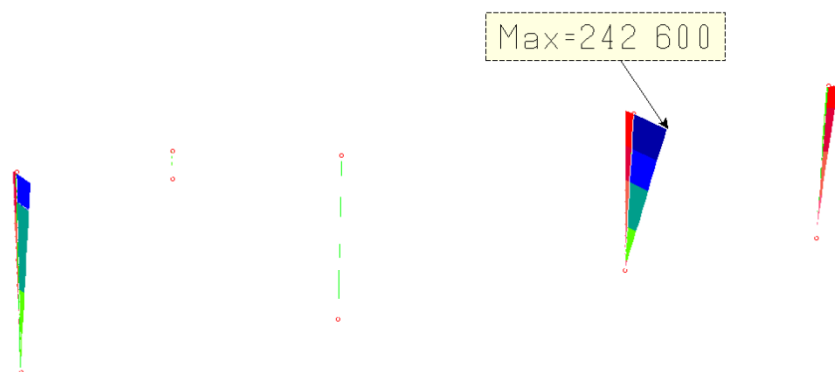
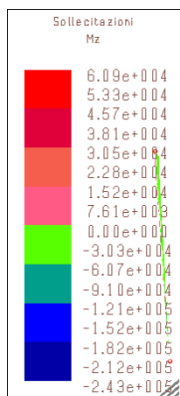
Momento torcente



Prospettiva

Momento My

210



Prospettiva

Colonne Mz

4.1.1. VERIFICA SLU E SLE

Lavoro: **BLOCCO 4** Intestazione lavoro: **ESECUTIVO**

Elemento: **TRAVE** Metodo di verifica: **Stati limite**

Gruppo: **1** Descrizione: **colonne acciaio**

Tabella: **Tabella pilastri**

Tipo acciaio: **S 235** Beta piano 'yx': **2.000** Beta piano 'zx': **2.000**
ASTA NUM. 2 NI 47 NF 116 Lungh. 346.0 cm SEZ. 6 Ps HEB 160

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf(Fx) | Sf(M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|-----|-------|------|-----|-------|-----|-------|--------|-------|--------|-------|--------|------|------|
| -- | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -9129 | -355 | 21 | 0 | 0 | 0 | 168.1 | 0.0 | 30.4 | 0.0 | 176.2 | 4 | |
| 5 | 0 | -3563 | -78 | 28 | 0 | 0 | 0 | 65.6 | 0.0 | 6.7 | 0.0 | 66.6 | 4 | |
| 6 | 0 | -3560 | -81 | 28 | 0 | 0 | 0 | 65.6 | 0.0 | 6.9 | 0.0 | 66.7 | 4 | |
| 7 | 0 | -2527 | -79 | -13 | 0 | 0 | 0 | 46.5 | 0.0 | 6.8 | 0.0 | 48.0 | 4 | |
| 8 | 0 | -2522 | -82 | -13 | 0 | 0 | 0 | 46.4 | 0.0 | 7.0 | 0.0 | 48.0 | 4 | |
| 9 | 0 | -3719 | -109 | 15 | 0 | 0 | 0 | 68.5 | 0.0 | 9.3 | 0.0 | 70.4 | 4 | |
| 10 | 0 | -3708 | -117 | 16 | 0 | 0 | 0 | 68.3 | 0.0 | 10.1 | 0.0 | 70.5 | 4 | |
| 11 | 0 | -3443 | -109 | 2 | 0 | 0 | 0 | 63.4 | 0.0 | 9.3 | 0.0 | 65.4 | 4 | |
| 12 | 0 | -2478 | -85 | 1 | 0 | 0 | 0 | 45.6 | 0.0 | 7.2 | 0.0 | 47.3 | 4 | |
| 13 | 0 | -7686 | -294 | 18 | 0 | 0 | 0 | 141.5 | 0.0 | 25.2 | 0.0 | 148.1 | 4 | |
| 14 | 0 | 1694 | 97 | -2 | 0 | 0 | 0 | 31.2 | 0.0 | 8.3 | 0.0 | 34.4 | 4 | |
| 15 | 0 | -7999 | -307 | 19 | 0 | 0 | 0 | 147.3 | 0.0 | 26.3 | 0.0 | 154.2 | 4 | |
| 1 | 173 | -9033 | -355 | 21 | 0 | -37 | -615 | 166.4 | 230.3 | 30.4 | 0.0 | 396.6 | 1 | |
| 5 | 173 | -3490 | -78 | 28 | 0 | -48 | -136 | 64.3 | 86.8 | 6.7 | 0.0 | 151.0 | 1 | |
| 6 | 173 | -3486 | -81 | 28 | 0 | -48 | -140 | 64.2 | 88.5 | 6.9 | 0.0 | 152.7 | 1 | |
| 7 | 173 | -2453 | -79 | -13 | 0 | 23 | -137 | 45.2 | 64.9 | 6.8 | 0.0 | 110.0 | 1 | |
| 8 | 173 | -2449 | -82 | -13 | 0 | 23 | -141 | 45.1 | 66.0 | 7.0 | 0.0 | 111.1 | 1 | |
| 9 | 173 | -3623 | -109 | 15 | 0 | -26 | -188 | 66.7 | 84.2 | 9.3 | 0.0 | 150.9 | 1 | |
| 10 | 173 | -3613 | -117 | 16 | 0 | -27 | -203 | 66.5 | 89.8 | 10.1 | 0.0 | 156.3 | 1 | |
| 11 | 173 | -3348 | -109 | 2 | 0 | -4 | -189 | 61.6 | 64.4 | 9.3 | 0.0 | 126.0 | 1 | |
| 12 | 173 | -2405 | -85 | 1 | 0 | -1 | -146 | 44.3 | 48.0 | 7.2 | 0.0 | 92.3 | 1 | |
| 13 | 173 | -7590 | -294 | 18 | 0 | -31 | -509 | 139.8 | 191.6 | 25.2 | 0.0 | 331.4 | 1 | |
| 14 | 173 | 1768 | 97 | -2 | 0 | 4 | 168 | 32.6 | 57.2 | 8.3 | 0.0 | 89.8 | 1 | |
| 15 | 173 | -7904 | -307 | 19 | 0 | -32 | -532 | 145.6 | 200.0 | 26.3 | 0.0 | 345.6 | 1 | |
| 1 | 346 | -8937 | -355 | 21 | 0 | -73 | -1229 | 164.6 | 460.5 | 30.4 | 0.0 | 625.1 | 1 | |
| 5 | 346 | -3416 | -78 | 28 | 0 | -96 | -271 | 62.9 | 173.6 | 6.7 | 0.0 | 236.5 | 1 | |
| 6 | 346 | -3412 | -81 | 28 | 0 | -97 | -280 | 62.8 | 176.9 | 6.9 | 0.0 | 239.8 | 1 | |
| 7 | 346 | -2379 | -79 | -13 | 0 | 46 | -274 | 43.8 | 129.7 | 6.8 | 0.0 | 173.5 | 1 | |
| 8 | 346 | -2375 | -82 | -13 | 0 | 46 | -283 | 43.7 | 132.1 | 7.0 | 0.0 | 175.8 | 1 | |
| 9 | 346 | -3527 | -109 | 15 | 0 | -53 | -376 | 65.0 | 168.4 | 9.3 | 0.0 | 233.4 | 1 | |
| 10 | 346 | -3517 | -117 | 16 | 0 | -55 | -406 | 64.8 | 179.6 | 10.1 | 0.0 | 244.3 | 1 | |
| 11 | 346 | -3252 | -109 | 2 | 0 | -9 | -377 | 59.9 | 128.8 | 9.3 | 0.0 | 188.7 | 1 | |
| 12 | 346 | -2331 | -85 | 1 | 0 | -2 | -293 | 42.9 | 96.1 | 7.2 | 0.0 | 139.0 | 1 | |
| 13 | 346 | -7494 | -294 | 18 | 0 | -63 | -1018 | 138.0 | 383.1 | 25.2 | 0.0 | 521.2 | 1 | |
| 14 | 346 | 1841 | 97 | -2 | 0 | 7 | 336 | 33.9 | 114.5 | 8.3 | 0.0 | 148.4 | 1 | |
| 15 | 346 | -7808 | -307 | 19 | 0 | -65 | -1064 | 143.8 | 400.0 | 26.3 | 0.0 | 543.8 | 1 | |

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Verifica di STABILITA' e/o SVERGOLAMENTO

| n.comb | Fx | My eq. | Mz eq. | Sn. omega | Sn. yx | Sn. zx | OMEGA | OMEGA1 | Sf | Nota |
|--------|-------|--------|--------|-----------|--------|--------|-------|--------|--------|-------------|
| -- | daN | daN*m | | | | | | | daN/cm | |
| 1 | -9129 | 44 | 737 | 172 | 103 | 172 | 4.35 | 1.00 | 1042.3 | Sn.zx > 150 |
| 5 | -3563 | 58 | 163 | 172 | 103 | 172 | 4.35 | 1.00 | 396.7 | Sn.zx > 150 |
| 6 | -3560 | 58 | 168 | 172 | 103 | 172 | 4.35 | 1.00 | 398.6 | Sn.zx > 150 |
| 7 | -2527 | 28 | 164 | 172 | 103 | 172 | 4.35 | 1.00 | 283.3 | Sn.zx > 150 |
| 8 | -2522 | 28 | 170 | 172 | 103 | 172 | 4.35 | 1.00 | 284.4 | Sn.zx > 150 |
| 9 | -3719 | 32 | 226 | 172 | 103 | 172 | 4.35 | 1.00 | 404.7 | Sn.zx > 150 |
| 10 | -3708 | 33 | 244 | 172 | 103 | 172 | 4.35 | 1.00 | 410.8 | Sn.zx > 150 |
| 11 | -3443 | 5 | 226 | 172 | 103 | 172 | 4.35 | 1.00 | 356.0 | Sn.zx > 150 |
| 12 | -2478 | 1 | 176 | 172 | 103 | 172 | 4.35 | 1.00 | 257.6 | Sn.zx > 150 |
| 13 | -7686 | 38 | 611 | 172 | 103 | 172 | 4.35 | 1.00 | 869.4 | Sn.zx > 150 |
| 14 | 1841 | 4 | 201 | 172 | 103 | 172 | 1.00 | 1.00 | 102.6 | Sn.zx > 150 |
| 15 | -7999 | 39 | 638 | 172 | 103 | 172 | 4.35 | 1.00 | 906.8 | Sn.zx > 150 |

ASTA NUM. 4 NI 30 NF 110 Lungh. 346.0 cm SEZ. 6 Ps HEB 160

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf(Fx) | Sf(M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|-----|-------|------|-----|-------|------|-------|--------|-------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -8180 | -701 | -35 | 0 | 0 | 0 | 150.6 | 0.0 | 60.1 | 0.0 | 183.1 | 4 | |
| 5 | 0 | -2214 | -166 | 36 | 0 | 0 | 0 | 40.8 | 0.0 | 14.2 | 0.0 | 47.6 | 4 | |
| 6 | 0 | -2215 | -167 | 36 | 0 | 0 | 0 | 40.8 | 0.0 | 14.3 | 0.0 | 47.7 | 4 | |
| 7 | 0 | -3950 | -166 | -62 | 0 | 0 | 0 | 72.7 | 0.0 | 14.2 | 0.0 | 76.8 | 4 | |
| 8 | 0 | -3949 | -166 | -62 | 0 | 0 | 0 | 72.7 | 0.0 | 14.3 | 0.0 | 76.8 | 4 | |
| 9 | 0 | -3155 | -232 | -2 | 0 | 0 | 0 | 58.1 | 0.0 | 19.9 | 0.0 | 67.5 | 4 | |
| 10 | 0 | -3159 | -235 | -2 | 0 | 0 | 0 | 58.2 | 0.0 | 20.2 | 0.0 | 67.8 | 4 | |
| 11 | 0 | -3677 | -232 | -32 | 0 | 0 | 0 | 67.7 | 0.0 | 19.9 | 0.0 | 76.0 | 4 | |
| 12 | 0 | -2797 | -168 | -28 | 0 | 0 | 0 | 51.5 | 0.0 | 14.4 | 0.0 | 57.2 | 4 | |
| 13 | 0 | -6918 | -583 | -31 | 0 | 0 | 0 | 127.4 | 0.0 | 50.0 | 0.0 | 154.0 | 4 | |
| 14 | 0 | 1335 | 176 | -0 | 0 | 0 | 0 | 24.6 | 0.0 | 15.1 | 0.0 | 35.9 | 4 | |
| 15 | 0 | -7193 | -609 | -32 | 0 | 0 | 0 | 132.5 | 0.0 | 52.2 | 0.0 | 160.4 | 4 | |
| 1 | 173 | -8085 | -701 | -35 | 0 | 61 | -1213 | 148.9 | 444.4 | 60.1 | 0.0 | 593.3 | 1 | |
| 5 | 173 | -2140 | -166 | 36 | 0 | -62 | -287 | 39.4 | 148.0 | 14.2 | 0.0 | 187.4 | 1 | |
| 6 | 173 | -2142 | -167 | 36 | 0 | -62 | -289 | 39.4 | 148.7 | 14.3 | 0.0 | 188.1 | 1 | |
| 7 | 173 | -3877 | -166 | -62 | 0 | 107 | -286 | 71.4 | 187.8 | 14.2 | 0.0 | 259.2 | 1 | |
| 8 | 173 | -3875 | -166 | -62 | 0 | 106 | -288 | 71.4 | 188.2 | 14.3 | 0.0 | 259.5 | 1 | |
| 9 | 173 | -3059 | -232 | -2 | 0 | 4 | -402 | 56.3 | 132.5 | 19.9 | 0.0 | 188.8 | 1 | |
| 10 | 173 | -3063 | -235 | -2 | 0 | 3 | -407 | 56.4 | 133.7 | 20.2 | 0.0 | 190.2 | 1 | |
| 11 | 173 | -3581 | -232 | -32 | 0 | 56 | -401 | 65.9 | 179.3 | 19.9 | 0.0 | 245.2 | 1 | |
| 12 | 173 | -2724 | -168 | -28 | 0 | 48 | -291 | 50.2 | 136.1 | 14.4 | 0.0 | 186.3 | 1 | |
| 13 | 173 | -6823 | -583 | -31 | 0 | 53 | -1009 | 125.6 | 371.8 | 50.0 | 0.0 | 497.4 | 1 | |
| 14 | 173 | 1409 | 176 | -0 | 0 | 0 | 305 | 25.9 | 98.1 | 15.1 | 0.0 | 124.1 | 1 | |
| 15 | 173 | -7097 | -609 | -32 | 0 | 55 | -1053 | 130.7 | 387.6 | 52.2 | 0.0 | 518.3 | 1 | |
| 1 | 346 | -7989 | -701 | -35 | 0 | 122 | -2426 | 147.1 | 888.8 | 60.1 | 0.0 | 1035.9 | 1 | |
| 5 | 346 | -2066 | -166 | 36 | 0 | -124 | -575 | 38.0 | 296.1 | 14.2 | 0.0 | 334.1 | 1 | |
| 6 | 346 | -2068 | -167 | 36 | 0 | -124 | -578 | 38.1 | 297.3 | 14.3 | 0.0 | 335.4 | 1 | |
| 7 | 346 | -3803 | -166 | -62 | 0 | 213 | -573 | 70.0 | 375.6 | 14.2 | 0.0 | 445.6 | 1 | |
| 8 | 346 | -3801 | -166 | -62 | 0 | 213 | -576 | 70.0 | 376.3 | 14.3 | 0.0 | 446.3 | 1 | |
| 9 | 346 | -2963 | -232 | -2 | 0 | 8 | -803 | 54.6 | 264.9 | 19.9 | 0.0 | 319.5 | 1 | |
| 10 | 346 | -2967 | -235 | -2 | 0 | 7 | -814 | 54.6 | 267.5 | 20.2 | 0.0 | 322.1 | 1 | |
| 11 | 346 | -3485 | -232 | -32 | 0 | 112 | -803 | 64.2 | 358.5 | 19.9 | 0.0 | 422.7 | 1 | |
| 12 | 346 | -2650 | -168 | -28 | 0 | 95 | -581 | 48.8 | 272.2 | 14.4 | 0.0 | 321.0 | 1 | |
| 13 | 346 | -6727 | -583 | -31 | 0 | 107 | -2017 | 123.9 | 743.5 | 50.0 | 0.0 | 867.4 | 1 | |
| 14 | 346 | 1482 | 176 | -0 | 0 | 1 | 609 | 27.3 | 196.2 | 15.1 | 0.0 | 223.5 | 1 | |
| 15 | 346 | -7001 | -609 | -32 | 0 | 110 | -2106 | 128.9 | 775.2 | 52.2 | 0.0 | 904.1 | 1 | |

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Verifica di STABILITA' e/o SVERGOLAMENTO

| n.comb | Fx | My eq. | Mz eq. | Sn. omega | Sn.yx | Sn.zx | OMEGA | OMEGA1 | Sf | Nota |
|--------|-------|--------|--------|-----------|-------|-------|-------|--------|--------|-------------|
| | daN | daN*m | | | | | | | daN/cm | |
| 1 | -8180 | 73 | 1456 | 172 | 103 | 172 | 4.35 | 1.00 | 1245.5 | Sn.zx > 150 |
| 5 | -2214 | 74 | 345 | 172 | 103 | 172 | 4.35 | 1.00 | 361.5 | Sn.zx > 150 |
| 6 | -2215 | 75 | 347 | 172 | 103 | 172 | 4.35 | 1.00 | 362.3 | Sn.zx > 150 |
| 7 | -3950 | 128 | 344 | 172 | 103 | 172 | 4.35 | 1.00 | 559.3 | Sn.zx > 150 |
| 8 | -3949 | 128 | 345 | 172 | 103 | 172 | 4.35 | 1.00 | 559.7 | Sn.zx > 150 |
| 9 | -3155 | 5 | 482 | 172 | 103 | 172 | 4.35 | 1.00 | 416.8 | Sn.zx > 150 |
| 10 | -3159 | 4 | 488 | 172 | 103 | 172 | 4.35 | 1.00 | 418.7 | Sn.zx > 150 |
| 11 | -3677 | 67 | 482 | 172 | 103 | 172 | 4.35 | 1.00 | 521.7 | Sn.zx > 150 |
| 12 | -2797 | 57 | 349 | 172 | 103 | 172 | 4.35 | 1.00 | 394.5 | Sn.zx > 150 |
| 13 | -6918 | 64 | 1210 | 172 | 103 | 172 | 4.35 | 1.00 | 1040.1 | Sn.zx > 150 |
| 14 | 1482 | 0 | 365 | 172 | 103 | 172 | 1.00 | 1.00 | 145.0 | Sn.zx > 150 |
| 15 | -7193 | 66 | 1264 | 172 | 103 | 172 | 4.35 | 1.00 | 1084.6 | Sn.zx > 150 |

ASTA NUM. 6 NI 117 NF 43 Lungh. 57.0 cm SEZ. 6 Ps HEB 160

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf(Fx) | Sf(M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|-----|------|-------|------|-----|--------|-------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -2258 | 13 | 280 | 0 | 160 | 2 | 41.6 | 144.1 | 10.1 | 0.0 | 185.7 | 1 | |
| 5 | 0 | -643 | -14 | 683 | 0 | 389 | 1 | 11.8 | 350.2 | 24.6 | 0.0 | 362.1 | 1 | |
| 6 | 0 | -635 | 39 | 681 | 0 | 388 | 0 | 11.7 | 349.3 | 24.5 | 0.0 | 361.0 | 1 | |
| 7 | 0 | -647 | -31 | -525 | 0 | -299 | 1 | 11.9 | 269.5 | 18.9 | 0.0 | 281.4 | 1 | |
| 8 | 0 | -638 | 22 | -527 | 0 | -300 | 0 | 11.8 | 270.4 | 19.0 | 0.0 | 282.1 | 1 | |
| 9 | 0 | -897 | -80 | 310 | 0 | 177 | 1 | 16.5 | 159.2 | 11.2 | 0.0 | 175.7 | 1 | |
| 10 | 0 | -868 | 96 | 304 | 0 | 173 | 1 | 16.0 | 156.0 | 11.0 | 0.0 | 172.0 | 1 | |
| 11 | 0 | -898 | -85 | -60 | 0 | -34 | 1 | 16.5 | 31.1 | 7.3 | 0.0 | 47.6 | 1 | |
| 12 | 0 | -627 | 89 | -99 | 0 | -56 | 0 | 11.5 | 50.8 | 7.6 | 0.0 | 62.3 | 1 | |
| 13 | 0 | -1910 | 11 | 239 | 0 | 136 | 2 | 35.2 | 123.0 | 8.6 | 0.0 | 158.2 | 1 | |
| 14 | 0 | 366 | -2 | -46 | 0 | -26 | -0 | 6.7 | 23.5 | 1.6 | 0.0 | 30.2 | 1 | |
| 15 | 0 | -1986 | 12 | 248 | 0 | 141 | 2 | 36.6 | 127.6 | 8.9 | 0.0 | 164.2 | 1 | |
| | | | | | | | | | | | | | | |
| 1 | 29 | -2242 | 13 | 280 | 0 | 80 | 6 | 41.3 | 73.6 | 10.1 | 0.0 | 114.9 | 1 | |
| 5 | 29 | -631 | -14 | 683 | 0 | 195 | -3 | 11.6 | 176.1 | 24.6 | 0.0 | 187.7 | 1 | |
| 6 | 29 | -623 | 39 | 681 | 0 | 194 | 12 | 11.5 | 178.3 | 24.5 | 0.0 | 189.8 | 1 | |
| 7 | 29 | -635 | -31 | -525 | 0 | -150 | -8 | 11.7 | 137.3 | 18.9 | 0.0 | 149.0 | 1 | |
| 8 | 29 | -626 | 22 | -527 | 0 | -150 | 7 | 11.5 | 137.3 | 19.0 | 0.0 | 148.8 | 1 | |
| 9 | 29 | -881 | -80 | 310 | 0 | 88 | -22 | 16.2 | 86.5 | 11.2 | 0.0 | 102.7 | 1 | |
| 10 | 29 | -853 | 96 | 304 | 0 | 87 | 28 | 15.7 | 86.9 | 11.0 | 0.0 | 102.6 | 1 | |
| 11 | 29 | -882 | -85 | -60 | 0 | -17 | -23 | 16.2 | 22.9 | 7.3 | 0.0 | 39.2 | 1 | |
| 12 | 29 | -615 | 89 | -99 | 0 | -28 | 26 | 11.3 | 33.6 | 7.6 | 0.0 | 44.9 | 1 | |
| 13 | 29 | -1895 | 11 | 239 | 0 | 68 | 5 | 34.9 | 62.8 | 8.6 | 0.0 | 97.7 | 1 | |
| 14 | 29 | 378 | -2 | -46 | 0 | -13 | -1 | 7.0 | 12.0 | 1.6 | 0.0 | 18.9 | 1 | |
| 15 | 29 | -1970 | 12 | 248 | 0 | 71 | 5 | 36.3 | 65.1 | 8.9 | 0.0 | 101.4 | 1 | |
| | | | | | | | | | | | | | | |
| 1 | 57 | -2226 | 13 | 280 | 0 | 0 | 9 | 41.0 | 3.0 | 10.1 | 0.0 | 46.9 | 3 | |
| 5 | 57 | -619 | -14 | 683 | 0 | 0 | -7 | 11.4 | 2.3 | 24.6 | 0.0 | 44.7 | 3 | |
| 6 | 57 | -610 | 39 | 681 | 0 | 0 | 23 | 11.2 | 7.3 | 24.5 | 0.0 | 46.2 | 3 | |
| 7 | 57 | -622 | -31 | -525 | 0 | 0 | -17 | 11.5 | 5.5 | 18.9 | 0.0 | 36.7 | 3 | |
| 8 | 57 | -614 | 22 | -527 | 0 | 0 | 13 | 11.3 | 4.1 | 19.0 | 0.0 | 36.2 | 3 | |
| 9 | 57 | -866 | -80 | 310 | 0 | 0 | -45 | 15.9 | 14.3 | 11.2 | 0.0 | 35.6 | 3 | |
| 10 | 57 | -837 | 96 | 304 | 0 | 0 | 55 | 15.4 | 17.8 | 11.0 | 0.0 | 37.9 | 3 | |
| 11 | 57 | -867 | -85 | -60 | 0 | 0 | -48 | 16.0 | 15.3 | 7.3 | 0.0 | 31.3 | 1 | |
| 12 | 57 | -603 | 89 | -99 | 0 | 0 | 51 | 11.1 | 16.5 | 7.6 | 0.0 | 28.2 | 3 | |
| 13 | 57 | -1879 | 11 | 239 | 0 | 0 | 8 | 34.6 | 2.6 | 8.6 | 0.0 | 39.7 | 3 | |
| 14 | 57 | 390 | -2 | -46 | 0 | 0 | -1 | 7.2 | 0.4 | 1.6 | 0.0 | 8.1 | 3 | |
| 15 | 57 | -1954 | 12 | 248 | 0 | 0 | 8 | 36.0 | 2.7 | 8.9 | 0.0 | 41.3 | 3 | |

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Verifica di STABILITA' e/o SVERGOLAMENTO

| n.comb | Fx | My eq. | Mz eq. | Sn. omega | Sn.yx | Sn.zx | OMEGA | OMEGA1 | Sf | Nota |
|--------|-------|--------|--------|-----------|-------|-------|-------|--------|--------|------|
| | daN | daN*m | | | | | | | daN/cm | |
| 1 | -2258 | 96 | 6 | 29 | 17 | 29 | 1.06 | 1.00 | 132.4 | |
| 5 | -643 | 233 | 4 | 29 | 17 | 29 | 1.06 | 1.00 | 224.0 | |
| 6 | -635 | 233 | 14 | 29 | 17 | 29 | 1.06 | 1.00 | 226.4 | |
| 7 | -647 | 180 | 10 | 29 | 17 | 29 | 1.06 | 1.00 | 177.5 | |
| 8 | -638 | 180 | 8 | 29 | 17 | 29 | 1.06 | 1.00 | 177.2 | |
| 9 | -897 | 106 | 26 | 29 | 17 | 29 | 1.06 | 1.00 | 121.4 | |
| 10 | -868 | 104 | 33 | 29 | 17 | 29 | 1.06 | 1.00 | 121.2 | |
| 11 | -898 | 21 | 28 | 29 | 17 | 29 | 1.06 | 1.00 | 45.1 | |
| 12 | -627 | 34 | 31 | 29 | 17 | 29 | 1.06 | 1.00 | 52.6 | |
| 13 | -1910 | 82 | 5 | 29 | 17 | 29 | 1.06 | 1.00 | 112.6 | |
| 14 | 390 | 16 | 1 | 29 | 17 | 29 | 1.00 | 1.00 | 21.5 | |
| 15 | -1986 | 85 | 6 | 29 | 17 | 29 | 1.06 | 1.00 | 116.9 | |

ASTA NUM. 7 NI 116 NF 53 Lungh. 57.0 cm SEZ. 6 Ps HEB 160

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf(Fx) | Sf(M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|------|------|-------|-----|-------|--------|-------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -8120 | -363 | -129 | 0 | -73 | -1230 | 149.5 | 460.8 | 31.1 | 0.0 | 610.4 | 1 | |
| 5 | 0 | -3186 | -96 | -169 | 0 | -96 | -272 | 58.7 | 173.7 | 8.2 | 0.0 | 232.3 | 1 | |
| 6 | 0 | -3187 | -73 | -170 | 0 | -97 | -280 | 58.7 | 177.0 | 6.2 | 0.0 | 235.7 | 1 | |
| 7 | 0 | -2041 | -92 | 81 | 0 | 46 | -274 | 37.6 | 129.8 | 7.9 | 0.0 | 167.4 | 1 | |
| 8 | 0 | -2040 | -69 | 80 | 0 | 46 | -283 | 37.6 | 132.2 | 5.9 | 0.0 | 169.7 | 1 | |
| 9 | 0 | -3156 | -155 | -93 | 0 | -53 | -377 | 58.1 | 168.6 | 13.3 | 0.0 | 226.7 | 1 | |
| 10 | 0 | -3158 | -79 | -96 | 0 | -55 | -406 | 58.2 | 179.7 | 6.8 | 0.0 | 237.9 | 1 | |
| 11 | 0 | -2847 | -154 | -15 | 0 | -9 | -378 | 52.4 | 128.9 | 13.2 | 0.0 | 181.4 | 1 | |
| 12 | 0 | -2039 | -44 | -4 | 0 | -2 | -293 | 37.6 | 96.1 | 3.8 | 0.0 | 133.7 | 1 | |
| 13 | 0 | -6787 | -301 | -110 | 0 | -63 | -1019 | 125.0 | 383.5 | 25.8 | 0.0 | 508.5 | 1 | |
| 14 | 0 | 1806 | 98 | 13 | 0 | 7 | 336 | 33.3 | 114.5 | 8.4 | 0.0 | 147.8 | 1 | |
| 15 | 0 | -7077 | -315 | -114 | 0 | -65 | -1065 | 130.3 | 400.3 | 27.0 | 0.0 | 530.7 | 1 | |
| | | | | | | | | | | | | | | |
| 1 | 29 | -8105 | -363 | -129 | 0 | -36 | -1334 | 149.3 | 460.9 | 31.1 | 0.0 | 610.2 | 1 | |
| 5 | 29 | -3174 | -96 | -169 | 0 | -48 | -299 | 58.5 | 139.1 | 8.2 | 0.0 | 197.6 | 1 | |
| 6 | 29 | -3175 | -73 | -170 | 0 | -48 | -301 | 58.5 | 140.1 | 6.2 | 0.0 | 198.6 | 1 | |
| 7 | 29 | -2029 | -92 | 81 | 0 | 23 | -301 | 37.4 | 117.4 | 7.9 | 0.0 | 154.7 | 1 | |
| 8 | 29 | -2028 | -69 | 80 | 0 | 23 | -303 | 37.3 | 117.9 | 5.9 | 0.0 | 155.2 | 1 | |
| 9 | 29 | -3141 | -155 | -93 | 0 | -26 | -421 | 57.8 | 158.9 | 13.3 | 0.0 | 216.8 | 1 | |
| 10 | 29 | -3142 | -79 | -96 | 0 | -27 | -429 | 57.9 | 162.3 | 6.8 | 0.0 | 220.1 | 1 | |
| 11 | 29 | -2832 | -154 | -15 | 0 | -4 | -422 | 52.1 | 139.1 | 13.2 | 0.0 | 191.3 | 1 | |
| 12 | 29 | -2027 | -44 | -4 | 0 | -1 | -306 | 37.3 | 99.1 | 3.8 | 0.0 | 136.4 | 1 | |
| 13 | 29 | -6772 | -301 | -110 | 0 | -31 | -1105 | 124.7 | 382.6 | 25.8 | 0.0 | 507.3 | 1 | |
| 14 | 29 | 1818 | 98 | 13 | 0 | 4 | 364 | 33.5 | 120.1 | 8.4 | 0.0 | 153.6 | 1 | |
| 15 | 29 | -7061 | -315 | -114 | 0 | -32 | -1155 | 130.0 | 399.7 | 27.0 | 0.0 | 529.8 | 1 | |
| | | | | | | | | | | | | | | |
| 1 | 57 | -8089 | -363 | -129 | 0 | 0 | -1437 | 149.0 | 461.6 | 31.1 | 0.0 | 610.6 | 1 | |
| 5 | 57 | -3162 | -96 | -169 | 0 | 0 | -326 | 58.2 | 104.8 | 8.2 | 0.0 | 163.0 | 1 | |
| 6 | 57 | -3162 | -73 | -170 | 0 | 0 | -322 | 58.2 | 103.4 | 6.2 | 0.0 | 161.6 | 1 | |
| 7 | 57 | -2016 | -92 | 81 | 0 | 0 | -327 | 37.1 | 104.9 | 7.9 | 0.0 | 142.1 | 1 | |
| 8 | 57 | -2015 | -69 | 80 | 0 | 0 | -323 | 37.1 | 103.6 | 5.9 | 0.0 | 140.7 | 1 | |
| 9 | 57 | -3125 | -155 | -93 | 0 | 0 | -465 | 57.6 | 149.4 | 13.3 | 0.0 | 207.0 | 1 | |
| 10 | 57 | -3126 | -79 | -96 | 0 | 0 | -451 | 57.6 | 145.0 | 6.8 | 0.0 | 202.6 | 1 | |
| 11 | 57 | -2816 | -154 | -15 | 0 | 0 | -465 | 51.9 | 149.5 | 13.2 | 0.0 | 201.4 | 1 | |
| 12 | 57 | -2014 | -44 | -4 | 0 | 0 | -318 | 37.1 | 102.2 | 3.8 | 0.0 | 139.3 | 1 | |
| 13 | 57 | -6756 | -301 | -110 | 0 | 0 | -1190 | 124.4 | 382.3 | 25.8 | 0.0 | 506.7 | 1 | |
| 14 | 57 | 1830 | 98 | 13 | 0 | -0 | 392 | 33.7 | 125.9 | 8.4 | 0.0 | 159.6 | 1 | |
| 15 | 57 | -7045 | -315 | -114 | 0 | 0 | -1244 | 129.7 | 399.6 | 27.0 | 0.0 | 529.3 | 1 | |

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Verifica di STABILITA' e/o SVERGOLAMENTO

| n.comb | Fx | My eq. | Mz eq. | Sn. omega | Sn.yx | Sn.zx | OMEGA | OMEGA1 | Sf | Nota |
|--------|-------|--------|--------|-----------|--------|-------|-------|--------|-------|------|
| | daN | daN*m | | | daN/cm | | | | | |
| 1 | -8120 | 44 | 1354 | 29 | 17 | 29 | 1.06 | 1.00 | 633.9 | |
| 5 | -3186 | 58 | 304 | 29 | 17 | 29 | 1.06 | 1.00 | 212.0 | |
| 6 | -3187 | 58 | 305 | 29 | 17 | 29 | 1.06 | 1.00 | 212.6 | |
| 7 | -2041 | 28 | 306 | 29 | 17 | 29 | 1.06 | 1.00 | 163.2 | |
| 8 | -2040 | 28 | 307 | 29 | 17 | 29 | 1.06 | 1.00 | 163.2 | |
| 9 | -3156 | 32 | 430 | 29 | 17 | 29 | 1.06 | 1.00 | 228.3 | |
| 10 | -3158 | 33 | 433 | 29 | 17 | 29 | 1.06 | 1.00 | 230.5 | |
| 11 | -2847 | 5 | 430 | 29 | 17 | 29 | 1.06 | 1.00 | 198.4 | |
| 12 | -2039 | 1 | 308 | 29 | 17 | 29 | 1.06 | 1.00 | 140.0 | |
| 13 | -6787 | 37 | 1122 | 29 | 17 | 29 | 1.06 | 1.00 | 527.1 | |
| 14 | 1830 | 4 | 370 | 29 | 17 | 29 | 1.00 | 1.00 | 156.3 | |
| 15 | -7077 | 39 | 1172 | 29 | 17 | 29 | 1.06 | 1.00 | 550.4 | |

4.1.2. VERIFICA NODO DI BASE

Viene verificato un nodo fittizio imponendo come sollecitazioni le maggiori di tutti i nodi della medesima tipologia.

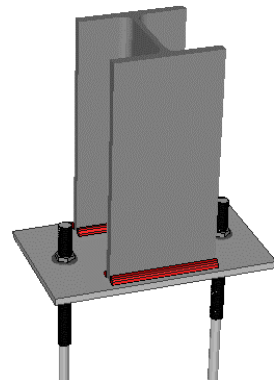
$$SN = 776 \text{ daN}$$

$$T = 1208 \text{ daN}$$

$$TX = 137 \text{ daN}$$

$$MF = 0 \text{ daN cm}$$

$$MT = 2127 \text{ daN cm}$$



[Verifica piastra di base] (S 235 (Fe 360), Rck 300)

250x200x10 Tipologia n. 1 A = 180 (mm)

[Verifica saldatura profilo]

Saldatura a cordone d'angolo (doppia sull'ala): verificata

Lunghezza1: 160 (mm) Altezza di gola1: 9 (mm)

Lunghezza2: 104 (mm) Altezza di gola2: 6 (mm)

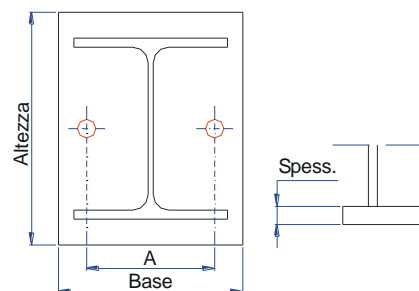
Lunghezza3: 61 (mm) Altezza di gola3: 9 (mm)

Sigma perp. = 29.2 daN/cm² Tens par. = 60.2 daN/cm²

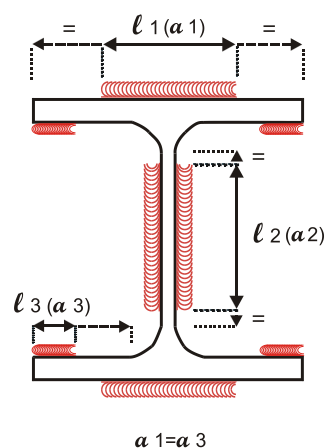
I.R. = 0.05

[Resistenza del nodo]

Modalità di collasso: **nessuna**, situazione più gravosa [tirafondo]



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Si ipotizza un ancorante che poi in fase costruttiva potrà essere sostituito con analogo sistema di ancoraggio con caratteristiche analoghe.

Basi della progettazione

Ancorante

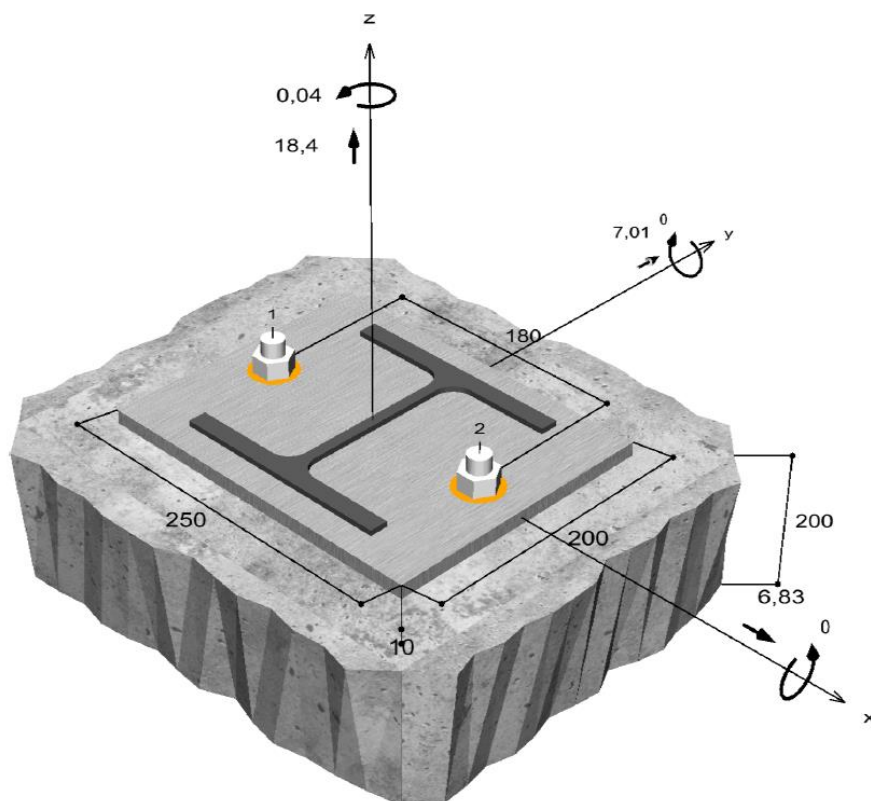
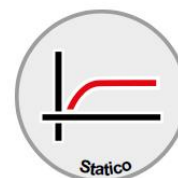
| | |
|--------------------------------|--|
| Sistema | fischer Sistema chimico a iniezione FIS EM |
| Ancorante chimico ad iniezione | FIS EM 390 S |
| Elemento di fissaggio | Barra filettata FIS A M 16 x 130, Acciaio zincato, Classe di resistenza 5.8 |
| Profondità di ancoraggio | 80 mm |
| Dati di progetto | Progettazione dell'ancorante in Calcestruzzo secondo Benestare ETA-10/0012, Opzione 1, Validità: 26/06/2013 - 26/06/2018 |



Geometria / Carichi

mm, kN, kNm

Valore di progetto delle azioni (sono inclusi i coefficienti parziali di sicurezza delle azioni)



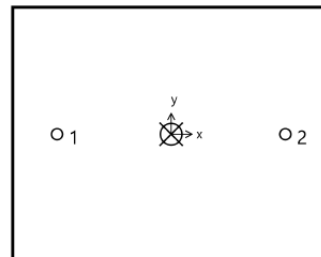
Carichi di progetto *)

| # | N _{Sd} kN | V _{Sd,x} kN | V _{Sd,y} kN | M _{Sd,x} kNm | M _{Sd,y} kNm | M _{T,Sd} kNm | Tipo di carico |
|---|-----------------------|-------------------------|-------------------------|--------------------------|--------------------------|--------------------------|----------------|
| 1 | 18,40 | 6,83 | 7,01 | 0,00 | 0,00 | 0,04 | Statico |

*) I coefficienti parziali di sicurezza per le azioni sono inclusi.

Forze risultanti sull'ancoraggio

| Ancorante n° | Forza di trazione kN | Forza di taglio kN | Forza di taglio x kN | Forza di taglio y kN |
|-----------------|----------------------------|-----------------------|-------------------------|-------------------------|
| 1 | 9,20 | 4,74 | 3,42 | 3,28 |
| 2 | 9,20 | 5,06 | 3,42 | 3,73 |



max. deformazione a compressione del calcestruzzo :

0,00 ‰

max. tensione di compressione del calcestruzzo :

0,0 N/mm²

Forza risultante di trazione :

18,40 kN , Coordinate x/y (0 / 0)

Forza risultante di compressione :

0,00 kN , Coordinate x/y (0 / 0)

Resistenza alla combinazione di trazione e taglio

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$$\beta_N = \beta_{N,c;1} = 0,40 \leq 1$$

$$\beta_V = \beta_{V;s;2} = 0,16 \leq 1$$

$$\beta_N^{1,5} + \beta_V^{1,5} = \beta_{N,c;1}^{1,5} + \beta_{V;s;2}^{1,5} = 0,32 \leq 1$$



Verifica soddisfatta

Equazione
(5.9a)

Equazione
(5.9b)

Equazione
(5.10)

4.1.3. VERIFICA NODO COLONNA - TRAVE PRINCIPALE

Viene verificato un nodo fittizio imponendo come sollecitazioni le maggiori di tutti i nodi della medesima tipologia.

SN = 1840 daN

T = 701 daN

TX = 683 daN

MFz = 242600 daN cm

MFy = 38900 daN cm

MT = 425n daN cm

Colonna: HEB 160

Trave: HEB 160 S 235 (Fe 360)

[Verifica] Banca n. 0: Banche generali AMV

[Verifica flangia] (S 235 (Fe 360))

Flangia tipo 1: 160x340x10 A = 90 B = 210 C = 55 G = 0 (mm)

n. 0 file intermedie di bulloni per infittimento

Mensola di rinforzo: h = 160 l = 160 s = 8 t = 13 (mm)

Diam. bulloni M20 Incremento foro: 2.0 (mm) (Classe 8.8)

[Resistenza zona a taglio]

F_{Rd} = 20514.4 daN (resistenza anima colonna)

[Resistenza zona a compressione]

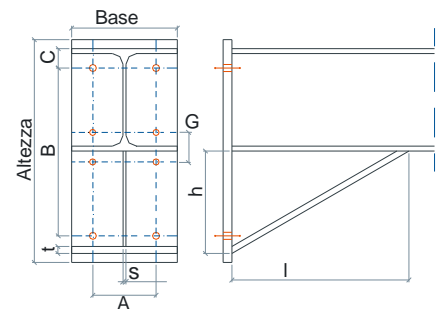
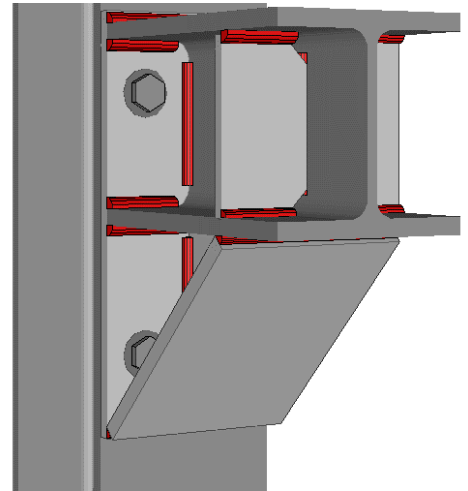
F_{Rd} = 24798.8 daN (resistenza anima colonna)

F_{Rd} = 53371.1 daN (resistenza ala trave)

F_{Rd} = 32917.5 daN (resistenza flangia mensola)

[Resistenza zona a trazione]

[Seconda fila di bulloni]



$F_{Rd} = 20348.5 \text{ daN}$ (resistenza ala colonna)

$F_{Rd} = 14062.4 \text{ daN}$ (resistenza flangia di estremità)

$F_{Rd} = 22052.2 \text{ daN}$ (resistenza anima colonna)

$F_{t,Rd,ult} = 14062.4 \text{ daN}$ (resistenza efficace seconda fila)

[Momento resistente]

$M_{j,Rd} = 363512.2 \text{ daN*cm}$

[Rigidezza rotazionale] (calcolata per N trascurabile)

$S_{j} = 166817920.0 \text{ daN*cm/rad}$ (rigidezza del giunto)

[Resistenza assiale profilo]

$N_{pl,Rd} = 121528.6 \text{ daN}$ $|N| \leq 0.05 N_{pl,Rd}$ (trascurabile)

[Verifica a presso-tensoflessione del giunto]

I.R. = 0.67

[Verifica a taglio del nodo]

$F_{v,Rd} = 9525.6 \text{ daN}$ (resistenza dei bulloni a taglio)

$F_{t,Rd} = 14288.4 \text{ daN}$ (resistenza dei bulloni a trazione)

I.R. = 0.31

[Verifica di rifollamento]

$F_{b,Rd} = 14181.8 \text{ daN}$ (resistenza a rifollamento)

I.R. = 0.01

[Verifica saldatura profilo con rinforzo]

Saldatura a cordone d'angolo (doppia sull'ala): verificata

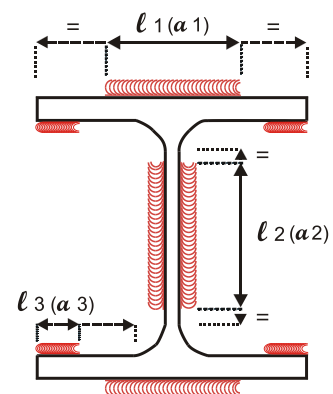
Lunghezza1: 160 (mm) Altezza di gola1: 9 (mm)

Lunghezza2: 262 (mm) Altezza di gola2: 6 (mm)

Lunghezza3: 60 (mm) Altezza di gola3: 9 (mm)

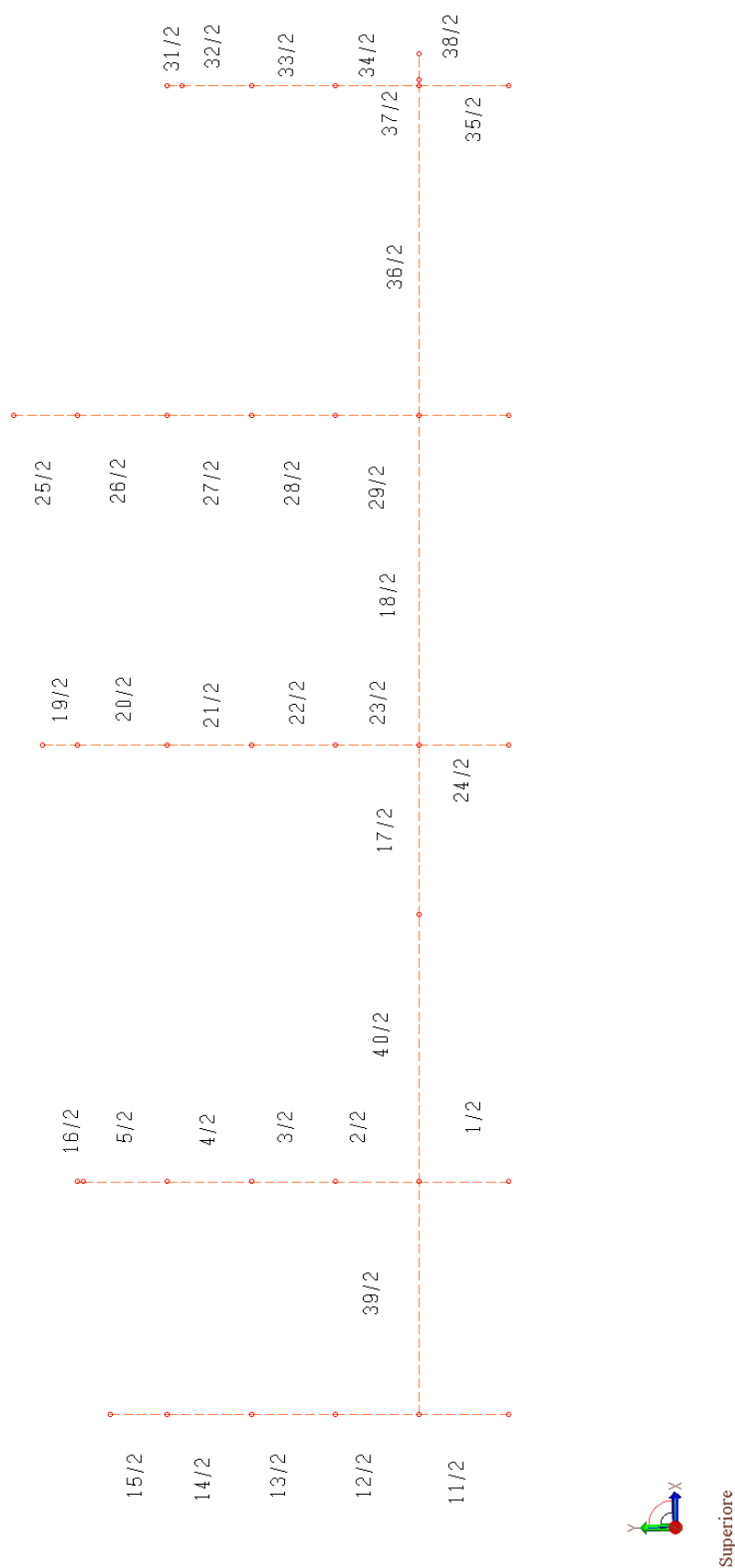
Sigma perp. = 301.7 daN/cm² Tens par. = 37.0 daN/cm²

I.R. = 0.15



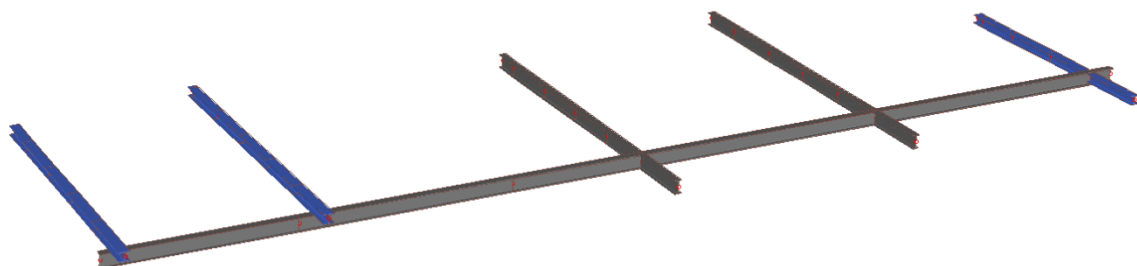
$a_1 = a_3$

4.2. VERIFICA TRAVI PRINCIPALI



Pianta travatura principale blocco 4 con indicato il codice degli elementi asta

Sezioni
■ 6 Ps HEB 160 ycap+No

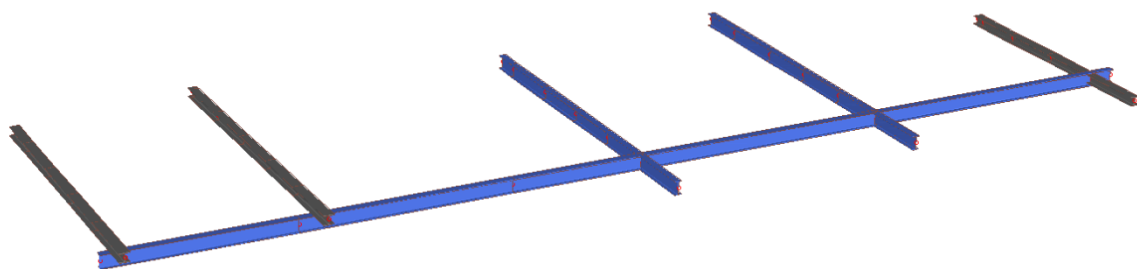


Prospettiva

HEB160

Sezioni
■ 1 Ps IPE 240 ycap+No

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Prospettiva

IPE240

4.2.1. VERIFICA SLU E SLE HEB160

SI VERIFICA LA TRAVE PIU' SOLLECITATA

Lavoro: **BLOCCO 4** Intestazione lavoro: **ESECUTIVO**

Elemento: **TRAVE** Metodo di verifica: **Stati limite**

Gruppo: **2** Descrizione: **Travi principali**

Tabella: **Tabella travi**

Tipo acciaio: **S 235** Beta piano 'yx': **1.000** Beta piano 'zx': **1.000**
ASTA NUM. 15 NI 69 NF 68 Lungh. 79.3 cm SEZ. 6 Ps HEB 160

categoria: p.p. y qy tot.

qy medio: 0.4263 0.4263 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf(Fx) | Sf(M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|------|------|-------|-----|------|--------|-------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -363 | 3205 | -28 | 0 | 0 | 0 | 6.7 | 0.0 | 274.6 | 0.0 | 475.7 | 4 | |
| 5 | 0 | -679 | 785 | 349 | 0 | 0 | 0 | 12.5 | 0.0 | 67.3 | 0.0 | 117.2 | 4 | |
| 6 | 0 | 510 | 786 | 349 | 0 | 0 | 0 | 9.4 | 0.0 | 67.4 | 0.0 | 117.1 | 4 | |
| 7 | 0 | -675 | 786 | -358 | 0 | -0 | 0 | 12.4 | 0.0 | 67.3 | 0.0 | 117.3 | 4 | |
| 8 | 0 | 514 | 787 | -358 | 0 | -0 | 0 | 9.5 | 0.0 | 67.4 | 0.0 | 117.2 | 4 | |
| 9 | 0 | -2099 | 1097 | 98 | 0 | 0 | 0 | 38.7 | 0.0 | 94.0 | 0.0 | 167.3 | 4 | |
| 10 | 0 | 1865 | 1100 | 99 | 0 | 0 | 0 | 34.3 | 0.0 | 94.3 | 0.0 | 166.8 | 4 | |
| 11 | 0 | -2098 | 1097 | -117 | 0 | -0 | 0 | 38.6 | 0.0 | 94.0 | 0.0 | 167.3 | 4 | |
| 12 | 0 | 1900 | 788 | -113 | 0 | -0 | 0 | 35.0 | 0.0 | 67.5 | 0.0 | 122.0 | 4 | |
| 13 | 0 | -301 | 2673 | -23 | 0 | 0 | 0 | 5.5 | 0.0 | 229.1 | 0.0 | 396.8 | 4 | |
| 14 | 0 | 98 | -757 | 3 | 0 | 0 | 0 | 1.8 | 0.0 | 64.9 | 0.0 | 112.3 | 4 | |
| 15 | 0 | -315 | 2788 | -24 | 0 | 0 | 0 | 5.8 | 0.0 | 238.9 | 0.0 | 413.8 | 4 | |
| 1 | 8 | -363 | 3201 | -28 | 0 | 2 | 254 | 6.7 | 83.5 | 274.3 | 0.0 | 475.1 | 4 | |
| 5 | 8 | -679 | 782 | 349 | 0 | -28 | 62 | 12.5 | 44.8 | 67.0 | 0.0 | 116.9 | 4 | |
| 6 | 8 | 510 | 783 | 349 | 0 | -28 | 62 | 9.4 | 44.9 | 67.1 | 0.0 | 116.7 | 4 | |
| 7 | 8 | -675 | 783 | -358 | 0 | 28 | 62 | 12.4 | 45.5 | 67.1 | 0.0 | 117.0 | 4 | |
| 8 | 8 | 514 | 784 | -358 | 0 | 28 | 62 | 9.5 | 45.5 | 67.1 | 0.0 | 116.8 | 4 | |
| 9 | 8 | -2099 | 1093 | 98 | 0 | -8 | 87 | 38.7 | 34.9 | 93.6 | 0.0 | 166.8 | 4 | |
| 10 | 8 | 1865 | 1096 | 99 | 0 | -8 | 87 | 34.3 | 35.0 | 93.9 | 0.0 | 166.3 | 4 | |
| 11 | 8 | -2098 | 1093 | -117 | 0 | 9 | 87 | 38.6 | 36.2 | 93.6 | 0.0 | 166.8 | 4 | |
| 12 | 8 | 1900 | 784 | -113 | 0 | 9 | 62 | 35.0 | 28.0 | 67.2 | 0.0 | 121.7 | 4 | |
| 13 | 8 | -301 | 2669 | -23 | 0 | 2 | 212 | 5.5 | 69.7 | 228.7 | 0.0 | 396.1 | 4 | |
| 14 | 8 | 98 | -760 | 3 | 0 | -0 | -60 | 1.8 | 19.5 | 65.1 | 0.0 | 112.8 | 4 | |
| 15 | 8 | -315 | 2784 | -24 | 0 | 2 | 221 | 5.8 | 72.7 | 238.5 | 0.0 | 413.2 | 4 | |
| 1 | 16 | -363 | 3196 | -28 | 0 | 4 | 508 | 6.7 | 166.9 | 273.9 | 0.0 | 474.4 | 4 | |
| 5 | 16 | -679 | 779 | 349 | 0 | -55 | 124 | 12.5 | 89.6 | 66.7 | 0.0 | 116.5 | 4 | |
| 6 | 16 | 510 | 780 | 349 | 0 | -55 | 124 | 9.4 | 89.7 | 66.8 | 0.0 | 116.3 | 4 | |
| 7 | 16 | -675 | 779 | -358 | 0 | 57 | 124 | 12.4 | 90.9 | 66.8 | 0.0 | 116.6 | 4 | |
| 8 | 16 | 514 | 780 | -358 | 0 | 57 | 124 | 9.5 | 91.0 | 66.9 | 0.0 | 116.4 | 4 | |
| 9 | 16 | -2099 | 1088 | 98 | 0 | -16 | 173 | 38.7 | 69.6 | 93.3 | 0.0 | 168.3 | 3 | |
| 10 | 16 | 1865 | 1091 | 99 | 0 | -16 | 174 | 34.3 | 69.9 | 93.5 | 0.0 | 166.6 | 3 | |
| 11 | 16 | -2098 | 1088 | -117 | 0 | 18 | 173 | 38.6 | 72.3 | 93.3 | 0.0 | 168.4 | 3 | |
| 12 | 16 | 1900 | 781 | -113 | 0 | 18 | 124 | 35.0 | 56.0 | 66.9 | 0.0 | 124.9 | 3 | |
| 13 | 16 | -301 | 2664 | -23 | 0 | 4 | 423 | 5.5 | 139.2 | 228.3 | 0.0 | 395.5 | 4 | |
| 14 | 16 | 98 | -764 | 3 | 0 | -0 | -121 | 1.8 | 39.1 | 65.4 | 0.0 | 113.3 | 4 | |
| 15 | 16 | -315 | 2779 | -24 | 0 | 4 | 442 | 5.8 | 145.2 | 238.2 | 0.0 | 412.5 | 4 | |
| 1 | 24 | -363 | 3192 | -28 | 0 | 7 | 761 | 6.7 | 250.1 | 273.5 | 0.0 | 473.8 | 3 | |
| 5 | 24 | -679 | 775 | 349 | 0 | -83 | 186 | 12.5 | 134.2 | 66.4 | 0.0 | 146.7 | 1 | |
| 6 | 24 | 510 | 776 | 349 | 0 | -83 | 186 | 9.4 | 134.4 | 66.5 | 0.0 | 143.8 | 1 | |
| 7 | 24 | -675 | 776 | -358 | 0 | 85 | 186 | 12.4 | 136.3 | 66.5 | 0.0 | 148.7 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|-------|------|------|---|------|------|------|-------|-------|-----|-------|---|
| 8 | 24 | 514 | 777 | -358 | 0 | 85 | 186 | 9.5 | 136.3 | 66.6 | 0.0 | 145.8 | 1 |
| 9 | 24 | -2099 | 1084 | 98 | 0 | -23 | 259 | 38.7 | 104.3 | 92.9 | 0.0 | 180.9 | 3 |
| 10 | 24 | 1865 | 1087 | 99 | 0 | -24 | 260 | 34.3 | 104.7 | 93.2 | 0.0 | 178.9 | 3 |
| 11 | 24 | -2098 | 1084 | -117 | 0 | 28 | 259 | 38.6 | 108.2 | 92.9 | 0.0 | 181.1 | 3 |
| 12 | 24 | 1900 | 778 | -113 | 0 | 27 | 186 | 35.0 | 83.9 | 66.6 | 0.0 | 134.7 | 3 |
| 13 | 24 | -301 | 2660 | -23 | 0 | 6 | 634 | 5.5 | 208.6 | 227.9 | 0.0 | 394.8 | 3 |
| 14 | 24 | 98 | -767 | 3 | 0 | -1 | -181 | 1.8 | 58.8 | 65.7 | 0.0 | 113.8 | 4 |
| 15 | 24 | -315 | 2775 | -24 | 0 | 6 | 662 | 5.8 | 217.7 | 237.8 | 0.0 | 411.9 | 3 |
| | | | | | | | | | | | | | |
| 1 | 32 | -363 | 3187 | -28 | 0 | 9 | 1014 | 6.7 | 333.3 | 273.1 | 0.0 | 507.4 | 3 |
| 5 | 32 | -679 | 772 | 349 | 0 | -111 | 247 | 12.5 | 178.8 | 66.1 | 0.0 | 191.3 | 1 |
| 6 | 32 | 510 | 773 | 349 | 0 | -111 | 247 | 9.4 | 179.0 | 66.2 | 0.0 | 188.4 | 1 |
| 7 | 32 | -675 | 772 | -358 | 0 | 114 | 247 | 12.4 | 181.5 | 66.2 | 0.0 | 194.0 | 1 |
| 8 | 32 | 514 | 773 | -358 | 0 | 113 | 247 | 9.5 | 181.6 | 66.3 | 0.0 | 191.0 | 1 |
| 9 | 32 | -2099 | 1079 | 98 | 0 | -31 | 345 | 38.7 | 138.8 | 92.5 | 0.0 | 195.6 | 3 |
| 10 | 32 | 1865 | 1083 | 99 | 0 | -31 | 346 | 34.3 | 139.4 | 92.8 | 0.0 | 193.2 | 3 |
| 11 | 32 | -2098 | 1079 | -117 | 0 | 37 | 345 | 38.6 | 144.1 | 92.5 | 0.0 | 195.8 | 3 |
| 12 | 32 | 1900 | 774 | -113 | 0 | 36 | 248 | 35.0 | 111.6 | 66.3 | 0.0 | 146.6 | 1 |
| 13 | 32 | -301 | 2655 | -23 | 0 | 7 | 845 | 5.5 | 278.0 | 227.5 | 0.0 | 422.7 | 3 |
| 14 | 32 | 98 | -770 | 3 | 0 | -1 | -242 | 1.8 | 78.5 | 66.0 | 0.0 | 122.3 | 3 |
| 15 | 32 | -315 | 2770 | -24 | 0 | 8 | 882 | 5.8 | 290.0 | 237.4 | 0.0 | 441.1 | 3 |
| | | | | | | | | | | | | | |
| 1 | 40 | -363 | 3183 | -28 | 0 | 11 | 1266 | 6.7 | 416.4 | 272.8 | 0.0 | 547.4 | 3 |
| 5 | 40 | -679 | 768 | 349 | 0 | -138 | 308 | 12.5 | 223.3 | 65.8 | 0.0 | 235.8 | 1 |
| 6 | 40 | 510 | 769 | 349 | 0 | -138 | 308 | 9.4 | 223.6 | 65.9 | 0.0 | 233.0 | 1 |
| 7 | 40 | -675 | 769 | -358 | 0 | 142 | 308 | 12.4 | 226.7 | 65.9 | 0.0 | 239.1 | 1 |
| 8 | 40 | 514 | 770 | -358 | 0 | 142 | 309 | 9.5 | 226.7 | 66.0 | 0.0 | 236.2 | 1 |
| 9 | 40 | -2099 | 1075 | 98 | 0 | -39 | 431 | 38.7 | 173.2 | 92.1 | 0.0 | 211.9 | 1 |
| 10 | 40 | 1865 | 1079 | 99 | 0 | -39 | 432 | 34.3 | 174.0 | 92.4 | 0.0 | 209.1 | 3 |
| 11 | 40 | -2098 | 1075 | -117 | 0 | 46 | 431 | 38.6 | 179.9 | 92.1 | 0.0 | 218.5 | 1 |
| 12 | 40 | 1900 | 771 | -113 | 0 | 45 | 309 | 35.0 | 139.3 | 66.1 | 0.0 | 174.3 | 1 |
| 13 | 40 | -301 | 2651 | -23 | 0 | 9 | 1055 | 5.5 | 347.2 | 227.2 | 0.0 | 456.0 | 3 |
| 14 | 40 | 98 | -774 | 3 | 0 | -1 | -303 | 1.8 | 98.4 | 66.3 | 0.0 | 132.4 | 3 |
| 15 | 40 | -315 | 2766 | -24 | 0 | 10 | 1101 | 5.8 | 362.3 | 237.0 | 0.0 | 475.8 | 3 |
| | | | | | | | | | | | | | |
| 1 | 48 | -363 | 3179 | -28 | 0 | 13 | 1519 | 6.7 | 499.3 | 272.4 | 0.0 | 592.4 | 3 |
| 5 | 48 | -679 | 765 | 349 | 0 | -166 | 369 | 12.5 | 267.7 | 65.6 | 0.0 | 280.2 | 1 |
| 6 | 48 | 510 | 766 | 349 | 0 | -166 | 369 | 9.4 | 268.0 | 65.6 | 0.0 | 277.4 | 1 |
| 7 | 48 | -675 | 766 | -358 | 0 | 170 | 369 | 12.4 | 271.8 | 65.6 | 0.0 | 284.2 | 1 |
| 8 | 48 | 514 | 767 | -358 | 0 | 170 | 370 | 9.5 | 271.8 | 65.7 | 0.0 | 281.3 | 1 |
| 9 | 48 | -2099 | 1071 | 98 | 0 | -47 | 516 | 38.7 | 207.5 | 91.7 | 0.0 | 246.2 | 1 |
| 10 | 48 | 1865 | 1074 | 99 | 0 | -47 | 517 | 34.3 | 208.5 | 92.1 | 0.0 | 242.8 | 1 |
| 11 | 48 | -2098 | 1071 | -117 | 0 | 55 | 516 | 38.6 | 215.5 | 91.7 | 0.0 | 254.1 | 1 |
| 12 | 48 | 1900 | 767 | -113 | 0 | 54 | 370 | 35.0 | 166.9 | 65.8 | 0.0 | 201.9 | 1 |
| 13 | 48 | -301 | 2647 | -23 | 0 | 11 | 1265 | 5.5 | 416.3 | 226.8 | 0.0 | 493.4 | 3 |
| 14 | 48 | 98 | -777 | 3 | 0 | -1 | -365 | 1.8 | 118.3 | 66.6 | 0.0 | 143.7 | 3 |
| 15 | 48 | -315 | 2762 | -24 | 0 | 12 | 1321 | 5.8 | 434.4 | 236.6 | 0.0 | 514.9 | 3 |
| | | | | | | | | | | | | | |
| 1 | 56 | -363 | 3174 | -28 | 0 | 15 | 1770 | 6.7 | 582.1 | 272.0 | 0.0 | 641.4 | 3 |
| 5 | 56 | -679 | 762 | 349 | 0 | -194 | 429 | 12.5 | 312.0 | 65.3 | 0.0 | 324.5 | 1 |
| 6 | 56 | 510 | 763 | 349 | 0 | -194 | 430 | 9.4 | 312.4 | 65.4 | 0.0 | 321.8 | 1 |
| 7 | 56 | -675 | 762 | -358 | 0 | 199 | 430 | 12.4 | 316.8 | 65.3 | 0.0 | 329.2 | 1 |
| 8 | 56 | 514 | 763 | -358 | 0 | 199 | 430 | 9.5 | 316.8 | 65.4 | 0.0 | 326.3 | 1 |
| 9 | 56 | -2099 | 1066 | 98 | 0 | -54 | 601 | 38.7 | 241.7 | 91.4 | 0.0 | 280.4 | 1 |
| 10 | 56 | 1865 | 1070 | 99 | 0 | -55 | 602 | 34.3 | 242.8 | 91.7 | 0.0 | 277.2 | 1 |
| 11 | 56 | -2098 | 1066 | -117 | 0 | 65 | 601 | 38.6 | 251.0 | 91.4 | 0.0 | 289.6 | 1 |
| 12 | 56 | 1900 | 764 | -113 | 0 | 62 | 431 | 35.0 | 194.5 | 65.5 | 0.0 | 229.4 | 1 |
| 13 | 56 | -301 | 2642 | -23 | 0 | 13 | 1475 | 5.5 | 485.3 | 226.4 | 0.0 | 534.2 | 3 |
| 14 | 56 | 98 | -780 | 3 | 0 | -2 | -427 | 1.8 | 138.4 | 66.9 | 0.0 | 156.0 | 3 |
| 15 | 56 | -315 | 2757 | -24 | 0 | 14 | 1539 | 5.8 | 506.4 | 236.3 | 0.0 | 557.5 | 3 |
| | | | | | | | | | | | | | |
| 1 | 63 | -363 | 3170 | -28 | 0 | 17 | 2022 | 6.7 | 664.8 | 271.6 | 0.0 | 693.5 | 3 |
| 5 | 63 | -679 | 758 | 349 | 0 | -221 | 490 | 12.5 | 356.3 | 65.0 | 0.0 | 368.7 | 1 |
| 6 | 63 | 510 | 759 | 349 | 0 | -221 | 490 | 9.4 | 356.7 | 65.1 | 0.0 | 366.1 | 1 |
| 7 | 63 | -675 | 759 | -358 | 0 | 227 | 490 | 12.4 | 361.7 | 65.0 | 0.0 | 374.1 | 1 |
| 8 | 63 | 514 | 760 | -358 | 0 | 227 | 491 | 9.5 | 361.7 | 65.1 | 0.0 | 371.2 | 1 |
| 9 | 63 | -2099 | 1062 | 98 | 0 | -62 | 685 | 38.7 | 275.8 | 91.0 | 0.0 | 314.5 | 1 |
| 10 | 63 | 1865 | 1066 | 99 | 0 | -63 | 687 | 34.3 | 277.1 | 91.3 | 0.0 | 311.4 | 1 |
| 11 | 63 | -2098 | 1062 | -117 | 0 | 74 | 685 | 38.6 | 286.4 | 91.0 | 0.0 | 325.1 | 1 |
| 12 | 63 | 1900 | 761 | -113 | 0 | 71 | 491 | 35.0 | 221.9 | 65.2 | 0.0 | 256.9 | 1 |
| 13 | 63 | -301 | 2638 | -23 | 0 | 15 | 1684 | 5.5 | 554.1 | 226.0 | 0.0 | 577.5 | 3 |
| 14 | 63 | 98 | -784 | 3 | 0 | -2 | -489 | 1.8 | 158.5 | 67.2 | 0.0 | 169.1 | 3 |
| 15 | 63 | -315 | 2753 | -24 | 0 | 15 | 1758 | 5.8 | 578.3 | 235.9 | 0.0 | 602.7 | 3 |
| | | | | | | | | | | | | | |
| 1 | 71 | -363 | 3165 | -28 | 0 | 20 | 2273 | 6.7 | 747.4 | 271.3 | 0.0 | 754.1 | 1 |
| 5 | 71 | -679 | 755 | 349 | 0 | -249 | 550 | 12.5 | 400.4 | 64.7 | 0.0 | 412.9 | 1 |
| 6 | 71 | 510 | 756 | 349 | 0 | -249 | 550 | 9.4 | 400.9 | 64.8 | 0.0 | 410.3 | 1 |
| 7 | 71 | -675 | 755 | -358 | 0 | 256 | 550 | 12.4 | 406.5 | 64.7 | 0.0 | 419.0 | 1 |
| 8 | 71 | 514 | 756 | -358 | 0 | 255 | 551 | 9.5 | 406.6 | 64.8 | 0.0 | 416.0 | 1 |
| 9 | 71 | -2099 | 1057 | 98 | 0 | -70 | 769 | 38.7 | 309.8 | 90.6 | 0.0 | 348.5 | 1 |
| 10 | 71 | 1865 | 1061 | 99 | 0 | -71 | 771 | 34.3 | 311.2 | 90.9 | 0.0 | 345.6 | 1 |
| 11 | 71 | -2098 | 1057 | -117 | 0 | 83 | 769 | 38.6 | 321.7 | 90.6 | 0.0 | 360.4 | 1 |
| 12 | 71 | 1900 | 757 | -112 | 0 | 80 | 551 | 35.0 | 249.2 | 64.9 | 0.0 | 284.2 | 1 |
| 13 | 71 | -301 | 2633 | -23 | 0 | 17 | 1893 | 5.5 | 622.9 | 225.7 | 0.0 | 628.4 | 1 |
| 14 | 71 | 98 | -787 | 3 | 0 | -2 | -551 | 1.8 | 178.7 | 67.5 | 0.0 | 182.9 | 3 |
| 15 | 71 | -315 | 2748 | -24 | 0 | 17 | 1976 | 5.8 | 650.1 | 235.5 | 0.0 | 655.8 | 1 |
| | | | | | | | | | | | | | |
| 1 | 79 | -363 | 3161 | -28 | 0 | 22 | 2524 | 6.7 | 829.9 | 270.9 | 0.0 | 836.6 | 1 |
| 5 | 79 | -679 | 752 | 349 | 0 | -277 | 609 | 12.5 | 444.5 | 64.4 | 0.0 | 457.0 | 1 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|-------|------|------|---|------|------|------|-------|-------|-----|-------|---|
| 6 | 79 | 510 | 753 | 349 | 0 | -277 | 610 | 9.4 | 445.0 | 64.5 | 0.0 | 454.4 | 1 |
| 7 | 79 | -675 | 752 | -358 | 0 | 284 | 610 | 12.4 | 451.3 | 64.4 | 0.0 | 463.7 | 1 |
| 8 | 79 | 514 | 753 | -358 | 0 | 284 | 611 | 9.5 | 451.3 | 64.5 | 0.0 | 460.8 | 1 |
| 9 | 79 | -2099 | 1053 | 98 | 0 | -78 | 853 | 38.7 | 343.7 | 90.2 | 0.0 | 382.3 | 1 |
| 10 | 79 | 1865 | 1057 | 99 | 0 | -79 | 855 | 34.3 | 345.2 | 90.6 | 0.0 | 379.6 | 1 |
| 11 | 79 | -2098 | 1053 | -117 | 0 | 92 | 853 | 38.6 | 356.9 | 90.2 | 0.0 | 395.5 | 1 |
| 12 | 79 | 1900 | 754 | -113 | 0 | 89 | 611 | 35.0 | 276.5 | 64.6 | 0.0 | 311.5 | 1 |
| 13 | 79 | -301 | 2629 | -23 | 0 | 19 | 2102 | 5.5 | 691.6 | 225.3 | 0.0 | 697.1 | 1 |
| 14 | 79 | 98 | -791 | 3 | 0 | -2 | -614 | 1.8 | 199.0 | 67.7 | 0.0 | 200.8 | 1 |
| 15 | 79 | -315 | 2744 | -24 | 0 | 19 | 2194 | 5.8 | 721.7 | 235.1 | 0.0 | 727.5 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|--------|-------|--------|---------|------|-----------|------|
| | | cm | daN*m | daN/cm | cm | | | |
| 1 | -- | 79 | 2524 | 810.3 | -- | -- | -- | |
| -- | Rara | 27 | 2 | -- | 34 | 0.00 | 1 / 99999 | |
| -- | Freq. | 27 | 2 | -- | 34 | 0.00 | 1 / 99999 | |
| -- | Q.Perm. | 27 | 2 | -- | 34 | 0.00 | 1 / 99999 | |
| -- | Rara | 27 | 2 | -- | 34 | 0.00 | 1 / 99999 | |
| -- | Rara | 27 | 2 | -- | 34 | 0.00 | 1 / 99999 | |
| -- | Freq. | 27 | 2 | -- | 34 | 0.00 | 1 / 99999 | |
| -- | Freq. | 27 | 2 | -- | 34 | 0.00 | 1 / 99999 | |

ASTA NUM. 14 NI 68 NF 67 Lungh. 116.0 cm SEZ. 6 Ps HEB 160

categoria: p.p. y qy tot.
qy medio: 0.4263 0.4263 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|------|------|----|-------|------|---------|--------|--------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | daN/cm | | | | |
| 1 | 0 | -363 | 856 | 16 | 0 | 22 | 2523 | 6.7 | 829.6 | 73.4 | 0.0 | 836.3 | 1 | |
| 5 | 0 | -558 | 218 | -493 | 0 | -277 | 609 | 10.3 | 444.4 | 18.7 | 0.0 | 454.6 | 1 | |
| 6 | 0 | 390 | 219 | -493 | 0 | -277 | 610 | 7.2 | 444.9 | 18.8 | 0.0 | 452.1 | 1 | |
| 7 | 0 | -555 | 219 | 498 | 0 | 284 | 610 | 10.2 | 451.2 | 18.7 | 0.0 | 461.4 | 1 | |
| 8 | 0 | 393 | 220 | 498 | 0 | 284 | 610 | 7.2 | 451.3 | 18.8 | 0.0 | 458.5 | 1 | |
| 9 | 0 | -1696 | 303 | -144 | 0 | -78 | 852 | 31.2 | 343.5 | 26.0 | 0.0 | 374.8 | 1 | |
| 10 | 0 | 1463 | 306 | -145 | 0 | -79 | 855 | 26.9 | 345.1 | 26.2 | 0.0 | 372.1 | 1 | |
| 11 | 0 | -1695 | 303 | 155 | 0 | 92 | 853 | 31.2 | 356.8 | 26.0 | 0.0 | 388.0 | 1 | |
| 12 | 0 | 1497 | 221 | 152 | 0 | 89 | 611 | 27.6 | 276.4 | 18.9 | 0.0 | 304.0 | 1 | |
| 13 | 0 | -301 | 717 | 13 | 0 | 19 | 2101 | 5.5 | 691.2 | 61.4 | 0.0 | 696.8 | 1 | |
| 14 | 0 | 98 | -185 | -2 | 0 | -2 | -613 | 1.8 | 198.8 | 15.9 | 0.0 | 200.6 | 1 | |
| 15 | 0 | -315 | 747 | 14 | 0 | 19 | 2193 | 5.8 | 721.4 | 64.0 | 0.0 | 727.2 | 1 | |
| 1 | 12 | -363 | 850 | 16 | 0 | 20 | 2622 | 6.7 | 859.7 | 72.8 | 0.0 | 866.4 | 1 | |
| 5 | 12 | -558 | 213 | -493 | 0 | -219 | 634 | 10.3 | 400.9 | 18.3 | 0.0 | 411.2 | 1 | |
| 6 | 12 | 390 | 214 | -493 | 0 | -220 | 635 | 7.2 | 401.5 | 18.4 | 0.0 | 408.6 | 1 | |
| 7 | 12 | -555 | 214 | 498 | 0 | 226 | 635 | 10.2 | 407.2 | 18.3 | 0.0 | 417.4 | 1 | |
| 8 | 12 | 393 | 215 | 498 | 0 | 226 | 636 | 7.2 | 407.3 | 18.4 | 0.0 | 414.6 | 1 | |
| 9 | 12 | -1696 | 296 | -144 | 0 | -61 | 887 | 31.2 | 339.6 | 25.4 | 0.0 | 370.9 | 1 | |
| 10 | 12 | 1463 | 300 | -145 | 0 | -62 | 890 | 26.9 | 341.3 | 25.7 | 0.0 | 368.2 | 1 | |
| 11 | 12 | -1695 | 297 | 155 | 0 | 74 | 887 | 31.2 | 351.8 | 25.4 | 0.0 | 383.0 | 1 | |
| 12 | 12 | 1497 | 216 | 152 | 0 | 72 | 636 | 27.6 | 268.6 | 18.5 | 0.0 | 296.2 | 1 | |
| 13 | 12 | -301 | 710 | 13 | 0 | 17 | 2184 | 5.5 | 716.4 | 60.9 | 0.0 | 722.0 | 1 | |
| 14 | 12 | 98 | -190 | -2 | 0 | -2 | -635 | 1.8 | 205.7 | 16.3 | 0.0 | 207.5 | 1 | |
| 15 | 12 | -315 | 741 | 14 | 0 | 18 | 2279 | 5.8 | 747.7 | 63.5 | 0.0 | 753.4 | 1 | |
| 1 | 23 | -363 | 843 | 16 | 0 | 18 | 2720 | 6.7 | 889.6 | 72.3 | 0.0 | 896.3 | 1 | |
| 5 | 23 | -558 | 208 | -493 | 0 | -162 | 659 | 10.3 | 357.3 | 17.8 | 0.0 | 367.6 | 1 | |
| 6 | 23 | 390 | 209 | -493 | 0 | -162 | 660 | 7.2 | 357.9 | 17.9 | 0.0 | 365.0 | 1 | |
| 7 | 23 | -555 | 209 | 498 | 0 | 168 | 659 | 10.2 | 363.1 | 18.0 | 0.0 | 373.3 | 1 | |
| 8 | 23 | 393 | 210 | 498 | 0 | 168 | 660 | 7.2 | 363.2 | 18.0 | 0.0 | 370.5 | 1 | |
| 9 | 23 | -1696 | 290 | -144 | 0 | -44 | 921 | 31.2 | 335.5 | 24.9 | 0.0 | 366.8 | 1 | |
| 10 | 23 | 1463 | 293 | -145 | 0 | -45 | 924 | 26.9 | 337.2 | 25.1 | 0.0 | 364.2 | 1 | |
| 11 | 23 | -1695 | 290 | 155 | 0 | 56 | 921 | 31.2 | 346.6 | 24.9 | 0.0 | 377.8 | 1 | |
| 12 | 23 | 1497 | 211 | 152 | 0 | 54 | 661 | 27.6 | 260.7 | 18.0 | 0.0 | 288.2 | 1 | |
| 13 | 23 | -301 | 704 | 13 | 0 | 16 | 2266 | 5.5 | 741.4 | 60.3 | 0.0 | 746.9 | 1 | |
| 14 | 23 | 98 | -195 | -2 | 0 | -2 | -657 | 1.8 | 212.7 | 16.7 | 0.0 | 214.5 | 1 | |
| 15 | 23 | -315 | 734 | 14 | 0 | 16 | 2365 | 5.8 | 773.7 | 62.9 | 0.0 | 779.5 | 1 | |
| 1 | 35 | -363 | 837 | 16 | 0 | 16 | 2818 | 6.7 | 919.3 | 71.7 | 0.0 | 926.0 | 1 | |
| 5 | 35 | -558 | 203 | -493 | 0 | -105 | 682 | 10.3 | 313.5 | 17.8 | 0.0 | 323.8 | 1 | |
| 6 | 35 | 390 | 204 | -493 | 0 | -105 | 684 | 7.2 | 314.1 | 17.8 | 0.0 | 321.2 | 1 | |
| 7 | 35 | -555 | 204 | 498 | 0 | 110 | 683 | 10.2 | 318.7 | 18.0 | 0.0 | 328.9 | 1 | |
| 8 | 35 | 393 | 205 | 498 | 0 | 110 | 684 | 7.2 | 319.0 | 18.0 | 0.0 | 326.2 | 1 | |
| 9 | 35 | -1696 | 284 | -144 | 0 | -28 | 954 | 31.2 | 331.1 | 24.3 | 0.0 | 362.4 | 1 | |
| 10 | 35 | 1463 | 287 | -145 | 0 | -28 | 958 | 26.9 | 332.9 | 24.6 | 0.0 | 359.9 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-------|------|------|---|------|------|------|--------|------|-----|--------|---|
| 11 | 35 | -1695 | 284 | 155 | 0 | 39 | 955 | 31.2 | 341.2 | 24.3 | 0.0 | 372.4 | 1 |
| 12 | 35 | 1497 | 206 | 152 | 0 | 36 | 685 | 27.6 | 252.5 | 17.6 | 0.0 | 280.1 | 1 |
| 13 | 35 | -301 | 698 | 13 | 0 | 14 | 2347 | 5.5 | 766.1 | 59.8 | 0.0 | 771.6 | 1 |
| 14 | 35 | 98 | -200 | -2 | 0 | -2 | -680 | 1.8 | 219.9 | 17.2 | 0.0 | 221.7 | 1 |
| 15 | 35 | -315 | 728 | 14 | 0 | 15 | 2450 | 5.8 | 799.4 | 62.4 | 0.0 | 805.2 | 1 |
| 1 | 46 | -363 | 830 | 16 | 0 | 15 | 2914 | 6.7 | 948.7 | 71.2 | 0.0 | 955.4 | 1 |
| 5 | 46 | -558 | 198 | -493 | 0 | -48 | 706 | 10.3 | 269.5 | 17.8 | 0.0 | 279.8 | 1 |
| 6 | 46 | 390 | 199 | -493 | 0 | -48 | 707 | 7.2 | 270.1 | 17.8 | 0.0 | 277.3 | 1 |
| 7 | 46 | -555 | 199 | 498 | 0 | 53 | 707 | 10.2 | 274.2 | 18.0 | 0.0 | 284.4 | 1 |
| 8 | 46 | 393 | 200 | 498 | 0 | 53 | 708 | 7.2 | 274.5 | 18.0 | 0.0 | 281.7 | 1 |
| 9 | 46 | -1696 | 277 | -144 | 0 | -11 | 987 | 31.2 | 326.5 | 23.8 | 0.0 | 357.8 | 1 |
| 10 | 46 | 1463 | 280 | -145 | 0 | -11 | 991 | 26.9 | 328.4 | 24.0 | 0.0 | 355.3 | 1 |
| 11 | 46 | -1695 | 277 | 155 | 0 | 21 | 987 | 31.2 | 335.5 | 23.8 | 0.0 | 366.7 | 1 |
| 12 | 46 | 1497 | 201 | 152 | 0 | 19 | 709 | 27.6 | 244.2 | 17.2 | 0.0 | 271.8 | 1 |
| 13 | 46 | -301 | 691 | 13 | 0 | 12 | 2428 | 5.5 | 790.5 | 59.2 | 0.0 | 796.1 | 1 |
| 14 | 46 | 98 | -205 | -2 | 0 | -1 | -704 | 1.8 | 227.2 | 17.6 | 0.0 | 229.0 | 1 |
| 15 | 46 | -315 | 721 | 14 | 0 | 13 | 2534 | 5.8 | 825.0 | 61.8 | 0.0 | 830.8 | 1 |
| 1 | 58 | -363 | 824 | 16 | 0 | 13 | 3010 | 6.7 | 977.9 | 70.6 | 0.0 | 984.6 | 1 |
| 5 | 58 | -558 | 193 | -493 | 0 | 9 | 728 | 10.3 | 242.4 | 17.8 | 0.0 | 252.6 | 1 |
| 6 | 58 | 390 | 194 | -493 | 0 | 9 | 730 | 7.2 | 242.7 | 17.8 | 0.0 | 249.8 | 1 |
| 7 | 58 | -555 | 194 | 498 | 0 | -5 | 729 | 10.2 | 238.8 | 18.0 | 0.0 | 249.0 | 1 |
| 8 | 58 | 393 | 195 | 498 | 0 | -5 | 731 | 7.2 | 239.3 | 18.0 | 0.0 | 246.5 | 1 |
| 9 | 58 | -1696 | 271 | -144 | 0 | 6 | 1018 | 31.2 | 332.2 | 23.2 | 0.0 | 363.5 | 1 |
| 10 | 58 | 1463 | 274 | -145 | 0 | 5 | 1023 | 26.9 | 333.4 | 23.5 | 0.0 | 360.4 | 1 |
| 11 | 58 | -1695 | 271 | 155 | 0 | 3 | 1019 | 31.2 | 329.5 | 23.2 | 0.0 | 360.7 | 1 |
| 12 | 58 | 1497 | 196 | 152 | 0 | 1 | 732 | 27.6 | 235.7 | 16.8 | 0.0 | 263.3 | 1 |
| 13 | 58 | -301 | 685 | 13 | 0 | 11 | 2507 | 5.5 | 814.8 | 58.7 | 0.0 | 820.3 | 1 |
| 14 | 58 | 98 | -210 | -2 | 0 | -1 | -728 | 1.8 | 234.8 | 18.0 | 0.0 | 236.6 | 1 |
| 15 | 58 | -315 | 715 | 14 | 0 | 11 | 2617 | 5.8 | 850.3 | 61.3 | 0.0 | 856.1 | 1 |
| 1 | 70 | -363 | 818 | 16 | 0 | 11 | 3106 | 6.7 | 1006.9 | 70.1 | 0.0 | 1013.6 | 1 |
| 5 | 70 | -558 | 188 | -493 | 0 | 67 | 751 | 10.3 | 300.9 | 17.8 | 0.0 | 311.2 | 1 |
| 6 | 70 | 390 | 189 | -493 | 0 | 67 | 752 | 7.2 | 301.3 | 17.8 | 0.0 | 308.5 | 1 |
| 7 | 70 | -555 | 189 | 498 | 0 | -63 | 752 | 10.2 | 297.9 | 18.0 | 0.0 | 308.1 | 1 |
| 8 | 70 | 393 | 190 | 498 | 0 | -63 | 753 | 7.2 | 298.5 | 18.0 | 0.0 | 305.7 | 1 |
| 9 | 70 | -1696 | 264 | -144 | 0 | 23 | 1049 | 31.2 | 357.2 | 22.7 | 0.0 | 388.5 | 1 |
| 10 | 70 | 1463 | 268 | -145 | 0 | 22 | 1055 | 26.9 | 358.6 | 22.9 | 0.0 | 385.6 | 1 |
| 11 | 70 | -1695 | 265 | 155 | 0 | -15 | 1050 | 31.2 | 350.9 | 22.7 | 0.0 | 382.1 | 1 |
| 12 | 70 | 1497 | 191 | 152 | 0 | -17 | 754 | 27.6 | 257.2 | 16.4 | 0.0 | 284.8 | 1 |
| 13 | 70 | -301 | 678 | 13 | 0 | 9 | 2586 | 5.5 | 838.7 | 58.1 | 0.0 | 844.3 | 1 |
| 14 | 70 | 98 | -215 | -2 | 0 | -1 | -753 | 1.8 | 242.5 | 18.4 | 0.0 | 244.4 | 1 |
| 15 | 70 | -315 | 709 | 14 | 0 | 10 | 2699 | 5.8 | 875.3 | 60.7 | 0.0 | 881.1 | 1 |
| 1 | 81 | -363 | 811 | 16 | 0 | 9 | 3200 | 6.7 | 1035.6 | 69.5 | 0.0 | 1042.3 | 1 |
| 5 | 81 | -558 | 184 | -493 | 0 | 124 | 772 | 10.3 | 359.3 | 17.8 | 0.0 | 369.6 | 1 |
| 6 | 81 | 390 | 185 | -493 | 0 | 124 | 774 | 7.2 | 359.8 | 17.8 | 0.0 | 366.9 | 1 |
| 7 | 81 | -555 | 184 | 498 | 0 | -121 | 773 | 10.2 | 356.9 | 18.0 | 0.0 | 367.1 | 1 |
| 8 | 81 | 393 | 185 | 498 | 0 | -121 | 775 | 7.2 | 357.5 | 18.0 | 0.0 | 364.7 | 1 |
| 9 | 81 | -1696 | 258 | -144 | 0 | 39 | 1080 | 31.2 | 382.0 | 22.1 | 0.0 | 413.2 | 1 |
| 10 | 81 | 1463 | 261 | -145 | 0 | 39 | 1085 | 26.9 | 383.6 | 22.4 | 0.0 | 410.5 | 1 |
| 11 | 81 | -1695 | 258 | 155 | 0 | -33 | 1080 | 31.2 | 376.8 | 22.1 | 0.0 | 408.0 | 1 |
| 12 | 81 | 1497 | 186 | 152 | 0 | -34 | 776 | 27.6 | 280.1 | 15.9 | 0.0 | 307.7 | 1 |
| 13 | 81 | -301 | 672 | 13 | 0 | 8 | 2665 | 5.5 | 862.5 | 57.6 | 0.0 | 868.0 | 1 |
| 14 | 81 | 98 | -220 | -2 | 0 | -1 | -778 | 1.8 | 250.5 | 18.8 | 0.0 | 252.3 | 1 |
| 15 | 81 | -315 | 702 | 14 | 0 | 8 | 2781 | 5.8 | 900.2 | 60.2 | 0.0 | 905.9 | 1 |
| 1 | 93 | -363 | 805 | 16 | 0 | 7 | 3294 | 6.7 | 1064.0 | 69.0 | 0.0 | 1070.7 | 1 |
| 5 | 93 | -558 | 179 | -493 | 0 | 181 | 793 | 10.3 | 417.5 | 17.8 | 0.0 | 427.8 | 1 |
| 6 | 93 | 390 | 180 | -493 | 0 | 181 | 795 | 7.2 | 418.0 | 17.8 | 0.0 | 425.2 | 1 |
| 7 | 93 | -555 | 179 | 498 | 0 | -179 | 794 | 10.2 | 415.7 | 18.0 | 0.0 | 425.9 | 1 |
| 8 | 93 | 393 | 180 | 498 | 0 | -179 | 796 | 7.2 | 416.3 | 18.0 | 0.0 | 423.5 | 1 |
| 9 | 93 | -1696 | 251 | -144 | 0 | 56 | 1109 | 31.2 | 406.5 | 21.5 | 0.0 | 437.7 | 1 |
| 10 | 93 | 1463 | 255 | -145 | 0 | 56 | 1115 | 26.9 | 408.3 | 21.8 | 0.0 | 435.3 | 1 |
| 11 | 93 | -1695 | 252 | 155 | 0 | -51 | 1110 | 31.2 | 402.4 | 21.6 | 0.0 | 433.6 | 1 |
| 12 | 93 | 1497 | 181 | 152 | 0 | -52 | 797 | 27.6 | 302.9 | 15.5 | 0.0 | 330.4 | 1 |
| 13 | 93 | -301 | 665 | 13 | 0 | 6 | 2742 | 5.5 | 886.0 | 57.0 | 0.0 | 891.5 | 1 |
| 14 | 93 | 98 | -225 | -2 | 0 | -1 | -804 | 1.8 | 258.6 | 19.3 | 0.0 | 260.4 | 1 |
| 15 | 93 | -315 | 696 | 14 | 0 | 7 | 2862 | 5.8 | 924.7 | 59.6 | 0.0 | 930.5 | 1 |
| 1 | 104 | -363 | 798 | 16 | 0 | 6 | 3387 | 6.7 | 1092.3 | 68.4 | 0.0 | 1099.0 | 1 |
| 5 | 104 | -558 | 174 | -493 | 0 | 238 | 814 | 10.3 | 475.6 | 17.8 | 0.0 | 485.8 | 1 |
| 6 | 104 | 390 | 175 | -493 | 0 | 238 | 815 | 7.2 | 476.1 | 17.8 | 0.0 | 483.3 | 1 |
| 7 | 104 | -555 | 174 | 498 | 0 | -236 | 815 | 10.2 | 474.3 | 18.0 | 0.0 | 484.5 | 1 |
| 8 | 104 | 393 | 175 | 498 | 0 | -236 | 817 | 7.2 | 474.9 | 18.0 | 0.0 | 482.1 | 1 |
| 9 | 104 | -1696 | 245 | -144 | 0 | 73 | 1138 | 31.2 | 430.8 | 21.0 | 0.0 | 462.0 | 1 |
| 10 | 104 | 1463 | 248 | -145 | 0 | 73 | 1145 | 26.9 | 432.8 | 21.3 | 0.0 | 459.8 | 1 |
| 11 | 104 | -1695 | 245 | 155 | 0 | -69 | 1139 | 31.2 | 427.8 | 21.0 | 0.0 | 459.0 | 1 |
| 12 | 104 | 1497 | 176 | 152 | 0 | -70 | 818 | 27.6 | 325.4 | 15.1 | 0.0 | 353.0 | 1 |
| 13 | 104 | -301 | 659 | 13 | 0 | 5 | 2819 | 5.5 | 909.3 | 56.5 | 0.0 | 914.8 | 1 |
| 14 | 104 | 98 | -230 | -2 | 0 | -1 | -830 | 1.8 | 266.9 | 19.7 | 0.0 | 268.7 | 1 |
| 15 | 104 | -315 | 689 | 14 | 0 | 5 | 2942 | 5.8 | 949.1 | 59.1 | 0.0 | 954.9 | 1 |
| 1 | 116 | -363 | 792 | 16 | 0 | 4 | 3479 | 6.7 | 1120.3 | 67.9 | 0.0 | 1127.0 | 1 |
| 5 | 116 | -558 | 169 | -493 | 0 | 295 | 834 | 10.3 | 533.4 | 17.8 | 0.0 | 543.7 | 1 |
| 6 | 116 | 390 | 170 | -493 | 0 | 295 | 835 | 7.2 | 534.0 | 17.8 | 0.0 | 541.2 | 1 |
| 7 | 116 | -555 | 169 | 498 | 0 | -294 | 835 | 10.2 | 532.7 | 18.0 | 0.0 | 542.9 | 1 |
| 8 | 116 | 393 | 170 | 498 | 0 | -294 | 837 | 7.2 | 533.3 | 18.0 | 0.0 | 540.6 | 1 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-------|------|------|---|-----|------|------|-------|------|-----|-------|---|
| 9 | 116 | -1696 | 239 | -144 | 0 | 89 | 1166 | 31.2 | 454.8 | 20.4 | 0.0 | 486.0 | 1 |
| 10 | 116 | 1463 | 242 | -145 | 0 | 89 | 1173 | 26.9 | 457.1 | 20.7 | 0.0 | 484.0 | 1 |
| 11 | 116 | -1695 | 239 | 155 | 0 | -87 | 1167 | 31.2 | 453.0 | 20.5 | 0.0 | 484.2 | 1 |
| 12 | 116 | 1497 | 171 | 152 | 0 | -87 | 838 | 27.6 | 347.8 | 14.7 | 0.0 | 375.3 | 1 |
| 13 | 116 | -301 | 653 | 13 | 0 | 3 | 2895 | 5.5 | 932.3 | 55.9 | 0.0 | 937.8 | 1 |
| 14 | 116 | 98 | -235 | -2 | 0 | -0 | -857 | 1.8 | 275.4 | 20.1 | 0.0 | 277.2 | 1 |
| 15 | 116 | -315 | 683 | 14 | 0 | 3 | 3022 | 5.8 | 973.2 | 58.5 | 0.0 | 979.0 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x | Mmax | Mmax | Sf (M) | x | fmax. | fmax | fmax / l | Nota |
|----|---------|-----|-------|--------|--------|------|-----------|------|----------|------|
| | | cm | daN*m | daN/cm | | cm | | | | |
| 1 | -- | 116 | 3479 | 1116.9 | -- | -- | -- | -- | -- | |
| -- | Rara | 56 | 3 | -- | 57 | 0.00 | 1 / 99999 | | | |
| -- | Freq. | 56 | 3 | -- | 57 | 0.00 | 1 / 99999 | | | |
| -- | Q.Perm. | 56 | 3 | -- | 57 | 0.00 | 1 / 99999 | | | |
| -- | Rara | 56 | 3 | -- | 57 | 0.00 | 1 / 99999 | | | |
| -- | Rara | 56 | 3 | -- | 57 | 0.00 | 1 / 99999 | | | |
| -- | Freq. | 56 | 3 | -- | 57 | 0.00 | 1 / 99999 | | | |
| -- | Freq. | 56 | 3 | -- | 57 | 0.00 | 1 / 99999 | | | |

ASTA NUM. 13 NI 67 NF 66 Lungh. 116.0 cm SEZ. 6 Ps HEB 160

categoria: p.p. y qy tot.
qy medio: 0.4263 0.4263 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|-------|------|----|-------|------|---------|--------|--------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | daN/cm | | | | |
| 1 | 0 | -363 | -1614 | 2 | 0 | 4 | 3479 | 6.7 | 1120.3 | 138.3 | 0.0 | 1127.0 | 1 | |
| 5 | 0 | -432 | -384 | 105 | 0 | 295 | 834 | 8.0 | 533.5 | 32.9 | 0.0 | 541.4 | 1 | |
| 6 | 0 | 264 | -383 | 105 | 0 | 295 | 836 | 4.9 | 534.1 | 32.8 | 0.0 | 538.9 | 1 | |
| 7 | 0 | -428 | -383 | -104 | 0 | -294 | 835 | 7.9 | 532.8 | 32.8 | 0.0 | 540.7 | 1 | |
| 8 | 0 | 267 | -382 | -104 | 0 | -294 | 837 | 4.9 | 533.4 | 32.7 | 0.0 | 538.3 | 1 | |
| 9 | 0 | -1276 | -539 | 32 | 0 | 89 | 1167 | 23.5 | 455.1 | 46.2 | 0.0 | 478.6 | 1 | |
| 10 | 0 | 1042 | -536 | 32 | 0 | 89 | 1173 | 19.2 | 457.1 | 45.9 | 0.0 | 476.3 | 1 | |
| 11 | 0 | -1275 | -539 | -30 | 0 | -87 | 1167 | 23.5 | 453.0 | 46.2 | 0.0 | 476.5 | 1 | |
| 12 | 0 | 1077 | -381 | -31 | 0 | -87 | 838 | 19.8 | 347.8 | 32.7 | 0.0 | 367.7 | 1 | |
| 13 | 0 | -301 | -1342 | 2 | 0 | 3 | 2896 | 5.5 | 932.6 | 115.0 | 0.0 | 938.2 | 1 | |
| 14 | 0 | 98 | 406 | -0 | 0 | -0 | -857 | 1.8 | 275.4 | 34.8 | 0.0 | 277.2 | 1 | |
| 15 | 0 | -315 | -1401 | 2 | 0 | 3 | 3023 | 5.8 | 973.5 | 120.1 | 0.0 | 979.3 | 1 | |
| 1 | 12 | -363 | -1621 | 2 | 0 | 4 | 3291 | 6.7 | 1059.8 | 138.9 | 0.0 | 1066.5 | 1 | |
| 5 | 12 | -432 | -389 | 105 | 0 | 283 | 789 | 8.0 | 508.1 | 33.3 | 0.0 | 516.1 | 1 | |
| 6 | 12 | 264 | -388 | 105 | 0 | 283 | 791 | 4.9 | 508.8 | 33.2 | 0.0 | 513.7 | 1 | |
| 7 | 12 | -428 | -388 | -104 | 0 | -282 | 790 | 7.9 | 507.6 | 33.3 | 0.0 | 515.5 | 1 | |
| 8 | 12 | 267 | -387 | -104 | 0 | -282 | 792 | 4.9 | 508.2 | 33.2 | 0.0 | 513.1 | 1 | |
| 9 | 12 | -1276 | -546 | 32 | 0 | 86 | 1104 | 23.5 | 431.5 | 46.7 | 0.0 | 455.0 | 1 | |
| 10 | 12 | 1042 | -542 | 32 | 0 | 86 | 1110 | 19.2 | 433.7 | 46.5 | 0.0 | 452.9 | 1 | |
| 11 | 12 | -1275 | -545 | -30 | 0 | -84 | 1104 | 23.5 | 429.7 | 46.7 | 0.0 | 453.1 | 1 | |
| 12 | 12 | 1077 | -386 | -31 | 0 | -84 | 794 | 19.8 | 330.3 | 33.1 | 0.0 | 350.2 | 1 | |
| 13 | 12 | -301 | -1348 | 2 | 0 | 3 | 2740 | 5.5 | 882.3 | 115.5 | 0.0 | 887.9 | 1 | |
| 14 | 12 | 98 | 401 | -0 | 0 | -0 | -810 | 1.8 | 260.3 | 34.4 | 0.0 | 262.1 | 1 | |
| 15 | 12 | -315 | -1408 | 2 | 0 | 3 | 2860 | 5.8 | 921.0 | 120.6 | 0.0 | 926.8 | 1 | |
| 1 | 23 | -363 | -1627 | 2 | 0 | 3 | 3103 | 6.7 | 999.2 | 139.4 | 0.0 | 1005.9 | 1 | |
| 5 | 23 | -432 | -394 | 105 | 0 | 271 | 744 | 8.0 | 482.6 | 33.7 | 0.0 | 490.6 | 1 | |
| 6 | 23 | 264 | -393 | 105 | 0 | 271 | 746 | 4.9 | 483.4 | 33.6 | 0.0 | 488.2 | 1 | |
| 7 | 23 | -428 | -393 | -104 | 0 | -270 | 745 | 7.9 | 482.3 | 33.7 | 0.0 | 490.1 | 1 | |
| 8 | 23 | 267 | -392 | -104 | 0 | -270 | 747 | 4.9 | 482.9 | 33.6 | 0.0 | 487.8 | 1 | |
| 9 | 23 | -1276 | -552 | 32 | 0 | 82 | 1040 | 23.5 | 407.7 | 47.3 | 0.0 | 431.2 | 1 | |
| 10 | 23 | 1042 | -549 | 32 | 0 | 82 | 1047 | 19.2 | 410.1 | 47.0 | 0.0 | 429.3 | 1 | |
| 11 | 23 | -1275 | -552 | -30 | 0 | -80 | 1040 | 23.5 | 406.1 | 47.3 | 0.0 | 429.6 | 1 | |
| 12 | 23 | 1077 | -391 | -31 | 0 | -80 | 749 | 19.8 | 312.6 | 33.5 | 0.0 | 332.4 | 1 | |
| 13 | 23 | -301 | -1355 | 2 | 0 | 3 | 2583 | 5.5 | 831.8 | 116.1 | 0.0 | 837.3 | 1 | |
| 14 | 23 | 98 | 396 | -0 | 0 | -0 | -764 | 1.8 | 245.5 | 33.9 | 0.0 | 247.3 | 1 | |
| 15 | 23 | -315 | -1414 | 2 | 0 | 3 | 2696 | 5.8 | 868.3 | 121.2 | 0.0 | 874.1 | 1 | |
| 1 | 35 | -363 | -1634 | 2 | 0 | 3 | 2914 | 6.7 | 938.2 | 140.0 | 0.0 | 944.9 | 1 | |
| 5 | 35 | -432 | -399 | 105 | 0 | 259 | 698 | 8.0 | 456.9 | 34.2 | 0.0 | 464.9 | 1 | |
| 6 | 35 | 264 | -398 | 105 | 0 | 259 | 700 | 4.9 | 457.7 | 34.1 | 0.0 | 462.6 | 1 | |
| 7 | 35 | -428 | -398 | -104 | 0 | -258 | 699 | 7.9 | 456.7 | 34.1 | 0.0 | 464.6 | 1 | |
| 8 | 35 | 267 | -397 | -104 | 0 | -258 | 701 | 4.9 | 457.4 | 34.0 | 0.0 | 462.3 | 1 | |
| 9 | 35 | -1276 | -558 | 32 | 0 | 78 | 976 | 23.5 | 383.7 | 47.8 | 0.0 | 407.2 | 1 | |
| 10 | 35 | 1042 | -555 | 32 | 0 | 78 | 983 | 19.2 | 386.2 | 47.6 | 0.0 | 405.4 | 1 | |
| 11 | 35 | -1275 | -558 | -30 | 0 | -77 | 976 | 23.5 | 382.3 | 47.8 | 0.0 | 405.7 | 1 | |
| 12 | 35 | 1077 | -396 | -31 | 0 | -77 | 703 | 19.8 | 294.7 | 33.9 | 0.0 | 314.5 | 1 | |
| 13 | 35 | -301 | -1361 | 2 | 0 | 3 | 2425 | 5.5 | 781.0 | 116.6 | 0.0 | 786.6 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-------|-------|------|---|------|------|------|-------|-------|-----|-------|---|
| 14 | 35 | 98 | 391 | -0 | 0 | -0 | -718 | 1.8 | 230.8 | 33.5 | 0.0 | 232.6 | 1 |
| 15 | 35 | -315 | -1421 | 2 | 0 | 3 | 2532 | 5.8 | 815.3 | 121.7 | 0.0 | 821.1 | 1 |
| 1 | 46 | -363 | -1640 | 2 | 0 | 3 | 2724 | 6.7 | 877.1 | 140.5 | 0.0 | 883.8 | 1 |
| 5 | 46 | -432 | -404 | 105 | 0 | 247 | 651 | 8.0 | 431.1 | 34.6 | 0.0 | 439.0 | 1 |
| 6 | 46 | 264 | -403 | 105 | 0 | 247 | 653 | 4.9 | 431.9 | 34.5 | 0.0 | 436.7 | 1 |
| 7 | 46 | -428 | -403 | -104 | 0 | -246 | 653 | 7.9 | 431.0 | 34.5 | 0.0 | 438.9 | 1 |
| 8 | 46 | 267 | -402 | -104 | 0 | -246 | 655 | 4.9 | 431.6 | 34.4 | 0.0 | 436.6 | 1 |
| 9 | 46 | -1276 | -565 | 32 | 0 | 74 | 911 | 23.5 | 359.4 | 48.4 | 0.0 | 382.9 | 1 |
| 10 | 46 | 1042 | -562 | 32 | 0 | 75 | 918 | 19.2 | 362.1 | 48.1 | 0.0 | 381.3 | 1 |
| 11 | 46 | -1275 | -565 | -30 | 0 | -73 | 911 | 23.5 | 358.2 | 48.4 | 0.0 | 381.7 | 1 |
| 12 | 46 | 1077 | -401 | -31 | 0 | -73 | 657 | 19.8 | 276.6 | 34.4 | 0.0 | 296.5 | 1 |
| 13 | 46 | -301 | -1368 | 2 | 0 | 3 | 2267 | 5.5 | 730.0 | 117.2 | 0.0 | 735.5 | 1 |
| 14 | 46 | 98 | 386 | -0 | 0 | -0 | -673 | 1.8 | 216.3 | 33.1 | 0.0 | 218.1 | 1 |
| 15 | 46 | -315 | -1427 | 2 | 0 | 3 | 2367 | 5.8 | 762.1 | 122.3 | 0.0 | 767.9 | 1 |
| 1 | 58 | -363 | -1647 | 2 | 0 | 3 | 2533 | 6.7 | 815.7 | 141.1 | 0.0 | 822.4 | 1 |
| 5 | 58 | -432 | -408 | 105 | 0 | 235 | 604 | 8.0 | 405.0 | 35.0 | 0.0 | 413.0 | 1 |
| 6 | 58 | 264 | -407 | 105 | 0 | 235 | 606 | 4.9 | 405.9 | 34.9 | 0.0 | 410.7 | 1 |
| 7 | 58 | -428 | -408 | -104 | 0 | -234 | 606 | 7.9 | 405.1 | 34.9 | 0.0 | 413.0 | 1 |
| 8 | 58 | 267 | -407 | -104 | 0 | -234 | 608 | 4.9 | 405.7 | 34.9 | 0.0 | 410.7 | 1 |
| 9 | 58 | -1276 | -571 | 32 | 0 | 71 | 845 | 23.5 | 334.9 | 49.0 | 0.0 | 358.3 | 1 |
| 10 | 58 | 1042 | -568 | 32 | 0 | 71 | 853 | 19.2 | 337.8 | 48.7 | 0.0 | 357.0 | 1 |
| 11 | 58 | -1275 | -571 | -30 | 0 | -70 | 845 | 23.5 | 333.9 | 48.9 | 0.0 | 357.4 | 1 |
| 12 | 58 | 1077 | -406 | -31 | 0 | -69 | 610 | 19.8 | 258.4 | 34.8 | 0.0 | 278.2 | 1 |
| 13 | 58 | -301 | -1374 | 2 | 0 | 2 | 2108 | 5.5 | 678.8 | 117.7 | 0.0 | 684.3 | 1 |
| 14 | 58 | 98 | 381 | -0 | 0 | -0 | -629 | 1.8 | 202.0 | 32.7 | 0.0 | 203.8 | 1 |
| 15 | 58 | -315 | -1434 | 2 | 0 | 2 | 2201 | 5.8 | 708.7 | 122.8 | 0.0 | 714.5 | 1 |
| 1 | 70 | -363 | -1653 | 2 | 0 | 2 | 2342 | 6.7 | 754.1 | 141.6 | 0.0 | 760.8 | 1 |
| 5 | 70 | -432 | -413 | 105 | 0 | 222 | 556 | 8.0 | 378.8 | 35.4 | 0.0 | 386.7 | 1 |
| 6 | 70 | 264 | -412 | 105 | 0 | 223 | 559 | 4.9 | 379.7 | 35.3 | 0.0 | 384.5 | 1 |
| 7 | 70 | -428 | -413 | -104 | 0 | -222 | 558 | 7.9 | 379.0 | 35.4 | 0.0 | 386.9 | 1 |
| 8 | 70 | 267 | -412 | -104 | 0 | -222 | 560 | 4.9 | 379.7 | 35.3 | 0.0 | 384.6 | 1 |
| 9 | 70 | -1276 | -578 | 32 | 0 | 67 | 778 | 23.5 | 310.1 | 49.5 | 0.0 | 333.6 | 1 |
| 10 | 70 | 1042 | -574 | 32 | 0 | 67 | 787 | 19.2 | 313.2 | 49.2 | 0.0 | 332.4 | 1 |
| 11 | 70 | -1275 | -577 | -30 | 0 | -66 | 779 | 23.5 | 309.3 | 49.5 | 0.0 | 332.8 | 1 |
| 12 | 70 | 1077 | -411 | -31 | 0 | -66 | 563 | 19.8 | 239.9 | 35.2 | 0.0 | 259.8 | 1 |
| 13 | 70 | -301 | -1380 | 2 | 0 | 2 | 1948 | 5.5 | 627.3 | 118.3 | 0.0 | 632.8 | 1 |
| 14 | 70 | 98 | 376 | -0 | 0 | -0 | -585 | 1.8 | 187.9 | 32.2 | 0.0 | 189.7 | 1 |
| 15 | 70 | -315 | -1440 | 2 | 0 | 2 | 2034 | 5.8 | 655.0 | 123.4 | 0.0 | 660.8 | 1 |
| 1 | 81 | -363 | -1660 | 2 | 0 | 2 | 2150 | 6.7 | 692.2 | 142.2 | 0.0 | 698.9 | 1 |
| 5 | 81 | -432 | -418 | 105 | 0 | 210 | 508 | 8.0 | 352.3 | 35.8 | 0.0 | 360.3 | 1 |
| 6 | 81 | 264 | -417 | 105 | 0 | 210 | 511 | 4.9 | 353.3 | 35.8 | 0.0 | 358.2 | 1 |
| 7 | 81 | -428 | -418 | -104 | 0 | -210 | 510 | 7.9 | 352.7 | 35.8 | 0.0 | 360.6 | 1 |
| 8 | 81 | 267 | -417 | -104 | 0 | -210 | 512 | 4.9 | 353.4 | 35.7 | 0.0 | 358.3 | 1 |
| 9 | 81 | -1276 | -584 | 32 | 0 | 63 | 711 | 23.5 | 285.1 | 50.1 | 0.0 | 308.6 | 1 |
| 10 | 81 | 1042 | -581 | 32 | 0 | 64 | 720 | 19.2 | 288.4 | 49.8 | 0.0 | 307.6 | 1 |
| 11 | 81 | -1275 | -584 | -30 | 0 | -63 | 711 | 23.5 | 284.6 | 50.0 | 0.0 | 308.0 | 1 |
| 12 | 81 | 1077 | -416 | -31 | 0 | -62 | 515 | 19.8 | 221.3 | 35.6 | 0.0 | 241.1 | 1 |
| 13 | 81 | -301 | -1387 | 2 | 0 | 2 | 1787 | 5.5 | 575.5 | 118.8 | 0.0 | 581.1 | 1 |
| 14 | 81 | 98 | 371 | -0 | 0 | -0 | -541 | 1.8 | 173.9 | 31.8 | 0.0 | 175.7 | 1 |
| 15 | 81 | -315 | -1447 | 2 | 0 | 2 | 1867 | 5.8 | 601.1 | 124.0 | 0.0 | 606.9 | 1 |
| 1 | 93 | -363 | -1666 | 2 | 0 | 2 | 1957 | 6.7 | 630.1 | 142.8 | 0.0 | 636.8 | 1 |
| 5 | 93 | -432 | -423 | 105 | 0 | 198 | 459 | 8.0 | 325.7 | 36.3 | 0.0 | 333.7 | 1 |
| 6 | 93 | 264 | -422 | 105 | 0 | 198 | 462 | 4.9 | 326.8 | 36.2 | 0.0 | 331.6 | 1 |
| 7 | 93 | -428 | -423 | -104 | 0 | -198 | 461 | 7.9 | 326.3 | 36.2 | 0.0 | 334.2 | 1 |
| 8 | 93 | 267 | -422 | -104 | 0 | -198 | 464 | 4.9 | 327.0 | 36.1 | 0.0 | 331.9 | 1 |
| 9 | 93 | -1276 | -591 | 32 | 0 | 59 | 643 | 23.5 | 259.8 | 50.6 | 0.0 | 283.3 | 1 |
| 10 | 93 | 1042 | -587 | 32 | 0 | 60 | 652 | 19.2 | 263.3 | 50.3 | 0.0 | 282.5 | 1 |
| 11 | 93 | -1275 | -590 | -30 | 0 | -59 | 643 | 23.5 | 259.5 | 50.6 | 0.0 | 283.0 | 1 |
| 12 | 93 | 1077 | -421 | -31 | 0 | -59 | 466 | 19.8 | 202.5 | 36.1 | 0.0 | 222.3 | 1 |
| 13 | 93 | -301 | -1393 | 2 | 0 | 2 | 1626 | 5.5 | 523.6 | 119.4 | 0.0 | 529.1 | 1 |
| 14 | 93 | 98 | 366 | -0 | 0 | -0 | -499 | 1.8 | 160.2 | 31.4 | 0.0 | 162.0 | 1 |
| 15 | 93 | -315 | -1453 | 2 | 0 | 2 | 1699 | 5.8 | 546.9 | 124.5 | 0.0 | 552.7 | 1 |
| 1 | 104 | -363 | -1673 | 2 | 0 | 2 | 1763 | 6.7 | 567.7 | 143.3 | 0.0 | 574.4 | 1 |
| 5 | 104 | -432 | -428 | 105 | 0 | 186 | 410 | 8.0 | 298.9 | 36.7 | 0.0 | 306.9 | 1 |
| 6 | 104 | 264 | -427 | 105 | 0 | 186 | 413 | 4.9 | 300.0 | 36.6 | 0.0 | 304.9 | 1 |
| 7 | 104 | -428 | -428 | -104 | 0 | -186 | 412 | 7.9 | 299.6 | 36.6 | 0.0 | 307.5 | 1 |
| 8 | 104 | 267 | -427 | -104 | 0 | -186 | 415 | 4.9 | 300.3 | 36.6 | 0.0 | 305.2 | 1 |
| 9 | 104 | -1276 | -597 | 32 | 0 | 56 | 574 | 23.5 | 234.3 | 51.2 | 0.0 | 257.8 | 1 |
| 10 | 104 | 1042 | -594 | 32 | 0 | 56 | 583 | 19.2 | 238.0 | 50.9 | 0.0 | 257.2 | 1 |
| 11 | 104 | -1275 | -597 | -30 | 0 | -56 | 574 | 23.5 | 234.3 | 51.1 | 0.0 | 257.8 | 1 |
| 12 | 104 | 1077 | -426 | -31 | 0 | -55 | 417 | 19.8 | 183.5 | 36.5 | 0.0 | 203.3 | 1 |
| 13 | 104 | -301 | -1400 | 2 | 0 | 2 | 1464 | 5.5 | 471.4 | 119.9 | 0.0 | 476.9 | 1 |
| 14 | 104 | 98 | 361 | -0 | 0 | -0 | -456 | 1.8 | 146.6 | 31.0 | 0.0 | 148.4 | 1 |
| 15 | 104 | -315 | -1460 | 2 | 0 | 2 | 1530 | 5.8 | 492.5 | 125.1 | 0.0 | 498.3 | 1 |
| 1 | 116 | -363 | -1679 | 2 | 0 | 2 | 1569 | 6.7 | 505.2 | 143.9 | 0.0 | 511.8 | 1 |
| 5 | 116 | -432 | -433 | 105 | 0 | 174 | 360 | 8.0 | 271.9 | 37.1 | 0.0 | 279.9 | 1 |
| 6 | 116 | 264 | -432 | 105 | 0 | 174 | 363 | 4.9 | 273.1 | 37.0 | 0.0 | 277.9 | 1 |
| 7 | 116 | -428 | -433 | -104 | 0 | -174 | 362 | 7.9 | 272.8 | 37.1 | 0.0 | 280.7 | 1 |
| 8 | 116 | 267 | -432 | -104 | 0 | -174 | 365 | 4.9 | 273.5 | 37.0 | 0.0 | 278.4 | 1 |
| 9 | 116 | -1276 | -603 | 32 | 0 | 52 | 504 | 23.5 | 208.6 | 51.7 | 0.0 | 232.1 | 1 |
| 10 | 116 | 1042 | -600 | 32 | 0 | 53 | 514 | 19.2 | 212.5 | 51.4 | 0.0 | 231.7 | 1 |
| 11 | 116 | -1275 | -603 | -30 | 0 | -52 | 505 | 23.5 | 208.8 | 51.7 | 0.0 | 232.3 | 1 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|-------|-----|---|-----|------|------|-------|-------|-----|-------|---|
| 12 | 116 | 1077 | -431 | -31 | 0 | -52 | 367 | 19.8 | 164.3 | 36.9 | 0.0 | 184.1 | 1 |
| 13 | 116 | -301 | -1406 | 2 | 0 | 1 | 1301 | 5.5 | 418.9 | 120.5 | 0.0 | 424.5 | 1 |
| 14 | 116 | 98 | 357 | -0 | 0 | -0 | -415 | 1.8 | 133.2 | 30.5 | 0.0 | 135.0 | 1 |
| 15 | 116 | -315 | -1466 | 2 | 0 | 1 | 1360 | 5.8 | 437.9 | 125.6 | 0.0 | 443.7 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x | Mmax | Mmax | Sf (M) | x | fmax. | fmax | fmax / l | Nota |
|----|---------|----|------|--------|---------|------|-----------|------|----------|------|
| | | cm | | daN*m | daN/cmq | | cm | | | |
| 1 | -- | 0 | 3479 | 1116.9 | -- | -- | -- | -- | -- | |
| -- | Rara | 60 | 3 | -- | 59 | 0.00 | 1 / 99999 | | | |
| -- | Freq. | 60 | 3 | -- | 59 | 0.00 | 1 / 99999 | | | |
| -- | Q.Perm. | 60 | 3 | -- | 59 | 0.00 | 1 / 99999 | | | |
| -- | Rara | 60 | 3 | -- | 59 | 0.00 | 1 / 99999 | | | |
| -- | Rara | 60 | 3 | -- | 59 | 0.00 | 1 / 99999 | | | |
| -- | Freq. | 60 | 3 | -- | 59 | 0.00 | 1 / 99999 | | | |
| -- | Freq. | 60 | 3 | -- | 59 | 0.00 | 1 / 99999 | | | |

ASTA NUM. 12 NI 66 NF 53 Lungh. 116.0 cm SEZ. 6 Ps HEB 160

 categoria: p.p. y qy tot.
 qy medio: 0.4263 0.4263 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|-------|------|----|-------|------|---------|--------|---------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | daN/cmq | | | | |
| 1 | 0 | -363 | -4085 | 4 | 0 | 2 | 1571 | 6.7 | 505.8 | 350.1 | 0.0 | 691.8 | 3 | |
| 5 | 0 | -306 | -986 | 343 | 0 | 174 | 360 | 5.6 | 272.1 | 84.5 | 0.0 | 277.7 | 1 | |
| 6 | 0 | 137 | -985 | 343 | 0 | 174 | 363 | 2.5 | 273.2 | 84.4 | 0.0 | 275.8 | 1 | |
| 7 | 0 | -302 | -985 | -342 | 0 | -174 | 362 | 5.6 | 273.0 | 84.4 | 0.0 | 278.5 | 1 | |
| 8 | 0 | 141 | -984 | -342 | 0 | -174 | 365 | 2.6 | 273.7 | 84.3 | 0.0 | 276.3 | 1 | |
| 9 | 0 | -855 | -1381 | 103 | 0 | 52 | 505 | 15.7 | 208.8 | 118.3 | 0.0 | 239.4 | 3 | |
| 10 | 0 | 621 | -1378 | 104 | 0 | 53 | 515 | 11.4 | 212.7 | 118.1 | 0.0 | 238.1 | 3 | |
| 11 | 0 | -854 | -1381 | -102 | 0 | -52 | 505 | 15.7 | 209.0 | 118.3 | 0.0 | 239.5 | 3 | |
| 12 | 0 | 656 | -983 | -102 | 0 | -52 | 368 | 12.1 | 164.4 | 84.3 | 0.0 | 176.5 | 1 | |
| 13 | 0 | -301 | -3401 | 3 | 0 | 1 | 1303 | 5.5 | 419.6 | 291.4 | 0.0 | 575.1 | 3 | |
| 14 | 0 | 98 | 997 | -0 | 0 | -0 | -415 | 1.8 | 133.3 | 85.4 | 0.0 | 174.4 | 3 | |
| 15 | 0 | -315 | -3550 | 3 | 0 | 1 | 1361 | 5.8 | 438.2 | 304.2 | 0.0 | 600.5 | 3 | |
| 1 | 12 | -363 | -4091 | 4 | 0 | 1 | 1097 | 6.7 | 353.2 | 350.6 | 0.0 | 621.5 | 3 | |
| 5 | 12 | -306 | -991 | 343 | 0 | 134 | 246 | 5.6 | 199.5 | 84.9 | 0.0 | 205.1 | 1 | |
| 6 | 12 | 137 | -990 | 343 | 0 | 134 | 249 | 2.5 | 200.7 | 84.8 | 0.0 | 203.2 | 1 | |
| 7 | 12 | -302 | -990 | -342 | 0 | -134 | 248 | 5.6 | 200.5 | 84.8 | 0.0 | 206.0 | 1 | |
| 8 | 12 | 141 | -989 | -342 | 0 | -134 | 251 | 2.6 | 201.2 | 84.7 | 0.0 | 203.8 | 1 | |
| 9 | 12 | -855 | -1387 | 103 | 0 | 40 | 344 | 15.7 | 146.5 | 118.9 | 0.0 | 214.7 | 3 | |
| 10 | 12 | 621 | -1384 | 104 | 0 | 41 | 355 | 11.4 | 150.4 | 118.6 | 0.0 | 213.7 | 3 | |
| 11 | 12 | -854 | -1387 | -102 | 0 | -40 | 345 | 15.7 | 146.8 | 118.9 | 0.0 | 214.8 | 3 | |
| 12 | 12 | 656 | -988 | -102 | 0 | -40 | 253 | 12.1 | 117.1 | 84.7 | 0.0 | 154.9 | 3 | |
| 13 | 12 | -301 | -3407 | 3 | 0 | 1 | 908 | 5.5 | 292.4 | 292.0 | 0.0 | 516.9 | 3 | |
| 14 | 12 | 98 | 992 | -0 | 0 | -0 | -300 | 1.8 | 96.3 | 85.0 | 0.0 | 155.4 | 3 | |
| 15 | 12 | -315 | -3556 | 3 | 0 | 1 | 949 | 5.8 | 305.6 | 304.8 | 0.0 | 539.7 | 3 | |
| 1 | 23 | -363 | -4098 | 4 | 0 | 1 | 622 | 6.7 | 200.3 | 351.1 | 0.0 | 608.2 | 4 | |
| 5 | 23 | -306 | -995 | 343 | 0 | 94 | 131 | 5.6 | 126.7 | 85.3 | 0.0 | 148.1 | 4 | |
| 6 | 23 | 137 | -994 | 343 | 0 | 94 | 134 | 2.5 | 127.9 | 85.2 | 0.0 | 147.8 | 4 | |
| 7 | 23 | -302 | -995 | -342 | 0 | -95 | 133 | 5.6 | 127.8 | 85.2 | 0.0 | 148.0 | 4 | |
| 8 | 23 | 141 | -994 | -342 | 0 | -94 | 136 | 2.6 | 128.6 | 85.2 | 0.0 | 147.7 | 4 | |
| 9 | 23 | -855 | -1394 | 103 | 0 | 28 | 183 | 15.7 | 83.9 | 119.4 | 0.0 | 207.6 | 4 | |
| 10 | 23 | 621 | -1391 | 104 | 0 | 29 | 194 | 11.4 | 87.8 | 119.2 | 0.0 | 206.8 | 4 | |
| 11 | 23 | -854 | -1394 | -102 | 0 | -28 | 183 | 15.7 | 84.4 | 119.4 | 0.0 | 207.6 | 4 | |
| 12 | 23 | 656 | -993 | -102 | 0 | -28 | 139 | 12.1 | 69.7 | 85.1 | 0.0 | 148.0 | 4 | |
| 13 | 23 | -301 | -3414 | 3 | 0 | 1 | 512 | 5.5 | 165.1 | 292.5 | 0.0 | 506.7 | 4 | |
| 14 | 23 | 98 | 987 | -0 | 0 | 0 | -185 | 1.8 | 59.4 | 84.6 | 0.0 | 146.5 | 4 | |
| 15 | 23 | -315 | -3563 | 3 | 0 | 1 | 536 | 5.8 | 172.7 | 305.3 | 0.0 | 528.8 | 4 | |
| 1 | 35 | -363 | -4104 | 4 | 0 | 0 | 146 | 6.7 | 47.2 | 351.7 | 0.0 | 609.2 | 4 | |
| 5 | 35 | -306 | -1000 | 343 | 0 | 54 | 15 | 5.6 | 53.8 | 85.7 | 0.0 | 148.7 | 4 | |
| 6 | 35 | 137 | -999 | 343 | 0 | 55 | 18 | 2.5 | 55.0 | 85.6 | 0.0 | 148.4 | 4 | |
| 7 | 35 | -302 | -1000 | -342 | 0 | -55 | 17 | 5.6 | 54.9 | 85.7 | 0.0 | 148.6 | 4 | |
| 8 | 35 | 141 | -999 | -342 | 0 | -55 | 20 | 2.6 | 55.8 | 85.6 | 0.0 | 148.3 | 4 | |
| 9 | 35 | -855 | -1400 | 103 | 0 | 16 | 21 | 15.7 | 21.1 | 120.0 | 0.0 | 208.5 | 4 | |
| 10 | 35 | 621 | -1397 | 104 | 0 | 16 | 32 | 11.4 | 25.0 | 119.7 | 0.0 | 207.7 | 4 | |
| 11 | 35 | -854 | -1400 | -102 | 0 | -16 | 21 | 15.7 | 21.7 | 120.0 | 0.0 | 208.5 | 4 | |
| 12 | 35 | 656 | -998 | -102 | 0 | -16 | 23 | 12.1 | 22.0 | 85.5 | 0.0 | 148.7 | 4 | |
| 13 | 35 | -301 | -3420 | 3 | 0 | 0 | 116 | 5.5 | 37.5 | 293.1 | 0.0 | 507.7 | 4 | |
| 14 | 35 | 98 | 982 | -0 | 0 | 0 | -71 | 1.8 | 22.8 | 84.2 | 0.0 | 145.8 | 4 | |
| 15 | 35 | -315 | -3569 | 3 | 0 | 0 | 122 | 5.8 | 39.6 | 305.9 | 0.0 | 529.8 | 4 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|-------|------|---|------|-------|------|--------|-------|-----|--------|---|
| 1 | 46 | -363 | -4111 | 4 | 0 | -0 | -330 | 6.7 | 106.1 | 352.2 | 0.0 | 610.1 | 4 |
| 5 | 46 | -306 | -1005 | 343 | 0 | 15 | -102 | 5.6 | 45.8 | 86.2 | 0.0 | 149.4 | 4 |
| 6 | 46 | 137 | -1004 | 343 | 0 | 15 | -98 | 2.5 | 44.8 | 86.1 | 0.0 | 149.1 | 4 |
| 7 | 46 | -302 | -1005 | -342 | 0 | -15 | -99 | 5.6 | 45.6 | 86.1 | 0.0 | 149.2 | 4 |
| 8 | 46 | 141 | -1004 | -342 | 0 | -15 | -96 | 2.6 | 44.3 | 86.0 | 0.0 | 149.0 | 4 |
| 9 | 46 | -855 | -1407 | 103 | 0 | 4 | -142 | 15.7 | 49.4 | 120.5 | 0.0 | 209.4 | 4 |
| 10 | 46 | 621 | -1404 | 104 | 0 | 4 | -131 | 11.4 | 45.9 | 120.3 | 0.0 | 208.7 | 4 |
| 11 | 46 | -854 | -1407 | -102 | 0 | -5 | -141 | 15.7 | 49.6 | 120.5 | 0.0 | 209.4 | 4 |
| 12 | 46 | 656 | -1003 | -102 | 0 | -4 | -93 | 12.1 | 33.8 | 86.0 | 0.0 | 149.4 | 4 |
| 13 | 46 | -301 | -3427 | 3 | 0 | -0 | -281 | 5.5 | 90.3 | 293.6 | 0.0 | 508.6 | 4 |
| 14 | 46 | 98 | 977 | -0 | 0 | 0 | 43 | 1.8 | 13.9 | 83.8 | 0.0 | 145.1 | 4 |
| 15 | 46 | -315 | -3576 | 3 | 0 | -0 | -292 | 5.8 | 93.8 | 306.4 | 0.0 | 530.7 | 4 |
| | | | | | | | | | | | | | |
| 1 | 58 | -363 | -4117 | 4 | 0 | -0 | -808 | 6.7 | 259.7 | 352.8 | 0.0 | 611.1 | 4 |
| 5 | 58 | -306 | -1010 | 343 | 0 | -25 | -218 | 5.6 | 92.7 | 86.6 | 0.0 | 150.8 | 3 |
| 6 | 58 | 137 | -1009 | 343 | 0 | -25 | -215 | 2.5 | 91.5 | 86.5 | 0.0 | 149.8 | 4 |
| 7 | 58 | -302 | -1009 | -342 | 0 | 24 | -216 | 5.6 | 91.4 | 86.5 | 0.0 | 150.4 | 3 |
| 8 | 58 | 141 | -1009 | -342 | 0 | 25 | -213 | 2.6 | 90.4 | 86.4 | 0.0 | 149.7 | 4 |
| 9 | 58 | -855 | -1413 | 103 | 0 | -8 | -306 | 15.7 | 105.2 | 121.1 | 0.0 | 212.0 | 3 |
| 10 | 58 | 621 | -1410 | 104 | 0 | -8 | -294 | 11.4 | 101.2 | 120.8 | 0.0 | 209.6 | 4 |
| 11 | 58 | -854 | -1413 | -102 | 0 | 7 | -305 | 15.7 | 104.4 | 121.1 | 0.0 | 211.8 | 3 |
| 12 | 58 | 656 | -1008 | -102 | 0 | 7 | -210 | 12.1 | 73.9 | 86.4 | 0.0 | 150.7 | 3 |
| 13 | 58 | -301 | -3433 | 3 | 0 | -0 | -679 | 5.5 | 218.4 | 294.2 | 0.0 | 509.6 | 4 |
| 14 | 58 | 98 | 972 | -0 | 0 | 0 | 156 | 1.8 | 50.2 | 83.3 | 0.0 | 144.3 | 4 |
| 15 | 58 | -315 | -3582 | 3 | 0 | -0 | -707 | 5.8 | 227.4 | 306.9 | 0.0 | 531.7 | 4 |
| | | | | | | | | | | | | | |
| 1 | 70 | -363 | -4123 | 4 | 0 | -1 | -1286 | 6.7 | 413.5 | 353.3 | 0.0 | 651.3 | 3 |
| 5 | 70 | -306 | -1015 | 343 | 0 | -65 | -336 | 5.6 | 166.2 | 87.0 | 0.0 | 171.8 | 1 |
| 6 | 70 | 137 | -1014 | 343 | 0 | -65 | -332 | 2.5 | 165.0 | 86.9 | 0.0 | 167.5 | 1 |
| 7 | 70 | -302 | -1014 | -342 | 0 | 64 | -334 | 5.6 | 164.9 | 86.9 | 0.0 | 170.4 | 1 |
| 8 | 70 | 141 | -1013 | -342 | 0 | 64 | -330 | 2.6 | 163.7 | 86.8 | 0.0 | 166.3 | 1 |
| 9 | 70 | -855 | -1419 | 103 | 0 | -20 | -470 | 15.7 | 168.7 | 121.6 | 0.0 | 236.7 | 3 |
| 10 | 70 | 621 | -1416 | 104 | 0 | -20 | -458 | 11.4 | 164.7 | 121.4 | 0.0 | 231.9 | 3 |
| 11 | 70 | -854 | -1419 | -102 | 0 | 19 | -469 | 15.7 | 167.8 | 121.6 | 0.0 | 236.6 | 3 |
| 12 | 70 | 656 | -1013 | -102 | 0 | 19 | -327 | 12.1 | 122.1 | 86.8 | 0.0 | 168.2 | 3 |
| 13 | 70 | -301 | -3439 | 3 | 0 | -1 | -1078 | 5.5 | 346.7 | 294.7 | 0.0 | 544.0 | 3 |
| 14 | 70 | 98 | 967 | -0 | 0 | 0 | 268 | 1.8 | 86.4 | 82.9 | 0.0 | 148.3 | 3 |
| 15 | 70 | -315 | -3588 | 3 | 0 | -1 | -1123 | 5.8 | 361.2 | 307.5 | 0.0 | 567.4 | 3 |
| | | | | | | | | | | | | | |
| 1 | 81 | -363 | -4130 | 4 | 0 | -1 | -1764 | 6.7 | 567.6 | 353.9 | 0.0 | 729.6 | 3 |
| 5 | 81 | -306 | -1020 | 343 | 0 | -105 | -454 | 5.6 | 239.9 | 87.4 | 0.0 | 245.5 | 1 |
| 6 | 81 | 137 | -1019 | 343 | 0 | -105 | -450 | 2.5 | 238.6 | 87.3 | 0.0 | 241.2 | 1 |
| 7 | 81 | -302 | -1019 | -342 | 0 | 104 | -452 | 5.6 | 238.5 | 87.3 | 0.0 | 244.1 | 1 |
| 8 | 81 | 141 | -1018 | -342 | 0 | 104 | -448 | 2.6 | 237.3 | 87.3 | 0.0 | 239.9 | 1 |
| 9 | 81 | -855 | -1426 | 103 | 0 | -32 | -635 | 15.7 | 232.5 | 122.2 | 0.0 | 266.9 | 3 |
| 10 | 81 | 621 | -1423 | 104 | 0 | -32 | -622 | 11.4 | 228.5 | 121.9 | 0.0 | 261.2 | 3 |
| 11 | 81 | -854 | -1426 | -102 | 0 | 31 | -634 | 15.7 | 231.5 | 122.2 | 0.0 | 266.7 | 3 |
| 12 | 81 | 656 | -1018 | -102 | 0 | 31 | -445 | 12.1 | 170.5 | 87.2 | 0.0 | 189.8 | 3 |
| 13 | 81 | -301 | -3446 | 3 | 0 | -1 | -1477 | 5.5 | 475.2 | 295.3 | 0.0 | 609.7 | 3 |
| 14 | 81 | 98 | 963 | -0 | 0 | 0 | 380 | 1.8 | 122.4 | 82.5 | 0.0 | 164.9 | 3 |
| 15 | 81 | -315 | -3595 | 3 | 0 | -1 | -1540 | 5.8 | 495.3 | 308.0 | 0.0 | 635.8 | 3 |
| | | | | | | | | | | | | | |
| 1 | 93 | -363 | -4136 | 4 | 0 | -2 | -2244 | 6.7 | 721.9 | 354.4 | 0.0 | 821.0 | 3 |
| 5 | 93 | -306 | -1025 | 343 | 0 | -144 | -573 | 5.6 | 313.7 | 87.8 | 0.0 | 319.4 | 1 |
| 6 | 93 | 137 | -1024 | 343 | 0 | -144 | -569 | 2.5 | 312.5 | 87.8 | 0.0 | 315.0 | 1 |
| 7 | 93 | -302 | -1024 | -342 | 0 | 144 | -570 | 5.6 | 312.3 | 87.8 | 0.0 | 317.9 | 1 |
| 8 | 93 | 141 | -1023 | -342 | 0 | 144 | -566 | 2.6 | 311.0 | 87.7 | 0.0 | 313.6 | 1 |
| 9 | 93 | -855 | -1432 | 103 | 0 | -44 | -801 | 15.7 | 296.5 | 122.7 | 0.0 | 312.2 | 1 |
| 10 | 93 | 621 | -1429 | 104 | 0 | -44 | -788 | 11.4 | 292.5 | 122.5 | 0.0 | 303.9 | 1 |
| 11 | 93 | -854 | -1432 | -102 | 0 | 43 | -800 | 15.7 | 295.3 | 122.7 | 0.0 | 311.1 | 1 |
| 12 | 93 | 656 | -1023 | -102 | 0 | 43 | -563 | 12.1 | 219.1 | 87.7 | 0.0 | 231.2 | 1 |
| 13 | 93 | -301 | -3452 | 3 | 0 | -1 | -1877 | 5.5 | 604.0 | 295.8 | 0.0 | 686.1 | 3 |
| 14 | 93 | 98 | 958 | -0 | 0 | 0 | 492 | 1.8 | 158.2 | 82.1 | 0.0 | 184.8 | 3 |
| 15 | 93 | -315 | -3601 | 3 | 0 | -2 | -1957 | 5.8 | 629.6 | 308.6 | 0.0 | 715.4 | 3 |
| | | | | | | | | | | | | | |
| 1 | 104 | -363 | -4143 | 4 | 0 | -2 | -2724 | 6.7 | 876.4 | 355.0 | 0.0 | 921.5 | 3 |
| 5 | 104 | -306 | -1030 | 343 | 0 | -184 | -692 | 5.6 | 387.8 | 88.3 | 0.0 | 393.4 | 1 |
| 6 | 104 | 137 | -1029 | 343 | 0 | -184 | -688 | 2.5 | 386.5 | 88.2 | 0.0 | 389.1 | 1 |
| 7 | 104 | -302 | -1029 | -342 | 0 | 183 | -689 | 5.6 | 386.3 | 88.2 | 0.0 | 391.9 | 1 |
| 8 | 104 | 141 | -1028 | -342 | 0 | 183 | -685 | 2.6 | 384.9 | 88.1 | 0.0 | 387.5 | 1 |
| 9 | 104 | -855 | -1439 | 103 | 0 | -56 | -968 | 15.7 | 360.7 | 123.3 | 0.0 | 376.5 | 1 |
| 10 | 104 | 621 | -1436 | 104 | 0 | -56 | -954 | 11.4 | 356.7 | 123.0 | 0.0 | 368.1 | 1 |
| 11 | 104 | -854 | -1439 | -102 | 0 | 55 | -967 | 15.7 | 359.5 | 123.3 | 0.0 | 375.2 | 1 |
| 12 | 104 | 656 | -1028 | -102 | 0 | 54 | -682 | 12.1 | 267.8 | 88.1 | 0.0 | 279.9 | 1 |
| 13 | 104 | -301 | -3459 | 3 | 0 | -2 | -2278 | 5.5 | 733.0 | 296.4 | 0.0 | 770.2 | 3 |
| 14 | 104 | 98 | 953 | -0 | 0 | 0 | 603 | 1.8 | 193.8 | 81.6 | 0.0 | 207.0 | 3 |
| 15 | 104 | -315 | -3608 | 3 | 0 | -2 | -2375 | 5.8 | 764.2 | 309.1 | 0.0 | 803.1 | 3 |
| | | | | | | | | | | | | | |
| 1 | 116 | -363 | -4149 | 4 | 0 | -3 | -3205 | 6.7 | 1031.2 | 355.5 | 0.0 | 1037.9 | 1 |
| 5 | 116 | -306 | -1035 | 343 | 0 | -224 | -812 | 5.6 | 462.0 | 88.7 | 0.0 | 467.7 | 1 |
| 6 | 116 | 137 | -1034 | 343 | 0 | -224 | -807 | 2.5 | 460.8 | 88.6 | 0.0 | 463.3 | 1 |
| 7 | 116 | -302 | -1034 | -342 | 0 | 223 | -809 | 5.6 | 460.5 | 88.6 | 0.0 | 466.0 | 1 |
| 8 | 116 | 141 | -1033 | -342 | 0 | 223 | -805 | 2.6 | 459.0 | 88.5 | 0.0 | 461.6 | 1 |
| 9 | 116 | -855 | -1445 | 103 | 0 | -68 | -1135 | 15.7 | 425.2 | 123.8 | 0.0 | 440.9 | 1 |
| 10 | 116 | 621 | -1442 | 104 | 0 | -68 | -1121 | 11.4 | 421.2 | 123.6 | 0.0 | 432.6 | 1 |
| 11 | 116 | -854 | -1445 | -102 | 0 | 66 | -1134 | 15.7 | 423.8 | 123.8 | 0.0 | 439.5 | 1 |
| 12 | 116 | 656 | -1033 | -102 | 0 | 66 | -801 | 12.1 | 316.8 | 88.5 | 0.0 | 328.9 | 1 |
| 13 | 116 | -301 | -3465 | 3 | 0 | -2 | -2680 | 5.5 | 862.3 | 296.9 | 0.0 | 867.9 | 1 |
| 14 | 116 | 98 | 948 | -0 | 0 | 0 | 713 | 1.8 | 229.2 | 81.2 | 0.0 | 231.0 | 1 |

15 116 -315 -3614 3 0 -2 -2794 5.8 899.0 309.7 0.0 904.8 1

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x | Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|----|------|-------|--------|---------|-----------|----------|------|
| | | cm | | daN*m | daN/cm | cm | | | |
| 1 | -- | 0 | 1571 | 504.3 | -- | -- | -- | -- | |
| -- | Rara | 53 | 2 | -- | 53 | 0.00 | 1 / 99999 | | |
| -- | Freq. | 53 | 2 | -- | 53 | 0.00 | 1 / 99999 | | |
| -- | Q.Perm. | 53 | 2 | -- | 53 | 0.00 | 1 / 99999 | | |
| -- | Rara | 53 | 2 | -- | 53 | 0.00 | 1 / 99999 | | |
| -- | Rara | 53 | 2 | -- | 53 | 0.00 | 1 / 99999 | | |
| -- | Freq. | 53 | 2 | -- | 53 | 0.00 | 1 / 99999 | | |
| -- | Freq. | 53 | 2 | -- | 53 | 0.00 | 1 / 99999 | | |

ASTA NUM. 11 NI 53 NF 65 Lungh. 125.0 cm SEZ. 6 Ps HEB 160

categoria: p.p. y qy tot.
qy medio: 0.4263 0.4263 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|------|------|----|-------|-------|---------|--------|--------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | daN/cm | | | | |
| 1 | 0 | 0 | 1447 | 2 | 0 | 2 | -1766 | 0.0 | 568.7 | 124.0 | 0.0 | 568.7 | 1 | |
| 5 | 0 | -79 | 413 | -180 | 0 | -225 | -483 | 1.4 | 357.6 | 35.4 | 0.0 | 359.1 | 1 | |
| 6 | 0 | 79 | 413 | -180 | 0 | -225 | -483 | 1.4 | 357.4 | 35.4 | 0.0 | 358.8 | 1 | |
| 7 | 0 | -79 | 413 | 181 | 0 | 226 | -483 | 1.4 | 358.6 | 35.4 | 0.0 | 360.1 | 1 | |
| 8 | 0 | 79 | 413 | 181 | 0 | 226 | -483 | 1.4 | 358.9 | 35.4 | 0.0 | 360.3 | 1 | |
| 9 | 0 | -262 | 569 | -54 | 0 | -67 | -669 | 4.8 | 275.2 | 48.8 | 0.0 | 280.0 | 1 | |
| 10 | 0 | 262 | 569 | -53 | 0 | -66 | -669 | 4.8 | 274.2 | 48.8 | 0.0 | 279.1 | 1 | |
| 11 | 0 | -262 | 569 | 54 | 0 | 68 | -669 | 4.8 | 275.8 | 48.8 | 0.0 | 280.6 | 1 | |
| 12 | 0 | 262 | 413 | 55 | 0 | 69 | -483 | 4.8 | 217.1 | 35.4 | 0.0 | 221.9 | 1 | |
| 13 | 0 | 0 | 1225 | 1 | 0 | 2 | -1489 | 0.0 | 479.5 | 105.0 | 0.0 | 479.5 | 1 | |
| 14 | 0 | -0 | -230 | -0 | 0 | -0 | 321 | 0.0 | 103.2 | 19.7 | 0.0 | 103.2 | 1 | |
| 15 | 0 | 0 | 1273 | 1 | 0 | 2 | -1549 | 0.0 | 498.9 | 109.1 | 0.0 | 498.9 | 1 | |
| 1 | 12 | 0 | 1440 | 2 | 0 | 2 | -1586 | 0.0 | 510.6 | 123.4 | 0.0 | 510.6 | 1 | |
| 5 | 12 | -79 | 408 | -180 | 0 | -203 | -432 | 1.4 | 320.9 | 34.9 | 0.0 | 322.4 | 1 | |
| 6 | 12 | 79 | 408 | -180 | 0 | -202 | -432 | 1.4 | 320.7 | 34.9 | 0.0 | 322.1 | 1 | |
| 7 | 12 | -79 | 408 | 181 | 0 | 203 | -432 | 1.4 | 321.8 | 34.9 | 0.0 | 323.3 | 1 | |
| 8 | 12 | 79 | 408 | 181 | 0 | 204 | -432 | 1.4 | 322.0 | 34.9 | 0.0 | 323.5 | 1 | |
| 9 | 12 | -262 | 562 | -54 | 0 | -61 | -598 | 4.8 | 246.4 | 48.2 | 0.0 | 251.3 | 1 | |
| 10 | 12 | 262 | 562 | -53 | 0 | -60 | -598 | 4.8 | 245.6 | 48.2 | 0.0 | 250.4 | 1 | |
| 11 | 12 | -262 | 562 | 54 | 0 | 61 | -598 | 4.8 | 247.0 | 48.2 | 0.0 | 251.8 | 1 | |
| 12 | 12 | 262 | 408 | 55 | 0 | 62 | -432 | 4.8 | 194.4 | 34.9 | 0.0 | 199.3 | 1 | |
| 13 | 12 | 0 | 1218 | 1 | 0 | 2 | -1336 | 0.0 | 430.4 | 104.4 | 0.0 | 430.4 | 1 | |
| 14 | 12 | -0 | -235 | -0 | 0 | -0 | 292 | 0.0 | 93.8 | 20.1 | 0.0 | 93.8 | 1 | |
| 15 | 12 | 0 | 1266 | 1 | 0 | 2 | -1390 | 0.0 | 447.7 | 108.5 | 0.0 | 447.7 | 1 | |
| 1 | 25 | 0 | 1433 | 2 | 0 | 2 | -1406 | 0.0 | 452.8 | 122.8 | 0.0 | 452.8 | 1 | |
| 5 | 25 | -79 | 402 | -180 | 0 | -180 | -381 | 1.4 | 284.4 | 34.5 | 0.0 | 285.9 | 1 | |
| 6 | 25 | 79 | 402 | -180 | 0 | -180 | -381 | 1.4 | 284.2 | 34.5 | 0.0 | 285.6 | 1 | |
| 7 | 25 | -79 | 402 | 181 | 0 | 181 | -381 | 1.4 | 285.2 | 34.5 | 0.0 | 286.6 | 1 | |
| 8 | 25 | 79 | 402 | 181 | 0 | 181 | -381 | 1.4 | 285.4 | 34.5 | 0.0 | 286.9 | 1 | |
| 9 | 25 | -262 | 555 | -54 | 0 | -54 | -528 | 4.8 | 218.0 | 47.6 | 0.0 | 222.8 | 1 | |
| 10 | 25 | 262 | 555 | -53 | 0 | -53 | -528 | 4.8 | 217.2 | 47.6 | 0.0 | 222.0 | 1 | |
| 11 | 25 | -262 | 555 | 54 | 0 | 54 | -528 | 4.8 | 218.4 | 47.6 | 0.0 | 223.3 | 1 | |
| 12 | 25 | 262 | 402 | 55 | 0 | 55 | -381 | 4.8 | 172.0 | 34.5 | 0.0 | 176.8 | 1 | |
| 13 | 25 | 0 | 1211 | 1 | 0 | 1 | -1184 | 0.0 | 381.5 | 103.8 | 0.0 | 381.5 | 1 | |
| 14 | 25 | -0 | -240 | -0 | 0 | -0 | 262 | 0.0 | 84.3 | 20.6 | 0.0 | 84.3 | 1 | |
| 15 | 25 | 0 | 1259 | 1 | 0 | 1 | -1232 | 0.0 | 396.9 | 107.9 | 0.0 | 396.9 | 1 | |
| 1 | 37 | 0 | 1426 | 2 | 0 | 1 | -1227 | 0.0 | 395.3 | 122.2 | 0.0 | 395.3 | 1 | |
| 5 | 37 | -79 | 397 | -180 | 0 | -158 | -331 | 1.4 | 248.1 | 34.0 | 0.0 | 249.6 | 1 | |
| 6 | 37 | 79 | 397 | -180 | 0 | -157 | -331 | 1.4 | 247.9 | 34.0 | 0.0 | 249.4 | 1 | |
| 7 | 37 | -79 | 397 | 181 | 0 | 158 | -331 | 1.4 | 248.8 | 34.0 | 0.0 | 250.3 | 1 | |
| 8 | 37 | 79 | 397 | 181 | 0 | 158 | -331 | 1.4 | 249.0 | 34.0 | 0.0 | 250.4 | 1 | |
| 9 | 37 | -262 | 548 | -54 | 0 | -47 | -459 | 4.8 | 189.7 | 47.0 | 0.0 | 194.6 | 1 | |
| 10 | 37 | 262 | 548 | -53 | 0 | -46 | -459 | 4.8 | 189.1 | 47.0 | 0.0 | 193.9 | 1 | |
| 11 | 37 | -262 | 548 | 54 | 0 | 48 | -459 | 4.8 | 190.2 | 47.0 | 0.0 | 195.0 | 1 | |
| 12 | 37 | 262 | 397 | 55 | 0 | 48 | -331 | 4.8 | 149.7 | 34.0 | 0.0 | 154.6 | 1 | |
| 13 | 37 | 0 | 1204 | 1 | 0 | 1 | -1033 | 0.0 | 332.8 | 103.2 | 0.0 | 332.8 | 1 | |
| 14 | 37 | -0 | -246 | -0 | 0 | -0 | 231 | 0.0 | 74.5 | 21.1 | 0.0 | 74.5 | 1 | |
| 15 | 37 | 0 | 1252 | 1 | 0 | 1 | -1075 | 0.0 | 346.4 | 107.3 | 0.0 | 346.4 | 1 | |
| 1 | 50 | 0 | 1419 | 2 | 0 | 1 | -1050 | 0.0 | 338.0 | 121.6 | 0.0 | 339.4 | 3 | |
| 5 | 50 | -79 | 392 | -180 | 0 | -135 | -282 | 1.4 | 212.0 | 33.6 | 0.0 | 213.5 | 1 | |
| 6 | 50 | 79 | 392 | -180 | 0 | -135 | -282 | 1.4 | 211.9 | 33.6 | 0.0 | 213.3 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|------|------|---|------|------|-----|-------|-------|-----|-------|---|
| 7 | 50 | -79 | 392 | 181 | 0 | 136 | -282 | 1.4 | 212.6 | 33.6 | 0.0 | 214.1 | 1 |
| 8 | 50 | 79 | 392 | 181 | 0 | 136 | -282 | 1.4 | 212.8 | 33.6 | 0.0 | 214.2 | 1 |
| 9 | 50 | -262 | 541 | -54 | 0 | -40 | -391 | 4.8 | 161.8 | 46.4 | 0.0 | 166.7 | 1 |
| 10 | 50 | 262 | 541 | -53 | 0 | -40 | -391 | 4.8 | 161.2 | 46.4 | 0.0 | 166.1 | 1 |
| 11 | 50 | -262 | 541 | 54 | 0 | 41 | -391 | 4.8 | 162.2 | 46.4 | 0.0 | 167.0 | 1 |
| 12 | 50 | 262 | 392 | 55 | 0 | 41 | -282 | 4.8 | 127.7 | 33.6 | 0.0 | 132.5 | 1 |
| 13 | 50 | 0 | 1197 | 1 | 0 | 1 | -883 | 0.0 | 284.5 | 102.6 | 0.0 | 285.9 | 3 |
| 14 | 50 | -0 | -251 | -0 | 0 | -0 | 200 | 0.0 | 64.5 | 21.5 | 0.0 | 64.5 | 1 |
| 15 | 50 | 0 | 1245 | 1 | 0 | 1 | -919 | 0.0 | 296.1 | 106.7 | 0.0 | 297.5 | 3 |
| | | | | | | | | | | | | | |
| 1 | 62 | 0 | 1412 | 2 | 0 | 1 | -873 | 0.0 | 281.0 | 121.0 | 0.0 | 300.4 | 3 |
| 5 | 62 | -79 | 386 | -180 | 0 | -113 | -233 | 1.4 | 176.2 | 33.1 | 0.0 | 177.6 | 1 |
| 6 | 62 | 79 | 386 | -180 | 0 | -112 | -233 | 1.4 | 176.0 | 33.1 | 0.0 | 177.5 | 1 |
| 7 | 62 | -79 | 386 | 181 | 0 | 113 | -233 | 1.4 | 176.7 | 33.1 | 0.0 | 178.1 | 1 |
| 8 | 62 | 79 | 386 | 181 | 0 | 113 | -233 | 1.4 | 176.8 | 33.1 | 0.0 | 178.3 | 1 |
| 9 | 62 | -262 | 535 | -54 | 0 | -34 | -324 | 4.8 | 134.2 | 45.8 | 0.0 | 139.0 | 1 |
| 10 | 62 | 262 | 535 | -53 | 0 | -33 | -324 | 4.8 | 133.7 | 45.8 | 0.0 | 138.5 | 1 |
| 11 | 62 | -262 | 535 | 54 | 0 | 34 | -324 | 4.8 | 134.5 | 45.8 | 0.0 | 139.3 | 1 |
| 12 | 62 | 262 | 386 | 55 | 0 | 34 | -233 | 4.8 | 105.9 | 33.1 | 0.0 | 110.7 | 1 |
| 13 | 62 | 0 | 1191 | 1 | 0 | 1 | -734 | 0.0 | 236.4 | 102.0 | 0.0 | 252.9 | 3 |
| 14 | 62 | -0 | -256 | -0 | 0 | -0 | 169 | 0.0 | 54.3 | 22.0 | 0.0 | 56.7 | 3 |
| 15 | 62 | 0 | 1239 | 1 | 0 | 1 | -764 | 0.0 | 246.1 | 106.1 | 0.0 | 263.2 | 3 |
| | | | | | | | | | | | | | |
| 1 | 75 | 0 | 1405 | 2 | 0 | 1 | -697 | 0.0 | 224.3 | 120.4 | 0.0 | 264.4 | 3 |
| 5 | 75 | -79 | 381 | -180 | 0 | -90 | -185 | 1.4 | 140.5 | 32.7 | 0.0 | 142.0 | 1 |
| 6 | 75 | 79 | 381 | -180 | 0 | -90 | -185 | 1.4 | 140.4 | 32.7 | 0.0 | 141.9 | 1 |
| 7 | 75 | -79 | 381 | 181 | 0 | 90 | -185 | 1.4 | 140.9 | 32.7 | 0.0 | 142.4 | 1 |
| 8 | 75 | 79 | 381 | 181 | 0 | 91 | -185 | 1.4 | 141.0 | 32.7 | 0.0 | 142.5 | 1 |
| 9 | 75 | -262 | 528 | -54 | 0 | -27 | -257 | 4.8 | 106.8 | 45.2 | 0.0 | 111.6 | 1 |
| 10 | 75 | 262 | 528 | -53 | 0 | -27 | -257 | 4.8 | 106.4 | 45.2 | 0.0 | 111.3 | 1 |
| 11 | 75 | -262 | 528 | 54 | 0 | 27 | -257 | 4.8 | 107.1 | 45.2 | 0.0 | 111.9 | 1 |
| 12 | 75 | 262 | 381 | 55 | 0 | 28 | -185 | 4.8 | 84.3 | 32.7 | 0.0 | 89.1 | 1 |
| 13 | 75 | 0 | 1184 | 1 | 0 | 1 | -586 | 0.0 | 188.6 | 101.4 | 0.0 | 222.5 | 3 |
| 14 | 75 | -0 | -262 | -0 | 0 | -0 | 136 | 0.0 | 43.9 | 22.4 | 0.0 | 50.5 | 3 |
| 15 | 75 | 0 | 1232 | 1 | 0 | 1 | -610 | 0.0 | 196.4 | 105.5 | 0.0 | 231.6 | 3 |
| | | | | | | | | | | | | | |
| 1 | 87 | 0 | 1398 | 2 | 0 | 1 | -521 | 0.0 | 167.9 | 119.8 | 0.0 | 232.7 | 3 |
| 5 | 87 | -79 | 376 | -180 | 0 | -68 | -138 | 1.4 | 105.1 | 32.2 | 0.0 | 106.6 | 1 |
| 6 | 87 | 79 | 376 | -180 | 0 | -67 | -138 | 1.4 | 105.0 | 32.2 | 0.0 | 106.5 | 1 |
| 7 | 87 | -79 | 376 | 181 | 0 | 68 | -138 | 1.4 | 105.4 | 32.2 | 0.0 | 106.8 | 1 |
| 8 | 87 | 79 | 376 | 181 | 0 | 68 | -138 | 1.4 | 105.5 | 32.2 | 0.0 | 106.9 | 1 |
| 9 | 87 | -262 | 521 | -54 | 0 | -20 | -192 | 4.8 | 79.7 | 44.6 | 0.0 | 89.9 | 3 |
| 10 | 87 | 262 | 521 | -53 | 0 | -20 | -192 | 4.8 | 79.4 | 44.6 | 0.0 | 89.8 | 3 |
| 11 | 87 | -262 | 521 | 54 | 0 | 20 | -192 | 4.8 | 79.9 | 44.6 | 0.0 | 89.9 | 3 |
| 12 | 87 | 262 | 376 | 55 | 0 | 21 | -138 | 4.8 | 62.9 | 32.2 | 0.0 | 67.8 | 1 |
| 13 | 87 | 0 | 1177 | 1 | 0 | 1 | -438 | 0.0 | 141.1 | 100.8 | 0.0 | 195.7 | 3 |
| 14 | 87 | -0 | -267 | -0 | 0 | -0 | 103 | 0.0 | 33.2 | 22.9 | 0.0 | 45.1 | 3 |
| 15 | 87 | 0 | 1225 | 1 | 0 | 1 | -456 | 0.0 | 146.9 | 104.9 | 0.0 | 203.7 | 3 |
| | | | | | | | | | | | | | |
| 1 | 100 | 0 | 1391 | 2 | 0 | 0 | -347 | 0.0 | 111.8 | 119.2 | 0.0 | 207.0 | 3 |
| 5 | 100 | -79 | 370 | -180 | 0 | -45 | -92 | 1.4 | 69.9 | 31.7 | 0.0 | 71.3 | 1 |
| 6 | 100 | 79 | 370 | -180 | 0 | -45 | -92 | 1.4 | 69.8 | 31.7 | 0.0 | 71.3 | 1 |
| 7 | 100 | -79 | 370 | 181 | 0 | 45 | -92 | 1.4 | 70.1 | 31.7 | 0.0 | 71.5 | 1 |
| 8 | 100 | 79 | 370 | 181 | 0 | 45 | -92 | 1.4 | 70.1 | 31.7 | 0.0 | 71.6 | 1 |
| 9 | 100 | -262 | 514 | -54 | 0 | -13 | -127 | 4.8 | 52.9 | 44.0 | 0.0 | 79.0 | 3 |
| 10 | 100 | 262 | 514 | -53 | 0 | -13 | -127 | 4.8 | 52.7 | 44.0 | 0.0 | 79.0 | 3 |
| 11 | 100 | -262 | 514 | 54 | 0 | 14 | -127 | 4.8 | 53.0 | 44.0 | 0.0 | 79.0 | 3 |
| 12 | 100 | 262 | 370 | 55 | 0 | 14 | -92 | 4.8 | 41.8 | 31.7 | 0.0 | 57.8 | 3 |
| 13 | 100 | 0 | 1170 | 1 | 0 | 0 | -292 | 0.0 | 93.9 | 100.2 | 0.0 | 174.0 | 3 |
| 14 | 100 | -0 | -272 | -0 | 0 | -0 | 70 | 0.0 | 22.4 | 23.3 | 0.0 | 40.7 | 3 |
| 15 | 100 | 0 | 1218 | 1 | 0 | 0 | -304 | 0.0 | 97.8 | 104.4 | 0.0 | 181.2 | 3 |
| | | | | | | | | | | | | | |
| 1 | 112 | 0 | 1384 | 2 | 0 | 0 | -174 | 0.0 | 55.9 | 118.6 | 0.0 | 205.4 | 4 |
| 5 | 112 | -79 | 365 | -180 | 0 | -23 | -46 | 1.4 | 34.9 | 31.3 | 0.0 | 54.2 | 4 |
| 6 | 112 | 79 | 365 | -180 | 0 | -22 | -46 | 1.4 | 34.8 | 31.3 | 0.0 | 54.2 | 4 |
| 7 | 112 | -79 | 365 | 181 | 0 | 23 | -46 | 1.4 | 35.0 | 31.3 | 0.0 | 54.2 | 4 |
| 8 | 112 | 79 | 365 | 181 | 0 | 23 | -46 | 1.4 | 35.0 | 31.3 | 0.0 | 54.2 | 4 |
| 9 | 112 | -262 | 507 | -54 | 0 | -7 | -63 | 4.8 | 26.4 | 43.4 | 0.0 | 75.4 | 4 |
| 10 | 112 | 262 | 507 | -53 | 0 | -7 | -63 | 4.8 | 26.3 | 43.4 | 0.0 | 75.4 | 4 |
| 11 | 112 | -262 | 507 | 54 | 0 | 7 | -63 | 4.8 | 26.4 | 43.4 | 0.0 | 75.4 | 4 |
| 12 | 112 | 262 | 365 | 55 | 0 | 7 | -46 | 4.8 | 20.8 | 31.3 | 0.0 | 54.4 | 4 |
| 13 | 112 | 0 | 1163 | 1 | 0 | 0 | -146 | 0.0 | 46.9 | 99.7 | 0.0 | 172.6 | 4 |
| 14 | 112 | -0 | -278 | -0 | 0 | -0 | 35 | 0.0 | 11.3 | 23.8 | 0.0 | 41.2 | 4 |
| 15 | 112 | 0 | 1211 | 1 | 0 | 0 | -152 | 0.0 | 48.9 | 103.8 | 0.0 | 179.7 | 4 |
| | | | | | | | | | | | | | |
| 1 | 125 | 0 | 1377 | 2 | 0 | 0 | -1 | 0.0 | 0.3 | 118.0 | 0.0 | 204.4 | 4 |
| 5 | 125 | -79 | 360 | -180 | 0 | 0 | -0 | 1.4 | 0.1 | 30.8 | 0.0 | 53.4 | 4 |
| 6 | 125 | 79 | 360 | -180 | 0 | 0 | -0 | 1.4 | 0.1 | 30.8 | 0.0 | 53.4 | 4 |
| 7 | 125 | -79 | 360 | 181 | 0 | 0 | -0 | 1.4 | 0.1 | 30.8 | 0.0 | 53.4 | 4 |
| 8 | 125 | 79 | 360 | 181 | 0 | 0 | -0 | 1.4 | 0.1 | 30.8 | 0.0 | 53.4 | 4 |
| 9 | 125 | -262 | 500 | -54 | 0 | 0 | -0 | 4.8 | 0.1 | 42.8 | 0.0 | 74.4 | 4 |
| 10 | 125 | 262 | 500 | -53 | 0 | 0 | -0 | 4.8 | 0.1 | 42.8 | 0.0 | 74.4 | 4 |
| 11 | 125 | -262 | 500 | 54 | 0 | 0 | -0 | 4.8 | 0.1 | 42.8 | 0.0 | 74.4 | 4 |
| 12 | 125 | 262 | 360 | 55 | 0 | 0 | -0 | 4.8 | 0.1 | 30.8 | 0.0 | 53.6 | 4 |
| 13 | 125 | 0 | 1156 | 1 | 0 | 0 | -1 | 0.0 | 0.3 | 99.1 | 0.0 | 171.6 | 4 |
| 14 | 125 | -0 | -283 | -0 | 0 | -0 | 0 | 0.0 | 0.1 | 24.3 | 0.0 | 42.0 | 4 |
| 15 | 125 | 0 | 1204 | 1 | 0 | 0 | -1 | 0.0 | 0.3 | 103.2 | 0.0 | 178.7 | 4 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

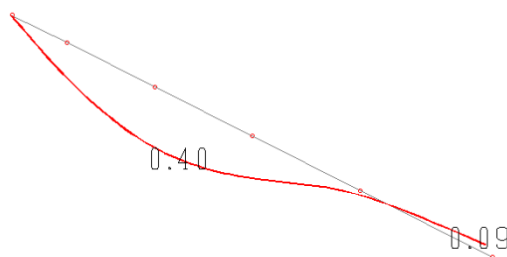
| NC | Tipo | x | Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|----|-------|--------|--------|---------|-----------|----------|------|
| | | cm | daN*m | daN/cm | | cm | | | |
| 14 | -- | 0 | 321 | 102.9 | -- | -- | -- | -- | |
| -- | Rara | 75 | 5 | -- | 68 | 0.00 | 1 / 99999 | | |
| -- | Freq. | 75 | 5 | -- | 68 | 0.00 | 1 / 99999 | | |
| -- | Q.Perm. | 75 | 5 | -- | 68 | 0.00 | 1 / 99999 | | |
| -- | Rara | 75 | 5 | -- | 68 | 0.00 | 1 / 99999 | | |
| -- | Rara | 75 | 5 | -- | 68 | 0.00 | 1 / 99999 | | |
| -- | Freq. | 75 | 5 | -- | 68 | 0.00 | 1 / 99999 | | |
| -- | Freq. | 75 | 5 | -- | 68 | 0.00 | 1 / 99999 | | |

Verifica di STABILITA' e/o SVERGOLAMENTO

| n.comb | Fx | My eq. | Mz eq. | Sn. omega | Sn.yx | Sn.zx | OMEGA | OMEGA1 | Sf | Nota |
|--------|-------|--------|--------|-----------|-------|-------|-------|--------|--------|------|
| | daN | daN*m | daN*m | | | | | | daN/cm | |
| 1 | -363 | 0 | 1 | 137 | 82 | 137 | 3.02 | 1.00 | 20.4 | |
| 5 | -679 | 0 | 0 | 137 | 82 | 137 | 3.02 | 1.00 | 37.8 | |
| 6 | 510 | 0 | 0 | 137 | 82 | 137 | 1.00 | 1.00 | 9.4 | |
| 7 | -675 | 0 | 0 | 137 | 82 | 137 | 3.02 | 1.00 | 37.6 | |
| 8 | 514 | 0 | 0 | 137 | 82 | 137 | 1.00 | 1.00 | 9.5 | |
| 9 | -2099 | 0 | 0 | 137 | 82 | 137 | 3.02 | 1.00 | 116.8 | |
| 10 | 1865 | 0 | 0 | 137 | 82 | 137 | 1.00 | 1.00 | 34.4 | |
| 11 | -2098 | 0 | 0 | 137 | 82 | 137 | 3.02 | 1.00 | 116.8 | |
| 12 | 1900 | 0 | 0 | 137 | 82 | 137 | 1.00 | 1.00 | 35.0 | |
| 13 | -301 | 0 | 0 | 137 | 82 | 137 | 3.02 | 1.00 | 16.9 | |
| 14 | -0 | 0 | 0 | 137 | 82 | 137 | 3.02 | 1.00 | 0.0 | |
| 15 | -315 | 0 | 1 | 137 | 82 | 137 | 3.02 | 1.00 | 17.7 | |

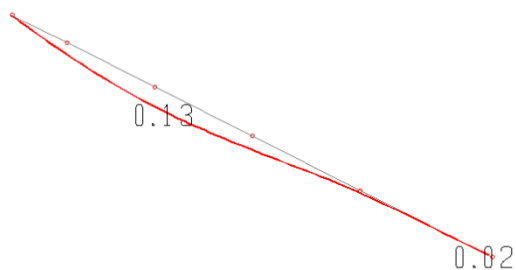
Verifica spostamenti veritcali

232



Prospettiva

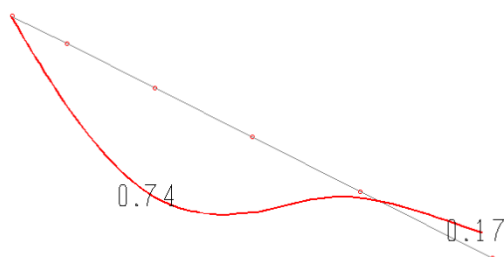
Freccia massima combinazione frequente



Prospettiva

Freccia massima combinazione quasi permanente

233



Prospettiva

Freccia massima combinazione rara

Luce di calcolo 320 cm

Rara $425/0.74 = 574 > 250 \rightarrow$ verificato

Frequente $425/0.40 = 1062.5 > 250 \rightarrow$ verificato

Quasi permanente $425/0.13 = 3269 > 250 \rightarrow$ verificato

4.2.1. VERIFICA SLU E SLE IPE240

SI VERIFICA LA TRAVE PIU' SOLLECITATA

Lavoro: **BLOCCO 4** Intestazione lavoro: **ESECUTIVO**

Elemento: **TRAVE** Metodo di verifica: **Stati limite**

Gruppo: **2** Descrizione: **Travi principali**

Tabella: **Tabella travi**

Tipo acciaio: **S 235**

ASTA NUM. 39 NI 116 NF 117 Lungh. 322.0 cm SEZ. 1 Ps IPE 240

categoria: p.p. y qy tot.

qy medio: 0.3069 0.3069 daN/cm

235

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|-----|-----|-------|----|-----|---------|--------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | 103 | 827 | -8 | 0 | -5 | 0 | 2.6 | 9.7 | 59.3 | 0.0 | 102.8 | 4 | |
| 5 | 0 | -326 | 88 | -2 | 0 | 1 | 0 | 8.3 | 2.3 | 6.3 | 0.0 | 13.8 | 4 | |
| 6 | 0 | -326 | 84 | -6 | 0 | 1 | 0 | 8.3 | 1.3 | 6.0 | 0.0 | 13.4 | 4 | |
| 7 | 0 | -1632 | 483 | 1 | 0 | -3 | 0 | 41.7 | 6.3 | 34.6 | 0.0 | 73.2 | 4 | |
| 8 | 0 | -1629 | 479 | -3 | 0 | -3 | 0 | 41.7 | 7.3 | 34.3 | 0.0 | 72.8 | 4 | |
| 9 | 0 | -38 | 333 | 4 | 0 | -0 | 0 | 1.0 | 0.6 | 23.9 | 0.0 | 41.4 | 4 | |
| 10 | 0 | -36 | 320 | -11 | 0 | -2 | 0 | 0.9 | 3.9 | 23.0 | 0.0 | 39.8 | 4 | |
| 11 | 0 | -461 | 452 | 5 | 0 | -2 | 0 | 11.8 | 3.3 | 32.4 | 0.0 | 57.4 | 4 | |
| 12 | 0 | -461 | 337 | -9 | 0 | -3 | 0 | 11.8 | 5.6 | 24.2 | 0.0 | 43.6 | 4 | |
| 13 | 0 | 88 | 716 | -7 | 0 | -4 | 0 | 2.3 | 8.2 | 51.3 | 0.0 | 89.0 | 4 | |
| 14 | 0 | -25 | -38 | 1 | 0 | 1 | 0 | 0.6 | 1.5 | 2.7 | 0.0 | 4.8 | 4 | |
| 15 | 0 | 91 | 740 | -7 | 0 | -4 | 0 | 2.3 | 8.5 | 53.1 | 0.0 | 92.0 | 4 | |
| 1 | 32 | 103 | 815 | -8 | 0 | -2 | 264 | 2.6 | 85.6 | 58.4 | 0.0 | 110.9 | 3 | |
| 5 | 32 | -326 | 78 | -2 | 0 | 2 | 27 | 8.3 | 11.6 | 5.6 | 0.0 | 20.0 | 1 | |
| 6 | 32 | -326 | 74 | -6 | 0 | 3 | 25 | 8.3 | 13.3 | 5.3 | 0.0 | 21.7 | 1 | |
| 7 | 32 | -1632 | 473 | 1 | 0 | -3 | 154 | 41.7 | 54.7 | 33.9 | 0.0 | 97.2 | 3 | |
| 8 | 32 | -1629 | 469 | -3 | 0 | -2 | 153 | 41.7 | 52.3 | 33.6 | 0.0 | 96.5 | 3 | |
| 9 | 32 | -38 | 320 | 4 | 0 | -1 | 105 | 1.0 | 35.6 | 23.0 | 0.0 | 43.8 | 3 | |
| 10 | 32 | -36 | 307 | -11 | 0 | 2 | 101 | 0.9 | 34.9 | 22.0 | 0.0 | 42.2 | 3 | |
| 11 | 32 | -461 | 439 | 5 | 0 | -3 | 143 | 11.8 | 50.7 | 31.5 | 0.0 | 67.8 | 3 | |
| 12 | 32 | -461 | 327 | -9 | 0 | 0 | 107 | 11.8 | 33.8 | 23.5 | 0.0 | 52.8 | 3 | |
| 13 | 32 | 88 | 703 | -7 | 0 | -2 | 229 | 2.3 | 73.9 | 50.4 | 0.0 | 95.8 | 3 | |
| 14 | 32 | -25 | -48 | 1 | 0 | 0 | -14 | 0.6 | 5.0 | 3.4 | 0.0 | 6.5 | 3 | |
| 15 | 32 | 91 | 727 | -7 | 0 | -2 | 236 | 2.3 | 76.5 | 52.1 | 0.0 | 99.1 | 3 | |
| 1 | 64 | 103 | 802 | -8 | 0 | 1 | 524 | 2.6 | 163.2 | 57.5 | 0.0 | 170.1 | 3 | |
| 5 | 64 | -326 | 68 | -2 | 0 | 2 | 50 | 8.3 | 20.0 | 4.9 | 0.0 | 28.4 | 1 | |
| 6 | 64 | -326 | 64 | -6 | 0 | 5 | 48 | 8.3 | 24.4 | 4.6 | 0.0 | 32.7 | 1 | |
| 7 | 64 | -1632 | 463 | 1 | 0 | -4 | 304 | 41.7 | 102.2 | 33.2 | 0.0 | 143.9 | 1 | |
| 8 | 64 | -1629 | 459 | -3 | 0 | -1 | 302 | 41.7 | 96.2 | 32.9 | 0.0 | 137.9 | 1 | |
| 9 | 64 | -38 | 307 | 4 | 0 | -3 | 206 | 1.0 | 69.2 | 22.0 | 0.0 | 70.2 | 1 | |
| 10 | 64 | -36 | 295 | -11 | 0 | 5 | 198 | 0.9 | 72.4 | 21.1 | 0.0 | 73.4 | 1 | |
| 11 | 64 | -461 | 426 | 5 | 0 | -5 | 282 | 11.8 | 96.8 | 30.5 | 0.0 | 108.6 | 1 | |
| 12 | 64 | -461 | 318 | -9 | 0 | 3 | 211 | 11.8 | 72.2 | 22.8 | 0.0 | 84.0 | 1 | |
| 13 | 64 | 88 | 690 | -7 | 0 | 1 | 453 | 2.3 | 140.9 | 49.5 | 0.0 | 146.8 | 3 | |
| 14 | 64 | -25 | -58 | 1 | 0 | -0 | -31 | 0.6 | 9.6 | 4.1 | 0.0 | 10.9 | 3 | |
| 15 | 64 | 91 | 715 | -7 | 0 | 1 | 468 | 2.3 | 145.8 | 51.2 | 0.0 | 151.9 | 3 | |
| 1 | 97 | 103 | 789 | -8 | 0 | 3 | 781 | 2.6 | 247.7 | 56.6 | 0.0 | 250.3 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-------|------|-----|---|-----|------|------|-------|------|-----|-------|---|
| 5 | 97 | -326 | 58 | -2 | 0 | 3 | 70 | 8.3 | 27.4 | 4.2 | 0.0 | 35.7 | 1 |
| 6 | 97 | -326 | 54 | -6 | 0 | 7 | 67 | 8.3 | 34.4 | 3.9 | 0.0 | 42.8 | 1 |
| 7 | 97 | -1632 | 453 | 1 | 0 | -4 | 452 | 41.7 | 148.6 | 32.5 | 0.0 | 190.3 | 1 |
| 8 | 97 | -1629 | 449 | -3 | 0 | -1 | 448 | 41.7 | 139.2 | 32.2 | 0.0 | 180.9 | 1 |
| 9 | 97 | -38 | 294 | 4 | 0 | -4 | 303 | 1.0 | 101.7 | 21.1 | 0.0 | 102.6 | 1 |
| 10 | 97 | -36 | 282 | -11 | 0 | 9 | 291 | 0.9 | 108.7 | 20.2 | 0.0 | 109.6 | 1 |
| 11 | 97 | -461 | 413 | 5 | 0 | -6 | 418 | 11.8 | 141.6 | 29.6 | 0.0 | 153.4 | 1 |
| 12 | 97 | -461 | 308 | -9 | 0 | 6 | 311 | 11.8 | 109.6 | 22.1 | 0.0 | 121.4 | 1 |
| 13 | 97 | 88 | 677 | -7 | 0 | 3 | 673 | 2.3 | 213.5 | 48.6 | 0.0 | 215.8 | 1 |
| 14 | 97 | -25 | -68 | 1 | 0 | -0 | -51 | 0.6 | 16.6 | 4.8 | 0.0 | 17.2 | 1 |
| 15 | 97 | 91 | 702 | -7 | 0 | 3 | 697 | 2.3 | 221.0 | 50.3 | 0.0 | 223.3 | 1 |
| | | | | | | | | | | | | | |
| 1 | 129 | 103 | 776 | -8 | 0 | 6 | 1032 | 2.6 | 330.9 | 55.6 | 0.0 | 333.5 | 1 |
| 5 | 129 | -326 | 48 | -2 | 0 | 3 | 87 | 8.3 | 33.8 | 3.4 | 0.0 | 42.1 | 1 |
| 6 | 129 | -326 | 44 | -6 | 0 | 9 | 82 | 8.3 | 43.5 | 3.2 | 0.0 | 51.8 | 1 |
| 7 | 129 | -1632 | 443 | 1 | 0 | -5 | 596 | 41.7 | 194.1 | 31.8 | 0.0 | 235.8 | 1 |
| 8 | 129 | -1629 | 439 | -3 | 0 | 0 | 591 | 41.7 | 183.2 | 31.5 | 0.0 | 224.9 | 1 |
| 9 | 129 | -38 | 282 | 4 | 0 | -5 | 396 | 1.0 | 132.8 | 20.2 | 0.0 | 133.8 | 1 |
| 10 | 129 | -36 | 269 | -11 | 0 | 13 | 379 | 0.9 | 143.7 | 19.3 | 0.0 | 144.6 | 1 |
| 11 | 129 | -461 | 400 | 5 | 0 | -8 | 548 | 11.8 | 185.2 | 28.7 | 0.0 | 196.9 | 1 |
| 12 | 129 | -461 | 298 | -9 | 0 | 9 | 409 | 11.8 | 146.1 | 21.3 | 0.0 | 157.9 | 1 |
| 13 | 129 | 88 | 665 | -7 | 0 | 5 | 889 | 2.3 | 284.9 | 47.6 | 0.0 | 287.1 | 1 |
| 14 | 129 | -25 | -77 | 1 | 0 | -1 | -74 | 0.6 | 24.6 | 5.6 | 0.0 | 25.2 | 1 |
| 15 | 129 | 91 | 689 | -7 | 0 | 5 | 920 | 2.3 | 294.9 | 49.4 | 0.0 | 297.2 | 1 |
| | | | | | | | | | | | | | |
| 1 | 161 | 103 | 763 | -8 | 0 | 9 | 1280 | 2.6 | 412.9 | 54.7 | 0.0 | 415.5 | 1 |
| 5 | 161 | -326 | 38 | -2 | 0 | 4 | 101 | 8.3 | 39.2 | 2.7 | 0.0 | 47.5 | 1 |
| 6 | 161 | -326 | 34 | -6 | 0 | 11 | 95 | 8.3 | 51.6 | 2.5 | 0.0 | 59.9 | 1 |
| 7 | 161 | -1632 | 433 | 1 | 0 | -5 | 737 | 41.7 | 238.6 | 31.1 | 0.0 | 280.3 | 1 |
| 8 | 161 | -1629 | 429 | -3 | 0 | 1 | 731 | 41.7 | 228.4 | 30.8 | 0.0 | 270.0 | 1 |
| 9 | 161 | -38 | 269 | 4 | 0 | -6 | 484 | 1.0 | 162.7 | 19.3 | 0.0 | 163.6 | 1 |
| 10 | 161 | -36 | 256 | -11 | 0 | 16 | 464 | 0.9 | 177.4 | 18.4 | 0.0 | 178.3 | 1 |
| 11 | 161 | -461 | 387 | 5 | 0 | -9 | 675 | 11.8 | 227.4 | 27.8 | 0.0 | 239.2 | 1 |
| 12 | 161 | -461 | 288 | -9 | 0 | 12 | 503 | 11.8 | 181.6 | 20.6 | 0.0 | 193.3 | 1 |
| 13 | 161 | 88 | 652 | -7 | 0 | 7 | 1101 | 2.3 | 355.0 | 46.7 | 0.0 | 357.2 | 1 |
| 14 | 161 | -25 | -87 | 1 | 0 | -1 | -101 | 0.6 | 33.6 | 6.3 | 0.0 | 34.2 | 1 |
| 15 | 161 | 91 | 676 | -7 | 0 | 8 | 1140 | 2.3 | 367.6 | 48.5 | 0.0 | 369.9 | 1 |
| | | | | | | | | | | | | | |
| 1 | 193 | 103 | 750 | -8 | 0 | 11 | 1524 | 2.6 | 493.5 | 53.8 | 0.0 | 496.2 | 1 |
| 5 | 193 | -326 | 28 | -2 | 0 | 4 | 112 | 8.3 | 43.6 | 2.0 | 0.0 | 52.0 | 1 |
| 6 | 193 | -326 | 24 | -6 | 0 | 13 | 104 | 8.3 | 58.7 | 1.8 | 0.0 | 67.0 | 1 |
| 7 | 193 | -1632 | 423 | 1 | 0 | -6 | 875 | 41.7 | 282.1 | 30.3 | 0.0 | 323.8 | 1 |
| 8 | 193 | -1629 | 419 | -3 | 0 | 2 | 867 | 41.7 | 272.6 | 30.1 | 0.0 | 314.2 | 1 |
| 9 | 193 | -38 | 256 | 4 | 0 | -8 | 569 | 1.0 | 191.2 | 18.3 | 0.0 | 192.2 | 1 |
| 10 | 193 | -36 | 243 | -11 | 0 | 20 | 544 | 0.9 | 209.8 | 17.4 | 0.0 | 210.7 | 1 |
| 11 | 193 | -461 | 375 | 5 | 0 | -11 | 798 | 11.8 | 268.4 | 26.9 | 0.0 | 280.2 | 1 |
| 12 | 193 | -461 | 278 | -9 | 0 | 16 | 594 | 11.8 | 216.0 | 19.9 | 0.0 | 227.8 | 1 |
| 13 | 193 | 88 | 639 | -7 | 0 | 10 | 1309 | 2.3 | 423.8 | 45.8 | 0.0 | 426.0 | 1 |
| 14 | 193 | -25 | -97 | 1 | 0 | -2 | -131 | 0.6 | 43.5 | 7.0 | 0.0 | 44.2 | 1 |
| 15 | 193 | 91 | 663 | -7 | 0 | 10 | 1356 | 2.3 | 439.0 | 47.5 | 0.0 | 441.3 | 1 |
| | | | | | | | | | | | | | |
| 1 | 225 | 103 | 737 | -8 | 0 | 14 | 1763 | 2.6 | 572.9 | 52.9 | 0.0 | 575.6 | 1 |
| 5 | 225 | -326 | 18 | -2 | 0 | 5 | 119 | 8.3 | 47.1 | 1.3 | 0.0 | 55.4 | 1 |
| 6 | 225 | -326 | 15 | -6 | 0 | 15 | 111 | 8.3 | 64.8 | 1.0 | 0.0 | 73.2 | 1 |
| 7 | 225 | -1632 | 413 | 1 | 0 | -6 | 1010 | 41.7 | 324.6 | 29.6 | 0.0 | 366.4 | 1 |
| 8 | 225 | -1629 | 410 | -3 | 0 | 3 | 1001 | 41.7 | 315.8 | 29.4 | 0.0 | 357.4 | 1 |
| 9 | 225 | -38 | 243 | 4 | 0 | -9 | 649 | 1.0 | 218.6 | 17.4 | 0.0 | 219.5 | 1 |
| 10 | 225 | -36 | 230 | -11 | 0 | 23 | 620 | 0.9 | 240.9 | 16.5 | 0.0 | 241.8 | 1 |
| 11 | 225 | -461 | 362 | 5 | 0 | -12 | 916 | 11.8 | 308.1 | 25.9 | 0.0 | 319.9 | 1 |
| 12 | 225 | -461 | 268 | -9 | 0 | 19 | 682 | 11.8 | 249.5 | 19.2 | 0.0 | 261.3 | 1 |
| 13 | 225 | 88 | 626 | -7 | 0 | 12 | 1513 | 2.3 | 491.3 | 44.9 | 0.0 | 493.5 | 1 |
| 14 | 225 | -25 | -107 | 1 | 0 | -2 | -163 | 0.6 | 54.5 | 7.7 | 0.0 | 55.1 | 1 |
| 15 | 225 | 91 | 650 | -7 | 0 | 12 | 1567 | 2.3 | 509.1 | 46.6 | 0.0 | 511.4 | 1 |
| | | | | | | | | | | | | | |
| 1 | 258 | 103 | 725 | -8 | 0 | 16 | 1999 | 2.6 | 651.1 | 52.0 | 0.0 | 653.7 | 1 |
| 5 | 258 | -326 | 8 | -2 | 0 | 5 | 124 | 8.3 | 49.6 | 0.6 | 0.0 | 57.9 | 1 |
| 6 | 258 | -326 | 5 | -6 | 0 | 17 | 114 | 8.3 | 70.0 | 0.4 | 0.0 | 78.3 | 1 |
| 7 | 258 | -1632 | 403 | 1 | 0 | -7 | 1141 | 41.7 | 366.2 | 28.9 | 0.0 | 407.9 | 1 |
| 8 | 258 | -1629 | 400 | -3 | 0 | 4 | 1131 | 41.7 | 358.0 | 28.7 | 0.0 | 399.7 | 1 |
| 9 | 258 | -38 | 230 | 4 | 0 | -10 | 725 | 1.0 | 244.6 | 16.5 | 0.0 | 245.6 | 1 |
| 10 | 258 | -36 | 217 | -11 | 0 | 27 | 692 | 0.9 | 270.8 | 15.6 | 0.0 | 271.7 | 1 |
| 11 | 258 | -461 | 349 | 5 | 0 | -14 | 1031 | 11.8 | 346.6 | 25.0 | 0.0 | 358.4 | 1 |
| 12 | 258 | -461 | 258 | -9 | 0 | 22 | 767 | 11.8 | 282.1 | 18.5 | 0.0 | 293.9 | 1 |
| 13 | 258 | 88 | 613 | -7 | 0 | 14 | 1712 | 2.3 | 557.5 | 44.0 | 0.0 | 559.8 | 1 |
| 14 | 258 | -25 | -117 | 1 | 0 | -2 | -200 | 0.6 | 66.4 | 8.4 | 0.0 | 67.1 | 1 |
| 15 | 258 | 91 | 637 | -7 | 0 | 15 | 1775 | 2.3 | 577.9 | 45.7 | 0.0 | 580.3 | 1 |
| | | | | | | | | | | | | | |
| 1 | 290 | 103 | 712 | -8 | 0 | 19 | 2230 | 2.6 | 727.9 | 51.0 | 0.0 | 730.6 | 1 |
| 5 | 290 | -326 | -1 | -2 | 0 | 6 | 125 | 8.3 | 51.0 | 0.1 | 0.0 | 59.4 | 1 |
| 6 | 290 | -326 | -5 | -6 | 0 | 19 | 114 | 8.3 | 74.2 | 0.4 | 0.0 | 82.5 | 1 |
| 7 | 290 | -1632 | 394 | 1 | 0 | -7 | 1270 | 41.7 | 406.7 | 28.2 | 0.0 | 448.5 | 1 |
| 8 | 290 | -1629 | 390 | -3 | 0 | 5 | 1258 | 41.7 | 399.2 | 27.9 | 0.0 | 440.9 | 1 |
| 9 | 290 | -38 | 217 | 4 | 0 | -11 | 797 | 1.0 | 269.4 | 15.6 | 0.0 | 270.3 | 1 |
| 10 | 290 | -36 | 205 | -11 | 0 | 31 | 760 | 0.9 | 299.4 | 14.7 | 0.0 | 300.3 | 1 |
| 11 | 290 | -461 | 336 | 5 | 0 | -15 | 1141 | 11.8 | 383.7 | 24.1 | 0.0 | 395.5 | 1 |
| 12 | 290 | -461 | 248 | -9 | 0 | 25 | 849 | 11.8 | 313.6 | 17.8 | 0.0 | 325.4 | 1 |
| 13 | 290 | 88 | 600 | -7 | 0 | 16 | 1908 | 2.3 | 622.5 | 43.0 | 0.0 | 624.8 | 1 |
| 14 | 290 | -25 | -127 | 1 | 0 | -3 | -239 | 0.6 | 79.3 | 9.1 | 0.0 | 80.0 | 1 |
| 15 | 290 | 91 | 625 | -7 | 0 | 17 | 1978 | 2.3 | 645.5 | 44.8 | 0.0 | 647.8 | 1 |

| | | | | | | | | | | | | | |
|----|-----|-------|------|-----|---|-----|------|------|-------|------|-----|-------|---|
| 1 | 322 | 103 | 699 | -8 | 0 | 22 | 2457 | 2.6 | 803.5 | 50.1 | 0.0 | 806.1 | 1 |
| 5 | 322 | -326 | -11 | -2 | 0 | 6 | 123 | 8.3 | 51.6 | 0.8 | 0.0 | 59.9 | 1 |
| 6 | 322 | -326 | -15 | -6 | 0 | 20 | 111 | 8.3 | 77.4 | 1.1 | 0.0 | 85.7 | 1 |
| 7 | 322 | -1632 | 384 | 1 | 0 | -8 | 1395 | 41.7 | 446.3 | 27.5 | 0.0 | 488.1 | 1 |
| 8 | 322 | -1629 | 380 | -3 | 0 | 6 | 1382 | 41.7 | 439.5 | 27.2 | 0.0 | 481.2 | 1 |
| 9 | 322 | -38 | 205 | 4 | 0 | -12 | 865 | 1.0 | 292.8 | 14.7 | 0.0 | 293.8 | 1 |
| 10 | 322 | -36 | 192 | -11 | 0 | 34 | 824 | 0.9 | 326.7 | 13.7 | 0.0 | 327.6 | 1 |
| 11 | 322 | -461 | 323 | 5 | 0 | -17 | 1247 | 11.8 | 419.6 | 23.2 | 0.0 | 431.4 | 1 |
| 12 | 322 | -461 | 238 | -9 | 0 | 28 | 927 | 11.8 | 344.2 | 17.1 | 0.0 | 356.0 | 1 |
| 13 | 322 | 88 | 588 | -7 | 0 | 18 | 2099 | 2.3 | 686.2 | 42.1 | 0.0 | 688.5 | 1 |
| 14 | 322 | -25 | -137 | 1 | 0 | -3 | -281 | 0.6 | 93.2 | 9.8 | 0.0 | 93.9 | 1 |
| 15 | 322 | 91 | 612 | -7 | 0 | 19 | 2177 | 2.3 | 711.8 | 43.9 | 0.0 | 714.1 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|--------|-------|---------------------|---------|------|-----------|------|
| | | cm | daN*m | daN/cm ^q | | cm | | |
| 1 | -- | 322 | 2457 | 757.6 | -- | -- | -- | |
| -- | Rara | 120 | 22 | -- | 137 | 0.00 | 1 / 99999 | |
| -- | Freq. | 120 | 22 | -- | 137 | 0.00 | 1 / 99999 | |
| -- | Q.Perm. | 120 | 22 | -- | 137 | 0.00 | 1 / 99999 | |
| -- | Rara | 120 | 22 | -- | 137 | 0.00 | 1 / 99999 | |
| -- | Rara | 120 | 22 | -- | 137 | 0.00 | 1 / 99999 | |
| -- | Freq. | 120 | 22 | -- | 137 | 0.00 | 1 / 99999 | |
| -- | Freq. | 120 | 22 | -- | 137 | 0.00 | 1 / 99999 | |

ASTA NUM. 40 NI 117 NF 114 Lungh. 370.0 cm SEZ. 1 Ps IPE 240

categoria: p.p. y qy tot.

qy medio: 0.3069 0.3069 daN/cm

237

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|-------|-----|----|-------|------|---------|---------------------|--------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | daN/cm ^q | | | | | |
| 1 | 0 | -56 | -1559 | 5 | 0 | 19 | 2548 | 1.4 | 826.2 | 111.8 | 0.0 | 827.7 | 1 | |
| 5 | 0 | -2657 | -654 | 2 | 0 | 8 | 1418 | 68.0 | 455.0 | 46.9 | 0.0 | 522.9 | 1 | |
| 6 | 0 | -2657 | -649 | 14 | 0 | 24 | 1405 | 68.0 | 483.0 | 46.6 | 0.0 | 550.9 | 1 | |
| 7 | 0 | 563 | -263 | -11 | 0 | -12 | 177 | 14.4 | 79.8 | 18.9 | 0.0 | 94.2 | 1 | |
| 8 | 0 | 567 | -258 | 1 | 0 | 3 | 165 | 14.5 | 57.9 | 18.5 | 0.0 | 72.4 | 1 | |
| 9 | 0 | -792 | -693 | -17 | 0 | -14 | 1285 | 20.2 | 426.1 | 49.6 | 0.0 | 446.3 | 1 | |
| 10 | 0 | -790 | -677 | 25 | 0 | 36 | 1244 | 20.2 | 460.4 | 48.5 | 0.0 | 480.6 | 1 | |
| 11 | 0 | 145 | -575 | -21 | 0 | -20 | 912 | 3.7 | 324.3 | 41.2 | 0.0 | 328.0 | 1 | |
| 12 | 0 | 163 | -389 | 21 | 0 | 28 | 581 | 4.2 | 238.4 | 27.9 | 0.0 | 242.6 | 1 | |
| 13 | 0 | -48 | -1323 | 4 | 0 | 16 | 2176 | 1.2 | 705.5 | 94.9 | 0.0 | 706.7 | 1 | |
| 14 | 0 | -6 | 229 | -1 | 0 | -3 | -292 | 0.1 | 95.7 | 16.4 | 0.0 | 95.9 | 1 | |
| 15 | 0 | -50 | -1374 | 4 | 0 | 17 | 2257 | 1.3 | 731.7 | 98.5 | 0.0 | 733.0 | 1 | |
| 1 | 37 | -56 | -1574 | 5 | 0 | 17 | 1968 | 1.4 | 643.8 | 112.8 | 0.0 | 645.2 | 1 | |
| 5 | 37 | -2657 | -665 | 2 | 0 | 8 | 1174 | 68.0 | 378.3 | 47.7 | 0.0 | 446.3 | 1 | |
| 6 | 37 | -2657 | -661 | 14 | 0 | 18 | 1163 | 68.0 | 397.1 | 47.4 | 0.0 | 465.0 | 1 | |
| 7 | 37 | 563 | -274 | -11 | 0 | -8 | 78 | 14.4 | 40.4 | 19.7 | 0.0 | 54.8 | 1 | |
| 8 | 37 | 567 | -270 | 1 | 0 | 3 | 67 | 14.5 | 26.7 | 19.3 | 0.0 | 42.8 | 3 | |
| 9 | 37 | -792 | -707 | -17 | 0 | -8 | 1026 | 20.2 | 333.1 | 50.7 | 0.0 | 353.3 | 1 | |
| 10 | 37 | -790 | -691 | 25 | 0 | 27 | 991 | 20.2 | 362.8 | 49.6 | 0.0 | 383.0 | 1 | |
| 11 | 37 | 145 | -590 | -21 | 0 | -13 | 697 | 3.7 | 241.6 | 42.3 | 0.0 | 245.3 | 1 | |
| 12 | 37 | 163 | -400 | 21 | 0 | 20 | 436 | 4.2 | 177.4 | 28.7 | 0.0 | 181.6 | 1 | |
| 13 | 37 | -48 | -1338 | 4 | 0 | 15 | 1684 | 1.2 | 550.5 | 95.9 | 0.0 | 551.7 | 1 | |
| 14 | 37 | -6 | 218 | -1 | 0 | -2 | -210 | 0.1 | 69.7 | 15.6 | 0.0 | 69.9 | 1 | |
| 15 | 37 | -50 | -1389 | 4 | 0 | 15 | 1746 | 1.3 | 570.8 | 99.6 | 0.0 | 572.1 | 1 | |
| 1 | 74 | -56 | -1588 | 5 | 0 | 16 | 1384 | 1.4 | 459.6 | 113.9 | 0.0 | 461.1 | 1 | |
| 5 | 74 | -2657 | -677 | 2 | 0 | 7 | 925 | 68.0 | 300.4 | 48.5 | 0.0 | 368.4 | 1 | |
| 6 | 74 | -2657 | -672 | 14 | 0 | 13 | 916 | 68.0 | 309.9 | 48.2 | 0.0 | 377.8 | 1 | |
| 7 | 74 | 563 | -286 | -11 | 0 | -4 | -26 | 14.4 | 15.5 | 20.5 | 0.0 | 38.5 | 4 | |
| 8 | 74 | 567 | -281 | 1 | 0 | 2 | -34 | 14.5 | 15.5 | 20.1 | 0.0 | 37.9 | 4 | |
| 9 | 74 | -792 | -722 | -17 | 0 | -2 | 762 | 20.2 | 238.3 | 51.8 | 0.0 | 258.6 | 1 | |
| 10 | 74 | -790 | -706 | 25 | 0 | 18 | 732 | 20.2 | 263.5 | 50.6 | 0.0 | 283.7 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-------|-------|-----|---|-----|-------|------|-------|-------|-----|-------|---|
| 11 | 74 | 145 | -605 | -21 | 0 | -5 | 476 | 3.7 | 157.2 | 43.3 | 0.0 | 160.9 | 1 |
| 12 | 74 | 163 | -411 | 21 | 0 | 13 | 286 | 4.2 | 115.1 | 29.5 | 0.0 | 119.3 | 1 |
| 13 | 74 | -48 | -1352 | 4 | 0 | 13 | 1186 | 1.2 | 393.8 | 97.0 | 0.0 | 395.0 | 1 |
| 14 | 74 | -6 | 207 | -1 | 0 | -2 | -131 | 0.1 | 45.0 | 14.8 | 0.0 | 45.2 | 1 |
| 15 | 74 | -50 | -1404 | 4 | 0 | 14 | 1229 | 1.3 | 408.1 | 100.6 | 0.0 | 409.4 | 1 |
| 1 | 111 | -56 | -1603 | 5 | 0 | 14 | 793 | 1.4 | 273.8 | 114.9 | 0.0 | 275.7 | 3 |
| 5 | 111 | -2657 | -688 | 2 | 0 | 6 | 673 | 68.0 | 221.2 | 49.3 | 0.0 | 289.1 | 1 |
| 6 | 111 | -2657 | -683 | 14 | 0 | 8 | 665 | 68.0 | 221.4 | 49.0 | 0.0 | 289.4 | 1 |
| 7 | 111 | 563 | -297 | -11 | 0 | 1 | -133 | 14.4 | 42.3 | 21.3 | 0.0 | 59.7 | 3 |
| 8 | 111 | 567 | -292 | 1 | 0 | 2 | -141 | 14.5 | 47.1 | 21.0 | 0.0 | 61.6 | 1 |
| 9 | 111 | -792 | -737 | -17 | 0 | 5 | 492 | 20.2 | 161.2 | 52.8 | 0.0 | 181.4 | 1 |
| 10 | 111 | -790 | -721 | 25 | 0 | 9 | 468 | 20.2 | 162.5 | 51.7 | 0.0 | 182.8 | 1 |
| 11 | 111 | 145 | -619 | -21 | 0 | 3 | 249 | 3.7 | 82.6 | 44.4 | 0.0 | 95.8 | 3 |
| 12 | 111 | 163 | -423 | 21 | 0 | 5 | 131 | 4.2 | 51.5 | 30.3 | 0.0 | 58.7 | 3 |
| 13 | 111 | -48 | -1367 | 4 | 0 | 12 | 683 | 1.2 | 235.5 | 98.0 | 0.0 | 236.7 | 1 |
| 14 | 111 | -6 | 195 | -1 | 0 | -2 | -57 | 0.1 | 21.6 | 14.0 | 0.0 | 25.1 | 3 |
| 15 | 111 | -50 | -1418 | 4 | 0 | 12 | 707 | 1.3 | 243.8 | 101.7 | 0.0 | 245.2 | 3 |
| 1 | 148 | -56 | -1618 | 5 | 0 | 12 | 197 | 1.4 | 86.3 | 116.0 | 0.0 | 200.9 | 4 |
| 5 | 148 | -2657 | -700 | 2 | 0 | 6 | 416 | 68.0 | 140.7 | 50.2 | 0.0 | 208.6 | 1 |
| 6 | 148 | -2657 | -695 | 14 | 0 | 2 | 410 | 68.0 | 131.6 | 49.8 | 0.0 | 199.6 | 1 |
| 7 | 148 | 563 | -309 | -11 | 0 | 5 | -246 | 14.4 | 85.6 | 22.1 | 0.0 | 100.0 | 1 |
| 8 | 148 | 567 | -304 | 1 | 0 | 1 | -251 | 14.5 | 80.0 | 21.8 | 0.0 | 94.5 | 1 |
| 9 | 148 | -792 | -752 | -17 | 0 | 11 | 216 | 20.2 | 89.4 | 53.9 | 0.0 | 110.3 | 3 |
| 10 | 148 | -790 | -736 | 25 | 0 | -1 | 199 | 20.2 | 62.7 | 52.7 | 0.0 | 104.8 | 3 |
| 11 | 148 | 145 | -634 | -21 | 0 | 10 | 17 | 3.7 | 27.3 | 45.5 | 0.0 | 78.9 | 4 |
| 12 | 148 | 163 | -434 | 21 | 0 | -2 | -27 | 4.2 | 13.3 | 31.1 | 0.0 | 54.1 | 4 |
| 13 | 148 | -48 | -1382 | 4 | 0 | 10 | 174 | 1.2 | 75.4 | 99.1 | 0.0 | 171.6 | 4 |
| 14 | 148 | -6 | 184 | -1 | 0 | -2 | 14 | 0.1 | 7.9 | 13.2 | 0.0 | 22.8 | 4 |
| 15 | 148 | -50 | -1433 | 4 | 0 | 11 | 179 | 1.3 | 77.8 | 102.8 | 0.0 | 178.0 | 4 |
| 1 | 185 | -56 | -1633 | 5 | 0 | 10 | -404 | 1.4 | 146.4 | 117.0 | 0.0 | 202.7 | 4 |
| 5 | 185 | -2657 | -711 | 2 | 0 | 5 | 155 | 68.0 | 58.8 | 51.0 | 0.0 | 131.9 | 3 |
| 6 | 185 | -2657 | -706 | 14 | 0 | -3 | 151 | 68.0 | 52.6 | 50.6 | 0.0 | 130.5 | 3 |
| 7 | 185 | 563 | -320 | -11 | 0 | 9 | -362 | 14.4 | 130.2 | 22.9 | 0.0 | 144.6 | 1 |
| 8 | 185 | 567 | -315 | 1 | 0 | 1 | -365 | 14.5 | 114.3 | 22.6 | 0.0 | 128.8 | 1 |
| 9 | 185 | -792 | -766 | -17 | 0 | 17 | -65 | 20.2 | 55.9 | 54.9 | 0.0 | 97.7 | 4 |
| 10 | 185 | -790 | -750 | 25 | 0 | -10 | -76 | 20.2 | 44.5 | 53.8 | 0.0 | 95.6 | 4 |
| 11 | 185 | 145 | -649 | -21 | 0 | 18 | -220 | 3.7 | 106.1 | 46.5 | 0.0 | 109.9 | 1 |
| 12 | 185 | 163 | -445 | 21 | 0 | -10 | -190 | 4.2 | 79.5 | 31.9 | 0.0 | 83.7 | 1 |
| 13 | 185 | -48 | -1397 | 4 | 0 | 9 | -340 | 1.2 | 123.2 | 100.1 | 0.0 | 173.4 | 4 |
| 14 | 185 | -6 | 173 | -1 | 0 | -2 | 80 | 0.1 | 27.8 | 12.4 | 0.0 | 28.3 | 3 |
| 15 | 185 | -50 | -1448 | 4 | 0 | 9 | -354 | 1.3 | 128.2 | 103.8 | 0.0 | 179.8 | 4 |
| 1 | 222 | -56 | -1647 | 5 | 0 | 9 | -1011 | 1.4 | 329.7 | 118.1 | 0.0 | 331.2 | 1 |
| 5 | 222 | -2657 | -722 | 2 | 0 | 5 | -110 | 68.0 | 43.7 | 51.8 | 0.0 | 121.9 | 3 |
| 6 | 222 | -2657 | -718 | 14 | 0 | -8 | -112 | 68.0 | 51.8 | 51.4 | 0.0 | 122.5 | 3 |
| 7 | 222 | 563 | -331 | -11 | 0 | 13 | -482 | 14.4 | 176.1 | 23.7 | 0.0 | 190.5 | 1 |
| 8 | 222 | 567 | -326 | 1 | 0 | 0 | -484 | 14.5 | 149.8 | 23.4 | 0.0 | 164.3 | 1 |
| 9 | 222 | -792 | -781 | -17 | 0 | 23 | -351 | 20.2 | 157.3 | 56.0 | 0.0 | 177.6 | 1 |
| 10 | 222 | -790 | -765 | 25 | 0 | -19 | -357 | 20.2 | 150.5 | 54.9 | 0.0 | 170.7 | 1 |
| 11 | 222 | 145 | -664 | -21 | 0 | 26 | -463 | 3.7 | 197.3 | 47.6 | 0.0 | 201.0 | 1 |
| 12 | 222 | 163 | -457 | 21 | 0 | -18 | -357 | 4.2 | 147.0 | 32.7 | 0.0 | 151.1 | 1 |
| 13 | 222 | -48 | -1411 | 4 | 0 | 7 | -859 | 1.2 | 280.2 | 101.2 | 0.0 | 281.4 | 1 |
| 14 | 222 | -6 | 161 | -1 | 0 | -1 | 141 | 0.1 | 46.4 | 11.6 | 0.0 | 46.6 | 1 |
| 15 | 222 | -50 | -1463 | 4 | 0 | 7 | -892 | 1.3 | 290.9 | 104.9 | 0.0 | 292.2 | 1 |
| 1 | 259 | -56 | -1662 | 5 | 0 | 7 | -1623 | 1.4 | 514.7 | 119.2 | 0.0 | 516.2 | 1 |
| 5 | 259 | -2657 | -734 | 2 | 0 | 4 | -380 | 68.0 | 125.4 | 52.6 | 0.0 | 193.3 | 1 |
| 6 | 259 | -2657 | -729 | 14 | 0 | -13 | -380 | 68.0 | 145.5 | 52.3 | 0.0 | 213.5 | 1 |
| 7 | 259 | 563 | -343 | -11 | 0 | 17 | -607 | 14.4 | 223.3 | 24.6 | 0.0 | 237.7 | 1 |
| 8 | 259 | 567 | -338 | 1 | 0 | -0 | -607 | 14.5 | 187.7 | 24.2 | 0.0 | 202.2 | 1 |
| 9 | 259 | -792 | -796 | -17 | 0 | 29 | -643 | 20.2 | 260.4 | 57.1 | 0.0 | 280.7 | 1 |
| 10 | 259 | -790 | -780 | 25 | 0 | -28 | -643 | 20.2 | 258.2 | 55.9 | 0.0 | 278.4 | 1 |
| 11 | 259 | 145 | -678 | -21 | 0 | 34 | -711 | 3.7 | 290.1 | 48.6 | 0.0 | 293.8 | 1 |
| 12 | 259 | 163 | -468 | 21 | 0 | -25 | -528 | 4.2 | 215.7 | 33.6 | 0.0 | 219.9 | 1 |
| 13 | 259 | -48 | -1426 | 4 | 0 | 6 | -1384 | 1.2 | 438.8 | 102.2 | 0.0 | 440.0 | 1 |
| 14 | 259 | -6 | 150 | -1 | 0 | -1 | 199 | 0.1 | 63.7 | 10.7 | 0.0 | 63.8 | 1 |
| 15 | 259 | -50 | -1478 | 4 | 0 | 6 | -1436 | 1.3 | 455.3 | 105.9 | 0.0 | 456.6 | 1 |
| 1 | 296 | -56 | -1677 | 5 | 0 | 5 | -2241 | 1.4 | 701.4 | 120.2 | 0.0 | 702.9 | 1 |
| 5 | 296 | -2657 | -745 | 2 | 0 | 3 | -653 | 68.0 | 208.4 | 53.4 | 0.0 | 276.4 | 1 |
| 6 | 296 | -2657 | -740 | 14 | 0 | -19 | -652 | 68.0 | 240.5 | 53.1 | 0.0 | 308.4 | 1 |
| 7 | 296 | 563 | -354 | -11 | 0 | 21 | -736 | 14.4 | 271.7 | 25.4 | 0.0 | 286.1 | 1 |
| 8 | 296 | 567 | -349 | 1 | 0 | -1 | -734 | 14.5 | 228.0 | 25.0 | 0.0 | 242.5 | 1 |
| 9 | 296 | -792 | -811 | -17 | 0 | 36 | -940 | 20.2 | 365.3 | 58.1 | 0.0 | 385.5 | 1 |
| 10 | 296 | -790 | -795 | 25 | 0 | -38 | -934 | 20.2 | 367.6 | 57.0 | 0.0 | 387.8 | 1 |
| 11 | 296 | 145 | -693 | -21 | 0 | 41 | -965 | 3.7 | 384.6 | 49.7 | 0.0 | 388.3 | 1 |
| 12 | 296 | 163 | -479 | 21 | 0 | -33 | -703 | 4.2 | 285.8 | 34.4 | 0.0 | 290.0 | 1 |
| 13 | 296 | -48 | -1441 | 4 | 0 | 4 | -1915 | 1.2 | 599.2 | 103.3 | 0.0 | 600.4 | 1 |
| 14 | 296 | -6 | 139 | -1 | 0 | -1 | 252 | 0.1 | 79.7 | 9.9 | 0.0 | 79.8 | 1 |
| 15 | 296 | -50 | -1492 | 4 | 0 | 4 | -1986 | 1.3 | 621.4 | 107.0 | 0.0 | 622.7 | 1 |
| 1 | 333 | -56 | -1691 | 5 | 0 | 3 | -2864 | 1.4 | 889.8 | 121.3 | 0.0 | 891.3 | 1 |
| 5 | 333 | -2657 | -756 | 2 | 0 | 3 | -931 | 68.0 | 292.7 | 54.2 | 0.0 | 360.7 | 1 |
| 6 | 333 | -2657 | -752 | 14 | 0 | -24 | -928 | 68.0 | 336.7 | 53.9 | 0.0 | 404.7 | 1 |
| 7 | 333 | 563 | -365 | -11 | 0 | 25 | -869 | 14.4 | 321.5 | 26.2 | 0.0 | 335.9 | 1 |
| 8 | 333 | 567 | -361 | 1 | 0 | -1 | -865 | 14.5 | 269.5 | 25.8 | 0.0 | 284.0 | 1 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-------|-------|-----|---|-----|-------|------|--------|-------|-----|--------|---|
| 9 | 333 | -792 | -825 | -17 | 0 | 42 | -1243 | 20.2 | 471.8 | 59.2 | 0.0 | 492.0 | 1 |
| 10 | 333 | -790 | -810 | 25 | 0 | -47 | -1231 | 20.2 | 478.7 | 58.0 | 0.0 | 498.9 | 1 |
| 11 | 333 | 145 | -708 | -21 | 0 | 49 | -1224 | 3.7 | 480.8 | 50.8 | 0.0 | 484.5 | 1 |
| 12 | 333 | 163 | -491 | 21 | 0 | -40 | -882 | 4.2 | 357.2 | 35.2 | 0.0 | 361.3 | 1 |
| 13 | 333 | -48 | -1455 | 4 | 0 | 3 | -2451 | 1.2 | 761.2 | 104.3 | 0.0 | 762.4 | 1 |
| 14 | 333 | -6 | 127 | -1 | 0 | -1 | 301 | 0.1 | 94.4 | 9.1 | 0.0 | 94.5 | 1 |
| 15 | 333 | -50 | -1507 | 4 | 0 | 3 | -2541 | 1.3 | 789.2 | 108.1 | 0.0 | 790.4 | 1 |
| | | | | | | | | | | | | | |
| 1 | 370 | -56 | -1706 | 5 | 0 | 1 | -3493 | 1.4 | 1079.9 | 122.3 | 0.0 | 1081.3 | 1 |
| 5 | 370 | -2657 | -768 | 2 | 0 | 2 | -1213 | 68.0 | 378.3 | 55.0 | 0.0 | 446.3 | 1 |
| 6 | 370 | -2657 | -763 | 14 | 0 | -29 | -1208 | 68.0 | 434.3 | 54.7 | 0.0 | 502.2 | 1 |
| 7 | 370 | 563 | -377 | -11 | 0 | 30 | -1006 | 14.4 | 372.6 | 27.0 | 0.0 | 387.0 | 1 |
| 8 | 370 | 567 | -372 | 1 | 0 | -2 | -1001 | 14.5 | 312.4 | 26.7 | 0.0 | 326.9 | 1 |
| 9 | 370 | -792 | -840 | -17 | 0 | 48 | -1551 | 20.2 | 579.9 | 60.2 | 0.0 | 600.2 | 1 |
| 10 | 370 | -790 | -824 | 25 | 0 | -56 | -1533 | 20.2 | 591.5 | 59.1 | 0.0 | 611.7 | 1 |
| 11 | 370 | 145 | -723 | -21 | 0 | 57 | -1489 | 3.7 | 578.7 | 51.8 | 0.0 | 582.4 | 1 |
| 12 | 370 | 163 | -502 | 21 | 0 | -48 | -1066 | 4.2 | 429.8 | 36.0 | 0.0 | 434.0 | 1 |
| 13 | 370 | -48 | -1470 | 4 | 0 | 1 | -2992 | 1.2 | 924.9 | 105.4 | 0.0 | 926.1 | 1 |
| 14 | 370 | -6 | 116 | -1 | 0 | -0 | 346 | 0.1 | 107.8 | 8.3 | 0.0 | 107.9 | 1 |
| 15 | 370 | -50 | -1522 | 4 | 0 | 1 | -3101 | 1.3 | 958.6 | 109.1 | 0.0 | 959.9 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x | Mmax | Mmax | Sf (M) | x | fmax. | fmax | fmax / l | Nota |
|----|---------|-----|------|-------|--------|------|-----------|------|----------|------|
| | | cm | | daN*m | daN/cm | | cm | | | |
| 1 | -- | 0 | 2548 | 785.6 | -- | -- | -- | -- | -- | |
| -- | Rara | 202 | 22 | -- | 198 | 0.00 | 1 / 99999 | | | |
| -- | Freq. | 202 | 22 | -- | 198 | 0.00 | 1 / 99999 | | | |
| -- | Q.Perm. | 202 | 22 | -- | 198 | 0.00 | 1 / 99999 | | | |
| -- | Rara | 202 | 22 | -- | 198 | 0.00 | 1 / 99999 | | | |
| -- | Rara | 202 | 22 | -- | 198 | 0.00 | 1 / 99999 | | | |
| -- | Freq. | 202 | 22 | -- | 198 | 0.00 | 1 / 99999 | | | |
| -- | Freq. | 202 | 22 | -- | 198 | 0.00 | 1 / 99999 | | | |

239
ASTA NUM. 17 NI 114 NF 99 Lungh. 235.2 cm SEZ. 1 Ps IPE 240

categoria: p.p. y qy tot.

qy medio: 0.3069 0.3069 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|------|-----|----|-------|-------|---------|--------|--------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | daN/cm | | | | |
| 1 | 0 | -56 | 2518 | 5 | 0 | 1 | -3493 | 1.4 | 1079.9 | 180.5 | 0.0 | 1081.3 | 1 | |
| 5 | 0 | -639 | 813 | 23 | 0 | 2 | -1213 | 16.3 | 378.3 | 58.3 | 0.0 | 394.7 | 1 | |
| 6 | 0 | -635 | 812 | -7 | 0 | -29 | -1208 | 16.2 | 434.3 | 58.2 | 0.0 | 450.5 | 1 | |
| 7 | 0 | 633 | 783 | 10 | 0 | 30 | -1006 | 16.2 | 372.6 | 56.2 | 0.0 | 388.7 | 1 | |
| 8 | 0 | 636 | 783 | -19 | 0 | -2 | -1001 | 16.3 | 312.4 | 56.1 | 0.0 | 328.7 | 1 | |
| 9 | 0 | -214 | 1095 | 53 | 0 | 48 | -1551 | 5.5 | 579.9 | 78.5 | 0.0 | 585.4 | 1 | |
| 10 | 0 | -203 | 1093 | -44 | 0 | -56 | -1533 | 5.2 | 591.5 | 78.4 | 0.0 | 596.7 | 1 | |
| 11 | 0 | 166 | 1086 | 49 | 0 | 57 | -1489 | 4.3 | 578.7 | 77.9 | 0.0 | 582.9 | 1 | |
| 12 | 0 | 184 | 792 | -49 | 0 | -48 | -1066 | 4.7 | 429.8 | 56.8 | 0.0 | 434.5 | 1 | |
| 13 | 0 | -48 | 2157 | 4 | 0 | 1 | -2992 | 1.2 | 924.9 | 154.6 | 0.0 | 926.1 | 1 | |
| 14 | 0 | 7 | -249 | -1 | 0 | -0 | 346 | 0.2 | 107.8 | 17.8 | 0.0 | 108.0 | 1 | |
| 15 | 0 | -50 | 2235 | 4 | 0 | 1 | -3101 | 1.3 | 958.6 | 160.2 | 0.0 | 959.9 | 1 | |
| | | | | | | | | | | | | | | |
| 1 | 24 | -56 | 2509 | 5 | 0 | 0 | -2902 | 1.4 | 895.2 | 179.9 | 0.0 | 896.7 | 1 | |
| 5 | 24 | -639 | 806 | 23 | 0 | -3 | -1023 | 16.3 | 322.2 | 57.8 | 0.0 | 338.5 | 1 | |
| 6 | 24 | -635 | 805 | -7 | 0 | -28 | -1018 | 16.2 | 372.4 | 57.7 | 0.0 | 388.6 | 1 | |
| 7 | 24 | 633 | 776 | 10 | 0 | 27 | -823 | 16.2 | 311.2 | 55.6 | 0.0 | 327.4 | 1 | |
| 8 | 24 | 636 | 775 | -19 | 0 | 3 | -818 | 16.3 | 258.0 | 55.6 | 0.0 | 274.3 | 1 | |
| 9 | 24 | -214 | 1086 | 53 | 0 | 36 | -1294 | 5.5 | 474.8 | 77.8 | 0.0 | 480.2 | 1 | |
| 10 | 24 | -203 | 1084 | -44 | 0 | -46 | -1277 | 5.2 | 490.6 | 77.7 | 0.0 | 495.7 | 1 | |
| 11 | 24 | 166 | 1077 | 49 | 0 | 45 | -1235 | 4.3 | 476.1 | 77.2 | 0.0 | 480.4 | 1 | |
| 12 | 24 | 184 | 785 | -49 | 0 | -36 | -881 | 4.7 | 348.4 | 56.3 | 0.0 | 353.1 | 1 | |
| 13 | 24 | -48 | 2148 | 4 | 0 | 0 | -2486 | 1.2 | 766.8 | 154.0 | 0.0 | 768.0 | 1 | |
| 14 | 24 | 7 | -256 | -1 | 0 | -0 | 287 | 0.2 | 89.2 | 18.3 | 0.0 | 89.4 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|------|-----|---|-----|-------|------|-------|-------|-----|-------|---|
| 15 | 24 | -50 | 2226 | 4 | 0 | 0 | -2576 | 1.3 | 794.7 | 159.6 | 0.0 | 796.0 | 1 |
| 1 | 47 | -56 | 2499 | 5 | 0 | -1 | -2313 | 1.4 | 715.0 | 179.2 | 0.0 | 716.4 | 1 |
| 5 | 47 | -639 | 799 | 23 | 0 | -9 | -834 | 16.3 | 275.2 | 57.3 | 0.0 | 291.5 | 1 |
| 6 | 47 | -635 | 798 | -7 | 0 | -26 | -829 | 16.2 | 311.0 | 57.2 | 0.0 | 327.3 | 1 |
| 7 | 47 | 633 | 769 | 10 | 0 | 25 | -641 | 16.2 | 250.5 | 55.1 | 0.0 | 266.6 | 1 |
| 8 | 47 | 636 | 768 | -19 | 0 | 7 | -636 | 16.3 | 211.7 | 55.1 | 0.0 | 228.0 | 1 |
| 9 | 47 | -214 | 1076 | 53 | 0 | 23 | -1040 | 5.5 | 370.3 | 77.2 | 0.0 | 375.7 | 1 |
| 10 | 47 | -203 | 1074 | -44 | 0 | -35 | -1023 | 5.2 | 390.3 | 77.0 | 0.0 | 395.5 | 1 |
| 11 | 47 | 166 | 1067 | 49 | 0 | 34 | -982 | 4.3 | 374.3 | 76.5 | 0.0 | 378.5 | 1 |
| 12 | 47 | 184 | 778 | -49 | 0 | -25 | -697 | 4.7 | 267.5 | 55.7 | 0.0 | 272.2 | 1 |
| 13 | 47 | -48 | 2138 | 4 | 0 | -1 | -1982 | 1.2 | 612.8 | 153.3 | 0.0 | 614.0 | 1 |
| 14 | 47 | 7 | -263 | -1 | 0 | -0 | 226 | 0.2 | 70.1 | 18.9 | 0.0 | 70.2 | 1 |
| 15 | 47 | -50 | 2216 | 4 | 0 | -1 | -2054 | 1.3 | 635.0 | 158.9 | 0.0 | 636.3 | 1 |
| 1 | 71 | -56 | 2490 | 5 | 0 | -2 | -1726 | 1.4 | 536.5 | 178.5 | 0.0 | 546.8 | 3 |
| 5 | 71 | -639 | 792 | 23 | 0 | -14 | -647 | 16.3 | 228.7 | 56.7 | 0.0 | 245.0 | 1 |
| 6 | 71 | -635 | 791 | -7 | 0 | -25 | -642 | 16.2 | 250.1 | 56.7 | 0.0 | 266.4 | 1 |
| 7 | 71 | 633 | 762 | 10 | 0 | 23 | -461 | 16.2 | 190.2 | 54.6 | 0.0 | 206.4 | 1 |
| 8 | 71 | 636 | 761 | -19 | 0 | 12 | -456 | 16.3 | 165.9 | 54.5 | 0.0 | 182.2 | 1 |
| 9 | 71 | -214 | 1067 | 53 | 0 | 11 | -788 | 5.5 | 266.4 | 76.5 | 0.0 | 271.9 | 1 |
| 10 | 71 | -203 | 1065 | -44 | 0 | -25 | -772 | 5.2 | 290.8 | 76.3 | 0.0 | 296.0 | 1 |
| 11 | 71 | 166 | 1058 | 49 | 0 | 22 | -732 | 4.3 | 273.1 | 75.8 | 0.0 | 277.3 | 1 |
| 12 | 71 | 184 | 770 | -49 | 0 | -13 | -515 | 4.7 | 187.1 | 55.2 | 0.0 | 191.8 | 1 |
| 13 | 71 | -48 | 2129 | 4 | 0 | -2 | -1480 | 1.2 | 460.1 | 152.6 | 0.0 | 468.6 | 3 |
| 14 | 71 | 7 | -270 | -1 | 0 | -0 | 163 | 0.2 | 50.4 | 19.4 | 0.0 | 53.3 | 3 |
| 15 | 71 | -50 | 2207 | 4 | 0 | -2 | -1534 | 1.3 | 476.8 | 158.2 | 0.0 | 485.6 | 3 |
| 1 | 94 | -56 | 2480 | 5 | 0 | -3 | -1142 | 1.4 | 358.7 | 177.8 | 0.0 | 404.6 | 3 |
| 5 | 94 | -639 | 784 | 23 | 0 | -19 | -462 | 16.3 | 182.8 | 56.2 | 0.0 | 199.1 | 1 |
| 6 | 94 | -635 | 784 | -7 | 0 | -23 | -457 | 16.2 | 189.8 | 56.2 | 0.0 | 206.1 | 1 |
| 7 | 94 | 633 | 754 | 10 | 0 | 20 | -283 | 16.2 | 130.4 | 54.1 | 0.0 | 146.6 | 1 |
| 8 | 94 | 636 | 754 | -19 | 0 | 16 | -278 | 16.3 | 120.7 | 54.0 | 0.0 | 136.9 | 1 |
| 9 | 94 | -214 | 1057 | 53 | 0 | -1 | -538 | 5.5 | 168.6 | 75.8 | 0.0 | 188.6 | 3 |
| 10 | 94 | -203 | 1055 | -44 | 0 | -15 | -523 | 5.2 | 191.9 | 75.7 | 0.0 | 197.1 | 1 |
| 11 | 94 | 166 | 1049 | 49 | 0 | 11 | -485 | 4.3 | 172.5 | 75.2 | 0.0 | 176.8 | 1 |
| 12 | 94 | 184 | 763 | -49 | 0 | -2 | -335 | 4.7 | 107.3 | 54.7 | 0.0 | 124.3 | 3 |
| 13 | 94 | -48 | 2119 | 4 | 0 | -3 | -981 | 1.2 | 308.2 | 152.0 | 0.0 | 346.9 | 3 |
| 14 | 94 | 7 | -278 | -1 | 0 | 0 | 99 | 0.2 | 30.6 | 19.9 | 0.0 | 39.0 | 3 |
| 15 | 94 | -50 | 2197 | 4 | 0 | -3 | -1016 | 1.3 | 319.2 | 157.5 | 0.0 | 359.4 | 3 |
| 1 | 118 | -56 | 2471 | 5 | 0 | -4 | -559 | 1.4 | 181.5 | 177.2 | 0.0 | 306.9 | 4 |
| 5 | 118 | -639 | 777 | 23 | 0 | -24 | -278 | 16.3 | 137.3 | 55.7 | 0.0 | 153.7 | 1 |
| 6 | 118 | -635 | 776 | -7 | 0 | -22 | -274 | 16.2 | 130.0 | 55.7 | 0.0 | 146.2 | 1 |
| 7 | 118 | 633 | 747 | 10 | 0 | 18 | -106 | 16.2 | 71.2 | 53.6 | 0.0 | 94.5 | 4 |
| 8 | 118 | 636 | 746 | -19 | 0 | 21 | -102 | 16.3 | 75.9 | 53.5 | 0.0 | 94.5 | 4 |
| 9 | 118 | -214 | 1048 | 53 | 0 | -14 | -291 | 5.5 | 118.3 | 75.1 | 0.0 | 135.5 | 3 |
| 10 | 118 | -203 | 1046 | -44 | 0 | -4 | -276 | 5.2 | 93.7 | 75.0 | 0.0 | 131.7 | 3 |
| 11 | 118 | 166 | 1039 | 49 | 0 | -0 | -239 | 4.3 | 74.7 | 74.5 | 0.0 | 129.1 | 4 |
| 12 | 118 | 184 | 756 | -49 | 0 | 10 | -156 | 4.7 | 68.3 | 54.2 | 0.0 | 94.0 | 4 |
| 13 | 118 | -48 | 2110 | 4 | 0 | -4 | -483 | 1.2 | 156.9 | 151.3 | 0.0 | 262.0 | 4 |
| 14 | 118 | 7 | -285 | -1 | 0 | 0 | 33 | 0.2 | 10.5 | 20.4 | 0.0 | 35.4 | 4 |
| 15 | 118 | -50 | 2188 | 4 | 0 | -4 | -500 | 1.3 | 162.2 | 156.9 | 0.0 | 271.7 | 4 |
| 1 | 141 | -56 | 2462 | 5 | 0 | -5 | 21 | 1.4 | 17.8 | 176.5 | 0.0 | 305.7 | 4 |
| 5 | 141 | -639 | 770 | 23 | 0 | -30 | -96 | 16.3 | 92.4 | 55.2 | 0.0 | 108.8 | 1 |
| 6 | 141 | -635 | 769 | -7 | 0 | -20 | -92 | 16.2 | 70.7 | 55.1 | 0.0 | 97.3 | 4 |
| 7 | 141 | 633 | 740 | 10 | 0 | 16 | 69 | 16.2 | 54.9 | 53.1 | 0.0 | 93.6 | 4 |
| 8 | 141 | 636 | 739 | -19 | 0 | 26 | 73 | 16.3 | 76.6 | 53.0 | 0.0 | 93.7 | 4 |
| 9 | 141 | -214 | 1039 | 53 | 0 | -26 | -45 | 5.5 | 68.7 | 74.5 | 0.0 | 129.2 | 4 |
| 10 | 141 | -203 | 1036 | -44 | 0 | 6 | -31 | 5.2 | 22.8 | 74.3 | 0.0 | 128.8 | 4 |
| 11 | 141 | 166 | 1030 | 49 | 0 | -12 | 4 | 4.3 | 26.5 | 73.8 | 0.0 | 128.0 | 4 |
| 12 | 141 | 184 | 749 | -49 | 0 | 21 | 21 | 4.7 | 50.9 | 53.7 | 0.0 | 93.2 | 4 |
| 13 | 141 | -48 | 2101 | 4 | 0 | -5 | 12 | 1.2 | 13.5 | 150.6 | 0.0 | 260.9 | 4 |
| 14 | 141 | 7 | -292 | -1 | 0 | 0 | -35 | 0.2 | 11.6 | 20.9 | 0.0 | 36.3 | 4 |
| 15 | 141 | -50 | 2179 | 4 | 0 | -5 | 14 | 1.3 | 14.5 | 156.2 | 0.0 | 270.5 | 4 |
| 1 | 165 | -56 | 2452 | 5 | 0 | -7 | 599 | 1.4 | 198.4 | 175.8 | 0.0 | 304.5 | 4 |
| 5 | 165 | -639 | 763 | 23 | 0 | -35 | 84 | 16.3 | 100.0 | 54.7 | 0.0 | 116.3 | 1 |
| 6 | 165 | -635 | 762 | -7 | 0 | -19 | 88 | 16.2 | 66.3 | 54.6 | 0.0 | 96.4 | 4 |
| 7 | 165 | 633 | 733 | 10 | 0 | 14 | 242 | 16.2 | 103.5 | 52.5 | 0.0 | 119.7 | 1 |
| 8 | 165 | 636 | 732 | -19 | 0 | 30 | 246 | 16.3 | 139.6 | 52.5 | 0.0 | 155.9 | 1 |
| 9 | 165 | -214 | 1029 | 53 | 0 | -38 | 198 | 5.5 | 142.0 | 73.8 | 0.0 | 147.5 | 1 |
| 10 | 165 | -203 | 1027 | -44 | 0 | 17 | 212 | 5.2 | 100.7 | 73.6 | 0.0 | 127.7 | 4 |
| 11 | 165 | 166 | 1020 | 49 | 0 | -23 | 245 | 4.3 | 124.9 | 73.2 | 0.0 | 129.2 | 1 |
| 12 | 165 | 184 | 741 | -49 | 0 | 33 | 196 | 4.7 | 129.2 | 53.2 | 0.0 | 133.9 | 1 |
| 13 | 165 | -48 | 2091 | 4 | 0 | -6 | 505 | 1.2 | 167.5 | 149.9 | 0.0 | 259.7 | 4 |
| 14 | 165 | 7 | -299 | -1 | 0 | 1 | -105 | 0.2 | 33.4 | 21.5 | 0.0 | 41.7 | 3 |
| 15 | 165 | -50 | 2169 | 4 | 0 | -6 | 525 | 1.3 | 174.2 | 155.5 | 0.0 | 269.4 | 4 |
| 1 | 188 | -56 | 2443 | 5 | 0 | -8 | 1174 | 1.4 | 378.3 | 175.1 | 0.0 | 410.4 | 3 |
| 5 | 188 | -639 | 755 | 23 | 0 | -40 | 263 | 16.3 | 166.2 | 54.2 | 0.0 | 182.5 | 1 |
| 6 | 188 | -635 | 755 | -7 | 0 | -17 | 267 | 16.2 | 118.1 | 54.1 | 0.0 | 134.3 | 1 |
| 7 | 188 | 633 | 726 | 10 | 0 | 11 | 413 | 16.2 | 151.6 | 52.0 | 0.0 | 167.8 | 1 |
| 8 | 188 | 636 | 725 | -19 | 0 | 35 | 417 | 16.3 | 202.1 | 52.0 | 0.0 | 218.4 | 1 |
| 9 | 188 | -214 | 1020 | 53 | 0 | -51 | 439 | 5.5 | 242.4 | 73.1 | 0.0 | 247.9 | 1 |
| 10 | 188 | -203 | 1018 | -44 | 0 | 27 | 452 | 5.2 | 196.8 | 73.0 | 0.0 | 202.0 | 1 |
| 11 | 188 | 166 | 1011 | 49 | 0 | -35 | 484 | 4.3 | 222.7 | 72.5 | 0.0 | 227.0 | 1 |
| 12 | 188 | 184 | 734 | -49 | 0 | 44 | 370 | 4.7 | 206.9 | 52.6 | 0.0 | 211.6 | 1 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|------|-----|---|-----|------|------|-------|-------|-----|-------|---|
| 13 | 188 | -48 | 2082 | 4 | 0 | -7 | 995 | 1.2 | 320.8 | 149.3 | 0.0 | 348.5 | 3 |
| 14 | 188 | 7 | -306 | -1 | 0 | 1 | -176 | 0.2 | 55.6 | 22.0 | 0.0 | 58.3 | 3 |
| 15 | 188 | -50 | 2160 | 4 | 0 | -7 | 1034 | 1.3 | 333.4 | 154.8 | 0.0 | 361.9 | 3 |
| 1 | 212 | -56 | 2433 | 5 | 0 | -9 | 1748 | 1.4 | 557.5 | 174.5 | 0.0 | 558.9 | 1 |
| 5 | 212 | -639 | 748 | 23 | 0 | -46 | 439 | 16.3 | 231.9 | 53.6 | 0.0 | 248.2 | 1 |
| 6 | 212 | -635 | 747 | -7 | 0 | -15 | 443 | 16.2 | 169.3 | 53.6 | 0.0 | 185.6 | 1 |
| 7 | 212 | 633 | 718 | 10 | 0 | 9 | 583 | 16.2 | 199.2 | 51.5 | 0.0 | 215.3 | 1 |
| 8 | 212 | 636 | 718 | -19 | 0 | 39 | 587 | 16.3 | 264.0 | 51.4 | 0.0 | 280.3 | 1 |
| 9 | 212 | -214 | 1010 | 53 | 0 | -63 | 678 | 5.5 | 342.2 | 72.4 | 0.0 | 347.7 | 1 |
| 10 | 212 | -203 | 1008 | -44 | 0 | 38 | 690 | 5.2 | 292.3 | 72.3 | 0.0 | 297.5 | 1 |
| 11 | 212 | 166 | 1002 | 49 | 0 | -46 | 721 | 4.3 | 319.9 | 71.8 | 0.0 | 324.1 | 1 |
| 12 | 212 | 184 | 727 | -49 | 0 | 56 | 541 | 4.7 | 284.2 | 52.1 | 0.0 | 288.9 | 1 |
| 13 | 212 | -48 | 2072 | 4 | 0 | -8 | 1484 | 1.2 | 473.5 | 148.6 | 0.0 | 474.7 | 1 |
| 14 | 212 | 7 | -314 | -1 | 0 | 1 | -249 | 0.2 | 78.4 | 22.5 | 0.0 | 78.6 | 1 |
| 15 | 212 | -50 | 2150 | 4 | 0 | -8 | 1541 | 1.3 | 491.8 | 154.2 | 0.0 | 493.1 | 1 |
| 1 | 235 | -56 | 2424 | 5 | 0 | -10 | 2319 | 1.4 | 736.0 | 173.8 | 0.0 | 737.5 | 1 |
| 5 | 235 | -639 | 741 | 23 | 0 | -51 | 615 | 16.3 | 297.1 | 53.1 | 0.0 | 313.4 | 1 |
| 6 | 235 | -635 | 740 | -7 | 0 | -14 | 618 | 16.2 | 220.0 | 53.1 | 0.0 | 236.3 | 1 |
| 7 | 235 | 633 | 711 | 10 | 0 | 7 | 751 | 16.2 | 246.2 | 51.0 | 0.0 | 262.4 | 1 |
| 8 | 235 | 636 | 710 | -19 | 0 | 44 | 755 | 16.3 | 325.5 | 50.9 | 0.0 | 341.7 | 1 |
| 9 | 235 | -214 | 1001 | 53 | 0 | -75 | 915 | 5.5 | 441.2 | 71.8 | 0.0 | 446.7 | 1 |
| 10 | 235 | -203 | 999 | -44 | 0 | 48 | 927 | 5.2 | 387.1 | 71.6 | 0.0 | 392.3 | 1 |
| 11 | 235 | 166 | 992 | 49 | 0 | -58 | 956 | 4.3 | 416.3 | 71.2 | 0.0 | 420.5 | 1 |
| 12 | 235 | 184 | 720 | -49 | 0 | 67 | 712 | 4.7 | 360.9 | 51.6 | 0.0 | 365.6 | 1 |
| 13 | 235 | -48 | 2063 | 4 | 0 | -9 | 1970 | 1.2 | 625.5 | 147.9 | 0.0 | 626.7 | 1 |
| 14 | 235 | 7 | -321 | -1 | 0 | 1 | -324 | 0.2 | 101.7 | 23.0 | 0.0 | 101.9 | 1 |
| 15 | 235 | -50 | 2141 | 4 | 0 | -9 | 2046 | 1.3 | 649.6 | 153.5 | 0.0 | 650.8 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|-----|-------|--------|---------|-------|-----------|------|
| | | cm | daN*m | daN/cm | | cm | | |
| 1 | -- | 235 | 2319 | 715.0 | -- | -- | -- | |
| -- | Rara | 118 | 0 | -- | 134 | -0.00 | 1 / 99999 | |
| -- | Freq. | 118 | 0 | -- | 134 | -0.00 | 1 / 99999 | |
| -- | Q.Perm. | 118 | 0 | -- | 134 | -0.00 | 1 / 99999 | |
| -- | Rara | 118 | 0 | -- | 134 | -0.00 | 1 / 99999 | |
| -- | Rara | 118 | 0 | -- | 134 | -0.00 | 1 / 99999 | |
| -- | Freq. | 118 | 0 | -- | 134 | -0.00 | 1 / 99999 | |
| -- | Freq. | 118 | 0 | -- | 134 | -0.00 | 1 / 99999 | |

241

ASTA NUM. 18 NI 99 NF 110 Lungh. 456.8 cm SEZ. 1 Ps IPE 240

categoria: p.p. y qy tot.

qy medio: 0.3069 0.3069 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|------|-----|----|-------|------|---------|--------|--------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | daN/cm | | | | |
| 1 | 0 | -30 | -417 | -3 | 0 | -7 | 2319 | 0.8 | 730.7 | 29.9 | 0.0 | 731.4 | 1 | |
| 5 | 0 | -501 | -64 | 24 | 0 | 55 | 615 | 12.8 | 305.2 | 4.6 | 0.0 | 318.0 | 1 | |
| 6 | 0 | -503 | -65 | 27 | 0 | 62 | 618 | 12.9 | 322.6 | 4.7 | 0.0 | 335.4 | 1 | |
| 7 | 0 | 508 | -94 | -28 | 0 | -66 | 751 | 13.0 | 371.1 | 6.8 | 0.0 | 384.1 | 1 | |
| 8 | 0 | 506 | -95 | -25 | 0 | -58 | 755 | 13.0 | 355.8 | 6.8 | 0.0 | 368.8 | 1 | |
| 9 | 0 | -156 | -109 | 2 | 0 | 3 | 915 | 4.0 | 289.1 | 7.8 | 0.0 | 293.1 | 1 | |
| 10 | 0 | -163 | -112 | 12 | 0 | 29 | 927 | 4.2 | 347.1 | 8.0 | 0.0 | 351.3 | 1 | |
| 11 | 0 | 146 | -118 | -13 | 0 | -34 | 956 | 3.7 | 366.1 | 8.5 | 0.0 | 369.8 | 1 | |
| 12 | 0 | 142 | -86 | -4 | 0 | -7 | 712 | 3.6 | 234.7 | 6.1 | 0.0 | 238.3 | 1 | |
| 13 | 0 | -26 | -340 | -3 | 0 | -6 | 1970 | 0.7 | 620.8 | 24.4 | 0.0 | 621.4 | 1 | |
| 14 | 0 | 4 | 141 | 0 | 0 | 1 | -324 | 0.1 | 101.2 | 10.1 | 0.0 | 101.3 | 1 | |
| 15 | 0 | -27 | -357 | -3 | 0 | -7 | 2046 | 0.7 | 644.7 | 25.6 | 0.0 | 645.4 | 1 | |

| | | | | | | | | | | | | | |
|----|-----|------|------|-----|---|-----|------|------|-------|------|-----|-------|---|
| 1 | 46 | -30 | -435 | -3 | 0 | -6 | 2125 | 0.8 | 667.8 | 31.2 | 0.0 | 668.6 | 1 |
| 5 | 46 | -501 | -78 | 24 | 0 | 44 | 582 | 12.8 | 272.2 | 5.6 | 0.0 | 285.0 | 1 |
| 6 | 46 | -503 | -79 | 27 | 0 | 50 | 585 | 12.9 | 286.8 | 5.7 | 0.0 | 299.7 | 1 |
| 7 | 46 | 508 | -108 | -28 | 0 | -53 | 705 | 13.0 | 329.8 | 7.8 | 0.0 | 342.9 | 1 |
| 8 | 46 | 506 | -109 | -25 | 0 | -47 | 708 | 13.0 | 317.2 | 7.8 | 0.0 | 330.1 | 1 |
| 9 | 46 | -156 | -127 | 2 | 0 | 2 | 861 | 4.0 | 270.1 | 9.1 | 0.0 | 274.1 | 1 |
| 10 | 46 | -163 | -130 | 12 | 0 | 24 | 871 | 4.2 | 318.9 | 9.3 | 0.0 | 323.1 | 1 |
| 11 | 46 | 146 | -136 | -13 | 0 | -28 | 898 | 3.7 | 335.2 | 9.8 | 0.0 | 338.9 | 1 |
| 12 | 46 | 142 | -100 | -4 | 0 | -5 | 669 | 3.6 | 217.8 | 7.1 | 0.0 | 221.4 | 1 |
| 13 | 46 | -26 | -359 | -3 | 0 | -5 | 1810 | 0.7 | 569.1 | 25.7 | 0.0 | 569.7 | 1 |
| 14 | 46 | 4 | 127 | 0 | 0 | 1 | -262 | 0.1 | 82.1 | 9.1 | 0.0 | 82.2 | 1 |
| 15 | 46 | -27 | -375 | -3 | 0 | -5 | 1879 | 0.7 | 590.6 | 26.9 | 0.0 | 591.3 | 1 |
| | | | | | | | | | | | | | |
| 1 | 91 | -30 | -453 | -3 | 0 | -5 | 1922 | 0.8 | 602.4 | 32.5 | 0.0 | 603.2 | 1 |
| 5 | 91 | -501 | -93 | 24 | 0 | 33 | 543 | 12.8 | 237.2 | 6.6 | 0.0 | 250.0 | 1 |
| 6 | 91 | -503 | -93 | 27 | 0 | 38 | 546 | 12.9 | 249.1 | 6.7 | 0.0 | 262.0 | 1 |
| 7 | 91 | 508 | -122 | -28 | 0 | -41 | 652 | 13.0 | 286.7 | 8.8 | 0.0 | 299.7 | 1 |
| 8 | 91 | 506 | -123 | -25 | 0 | -35 | 655 | 13.0 | 276.5 | 8.8 | 0.0 | 289.5 | 1 |
| 9 | 91 | -156 | -146 | 2 | 0 | 1 | 798 | 4.0 | 248.5 | 10.4 | 0.0 | 252.5 | 1 |
| 10 | 91 | -163 | -148 | 12 | 0 | 19 | 808 | 4.2 | 288.2 | 10.6 | 0.0 | 292.3 | 1 |
| 11 | 91 | 146 | -155 | -13 | 0 | -22 | 831 | 3.7 | 301.7 | 11.1 | 0.0 | 305.4 | 1 |
| 12 | 91 | 142 | -114 | -4 | 0 | -4 | 620 | 3.6 | 198.9 | 8.2 | 0.0 | 202.6 | 1 |
| 13 | 91 | -26 | -377 | -3 | 0 | -4 | 1643 | 0.7 | 514.9 | 27.0 | 0.0 | 515.5 | 1 |
| 14 | 91 | 4 | 113 | 0 | 0 | 0 | -208 | 0.1 | 64.9 | 8.1 | 0.0 | 65.0 | 1 |
| 15 | 91 | -27 | -393 | -3 | 0 | -4 | 1703 | 0.7 | 533.9 | 28.2 | 0.0 | 534.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 137 | -30 | -471 | -3 | 0 | -3 | 1711 | 0.8 | 534.4 | 33.8 | 0.0 | 535.2 | 1 |
| 5 | 137 | -501 | -107 | 24 | 0 | 22 | 497 | 12.8 | 200.2 | 7.6 | 0.0 | 213.0 | 1 |
| 6 | 137 | -503 | -107 | 27 | 0 | 26 | 500 | 12.9 | 209.4 | 7.7 | 0.0 | 222.2 | 1 |
| 7 | 137 | 508 | -136 | -28 | 0 | -28 | 593 | 13.0 | 241.5 | 9.8 | 0.0 | 254.5 | 1 |
| 8 | 137 | 506 | -137 | -25 | 0 | -24 | 596 | 13.0 | 233.9 | 9.8 | 0.0 | 246.8 | 1 |
| 9 | 137 | -156 | -164 | 2 | 0 | -0 | 728 | 4.0 | 224.4 | 11.7 | 0.0 | 228.4 | 1 |
| 10 | 137 | -163 | -166 | 12 | 0 | 13 | 736 | 4.2 | 254.8 | 11.9 | 0.0 | 259.0 | 1 |
| 11 | 137 | 146 | -173 | -13 | 0 | -15 | 756 | 3.7 | 265.7 | 12.4 | 0.0 | 269.4 | 1 |
| 12 | 137 | 142 | -128 | -4 | 0 | -2 | 565 | 3.6 | 178.1 | 9.2 | 0.0 | 181.7 | 1 |
| 13 | 137 | -26 | -395 | -3 | 0 | -3 | 1466 | 0.7 | 458.1 | 28.3 | 0.0 | 458.7 | 1 |
| 14 | 137 | 4 | 99 | 0 | 0 | 0 | -159 | 0.1 | 49.7 | 7.1 | 0.0 | 49.8 | 1 |
| 15 | 137 | -27 | -411 | -3 | 0 | -3 | 1520 | 0.7 | 474.7 | 29.5 | 0.0 | 475.4 | 1 |
| | | | | | | | | | | | | | |
| 1 | 183 | -30 | -489 | -3 | 0 | -2 | 1491 | 0.8 | 463.9 | 35.1 | 0.0 | 464.6 | 1 |
| 5 | 183 | -501 | -121 | 24 | 0 | 11 | 446 | 12.8 | 161.3 | 8.6 | 0.0 | 174.1 | 1 |
| 6 | 183 | -503 | -121 | 27 | 0 | 14 | 448 | 12.9 | 167.7 | 8.7 | 0.0 | 180.6 | 1 |
| 7 | 183 | 508 | -150 | -28 | 0 | -15 | 528 | 13.0 | 194.4 | 10.8 | 0.0 | 207.4 | 1 |
| 8 | 183 | 506 | -151 | -25 | 0 | -12 | 530 | 13.0 | 189.3 | 10.8 | 0.0 | 202.3 | 1 |
| 9 | 183 | -156 | -182 | 2 | 0 | -1 | 649 | 4.0 | 202.4 | 13.1 | 0.0 | 206.4 | 1 |
| 10 | 183 | -163 | -185 | 12 | 0 | 8 | 656 | 4.2 | 218.9 | 13.2 | 0.0 | 223.1 | 1 |
| 11 | 183 | 146 | -191 | -13 | 0 | -9 | 673 | 3.7 | 227.1 | 13.7 | 0.0 | 230.8 | 1 |
| 12 | 183 | 142 | -142 | -4 | 0 | 0 | 504 | 3.6 | 155.4 | 10.2 | 0.0 | 159.0 | 1 |
| 13 | 183 | -26 | -413 | -3 | 0 | -2 | 1282 | 0.7 | 398.7 | 29.6 | 0.0 | 399.4 | 1 |
| 14 | 183 | 4 | 85 | 0 | 0 | 0 | -117 | 0.1 | 36.5 | 6.1 | 0.0 | 36.6 | 1 |
| 15 | 183 | -27 | -430 | -3 | 0 | -2 | 1328 | 0.7 | 412.9 | 30.8 | 0.0 | 413.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 228 | -30 | -508 | -3 | 0 | -1 | 1264 | 0.8 | 390.7 | 36.4 | 0.0 | 391.5 | 1 |
| 5 | 228 | -501 | -135 | 24 | 0 | 0 | 387 | 12.8 | 120.4 | 9.6 | 0.0 | 133.2 | 1 |
| 6 | 228 | -503 | -135 | 27 | 0 | 2 | 389 | 12.9 | 124.0 | 9.7 | 0.0 | 136.9 | 1 |
| 7 | 228 | 508 | -164 | -28 | 0 | -2 | 456 | 13.0 | 145.3 | 11.8 | 0.0 | 158.3 | 1 |
| 8 | 228 | 506 | -165 | -25 | 0 | -1 | 457 | 13.0 | 142.7 | 11.8 | 0.0 | 155.7 | 1 |
| 9 | 228 | -156 | -200 | 2 | 0 | -2 | 561 | 4.0 | 177.8 | 14.4 | 0.0 | 181.8 | 1 |
| 10 | 228 | -163 | -203 | 12 | 0 | 3 | 567 | 4.2 | 180.5 | 14.5 | 0.0 | 184.6 | 1 |
| 11 | 228 | 146 | -209 | -13 | 0 | -3 | 582 | 3.7 | 185.9 | 15.0 | 0.0 | 189.7 | 1 |
| 12 | 228 | 142 | -156 | -4 | 0 | 2 | 436 | 3.6 | 138.3 | 11.2 | 0.0 | 141.9 | 1 |
| 13 | 228 | -26 | -431 | -3 | 0 | -0 | 1089 | 0.7 | 336.8 | 30.9 | 0.0 | 337.4 | 1 |
| 14 | 228 | 4 | 71 | 0 | 0 | 0 | -82 | 0.1 | 25.3 | 5.1 | 0.0 | 25.4 | 1 |
| 15 | 228 | -27 | -448 | -3 | 0 | -0 | 1127 | 0.7 | 348.5 | 32.1 | 0.0 | 349.2 | 1 |
| | | | | | | | | | | | | | |
| 1 | 274 | -30 | -526 | -3 | 0 | 1 | 1028 | 0.8 | 318.6 | 37.7 | 0.0 | 319.3 | 1 |
| 5 | 274 | -501 | -149 | 24 | 0 | -10 | 323 | 12.8 | 121.5 | 10.7 | 0.0 | 134.3 | 1 |
| 6 | 274 | -503 | -149 | 27 | 0 | -10 | 324 | 12.9 | 121.5 | 10.7 | 0.0 | 134.3 | 1 |
| 7 | 274 | 508 | -178 | -28 | 0 | 10 | 377 | 13.0 | 138.5 | 12.8 | 0.0 | 151.5 | 1 |
| 8 | 274 | 506 | -179 | -25 | 0 | 11 | 379 | 13.0 | 139.3 | 12.9 | 0.0 | 152.3 | 1 |
| 9 | 274 | -156 | -218 | 2 | 0 | -3 | 466 | 4.0 | 150.7 | 15.7 | 0.0 | 154.7 | 1 |
| 10 | 274 | -163 | -221 | 12 | 0 | -3 | 471 | 4.2 | 150.7 | 15.9 | 0.0 | 154.9 | 1 |
| 11 | 274 | 146 | -227 | -13 | 0 | 3 | 482 | 3.7 | 155.1 | 16.3 | 0.0 | 158.9 | 1 |
| 12 | 274 | 142 | -170 | -4 | 0 | 4 | 361 | 3.6 | 119.2 | 12.2 | 0.0 | 122.8 | 1 |
| 13 | 274 | -26 | -450 | -3 | 0 | 1 | 888 | 0.7 | 275.3 | 32.2 | 0.0 | 275.9 | 1 |
| 14 | 274 | 4 | 57 | 0 | 0 | -0 | -53 | 0.1 | 16.4 | 4.1 | 0.0 | 16.5 | 1 |
| 15 | 274 | -27 | -466 | -3 | 0 | 1 | 918 | 0.7 | 284.7 | 33.4 | 0.0 | 285.4 | 1 |
| | | | | | | | | | | | | | |
| 1 | 320 | -30 | -544 | -3 | 0 | 2 | 783 | 0.8 | 246.1 | 39.0 | 0.0 | 246.9 | 1 |
| 5 | 320 | -501 | -163 | 24 | 0 | -21 | 252 | 12.8 | 122.5 | 11.7 | 0.0 | 135.3 | 1 |
| 6 | 320 | -503 | -163 | 27 | 0 | -22 | 253 | 12.9 | 125.0 | 11.7 | 0.0 | 137.9 | 1 |
| 7 | 320 | 508 | -192 | -28 | 0 | 23 | 293 | 13.0 | 139.3 | 13.8 | 0.0 | 152.3 | 1 |
| 8 | 320 | 506 | -193 | -25 | 0 | 22 | 294 | 13.0 | 137.4 | 13.9 | 0.0 | 150.3 | 1 |
| 9 | 320 | -156 | -237 | 2 | 0 | -4 | 362 | 4.0 | 121.1 | 17.0 | 0.0 | 125.0 | 1 |
| 10 | 320 | -163 | -239 | 12 | 0 | -8 | 365 | 4.2 | 129.5 | 17.2 | 0.0 | 133.6 | 1 |
| 11 | 320 | 146 | -246 | -13 | 0 | 9 | 374 | 3.7 | 134.8 | 17.6 | 0.0 | 138.5 | 1 |
| 12 | 320 | 142 | -184 | -4 | 0 | 5 | 281 | 3.6 | 98.2 | 13.2 | 0.0 | 101.8 | 1 |
| 13 | 320 | -26 | -468 | -3 | 0 | 2 | 678 | 0.7 | 213.1 | 33.5 | 0.0 | 213.8 | 1 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|------|-----|---|-----|-----|------|-------|------|-----|-------|---|
| 14 | 320 | 4 | 43 | 0 | 0 | -0 | -30 | 0.1 | 9.7 | 3.1 | 0.0 | 9.7 | 1 |
| 15 | 320 | -27 | -484 | -3 | 0 | 2 | 701 | 0.7 | 220.3 | 34.7 | 0.0 | 221.0 | 1 |
| 1 | 365 | -30 | -562 | -3 | 0 | 4 | 530 | 0.8 | 171.1 | 40.3 | 0.0 | 171.9 | 1 |
| 5 | 365 | -501 | -177 | 24 | 0 | -32 | 174 | 12.8 | 121.6 | 12.7 | 0.0 | 134.4 | 1 |
| 6 | 365 | -503 | -177 | 27 | 0 | -34 | 175 | 12.9 | 126.6 | 12.7 | 0.0 | 139.5 | 1 |
| 7 | 365 | 508 | -206 | -28 | 0 | 36 | 201 | 13.0 | 138.1 | 14.8 | 0.0 | 151.1 | 1 |
| 8 | 365 | 506 | -207 | -25 | 0 | 34 | 202 | 13.0 | 133.5 | 14.9 | 0.0 | 146.4 | 1 |
| 9 | 365 | -156 | -255 | 2 | 0 | -6 | 250 | 4.0 | 88.8 | 18.3 | 0.0 | 92.8 | 1 |
| 10 | 365 | -163 | -258 | 12 | 0 | -13 | 252 | 4.2 | 105.7 | 18.5 | 0.0 | 109.8 | 1 |
| 11 | 365 | 146 | -264 | -13 | 0 | 15 | 258 | 3.7 | 111.9 | 18.9 | 0.0 | 115.6 | 1 |
| 12 | 365 | 142 | -198 | -4 | 0 | 7 | 194 | 3.6 | 75.1 | 14.2 | 0.0 | 78.8 | 1 |
| 13 | 365 | -26 | -486 | -3 | 0 | 3 | 461 | 0.7 | 148.4 | 34.8 | 0.0 | 149.1 | 1 |
| 14 | 365 | 4 | 29 | 0 | 0 | -0 | -13 | 0.1 | 4.9 | 2.1 | 0.0 | 5.0 | 1 |
| 15 | 365 | -27 | -503 | -3 | 0 | 3 | 476 | 0.7 | 153.4 | 36.0 | 0.0 | 154.1 | 1 |
| 1 | 411 | -30 | -580 | -3 | 0 | 5 | 269 | 0.8 | 93.5 | 41.6 | 0.0 | 95.9 | 3 |
| 5 | 411 | -501 | -191 | 24 | 0 | -43 | 90 | 12.8 | 118.6 | 13.7 | 0.0 | 131.5 | 1 |
| 6 | 411 | -503 | -191 | 27 | 0 | -47 | 91 | 12.9 | 126.2 | 13.7 | 0.0 | 139.1 | 1 |
| 7 | 411 | 508 | -220 | -28 | 0 | 49 | 104 | 13.0 | 134.9 | 15.8 | 0.0 | 147.9 | 1 |
| 8 | 411 | 506 | -221 | -25 | 0 | 45 | 104 | 13.0 | 127.6 | 15.9 | 0.0 | 140.5 | 1 |
| 9 | 411 | -156 | -273 | 2 | 0 | -7 | 129 | 4.0 | 54.0 | 19.6 | 0.0 | 58.0 | 1 |
| 10 | 411 | -163 | -276 | 12 | 0 | -19 | 130 | 4.2 | 79.3 | 19.8 | 0.0 | 83.5 | 1 |
| 11 | 411 | 146 | -282 | -13 | 0 | 21 | 133 | 3.7 | 86.4 | 20.2 | 0.0 | 90.1 | 1 |
| 12 | 411 | 142 | -212 | -4 | 0 | 9 | 100 | 3.6 | 50.1 | 15.2 | 0.0 | 53.8 | 1 |
| 13 | 411 | -26 | -504 | -3 | 0 | 4 | 234 | 0.7 | 81.2 | 36.2 | 0.0 | 83.4 | 3 |
| 14 | 411 | 4 | 15 | 0 | 0 | -0 | -4 | 0.1 | 2.1 | 1.1 | 0.0 | 2.2 | 1 |
| 15 | 411 | -27 | -521 | -3 | 0 | 4 | 242 | 0.7 | 83.9 | 37.3 | 0.0 | 86.1 | 3 |
| 1 | 457 | -30 | -599 | -3 | 0 | 6 | 0 | 0.8 | 13.4 | 42.9 | 0.0 | 74.4 | 4 |
| 5 | 457 | -501 | -205 | 24 | 0 | -54 | 0 | 12.8 | 113.7 | 14.7 | 0.0 | 126.6 | 1 |
| 6 | 457 | -503 | -205 | 27 | 0 | -59 | 0 | 12.9 | 123.9 | 14.7 | 0.0 | 136.7 | 1 |
| 7 | 457 | 508 | -235 | -28 | 0 | 61 | 0 | 13.0 | 129.8 | 16.8 | 0.0 | 142.8 | 1 |
| 8 | 457 | 506 | -235 | -25 | 0 | 57 | 0 | 13.0 | 119.7 | 16.9 | 0.0 | 132.7 | 1 |
| 9 | 457 | -156 | -291 | 2 | 0 | -8 | 0 | 4.0 | 16.6 | 20.9 | 0.0 | 36.5 | 4 |
| 10 | 457 | -163 | -294 | 12 | 0 | -24 | 0 | 4.2 | 50.4 | 21.1 | 0.0 | 54.5 | 1 |
| 11 | 457 | 146 | -300 | -13 | 0 | 28 | 0 | 3.7 | 58.4 | 21.5 | 0.0 | 62.1 | 1 |
| 12 | 457 | 142 | -226 | -4 | 0 | 11 | 0 | 3.6 | 23.2 | 16.2 | 0.0 | 28.5 | 4 |
| 13 | 457 | -26 | -523 | -3 | 0 | 5 | 0 | 0.7 | 11.4 | 37.5 | 0.0 | 64.9 | 4 |
| 14 | 457 | 4 | 1 | 0 | 0 | -1 | 0 | 0.1 | 1.3 | 0.1 | 0.0 | 1.4 | 1 |
| 15 | 457 | -27 | -539 | -3 | 0 | 6 | 0 | 0.7 | 11.8 | 38.7 | 0.0 | 67.0 | 4 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|-----|-------|--------|---------|------|-----------|------|
| | | cm | daN*m | daN/cm | cm | | | |
| 1 | -- | 0 | 2319 | 715.0 | -- | -- | -- | |
| -- | Rara | 213 | 33 | -- | 217 | 0.01 | 1 / 86160 | |
| -- | Freq. | 213 | 33 | -- | 217 | 0.01 | 1 / 86160 | |
| -- | Q.Perm. | 213 | 33 | -- | 217 | 0.01 | 1 / 86160 | |
| -- | Rara | 213 | 33 | -- | 217 | 0.01 | 1 / 86160 | |
| -- | Rara | 213 | 33 | -- | 217 | 0.01 | 1 / 86160 | |
| -- | Freq. | 213 | 33 | -- | 217 | 0.01 | 1 / 86160 | |
| -- | Freq. | 213 | 33 | -- | 217 | 0.01 | 1 / 86160 | |

ASTA NUM. 36 NI 110 NF 111 Lungh. 456.8 cm SEZ. 1 Ps IPE 240

categoria: p.p. y qy tot.

qy medio: 0.3069 0.3069 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|-----|----|----|-------|------|---------|--------|--------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | daN/cm | | | | |
| 1 | 0 | -83 | 277 | -2 | 0 | -4 | -131 | 2.1 | 49.4 | 19.9 | 0.0 | 51.5 | 1 | |
| 5 | 0 | -761 | 29 | 28 | 0 | 61 | 122 | 19.5 | 167.2 | 2.1 | 0.0 | 186.6 | 1 | |
| 6 | 0 | -763 | 29 | 29 | 0 | 62 | 122 | 19.5 | 169.4 | 2.1 | 0.0 | 188.9 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|-----|-----|---|-----|------|------|-------|------|-----|-------|---|
| 7 | 0 | -454 | 214 | -30 | 0 | -64 | -215 | 11.6 | 202.1 | 15.3 | 0.0 | 213.7 | 1 |
| 8 | 0 | -454 | 214 | -30 | 0 | -63 | -215 | 11.6 | 200.0 | 15.3 | 0.0 | 211.6 | 1 |
| 9 | 0 | -243 | 133 | 8 | 0 | 17 | -11 | 6.2 | 38.2 | 9.5 | 0.0 | 44.4 | 1 |
| 10 | 0 | -247 | 133 | 9 | 0 | 20 | -10 | 6.3 | 44.9 | 9.5 | 0.0 | 51.2 | 1 |
| 11 | 0 | -165 | 190 | -10 | 0 | -22 | -115 | 4.2 | 82.1 | 13.6 | 0.0 | 86.3 | 1 |
| 12 | 0 | -154 | 149 | -9 | 0 | -18 | -97 | 3.9 | 68.7 | 10.7 | 0.0 | 72.7 | 1 |
| 13 | 0 | -71 | 248 | -2 | 0 | -4 | -114 | 1.8 | 43.0 | 17.8 | 0.0 | 44.8 | 1 |
| 14 | 0 | 0 | 38 | 0 | 0 | 0 | 0 | 0.0 | 0.4 | 2.7 | 0.0 | 4.7 | 4 |
| 15 | 0 | -74 | 254 | -2 | 0 | -4 | -118 | 1.9 | 44.4 | 18.2 | 0.0 | 46.2 | 1 |
| 1 | 46 | -83 | 259 | -2 | 0 | -3 | -8 | 2.1 | 9.7 | 18.6 | 0.0 | 32.2 | 4 |
| 5 | 46 | -761 | 15 | 28 | 0 | 48 | 132 | 19.5 | 142.8 | 1.8 | 0.0 | 162.2 | 1 |
| 6 | 46 | -763 | 15 | 29 | 0 | 49 | 132 | 19.5 | 144.5 | 1.8 | 0.0 | 164.0 | 1 |
| 7 | 46 | -454 | 200 | -30 | 0 | -51 | -120 | 11.6 | 144.1 | 14.3 | 0.0 | 155.7 | 1 |
| 8 | 46 | -454 | 200 | -30 | 0 | -50 | -120 | 11.6 | 142.4 | 14.3 | 0.0 | 154.0 | 1 |
| 9 | 46 | -243 | 115 | 8 | 0 | 13 | 46 | 6.2 | 41.7 | 8.2 | 0.0 | 47.9 | 1 |
| 10 | 46 | -247 | 114 | 9 | 0 | 16 | 47 | 6.3 | 47.3 | 8.2 | 0.0 | 53.6 | 1 |
| 11 | 46 | -165 | 172 | -10 | 0 | -17 | -32 | 4.2 | 46.6 | 12.3 | 0.0 | 50.8 | 1 |
| 12 | 46 | -154 | 135 | -9 | 0 | -14 | -32 | 3.9 | 40.5 | 9.7 | 0.0 | 44.5 | 1 |
| 13 | 46 | -71 | 230 | -2 | 0 | -3 | -5 | 1.8 | 7.6 | 16.5 | 0.0 | 28.6 | 4 |
| 14 | 46 | 0 | 24 | 0 | 0 | 0 | 14 | 0.0 | 4.7 | 1.7 | 0.0 | 4.7 | 3 |
| 15 | 46 | -74 | 236 | -2 | 0 | -3 | -5 | 1.9 | 8.1 | 16.9 | 0.0 | 29.4 | 4 |
| 1 | 91 | -83 | 241 | -2 | 0 | -2 | 106 | 2.1 | 37.8 | 17.3 | 0.0 | 40.0 | 1 |
| 5 | 91 | -761 | 1 | 28 | 0 | 35 | 136 | 19.5 | 116.4 | 1.8 | 0.0 | 135.8 | 1 |
| 6 | 91 | -763 | 1 | 29 | 0 | 36 | 136 | 19.5 | 117.6 | 1.8 | 0.0 | 137.1 | 1 |
| 7 | 91 | -454 | 186 | -30 | 0 | -37 | -32 | 11.6 | 88.0 | 13.3 | 0.0 | 99.6 | 1 |
| 8 | 91 | -454 | 186 | -30 | 0 | -36 | -32 | 11.6 | 86.8 | 13.3 | 0.0 | 98.4 | 1 |
| 9 | 91 | -243 | 96 | 8 | 0 | 10 | 94 | 6.2 | 49.2 | 6.9 | 0.0 | 55.4 | 1 |
| 10 | 91 | -247 | 96 | 9 | 0 | 11 | 95 | 6.3 | 53.2 | 6.9 | 0.0 | 59.5 | 1 |
| 11 | 91 | -165 | 153 | -10 | 0 | -13 | 42 | 4.2 | 39.8 | 11.0 | 0.0 | 44.0 | 1 |
| 12 | 91 | -154 | 121 | -9 | 0 | -11 | 26 | 3.9 | 30.4 | 8.7 | 0.0 | 34.3 | 1 |
| 13 | 91 | -71 | 212 | -2 | 0 | -2 | 96 | 1.8 | 34.1 | 15.2 | 0.0 | 35.9 | 1 |
| 14 | 91 | 0 | 10 | 0 | 0 | 0 | 22 | 0.0 | 6.9 | 0.7 | 0.0 | 7.0 | 1 |
| 15 | 91 | -74 | 218 | -2 | 0 | -2 | 98 | 1.9 | 34.9 | 15.6 | 0.0 | 36.8 | 1 |
| 1 | 137 | -83 | 222 | -2 | 0 | -2 | 212 | 2.1 | 68.5 | 15.9 | 0.0 | 70.6 | 1 |
| 5 | 137 | -761 | -13 | 28 | 0 | 22 | 133 | 19.5 | 88.0 | 1.8 | 0.0 | 107.5 | 1 |
| 6 | 137 | -763 | -13 | 29 | 0 | 23 | 133 | 19.5 | 88.7 | 1.8 | 0.0 | 108.2 | 1 |
| 7 | 137 | -454 | 172 | -30 | 0 | -23 | 49 | 11.6 | 64.2 | 12.3 | 0.0 | 75.8 | 1 |
| 8 | 137 | -454 | 172 | -30 | 0 | -23 | 49 | 11.6 | 63.6 | 12.3 | 0.0 | 75.2 | 1 |
| 9 | 137 | -243 | 78 | 8 | 0 | 6 | 134 | 6.2 | 54.2 | 5.6 | 0.0 | 60.4 | 1 |
| 10 | 137 | -247 | 78 | 9 | 0 | 7 | 134 | 6.3 | 56.5 | 5.6 | 0.0 | 62.8 | 1 |
| 11 | 137 | -165 | 135 | -10 | 0 | -8 | 108 | 4.2 | 50.1 | 9.7 | 0.0 | 54.3 | 1 |
| 12 | 137 | -154 | 107 | -9 | 0 | -7 | 78 | 3.9 | 38.2 | 7.7 | 0.0 | 42.1 | 1 |
| 13 | 137 | -71 | 193 | -2 | 0 | -1 | 189 | 1.8 | 60.9 | 13.9 | 0.0 | 62.7 | 1 |
| 14 | 137 | 0 | -4 | 0 | 0 | 0 | 23 | 0.0 | 7.3 | 0.3 | 0.0 | 7.3 | 1 |
| 15 | 137 | -74 | 200 | -2 | 0 | -1 | 194 | 1.9 | 62.6 | 14.3 | 0.0 | 64.4 | 1 |
| 1 | 183 | -83 | 204 | -2 | 0 | -1 | 309 | 2.1 | 96.5 | 14.6 | 0.0 | 98.7 | 1 |
| 5 | 183 | -761 | -27 | 28 | 0 | 9 | 124 | 19.5 | 57.7 | 2.0 | 0.0 | 77.1 | 1 |
| 6 | 183 | -763 | -27 | 29 | 0 | 9 | 124 | 19.5 | 57.9 | 2.0 | 0.0 | 77.4 | 1 |
| 7 | 183 | -454 | 158 | -30 | 0 | -9 | 124 | 11.6 | 58.4 | 11.3 | 0.0 | 70.1 | 1 |
| 8 | 183 | -454 | 158 | -30 | 0 | -9 | 125 | 11.6 | 58.2 | 11.3 | 0.0 | 69.8 | 1 |
| 9 | 183 | -243 | 60 | 8 | 0 | 3 | 166 | 6.2 | 56.6 | 4.3 | 0.0 | 62.8 | 1 |
| 10 | 183 | -247 | 60 | 9 | 0 | 3 | 166 | 6.3 | 57.2 | 4.3 | 0.0 | 63.6 | 1 |
| 11 | 183 | -165 | 117 | -10 | 0 | -3 | 166 | 4.2 | 57.9 | 8.4 | 0.0 | 62.1 | 1 |
| 12 | 183 | -154 | 93 | -9 | 0 | -3 | 124 | 3.9 | 44.0 | 6.6 | 0.0 | 48.0 | 1 |
| 13 | 183 | -71 | 175 | -2 | 0 | -0 | 273 | 1.8 | 85.2 | 12.6 | 0.0 | 87.0 | 1 |
| 14 | 183 | 0 | -18 | 0 | 0 | 0 | 18 | 0.0 | 5.6 | 1.3 | 0.0 | 5.6 | 1 |
| 15 | 183 | -74 | 182 | -2 | 0 | -1 | 281 | 1.9 | 87.6 | 13.0 | 0.0 | 89.5 | 1 |
| 1 | 228 | -83 | 186 | -2 | 0 | 0 | 398 | 2.1 | 123.6 | 13.3 | 0.0 | 125.7 | 1 |
| 5 | 228 | -761 | -41 | 28 | 0 | -4 | 108 | 19.5 | 41.2 | 3.0 | 0.0 | 60.7 | 1 |
| 6 | 228 | -763 | -41 | 29 | 0 | -4 | 108 | 19.5 | 41.4 | 3.0 | 0.0 | 60.9 | 1 |
| 7 | 228 | -454 | 144 | -30 | 0 | 4 | 193 | 11.6 | 68.5 | 10.3 | 0.0 | 80.1 | 1 |
| 8 | 228 | -454 | 143 | -30 | 0 | 4 | 193 | 11.6 | 68.2 | 10.3 | 0.0 | 79.8 | 1 |
| 9 | 228 | -243 | 42 | 8 | 0 | -1 | 189 | 6.2 | 60.1 | 3.0 | 0.0 | 66.3 | 1 |
| 10 | 228 | -247 | 41 | 9 | 0 | -1 | 189 | 6.3 | 60.9 | 3.0 | 0.0 | 67.3 | 1 |
| 11 | 228 | -165 | 99 | -10 | 0 | 2 | 215 | 4.2 | 69.7 | 7.1 | 0.0 | 73.9 | 1 |
| 12 | 228 | -154 | 79 | -9 | 0 | 1 | 163 | 3.9 | 52.5 | 5.6 | 0.0 | 56.5 | 1 |
| 13 | 228 | -71 | 157 | -2 | 0 | 0 | 349 | 1.8 | 108.2 | 11.3 | 0.0 | 110.0 | 1 |
| 14 | 228 | 0 | -32 | 0 | 0 | -0 | 7 | 0.0 | 2.1 | 2.3 | 0.0 | 4.0 | 4 |
| 15 | 228 | -74 | 163 | -2 | 0 | 0 | 359 | 1.9 | 111.5 | 11.7 | 0.0 | 113.4 | 1 |
| 1 | 274 | -83 | 168 | -2 | 0 | 1 | 479 | 2.1 | 150.5 | 12.0 | 0.0 | 152.6 | 1 |
| 5 | 274 | -761 | -55 | 28 | 0 | -17 | 86 | 19.5 | 61.9 | 4.0 | 0.0 | 81.3 | 1 |
| 6 | 274 | -763 | -55 | 29 | 0 | -17 | 86 | 19.5 | 62.6 | 4.0 | 0.0 | 82.1 | 1 |
| 7 | 274 | -454 | 130 | -30 | 0 | 18 | 256 | 11.6 | 116.7 | 9.3 | 0.0 | 128.3 | 1 |
| 8 | 274 | -454 | 129 | -30 | 0 | 18 | 256 | 11.6 | 115.9 | 9.3 | 0.0 | 127.5 | 1 |
| 9 | 274 | -243 | 24 | 8 | 0 | -4 | 204 | 6.2 | 72.1 | 1.7 | 0.0 | 78.3 | 1 |
| 10 | 274 | -247 | 23 | 9 | 0 | -6 | 203 | 6.3 | 74.4 | 1.7 | 0.0 | 80.7 | 1 |
| 11 | 274 | -165 | 81 | -10 | 0 | 6 | 256 | 4.2 | 92.3 | 5.8 | 0.0 | 96.5 | 1 |
| 12 | 274 | -154 | 65 | -9 | 0 | 5 | 196 | 3.9 | 70.9 | 4.6 | 0.0 | 74.8 | 1 |
| 13 | 274 | -71 | 139 | -2 | 0 | 1 | 416 | 1.8 | 130.7 | 9.9 | 0.0 | 132.5 | 1 |
| 14 | 274 | 0 | -46 | 0 | 0 | -0 | -11 | 0.0 | 3.6 | 3.3 | 0.0 | 5.7 | 4 |
| 15 | 274 | -74 | 145 | -2 | 0 | 1 | 430 | 1.9 | 135.0 | 10.4 | 0.0 | 136.9 | 1 |
| 1 | 320 | -83 | 150 | -2 | 0 | 2 | 552 | 2.1 | 174.8 | 10.7 | 0.0 | 176.9 | 1 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|------|-----|---|-----|------|------|-------|-----|-----|-------|---|
| 5 | 320 | -761 | -69 | 28 | 0 | -30 | 57 | 19.5 | 80.6 | 5.0 | 0.0 | 100.1 | 1 |
| 6 | 320 | -763 | -69 | 29 | 0 | -30 | 57 | 19.5 | 81.8 | 5.0 | 0.0 | 101.3 | 1 |
| 7 | 320 | -454 | 116 | -30 | 0 | 32 | 312 | 11.6 | 162.9 | 8.3 | 0.0 | 174.5 | 1 |
| 8 | 320 | -454 | 115 | -30 | 0 | 31 | 312 | 11.6 | 161.7 | 8.3 | 0.0 | 173.3 | 1 |
| 9 | 320 | -243 | 5 | 8 | 0 | -8 | 210 | 6.2 | 81.5 | 0.5 | 0.0 | 87.7 | 1 |
| 10 | 320 | -247 | 5 | 9 | 0 | -10 | 210 | 6.3 | 85.3 | 0.6 | 0.0 | 91.6 | 1 |
| 11 | 320 | -165 | 62 | -10 | 0 | 11 | 289 | 4.2 | 112.4 | 4.5 | 0.0 | 116.6 | 1 |
| 12 | 320 | -154 | 51 | -9 | 0 | 9 | 222 | 3.9 | 87.2 | 3.6 | 0.0 | 91.2 | 1 |
| 13 | 320 | -71 | 121 | -2 | 0 | 2 | 475 | 1.8 | 150.7 | 8.6 | 0.0 | 152.5 | 1 |
| 14 | 320 | 0 | -60 | 0 | 0 | -0 | -36 | 0.0 | 11.2 | 4.3 | 0.0 | 11.7 | 3 |
| 15 | 320 | -74 | 127 | -2 | 0 | 2 | 492 | 1.9 | 155.9 | 9.1 | 0.0 | 157.8 | 1 |
| | | | | | | | | | | | | | |
| 1 | 365 | -83 | 131 | -2 | 0 | 3 | 616 | 2.1 | 196.5 | 9.4 | 0.0 | 198.7 | 1 |
| 5 | 365 | -761 | -83 | 28 | 0 | -43 | 23 | 19.5 | 97.3 | 6.0 | 0.0 | 116.8 | 1 |
| 6 | 365 | -763 | -83 | 29 | 0 | -44 | 22 | 19.5 | 98.9 | 6.0 | 0.0 | 118.4 | 1 |
| 7 | 365 | -454 | 102 | -30 | 0 | 45 | 361 | 11.6 | 207.2 | 7.3 | 0.0 | 218.8 | 1 |
| 8 | 365 | -454 | 101 | -30 | 0 | 45 | 361 | 11.6 | 205.4 | 7.3 | 0.0 | 217.0 | 1 |
| 9 | 365 | -243 | -13 | 8 | 0 | -11 | 209 | 6.2 | 88.3 | 0.9 | 0.0 | 94.5 | 1 |
| 10 | 365 | -247 | -13 | 9 | 0 | -14 | 208 | 6.3 | 93.6 | 1.0 | 0.0 | 99.9 | 1 |
| 11 | 365 | -165 | 44 | -10 | 0 | 16 | 313 | 4.2 | 129.9 | 3.2 | 0.0 | 134.1 | 1 |
| 12 | 365 | -154 | 37 | -9 | 0 | 13 | 242 | 3.9 | 101.6 | 2.6 | 0.0 | 105.6 | 1 |
| 13 | 365 | -71 | 102 | -2 | 0 | 3 | 526 | 1.8 | 168.1 | 7.3 | 0.0 | 169.9 | 1 |
| 14 | 365 | 0 | -74 | 0 | 0 | -0 | -66 | 0.0 | 20.8 | 5.3 | 0.0 | 20.8 | 1 |
| 15 | 365 | -74 | 109 | -2 | 0 | 3 | 546 | 1.9 | 174.2 | 7.8 | 0.0 | 176.1 | 1 |
| | | | | | | | | | | | | | |
| 1 | 411 | -83 | 113 | -2 | 0 | 4 | 672 | 2.1 | 215.7 | 8.1 | 0.0 | 217.9 | 1 |
| 5 | 411 | -761 | -97 | 28 | 0 | -56 | -19 | 19.5 | 123.6 | 7.0 | 0.0 | 143.1 | 1 |
| 6 | 411 | -763 | -97 | 29 | 0 | -57 | -19 | 19.5 | 125.9 | 7.0 | 0.0 | 145.4 | 1 |
| 7 | 411 | -454 | 88 | -30 | 0 | 59 | 405 | 11.6 | 249.5 | 6.3 | 0.0 | 261.1 | 1 |
| 8 | 411 | -454 | 87 | -30 | 0 | 58 | 404 | 11.6 | 247.2 | 6.3 | 0.0 | 258.8 | 1 |
| 9 | 411 | -243 | -31 | 8 | 0 | -15 | 199 | 6.2 | 92.6 | 2.2 | 0.0 | 98.8 | 1 |
| 10 | 411 | -247 | -32 | 9 | 0 | -18 | 198 | 6.3 | 99.4 | 2.3 | 0.0 | 105.7 | 1 |
| 11 | 411 | -165 | 26 | -10 | 0 | 21 | 329 | 4.2 | 144.8 | 1.9 | 0.0 | 149.0 | 1 |
| 12 | 411 | -154 | 23 | -9 | 0 | 17 | 255 | 3.9 | 114.0 | 1.6 | 0.0 | 118.0 | 1 |
| 13 | 411 | -71 | 84 | -2 | 0 | 4 | 569 | 1.8 | 182.9 | 6.0 | 0.0 | 184.7 | 1 |
| 14 | 411 | 0 | -88 | 0 | 0 | -0 | -103 | 0.0 | 32.3 | 6.3 | 0.0 | 32.3 | 1 |
| 15 | 411 | -74 | 90 | -2 | 0 | 4 | 591 | 1.9 | 190.0 | 6.5 | 0.0 | 191.9 | 1 |
| | | | | | | | | | | | | | |
| 1 | 457 | -83 | 95 | -2 | 0 | 5 | 719 | 2.1 | 232.4 | 6.8 | 0.0 | 234.5 | 1 |
| 5 | 457 | -761 | -111 | 28 | 0 | -69 | -66 | 19.5 | 165.8 | 8.0 | 0.0 | 185.3 | 1 |
| 6 | 457 | -763 | -112 | 29 | 0 | -70 | -67 | 19.5 | 168.5 | 8.0 | 0.0 | 188.0 | 1 |
| 7 | 457 | -454 | 74 | -30 | 0 | 73 | 441 | 11.6 | 289.8 | 5.3 | 0.0 | 301.4 | 1 |
| 8 | 457 | -454 | 73 | -30 | 0 | 72 | 441 | 11.6 | 287.0 | 5.3 | 0.0 | 298.6 | 1 |
| 9 | 457 | -243 | -49 | 8 | 0 | -18 | 180 | 6.2 | 94.3 | 3.5 | 0.0 | 100.5 | 1 |
| 10 | 457 | -247 | -50 | 9 | 0 | -22 | 179 | 6.3 | 102.6 | 3.6 | 0.0 | 108.9 | 1 |
| 11 | 457 | -165 | 8 | -10 | 0 | 25 | 337 | 4.2 | 157.2 | 0.7 | 0.0 | 161.4 | 1 |
| 12 | 457 | -154 | 9 | -9 | 0 | 21 | 263 | 3.9 | 124.5 | 0.6 | 0.0 | 128.4 | 1 |
| 13 | 457 | -71 | 66 | -2 | 0 | 4 | 603 | 1.8 | 195.1 | 4.7 | 0.0 | 197.0 | 1 |
| 14 | 457 | 0 | -102 | 0 | 0 | -0 | -147 | 0.0 | 45.8 | 7.3 | 0.0 | 45.8 | 1 |
| 15 | 457 | -74 | 72 | -2 | 0 | 4 | 628 | 1.9 | 203.2 | 5.2 | 0.0 | 205.1 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|--------|-------|---------------------|---------|------|-----------|------|
| | | cm | daN*m | daN/cm ² | cm | | | |
| 1 | -- | 457 | 719 | 221.7 | -- | -- | -- | |
| -- | Rara | 234 | 26 | -- | 234 | 0.00 | 1 / 99999 | |
| -- | Freq. | 234 | 26 | -- | 234 | 0.00 | 1 / 99999 | |
| -- | Q.Perm. | 234 | 26 | -- | 234 | 0.00 | 1 / 99999 | |
| -- | Rara | 234 | 26 | -- | 234 | 0.00 | 1 / 99999 | |
| -- | Rara | 234 | 26 | -- | 234 | 0.00 | 1 / 99999 | |
| -- | Freq. | 234 | 26 | -- | 234 | 0.00 | 1 / 99999 | |
| -- | Freq. | 234 | 26 | -- | 234 | 0.00 | 1 / 99999 | |

ASTA NUM. 37 NI 111 NF 113 Lungh. 8.0 cm SEZ. 1 Ps IPE 240

categoria: p.p. y qy tot.

qy medio: 0.3069 0.3069 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|-------|------|-------|-----|------|---------|--------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -88 | -2983 | -26 | 0 | -2 | 720 | 2.3 | 226.6 | 213.9 | 0.0 | 370.4 | 4 | |
| 5 | 0 | -1234 | -937 | 356 | 0 | 26 | -66 | 31.6 | 75.4 | 67.1 | 0.0 | 121.3 | 4 | |
| 6 | 0 | -1236 | -937 | 376 | 0 | 33 | -67 | 31.6 | 89.2 | 67.2 | 0.0 | 121.5 | 4 | |
| 7 | 0 | 3 | -752 | -391 | 0 | -34 | 442 | 0.1 | 207.5 | 53.9 | 0.0 | 207.6 | 1 | |
| 8 | 0 | 3 | -752 | -371 | 0 | -27 | 442 | 0.1 | 193.7 | 53.9 | 0.0 | 193.8 | 1 | |
| 9 | 0 | -384 | -1193 | 74 | 0 | -2 | 181 | 9.8 | 60.4 | 85.5 | 0.0 | 148.5 | 4 | |
| 10 | 0 | -390 | -1193 | 141 | 0 | 19 | 179 | 10.0 | 96.2 | 85.5 | 0.0 | 148.6 | 4 | |
| 11 | 0 | -29 | -1136 | -156 | 0 | -21 | 337 | 0.7 | 147.5 | 81.4 | 0.0 | 148.9 | 3 | |
| 12 | 0 | -19 | -817 | -86 | 0 | 1 | 263 | 0.5 | 83.7 | 58.5 | 0.0 | 109.6 | 3 | |
| 13 | 0 | -76 | -2523 | -22 | 0 | -2 | 604 | 1.9 | 190.1 | 180.9 | 0.0 | 313.3 | 4 | |
| 14 | 0 | 1 | 490 | 1 | 0 | 0 | -147 | 0.0 | 45.6 | 35.1 | 0.0 | 63.2 | 3 | |
| 15 | 0 | -78 | -2623 | -23 | 0 | -2 | 629 | 2.0 | 198.1 | 188.1 | 0.0 | 325.7 | 4 | |
| 1 | 4 | -88 | -2985 | -26 | 0 | -1 | 601 | 2.3 | 187.6 | 214.0 | 0.0 | 370.6 | 4 | |
| 5 | 4 | -1234 | -938 | 356 | 0 | 12 | -104 | 31.6 | 56.9 | 67.2 | 0.0 | 121.0 | 4 | |
| 6 | 4 | -1236 | -938 | 376 | 0 | 17 | -104 | 31.6 | 69.0 | 67.2 | 0.0 | 121.2 | 4 | |
| 7 | 4 | 3 | -753 | -391 | 0 | -18 | 412 | 0.1 | 165.2 | 54.0 | 0.0 | 165.3 | 1 | |
| 8 | 4 | 3 | -753 | -371 | 0 | -12 | 411 | 0.1 | 153.1 | 54.0 | 0.0 | 153.2 | 1 | |
| 9 | 4 | -384 | -1195 | 74 | 0 | -5 | 133 | 9.8 | 51.9 | 85.6 | 0.0 | 148.7 | 4 | |
| 10 | 4 | -390 | -1195 | 141 | 0 | 14 | 132 | 10.0 | 69.6 | 85.7 | 0.0 | 148.8 | 4 | |
| 11 | 4 | -29 | -1138 | -156 | 0 | -14 | 292 | 0.7 | 120.3 | 81.6 | 0.0 | 141.3 | 4 | |
| 12 | 4 | -19 | -818 | -86 | 0 | 5 | 230 | 0.5 | 80.8 | 58.6 | 0.0 | 103.8 | 3 | |
| 13 | 4 | -76 | -2525 | -22 | 0 | -1 | 503 | 1.9 | 157.2 | 181.0 | 0.0 | 313.5 | 4 | |
| 14 | 4 | 1 | 488 | 1 | 0 | 0 | -128 | 0.0 | 39.5 | 35.0 | 0.0 | 60.6 | 4 | |
| 15 | 4 | -78 | -2625 | -23 | 0 | -1 | 524 | 2.0 | 163.8 | 188.2 | 0.0 | 325.9 | 4 | |
| 1 | 8 | -88 | -2986 | -26 | 0 | -0 | 481 | 2.3 | 148.6 | 214.1 | 0.0 | 370.8 | 4 | |
| 5 | 8 | -1234 | -939 | 356 | 0 | -2 | -141 | 31.6 | 48.7 | 67.3 | 0.0 | 122.6 | 3 | |
| 6 | 8 | -1236 | -939 | 376 | 0 | 2 | -142 | 31.6 | 48.8 | 67.3 | 0.0 | 123.4 | 3 | |
| 7 | 8 | 3 | -754 | -391 | 0 | -2 | 382 | 0.1 | 122.9 | 54.1 | 0.0 | 137.8 | 3 | |
| 8 | 8 | 3 | -754 | -371 | 0 | 2 | 381 | 0.1 | 122.6 | 54.1 | 0.0 | 137.0 | 3 | |
| 9 | 8 | -384 | -1196 | 74 | 0 | -8 | 85 | 9.8 | 43.4 | 85.7 | 0.0 | 148.9 | 4 | |
| 10 | 8 | -390 | -1197 | 141 | 0 | 8 | 84 | 10.0 | 42.9 | 85.8 | 0.0 | 149.0 | 4 | |
| 11 | 8 | -29 | -1139 | -156 | 0 | -8 | 246 | 0.7 | 93.1 | 81.7 | 0.0 | 141.5 | 4 | |
| 12 | 8 | -19 | -819 | -86 | 0 | 8 | 198 | 0.5 | 78.0 | 58.7 | 0.0 | 101.7 | 4 | |
| 13 | 8 | -76 | -2526 | -22 | 0 | -0 | 402 | 1.9 | 124.2 | 181.1 | 0.0 | 313.7 | 4 | |
| 14 | 8 | 1 | 487 | 1 | 0 | 0 | -108 | 0.0 | 33.4 | 34.9 | 0.0 | 60.5 | 4 | |
| 15 | 8 | -78 | -2626 | -23 | 0 | -0 | 419 | 2.0 | 129.5 | 188.3 | 0.0 | 326.1 | 4 | |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x | Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|----|------|-------|--------|---------|-----------|----------|------|
| | | cm | | daN*m | daN/cm | cm | | | |
| 1 | -- | 0 | 720 | 222.0 | -- | -- | -- | -- | |
| -- | Rara | 8 | 4 | -- | 6 | -0.00 | 1 / 99999 | | |
| -- | Freq. | 8 | 4 | -- | 6 | -0.00 | 1 / 99999 | | |
| -- | Q.Perm. | 8 | 4 | -- | 6 | -0.00 | 1 / 99999 | | |
| -- | Rara | 8 | 4 | -- | 6 | -0.00 | 1 / 99999 | | |
| -- | Rara | 8 | 4 | -- | 6 | -0.00 | 1 / 99999 | | |
| -- | Freq. | 8 | 4 | -- | 6 | -0.00 | 1 / 99999 | | |
| -- | Freq. | 8 | 4 | -- | 6 | -0.00 | 1 / 99999 | | |

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ASTA NUM. 38 NI 113 NF 112 Lungh. 35.0 cm SEZ. 1 Ps IPE 240

categoria: p.p. y qy tot.

qy medio: 0.3069 0.3069 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|-------|-----|-------|----|------|---------|--------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -164 | -2988 | -0 | 0 | -0 | 481 | 4.2 | 148.6 | 214.2 | 0.0 | 371.1 | 4 | |
| 5 | 0 | -2292 | -940 | -7 | 0 | -2 | -141 | 58.6 | 48.7 | 67.4 | 0.0 | 134.6 | 3 | |
| 6 | 0 | -2296 | -940 | 7 | 0 | 2 | -142 | 58.7 | 48.8 | 67.4 | 0.0 | 134.8 | 3 | |
| 7 | 0 | 10 | -755 | -7 | 0 | -2 | 382 | 0.3 | 122.9 | 54.1 | 0.0 | 131.0 | 3 | |
| 8 | 0 | 10 | -755 | 7 | 0 | 2 | 381 | 0.3 | 122.6 | 54.2 | 0.0 | 131.0 | 3 | |
| 9 | 0 | -714 | -1197 | -23 | 0 | -8 | 85 | 18.3 | 43.4 | 85.8 | 0.0 | 149.9 | 4 | |
| 10 | 0 | -725 | -1198 | 23 | 0 | 8 | 84 | 18.5 | 42.9 | 85.9 | 0.0 | 150.0 | 4 | |
| 11 | 0 | -52 | -1140 | -23 | 0 | -8 | 246 | 1.3 | 93.1 | 81.7 | 0.0 | 141.6 | 4 | |
| 12 | 0 | -33 | -820 | 23 | 0 | 8 | 198 | 0.9 | 78.0 | 58.8 | 0.0 | 101.8 | 4 | |
| 13 | 0 | -140 | -2528 | -0 | 0 | -0 | 402 | 3.6 | 124.2 | 181.2 | 0.0 | 313.9 | 4 | |
| 14 | 0 | 1 | 486 | 0 | 0 | 0 | -108 | 0.0 | 33.4 | 34.9 | 0.0 | 60.4 | 4 | |
| 15 | 0 | -145 | -2628 | -0 | 0 | -0 | 419 | 3.7 | 129.5 | 188.4 | 0.0 | 326.4 | 4 | |
| 1 | 3 | -164 | -2989 | -0 | 0 | -0 | 377 | 4.2 | 116.3 | 214.3 | 0.0 | 371.2 | 4 | |
| 5 | 3 | -2292 | -941 | -7 | 0 | -2 | -174 | 58.6 | 58.3 | 67.5 | 0.0 | 141.6 | 3 | |
| 6 | 3 | -2296 | -941 | 7 | 0 | 2 | -175 | 58.7 | 58.4 | 67.5 | 0.0 | 141.8 | 3 | |
| 7 | 3 | 10 | -756 | -7 | 0 | -2 | 355 | 0.3 | 114.2 | 54.2 | 0.0 | 125.0 | 3 | |
| 8 | 3 | 10 | -756 | 7 | 0 | 2 | 355 | 0.3 | 113.9 | 54.2 | 0.0 | 124.9 | 3 | |
| 9 | 3 | -714 | -1198 | -23 | 0 | -7 | 43 | 18.3 | 28.7 | 85.9 | 0.0 | 150.0 | 4 | |
| 10 | 3 | -725 | -1199 | 23 | 0 | 7 | 42 | 18.5 | 28.3 | 86.0 | 0.0 | 150.2 | 4 | |
| 11 | 3 | -52 | -1141 | -23 | 0 | -7 | 206 | 1.3 | 79.1 | 81.8 | 0.0 | 141.8 | 4 | |
| 12 | 3 | -33 | -821 | 23 | 0 | 7 | 169 | 0.9 | 67.4 | 58.9 | 0.0 | 102.0 | 4 | |
| 13 | 3 | -140 | -2529 | -0 | 0 | -0 | 314 | 3.6 | 96.9 | 181.3 | 0.0 | 314.1 | 4 | |
| 14 | 3 | 1 | 485 | 0 | 0 | 0 | -91 | 0.0 | 28.1 | 34.8 | 0.0 | 60.2 | 4 | |
| 15 | 3 | -145 | -2629 | -0 | 0 | -0 | 327 | 3.7 | 101.1 | 188.5 | 0.0 | 326.5 | 4 | |
| 1 | 7 | -164 | -2991 | -0 | 0 | -0 | 272 | 4.2 | 84.0 | 214.4 | 0.0 | 371.4 | 4 | |
| 5 | 7 | -2292 | -942 | -7 | 0 | -2 | -207 | 58.6 | 68.0 | 67.5 | 0.0 | 148.9 | 3 | |
| 6 | 7 | -2296 | -942 | 7 | 0 | 2 | -207 | 58.7 | 68.1 | 67.6 | 0.0 | 149.1 | 3 | |
| 7 | 7 | 10 | -757 | -7 | 0 | -2 | 329 | 0.3 | 105.5 | 54.3 | 0.0 | 119.0 | 3 | |
| 8 | 7 | 10 | -757 | 7 | 0 | 2 | 328 | 0.3 | 105.3 | 54.3 | 0.0 | 118.9 | 3 | |
| 9 | 7 | -714 | -1200 | -23 | 0 | -6 | 1 | 18.3 | 14.1 | 86.0 | 0.0 | 150.2 | 4 | |
| 10 | 7 | -725 | -1201 | 23 | 0 | 6 | -0 | 18.5 | 13.7 | 86.1 | 0.0 | 150.4 | 4 | |
| 11 | 7 | -52 | -1143 | -23 | 0 | -6 | 166 | 1.3 | 65.0 | 81.9 | 0.0 | 141.9 | 4 | |
| 12 | 7 | -33 | -822 | 23 | 0 | 6 | 140 | 0.9 | 56.8 | 58.9 | 0.0 | 102.1 | 4 | |
| 13 | 7 | -140 | -2531 | -0 | 0 | -0 | 225 | 3.6 | 69.5 | 181.4 | 0.0 | 314.3 | 4 | |
| 14 | 7 | 1 | 484 | 0 | 0 | 0 | -74 | 0.0 | 22.9 | 34.7 | 0.0 | 60.1 | 4 | |
| 15 | 7 | -145 | -2631 | -0 | 0 | -0 | 235 | 3.7 | 72.7 | 188.6 | 0.0 | 326.7 | 4 | |
| 1 | 10 | -164 | -2992 | -0 | 0 | -0 | 167 | 4.2 | 51.7 | 214.5 | 0.0 | 371.6 | 4 | |
| 5 | 10 | -2292 | -943 | -7 | 0 | -2 | -240 | 58.6 | 77.6 | 67.6 | 0.0 | 156.5 | 3 | |
| 6 | 10 | -2296 | -943 | 7 | 0 | 2 | -241 | 58.7 | 77.8 | 67.6 | 0.0 | 156.6 | 3 | |
| 7 | 10 | 10 | -758 | -7 | 0 | -2 | 302 | 0.3 | 96.8 | 54.4 | 0.0 | 113.3 | 3 | |
| 8 | 10 | 10 | -759 | 7 | 0 | 2 | 302 | 0.3 | 96.6 | 54.4 | 0.0 | 113.2 | 3 | |
| 9 | 10 | -714 | -1201 | -23 | 0 | -6 | -41 | 18.3 | 24.6 | 86.1 | 0.0 | 150.4 | 4 | |
| 10 | 10 | -725 | -1202 | 23 | 0 | 6 | -42 | 18.5 | 24.9 | 86.2 | 0.0 | 150.5 | 4 | |
| 11 | 10 | -52 | -1144 | -23 | 0 | -6 | 126 | 1.3 | 51.0 | 82.0 | 0.0 | 142.1 | 4 | |
| 12 | 10 | -33 | -823 | 23 | 0 | 6 | 111 | 0.9 | 46.3 | 59.0 | 0.0 | 102.2 | 4 | |
| 13 | 10 | -140 | -2532 | -0 | 0 | -0 | 136 | 3.6 | 42.2 | 181.5 | 0.0 | 314.5 | 4 | |
| 14 | 10 | 1 | 483 | 0 | 0 | 0 | -57 | 0.0 | 17.7 | 34.6 | 0.0 | 60.0 | 4 | |
| 15 | 10 | -145 | -2632 | -0 | 0 | -0 | 143 | 3.7 | 44.3 | 188.7 | 0.0 | 326.9 | 4 | |
| 1 | 14 | -164 | -2994 | -0 | 0 | -0 | 63 | 4.2 | 19.4 | 214.6 | 0.0 | 371.8 | 4 | |
| 5 | 14 | -2292 | -944 | -7 | 0 | -1 | -273 | 58.6 | 87.3 | 67.7 | 0.0 | 164.2 | 3 | |
| 6 | 14 | -2296 | -944 | 7 | 0 | 1 | -274 | 58.7 | 87.4 | 67.7 | 0.0 | 164.3 | 3 | |
| 7 | 14 | 10 | -759 | -7 | 0 | -1 | 276 | 0.3 | 88.1 | 54.5 | 0.0 | 107.7 | 3 | |
| 8 | 14 | 10 | -760 | 7 | 0 | 1 | 275 | 0.3 | 87.9 | 54.5 | 0.0 | 107.6 | 3 | |
| 9 | 14 | -714 | -1203 | -23 | 0 | -5 | -83 | 18.3 | 35.8 | 86.2 | 0.0 | 150.5 | 4 | |
| 10 | 14 | -725 | -1204 | 23 | 0 | 5 | -84 | 18.5 | 36.2 | 86.3 | 0.0 | 150.7 | 4 | |
| 11 | 14 | -52 | -1146 | -23 | 0 | -5 | 86 | 1.3 | 36.9 | 82.1 | 0.0 | 142.3 | 4 | |
| 12 | 14 | -33 | -824 | 23 | 0 | 5 | 82 | 0.9 | 35.7 | 59.1 | 0.0 | 102.4 | 4 | |
| 13 | 14 | -140 | -2534 | -0 | 0 | -0 | 48 | 3.6 | 14.8 | 181.6 | 0.0 | 314.6 | 4 | |
| 14 | 14 | 1 | 482 | 0 | 0 | 0 | -40 | 0.0 | 12.5 | 34.5 | 0.0 | 59.8 | 4 | |
| 15 | 14 | -145 | -2634 | -0 | 0 | -0 | 51 | 3.7 | 15.8 | 188.8 | 0.0 | 327.1 | 4 | |
| 1 | 17 | -164 | -2995 | -0 | 0 | -0 | -42 | 4.2 | 13.1 | 214.7 | 0.0 | 371.9 | 4 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|-------|-------|-----|---|----|------|------|-------|-------|-----|-------|---|
| 5 | 17 | -2292 | -945 | -7 | 0 | -1 | -306 | 58.6 | 97.0 | 67.8 | 0.0 | 172.0 | 3 |
| 6 | 17 | -2296 | -945 | 7 | 0 | 1 | -307 | 58.7 | 97.1 | 67.8 | 0.0 | 172.2 | 3 |
| 7 | 17 | 10 | -761 | -7 | 0 | -1 | 249 | 0.3 | 79.4 | 54.5 | 0.0 | 102.4 | 3 |
| 8 | 17 | 10 | -761 | 7 | 0 | 1 | 249 | 0.3 | 79.2 | 54.5 | 0.0 | 102.3 | 3 |
| 9 | 17 | -714 | -1204 | -23 | 0 | -4 | -125 | 18.3 | 47.1 | 86.3 | 0.0 | 150.7 | 4 |
| 10 | 17 | -725 | -1205 | 23 | 0 | 4 | -126 | 18.5 | 47.5 | 86.4 | 0.0 | 150.8 | 4 |
| 11 | 17 | -52 | -1147 | -23 | 0 | -4 | 46 | 1.3 | 22.8 | 82.2 | 0.0 | 142.4 | 4 |
| 12 | 17 | -33 | -825 | 23 | 0 | 4 | 54 | 0.9 | 25.1 | 59.2 | 0.0 | 102.5 | 4 |
| 13 | 17 | -140 | -2535 | -0 | 0 | -0 | -41 | 3.6 | 12.7 | 181.7 | 0.0 | 314.8 | 4 |
| 14 | 17 | 1 | 481 | 0 | 0 | 0 | -23 | 0.0 | 7.3 | 34.5 | 0.0 | 59.7 | 4 |
| 15 | 17 | -145 | -2635 | -0 | 0 | -0 | -41 | 3.7 | 12.8 | 188.9 | 0.0 | 327.2 | 4 |
| | | | | | | | | | | | | | |
| 1 | 21 | -164 | -2996 | -0 | 0 | -0 | -147 | 4.2 | 45.4 | 214.8 | 0.0 | 372.1 | 4 |
| 5 | 21 | -2292 | -946 | -7 | 0 | -1 | -339 | 58.6 | 106.7 | 67.9 | 0.0 | 180.1 | 3 |
| 6 | 21 | -2296 | -947 | 7 | 0 | 1 | -340 | 58.7 | 106.8 | 67.9 | 0.0 | 180.3 | 3 |
| 7 | 21 | 10 | -762 | -7 | 0 | -1 | 222 | 0.3 | 70.6 | 54.6 | 0.0 | 97.4 | 3 |
| 8 | 21 | 10 | -762 | 7 | 0 | 1 | 222 | 0.3 | 70.4 | 54.6 | 0.0 | 97.3 | 3 |
| 9 | 21 | -714 | -1205 | -23 | 0 | -3 | -167 | 18.3 | 58.4 | 86.4 | 0.0 | 150.8 | 4 |
| 10 | 21 | -725 | -1206 | 23 | 0 | 3 | -169 | 18.5 | 58.8 | 86.5 | 0.0 | 151.0 | 4 |
| 11 | 21 | -52 | -1148 | -23 | 0 | -3 | 6 | 1.3 | 8.7 | 82.3 | 0.0 | 142.6 | 4 |
| 12 | 21 | -33 | -826 | 23 | 0 | 3 | 25 | 0.9 | 14.4 | 59.3 | 0.0 | 102.6 | 4 |
| 13 | 21 | -140 | -2536 | -0 | 0 | -0 | -130 | 3.6 | 40.0 | 181.8 | 0.0 | 315.0 | 4 |
| 14 | 21 | 1 | 480 | 0 | 0 | 0 | -7 | 0.0 | 2.1 | 34.4 | 0.0 | 59.6 | 4 |
| 15 | 21 | -145 | -2636 | -0 | 0 | -0 | -133 | 3.7 | 41.2 | 189.0 | 0.0 | 327.4 | 4 |
| | | | | | | | | | | | | | |
| 1 | 24 | -164 | -2998 | -0 | 0 | -0 | -252 | 4.2 | 77.8 | 214.9 | 0.0 | 372.3 | 4 |
| 5 | 24 | -2292 | -947 | -7 | 0 | -1 | -372 | 58.6 | 116.4 | 67.9 | 0.0 | 188.2 | 3 |
| 6 | 24 | -2296 | -948 | 7 | 0 | 1 | -373 | 58.7 | 116.5 | 67.9 | 0.0 | 188.4 | 3 |
| 7 | 24 | 10 | -763 | -7 | 0 | -1 | 196 | 0.3 | 61.9 | 54.7 | 0.0 | 94.7 | 4 |
| 8 | 24 | 10 | -763 | 7 | 0 | 1 | 195 | 0.3 | 61.7 | 54.7 | 0.0 | 94.7 | 4 |
| 9 | 24 | -714 | -1207 | -23 | 0 | -2 | -209 | 18.3 | 69.7 | 86.5 | 0.0 | 151.0 | 4 |
| 10 | 24 | -725 | -1208 | 23 | 0 | 2 | -211 | 18.5 | 70.1 | 86.6 | 0.0 | 151.2 | 4 |
| 11 | 24 | -52 | -1150 | -23 | 0 | -2 | -34 | 1.3 | 15.7 | 82.4 | 0.0 | 142.8 | 4 |
| 12 | 24 | -33 | -828 | 23 | 0 | 2 | -4 | 0.9 | 6.4 | 59.3 | 0.0 | 102.8 | 4 |
| 13 | 24 | -140 | -2538 | -0 | 0 | -0 | -218 | 3.6 | 67.4 | 181.9 | 0.0 | 315.2 | 4 |
| 14 | 24 | 1 | 479 | 0 | 0 | 0 | 10 | 0.0 | 3.2 | 34.3 | 0.0 | 59.4 | 4 |
| 15 | 24 | -145 | -2638 | -0 | 0 | -0 | -226 | 3.7 | 69.7 | 189.1 | 0.0 | 327.6 | 4 |
| | | | | | | | | | | | | | |
| 1 | 28 | -164 | -2999 | -0 | 0 | -0 | -357 | 4.2 | 110.1 | 215.0 | 0.0 | 372.5 | 4 |
| 5 | 28 | -2292 | -949 | -7 | 0 | -0 | -406 | 58.6 | 126.1 | 68.0 | 0.0 | 196.5 | 3 |
| 6 | 28 | -2296 | -949 | 7 | 0 | 0 | -406 | 58.7 | 126.2 | 68.0 | 0.0 | 196.7 | 3 |
| 7 | 28 | 10 | -764 | -7 | 0 | -0 | 169 | 0.3 | 53.1 | 54.8 | 0.0 | 94.8 | 4 |
| 8 | 28 | 10 | -764 | 7 | 0 | 0 | 169 | 0.3 | 53.0 | 54.8 | 0.0 | 94.9 | 4 |
| 9 | 28 | -714 | -1208 | -23 | 0 | -2 | -252 | 18.3 | 81.0 | 86.6 | 0.0 | 151.2 | 4 |
| 10 | 28 | -725 | -1209 | 23 | 0 | 2 | -253 | 18.5 | 81.5 | 86.7 | 0.0 | 151.3 | 4 |
| 11 | 28 | -52 | -1151 | -23 | 0 | -2 | -75 | 1.3 | 26.4 | 82.5 | 0.0 | 143.0 | 4 |
| 12 | 28 | -33 | -829 | 23 | 0 | 2 | -33 | 0.9 | 13.7 | 59.4 | 0.0 | 102.9 | 4 |
| 13 | 28 | -140 | -2539 | -0 | 0 | -0 | -307 | 3.6 | 94.8 | 182.0 | 0.0 | 315.3 | 4 |
| 14 | 28 | 1 | 478 | 0 | 0 | 0 | 27 | 0.0 | 8.3 | 34.2 | 0.0 | 59.3 | 4 |
| 15 | 28 | -145 | -2639 | -0 | 0 | -0 | -318 | 3.7 | 98.1 | 189.2 | 0.0 | 327.8 | 4 |
| | | | | | | | | | | | | | |
| 1 | 31 | -164 | -3001 | -0 | 0 | -0 | -462 | 4.2 | 142.4 | 215.1 | 0.0 | 372.6 | 4 |
| 5 | 31 | -2292 | -950 | -7 | 0 | -0 | -439 | 58.6 | 135.8 | 68.1 | 0.0 | 204.9 | 3 |
| 6 | 31 | -2296 | -950 | 7 | 0 | 0 | -439 | 58.7 | 136.0 | 68.1 | 0.0 | 205.1 | 3 |
| 7 | 31 | 10 | -765 | -7 | 0 | -0 | 142 | 0.3 | 44.4 | 54.8 | 0.0 | 95.0 | 4 |
| 8 | 31 | 10 | -765 | 7 | 0 | 0 | 142 | 0.3 | 44.2 | 54.8 | 0.0 | 95.0 | 4 |
| 9 | 31 | -714 | -1210 | -23 | 0 | -1 | -294 | 18.3 | 92.4 | 86.7 | 0.0 | 155.4 | 3 |
| 10 | 31 | -725 | -1211 | 23 | 0 | 1 | -296 | 18.5 | 92.8 | 86.8 | 0.0 | 155.9 | 3 |
| 11 | 31 | -52 | -1153 | -23 | 0 | -1 | -115 | 1.3 | 37.1 | 82.6 | 0.0 | 143.1 | 4 |
| 12 | 31 | -33 | -830 | 23 | 0 | 1 | -62 | 0.9 | 20.9 | 59.5 | 0.0 | 103.0 | 4 |
| 13 | 31 | -140 | -2541 | -0 | 0 | -0 | -396 | 3.6 | 122.2 | 182.1 | 0.0 | 315.5 | 4 |
| 14 | 31 | 1 | 476 | 0 | 0 | 0 | 44 | 0.0 | 13.5 | 34.2 | 0.0 | 59.2 | 4 |
| 15 | 31 | -145 | -2641 | -0 | 0 | -0 | -410 | 3.7 | 126.6 | 189.3 | 0.0 | 327.9 | 4 |
| | | | | | | | | | | | | | |
| 1 | 35 | -164 | -3002 | -0 | 0 | 0 | -567 | 4.2 | 174.8 | 215.2 | 0.0 | 372.8 | 4 |
| 5 | 35 | -2292 | -951 | -7 | 0 | 0 | -472 | 58.6 | 145.6 | 68.2 | 0.0 | 213.3 | 3 |
| 6 | 35 | -2296 | -951 | 7 | 0 | 0 | -473 | 58.7 | 145.7 | 68.2 | 0.0 | 213.6 | 3 |
| 7 | 35 | 10 | -766 | -7 | 0 | -0 | 115 | 0.3 | 35.6 | 54.9 | 0.0 | 95.1 | 4 |
| 8 | 35 | 10 | -766 | 7 | 0 | -0 | 115 | 0.3 | 35.5 | 54.9 | 0.0 | 95.1 | 4 |
| 9 | 35 | -714 | -1211 | -23 | 0 | 0 | -336 | 18.3 | 103.7 | 86.8 | 0.0 | 163.5 | 3 |
| 10 | 35 | -725 | -1212 | 23 | 0 | 0 | -338 | 18.5 | 104.2 | 86.9 | 0.0 | 164.1 | 3 |
| 11 | 35 | -52 | -1154 | -23 | 0 | 0 | -155 | 1.3 | 47.9 | 82.7 | 0.0 | 143.3 | 4 |
| 12 | 35 | -33 | -831 | 23 | 0 | 0 | -91 | 0.9 | 28.2 | 59.6 | 0.0 | 103.2 | 4 |
| 13 | 35 | -140 | -2542 | -0 | 0 | 0 | -485 | 3.6 | 149.6 | 182.2 | 0.0 | 315.7 | 4 |
| 14 | 35 | 1 | 475 | 0 | 0 | -0 | 60 | 0.0 | 18.6 | 34.1 | 0.0 | 59.0 | 4 |
| 15 | 35 | -145 | -2642 | -0 | 0 | 0 | -503 | 3.7 | 155.1 | 189.4 | 0.0 | 328.1 | 4 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|-------|--------|-------|---------------------|---------|------|-----------|------|
| | | cm | daN*m | daN/cm ² | | cm | | |
| 1 | -- | 0 | 481 | 148.4 | -- | -- | -- | |
| -- | Rara | 0 | 4 | -- | 17 | 0.00 | 1 / 99999 | |
| -- | Freq. | 0 | 4 | -- | 17 | 0.00 | 1 / 99999 | |

| | | | | | | | |
|----|---------|---|---|----|----|------|-----------|
| -- | Q.Perm. | 0 | 4 | -- | 17 | 0.00 | 1 / 99999 |
| -- | Rara | 0 | 4 | -- | 17 | 0.00 | 1 / 99999 |
| -- | Rara | 0 | 4 | -- | 17 | 0.00 | 1 / 99999 |
| -- | Freq. | 0 | 4 | -- | 17 | 0.00 | 1 / 99999 |
| -- | Freq. | 0 | 4 | -- | 17 | 0.00 | 1 / 99999 |

ASTA NUM. 25 NI 115 NF 100 Lungh. 88.4 cm SEZ. 1 Ps IPE 240

categoria: p.p. y qy tot.

qy medio: 0.3069 0.3069 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|------|-----|-------|-----|------|---------|--------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cmq | | | | | | |
| 1 | 0 | -701 | 2716 | -0 | 0 | 0 | 0 | 17.9 | 0.0 | 194.7 | 0.0 | 337.7 | 4 | |
| 5 | 0 | -697 | 699 | -28 | 0 | 0 | 0 | 17.8 | 0.0 | 50.1 | 0.0 | 88.6 | 4 | |
| 6 | 0 | 393 | 698 | -37 | 0 | 0 | 0 | 10.0 | 0.0 | 50.1 | 0.0 | 87.3 | 4 | |
| 7 | 0 | -725 | 699 | 37 | 0 | 0 | 0 | 18.5 | 0.0 | 50.1 | 0.0 | 88.8 | 4 | |
| 8 | 0 | 364 | 699 | 27 | 0 | 0 | 0 | 9.3 | 0.0 | 50.1 | 0.0 | 87.3 | 4 | |
| 9 | 0 | -2044 | 973 | 6 | 0 | 0 | 0 | 52.3 | 0.0 | 69.8 | 0.0 | 131.7 | 4 | |
| 10 | 0 | 1587 | 971 | -25 | 0 | 0 | 0 | 40.6 | 0.0 | 69.6 | 0.0 | 127.2 | 4 | |
| 11 | 0 | -2053 | 973 | 25 | 0 | 0 | 0 | 52.5 | 0.0 | 69.8 | 0.0 | 131.8 | 4 | |
| 12 | 0 | 1645 | 698 | -6 | 0 | 0 | 0 | 42.1 | 0.0 | 50.0 | 0.0 | 96.3 | 4 | |
| 13 | 0 | -583 | 2275 | -0 | 0 | 0 | 0 | 14.9 | 0.0 | 163.1 | 0.0 | 282.9 | 4 | |
| 14 | 0 | 176 | -579 | 0 | 0 | 0 | 0 | 4.5 | 0.0 | 41.5 | 0.0 | 72.0 | 4 | |
| 15 | 0 | -608 | 2371 | -0 | 0 | 0 | 0 | 15.6 | 0.0 | 170.0 | 0.0 | 294.8 | 4 | |
| | | | | | | | | | | | | | | |
| 1 | 9 | -701 | 2713 | -0 | 0 | 0 | 240 | 17.9 | 74.0 | 194.5 | 0.0 | 337.3 | 4 | |
| 5 | 9 | -697 | 696 | -28 | 0 | 2 | 62 | 17.8 | 24.2 | 49.9 | 0.0 | 88.3 | 4 | |
| 6 | 9 | 393 | 696 | -37 | 0 | 3 | 62 | 10.0 | 25.9 | 49.9 | 0.0 | 87.0 | 4 | |
| 7 | 9 | -725 | 696 | 37 | 0 | -3 | 62 | 18.5 | 25.9 | 49.9 | 0.0 | 88.5 | 4 | |
| 8 | 9 | 364 | 696 | 27 | 0 | -2 | 62 | 9.3 | 24.1 | 49.9 | 0.0 | 87.0 | 4 | |
| 9 | 9 | -2044 | 969 | 6 | 0 | -0 | 86 | 52.3 | 27.5 | 69.5 | 0.0 | 131.3 | 4 | |
| 10 | 9 | 1587 | 968 | -25 | 0 | 2 | 86 | 40.6 | 31.1 | 69.4 | 0.0 | 126.9 | 4 | |
| 11 | 9 | -2053 | 970 | 25 | 0 | -2 | 86 | 52.5 | 31.1 | 69.5 | 0.0 | 131.4 | 4 | |
| 12 | 9 | 1645 | 695 | -6 | 0 | 1 | 62 | 42.1 | 20.0 | 49.8 | 0.0 | 96.0 | 4 | |
| 13 | 9 | -583 | 2272 | -0 | 0 | 0 | 201 | 14.9 | 62.0 | 162.9 | 0.0 | 282.5 | 4 | |
| 14 | 9 | 176 | -582 | 0 | 0 | -0 | -51 | 4.5 | 15.8 | 41.7 | 0.0 | 72.4 | 4 | |
| 15 | 9 | -608 | 2368 | -0 | 0 | 0 | 209 | 15.6 | 64.6 | 169.7 | 0.0 | 294.4 | 4 | |
| | | | | | | | | | | | | | | |
| 1 | 18 | -701 | 2709 | -0 | 0 | 0 | 479 | 17.9 | 147.9 | 194.2 | 0.0 | 336.9 | 4 | |
| 5 | 18 | -697 | 693 | -28 | 0 | 5 | 123 | 17.8 | 48.2 | 49.7 | 0.0 | 88.1 | 4 | |
| 6 | 18 | 393 | 693 | -37 | 0 | 6 | 123 | 10.0 | 51.6 | 49.7 | 0.0 | 86.7 | 4 | |
| 7 | 18 | -725 | 694 | 37 | 0 | -6 | 123 | 18.5 | 51.6 | 49.7 | 0.0 | 88.3 | 4 | |
| 8 | 18 | 364 | 693 | 27 | 0 | -5 | 123 | 9.3 | 48.2 | 49.7 | 0.0 | 86.7 | 4 | |
| 9 | 18 | -2044 | 966 | 6 | 0 | -1 | 171 | 52.3 | 54.9 | 69.3 | 0.0 | 137.8 | 3 | |
| 10 | 18 | 1587 | 964 | -25 | 0 | 4 | 171 | 40.6 | 62.0 | 69.1 | 0.0 | 129.6 | 3 | |
| 11 | 18 | -2053 | 966 | 25 | 0 | -4 | 171 | 52.5 | 62.1 | 69.3 | 0.0 | 138.3 | 3 | |
| 12 | 18 | 1645 | 692 | -6 | 0 | 1 | 123 | 42.1 | 40.0 | 49.6 | 0.0 | 102.2 | 3 | |
| 13 | 18 | -583 | 2268 | -0 | 0 | 0 | 401 | 14.9 | 123.9 | 162.6 | 0.0 | 282.0 | 4 | |
| 14 | 18 | 176 | -584 | 0 | 0 | -0 | -103 | 4.5 | 31.7 | 41.9 | 0.0 | 72.7 | 4 | |
| 15 | 18 | -608 | 2364 | -0 | 0 | 0 | 418 | 15.6 | 129.2 | 169.5 | 0.0 | 294.0 | 4 | |
| | | | | | | | | | | | | | | |
| 1 | 27 | -701 | 2706 | -0 | 0 | 0 | 718 | 17.9 | 221.7 | 194.0 | 0.0 | 343.7 | 3 | |
| 5 | 27 | -697 | 691 | -28 | 0 | 7 | 184 | 17.8 | 72.3 | 49.5 | 0.0 | 97.6 | 3 | |
| 6 | 27 | 393 | 690 | -37 | 0 | 10 | 184 | 10.0 | 77.3 | 49.5 | 0.0 | 92.2 | 3 | |
| 7 | 27 | -725 | 691 | 37 | 0 | -10 | 184 | 18.5 | 77.3 | 49.5 | 0.0 | 98.4 | 3 | |
| 8 | 27 | 364 | 691 | 27 | 0 | -7 | 184 | 9.3 | 72.2 | 49.5 | 0.0 | 91.6 | 3 | |
| 9 | 27 | -2044 | 962 | 6 | 0 | -1 | 257 | 52.3 | 82.2 | 69.0 | 0.0 | 156.2 | 3 | |
| 10 | 27 | 1587 | 961 | -25 | 0 | 7 | 256 | 40.6 | 92.9 | 68.9 | 0.0 | 147.2 | 3 | |
| 11 | 27 | -2053 | 963 | 25 | 0 | -7 | 257 | 52.5 | 93.0 | 69.0 | 0.0 | 156.8 | 3 | |
| 12 | 27 | 1645 | 690 | -6 | 0 | 2 | 184 | 42.1 | 59.9 | 49.4 | 0.0 | 115.7 | 3 | |
| 13 | 27 | -583 | 2265 | -0 | 0 | 0 | 602 | 14.9 | 185.7 | 162.4 | 0.0 | 287.6 | 3 | |
| 14 | 27 | 176 | -587 | 0 | 0 | -0 | -155 | 4.5 | 47.7 | 42.1 | 0.0 | 74.7 | 3 | |
| 15 | 27 | -608 | 2361 | -0 | 0 | 0 | 627 | 15.6 | 193.6 | 169.2 | 0.0 | 299.9 | 3 | |
| | | | | | | | | | | | | | | |
| 1 | 35 | -701 | 2702 | -0 | 0 | 0 | 957 | 17.9 | 295.4 | 193.7 | 0.0 | 390.4 | 3 | |
| 5 | 35 | -697 | 688 | -28 | 0 | 10 | 245 | 17.8 | 96.2 | 49.3 | 0.0 | 114.0 | 1 | |
| 6 | 35 | 393 | 687 | -37 | 0 | 13 | 245 | 10.0 | 103.0 | 49.3 | 0.0 | 113.0 | 1 | |
| 7 | 35 | -725 | 688 | 37 | 0 | -13 | 245 | 18.5 | 103.0 | 49.4 | 0.0 | 121.5 | 1 | |
| 8 | 35 | 364 | 688 | 27 | 0 | -10 | 245 | 9.3 | 96.1 | 49.3 | 0.0 | 105.4 | 1 | |
| 9 | 35 | -2044 | 959 | 6 | 0 | -2 | 341 | 52.3 | 109.4 | 68.8 | 0.0 | 175.9 | 3 | |
| 10 | 35 | 1587 | 957 | -25 | 0 | 9 | 341 | 40.6 | 123.7 | 68.6 | 0.0 | 166.5 | 3 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|-------|------|-----|---|-----|------|------|-------|-------|-----|-------|---|
| 11 | 35 | -2053 | 959 | 25 | 0 | -9 | 341 | 52.5 | 123.8 | 68.8 | 0.0 | 176.7 | 3 |
| 12 | 35 | 1645 | 687 | -6 | 0 | 2 | 245 | 42.1 | 79.7 | 49.2 | 0.0 | 130.0 | 3 |
| 13 | 35 | -583 | 2261 | -0 | 0 | 0 | 802 | 14.9 | 247.4 | 162.1 | 0.0 | 326.8 | 3 |
| 14 | 35 | 176 | -590 | 0 | 0 | -0 | -207 | 4.5 | 63.7 | 42.3 | 0.0 | 85.1 | 3 |
| 15 | 35 | -608 | 2357 | -0 | 0 | 0 | 836 | 15.6 | 257.9 | 169.0 | 0.0 | 340.7 | 3 |
| 1 | 44 | -701 | 2699 | -0 | 0 | 0 | 1196 | 17.9 | 369.1 | 193.5 | 0.0 | 442.6 | 3 |
| 5 | 44 | -697 | 685 | -28 | 0 | 12 | 306 | 17.8 | 120.1 | 49.1 | 0.0 | 137.9 | 1 |
| 6 | 44 | 393 | 685 | -37 | 0 | 16 | 306 | 10.0 | 128.5 | 49.1 | 0.0 | 138.6 | 1 |
| 7 | 44 | -725 | 686 | 37 | 0 | -16 | 306 | 18.5 | 128.5 | 49.2 | 0.0 | 147.1 | 1 |
| 8 | 44 | 364 | 685 | 27 | 0 | -12 | 306 | 9.3 | 119.9 | 49.1 | 0.0 | 129.2 | 1 |
| 9 | 44 | -2044 | 955 | 6 | 0 | -2 | 426 | 52.3 | 136.5 | 68.5 | 0.0 | 196.5 | 3 |
| 10 | 44 | 1587 | 954 | -25 | 0 | 11 | 425 | 40.6 | 154.3 | 68.4 | 0.0 | 194.9 | 1 |
| 11 | 44 | -2053 | 956 | 25 | 0 | -11 | 426 | 52.5 | 154.5 | 68.5 | 0.0 | 207.0 | 1 |
| 12 | 44 | 1645 | 684 | -6 | 0 | 3 | 305 | 42.1 | 99.4 | 49.1 | 0.0 | 144.9 | 3 |
| 13 | 44 | -583 | 2258 | -0 | 0 | 0 | 1001 | 14.9 | 309.0 | 161.9 | 0.0 | 370.4 | 3 |
| 14 | 44 | 176 | -592 | 0 | 0 | -0 | -259 | 4.5 | 79.8 | 42.5 | 0.0 | 96.7 | 3 |
| 15 | 44 | -608 | 2354 | -0 | 0 | 0 | 1044 | 15.6 | 322.2 | 168.7 | 0.0 | 386.1 | 3 |
| 1 | 53 | -701 | 2695 | -0 | 0 | 0 | 1434 | 17.9 | 442.6 | 193.2 | 0.0 | 498.3 | 3 |
| 5 | 53 | -697 | 683 | -28 | 0 | 15 | 366 | 17.8 | 143.9 | 48.9 | 0.0 | 161.7 | 1 |
| 6 | 53 | 393 | 682 | -37 | 0 | 19 | 366 | 10.0 | 154.0 | 48.9 | 0.0 | 164.0 | 1 |
| 7 | 53 | -725 | 683 | 37 | 0 | -19 | 366 | 18.5 | 154.0 | 49.0 | 0.0 | 172.5 | 1 |
| 8 | 53 | 364 | 682 | 27 | 0 | -15 | 366 | 9.3 | 143.7 | 48.9 | 0.0 | 153.0 | 1 |
| 9 | 53 | -2044 | 952 | 6 | 0 | -3 | 510 | 52.3 | 163.6 | 68.2 | 0.0 | 217.7 | 3 |
| 10 | 53 | 1587 | 950 | -25 | 0 | 13 | 509 | 40.6 | 184.9 | 68.1 | 0.0 | 225.5 | 1 |
| 11 | 53 | -2053 | 952 | 25 | 0 | -13 | 510 | 52.5 | 185.1 | 68.3 | 0.0 | 237.6 | 1 |
| 12 | 53 | 1645 | 681 | -6 | 0 | 3 | 366 | 42.1 | 119.1 | 48.9 | 0.0 | 161.2 | 1 |
| 13 | 53 | -583 | 2254 | -0 | 0 | 0 | 1201 | 14.9 | 370.6 | 161.6 | 0.0 | 417.0 | 3 |
| 14 | 53 | 176 | -595 | 0 | 0 | -0 | -311 | 4.5 | 96.0 | 42.7 | 0.0 | 109.2 | 3 |
| 15 | 53 | -608 | 2350 | -0 | 0 | 0 | 1252 | 15.6 | 386.3 | 168.5 | 0.0 | 434.8 | 3 |
| 1 | 62 | -701 | 2692 | -0 | 0 | 0 | 1672 | 17.9 | 516.0 | 193.0 | 0.0 | 556.6 | 3 |
| 5 | 62 | -697 | 680 | -28 | 0 | 17 | 426 | 17.8 | 167.6 | 48.7 | 0.0 | 185.4 | 1 |
| 6 | 62 | 393 | 679 | -37 | 0 | 23 | 426 | 10.0 | 179.4 | 48.7 | 0.0 | 189.4 | 1 |
| 7 | 62 | -725 | 680 | 37 | 0 | -23 | 427 | 18.5 | 179.4 | 48.8 | 0.0 | 197.9 | 1 |
| 8 | 62 | 364 | 680 | 27 | 0 | -17 | 426 | 9.3 | 167.4 | 48.7 | 0.0 | 176.7 | 1 |
| 9 | 62 | -2044 | 948 | 6 | 0 | -3 | 594 | 52.3 | 190.5 | 68.0 | 0.0 | 242.8 | 1 |
| 10 | 62 | 1587 | 946 | -25 | 0 | 15 | 593 | 40.6 | 215.4 | 67.9 | 0.0 | 256.0 | 1 |
| 11 | 62 | -2053 | 948 | 25 | 0 | -15 | 594 | 52.5 | 215.6 | 68.0 | 0.0 | 268.1 | 1 |
| 12 | 62 | 1645 | 679 | -6 | 0 | 4 | 426 | 42.1 | 138.7 | 48.7 | 0.0 | 180.7 | 1 |
| 13 | 62 | -583 | 2251 | -0 | 0 | 0 | 1400 | 14.9 | 432.0 | 161.4 | 0.0 | 465.8 | 3 |
| 14 | 62 | 176 | -598 | 0 | 0 | -0 | -364 | 4.5 | 112.2 | 42.9 | 0.0 | 122.2 | 3 |
| 15 | 62 | -608 | 2347 | -0 | 0 | 0 | 1459 | 15.6 | 450.3 | 168.2 | 0.0 | 485.6 | 3 |
| 1 | 71 | -701 | 2688 | -0 | 0 | 0 | 1910 | 17.9 | 589.3 | 192.7 | 0.0 | 616.7 | 3 |
| 5 | 71 | -697 | 677 | -28 | 0 | 20 | 486 | 17.8 | 191.2 | 48.6 | 0.0 | 209.0 | 1 |
| 6 | 71 | 393 | 677 | -37 | 0 | 26 | 486 | 10.0 | 204.7 | 48.5 | 0.0 | 214.8 | 1 |
| 7 | 71 | -725 | 678 | 37 | 0 | -26 | 487 | 18.5 | 204.7 | 48.6 | 0.0 | 223.3 | 1 |
| 8 | 71 | 364 | 677 | 27 | 0 | -19 | 486 | 9.3 | 191.0 | 48.5 | 0.0 | 200.3 | 1 |
| 9 | 71 | -2044 | 945 | 6 | 0 | -4 | 678 | 52.3 | 217.3 | 67.7 | 0.0 | 269.6 | 1 |
| 10 | 71 | 1587 | 943 | -25 | 0 | 18 | 677 | 40.6 | 245.8 | 67.6 | 0.0 | 286.4 | 1 |
| 11 | 71 | -2053 | 945 | 25 | 0 | -17 | 678 | 52.5 | 246.0 | 67.7 | 0.0 | 298.5 | 1 |
| 12 | 71 | 1645 | 676 | -6 | 0 | 4 | 486 | 42.1 | 158.2 | 48.5 | 0.0 | 200.3 | 1 |
| 13 | 71 | -583 | 2247 | -0 | 0 | 0 | 1598 | 14.9 | 493.3 | 161.1 | 0.0 | 516.0 | 3 |
| 14 | 71 | 176 | -601 | 0 | 0 | -0 | -417 | 4.5 | 128.6 | 43.1 | 0.0 | 135.7 | 3 |
| 15 | 71 | -608 | 2343 | -0 | 0 | 0 | 1666 | 15.6 | 514.3 | 168.0 | 0.0 | 538.0 | 3 |
| 1 | 80 | -701 | 2685 | -0 | 0 | 0 | 2147 | 17.9 | 662.6 | 192.5 | 0.0 | 680.5 | 1 |
| 5 | 80 | -697 | 675 | -28 | 0 | 22 | 546 | 17.8 | 214.8 | 48.4 | 0.0 | 232.6 | 1 |
| 6 | 80 | 393 | 674 | -37 | 0 | 29 | 546 | 10.0 | 230.0 | 48.3 | 0.0 | 240.0 | 1 |
| 7 | 80 | -725 | 675 | 37 | 0 | -29 | 546 | 18.5 | 230.0 | 48.4 | 0.0 | 248.5 | 1 |
| 8 | 80 | 364 | 674 | 27 | 0 | -22 | 546 | 9.3 | 214.5 | 48.3 | 0.0 | 223.8 | 1 |
| 9 | 80 | -2044 | 941 | 6 | 0 | -4 | 761 | 52.3 | 244.0 | 67.5 | 0.0 | 296.3 | 1 |
| 10 | 80 | 1587 | 939 | -25 | 0 | 20 | 760 | 40.6 | 276.1 | 67.4 | 0.0 | 316.6 | 1 |
| 11 | 80 | -2053 | 941 | 25 | 0 | -20 | 761 | 52.5 | 276.3 | 67.5 | 0.0 | 328.8 | 1 |
| 12 | 80 | 1645 | 673 | -6 | 0 | 5 | 545 | 42.1 | 177.6 | 48.3 | 0.0 | 219.7 | 1 |
| 13 | 80 | -583 | 2244 | -0 | 0 | 0 | 1797 | 14.9 | 554.5 | 160.8 | 0.0 | 569.4 | 1 |
| 14 | 80 | 176 | -603 | 0 | 0 | -0 | -470 | 4.5 | 145.0 | 43.3 | 0.0 | 149.6 | 3 |
| 15 | 80 | -608 | 2340 | -0 | 0 | 0 | 1873 | 15.6 | 578.2 | 167.7 | 0.0 | 593.7 | 1 |
| 1 | 88 | -701 | 2681 | -0 | 0 | 0 | 2384 | 17.9 | 735.7 | 192.2 | 0.0 | 753.6 | 1 |
| 5 | 88 | -697 | 672 | -28 | 0 | 24 | 606 | 17.8 | 238.3 | 48.2 | 0.0 | 256.1 | 1 |
| 6 | 88 | 393 | 671 | -37 | 0 | 32 | 605 | 10.0 | 255.2 | 48.1 | 0.0 | 265.2 | 1 |
| 7 | 88 | -725 | 672 | 37 | 0 | -32 | 606 | 18.5 | 255.2 | 48.2 | 0.0 | 273.7 | 1 |
| 8 | 88 | 364 | 672 | 27 | 0 | -24 | 605 | 9.3 | 238.0 | 48.1 | 0.0 | 247.3 | 1 |
| 9 | 88 | -2044 | 938 | 6 | 0 | -5 | 844 | 52.3 | 270.7 | 67.2 | 0.0 | 322.9 | 1 |
| 10 | 88 | 1587 | 936 | -25 | 0 | 22 | 843 | 40.6 | 306.3 | 67.1 | 0.0 | 346.8 | 1 |
| 11 | 88 | -2053 | 938 | 25 | 0 | -22 | 844 | 52.5 | 306.5 | 67.2 | 0.0 | 359.0 | 1 |
| 12 | 88 | 1645 | 671 | -6 | 0 | 5 | 605 | 42.1 | 197.0 | 48.1 | 0.0 | 239.1 | 1 |
| 13 | 88 | -583 | 2240 | -0 | 0 | 0 | 1995 | 14.9 | 615.7 | 160.6 | 0.0 | 630.6 | 1 |
| 14 | 88 | 176 | -606 | 0 | 0 | -0 | -524 | 4.5 | 161.4 | 43.4 | 0.0 | 165.9 | 1 |
| 15 | 88 | -608 | 2336 | -0 | 0 | 0 | 2080 | 15.6 | 641.9 | 167.5 | 0.0 | 657.5 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|------|--------|------|--------|---------|------|----------|------|
|----|------|--------|------|--------|---------|------|----------|------|

| | | cm | daN*m | daN/cm ² | cm | | | |
|----|---------|----|-------|---------------------|----|------|-----------|--|
| 1 | -- | 88 | 2384 | 735.0 | -- | -- | -- | |
| -- | Rara | 31 | 1 | -- | 38 | 0.00 | 1 / 99999 | |
| -- | Freq. | 31 | 1 | -- | 38 | 0.00 | 1 / 99999 | |
| -- | Q.Perm. | 31 | 1 | -- | 38 | 0.00 | 1 / 99999 | |
| -- | Rara | 31 | 1 | -- | 38 | 0.00 | 1 / 99999 | |
| -- | Rara | 31 | 1 | -- | 38 | 0.00 | 1 / 99999 | |
| -- | Freq. | 31 | 1 | -- | 38 | 0.00 | 1 / 99999 | |
| -- | Freq. | 31 | 1 | -- | 38 | 0.00 | 1 / 99999 | |

ASTA NUM. 26 NI 100 NF 101 Lungh. 125.0 cm SEZ. 1 Ps IPE 240

categoria: p.p. y qy tot.

qy medio: 0.3069 0.3069 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf(Fx) | Sf(M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|------|-----|-------|-----|------|---------------------|-------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm ² | | | | | | |
| 1 | 0 | -701 | 1751 | -2 | 0 | 0 | 2384 | 17.9 | 735.3 | 125.5 | 0.0 | 753.2 | 1 | |
| 5 | 0 | -644 | 429 | 94 | 0 | 34 | 606 | 16.5 | 258.8 | 30.8 | 0.0 | 275.3 | 1 | |
| 6 | 0 | 338 | 428 | 87 | 0 | 27 | 605 | 8.6 | 244.2 | 30.7 | 0.0 | 252.9 | 1 | |
| 7 | 0 | -670 | 429 | -88 | 0 | -27 | 606 | 17.1 | 244.4 | 30.8 | 0.0 | 261.5 | 1 | |
| 8 | 0 | 311 | 429 | -95 | 0 | -34 | 605 | 8.0 | 258.7 | 30.7 | 0.0 | 266.7 | 1 | |
| 9 | 0 | -1865 | 600 | 39 | 0 | 21 | 844 | 47.7 | 303.9 | 43.0 | 0.0 | 351.6 | 1 | |
| 10 | 0 | 1407 | 599 | 15 | 0 | -2 | 843 | 36.0 | 264.4 | 42.9 | 0.0 | 300.4 | 1 | |
| 11 | 0 | -1873 | 601 | -16 | 0 | 2 | 844 | 47.9 | 265.1 | 43.1 | 0.0 | 313.0 | 1 | |
| 12 | 0 | 1466 | 428 | -40 | 0 | -21 | 605 | 37.5 | 230.0 | 30.7 | 0.0 | 267.4 | 1 | |
| 13 | 0 | -583 | 1460 | -1 | 0 | 0 | 1995 | 14.9 | 615.3 | 104.7 | 0.0 | 630.2 | 1 | |
| 14 | 0 | 176 | -415 | 0 | 0 | -0 | -523 | 4.5 | 161.4 | 29.8 | 0.0 | 165.9 | 1 | |
| 15 | 0 | -608 | 1523 | -1 | 0 | 0 | 2079 | 15.6 | 641.2 | 109.2 | 0.0 | 656.8 | 1 | |
| 1 | 13 | -701 | 1746 | -2 | 0 | 0 | 2603 | 17.9 | 803.1 | 125.2 | 0.0 | 821.0 | 1 | |
| 5 | 13 | -644 | 425 | 94 | 0 | 22 | 659 | 16.5 | 250.4 | 30.5 | 0.0 | 266.9 | 1 | |
| 6 | 13 | 338 | 425 | 87 | 0 | 16 | 658 | 8.6 | 237.7 | 30.4 | 0.0 | 246.3 | 1 | |
| 7 | 13 | -670 | 425 | -88 | 0 | -16 | 659 | 17.1 | 237.7 | 30.5 | 0.0 | 254.9 | 1 | |
| 8 | 13 | 311 | 425 | -95 | 0 | -22 | 659 | 8.0 | 250.1 | 30.5 | 0.0 | 258.1 | 1 | |
| 9 | 13 | -1865 | 595 | 39 | 0 | 16 | 919 | 47.7 | 316.6 | 42.7 | 0.0 | 364.3 | 1 | |
| 10 | 13 | 1407 | 594 | 15 | 0 | -4 | 917 | 36.0 | 291.4 | 42.6 | 0.0 | 327.4 | 1 | |
| 11 | 13 | -1873 | 596 | -16 | 0 | 4 | 919 | 47.9 | 292.3 | 42.7 | 0.0 | 340.2 | 1 | |
| 12 | 13 | 1466 | 424 | -40 | 0 | -16 | 658 | 37.5 | 235.9 | 30.4 | 0.0 | 273.4 | 1 | |
| 13 | 13 | -583 | 1455 | -1 | 0 | 0 | 2177 | 14.9 | 671.8 | 104.3 | 0.0 | 686.7 | 1 | |
| 14 | 13 | 176 | -419 | 0 | 0 | -0 | -576 | 4.5 | 177.5 | 30.0 | 0.0 | 182.0 | 1 | |
| 15 | 13 | -608 | 1518 | -1 | 0 | 0 | 2269 | 15.6 | 700.2 | 108.8 | 0.0 | 715.7 | 1 | |
| 1 | 25 | -701 | 1741 | -2 | 0 | 0 | 2821 | 17.9 | 870.7 | 124.8 | 0.0 | 888.6 | 1 | |
| 5 | 25 | -644 | 421 | 94 | 0 | 11 | 712 | 16.5 | 241.8 | 30.2 | 0.0 | 258.3 | 1 | |
| 6 | 25 | 338 | 421 | 87 | 0 | 6 | 711 | 8.6 | 231.0 | 30.2 | 0.0 | 239.6 | 1 | |
| 7 | 25 | -670 | 422 | -88 | 0 | -5 | 712 | 17.1 | 231.0 | 30.2 | 0.0 | 248.1 | 1 | |
| 8 | 25 | 311 | 421 | -95 | 0 | -10 | 712 | 8.0 | 241.4 | 30.2 | 0.0 | 249.4 | 1 | |
| 9 | 25 | -1865 | 590 | 39 | 0 | 11 | 993 | 47.7 | 329.2 | 42.3 | 0.0 | 376.9 | 1 | |
| 10 | 25 | 1407 | 589 | 15 | 0 | -6 | 991 | 36.0 | 318.2 | 42.2 | 0.0 | 354.2 | 1 | |
| 11 | 25 | -1873 | 591 | -16 | 0 | 6 | 993 | 47.9 | 319.3 | 42.3 | 0.0 | 367.2 | 1 | |
| 12 | 25 | 1466 | 420 | -40 | 0 | -11 | 711 | 37.5 | 241.7 | 30.1 | 0.0 | 279.2 | 1 | |
| 13 | 25 | -583 | 1450 | -1 | 0 | 0 | 2359 | 14.9 | 728.2 | 104.0 | 0.0 | 743.1 | 1 | |
| 14 | 25 | 176 | -423 | 0 | 0 | -0 | -628 | 4.5 | 193.7 | 30.3 | 0.0 | 198.2 | 1 | |
| 15 | 25 | -608 | 1513 | -1 | 0 | 0 | 2459 | 15.6 | 759.0 | 108.5 | 0.0 | 774.5 | 1 | |
| 1 | 38 | -701 | 1736 | -2 | 0 | 1 | 3038 | 17.9 | 938.1 | 124.5 | 0.0 | 956.0 | 1 | |
| 5 | 38 | -644 | 417 | 94 | 0 | -1 | 764 | 16.5 | 238.2 | 29.9 | 0.0 | 254.7 | 1 | |
| 6 | 38 | 338 | 417 | 87 | 0 | -5 | 764 | 8.6 | 246.8 | 29.9 | 0.0 | 255.4 | 1 | |
| 7 | 38 | -670 | 418 | -88 | 0 | 6 | 765 | 17.1 | 247.6 | 30.0 | 0.0 | 264.8 | 1 | |
| 8 | 38 | 311 | 417 | -95 | 0 | 1 | 764 | 8.0 | 238.6 | 29.9 | 0.0 | 246.5 | 1 | |
| 9 | 38 | -1865 | 585 | 39 | 0 | 6 | 1067 | 47.7 | 341.5 | 42.0 | 0.0 | 389.2 | 1 | |
| 10 | 38 | 1407 | 584 | 15 | 0 | -8 | 1064 | 36.0 | 344.8 | 41.8 | 0.0 | 380.8 | 1 | |
| 11 | 38 | -1873 | 586 | -16 | 0 | 8 | 1067 | 47.9 | 346.2 | 42.0 | 0.0 | 394.1 | 1 | |
| 12 | 38 | 1466 | 416 | -40 | 0 | -6 | 763 | 37.5 | 247.3 | 29.9 | 0.0 | 284.8 | 1 | |
| 13 | 38 | -583 | 1445 | -1 | 0 | 1 | 2540 | 14.9 | 784.3 | 103.6 | 0.0 | 799.2 | 1 | |
| 14 | 38 | 176 | -427 | 0 | 0 | -0 | -681 | 4.5 | 210.1 | 30.6 | 0.0 | 214.6 | 1 | |
| 15 | 38 | -608 | 1508 | -1 | 0 | 1 | 2647 | 15.6 | 817.5 | 108.1 | 0.0 | 833.1 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-------|------|-----|---|-----|-------|------|--------|-------|-----|--------|---|
| 1 | 50 | -701 | 1731 | -2 | 0 | 1 | 3255 | 17.9 | 1005.3 | 124.1 | 0.0 | 1023.3 | 1 |
| 5 | 50 | -644 | 414 | 94 | 0 | -13 | 816 | 16.5 | 279.1 | 29.7 | 0.0 | 295.6 | 1 |
| 6 | 50 | 338 | 413 | 87 | 0 | -16 | 816 | 8.6 | 285.8 | 29.6 | 0.0 | 294.4 | 1 |
| 7 | 50 | -670 | 414 | -88 | 0 | 17 | 817 | 17.1 | 286.8 | 29.7 | 0.0 | 304.0 | 1 |
| 8 | 50 | 311 | 413 | -95 | 0 | 13 | 816 | 8.0 | 279.6 | 29.6 | 0.0 | 287.5 | 1 |
| 9 | 50 | -1865 | 580 | 39 | 0 | 1 | 1140 | 47.7 | 353.6 | 41.6 | 0.0 | 401.3 | 1 |
| 10 | 50 | 1407 | 579 | 15 | 0 | -10 | 1137 | 36.0 | 371.2 | 41.5 | 0.0 | 407.2 | 1 |
| 11 | 50 | -1873 | 581 | -16 | 0 | 10 | 1140 | 47.9 | 372.8 | 41.6 | 0.0 | 420.7 | 1 |
| 12 | 50 | 1466 | 413 | -40 | 0 | -1 | 815 | 37.5 | 252.8 | 29.6 | 0.0 | 290.3 | 1 |
| 13 | 50 | -583 | 1440 | -1 | 0 | 1 | 2720 | 14.9 | 840.2 | 103.2 | 0.0 | 855.1 | 1 |
| 14 | 50 | 176 | -430 | 0 | 0 | -0 | -735 | 4.5 | 226.7 | 30.9 | 0.0 | 231.1 | 1 |
| 15 | 50 | -608 | 1503 | -1 | 0 | 1 | 2836 | 15.6 | 875.9 | 107.8 | 0.0 | 891.5 | 1 |
| | | | | | | | | | | | | | |
| 1 | 63 | -701 | 1726 | -2 | 0 | 1 | 3471 | 17.9 | 1072.4 | 123.7 | 0.0 | 1090.3 | 1 |
| 5 | 63 | -644 | 410 | 94 | 0 | -25 | 868 | 16.5 | 319.9 | 29.4 | 0.0 | 336.3 | 1 |
| 6 | 63 | 338 | 409 | 87 | 0 | -27 | 867 | 8.6 | 324.6 | 29.3 | 0.0 | 333.3 | 1 |
| 7 | 63 | -670 | 410 | -88 | 0 | 27 | 868 | 17.1 | 325.8 | 29.4 | 0.0 | 343.0 | 1 |
| 8 | 63 | 311 | 410 | -95 | 0 | 25 | 867 | 8.0 | 320.5 | 29.4 | 0.0 | 328.4 | 1 |
| 9 | 63 | -1865 | 576 | 39 | 0 | -4 | 1212 | 47.7 | 381.7 | 41.3 | 0.0 | 429.4 | 1 |
| 10 | 63 | 1407 | 574 | 15 | 0 | -12 | 1209 | 36.0 | 397.4 | 41.1 | 0.0 | 433.4 | 1 |
| 11 | 63 | -1873 | 576 | -16 | 0 | 12 | 1212 | 47.9 | 399.3 | 41.3 | 0.0 | 447.2 | 1 |
| 12 | 63 | 1466 | 409 | -40 | 0 | 4 | 866 | 37.5 | 275.8 | 29.3 | 0.0 | 313.2 | 1 |
| 13 | 63 | -583 | 1435 | -1 | 0 | 1 | 2900 | 14.9 | 896.0 | 102.9 | 0.0 | 910.9 | 1 |
| 14 | 63 | 176 | -434 | 0 | 0 | -0 | -789 | 4.5 | 243.3 | 31.1 | 0.0 | 247.8 | 1 |
| 15 | 63 | -608 | 1499 | -1 | 0 | 1 | 3023 | 15.6 | 934.1 | 107.4 | 0.0 | 949.7 | 1 |
| | | | | | | | | | | | | | |
| 1 | 75 | -701 | 1721 | -2 | 0 | 1 | 3686 | 17.9 | 1139.2 | 123.4 | 0.0 | 1157.1 | 1 |
| 5 | 75 | -644 | 406 | 94 | 0 | -37 | 919 | 16.5 | 360.5 | 29.1 | 0.0 | 377.0 | 1 |
| 6 | 75 | 338 | 405 | 87 | 0 | -38 | 918 | 8.6 | 363.3 | 29.1 | 0.0 | 372.0 | 1 |
| 7 | 75 | -670 | 406 | -88 | 0 | 38 | 920 | 17.1 | 364.7 | 29.1 | 0.0 | 381.8 | 1 |
| 8 | 75 | 311 | 406 | -95 | 0 | 37 | 918 | 8.0 | 361.2 | 29.1 | 0.0 | 369.2 | 1 |
| 9 | 75 | -1865 | 571 | 39 | 0 | -9 | 1284 | 47.7 | 414.2 | 40.9 | 0.0 | 461.8 | 1 |
| 10 | 75 | 1407 | 569 | 15 | 0 | -14 | 1280 | 36.0 | 423.4 | 40.8 | 0.0 | 459.4 | 1 |
| 11 | 75 | -1873 | 571 | -16 | 0 | 14 | 1284 | 47.9 | 425.5 | 40.9 | 0.0 | 473.4 | 1 |
| 12 | 75 | 1466 | 405 | -40 | 0 | 9 | 917 | 37.5 | 301.9 | 29.0 | 0.0 | 339.4 | 1 |
| 13 | 75 | -583 | 1430 | -1 | 0 | 1 | 3079 | 14.9 | 951.5 | 102.5 | 0.0 | 966.4 | 1 |
| 14 | 75 | 176 | -438 | 0 | 0 | -0 | -843 | 4.5 | 260.2 | 31.4 | 0.0 | 264.7 | 1 |
| 15 | 75 | -608 | 1494 | -1 | 0 | 1 | 3210 | 15.6 | 992.1 | 107.1 | 0.0 | 1007.7 | 1 |
| | | | | | | | | | | | | | |
| 1 | 88 | -701 | 1716 | -2 | 0 | 1 | 3901 | 17.9 | 1205.9 | 123.0 | 0.0 | 1223.8 | 1 |
| 5 | 88 | -644 | 402 | 94 | 0 | -48 | 969 | 16.5 | 401.0 | 28.8 | 0.0 | 417.5 | 1 |
| 6 | 88 | 338 | 402 | 87 | 0 | -49 | 968 | 8.6 | 401.9 | 28.8 | 0.0 | 410.5 | 1 |
| 7 | 88 | -670 | 402 | -88 | 0 | 49 | 970 | 17.1 | 403.4 | 28.9 | 0.0 | 420.6 | 1 |
| 8 | 88 | 311 | 402 | -95 | 0 | 49 | 969 | 8.0 | 401.8 | 28.8 | 0.0 | 409.7 | 1 |
| 9 | 88 | -1865 | 566 | 39 | 0 | -14 | 1355 | 47.7 | 446.4 | 40.5 | 0.0 | 494.1 | 1 |
| 10 | 88 | 1407 | 564 | 15 | 0 | -15 | 1351 | 36.0 | 449.2 | 40.4 | 0.0 | 485.2 | 1 |
| 11 | 88 | -1873 | 566 | -16 | 0 | 16 | 1355 | 47.9 | 451.6 | 40.6 | 0.0 | 499.5 | 1 |
| 12 | 88 | 1466 | 401 | -40 | 0 | 14 | 967 | 37.5 | 327.9 | 28.8 | 0.0 | 365.4 | 1 |
| 13 | 88 | -583 | 1425 | -1 | 0 | 1 | 3257 | 14.9 | 1006.9 | 102.2 | 0.0 | 1021.8 | 1 |
| 14 | 88 | 176 | -442 | 0 | 0 | -0 | -898 | 4.5 | 277.1 | 31.7 | 0.0 | 281.6 | 1 |
| 15 | 88 | -608 | 1489 | -1 | 0 | 1 | 3397 | 15.6 | 1050.0 | 106.7 | 0.0 | 1065.5 | 1 |
| | | | | | | | | | | | | | |
| 1 | 100 | -701 | 1711 | -2 | 0 | 2 | 4115 | 17.9 | 1272.3 | 122.7 | 0.0 | 1290.2 | 1 |
| 5 | 100 | -644 | 398 | 94 | 0 | -60 | 1019 | 16.5 | 441.3 | 28.6 | 0.0 | 457.8 | 1 |
| 6 | 100 | 338 | 398 | 87 | 0 | -60 | 1018 | 8.6 | 440.3 | 28.5 | 0.0 | 448.9 | 1 |
| 7 | 100 | -670 | 399 | -88 | 0 | 60 | 1020 | 17.1 | 442.0 | 28.6 | 0.0 | 459.2 | 1 |
| 8 | 100 | 311 | 398 | -95 | 0 | 61 | 1019 | 8.0 | 442.2 | 28.5 | 0.0 | 450.2 | 1 |
| 9 | 100 | -1865 | 561 | 39 | 0 | -18 | 1425 | 47.7 | 478.4 | 40.2 | 0.0 | 526.1 | 1 |
| 10 | 100 | 1407 | 559 | 15 | 0 | -17 | 1421 | 36.0 | 474.9 | 40.1 | 0.0 | 510.9 | 1 |
| 11 | 100 | -1873 | 561 | -16 | 0 | 18 | 1425 | 47.9 | 477.5 | 40.2 | 0.0 | 525.4 | 1 |
| 12 | 100 | 1466 | 397 | -40 | 0 | 19 | 1017 | 37.5 | 353.7 | 28.5 | 0.0 | 391.2 | 1 |
| 13 | 100 | -583 | 1420 | -1 | 0 | 1 | 3435 | 14.9 | 1062.1 | 101.8 | 0.0 | 1077.0 | 1 |
| 14 | 100 | 176 | -446 | 0 | 0 | -0 | -954 | 4.5 | 294.3 | 32.0 | 0.0 | 298.7 | 1 |
| 15 | 100 | -608 | 1484 | -1 | 0 | 1 | 3582 | 15.6 | 1107.6 | 106.4 | 0.0 | 1123.1 | 1 |
| | | | | | | | | | | | | | |
| 1 | 113 | -701 | 1706 | -2 | 0 | 2 | 4329 | 17.9 | 1338.6 | 122.3 | 0.0 | 1356.5 | 1 |
| 5 | 113 | -644 | 394 | 94 | 0 | -72 | 1069 | 16.5 | 481.5 | 28.3 | 0.0 | 498.0 | 1 |
| 6 | 113 | 338 | 394 | 87 | 0 | -71 | 1068 | 8.6 | 478.6 | 28.2 | 0.0 | 487.2 | 1 |
| 7 | 113 | -670 | 395 | -88 | 0 | 71 | 1070 | 17.1 | 480.4 | 28.3 | 0.0 | 497.6 | 1 |
| 8 | 113 | 311 | 394 | -95 | 0 | 73 | 1068 | 8.0 | 482.5 | 28.3 | 0.0 | 490.5 | 1 |
| 9 | 113 | -1865 | 556 | 39 | 0 | -23 | 1495 | 47.7 | 510.3 | 39.8 | 0.0 | 558.0 | 1 |
| 10 | 113 | 1407 | 554 | 15 | 0 | -19 | 1491 | 36.0 | 500.3 | 39.7 | 0.0 | 536.3 | 1 |
| 11 | 113 | -1873 | 556 | -16 | 0 | 20 | 1495 | 47.9 | 503.2 | 39.8 | 0.0 | 551.1 | 1 |
| 12 | 113 | 1466 | 393 | -40 | 0 | 24 | 1066 | 37.5 | 379.4 | 28.2 | 0.0 | 416.9 | 1 |
| 13 | 113 | -583 | 1415 | -1 | 0 | 2 | 3612 | 14.9 | 1117.1 | 101.4 | 0.0 | 1132.0 | 1 |
| 14 | 113 | 176 | -450 | 0 | 0 | -0 | -1010 | 4.5 | 311.5 | 32.2 | 0.0 | 316.0 | 1 |
| 15 | 113 | -608 | 1479 | -1 | 0 | 2 | 3768 | 15.6 | 1165.0 | 106.0 | 0.0 | 1180.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 125 | -701 | 1701 | -2 | 0 | 2 | 4542 | 17.9 | 1404.6 | 122.0 | 0.0 | 1422.6 | 1 |
| 5 | 125 | -644 | 391 | 94 | 0 | -84 | 1118 | 16.5 | 521.5 | 28.0 | 0.0 | 538.0 | 1 |
| 6 | 125 | 338 | 390 | 87 | 0 | -82 | 1117 | 8.6 | 516.7 | 28.0 | 0.0 | 525.3 | 1 |
| 7 | 125 | -670 | 391 | -88 | 0 | 82 | 1119 | 17.1 | 518.7 | 28.0 | 0.0 | 535.9 | 1 |
| 8 | 125 | 311 | 390 | -95 | 0 | 84 | 1117 | 8.0 | 522.6 | 28.0 | 0.0 | 530.6 | 1 |
| 9 | 125 | -1865 | 551 | 39 | 0 | -28 | 1564 | 47.7 | 542.0 | 39.5 | 0.0 | 589.7 | 1 |
| 10 | 125 | 1407 | 549 | 15 | 0 | -21 | 1560 | 36.0 | 525.6 | 39.3 | 0.0 | 561.5 | 1 |
| 11 | 125 | -1873 | 551 | -16 | 0 | 22 | 1564 | 47.9 | 528.7 | 39.5 | 0.0 | 576.6 | 1 |
| 12 | 125 | 1466 | 390 | -40 | 0 | 29 | 1115 | 37.5 | 404.9 | 27.9 | 0.0 | 442.4 | 1 |
| 13 | 125 | -583 | 1410 | -1 | 0 | 2 | 3789 | 14.9 | 1171.9 | 101.1 | 0.0 | 1186.8 | 1 |
| 14 | 125 | 176 | -453 | 0 | 0 | -0 | -1066 | 4.5 | 328.9 | 32.5 | 0.0 | 333.4 | 1 |

15 125 -608 1474 -1 0 2 3952 15.6 1222.2 105.7 0.0 1237.8 1

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax cm | Mmax daN*m | Sf (M) daN/cm | x fmax. cm | fmax | fmax / l | Nota |
|----|---------|--------------|---------------|------------------|---------------|------|-----------|------|
| 1 | -- | 125 | 4542 | 1400.4 | -- | -- | -- | |
| -- | Rara | 62 | 2 | -- | 62 | 0.00 | 1 / 99999 | |
| -- | Freq. | 62 | 2 | -- | 62 | 0.00 | 1 / 99999 | |
| -- | Q.Perm. | 62 | 2 | -- | 62 | 0.00 | 1 / 99999 | |
| -- | Rara | 62 | 2 | -- | 62 | 0.00 | 1 / 99999 | |
| -- | Rara | 62 | 2 | -- | 62 | 0.00 | 1 / 99999 | |
| -- | Freq. | 62 | 2 | -- | 62 | 0.00 | 1 / 99999 | |
| -- | Freq. | 62 | 2 | -- | 62 | 0.00 | 1 / 99999 | |

ASTA NUM. 27 NI 101 NF 102 Lungh. 116.0 cm SEZ. 1 Ps IPE 240

categoria: p.p. y qy tot.

qy medio: 0.3069 0.3069 daN/cm

| NC | x cm | Fx daN | Fy daN | Fz daN | Mx daN*m | My daN*m | Mz daN*m | Sf (Fx) daN/cm | Sf (M) daN/cm | taglio | tors. | Sf.id. | Loc. | Nota |
|----|---------|-----------|-----------|-----------|-------------|-------------|-------------|-------------------|------------------|--------|-------|--------|------|------|
| 1 | 0 | -701 | -246 | -1 | 0 | 2 | 4542 | 17.9 | 1404.6 | 17.6 | 0.0 | 1422.6 | 1 | |
| 5 | 0 | -541 | -65 | -55 | 0 | -84 | 1118 | 13.8 | 521.5 | 4.6 | 0.0 | 535.4 | 1 | |
| 6 | 0 | 235 | -65 | -54 | 0 | -82 | 1117 | 6.0 | 516.7 | 4.7 | 0.0 | 522.7 | 1 | |
| 7 | 0 | -568 | -64 | 52 | 0 | 82 | 1119 | 14.5 | 518.7 | 4.6 | 0.0 | 533.2 | 1 | |
| 8 | 0 | 208 | -65 | 54 | 0 | 84 | 1117 | 5.3 | 522.6 | 4.6 | 0.0 | 528.0 | 1 | |
| 9 | 0 | -1522 | -89 | -19 | 0 | -28 | 1564 | 38.9 | 542.0 | 6.4 | 0.0 | 580.9 | 1 | |
| 10 | 0 | 1064 | -91 | -14 | 0 | -21 | 1560 | 27.2 | 525.6 | 6.5 | 0.0 | 552.8 | 1 | |
| 11 | 0 | -1530 | -89 | 13 | 0 | 22 | 1564 | 39.1 | 528.7 | 6.4 | 0.0 | 567.8 | 1 | |
| 12 | 0 | 1122 | -66 | 18 | 0 | 29 | 1115 | 28.7 | 404.9 | 4.7 | 0.0 | 433.6 | 1 | |
| 13 | 0 | -583 | -207 | -1 | 0 | 2 | 3789 | 14.9 | 1171.9 | 14.8 | 0.0 | 1186.8 | 1 | |
| 14 | 0 | 176 | 50 | 0 | 0 | -0 | -1066 | 4.5 | 328.9 | 3.6 | 0.0 | 333.4 | 1 | |
| 15 | 0 | -608 | -215 | -1 | 0 | 2 | 3952 | 15.6 | 1222.2 | 15.4 | 0.0 | 1237.8 | 1 | |
| 1 | 12 | -701 | -251 | -1 | 0 | 2 | 4513 | 17.9 | 1396.1 | 18.0 | 0.0 | 1414.0 | 1 | |
| 5 | 12 | -541 | -68 | -55 | 0 | -77 | 1110 | 13.8 | 505.6 | 4.9 | 0.0 | 519.4 | 1 | |
| 6 | 12 | 235 | -69 | -54 | 0 | -75 | 1109 | 6.0 | 501.1 | 4.9 | 0.0 | 507.1 | 1 | |
| 7 | 12 | -568 | -68 | 52 | 0 | 76 | 1111 | 14.5 | 503.6 | 4.9 | 0.0 | 518.1 | 1 | |
| 8 | 12 | 208 | -68 | 54 | 0 | 78 | 1109 | 5.3 | 507.1 | 4.9 | 0.0 | 512.4 | 1 | |
| 9 | 12 | -1522 | -94 | -19 | 0 | -26 | 1553 | 38.9 | 534.0 | 6.7 | 0.0 | 572.9 | 1 | |
| 10 | 12 | 1064 | -96 | -14 | 0 | -19 | 1549 | 27.2 | 518.8 | 6.8 | 0.0 | 546.0 | 1 | |
| 11 | 12 | -1530 | -93 | 13 | 0 | 20 | 1553 | 39.1 | 522.3 | 6.7 | 0.0 | 561.4 | 1 | |
| 12 | 12 | 1122 | -69 | 18 | 0 | 27 | 1107 | 28.7 | 398.1 | 5.0 | 0.0 | 426.8 | 1 | |
| 13 | 12 | -583 | -211 | -1 | 0 | 2 | 3765 | 14.9 | 1164.7 | 15.1 | 0.0 | 1179.6 | 1 | |
| 14 | 12 | 176 | 46 | 0 | 0 | -0 | -1060 | 4.5 | 327.3 | 3.3 | 0.0 | 331.7 | 1 | |
| 15 | 12 | -608 | -220 | -1 | 0 | 2 | 3927 | 15.6 | 1214.8 | 15.8 | 0.0 | 1230.4 | 1 | |
| 1 | 23 | -701 | -255 | -1 | 0 | 2 | 4484 | 17.9 | 1387.4 | 18.3 | 0.0 | 1405.4 | 1 | |
| 5 | 23 | -541 | -72 | -55 | 0 | -71 | 1102 | 13.8 | 489.5 | 5.1 | 0.0 | 503.3 | 1 | |
| 6 | 23 | 235 | -72 | -54 | 0 | -69 | 1101 | 6.0 | 485.3 | 5.2 | 0.0 | 491.3 | 1 | |
| 7 | 23 | -568 | -71 | 52 | 0 | 70 | 1103 | 14.5 | 488.3 | 5.1 | 0.0 | 502.8 | 1 | |
| 8 | 23 | 208 | -72 | 54 | 0 | 72 | 1101 | 5.3 | 491.5 | 5.1 | 0.0 | 496.8 | 1 | |
| 9 | 23 | -1522 | -98 | -19 | 0 | -24 | 1542 | 38.9 | 525.9 | 7.0 | 0.0 | 564.8 | 1 | |
| 10 | 23 | 1064 | -100 | -14 | 0 | -18 | 1538 | 27.2 | 511.9 | 7.2 | 0.0 | 539.1 | 1 | |
| 11 | 23 | -1530 | -98 | 13 | 0 | 19 | 1542 | 39.1 | 515.7 | 7.0 | 0.0 | 554.8 | 1 | |
| 12 | 23 | 1122 | -73 | 18 | 0 | 25 | 1099 | 28.7 | 391.1 | 5.2 | 0.0 | 419.8 | 1 | |
| 13 | 23 | -583 | -216 | -1 | 0 | 2 | 3740 | 14.9 | 1157.3 | 15.5 | 0.0 | 1172.2 | 1 | |
| 14 | 23 | 176 | 42 | 0 | 0 | -0 | -1055 | 4.5 | 325.7 | 3.0 | 0.0 | 330.2 | 1 | |
| 15 | 23 | -608 | -224 | -1 | 0 | 2 | 3901 | 15.6 | 1207.2 | 16.1 | 0.0 | 1222.7 | 1 | |
| 1 | 35 | -701 | -260 | -1 | 0 | 3 | 4454 | 17.9 | 1378.6 | 18.6 | 0.0 | 1396.5 | 1 | |
| 5 | 35 | -541 | -75 | -55 | 0 | -64 | 1094 | 13.8 | 473.2 | 5.4 | 0.0 | 487.1 | 1 | |
| 6 | 35 | 235 | -76 | -54 | 0 | -63 | 1092 | 6.0 | 469.5 | 5.4 | 0.0 | 475.5 | 1 | |
| 7 | 35 | -568 | -75 | 52 | 0 | 64 | 1095 | 14.5 | 472.9 | 5.4 | 0.0 | 487.5 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-------|------|-----|---|-----|-------|------|--------|------|-----|--------|---|
| 8 | 35 | 208 | -75 | 54 | 0 | 66 | 1093 | 5.3 | 475.7 | 5.4 | 0.0 | 481.0 | 1 |
| 9 | 35 | -1522 | -103 | -19 | 0 | -22 | 1531 | 38.9 | 517.6 | 7.4 | 0.0 | 556.5 | 1 |
| 10 | 35 | 1064 | -105 | -14 | 0 | -16 | 1526 | 27.2 | 504.8 | 7.5 | 0.0 | 532.0 | 1 |
| 11 | 35 | -1530 | -103 | 13 | 0 | 18 | 1531 | 39.1 | 509.0 | 7.4 | 0.0 | 548.1 | 1 |
| 12 | 35 | 1122 | -76 | 18 | 0 | 23 | 1091 | 28.7 | 384.0 | 5.5 | 0.0 | 412.7 | 1 |
| 13 | 35 | -583 | -220 | -1 | 0 | 2 | 3715 | 14.9 | 1149.8 | 15.8 | 0.0 | 1164.7 | 1 |
| 14 | 35 | 176 | 39 | 0 | 0 | -0 | -1051 | 4.5 | 324.3 | 2.8 | 0.0 | 328.7 | 1 |
| 15 | 35 | -608 | -229 | -1 | 0 | 2 | 3875 | 15.6 | 1199.4 | 16.4 | 0.0 | 1215.0 | 1 |
| | | | | | | | | | | | | | |
| 1 | 46 | -701 | -265 | -1 | 0 | 3 | 4424 | 17.9 | 1369.6 | 19.0 | 0.0 | 1387.5 | 1 |
| 5 | 46 | -541 | -79 | -55 | 0 | -58 | 1085 | 13.8 | 456.9 | 5.6 | 0.0 | 470.7 | 1 |
| 6 | 46 | 235 | -79 | -54 | 0 | -57 | 1083 | 6.0 | 453.5 | 5.7 | 0.0 | 459.5 | 1 |
| 7 | 46 | -568 | -78 | 52 | 0 | 58 | 1086 | 14.5 | 457.4 | 5.6 | 0.0 | 471.9 | 1 |
| 8 | 46 | 208 | -79 | 54 | 0 | 59 | 1084 | 5.3 | 459.8 | 5.7 | 0.0 | 465.1 | 1 |
| 9 | 46 | -1522 | -108 | -19 | 0 | -19 | 1518 | 38.9 | 509.2 | 7.7 | 0.0 | 548.1 | 1 |
| 10 | 46 | 1064 | -109 | -14 | 0 | -15 | 1513 | 27.2 | 497.6 | 7.8 | 0.0 | 524.8 | 1 |
| 11 | 46 | -1530 | -107 | 13 | 0 | 16 | 1518 | 39.1 | 502.1 | 7.7 | 0.0 | 541.2 | 1 |
| 12 | 46 | 1122 | -80 | 18 | 0 | 20 | 1082 | 28.7 | 376.7 | 5.7 | 0.0 | 405.4 | 1 |
| 13 | 46 | -583 | -225 | -1 | 0 | 2 | 3689 | 14.9 | 1142.1 | 16.1 | 0.0 | 1157.0 | 1 |
| 14 | 46 | 176 | 35 | 0 | 0 | -0 | -1046 | 4.5 | 322.9 | 2.5 | 0.0 | 327.4 | 1 |
| 15 | 46 | -608 | -234 | -1 | 0 | 2 | 3848 | 15.6 | 1191.5 | 16.7 | 0.0 | 1207.0 | 1 |
| | | | | | | | | | | | | | |
| 1 | 58 | -701 | -269 | -1 | 0 | 3 | 4393 | 17.9 | 1360.4 | 19.3 | 0.0 | 1378.3 | 1 |
| 5 | 58 | -541 | -82 | -55 | 0 | -52 | 1075 | 13.8 | 440.4 | 5.9 | 0.0 | 454.2 | 1 |
| 6 | 58 | 235 | -83 | -54 | 0 | -50 | 1074 | 6.0 | 437.3 | 5.9 | 0.0 | 443.3 | 1 |
| 7 | 58 | -568 | -82 | 52 | 0 | 52 | 1077 | 14.5 | 441.8 | 5.9 | 0.0 | 456.3 | 1 |
| 8 | 58 | 208 | -83 | 54 | 0 | 53 | 1075 | 5.3 | 443.8 | 5.9 | 0.0 | 449.1 | 1 |
| 9 | 58 | -1522 | -112 | -19 | 0 | -17 | 1506 | 38.9 | 500.5 | 8.0 | 0.0 | 539.5 | 1 |
| 10 | 58 | 1064 | -114 | -14 | 0 | -13 | 1500 | 27.2 | 490.2 | 8.2 | 0.0 | 517.4 | 1 |
| 11 | 58 | -1530 | -112 | 13 | 0 | 15 | 1506 | 39.1 | 495.0 | 8.0 | 0.0 | 534.1 | 1 |
| 12 | 58 | 1122 | -83 | 18 | 0 | 18 | 1072 | 28.7 | 369.4 | 6.0 | 0.0 | 398.1 | 1 |
| 13 | 58 | -583 | -230 | -1 | 0 | 2 | 3662 | 14.9 | 1134.3 | 16.5 | 0.0 | 1149.2 | 1 |
| 14 | 58 | 176 | 32 | 0 | 0 | -0 | -1042 | 4.5 | 321.8 | 2.3 | 0.0 | 326.3 | 1 |
| 15 | 58 | -608 | -238 | -1 | 0 | 3 | 3821 | 15.6 | 1183.4 | 17.1 | 0.0 | 1198.9 | 1 |
| | | | | | | | | | | | | | |
| 1 | 70 | -701 | -274 | -1 | 0 | 3 | 4361 | 17.9 | 1351.1 | 19.6 | 0.0 | 1369.0 | 1 |
| 5 | 70 | -541 | -86 | -55 | 0 | -45 | 1065 | 13.8 | 423.8 | 6.2 | 0.0 | 437.6 | 1 |
| 6 | 70 | 235 | -86 | -54 | 0 | -44 | 1064 | 6.0 | 421.1 | 6.2 | 0.0 | 427.1 | 1 |
| 7 | 70 | -568 | -85 | 52 | 0 | 46 | 1067 | 14.5 | 426.0 | 6.1 | 0.0 | 440.5 | 1 |
| 8 | 70 | 208 | -86 | 54 | 0 | 47 | 1065 | 5.3 | 427.6 | 6.2 | 0.0 | 432.9 | 1 |
| 9 | 70 | -1522 | -117 | -19 | 0 | -15 | 1492 | 38.9 | 491.8 | 8.4 | 0.0 | 530.7 | 1 |
| 10 | 70 | 1064 | -119 | -14 | 0 | -11 | 1487 | 27.2 | 482.6 | 8.5 | 0.0 | 509.8 | 1 |
| 11 | 70 | -1530 | -117 | 13 | 0 | 13 | 1492 | 39.1 | 487.8 | 8.4 | 0.0 | 526.9 | 1 |
| 12 | 70 | 1122 | -87 | 18 | 0 | 16 | 1062 | 28.7 | 361.9 | 6.2 | 0.0 | 390.6 | 1 |
| 13 | 70 | -583 | -234 | -1 | 0 | 3 | 3635 | 14.9 | 1126.3 | 16.8 | 0.0 | 1141.2 | 1 |
| 14 | 70 | 176 | 28 | 0 | 0 | -0 | -1039 | 4.5 | 320.7 | 2.0 | 0.0 | 325.2 | 1 |
| 15 | 70 | -608 | -243 | -1 | 0 | 3 | 3793 | 15.6 | 1175.1 | 17.4 | 0.0 | 1190.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 81 | -701 | -278 | -1 | 0 | 3 | 4329 | 17.9 | 1341.6 | 20.0 | 0.0 | 1359.5 | 1 |
| 5 | 81 | -541 | -89 | -55 | 0 | -39 | 1055 | 13.8 | 407.0 | 6.4 | 0.0 | 420.9 | 1 |
| 6 | 81 | 235 | -90 | -54 | 0 | -38 | 1053 | 6.0 | 404.7 | 6.5 | 0.0 | 410.7 | 1 |
| 7 | 81 | -568 | -89 | 52 | 0 | 40 | 1057 | 14.5 | 410.1 | 6.4 | 0.0 | 424.6 | 1 |
| 8 | 81 | 208 | -90 | 54 | 0 | 41 | 1055 | 5.3 | 411.3 | 6.4 | 0.0 | 416.6 | 1 |
| 9 | 81 | -1522 | -121 | -19 | 0 | -13 | 1479 | 38.9 | 482.8 | 8.7 | 0.0 | 521.7 | 1 |
| 10 | 81 | 1064 | -123 | -14 | 0 | -10 | 1473 | 27.2 | 474.9 | 8.8 | 0.0 | 502.1 | 1 |
| 11 | 81 | -1530 | -121 | 13 | 0 | 12 | 1479 | 39.1 | 480.4 | 8.7 | 0.0 | 519.5 | 1 |
| 12 | 81 | 1122 | -91 | 18 | 0 | 14 | 1052 | 28.7 | 354.3 | 6.5 | 0.0 | 382.9 | 1 |
| 13 | 81 | -583 | -239 | -1 | 0 | 3 | 3608 | 14.9 | 1118.1 | 17.1 | 0.0 | 1133.0 | 1 |
| 14 | 81 | 176 | 25 | 0 | 0 | -0 | -1036 | 4.5 | 319.8 | 1.8 | 0.0 | 324.3 | 1 |
| 15 | 81 | -608 | -248 | -1 | 0 | 3 | 3764 | 15.6 | 1166.6 | 17.7 | 0.0 | 1182.2 | 1 |
| | | | | | | | | | | | | | |
| 1 | 93 | -701 | -283 | -1 | 0 | 3 | 4297 | 17.9 | 1331.9 | 20.3 | 0.0 | 1349.8 | 1 |
| 5 | 93 | -541 | -93 | -55 | 0 | -32 | 1045 | 13.8 | 390.2 | 6.7 | 0.0 | 404.0 | 1 |
| 6 | 93 | 235 | -94 | -54 | 0 | -32 | 1043 | 6.0 | 388.2 | 6.7 | 0.0 | 394.2 | 1 |
| 7 | 93 | -568 | -93 | 52 | 0 | 34 | 1046 | 14.5 | 394.1 | 6.6 | 0.0 | 408.6 | 1 |
| 8 | 93 | 208 | -93 | 54 | 0 | 35 | 1044 | 5.3 | 394.9 | 6.7 | 0.0 | 400.2 | 1 |
| 9 | 93 | -1522 | -126 | -19 | 0 | -11 | 1464 | 38.9 | 473.7 | 9.0 | 0.0 | 512.6 | 1 |
| 10 | 93 | 1064 | -128 | -14 | 0 | -8 | 1458 | 27.2 | 466.9 | 9.2 | 0.0 | 494.2 | 1 |
| 11 | 93 | -1530 | -126 | 13 | 0 | 10 | 1464 | 39.1 | 472.8 | 9.0 | 0.0 | 512.0 | 1 |
| 12 | 93 | 1122 | -94 | 18 | 0 | 12 | 1042 | 28.7 | 346.5 | 6.7 | 0.0 | 375.2 | 1 |
| 13 | 93 | -583 | -244 | -1 | 0 | 3 | 3580 | 14.9 | 1109.8 | 17.5 | 0.0 | 1124.7 | 1 |
| 14 | 93 | 176 | 21 | 0 | 0 | -0 | -1033 | 4.5 | 319.0 | 1.5 | 0.0 | 323.5 | 1 |
| 15 | 93 | -608 | -252 | -1 | 0 | 3 | 3735 | 15.6 | 1158.0 | 18.1 | 0.0 | 1173.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 104 | -701 | -288 | -1 | 0 | 4 | 4264 | 17.9 | 1322.1 | 20.6 | 0.0 | 1340.0 | 1 |
| 5 | 104 | -541 | -97 | -55 | 0 | -26 | 1033 | 13.8 | 373.2 | 6.9 | 0.0 | 387.0 | 1 |
| 6 | 104 | 235 | -97 | -54 | 0 | -25 | 1032 | 6.0 | 371.6 | 7.0 | 0.0 | 377.6 | 1 |
| 7 | 104 | -568 | -96 | 52 | 0 | 28 | 1035 | 14.5 | 378.0 | 6.9 | 0.0 | 392.5 | 1 |
| 8 | 104 | 208 | -97 | 54 | 0 | 28 | 1033 | 5.3 | 378.4 | 6.9 | 0.0 | 383.7 | 1 |
| 9 | 104 | -1522 | -131 | -19 | 0 | -8 | 1449 | 38.9 | 464.4 | 9.4 | 0.0 | 503.3 | 1 |
| 10 | 104 | 1064 | -133 | -14 | 0 | -7 | 1443 | 27.2 | 458.9 | 9.5 | 0.0 | 486.1 | 1 |
| 11 | 104 | -1530 | -130 | 13 | 0 | 9 | 1449 | 39.1 | 465.1 | 9.4 | 0.0 | 504.2 | 1 |
| 12 | 104 | 1122 | -98 | 18 | 0 | 10 | 1030 | 28.7 | 338.6 | 7.0 | 0.0 | 367.3 | 1 |
| 13 | 104 | -583 | -248 | -1 | 0 | 3 | 3551 | 14.9 | 1101.3 | 17.8 | 0.0 | 1116.2 | 1 |
| 14 | 104 | 176 | 18 | 0 | 0 | -0 | -1031 | 4.5 | 318.3 | 1.3 | 0.0 | 322.8 | 1 |
| 15 | 104 | -608 | -257 | -1 | 0 | 3 | 3706 | 15.6 | 1149.3 | 18.4 | 0.0 | 1164.8 | 1 |
| | | | | | | | | | | | | | |
| 1 | 116 | -701 | -292 | -1 | 0 | 4 | 4230 | 17.9 | 1312.0 | 21.0 | 0.0 | 1330.0 | 1 |
| 5 | 116 | -541 | -100 | -55 | 0 | -19 | 1022 | 13.8 | 356.1 | 7.2 | 0.0 | 369.9 | 1 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-------|------|-----|---|-----|-------|------|--------|------|-----|--------|---|
| 6 | 116 | 235 | -101 | -54 | 0 | -19 | 1020 | 6.0 | 354.8 | 7.2 | 0.0 | 360.8 | 1 |
| 7 | 116 | -568 | -100 | 52 | 0 | 22 | 1024 | 14.5 | 361.7 | 7.2 | 0.0 | 376.2 | 1 |
| 8 | 116 | 208 | -100 | 54 | 0 | 22 | 1022 | 5.3 | 361.7 | 7.2 | 0.0 | 367.0 | 1 |
| 9 | 116 | -1522 | -135 | -19 | 0 | -6 | 1434 | 38.9 | 455.0 | 9.7 | 0.0 | 493.9 | 1 |
| 10 | 116 | 1064 | -137 | -14 | 0 | -5 | 1427 | 27.2 | 450.6 | 9.8 | 0.0 | 477.8 | 1 |
| 11 | 116 | -1530 | -135 | 13 | 0 | 7 | 1434 | 39.1 | 457.2 | 9.7 | 0.0 | 496.4 | 1 |
| 12 | 116 | 1122 | -101 | 18 | 0 | 8 | 1019 | 28.7 | 330.6 | 7.3 | 0.0 | 359.3 | 1 |
| 13 | 116 | -583 | -253 | -1 | 0 | 3 | 3522 | 14.9 | 1092.6 | 18.1 | 0.0 | 1107.5 | 1 |
| 14 | 116 | 176 | 14 | 0 | 0 | -0 | -1029 | 4.5 | 317.8 | 1.0 | 0.0 | 322.3 | 1 |
| 15 | 116 | -608 | -261 | -1 | 0 | 3 | 3676 | 15.6 | 1140.3 | 18.7 | 0.0 | 1155.9 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|--------|-------|--------|---------|------|-----------|------|
| | | cm | daN*m | daN/cm | cm | | | |
| 1 | -- | 0 | 4542 | 1400.4 | -- | -- | -- | |
| -- | Rara | 59 | 2 | -- | 59 | 0.00 | 1 / 99999 | |
| -- | Freq. | 59 | 2 | -- | 59 | 0.00 | 1 / 99999 | |
| -- | Q.Perm. | 59 | 2 | -- | 59 | 0.00 | 1 / 99999 | |
| -- | Rara | 59 | 2 | -- | 59 | 0.00 | 1 / 99999 | |
| -- | Rara | 59 | 2 | -- | 59 | 0.00 | 1 / 99999 | |
| -- | Freq. | 59 | 2 | -- | 59 | 0.00 | 1 / 99999 | |
| -- | Freq. | 59 | 2 | -- | 59 | 0.00 | 1 / 99999 | |

ASTA NUM. 28 NI 102 NF 103 Lungh. 116.0 cm SEZ. 1 Ps IPE 240

categoria: p.p. y qy tot.

qy medio: 0.3069 0.3069 daN/cm

255

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|-------|-----|----|-------|-------|---------|--------|--------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | daN/cm | | | | |
| 1 | 0 | -701 | -2430 | 3 | 0 | 4 | 4231 | 17.9 | 1312.4 | 174.2 | 0.0 | 1330.3 | 1 | |
| 5 | 0 | -430 | -591 | -71 | 0 | -19 | 1023 | 11.0 | 356.4 | 42.4 | 0.0 | 367.4 | 1 | |
| 6 | 0 | 124 | -591 | -68 | 0 | -19 | 1021 | 3.2 | 355.1 | 42.4 | 0.0 | 358.3 | 1 | |
| 7 | 0 | -457 | -590 | 74 | 0 | 22 | 1024 | 11.7 | 361.7 | 42.3 | 0.0 | 373.4 | 1 | |
| 8 | 0 | 97 | -591 | 76 | 0 | 22 | 1022 | 2.5 | 361.7 | 42.4 | 0.0 | 364.2 | 1 | |
| 9 | 0 | -1153 | -826 | -26 | 0 | -6 | 1434 | 29.5 | 455.0 | 59.2 | 0.0 | 484.5 | 1 | |
| 10 | 0 | 694 | -828 | -17 | 0 | -5 | 1428 | 17.8 | 450.9 | 59.4 | 0.0 | 468.7 | 1 | |
| 11 | 0 | -1161 | -826 | 19 | 0 | 7 | 1434 | 29.7 | 457.2 | 59.2 | 0.0 | 486.9 | 1 | |
| 12 | 0 | 753 | -592 | 27 | 0 | 8 | 1019 | 19.3 | 330.6 | 42.4 | 0.0 | 349.9 | 1 | |
| 13 | 0 | -583 | -2025 | 2 | 0 | 3 | 3523 | 14.9 | 1092.9 | 145.2 | 0.0 | 1107.8 | 1 | |
| 14 | 0 | 176 | 583 | -0 | 0 | -0 | -1030 | 4.5 | 318.1 | 41.8 | 0.0 | 322.6 | 1 | |
| 15 | 0 | -608 | -2113 | 2 | 0 | 3 | 3677 | 15.6 | 1140.6 | 151.5 | 0.0 | 1156.2 | 1 | |
| 1 | 12 | -701 | -2435 | 3 | 0 | 3 | 3949 | 17.9 | 1224.7 | 174.5 | 0.0 | 1242.7 | 1 | |
| 5 | 12 | -430 | -594 | -71 | 0 | -11 | 954 | 11.0 | 317.8 | 42.6 | 0.0 | 328.8 | 1 | |
| 6 | 12 | 124 | -595 | -68 | 0 | -11 | 952 | 3.2 | 317.1 | 42.6 | 0.0 | 320.3 | 1 | |
| 7 | 12 | -457 | -594 | 74 | 0 | 13 | 955 | 11.7 | 322.4 | 42.6 | 0.0 | 334.1 | 1 | |
| 8 | 12 | 97 | -595 | 76 | 0 | 13 | 953 | 2.5 | 321.8 | 42.6 | 0.0 | 324.2 | 1 | |
| 9 | 12 | -1153 | -831 | -26 | 0 | -3 | 1338 | 29.5 | 419.1 | 59.6 | 0.0 | 448.6 | 1 | |
| 10 | 12 | 694 | -833 | -17 | 0 | -3 | 1332 | 17.8 | 417.2 | 59.7 | 0.0 | 434.9 | 1 | |
| 11 | 12 | -1161 | -831 | 19 | 0 | 5 | 1338 | 29.7 | 423.0 | 59.6 | 0.0 | 452.7 | 1 | |
| 12 | 12 | 753 | -595 | 27 | 0 | 5 | 950 | 19.3 | 302.7 | 42.7 | 0.0 | 321.9 | 1 | |
| 13 | 12 | -583 | -2030 | 2 | 0 | 3 | 3288 | 14.9 | 1019.9 | 145.5 | 0.0 | 1034.8 | 1 | |
| 14 | 12 | 176 | 579 | -0 | 0 | -0 | -963 | 4.5 | 297.2 | 41.5 | 0.0 | 301.7 | 1 | |
| 15 | 12 | -608 | -2118 | 2 | 0 | 3 | 3432 | 15.6 | 1064.5 | 151.8 | 0.0 | 1080.0 | 1 | |
| 1 | 23 | -701 | -2439 | 3 | 0 | 3 | 3666 | 17.9 | 1137.0 | 174.9 | 0.0 | 1154.9 | 1 | |
| 5 | 23 | -430 | -598 | -71 | 0 | -3 | 885 | 11.0 | 279.0 | 42.9 | 0.0 | 290.0 | 1 | |
| 6 | 23 | 124 | -598 | -68 | 0 | -3 | 883 | 3.2 | 279.0 | 42.9 | 0.0 | 282.2 | 1 | |
| 7 | 23 | -457 | -598 | 74 | 0 | 5 | 886 | 11.7 | 283.0 | 42.8 | 0.0 | 294.7 | 1 | |
| 8 | 23 | 97 | -598 | 76 | 0 | 4 | 884 | 2.5 | 281.7 | 42.9 | 0.0 | 284.2 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-------|-------|-----|---|-----|------|------|--------|-------|-----|--------|---|
| 9 | 23 | -1153 | -835 | -26 | 0 | -0 | 1241 | 29.5 | 383.0 | 59.9 | 0.0 | 412.5 | 1 |
| 10 | 23 | 694 | -837 | -17 | 0 | -1 | 1235 | 17.8 | 383.3 | 60.0 | 0.0 | 401.0 | 1 |
| 11 | 23 | -1161 | -835 | 19 | 0 | 3 | 1241 | 29.7 | 388.6 | 59.9 | 0.0 | 418.3 | 1 |
| 12 | 23 | 753 | -599 | 27 | 0 | 1 | 881 | 19.3 | 274.6 | 42.9 | 0.0 | 293.8 | 1 |
| 13 | 23 | -583 | -2034 | 2 | 0 | 3 | 3052 | 14.9 | 946.7 | 145.8 | 0.0 | 961.6 | 1 |
| 14 | 23 | 176 | 576 | -0 | 0 | -0 | -895 | 4.5 | 276.5 | 41.3 | 0.0 | 281.0 | 1 |
| 15 | 23 | -608 | -2122 | 2 | 0 | 3 | 3186 | 15.6 | 988.1 | 152.2 | 0.0 | 1003.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 35 | -701 | -2444 | 3 | 0 | 3 | 3383 | 17.9 | 1049.0 | 175.2 | 0.0 | 1066.9 | 1 |
| 5 | 35 | -430 | -601 | -71 | 0 | 5 | 815 | 11.0 | 262.7 | 43.1 | 0.0 | 273.7 | 1 |
| 6 | 35 | 124 | -602 | -68 | 0 | 5 | 813 | 3.2 | 260.7 | 43.2 | 0.0 | 263.9 | 1 |
| 7 | 35 | -457 | -601 | 74 | 0 | -4 | 817 | 11.7 | 260.1 | 43.1 | 0.0 | 271.8 | 1 |
| 8 | 35 | 97 | -602 | 76 | 0 | -5 | 815 | 2.5 | 260.8 | 43.1 | 0.0 | 263.3 | 1 |
| 9 | 35 | -1153 | -840 | -26 | 0 | 3 | 1144 | 29.5 | 358.7 | 60.2 | 0.0 | 388.2 | 1 |
| 10 | 35 | 694 | -842 | -17 | 0 | 1 | 1137 | 17.8 | 352.2 | 60.4 | 0.0 | 369.9 | 1 |
| 11 | 35 | -1161 | -840 | 19 | 0 | 1 | 1144 | 29.7 | 354.1 | 60.2 | 0.0 | 383.8 | 1 |
| 12 | 35 | 753 | -603 | 27 | 0 | -2 | 811 | 19.3 | 253.9 | 43.2 | 0.0 | 273.1 | 1 |
| 13 | 35 | -583 | -2039 | 2 | 0 | 2 | 2816 | 14.9 | 873.3 | 146.2 | 0.0 | 888.2 | 1 |
| 14 | 35 | 176 | 572 | -0 | 0 | -0 | -829 | 4.5 | 256.0 | 41.0 | 0.0 | 260.5 | 1 |
| 15 | 35 | -608 | -2127 | 2 | 0 | 2 | 2940 | 15.6 | 911.6 | 152.5 | 0.0 | 927.1 | 1 |
| | | | | | | | | | | | | | |
| 1 | 46 | -701 | -2448 | 3 | 0 | 2 | 3099 | 17.9 | 960.9 | 175.5 | 0.0 | 978.8 | 1 |
| 5 | 46 | -430 | -605 | -71 | 0 | 14 | 745 | 11.0 | 258.5 | 43.4 | 0.0 | 269.5 | 1 |
| 6 | 46 | 124 | -606 | -68 | 0 | 13 | 743 | 3.2 | 255.9 | 43.4 | 0.0 | 259.1 | 1 |
| 7 | 46 | -457 | -605 | 74 | 0 | -12 | 747 | 11.7 | 256.6 | 43.3 | 0.0 | 268.3 | 1 |
| 8 | 46 | 97 | -605 | 76 | 0 | -13 | 745 | 2.5 | 257.9 | 43.4 | 0.0 | 260.4 | 1 |
| 9 | 46 | -1153 | -845 | -26 | 0 | 6 | 1046 | 29.5 | 334.8 | 60.6 | 0.0 | 364.3 | 1 |
| 10 | 46 | 694 | -847 | -17 | 0 | 3 | 1039 | 17.8 | 326.0 | 60.7 | 0.0 | 343.8 | 1 |
| 11 | 46 | -1161 | -845 | 19 | 0 | -2 | 1047 | 29.7 | 326.0 | 60.5 | 0.0 | 355.7 | 1 |
| 12 | 46 | 753 | -606 | 27 | 0 | -5 | 741 | 19.3 | 239.0 | 43.5 | 0.0 | 258.2 | 1 |
| 13 | 46 | -583 | -2043 | 2 | 0 | 2 | 2579 | 14.9 | 799.8 | 146.5 | 0.0 | 814.7 | 1 |
| 14 | 46 | 176 | 569 | -0 | 0 | -0 | -763 | 4.5 | 235.5 | 40.8 | 0.0 | 240.0 | 1 |
| 15 | 46 | -608 | -2131 | 2 | 0 | 2 | 2693 | 15.6 | 834.9 | 152.8 | 0.0 | 850.4 | 1 |
| | | | | | | | | | | | | | |
| 1 | 58 | -701 | -2453 | 3 | 0 | 2 | 2815 | 17.9 | 872.6 | 175.9 | 0.0 | 890.5 | 1 |
| 5 | 58 | -430 | -609 | -71 | 0 | 22 | 675 | 11.0 | 254.3 | 43.6 | 0.0 | 265.2 | 1 |
| 6 | 58 | 124 | -609 | -68 | 0 | 21 | 673 | 3.2 | 250.9 | 43.7 | 0.0 | 254.1 | 1 |
| 7 | 58 | -457 | -608 | 74 | 0 | -21 | 676 | 11.7 | 253.0 | 43.6 | 0.0 | 264.7 | 1 |
| 8 | 58 | 97 | -609 | 76 | 0 | -22 | 674 | 2.5 | 255.0 | 43.6 | 0.0 | 257.5 | 1 |
| 9 | 58 | -1153 | -849 | -26 | 0 | 9 | 948 | 29.5 | 310.8 | 60.9 | 0.0 | 340.3 | 1 |
| 10 | 58 | 694 | -851 | -17 | 0 | 5 | 941 | 17.8 | 299.7 | 61.0 | 0.0 | 317.5 | 1 |
| 11 | 58 | -1161 | -849 | 19 | 0 | -4 | 948 | 29.7 | 300.4 | 60.9 | 0.0 | 330.1 | 1 |
| 12 | 58 | 753 | -610 | 27 | 0 | -8 | 671 | 19.3 | 224.0 | 43.7 | 0.0 | 243.2 | 1 |
| 13 | 58 | -583 | -2048 | 2 | 0 | 2 | 2342 | 14.9 | 726.1 | 146.8 | 0.0 | 741.0 | 1 |
| 14 | 58 | 176 | 565 | -0 | 0 | -0 | -697 | 4.5 | 215.2 | 40.5 | 0.0 | 219.7 | 1 |
| 15 | 58 | -608 | -2136 | 2 | 0 | 2 | 2445 | 15.6 | 758.0 | 153.1 | 0.0 | 773.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 70 | -701 | -2458 | 3 | 0 | 2 | 2530 | 17.9 | 784.2 | 176.2 | 0.0 | 802.1 | 1 |
| 5 | 70 | -430 | -612 | -71 | 0 | 30 | 604 | 11.0 | 249.8 | 43.9 | 0.0 | 260.8 | 1 |
| 6 | 70 | 124 | -613 | -68 | 0 | 29 | 602 | 3.2 | 245.8 | 43.9 | 0.0 | 249.0 | 1 |
| 7 | 70 | -457 | -612 | 74 | 0 | -30 | 606 | 11.7 | 249.3 | 43.9 | 0.0 | 261.0 | 1 |
| 8 | 70 | 97 | -612 | 76 | 0 | -31 | 603 | 2.5 | 251.9 | 43.9 | 0.0 | 254.4 | 1 |
| 9 | 70 | -1153 | -854 | -26 | 0 | 12 | 849 | 29.5 | 286.6 | 61.2 | 0.0 | 316.0 | 1 |
| 10 | 70 | 694 | -856 | -17 | 0 | 6 | 842 | 17.8 | 273.2 | 61.4 | 0.0 | 291.0 | 1 |
| 11 | 70 | -1161 | -854 | 19 | 0 | -6 | 850 | 29.7 | 274.5 | 61.2 | 0.0 | 304.2 | 1 |
| 12 | 70 | 753 | -613 | 27 | 0 | -11 | 600 | 19.3 | 208.8 | 44.0 | 0.0 | 228.1 | 1 |
| 13 | 70 | -583 | -2053 | 2 | 0 | 2 | 2104 | 14.9 | 652.3 | 147.2 | 0.0 | 667.2 | 1 |
| 14 | 70 | 176 | 562 | -0 | 0 | -0 | -631 | 4.5 | 195.0 | 40.3 | 0.0 | 199.5 | 1 |
| 15 | 70 | -608 | -2141 | 2 | 0 | 2 | 2197 | 15.6 | 681.0 | 153.5 | 0.0 | 696.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 81 | -701 | -2462 | 3 | 0 | 2 | 2245 | 17.9 | 695.6 | 176.5 | 0.0 | 713.5 | 1 |
| 5 | 81 | -430 | -616 | -71 | 0 | 38 | 533 | 11.0 | 245.3 | 44.1 | 0.0 | 256.3 | 1 |
| 6 | 81 | 124 | -616 | -68 | 0 | 36 | 531 | 3.2 | 240.6 | 44.2 | 0.0 | 243.8 | 1 |
| 7 | 81 | -457 | -615 | 74 | 0 | -38 | 534 | 11.7 | 245.4 | 44.1 | 0.0 | 257.1 | 1 |
| 8 | 81 | 97 | -616 | 76 | 0 | -40 | 532 | 2.5 | 248.7 | 44.2 | 0.0 | 251.1 | 1 |
| 9 | 81 | -1153 | -859 | -26 | 0 | 15 | 750 | 29.5 | 262.2 | 61.6 | 0.0 | 291.7 | 1 |
| 10 | 81 | 694 | -860 | -17 | 0 | 8 | 742 | 17.8 | 246.6 | 61.7 | 0.0 | 264.4 | 1 |
| 11 | 81 | -1161 | -858 | 19 | 0 | -8 | 750 | 29.7 | 248.5 | 61.5 | 0.0 | 278.2 | 1 |
| 12 | 81 | 753 | -617 | 27 | 0 | -15 | 528 | 19.3 | 193.6 | 44.2 | 0.0 | 212.8 | 1 |
| 13 | 81 | -583 | -2057 | 2 | 0 | 1 | 1866 | 14.9 | 578.2 | 147.5 | 0.0 | 593.1 | 1 |
| 14 | 81 | 176 | 558 | -0 | 0 | -0 | -566 | 4.5 | 174.9 | 40.0 | 0.0 | 179.4 | 1 |
| 15 | 81 | -608 | -2145 | 2 | 0 | 1 | 1949 | 15.6 | 603.8 | 153.8 | 0.0 | 619.4 | 1 |
| | | | | | | | | | | | | | |
| 1 | 93 | -701 | -2467 | 3 | 0 | 1 | 1959 | 17.9 | 606.8 | 176.9 | 0.0 | 624.7 | 1 |
| 5 | 93 | -430 | -619 | -71 | 0 | 47 | 461 | 11.0 | 240.6 | 44.4 | 0.0 | 251.6 | 1 |
| 6 | 93 | 124 | -620 | -68 | 0 | 44 | 459 | 3.2 | 235.3 | 44.4 | 0.0 | 238.4 | 1 |
| 7 | 93 | -457 | -619 | 74 | 0 | -47 | 463 | 11.7 | 241.4 | 44.4 | 0.0 | 253.1 | 1 |
| 8 | 93 | 97 | -619 | 76 | 0 | -49 | 460 | 2.5 | 245.3 | 44.4 | 0.0 | 247.8 | 1 |
| 9 | 93 | -1153 | -863 | -26 | 0 | 18 | 650 | 29.5 | 237.6 | 61.9 | 0.0 | 267.1 | 1 |
| 10 | 93 | 694 | -865 | -17 | 0 | 10 | 642 | 17.8 | 219.8 | 62.0 | 0.0 | 237.6 | 1 |
| 11 | 93 | -1161 | -863 | 19 | 0 | -10 | 651 | 29.7 | 222.4 | 61.9 | 0.0 | 252.1 | 1 |
| 12 | 93 | 753 | -620 | 27 | 0 | -18 | 457 | 19.3 | 178.2 | 44.5 | 0.0 | 197.5 | 1 |
| 13 | 93 | -583 | -2062 | 2 | 0 | 1 | 1627 | 14.9 | 504.0 | 147.8 | 0.0 | 518.9 | 1 |
| 14 | 93 | 176 | 555 | -0 | 0 | -0 | -502 | 4.5 | 155.0 | 39.8 | 0.0 | 159.5 | 1 |
| 15 | 93 | -608 | -2150 | 2 | 0 | 1 | 1700 | 15.6 | 526.5 | 154.1 | 0.0 | 542.0 | 1 |
| | | | | | | | | | | | | | |
| 1 | 104 | -701 | -2471 | 3 | 0 | 1 | 1673 | 17.9 | 517.9 | 177.2 | 0.0 | 547.2 | 3 |
| 5 | 104 | -430 | -623 | -71 | 0 | 55 | 389 | 11.0 | 235.8 | 44.7 | 0.0 | 246.8 | 1 |
| 6 | 104 | 124 | -623 | -68 | 0 | 52 | 387 | 3.2 | 229.8 | 44.7 | 0.0 | 233.0 | 1 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-------|-------|-----|---|-----|------|------|-------|-------|-----|-------|---|
| 7 | 104 | -457 | -622 | 74 | 0 | -55 | 391 | 11.7 | 237.3 | 44.6 | 0.0 | 249.0 | 1 |
| 8 | 104 | 97 | -623 | 76 | 0 | -58 | 388 | 2.5 | 241.8 | 44.7 | 0.0 | 244.3 | 1 |
| 9 | 104 | -1153 | -868 | -26 | 0 | 21 | 550 | 29.5 | 212.9 | 62.2 | 0.0 | 242.4 | 1 |
| 10 | 104 | 694 | -870 | -17 | 0 | 12 | 542 | 17.8 | 192.8 | 62.4 | 0.0 | 210.6 | 1 |
| 11 | 104 | -1161 | -868 | 19 | 0 | -12 | 550 | 29.7 | 196.0 | 62.2 | 0.0 | 225.7 | 1 |
| 12 | 104 | 753 | -624 | 27 | 0 | -21 | 384 | 19.3 | 162.7 | 44.7 | 0.0 | 181.9 | 1 |
| 13 | 104 | -583 | -2066 | 2 | 0 | 1 | 1388 | 14.9 | 429.7 | 148.2 | 0.0 | 454.7 | 3 |
| 14 | 104 | 176 | 551 | -0 | 0 | -0 | -438 | 4.5 | 135.2 | 39.5 | 0.0 | 139.7 | 1 |
| 15 | 104 | -608 | -2154 | 2 | 0 | 1 | 1450 | 15.6 | 448.9 | 154.5 | 0.0 | 474.9 | 3 |
| | | | | | | | | | | | | | |
| 1 | 116 | -701 | -2476 | 3 | 0 | 1 | 1386 | 17.9 | 428.8 | 177.5 | 0.0 | 475.7 | 3 |
| 5 | 116 | -430 | -626 | -71 | 0 | 63 | 317 | 11.0 | 230.9 | 44.9 | 0.0 | 241.9 | 1 |
| 6 | 116 | 124 | -627 | -68 | 0 | 60 | 314 | 3.2 | 224.2 | 45.0 | 0.0 | 227.4 | 1 |
| 7 | 116 | -457 | -626 | 74 | 0 | -64 | 318 | 11.7 | 233.1 | 44.9 | 0.0 | 244.7 | 1 |
| 8 | 116 | 97 | -627 | 76 | 0 | -67 | 316 | 2.5 | 238.2 | 44.9 | 0.0 | 240.7 | 1 |
| 9 | 116 | -1153 | -872 | -26 | 0 | 24 | 449 | 29.5 | 188.1 | 62.5 | 0.0 | 217.6 | 1 |
| 10 | 116 | 694 | -874 | -17 | 0 | 14 | 440 | 17.8 | 165.7 | 62.7 | 0.0 | 183.4 | 1 |
| 11 | 116 | -1161 | -872 | 19 | 0 | -15 | 449 | 29.7 | 169.6 | 62.5 | 0.0 | 199.2 | 1 |
| 12 | 116 | 753 | -628 | 27 | 0 | -24 | 312 | 19.3 | 147.0 | 45.0 | 0.0 | 166.3 | 1 |
| 13 | 116 | -583 | -2071 | 2 | 0 | 1 | 1148 | 14.9 | 355.2 | 148.5 | 0.0 | 395.1 | 3 |
| 14 | 116 | 176 | 547 | -0 | 0 | -0 | -374 | 4.5 | 115.5 | 39.2 | 0.0 | 122.5 | 3 |
| 15 | 116 | -608 | -2159 | 2 | 0 | 1 | 1200 | 15.6 | 371.3 | 154.8 | 0.0 | 412.7 | 3 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|--------|-------|--------|---------|------|-----------|------|
| | | cm | daN*m | daN/cm | cm | | | |
| 1 | -- | 0 | 4231 | 1304.5 | -- | -- | -- | |
| -- | Rara | 59 | 2 | -- | 59 | 0.00 | 1 / 99999 | |
| -- | Freq. | 59 | 2 | -- | 59 | 0.00 | 1 / 99999 | |
| -- | Q.Perm. | 59 | 2 | -- | 59 | 0.00 | 1 / 99999 | |
| -- | Rara | 59 | 2 | -- | 59 | 0.00 | 1 / 99999 | |
| -- | Rara | 59 | 2 | -- | 59 | 0.00 | 1 / 99999 | |
| -- | Freq. | 59 | 2 | -- | 59 | 0.00 | 1 / 99999 | |
| -- | Freq. | 59 | 2 | -- | 59 | 0.00 | 1 / 99999 | |

ASTA NUM. 29 NI 103 NF 110 Lungh. 116.0 cm SEZ. 1 Ps IPE 240

257

categoria: p.p. y qy tot.

qy medio: 0.3069 0.3069 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|-------|-----|----|-------|------|---------|--------|--------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | daN/cm | | | | |
| 1 | 0 | -701 | -4613 | 6 | 0 | 1 | 1388 | 17.9 | 429.4 | 330.7 | 0.0 | 608.1 | 3 | |
| 5 | 0 | -319 | -1117 | 76 | 0 | 63 | 317 | 8.2 | 231.0 | 80.1 | 0.0 | 239.2 | 1 | |
| 6 | 0 | 13 | -1118 | 72 | 0 | 60 | 315 | 0.3 | 224.3 | 80.2 | 0.0 | 224.6 | 1 | |
| 7 | 0 | -346 | -1117 | -78 | 0 | -64 | 319 | 8.8 | 233.2 | 80.1 | 0.0 | 242.1 | 1 | |
| 8 | 0 | -13 | -1117 | -82 | 0 | -67 | 316 | 0.3 | 238.4 | 80.1 | 0.0 | 238.7 | 1 | |
| 9 | 0 | -783 | -1563 | 30 | 0 | 24 | 450 | 20.0 | 188.3 | 112.1 | 0.0 | 213.4 | 3 | |
| 10 | 0 | 325 | -1565 | 16 | 0 | 14 | 441 | 8.3 | 165.9 | 112.2 | 0.0 | 203.2 | 3 | |
| 11 | 0 | -792 | -1563 | -15 | 0 | -15 | 450 | 20.2 | 169.7 | 112.1 | 0.0 | 212.9 | 3 | |
| 12 | 0 | 384 | -1118 | -29 | 0 | -24 | 312 | 9.8 | 147.2 | 80.2 | 0.0 | 157.0 | 1 | |
| 13 | 0 | -583 | -3843 | 6 | 0 | 1 | 1150 | 14.9 | 355.8 | 275.5 | 0.0 | 505.4 | 3 | |
| 14 | 0 | 176 | 1117 | -1 | 0 | -0 | -374 | 4.5 | 115.6 | 80.1 | 0.0 | 154.9 | 3 | |
| 15 | 0 | -608 | -4010 | 6 | 0 | 1 | 1201 | 15.6 | 371.6 | 287.5 | 0.0 | 527.5 | 3 | |
| | | | | | | | | | | | | | | |
| 1 | 12 | -701 | -4618 | 6 | 0 | -0 | 853 | 17.9 | 263.0 | 331.1 | 0.0 | 573.7 | 4 | |
| 5 | 12 | -319 | -1121 | 76 | 0 | 54 | 187 | 8.2 | 172.3 | 80.3 | 0.0 | 180.5 | 1 | |
| 6 | 12 | 13 | -1122 | 72 | 0 | 52 | 185 | 0.3 | 166.6 | 80.4 | 0.0 | 166.9 | 1 | |
| 7 | 12 | -346 | -1121 | -78 | 0 | -55 | 189 | 8.8 | 174.1 | 80.3 | 0.0 | 183.0 | 1 | |
| 8 | 12 | -13 | -1121 | -82 | 0 | -57 | 187 | 0.3 | 178.3 | 80.3 | 0.0 | 178.6 | 1 | |
| 9 | 12 | -783 | -1568 | 30 | 0 | 20 | 268 | 20.0 | 125.0 | 112.4 | 0.0 | 195.9 | 4 | |
| 10 | 12 | 325 | -1570 | 16 | 0 | 12 | 259 | 8.3 | 105.8 | 112.5 | 0.0 | 195.2 | 4 | |
| 11 | 12 | -792 | -1568 | -15 | 0 | -13 | 268 | 20.2 | 110.0 | 112.4 | 0.0 | 195.9 | 4 | |
| 12 | 12 | 384 | -1122 | -29 | 0 | -21 | 182 | 9.8 | 100.0 | 80.4 | 0.0 | 139.8 | 4 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|------|-------|-----|---|-----|-------|------|-------|-------|-----|-------|---|
| 13 | 12 | -583 | -3848 | 6 | 0 | -0 | 704 | 14.9 | 217.2 | 275.9 | 0.0 | 478.0 | 4 |
| 14 | 12 | 176 | 1113 | -1 | 0 | -0 | -245 | 4.5 | 75.6 | 79.8 | 0.0 | 138.3 | 4 |
| 15 | 12 | -608 | -4015 | 6 | 0 | -0 | 736 | 15.6 | 226.9 | 287.8 | 0.0 | 498.8 | 4 |
| 1 | 23 | -701 | -4622 | 6 | 0 | -1 | 316 | 17.9 | 99.3 | 331.4 | 0.0 | 574.3 | 4 |
| 5 | 23 | -319 | -1124 | 76 | 0 | 45 | 57 | 8.2 | 113.5 | 80.6 | 0.0 | 140.2 | 4 |
| 6 | 23 | 13 | -1125 | 72 | 0 | 43 | 55 | 0.3 | 108.7 | 80.7 | 0.0 | 139.8 | 4 |
| 7 | 23 | -346 | -1124 | -78 | 0 | -46 | 59 | 8.8 | 114.9 | 80.6 | 0.0 | 140.3 | 4 |
| 8 | 23 | -13 | -1124 | -82 | 0 | -48 | 56 | 0.3 | 118.1 | 80.6 | 0.0 | 139.7 | 4 |
| 9 | 23 | -783 | -1572 | 30 | 0 | 17 | 86 | 20.0 | 61.5 | 112.7 | 0.0 | 196.5 | 4 |
| 10 | 23 | 325 | -1574 | 16 | 0 | 10 | 77 | 8.3 | 45.6 | 112.9 | 0.0 | 195.7 | 4 |
| 11 | 23 | -792 | -1572 | -15 | 0 | -11 | 86 | 20.2 | 50.1 | 112.7 | 0.0 | 196.4 | 4 |
| 12 | 23 | 384 | -1125 | -29 | 0 | -17 | 52 | 9.8 | 52.6 | 80.7 | 0.0 | 140.2 | 4 |
| 13 | 23 | -583 | -3852 | 6 | 0 | -1 | 257 | 14.9 | 80.8 | 276.2 | 0.0 | 478.6 | 4 |
| 14 | 23 | 176 | 1110 | -1 | 0 | 0 | -116 | 4.5 | 35.8 | 79.6 | 0.0 | 137.9 | 4 |
| 15 | 23 | -608 | -4019 | 6 | 0 | -1 | 270 | 15.6 | 84.7 | 288.2 | 0.0 | 499.4 | 4 |
| 1 | 35 | -701 | -4627 | 6 | 0 | -2 | -220 | 17.9 | 71.2 | 331.7 | 0.0 | 574.9 | 4 |
| 5 | 35 | -319 | -1128 | 76 | 0 | 37 | -73 | 8.2 | 99.8 | 80.9 | 0.0 | 140.6 | 4 |
| 6 | 35 | 13 | -1129 | 72 | 0 | 35 | -76 | 0.3 | 97.6 | 80.9 | 0.0 | 140.2 | 4 |
| 7 | 35 | -346 | -1128 | -78 | 0 | -37 | -72 | 8.8 | 99.7 | 80.8 | 0.0 | 140.6 | 4 |
| 8 | 35 | -13 | -1128 | -82 | 0 | -38 | -74 | 0.3 | 103.6 | 80.9 | 0.0 | 140.1 | 4 |
| 9 | 35 | -783 | -1577 | 30 | 0 | 13 | -97 | 20.0 | 57.7 | 113.1 | 0.0 | 197.0 | 4 |
| 10 | 35 | 325 | -1579 | 16 | 0 | 8 | -106 | 8.3 | 50.4 | 113.2 | 0.0 | 196.3 | 4 |
| 11 | 35 | -792 | -1577 | -15 | 0 | -9 | -96 | 20.2 | 49.4 | 113.0 | 0.0 | 197.0 | 4 |
| 12 | 35 | 384 | -1129 | -29 | 0 | -14 | -79 | 9.8 | 53.6 | 80.9 | 0.0 | 140.6 | 4 |
| 13 | 35 | -583 | -3857 | 6 | 0 | -1 | -190 | 14.9 | 61.4 | 276.5 | 0.0 | 479.2 | 4 |
| 14 | 35 | 176 | 1106 | -1 | 0 | 0 | 12 | 4.5 | 4.0 | 79.3 | 0.0 | 137.4 | 4 |
| 15 | 35 | -608 | -4024 | 6 | 0 | -1 | -197 | 15.6 | 63.6 | 288.5 | 0.0 | 500.0 | 4 |
| 1 | 46 | -701 | -4632 | 6 | 0 | -2 | -757 | 17.9 | 238.3 | 332.1 | 0.0 | 575.5 | 4 |
| 5 | 46 | -319 | -1131 | 76 | 0 | 28 | -205 | 8.2 | 121.5 | 81.1 | 0.0 | 140.9 | 4 |
| 6 | 46 | 13 | -1132 | 72 | 0 | 27 | -207 | 0.3 | 120.3 | 81.2 | 0.0 | 140.6 | 4 |
| 7 | 46 | -346 | -1131 | -78 | 0 | -28 | -203 | 8.8 | 121.1 | 81.1 | 0.0 | 140.9 | 4 |
| 8 | 46 | -13 | -1131 | -82 | 0 | -29 | -205 | 0.3 | 123.9 | 81.1 | 0.0 | 140.5 | 4 |
| 9 | 46 | -783 | -1582 | 30 | 0 | 10 | -280 | 20.0 | 106.9 | 113.4 | 0.0 | 197.6 | 4 |
| 10 | 46 | 325 | -1583 | 16 | 0 | 7 | -289 | 8.3 | 102.9 | 113.5 | 0.0 | 196.8 | 4 |
| 11 | 46 | -792 | -1581 | -15 | 0 | -8 | -280 | 20.2 | 102.1 | 113.4 | 0.0 | 197.5 | 4 |
| 12 | 46 | 384 | -1132 | -29 | 0 | -10 | -210 | 9.8 | 86.8 | 81.2 | 0.0 | 141.0 | 4 |
| 13 | 46 | -583 | -3861 | 6 | 0 | -2 | -638 | 14.9 | 200.8 | 276.8 | 0.0 | 479.7 | 4 |
| 14 | 46 | 176 | 1103 | -1 | 0 | 0 | 140 | 4.5 | 43.6 | 79.1 | 0.0 | 137.0 | 4 |
| 15 | 46 | -608 | -4029 | 6 | 0 | -2 | -664 | 15.6 | 209.0 | 288.8 | 0.0 | 500.5 | 4 |
| 1 | 58 | -701 | -4637 | 6 | 0 | -3 | -1295 | 17.9 | 405.7 | 332.4 | 0.0 | 592.5 | 3 |
| 5 | 58 | -319 | -1135 | 76 | 0 | 19 | -336 | 8.2 | 143.4 | 81.4 | 0.0 | 152.7 | 3 |
| 6 | 58 | 13 | -1136 | 72 | 0 | 18 | -339 | 0.3 | 143.1 | 81.4 | 0.0 | 147.9 | 3 |
| 7 | 58 | -346 | -1135 | -78 | 0 | -19 | -334 | 8.8 | 142.5 | 81.3 | 0.0 | 152.8 | 3 |
| 8 | 58 | -13 | -1135 | -82 | 0 | -19 | -337 | 0.3 | 144.4 | 81.4 | 0.0 | 147.7 | 3 |
| 9 | 58 | -783 | -1587 | 30 | 0 | 6 | -464 | 20.0 | 156.3 | 113.7 | 0.0 | 216.6 | 3 |
| 10 | 58 | 325 | -1588 | 16 | 0 | 5 | -473 | 8.3 | 155.6 | 113.9 | 0.0 | 210.2 | 3 |
| 11 | 58 | -792 | -1586 | -15 | 0 | -6 | -463 | 20.2 | 155.0 | 113.7 | 0.0 | 216.5 | 3 |
| 12 | 58 | 384 | -1136 | -29 | 0 | -7 | -341 | 9.8 | 120.2 | 81.4 | 0.0 | 153.9 | 3 |
| 13 | 58 | -583 | -3866 | 6 | 0 | -3 | -1086 | 14.9 | 340.3 | 277.2 | 0.0 | 495.1 | 3 |
| 14 | 58 | 176 | 1099 | -1 | 0 | 0 | 268 | 4.5 | 83.1 | 78.8 | 0.0 | 136.5 | 4 |
| 15 | 58 | -608 | -4034 | 6 | 0 | -3 | -1131 | 15.6 | 354.5 | 289.2 | 0.0 | 516.3 | 3 |
| 1 | 70 | -701 | -4641 | 6 | 0 | -4 | -1833 | 17.9 | 573.2 | 332.8 | 0.0 | 701.5 | 3 |
| 5 | 70 | -319 | -1139 | 76 | 0 | 10 | -468 | 8.2 | 165.3 | 81.6 | 0.0 | 180.0 | 3 |
| 6 | 70 | 13 | -1139 | 72 | 0 | 10 | -470 | 0.3 | 166.1 | 81.7 | 0.0 | 174.4 | 3 |
| 7 | 70 | -346 | -1138 | -78 | 0 | -10 | -466 | 8.8 | 164.1 | 81.6 | 0.0 | 180.0 | 3 |
| 8 | 70 | -13 | -1139 | -82 | 0 | -10 | -469 | 0.3 | 165.0 | 81.6 | 0.0 | 174.0 | 3 |
| 9 | 70 | -783 | -1591 | 30 | 0 | 3 | -648 | 20.0 | 205.8 | 114.1 | 0.0 | 255.9 | 3 |
| 10 | 70 | 325 | -1593 | 16 | 0 | 3 | -658 | 8.3 | 208.5 | 114.2 | 0.0 | 248.8 | 3 |
| 11 | 70 | -792 | -1591 | -15 | 0 | -4 | -648 | 20.2 | 208.1 | 114.0 | 0.0 | 256.0 | 3 |
| 12 | 70 | 384 | -1140 | -29 | 0 | -4 | -473 | 9.8 | 153.7 | 81.7 | 0.0 | 181.8 | 3 |
| 13 | 70 | -583 | -3871 | 6 | 0 | -3 | -1535 | 14.9 | 480.0 | 277.5 | 0.0 | 586.3 | 3 |
| 14 | 70 | 176 | 1095 | -1 | 0 | 0 | 395 | 4.5 | 122.5 | 78.5 | 0.0 | 157.8 | 3 |
| 15 | 70 | -608 | -4038 | 6 | 0 | -3 | -1599 | 15.6 | 500.3 | 289.5 | 0.0 | 611.3 | 3 |
| 1 | 81 | -701 | -4646 | 6 | 0 | -5 | -2372 | 17.9 | 740.9 | 333.1 | 0.0 | 824.5 | 3 |
| 5 | 81 | -319 | -1142 | 76 | 0 | 1 | -600 | 8.2 | 187.4 | 81.9 | 0.0 | 210.1 | 3 |
| 6 | 81 | 13 | -1143 | 72 | 0 | 2 | -603 | 0.3 | 189.2 | 81.9 | 0.0 | 204.2 | 3 |
| 7 | 81 | -346 | -1142 | -78 | 0 | -1 | -598 | 8.8 | 185.8 | 81.8 | 0.0 | 210.1 | 3 |
| 8 | 81 | -13 | -1142 | -82 | 0 | -0 | -601 | 0.3 | 185.7 | 81.9 | 0.0 | 203.6 | 3 |
| 9 | 81 | -783 | -1596 | 30 | 0 | -1 | -833 | 20.0 | 258.3 | 114.4 | 0.0 | 299.3 | 3 |
| 10 | 81 | 325 | -1597 | 16 | 0 | 1 | -843 | 8.3 | 261.5 | 114.5 | 0.0 | 291.7 | 3 |
| 11 | 81 | -792 | -1595 | -15 | 0 | -2 | -832 | 20.2 | 261.3 | 114.4 | 0.0 | 299.4 | 3 |
| 12 | 81 | 384 | -1143 | -29 | 0 | -0 | -605 | 9.8 | 187.3 | 82.0 | 0.0 | 212.6 | 3 |
| 13 | 81 | -583 | -3875 | 6 | 0 | -4 | -1984 | 14.9 | 619.9 | 277.8 | 0.0 | 689.0 | 3 |
| 14 | 81 | 176 | 1092 | -1 | 0 | 0 | 522 | 4.5 | 161.7 | 78.3 | 0.0 | 185.7 | 3 |
| 15 | 81 | -608 | -4043 | 6 | 0 | -4 | -2068 | 15.6 | 646.1 | 289.9 | 0.0 | 718.4 | 3 |
| 1 | 93 | -701 | -4651 | 6 | 0 | -5 | -2911 | 17.9 | 908.7 | 333.4 | 0.0 | 956.2 | 3 |
| 5 | 93 | -319 | -1146 | 76 | 0 | -8 | -733 | 8.2 | 242.2 | 82.1 | 0.0 | 250.3 | 1 |
| 6 | 93 | 13 | -1146 | 72 | 0 | -7 | -735 | 0.3 | 241.1 | 82.2 | 0.0 | 241.4 | 1 |
| 7 | 93 | -346 | -1145 | -78 | 0 | 8 | -731 | 8.8 | 242.9 | 82.1 | 0.0 | 251.8 | 1 |
| 8 | 93 | -13 | -1146 | -82 | 0 | 9 | -733 | 0.3 | 245.7 | 82.1 | 0.0 | 246.0 | 1 |
| 9 | 93 | -783 | -1601 | 30 | 0 | -4 | -1019 | 20.0 | 322.8 | 114.8 | 0.0 | 345.9 | 3 |
| 10 | 93 | 325 | -1602 | 16 | 0 | -1 | -1028 | 8.3 | 319.4 | 114.8 | 0.0 | 337.6 | 3 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|-------|-----|---|-----|-------|------|--------|-------|-----|--------|---|
| 11 | 93 | -792 | -1600 | -15 | 0 | -0 | -1018 | 20.2 | 314.6 | 114.7 | 0.0 | 345.4 | 3 |
| 12 | 93 | 384 | -1147 | -29 | 0 | 3 | -738 | 9.8 | 234.2 | 82.2 | 0.0 | 245.9 | 3 |
| 13 | 93 | -583 | -3880 | 6 | 0 | -5 | -2434 | 14.9 | 759.9 | 278.2 | 0.0 | 799.0 | 3 |
| 14 | 93 | 176 | 1088 | -1 | 0 | 0 | 649 | 4.5 | 200.8 | 78.0 | 0.0 | 215.9 | 3 |
| 15 | 93 | -608 | -4048 | 6 | 0 | -5 | -2537 | 15.6 | 792.2 | 290.2 | 0.0 | 833.1 | 3 |
| | | | | | | | | | | | | | |
| 1 | 104 | -701 | -4655 | 6 | 0 | -6 | -3451 | 17.9 | 1076.7 | 333.8 | 0.0 | 1094.6 | 1 |
| 5 | 104 | -319 | -1149 | 76 | 0 | -17 | -866 | 8.2 | 301.9 | 82.4 | 0.0 | 310.1 | 1 |
| 6 | 104 | 13 | -1150 | 72 | 0 | -15 | -868 | 0.3 | 299.9 | 82.4 | 0.0 | 300.2 | 1 |
| 7 | 104 | -346 | -1149 | -78 | 0 | 17 | -864 | 8.8 | 303.0 | 82.3 | 0.0 | 311.9 | 1 |
| 8 | 104 | -13 | -1149 | -82 | 0 | 19 | -867 | 0.3 | 306.8 | 82.4 | 0.0 | 307.1 | 1 |
| 9 | 104 | -783 | -1605 | 30 | 0 | -8 | -1205 | 20.0 | 387.4 | 115.1 | 0.0 | 407.4 | 1 |
| 10 | 104 | 325 | -1606 | 16 | 0 | -3 | -1214 | 8.3 | 380.9 | 115.2 | 0.0 | 389.2 | 1 |
| 11 | 104 | -792 | -1604 | -15 | 0 | 1 | -1204 | 20.2 | 374.0 | 115.0 | 0.0 | 394.2 | 1 |
| 12 | 104 | 384 | -1150 | -29 | 0 | 7 | -871 | 9.8 | 282.4 | 82.5 | 0.0 | 292.3 | 1 |
| 13 | 104 | -583 | -3884 | 6 | 0 | -5 | -2884 | 14.9 | 900.2 | 278.5 | 0.0 | 915.1 | 1 |
| 14 | 104 | 176 | 1085 | -1 | 0 | 0 | 775 | 4.5 | 239.8 | 77.8 | 0.0 | 247.4 | 3 |
| 15 | 104 | -608 | -4052 | 6 | 0 | -5 | -3007 | 15.6 | 938.4 | 290.5 | 0.0 | 953.9 | 1 |
| | | | | | | | | | | | | | |
| 1 | 116 | -701 | -4660 | 6 | 0 | -7 | -3991 | 17.9 | 1244.9 | 334.1 | 0.0 | 1262.8 | 1 |
| 5 | 116 | -319 | -1153 | 76 | 0 | -25 | -999 | 8.2 | 361.7 | 82.7 | 0.0 | 369.9 | 1 |
| 6 | 116 | 13 | -1153 | 72 | 0 | -24 | -1002 | 0.3 | 358.7 | 82.7 | 0.0 | 359.1 | 1 |
| 7 | 116 | -346 | -1152 | -78 | 0 | 26 | -997 | 8.8 | 363.2 | 82.6 | 0.0 | 372.1 | 1 |
| 8 | 116 | -13 | -1153 | -82 | 0 | 28 | -1000 | 0.3 | 368.0 | 82.7 | 0.0 | 368.3 | 1 |
| 9 | 116 | -783 | -1610 | 30 | 0 | -11 | -1391 | 20.0 | 452.2 | 115.4 | 0.0 | 472.2 | 1 |
| 10 | 116 | 325 | -1611 | 16 | 0 | -5 | -1401 | 8.3 | 442.4 | 115.5 | 0.0 | 450.7 | 1 |
| 11 | 116 | -792 | -1609 | -15 | 0 | 3 | -1390 | 20.2 | 435.2 | 115.4 | 0.0 | 455.5 | 1 |
| 12 | 116 | 384 | -1154 | -29 | 0 | 10 | -1005 | 9.8 | 330.8 | 82.7 | 0.0 | 340.6 | 1 |
| 13 | 116 | -583 | -3889 | 6 | 0 | -6 | -3335 | 14.9 | 1040.5 | 278.8 | 0.0 | 1055.4 | 1 |
| 14 | 116 | 176 | 1081 | -1 | 0 | 0 | 900 | 4.5 | 278.6 | 77.5 | 0.0 | 283.1 | 1 |
| 15 | 116 | -608 | -4057 | 6 | 0 | -6 | -3477 | 15.6 | 1084.8 | 290.9 | 0.0 | 1100.3 | 1 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|--------|-------|--------|---------|------|-----------|------|
| | | cm | daN*m | daN/cm | | cm | | |
| 1 | -- | 0 | 1388 | 428.0 | -- | -- | -- | |
| -- | Rara | 53 | 1 | -- | 53 | 0.00 | 1 / 99999 | |
| -- | Freq. | 53 | 1 | -- | 53 | 0.00 | 1 / 99999 | |
| -- | Q.Perm. | 53 | 1 | -- | 53 | 0.00 | 1 / 99999 | |
| -- | Rara | 53 | 1 | -- | 53 | 0.00 | 1 / 99999 | |
| -- | Rara | 53 | 1 | -- | 53 | 0.00 | 1 / 99999 | |
| -- | Freq. | 53 | 1 | -- | 53 | 0.00 | 1 / 99999 | |
| -- | Freq. | 53 | 1 | -- | 53 | 0.00 | 1 / 99999 | |

259
ASTA NUM. 30 NI 110 NF 104 Lungh. 125.0 cm SEZ. 1 Ps IPE 240

categoria: p.p. y qy tot.

qy medio: 0.3069 0.3069 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|------|------|------|----|-------|-------|---------|--------|--------|-------|--------|------|------|
| | cm | | daN | | | daN*m | | | | daN/cm | | | | |
| 1 | 0 | 0 | 1273 | 3 | 0 | 4 | -1562 | 0.0 | 489.7 | 91.3 | 0.0 | 489.7 | 1 | |
| 5 | 0 | -69 | 358 | -112 | 0 | -141 | -424 | 1.8 | 427.5 | 25.7 | 0.0 | 429.2 | 1 | |
| 6 | 0 | 69 | 358 | -116 | 0 | -145 | -424 | 1.8 | 435.9 | 25.7 | 0.0 | 437.7 | 1 | |
| 7 | 0 | -69 | 358 | 122 | 0 | 152 | -424 | 1.8 | 452.2 | 25.7 | 0.0 | 454.0 | 1 | |
| 8 | 0 | 69 | 358 | 119 | 0 | 148 | -424 | 1.8 | 443.8 | 25.7 | 0.0 | 445.5 | 1 | |
| 9 | 0 | -230 | 494 | -28 | 0 | -35 | -587 | 5.9 | 255.7 | 35.4 | 0.0 | 261.6 | 1 | |
| 10 | 0 | 231 | 494 | -39 | 0 | -49 | -587 | 5.9 | 283.6 | 35.4 | 0.0 | 289.5 | 1 | |
| 11 | 0 | -231 | 494 | 42 | 0 | 53 | -587 | 5.9 | 292.6 | 35.4 | 0.0 | 298.5 | 1 | |
| 12 | 0 | 230 | 358 | 31 | 0 | 39 | -424 | 5.9 | 213.6 | 25.7 | 0.0 | 219.5 | 1 | |
| 13 | 0 | 0 | 1076 | 3 | 0 | 3 | -1315 | 0.0 | 412.4 | 77.1 | 0.0 | 412.4 | 1 | |
| 14 | 0 | -0 | -213 | -0 | 0 | -0 | 291 | 0.0 | 90.1 | 15.3 | 0.0 | 90.1 | 1 | |
| 15 | 0 | 0 | 1119 | 3 | 0 | 3 | -1369 | 0.0 | 429.3 | 80.2 | 0.0 | 429.3 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|----|------|------|------|---|------|-------|-----|-------|------|-----|-------|---|
| 1 | 13 | 0 | 1268 | 3 | 0 | 3 | -1403 | 0.0 | 439.9 | 90.9 | 0.0 | 439.9 | 1 |
| 5 | 13 | -69 | 354 | -112 | 0 | -126 | -379 | 1.8 | 384.1 | 25.4 | 0.0 | 385.8 | 1 |
| 6 | 13 | 69 | 354 | -116 | 0 | -130 | -379 | 1.8 | 391.7 | 25.4 | 0.0 | 393.4 | 1 |
| 7 | 13 | -69 | 354 | 122 | 0 | 137 | -379 | 1.8 | 406.3 | 25.4 | 0.0 | 408.1 | 1 |
| 8 | 13 | 69 | 354 | 119 | 0 | 133 | -379 | 1.8 | 398.7 | 25.4 | 0.0 | 400.5 | 1 |
| 9 | 13 | -230 | 489 | -28 | 0 | -32 | -525 | 5.9 | 229.3 | 35.1 | 0.0 | 235.2 | 1 |
| 10 | 13 | 231 | 489 | -39 | 0 | -44 | -525 | 5.9 | 254.4 | 35.1 | 0.0 | 260.3 | 1 |
| 11 | 13 | -231 | 489 | 42 | 0 | 48 | -525 | 5.9 | 262.5 | 35.1 | 0.0 | 268.4 | 1 |
| 12 | 13 | 230 | 354 | 31 | 0 | 35 | -379 | 5.9 | 191.6 | 25.4 | 0.0 | 197.5 | 1 |
| 13 | 13 | 0 | 1071 | 3 | 0 | 3 | -1181 | 0.0 | 370.3 | 76.8 | 0.0 | 370.3 | 1 |
| 14 | 13 | -0 | -217 | -0 | 0 | -0 | 264 | 0.0 | 81.8 | 15.5 | 0.0 | 81.8 | 1 |
| 15 | 13 | 0 | 1114 | 3 | 0 | 3 | -1229 | 0.0 | 385.5 | 79.9 | 0.0 | 385.5 | 1 |
| | | | | | | | | | | | | | |
| 1 | 25 | 0 | 1263 | 3 | 0 | 3 | -1245 | 0.0 | 390.3 | 90.6 | 0.0 | 390.3 | 1 |
| 5 | 25 | -69 | 350 | -112 | 0 | -112 | -335 | 1.8 | 340.8 | 25.1 | 0.0 | 342.6 | 1 |
| 6 | 25 | 69 | 350 | -116 | 0 | -116 | -335 | 1.8 | 347.6 | 25.1 | 0.0 | 349.3 | 1 |
| 7 | 25 | -69 | 350 | 122 | 0 | 122 | -335 | 1.8 | 360.6 | 25.1 | 0.0 | 362.4 | 1 |
| 8 | 25 | 69 | 350 | 119 | 0 | 119 | -335 | 1.8 | 353.8 | 25.1 | 0.0 | 355.6 | 1 |
| 9 | 25 | -230 | 484 | -28 | 0 | -28 | -464 | 5.9 | 203.0 | 34.7 | 0.0 | 208.9 | 1 |
| 10 | 25 | 231 | 484 | -39 | 0 | -39 | -464 | 5.9 | 225.3 | 34.7 | 0.0 | 231.2 | 1 |
| 11 | 25 | -231 | 484 | 42 | 0 | 42 | -464 | 5.9 | 232.6 | 34.7 | 0.0 | 238.5 | 1 |
| 12 | 25 | 230 | 350 | 31 | 0 | 31 | -335 | 5.9 | 169.7 | 25.1 | 0.0 | 175.6 | 1 |
| 13 | 25 | 0 | 1066 | 3 | 0 | 3 | -1047 | 0.0 | 328.4 | 76.4 | 0.0 | 328.4 | 1 |
| 14 | 25 | -0 | -221 | -0 | 0 | -0 | 236 | 0.0 | 73.3 | 15.8 | 0.0 | 73.3 | 1 |
| 15 | 25 | 0 | 1109 | 3 | 0 | 3 | -1090 | 0.0 | 342.0 | 79.5 | 0.0 | 342.0 | 1 |
| | | | | | | | | | | | | | |
| 1 | 38 | 0 | 1258 | 3 | 0 | 3 | -1087 | 0.0 | 340.9 | 90.2 | 0.0 | 340.9 | 1 |
| 5 | 38 | -69 | 346 | -112 | 0 | -98 | -292 | 1.8 | 297.7 | 24.8 | 0.0 | 299.5 | 1 |
| 6 | 38 | 69 | 346 | -116 | 0 | -101 | -292 | 1.8 | 303.6 | 24.8 | 0.0 | 305.4 | 1 |
| 7 | 38 | -69 | 346 | 122 | 0 | 107 | -292 | 1.8 | 315.0 | 24.8 | 0.0 | 316.8 | 1 |
| 8 | 38 | 69 | 346 | 119 | 0 | 104 | -292 | 1.8 | 309.1 | 24.8 | 0.0 | 310.9 | 1 |
| 9 | 38 | -230 | 479 | -28 | 0 | -25 | -404 | 5.9 | 177.0 | 34.3 | 0.0 | 182.9 | 1 |
| 10 | 38 | 231 | 479 | -39 | 0 | -34 | -404 | 5.9 | 196.5 | 34.3 | 0.0 | 202.4 | 1 |
| 11 | 38 | -231 | 479 | 42 | 0 | 37 | -404 | 5.9 | 202.9 | 34.3 | 0.0 | 208.8 | 1 |
| 12 | 38 | 230 | 346 | 31 | 0 | 27 | -292 | 5.9 | 148.0 | 24.8 | 0.0 | 153.9 | 1 |
| 13 | 38 | 0 | 1061 | 3 | 0 | 2 | -914 | 0.0 | 286.7 | 76.1 | 0.0 | 286.7 | 1 |
| 14 | 38 | -0 | -225 | -0 | 0 | -0 | 208 | 0.0 | 64.7 | 16.1 | 0.0 | 64.7 | 1 |
| 15 | 38 | 0 | 1104 | 3 | 0 | 2 | -952 | 0.0 | 298.6 | 79.2 | 0.0 | 298.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 50 | 0 | 1253 | 3 | 0 | 2 | -930 | 0.0 | 291.7 | 89.8 | 0.0 | 291.7 | 1 |
| 5 | 50 | -69 | 343 | -112 | 0 | -84 | -249 | 1.8 | 254.7 | 24.6 | 0.0 | 256.5 | 1 |
| 6 | 50 | 69 | 343 | -116 | 0 | -87 | -249 | 1.8 | 259.8 | 24.6 | 0.0 | 261.6 | 1 |
| 7 | 50 | -69 | 343 | 122 | 0 | 91 | -249 | 1.8 | 269.6 | 24.6 | 0.0 | 271.4 | 1 |
| 8 | 50 | 69 | 343 | 119 | 0 | 89 | -249 | 1.8 | 264.5 | 24.6 | 0.0 | 266.3 | 1 |
| 9 | 50 | -230 | 474 | -28 | 0 | -21 | -345 | 5.9 | 151.2 | 34.0 | 0.0 | 157.0 | 1 |
| 10 | 50 | 231 | 474 | -39 | 0 | -29 | -345 | 5.9 | 167.9 | 34.0 | 0.0 | 173.8 | 1 |
| 11 | 50 | -231 | 474 | 42 | 0 | 32 | -345 | 5.9 | 173.3 | 34.0 | 0.0 | 179.2 | 1 |
| 12 | 50 | 230 | 343 | 31 | 0 | 24 | -249 | 5.9 | 126.4 | 24.6 | 0.0 | 132.3 | 1 |
| 13 | 50 | 0 | 1056 | 3 | 0 | 2 | -782 | 0.0 | 245.2 | 75.7 | 0.0 | 245.2 | 1 |
| 14 | 50 | -0 | -228 | -0 | 0 | -0 | 180 | 0.0 | 55.9 | 16.4 | 0.0 | 55.9 | 1 |
| 15 | 50 | 0 | 1099 | 3 | 0 | 2 | -814 | 0.0 | 255.4 | 78.8 | 0.0 | 255.4 | 1 |
| | | | | | | | | | | | | | |
| 1 | 63 | 0 | 1248 | 3 | 0 | 2 | -774 | 0.0 | 242.6 | 89.5 | 0.0 | 250.6 | 3 |
| 5 | 63 | -69 | 339 | -112 | 0 | -70 | -206 | 1.8 | 211.9 | 24.3 | 0.0 | 213.7 | 1 |
| 6 | 63 | 69 | 339 | -116 | 0 | -72 | -206 | 1.8 | 216.1 | 24.3 | 0.0 | 217.9 | 1 |
| 7 | 63 | -69 | 339 | 122 | 0 | 76 | -206 | 1.8 | 224.3 | 24.3 | 0.0 | 226.1 | 1 |
| 8 | 63 | 69 | 339 | 119 | 0 | 74 | -206 | 1.8 | 220.1 | 24.3 | 0.0 | 221.8 | 1 |
| 9 | 63 | -230 | 469 | -28 | 0 | -18 | -286 | 5.9 | 125.5 | 33.6 | 0.0 | 131.4 | 1 |
| 10 | 63 | 231 | 469 | -39 | 0 | -24 | -286 | 5.9 | 139.4 | 33.6 | 0.0 | 145.3 | 1 |
| 11 | 63 | -231 | 469 | 42 | 0 | 26 | -286 | 5.9 | 144.0 | 33.6 | 0.0 | 149.9 | 1 |
| 12 | 63 | 230 | 339 | 31 | 0 | 20 | -206 | 5.9 | 105.0 | 24.3 | 0.0 | 110.9 | 1 |
| 13 | 63 | 0 | 1051 | 3 | 0 | 2 | -650 | 0.0 | 203.9 | 75.4 | 0.0 | 210.7 | 3 |
| 14 | 63 | -0 | -232 | -0 | 0 | -0 | 151 | 0.0 | 47.0 | 16.6 | 0.0 | 48.4 | 3 |
| 15 | 63 | 0 | 1094 | 3 | 0 | 2 | -677 | 0.0 | 212.4 | 78.4 | 0.0 | 219.4 | 3 |
| | | | | | | | | | | | | | |
| 1 | 75 | 0 | 1243 | 3 | 0 | 2 | -618 | 0.0 | 193.8 | 89.1 | 0.0 | 212.7 | 3 |
| 5 | 75 | -69 | 335 | -112 | 0 | -56 | -164 | 1.8 | 169.3 | 24.0 | 0.0 | 171.0 | 1 |
| 6 | 75 | 69 | 335 | -116 | 0 | -58 | -164 | 1.8 | 172.6 | 24.0 | 0.0 | 174.4 | 1 |
| 7 | 75 | -69 | 335 | 122 | 0 | 61 | -164 | 1.8 | 179.2 | 24.0 | 0.0 | 180.9 | 1 |
| 8 | 75 | 69 | 335 | 119 | 0 | 59 | -164 | 1.8 | 175.8 | 24.0 | 0.0 | 177.5 | 1 |
| 9 | 75 | -230 | 464 | -28 | 0 | -14 | -227 | 5.9 | 100.0 | 33.3 | 0.0 | 105.9 | 1 |
| 10 | 75 | 231 | 464 | -39 | 0 | -19 | -227 | 5.9 | 111.2 | 33.3 | 0.0 | 117.1 | 1 |
| 11 | 75 | -231 | 464 | 42 | 0 | 21 | -227 | 5.9 | 114.8 | 33.3 | 0.0 | 120.7 | 1 |
| 12 | 75 | 230 | 335 | 31 | 0 | 16 | -164 | 5.9 | 83.7 | 24.0 | 0.0 | 89.6 | 1 |
| 13 | 75 | 0 | 1046 | 3 | 0 | 1 | -519 | 0.0 | 162.8 | 75.0 | 0.0 | 178.8 | 3 |
| 14 | 75 | -0 | -236 | -0 | 0 | -0 | 122 | 0.0 | 37.9 | 16.9 | 0.0 | 41.5 | 3 |
| 15 | 75 | 0 | 1089 | 3 | 0 | 1 | -541 | 0.0 | 169.6 | 78.1 | 0.0 | 186.2 | 3 |
| | | | | | | | | | | | | | |
| 1 | 88 | 0 | 1238 | 3 | 0 | 1 | -463 | 0.0 | 145.1 | 88.8 | 0.0 | 178.0 | 3 |
| 5 | 88 | -69 | 331 | -112 | 0 | -42 | -122 | 1.8 | 126.7 | 23.7 | 0.0 | 128.5 | 1 |
| 6 | 88 | 69 | 331 | -116 | 0 | -43 | -122 | 1.8 | 129.3 | 23.7 | 0.0 | 131.1 | 1 |
| 7 | 88 | -69 | 331 | 122 | 0 | 46 | -122 | 1.8 | 134.2 | 23.7 | 0.0 | 135.9 | 1 |
| 8 | 88 | 69 | 331 | 119 | 0 | 44 | -122 | 1.8 | 131.6 | 23.7 | 0.0 | 133.4 | 1 |
| 9 | 88 | -230 | 459 | -28 | 0 | -11 | -170 | 5.9 | 74.8 | 32.9 | 0.0 | 80.7 | 1 |
| 10 | 88 | 231 | 459 | -39 | 0 | -15 | -170 | 5.9 | 83.1 | 32.9 | 0.0 | 89.0 | 1 |
| 11 | 88 | -231 | 459 | 42 | 0 | 16 | -170 | 5.9 | 85.9 | 32.9 | 0.0 | 91.8 | 1 |
| 12 | 88 | 230 | 331 | 31 | 0 | 12 | -122 | 5.9 | 62.6 | 23.7 | 0.0 | 68.5 | 1 |
| 13 | 88 | 0 | 1041 | 3 | 0 | 1 | -389 | 0.0 | 121.9 | 74.6 | 0.0 | 149.5 | 3 |
| 14 | 88 | -0 | -240 | -0 | 0 | -0 | 92 | 0.0 | 28.6 | 17.2 | 0.0 | 35.0 | 3 |

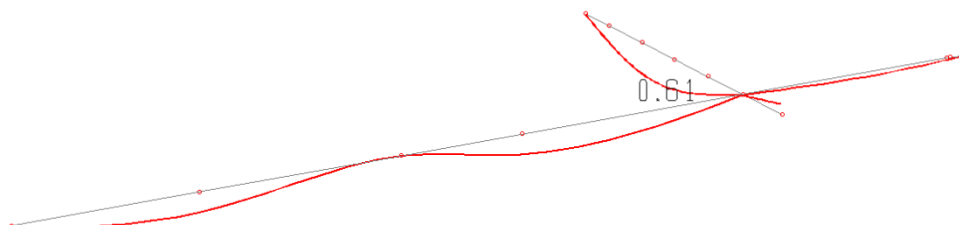
REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|------|------|---|-----|------|-----|-------|------|-----|-------|---|
| 15 | 88 | 0 | 1084 | 3 | 0 | 1 | -405 | 0.0 | 127.0 | 77.7 | 0.0 | 155.7 | 3 |
| 1 | 100 | 0 | 1233 | 3 | 0 | 1 | -308 | 0.0 | 96.7 | 88.4 | 0.0 | 153.1 | 4 |
| 5 | 100 | -69 | 327 | -112 | 0 | -28 | -81 | 1.8 | 84.4 | 23.5 | 0.0 | 86.1 | 1 |
| 6 | 100 | 69 | 327 | -116 | 0 | -29 | -81 | 1.8 | 86.1 | 23.5 | 0.0 | 87.8 | 1 |
| 7 | 100 | -69 | 327 | 122 | 0 | 30 | -81 | 1.8 | 89.3 | 23.5 | 0.0 | 91.1 | 1 |
| 8 | 100 | 69 | 327 | 119 | 0 | 30 | -81 | 1.8 | 87.6 | 23.5 | 0.0 | 89.4 | 1 |
| 9 | 100 | -230 | 454 | -28 | 0 | -7 | -113 | 5.9 | 49.7 | 32.5 | 0.0 | 58.7 | 3 |
| 10 | 100 | 231 | 454 | -39 | 0 | -10 | -113 | 5.9 | 55.3 | 32.5 | 0.0 | 61.2 | 1 |
| 11 | 100 | -231 | 454 | 42 | 0 | 11 | -113 | 5.9 | 57.1 | 32.5 | 0.0 | 63.0 | 1 |
| 12 | 100 | 230 | 327 | 31 | 0 | 8 | -81 | 5.9 | 41.6 | 23.5 | 0.0 | 47.5 | 1 |
| 13 | 100 | 0 | 1036 | 3 | 0 | 1 | -259 | 0.0 | 81.2 | 74.3 | 0.0 | 128.7 | 4 |
| 14 | 100 | -0 | -244 | -0 | 0 | -0 | 62 | 0.0 | 19.3 | 17.5 | 0.0 | 30.3 | 4 |
| 15 | 100 | 0 | 1079 | 3 | 0 | 1 | -270 | 0.0 | 84.5 | 77.4 | 0.0 | 134.0 | 4 |
| 1 | 113 | 0 | 1228 | 3 | 0 | 0 | -154 | 0.0 | 48.4 | 88.0 | 0.0 | 152.5 | 4 |
| 5 | 113 | -69 | 323 | -112 | 0 | -14 | -40 | 1.8 | 42.2 | 23.2 | 0.0 | 43.9 | 1 |
| 6 | 113 | 69 | 323 | -116 | 0 | -14 | -40 | 1.8 | 43.0 | 23.2 | 0.0 | 44.8 | 1 |
| 7 | 113 | -69 | 323 | 122 | 0 | 15 | -40 | 1.8 | 44.6 | 23.2 | 0.0 | 46.4 | 1 |
| 8 | 113 | 69 | 323 | 119 | 0 | 15 | -40 | 1.8 | 43.8 | 23.2 | 0.0 | 45.6 | 1 |
| 9 | 113 | -230 | 449 | -28 | 0 | -4 | -56 | 5.9 | 24.8 | 32.2 | 0.0 | 56.1 | 4 |
| 10 | 113 | 231 | 449 | -39 | 0 | -5 | -56 | 5.9 | 27.6 | 32.2 | 0.0 | 56.1 | 4 |
| 11 | 113 | -231 | 449 | 42 | 0 | 5 | -56 | 5.9 | 28.5 | 32.2 | 0.0 | 56.1 | 4 |
| 12 | 113 | 230 | 323 | 31 | 0 | 4 | -40 | 5.9 | 20.8 | 23.2 | 0.0 | 40.7 | 4 |
| 13 | 113 | 0 | 1031 | 3 | 0 | 0 | -129 | 0.0 | 40.6 | 73.9 | 0.0 | 128.0 | 4 |
| 14 | 113 | -0 | -248 | -0 | 0 | -0 | 31 | 0.0 | 9.7 | 17.7 | 0.0 | 30.7 | 4 |
| 15 | 113 | 0 | 1074 | 3 | 0 | 0 | -135 | 0.0 | 42.3 | 77.0 | 0.0 | 133.4 | 4 |
| 1 | 125 | 0 | 1223 | 3 | 0 | 0 | -1 | 0.0 | 0.3 | 87.7 | 0.0 | 151.9 | 4 |
| 5 | 125 | -69 | 320 | -112 | 0 | 0 | -0 | 1.8 | 0.1 | 22.9 | 0.0 | 39.7 | 4 |
| 6 | 125 | 69 | 320 | -116 | 0 | 0 | -0 | 1.8 | 0.1 | 22.9 | 0.0 | 39.7 | 4 |
| 7 | 125 | -69 | 320 | 122 | 0 | 0 | -0 | 1.8 | 0.1 | 22.9 | 0.0 | 39.7 | 4 |
| 8 | 125 | 69 | 320 | 119 | 0 | 0 | -0 | 1.8 | 0.1 | 22.9 | 0.0 | 39.7 | 4 |
| 9 | 125 | -230 | 444 | -28 | 0 | 0 | -0 | 5.9 | 0.1 | 31.8 | 0.0 | 55.4 | 4 |
| 10 | 125 | 231 | 444 | -39 | 0 | 0 | -0 | 5.9 | 0.1 | 31.8 | 0.0 | 55.5 | 4 |
| 11 | 125 | -231 | 444 | 42 | 0 | 0 | -0 | 5.9 | 0.1 | 31.8 | 0.0 | 55.5 | 4 |
| 12 | 125 | 230 | 320 | 31 | 0 | 0 | -0 | 5.9 | 0.1 | 22.9 | 0.0 | 40.1 | 4 |
| 13 | 125 | 0 | 1026 | 3 | 0 | 0 | -1 | 0.0 | 0.3 | 73.6 | 0.0 | 127.4 | 4 |
| 14 | 125 | -0 | -251 | -0 | 0 | -0 | 0 | 0.0 | 0.1 | 18.0 | 0.0 | 31.2 | 4 |
| 15 | 125 | 0 | 1069 | 3 | 0 | 0 | -1 | 0.0 | 0.3 | 76.6 | 0.0 | 132.7 | 4 |

MOMENTO MASSIMO E FRECCIA IN CAMPATA

| NC | Tipo | x Mmax | Mmax | Sf (M) | x fmax. | fmax | fmax / l | Nota |
|----|---------|--------|-------|---------------------|---------|------|-----------|------|
| | | cm | daN*m | daN/cm ² | | cm | | |
| 14 | -- | 0 | 291 | 89.6 | -- | -- | -- | |
| -- | Rara | 75 | 4 | -- | 68 | 0.00 | 1 / 99999 | |
| -- | Freq. | 75 | 4 | -- | 68 | 0.00 | 1 / 99999 | |
| -- | Q.Perm. | 75 | 4 | -- | 68 | 0.00 | 1 / 99999 | |
| -- | Rara | 75 | 4 | -- | 68 | 0.00 | 1 / 99999 | |
| -- | Rara | 75 | 4 | -- | 68 | 0.00 | 1 / 99999 | |
| -- | Freq. | 75 | 4 | -- | 68 | 0.00 | 1 / 99999 | |
| -- | Freq. | 75 | 4 | -- | 68 | 0.00 | 1 / 99999 | |

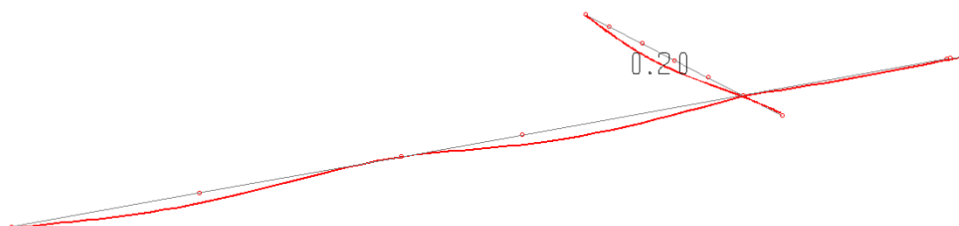
Verifica spostamenti verticali



Prospettiva

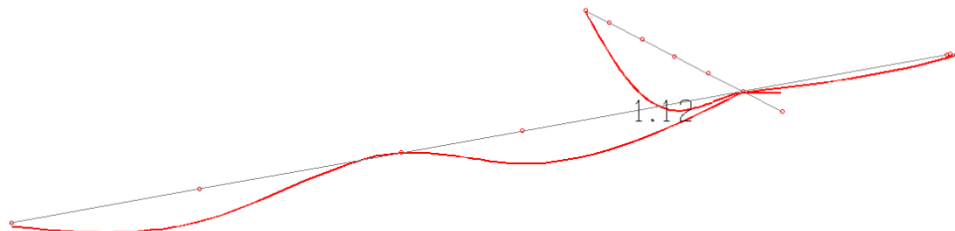
Freccia massima combinazione frequente

262



Prospettiva

Freccia massima combinazione quasi permanente



Prospettiva

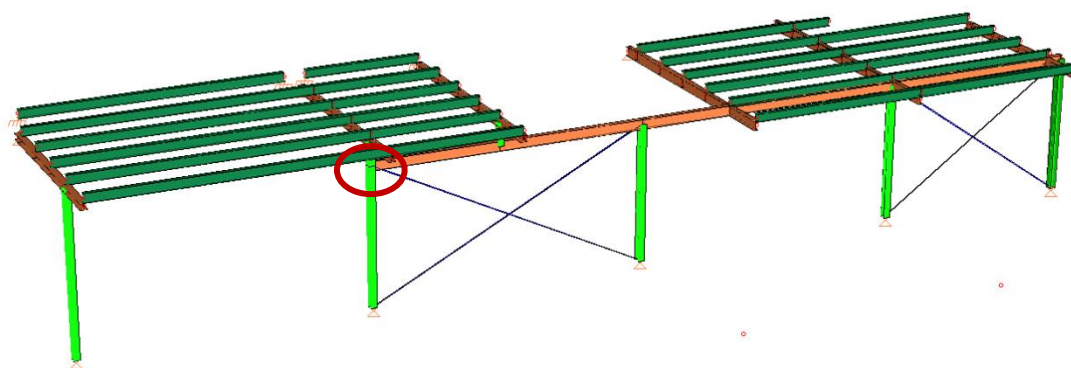
Freccia massima combinazione rara

Luce di calcolo 320 cm

| | |
|------------------|---|
| Rara | $560/1.12 = 500 > 250 \rightarrow \text{verificato}$ |
| Frequente | $560/0.61 = 918 > 250 \rightarrow \text{verificato}$ |
| Quasi permanente | $560/0.20 = 2800 > 250 \rightarrow \text{verificato}$ |

4.2.2. VERIFICA NODO TRAVE IPE240 – COLONNA HEB160.

Si esegue la verifica a taglio della trave ancorata al pilastro come semplice appoggio.



Prospettiva

264

Colonna: Gruppo = 1 Elemento = 2 **HEB 160**

Trave secondaria: Gruppo = 2 Elemento = 39 **IPE 240**

S 235 (Fe 360)

[Verifica] Banca n. 0: Banche generali AMV

$N = -1632.00 \text{ daN}$ $T = 827.40 \text{ daN}$

[Bulloni] (Classe 8.8)

$n. (\text{lato profilo supportato}) = 2$ $n. (\text{lato profilo supportante}) = 1$ M14 Disposizione a due bulloni Inc.Foro=1.0

[Squadrette] (S 235 (Fe 360))

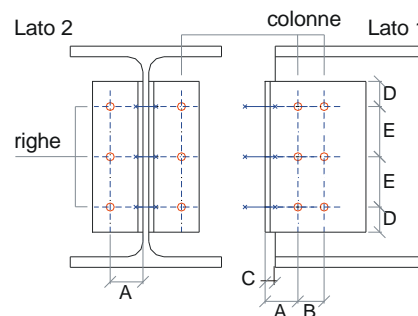
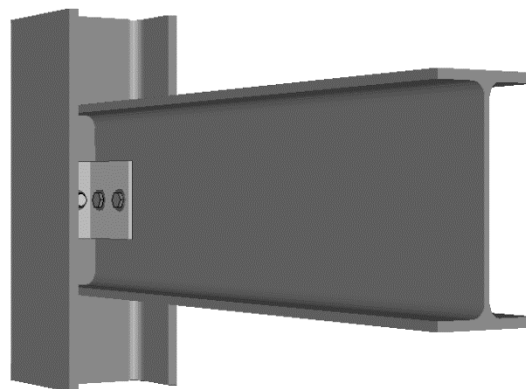
L100x50x6 $h = 100$ $A = 30$ $B = 50$ $C = 5$ $D = 50$ (mm)

[Resistenza a taglio dei bulloni]

$F_v, R_d, \text{Tot} = 4471.2 \text{ daN}$ (trave portata) I.R. = 0.18

$F_v, R_d, \text{Tot} = 4471.2 \text{ daN}$ (trave portante) I.R. = 0.09

[Rifollamento]



Fb,Rd = 4939.2 daN (squadretta sulla trave portata) I.R. = 0.16

Fb,Rd = 6249.6 daN (trave portata) I.R. = 0.26

Fb,Rd = 4939.2 daN (squadretta sulla trave portante) I.R. = 0.08

Fb,Rd = 8064.0 daN (trave portante) I.R. = 0.05

[Verifica della sezione lorda]

Vpl,Rd = 7753.0 daN (squadretta sul lato della trave portata) I.R. = 0.05

Vpl,Rd = 24716.0 daN (trave portata) I.R. = 0.03

Vpl,Rd = 7753.0 daN (squadretta sul lato della trave portante) I.R. = 0.05

[Verifica della sezione netta]

Vpl,Rd = 8480.1 daN (squadretta sul lato della trave portata) I.R. = 0.05

Vpl,Rd = 30258.4 daN (trave portata) I.R. = 0.03

Vpl,Rd = 8480.1 daN (squadretta sul lato della trave portante) I.R. = 0.05

[Verifica a Block Shear]

Fv,Rd = 7736.5 daN (squadretta sul lato della trave portata) I.R. = 0.05

Fv,Rd = 10210.3 daN (trave portata) I.R. = 0.08

Fv,Rd = 5361.1 daN (squadretta sul lato della trave portante) I.R. = 0.08

[Verifica a momento flettente]

I.R. (squadretta sul lato della trave portata) = 0.12

I.R. (squadretta sul lato della trave portante) = 0.06

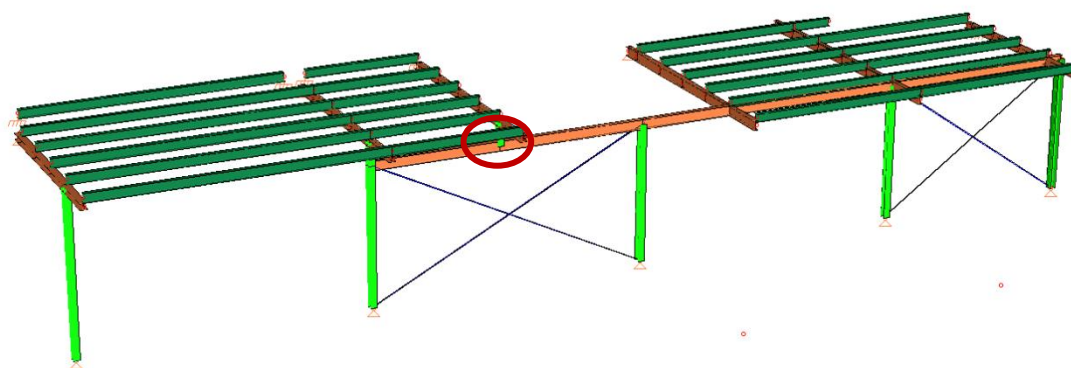
I.R. (trave portata) = 0.02

[Resistenza del nodo]

Modalità di collasso: **nessuna**, situazione più gravosa [Rifollamento (trave portata)]

4.2.1. VERIFICA NODO COLONNA HEB160 - TRAVE IPE240

Si esegue la verifica a del pilastro ancorata alla trave.



Prospettiva

266

Colonna: Gruppo = 1 Elemento = 6 **HEB 160**

Trave: Gruppo = 2 Elemento = 40 **IPE 240** S 235 (Fe 360)

[Verifica] Banca n. 0: Banche generali AMV

$N = -2258.00 \text{ daN}$ $T \text{ (taglio massimo)} = 95.71 \text{ daN}$ $M_{\text{max pos.}} = 185.70 \text{ daN*cm}$ $M_{\text{max neg.}} = -33.01 \text{ daN*cm}$ $M_{\text{torcente}} = 418.80 \text{ daN*cm}$

Per le sollecitazioni di ogni c.c. riferirsi ai risultati dell'analisi strutturale.

[Verifica flangia] (S 235 (Fe 360))

Flangia tipo 1: 160x180x10 $A = 80$ $B = 100$ $C = 55$ (mm)

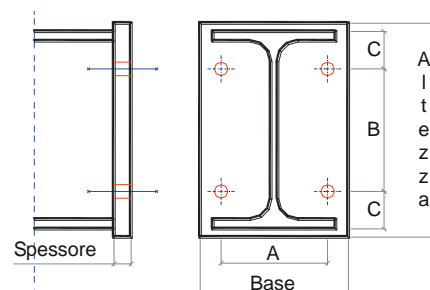
n. 0 file intermedie di bulloni per infittimento

Diam. bulloni M14 Incremento foro: 1.0 (mm) (Classe 8.8)

[Resistenza zona a taglio]

$F_{Rd} = 22244.4 \text{ daN}$ (resistenza anima colonna)

[Resistenza zona a compressione]



$F_{Rd} = 12821.6 \text{ daN}$ (resistenza anima colonna)

[Resistenza zona a trazione]

[Seconda fila di bulloni]

$F_{Rd} = 9842.2 \text{ daN}$ (resistenza ala colonna)

$F_{Rd} = 10577.0 \text{ daN}$ (resistenza flangia di estremità)

$F_{Rd} = 15704.6 \text{ daN}$ (resistenza anima colonna)

$F_{t2,Rd,ult} = 9842.2 \text{ daN}$ (resistenza efficace seconda fila)

[Momento resistente negativo]

$M_{j,Rd} = 96945.8 \text{ daN*cm}$

[Momento resistente positivo]

$M_{j,Rd} = 96945.8 \text{ daN*cm}$

[Rigidità rotazionale (M negativo)] (calcolata per N trascurabile)

$S_{j} = 34726492.0 \text{ daN*cm/rad}$ (rigidità del giunto)

[Rigidità rotazionale (M positivo)] (calcolata per N trascurabile)

$S_{j} = 34726492.0 \text{ daN*cm/rad}$ (rigidità del giunto)

[Resistenza assiale profilo]

$N_{pl,Rd} = 121528.6 \text{ daN}$ $|N| \leq 0.05 N_{pl,Rd}$ (trascurabile)

[Verifica a presso-tensoflessione del giunto]

I.R. = 0.00

[Verifica a taglio del nodo]

$F_{v,Rd} = 4471.2 \text{ daN}$ (resistenza dei bulloni a taglio)

$F_{t,Rd} = 6706.8 \text{ daN}$ (resistenza dei bulloni a trazione)

I.R. = 0.01

[Verifica di rifollamento]

$F_{b,Rd} = 8960.0 \text{ daN}$ (resistenza a rifollamento)

I.R. = 0.00

[Verifica saldatura profilo]

Saldatura a cordone d'angolo (doppia sull'ala): verificata

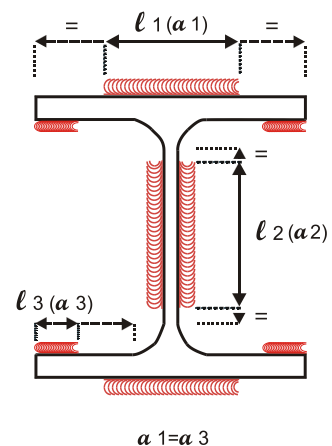
Lunghezza1: 160 (mm) Altezza di gola1: 5 (mm)

Lunghezza2: 104 (mm) Altezza di gola2: 5 (mm)

Lunghezza3: 61 (mm) Altezza di gola3: 5 (mm)

Sigma perp. = 59.4 daN/cm² Tens par. = 68.0 daN/cm²

I.R. = 0.06



4.2.2. VERIFICA NODO INCASTRO TRAVE CONTINUA IPE240

Trave principale: Gruppo = 2 Elemento = 17 **IPE 240**

Trave secondaria: Gruppo = 2 Elemento = 40 **IPE 240** S 235 (Fe 360)

[Verifica] Banca n. 0: Banche generali AMV

$N = -2657.00 \text{ daN}$ $T = -1706.00 \text{ daN}$ $M = -349300.00 \text{ daN*cm}$ $M \text{ torcente} = 0.00 \text{ daN*cm}$

[Coprigiunto anima] S 235 (Fe 360)

300x200x6 A = 50 B = 50 C = 50 D = 50 E = 50 (mm)

[Coprigiunto ala] S 235 (Fe 360)

300x120x6 A = 50 B = 50 C = 50 D = 30 F = 30 (mm)

[Coprigiunto anima] (Classe 8.8)

N. bulloni anima = 6 + 6 M14 Disposizione a doppia colonna
Inc.Foro=1.0

[Resistenza a taglio]

$F_v, R_d, Tot = 4471.2 \text{ daN}$ (dei bulloni)

I.R. = 0.41

$F_v, R_d, Tot = 14846.2 \text{ daN}$ (del coprigiunto)

I.R. = 0.06

[Verifica a momento flettente]

I.R. = 0.46

[Rifollamento]

$F_v, R_d = 5208.0 \text{ daN}$ (del coprigiunto)

I.R. = 0.35

$F_v, R_d = 5381.6 \text{ daN}$ (anima della trave)

I.R. = 0.68

[Verifica a Block Shear]

$B_v, R_d = 15506.0 \text{ daN}$ (del coprigiunto)

I.R. = 0.06

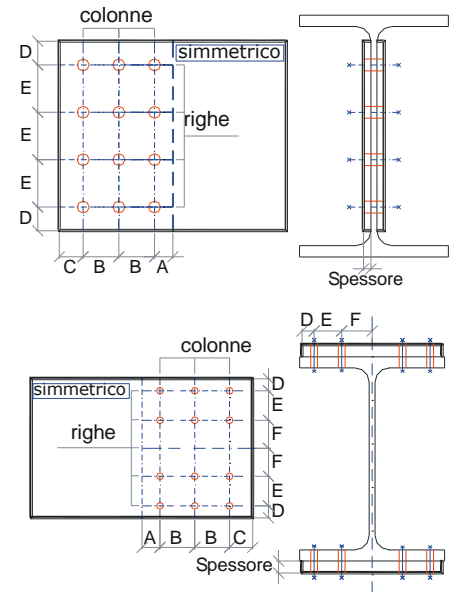
$B_v, R_d = 16022.8 \text{ daN}$ (anima della trave)

I.R. = 0.11

[Verifica a taglio sulla trave]

$F_v, R_d = 24716.0 \text{ daN}$ (sezione lorda)

I.R. = 0.07



$F_{V,Rd} = 27165.6 \text{ daN}$ (sezione netta)

$I.R. = 0.06$

[Coprigiunto ala] (Classe 8.8)

N. bulloni ala = 4 + 4 M14 Disposizione a singolo coprigiunto a due righe Inc.For=1.0

[Resistenza a taglio]

$F_{V,Rd} = 4471.2 \text{ daN}$ (dei bulloni)

$I.R. = 0.72$

[Rifollamento]

$F_{V,Rd} = 4032.0 \text{ daN}$ (del coprigiunto)

$I.R. = 0.80$

$F_{V,Rd} = 6585.6 \text{ daN}$ (ala della trave)

$I.R. = 0.49$

[Verifica a trazione/compressione]

$F_{N,Rd} = 16114.3 \text{ daN}$ (sezione lorda)

$I.R. = 0.80$

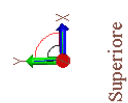
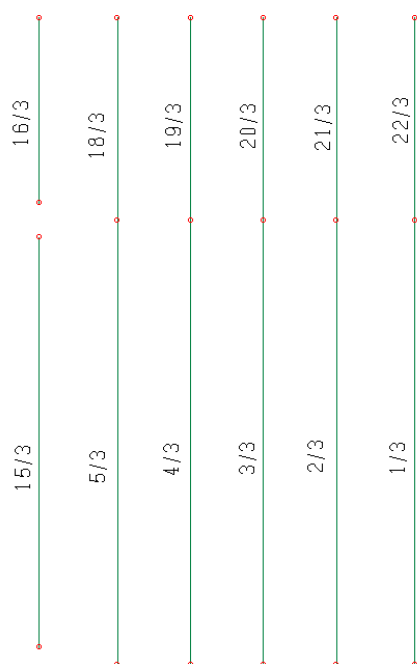
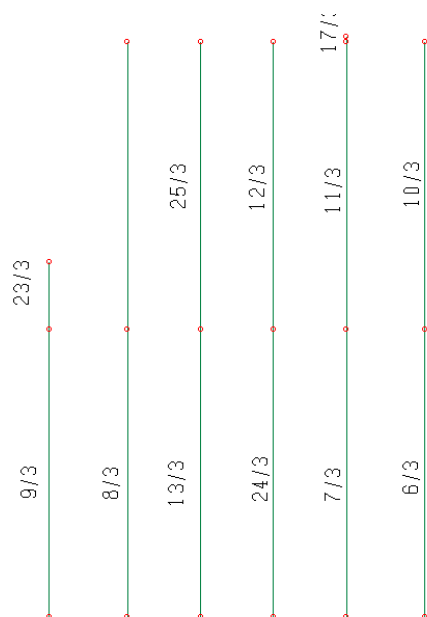
$F_{N,Rd} = 13996.8 \text{ daN}$ (sezione netta)

$I.R. = 0.93$

[Resistenza del nodo]

Modalità di collasso: vedi [Verifica a trazione/compressione sezione lorda]

4.3. VERIFICA TRAVI SECONDARIE



Pianta travatura secondaria blocco 2 con indicato il codice degli elementi asta

4.3.1. VERIFICA SLU E SLE

Lavoro: **BLOCCO 4** Intestazione lavoro: **ESECUTIVO**

Elemento: **TRAVE** Metodo di verifica: **Stati limite**

Gruppo: **3** Descrizione: **Trave secondaria**

Tabella: **TABELLA TRAVI SECONDARIE**

Tipo acciaio: **S 275**

ASTA NUM. 2 NI 127 NF 137 Lungh. 706.5 cm SEZ. 8 Ps IPE 220

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

qy medio: 0.2622 0.2410 0.6025 2.0726 1.2050 4.3833 daN/cm

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| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|-----|------|------|----|-------|----|------|---------|--------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -1 | 1712 | -0 | 0 | -0 | 0 | 0.0 | 0.1 | 143.0 | 0.0 | 247.7 | 4 | |
| 5 | 0 | -795 | 391 | 0 | 0 | 0 | 0 | 23.8 | 0.2 | 32.6 | 0.0 | 61.3 | 4 | |
| 6 | 0 | -795 | 391 | 0 | 0 | 0 | 0 | 23.8 | 0.2 | 32.6 | 0.0 | 61.3 | 4 | |
| 7 | 0 | 796 | 391 | -0 | 0 | -0 | 0 | 23.8 | 0.2 | 32.6 | 0.0 | 61.3 | 4 | |
| 8 | 0 | 796 | 391 | -0 | 0 | -0 | 0 | 23.8 | 0.2 | 32.6 | 0.0 | 61.3 | 4 | |
| 9 | 0 | -238 | 550 | -0 | 0 | 0 | 0 | 7.1 | 0.0 | 46.0 | 0.0 | 80.0 | 4 | |
| 10 | 0 | -238 | 550 | 0 | 0 | 0 | 0 | 7.1 | 0.0 | 46.0 | 0.0 | 80.0 | 4 | |
| 11 | 0 | 239 | 550 | -0 | 0 | -0 | 0 | 7.1 | 0.1 | 46.0 | 0.0 | 80.0 | 4 | |
| 12 | 0 | 239 | 391 | 0 | 0 | -0 | 0 | 7.1 | 0.1 | 32.6 | 0.0 | 57.0 | 4 | |
| 13 | 0 | -0 | 1419 | -0 | 0 | -0 | 0 | 0.0 | 0.1 | 118.6 | 0.0 | 205.3 | 4 | |
| 14 | 0 | 0 | -461 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 38.5 | 0.0 | 66.7 | 4 | |
| 15 | 0 | -0 | 1483 | -0 | 0 | -0 | 0 | 0.0 | 0.1 | 123.9 | 0.0 | 214.6 | 4 | |
| 1 | 71 | -1 | 1370 | -0 | 0 | -0 | 1089 | 0.0 | 432.1 | 114.4 | 0.0 | 432.1 | 1 | |
| 5 | 71 | -795 | 312 | 0 | 0 | 0 | 248 | 23.8 | 98.7 | 26.1 | 0.0 | 122.5 | 1 | |
| 6 | 71 | -795 | 312 | 0 | 0 | 0 | 248 | 23.8 | 98.7 | 26.1 | 0.0 | 122.5 | 1 | |
| 7 | 71 | 796 | 312 | -0 | 0 | -0 | 248 | 23.8 | 98.7 | 26.1 | 0.0 | 122.5 | 1 | |
| 8 | 71 | 796 | 312 | -0 | 0 | -0 | 248 | 23.8 | 98.7 | 26.1 | 0.0 | 122.6 | 1 | |
| 9 | 71 | -238 | 440 | -0 | 0 | 0 | 350 | 7.1 | 138.9 | 36.8 | 0.0 | 146.1 | 1 | |
| 10 | 71 | -238 | 440 | 0 | 0 | 0 | 350 | 7.1 | 138.9 | 36.8 | 0.0 | 146.0 | 1 | |
| 11 | 71 | 239 | 440 | -0 | 0 | -0 | 350 | 7.1 | 138.9 | 36.8 | 0.0 | 146.0 | 1 | |
| 12 | 71 | 239 | 312 | 0 | 0 | -0 | 248 | 7.1 | 98.7 | 26.1 | 0.0 | 105.8 | 1 | |
| 13 | 71 | -0 | 1135 | -0 | 0 | -0 | 902 | 0.0 | 358.0 | 94.8 | 0.0 | 358.0 | 1 | |
| 14 | 71 | 0 | -369 | 0 | 0 | 0 | -293 | 0.0 | 116.3 | 30.8 | 0.0 | 116.3 | 1 | |
| 15 | 71 | -0 | 1186 | -0 | 0 | -0 | 943 | 0.0 | 374.1 | 99.1 | 0.0 | 374.1 | 1 | |
| 1 | 141 | -1 | 1027 | -0 | 0 | -0 | 1936 | 0.0 | 768.1 | 85.8 | 0.0 | 768.2 | 1 | |
| 5 | 141 | -795 | 234 | 0 | 0 | 0 | 442 | 23.8 | 175.4 | 19.6 | 0.0 | 199.2 | 1 | |
| 6 | 141 | -795 | 234 | 0 | 0 | 0 | 442 | 23.8 | 175.3 | 19.6 | 0.0 | 199.1 | 1 | |
| 7 | 141 | 796 | 234 | -0 | 0 | -0 | 442 | 23.8 | 175.3 | 19.6 | 0.0 | 199.2 | 1 | |
| 8 | 141 | 796 | 234 | -0 | 0 | -0 | 442 | 23.8 | 175.4 | 19.6 | 0.0 | 199.2 | 1 | |
| 9 | 141 | -238 | 330 | -0 | 0 | 0 | 622 | 7.1 | 247.0 | 27.6 | 0.0 | 254.1 | 1 | |
| 10 | 141 | -238 | 330 | 0 | 0 | -0 | 622 | 7.1 | 246.9 | 27.6 | 0.0 | 254.0 | 1 | |
| 11 | 141 | 239 | 330 | -0 | 0 | 0 | 622 | 7.1 | 246.9 | 27.6 | 0.0 | 254.0 | 1 | |
| 12 | 141 | 239 | 234 | 0 | 0 | -0 | 442 | 7.1 | 175.3 | 19.6 | 0.0 | 182.5 | 1 | |
| 13 | 141 | -0 | 851 | -0 | 0 | -0 | 1604 | 0.0 | 636.4 | 71.1 | 0.0 | 636.4 | 1 | |
| 14 | 141 | 0 | -276 | 0 | 0 | -0 | -521 | 0.0 | 206.7 | 23.1 | 0.0 | 206.7 | 1 | |
| 15 | 141 | -0 | 890 | -0 | 0 | -0 | 1676 | 0.0 | 665.0 | 74.3 | 0.0 | 665.1 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|-------|----|---|----|------|------|--------|-------|-----|--------|---|
| 1 | 212 | -1 | 685 | -0 | 0 | 0 | 2541 | 0.0 | 1008.2 | 57.2 | 0.0 | 1008.2 | 1 |
| 5 | 212 | -795 | 156 | 0 | 0 | 0 | 579 | 23.8 | 230.1 | 13.1 | 0.0 | 253.9 | 1 |
| 6 | 212 | -795 | 156 | 0 | 0 | 0 | 579 | 23.8 | 230.1 | 13.1 | 0.0 | 253.8 | 1 |
| 7 | 212 | 796 | 156 | -0 | 0 | -0 | 579 | 23.8 | 230.0 | 13.1 | 0.0 | 253.9 | 1 |
| 8 | 212 | 796 | 156 | -0 | 0 | -0 | 579 | 23.8 | 230.1 | 13.1 | 0.0 | 253.9 | 1 |
| 9 | 212 | -238 | 220 | -0 | 0 | 0 | 816 | 7.1 | 324.2 | 18.4 | 0.0 | 331.3 | 1 |
| 10 | 212 | -238 | 220 | 0 | 0 | -0 | 816 | 7.1 | 324.1 | 18.4 | 0.0 | 331.2 | 1 |
| 11 | 212 | 239 | 220 | -0 | 0 | 0 | 816 | 7.1 | 324.1 | 18.4 | 0.0 | 331.2 | 1 |
| 12 | 212 | 239 | 156 | 0 | 0 | -0 | 579 | 7.1 | 230.1 | 13.1 | 0.0 | 237.3 | 1 |
| 13 | 212 | -0 | 568 | -0 | 0 | 0 | 2105 | 0.0 | 835.3 | 47.4 | 0.0 | 835.3 | 1 |
| 14 | 212 | 0 | -184 | 0 | 0 | -0 | -684 | 0.0 | 271.3 | 15.4 | 0.0 | 271.3 | 1 |
| 15 | 212 | -0 | 593 | -0 | 0 | 0 | 2200 | 0.0 | 872.9 | 49.6 | 0.0 | 872.9 | 1 |
| | | | | | | | | | | | | | |
| 1 | 283 | -1 | 342 | -0 | 0 | 0 | 2904 | 0.0 | 1152.2 | 28.6 | 0.0 | 1152.3 | 1 |
| 5 | 283 | -795 | 78 | 0 | 0 | 0 | 662 | 23.8 | 263.0 | 6.5 | 0.0 | 286.8 | 1 |
| 6 | 283 | -795 | 78 | 0 | 0 | 0 | 662 | 23.8 | 262.9 | 6.5 | 0.0 | 286.7 | 1 |
| 7 | 283 | 796 | 78 | -0 | 0 | -0 | 662 | 23.8 | 262.8 | 6.5 | 0.0 | 286.7 | 1 |
| 8 | 283 | 796 | 78 | -0 | 0 | -0 | 662 | 23.8 | 262.9 | 6.5 | 0.0 | 286.8 | 1 |
| 9 | 283 | -238 | 110 | -0 | 0 | 0 | 933 | 7.1 | 370.5 | 9.2 | 0.0 | 377.6 | 1 |
| 10 | 283 | -238 | 110 | 0 | 0 | -0 | 933 | 7.1 | 370.4 | 9.2 | 0.0 | 377.5 | 1 |
| 11 | 283 | 239 | 110 | -0 | 0 | 0 | 933 | 7.1 | 370.4 | 9.2 | 0.0 | 377.6 | 1 |
| 12 | 283 | 239 | 78 | 0 | 0 | -0 | 662 | 7.1 | 263.0 | 6.5 | 0.0 | 270.1 | 1 |
| 13 | 283 | -0 | 284 | -0 | 0 | 0 | 2406 | 0.0 | 954.6 | 23.7 | 0.0 | 954.6 | 1 |
| 14 | 283 | 0 | -92 | 0 | 0 | -0 | -781 | 0.0 | 310.0 | 7.7 | 0.0 | 310.0 | 1 |
| 15 | 283 | -0 | 297 | -0 | 0 | 0 | 2514 | 0.0 | 997.6 | 24.8 | 0.0 | 997.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 353 | -1 | 0 | -0 | 0 | 0 | 3025 | 0.0 | 1200.3 | 0.0 | 0.0 | 1200.3 | 1 |
| 5 | 353 | -795 | 0 | 0 | 0 | 0 | 690 | 23.8 | 273.9 | 0.0 | 0.0 | 297.7 | 1 |
| 6 | 353 | -795 | 0 | 0 | 0 | 0 | 690 | 23.8 | 273.8 | 0.0 | 0.0 | 297.6 | 1 |
| 7 | 353 | 796 | 0 | -0 | 0 | 0 | 690 | 23.8 | 273.8 | 0.0 | 0.0 | 297.6 | 1 |
| 8 | 353 | 796 | 0 | -0 | 0 | -0 | 690 | 23.8 | 273.9 | 0.0 | 0.0 | 297.7 | 1 |
| 9 | 353 | -238 | 0 | -0 | 0 | 0 | 972 | 7.1 | 386.0 | 0.0 | 0.0 | 393.1 | 1 |
| 10 | 353 | -238 | 0 | 0 | 0 | -0 | 972 | 7.1 | 385.9 | 0.0 | 0.0 | 393.0 | 1 |
| 11 | 353 | 239 | 0 | -0 | 0 | 0 | 972 | 7.1 | 385.9 | 0.0 | 0.0 | 393.0 | 1 |
| 12 | 353 | 239 | 0 | 0 | 0 | -0 | 690 | 7.1 | 274.0 | 0.0 | 0.0 | 281.1 | 1 |
| 13 | 353 | -0 | 0 | -0 | 0 | 0 | 2506 | 0.0 | 994.4 | 0.0 | 0.0 | 994.4 | 1 |
| 14 | 353 | 0 | -0 | 0 | 0 | -0 | -814 | 0.0 | 323.0 | 0.0 | 0.0 | 323.0 | 1 |
| 15 | 353 | -0 | -0 | -0 | 0 | 0 | 2619 | 0.0 | 1039.2 | 0.0 | 0.0 | 1039.2 | 1 |
| | | | | | | | | | | | | | |
| 1 | 424 | -1 | -342 | -0 | 0 | 0 | 2904 | 0.0 | 1152.3 | 28.6 | 0.0 | 1152.3 | 1 |
| 5 | 424 | -795 | -78 | 0 | 0 | 0 | 662 | 23.8 | 262.9 | 6.5 | 0.0 | 286.7 | 1 |
| 6 | 424 | -795 | -78 | 0 | 0 | 0 | 662 | 23.8 | 262.8 | 6.5 | 0.0 | 286.6 | 1 |
| 7 | 424 | 796 | -78 | -0 | 0 | 0 | 662 | 23.8 | 262.9 | 6.5 | 0.0 | 286.7 | 1 |
| 8 | 424 | 796 | -78 | -0 | 0 | -0 | 662 | 23.8 | 262.9 | 6.5 | 0.0 | 286.7 | 1 |
| 9 | 424 | -238 | -110 | -0 | 0 | 0 | 933 | 7.1 | 370.6 | 9.2 | 0.0 | 377.7 | 1 |
| 10 | 424 | -238 | -110 | 0 | 0 | -0 | 933 | 7.1 | 370.5 | 9.2 | 0.0 | 377.6 | 1 |
| 11 | 424 | 239 | -110 | -0 | 0 | 0 | 933 | 7.1 | 370.5 | 9.2 | 0.0 | 377.7 | 1 |
| 12 | 424 | 239 | -78 | 0 | 0 | -0 | 662 | 7.1 | 263.0 | 6.5 | 0.0 | 270.2 | 1 |
| 13 | 424 | -0 | -284 | -0 | 0 | 0 | 2406 | 0.0 | 954.7 | 23.7 | 0.0 | 954.7 | 1 |
| 14 | 424 | 0 | 92 | 0 | 0 | -0 | -781 | 0.0 | 310.0 | 7.7 | 0.0 | 310.0 | 1 |
| 15 | 424 | -0 | -297 | -0 | 0 | 0 | 2514 | 0.0 | 997.6 | 24.8 | 0.0 | 997.6 | 1 |
| | | | | | | | | | | | | | |
| 1 | 495 | -1 | -685 | -0 | 0 | 0 | 2541 | 0.0 | 1008.3 | 57.2 | 0.0 | 1008.3 | 1 |
| 5 | 495 | -795 | -156 | 0 | 0 | 0 | 579 | 23.8 | 230.1 | 13.1 | 0.0 | 253.9 | 1 |
| 6 | 495 | -795 | -156 | 0 | 0 | -0 | 579 | 23.8 | 230.0 | 13.1 | 0.0 | 253.8 | 1 |
| 7 | 495 | 796 | -156 | -0 | 0 | 0 | 579 | 23.8 | 230.0 | 13.1 | 0.0 | 253.9 | 1 |
| 8 | 495 | 796 | -156 | -0 | 0 | -0 | 579 | 23.8 | 230.0 | 13.1 | 0.0 | 253.8 | 1 |
| 9 | 495 | -238 | -220 | -0 | 0 | 0 | 816 | 7.1 | 324.3 | 18.4 | 0.0 | 331.5 | 1 |
| 10 | 495 | -238 | -220 | 0 | 0 | -0 | 816 | 7.1 | 324.2 | 18.4 | 0.0 | 331.4 | 1 |
| 11 | 495 | 239 | -220 | -0 | 0 | 0 | 816 | 7.1 | 324.3 | 18.4 | 0.0 | 331.4 | 1 |
| 12 | 495 | 239 | -156 | 0 | 0 | -0 | 579 | 7.1 | 230.2 | 13.1 | 0.0 | 237.3 | 1 |
| 13 | 495 | -0 | -568 | -0 | 0 | 0 | 2105 | 0.0 | 835.4 | 47.4 | 0.0 | 835.4 | 1 |
| 14 | 495 | 0 | 184 | 0 | 0 | -0 | -684 | 0.0 | 271.3 | 15.4 | 0.0 | 271.3 | 1 |
| 15 | 495 | -0 | -593 | -0 | 0 | 0 | 2200 | 0.0 | 873.0 | 49.6 | 0.0 | 873.0 | 1 |
| | | | | | | | | | | | | | |
| 1 | 565 | -1 | -1027 | -0 | 0 | 0 | 1936 | 0.0 | 768.3 | 85.8 | 0.0 | 768.3 | 1 |
| 5 | 565 | -795 | -234 | 0 | 0 | 0 | 442 | 23.8 | 175.3 | 19.6 | 0.0 | 199.1 | 1 |
| 6 | 565 | -795 | -234 | 0 | 0 | -0 | 442 | 23.8 | 175.3 | 19.6 | 0.0 | 199.1 | 1 |
| 7 | 565 | 796 | -234 | -0 | 0 | 0 | 442 | 23.8 | 175.3 | 19.6 | 0.0 | 199.2 | 1 |
| 8 | 565 | 796 | -234 | -0 | 0 | -0 | 442 | 23.8 | 175.3 | 19.6 | 0.0 | 199.1 | 1 |
| 9 | 565 | -238 | -330 | -0 | 0 | 0 | 622 | 7.1 | 247.2 | 27.6 | 0.0 | 254.3 | 1 |
| 10 | 565 | -238 | -330 | 0 | 0 | -0 | 622 | 7.1 | 247.1 | 27.6 | 0.0 | 254.2 | 1 |
| 11 | 565 | 239 | -330 | -0 | 0 | 0 | 622 | 7.1 | 247.2 | 27.6 | 0.0 | 254.4 | 1 |
| 12 | 565 | 239 | -234 | 0 | 0 | -0 | 442 | 7.1 | 175.5 | 19.6 | 0.0 | 182.6 | 1 |
| 13 | 565 | -0 | -851 | -0 | 0 | 0 | 1604 | 0.0 | 636.5 | 71.1 | 0.0 | 636.5 | 1 |
| 14 | 565 | 0 | 276 | 0 | 0 | -0 | -521 | 0.0 | 206.7 | 23.1 | 0.0 | 206.7 | 1 |
| 15 | 565 | -0 | -890 | -0 | 0 | 0 | 1676 | 0.0 | 665.2 | 74.3 | 0.0 | 665.2 | 1 |
| | | | | | | | | | | | | | |
| 1 | 636 | -1 | -1370 | -0 | 0 | 0 | 1089 | 0.0 | 432.3 | 114.4 | 0.0 | 432.3 | 1 |
| 5 | 636 | -795 | -312 | 0 | 0 | 0 | 248 | 23.8 | 98.7 | 26.1 | 0.0 | 122.5 | 1 |
| 6 | 636 | -795 | -312 | 0 | 0 | -0 | 248 | 23.8 | 98.6 | 26.1 | 0.0 | 122.4 | 1 |
| 7 | 636 | 796 | -312 | -0 | 0 | 0 | 248 | 23.8 | 98.7 | 26.1 | 0.0 | 122.6 | 1 |
| 8 | 636 | 796 | -312 | -0 | 0 | -0 | 248 | 23.8 | 98.6 | 26.1 | 0.0 | 122.4 | 1 |
| 9 | 636 | -238 | -440 | -0 | 0 | 0 | 350 | 7.1 | 139.2 | 36.8 | 0.0 | 146.4 | 1 |
| 10 | 636 | -238 | -440 | 0 | 0 | -0 | 350 | 7.1 | 139.2 | 36.8 | 0.0 | 146.3 | 1 |
| 11 | 636 | 239 | -440 | -0 | 0 | 0 | 350 | 7.1 | 139.3 | 36.8 | 0.0 | 146.4 | 1 |
| 12 | 636 | 239 | -312 | 0 | 0 | -0 | 248 | 7.1 | 98.8 | 26.1 | 0.0 | 106.0 | 1 |
| 13 | 636 | -0 | -1135 | -0 | 0 | 0 | 902 | 0.0 | 358.1 | 94.8 | 0.0 | 358.1 | 1 |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|-------|----|---|----|------|------|-------|-------|-----|-------|---|
| 14 | 636 | 0 | 369 | 0 | 0 | -0 | -293 | 0.0 | 116.3 | 30.8 | 0.0 | 116.3 | 1 |
| 15 | 636 | -0 | -1186 | -0 | 0 | 0 | 943 | 0.0 | 374.2 | 99.1 | 0.0 | 374.3 | 1 |
| 1 | 707 | -1 | -1712 | -0 | 0 | 0 | -0 | 0.0 | 0.2 | 143.0 | 0.0 | 247.7 | 4 |
| 5 | 707 | -795 | -391 | 0 | 0 | 0 | -0 | 23.8 | 0.1 | 32.6 | 0.0 | 61.3 | 4 |
| 6 | 707 | -795 | -391 | 0 | 0 | -0 | -0 | 23.8 | 0.1 | 32.6 | 0.0 | 61.3 | 4 |
| 7 | 707 | 796 | -391 | -0 | 0 | 0 | -0 | 23.8 | 0.2 | 32.6 | 0.0 | 61.3 | 4 |
| 8 | 707 | 796 | -391 | -0 | 0 | -0 | -0 | 23.8 | 0.0 | 32.6 | 0.0 | 61.3 | 4 |
| 9 | 707 | -238 | -550 | -0 | 0 | 0 | 0 | 7.1 | 0.4 | 46.0 | 0.0 | 80.0 | 4 |
| 10 | 707 | -238 | -550 | 0 | 0 | -0 | 0 | 7.1 | 0.3 | 46.0 | 0.0 | 80.0 | 4 |
| 11 | 707 | 239 | -550 | -0 | 0 | 0 | 0 | 7.1 | 0.5 | 46.0 | 0.0 | 80.0 | 4 |
| 12 | 707 | 239 | -391 | 0 | 0 | -0 | -0 | 7.1 | 0.3 | 32.6 | 0.0 | 57.0 | 4 |
| 13 | 707 | -0 | -1419 | -0 | 0 | 0 | 0 | 0.0 | 0.2 | 118.6 | 0.0 | 205.3 | 4 |
| 14 | 707 | 0 | 461 | 0 | 0 | -0 | 0 | 0.0 | 0.1 | 38.5 | 0.0 | 66.7 | 4 |
| 15 | 707 | -0 | -1483 | -0 | 0 | 0 | -0 | 0.0 | 0.2 | 123.9 | 0.0 | 214.6 | 4 |

ASTA NUM. 21 NI 137 NF 138 Lungh. 322.0 cm SEZ. 8 Ps IPE 220

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

qy medio: 0.2622 0.2410 0.6025 2.0726 1.2050 4.3833 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|----|-------|------|----|-------|----|------|---------|--------|--------|-------|--------|------|------|
| -- | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | -151 | 781 | 0 | 0 | 0 | 0 | 4.5 | 0.2 | 65.2 | 0.0 | 113.0 | 4 | |
| 5 | 0 | -1518 | 178 | 0 | 0 | 0 | 0 | 45.4 | 0.1 | 14.9 | 0.0 | 52.2 | 4 | |
| 6 | 0 | -1518 | 178 | -0 | 0 | -0 | 0 | 45.4 | 0.1 | 14.9 | 0.0 | 52.2 | 4 | |
| 7 | 0 | 1387 | 178 | 0 | 0 | 0 | 0 | 41.5 | 0.2 | 14.9 | 0.0 | 48.9 | 4 | |
| 8 | 0 | 1387 | 178 | -0 | 0 | -0 | 0 | 41.5 | 0.0 | 14.9 | 0.0 | 48.9 | 4 | |
| 9 | 0 | -507 | 251 | 0 | 0 | 0 | 0 | 15.2 | 0.4 | 21.0 | 0.0 | 39.3 | 4 | |
| 10 | 0 | -508 | 251 | -0 | 0 | -0 | 0 | 15.2 | 0.3 | 21.0 | 0.0 | 39.4 | 4 | |
| 11 | 0 | 367 | 251 | 0 | 0 | 0 | 0 | 11.0 | 0.5 | 21.0 | 0.0 | 37.9 | 4 | |
| 12 | 0 | 383 | 178 | -0 | 0 | -0 | 0 | 11.5 | 0.3 | 14.9 | 0.0 | 28.2 | 4 | |
| 13 | 0 | -129 | 647 | 0 | 0 | 0 | 0 | 3.9 | 0.2 | 54.0 | 0.0 | 93.6 | 4 | |
| 14 | 0 | 19 | -210 | -0 | 0 | -0 | 0 | 0.6 | 0.1 | 17.5 | 0.0 | 30.4 | 4 | |
| 15 | 0 | -134 | 676 | 0 | 0 | 0 | 0 | 4.0 | 0.2 | 56.5 | 0.0 | 97.9 | 4 | |
| 1 | 32 | -151 | 624 | 0 | 0 | 0 | 226 | 4.5 | 89.9 | 52.2 | 0.0 | 111.8 | 3 | |
| 5 | 32 | -1518 | 142 | 0 | 0 | 0 | 52 | 45.4 | 20.6 | 11.9 | 0.0 | 66.2 | 3 | |
| 6 | 32 | -1518 | 142 | -0 | 0 | -0 | 52 | 45.4 | 20.6 | 11.9 | 0.0 | 66.2 | 3 | |
| 7 | 32 | 1387 | 142 | 0 | 0 | 0 | 52 | 41.5 | 20.7 | 11.9 | 0.0 | 62.4 | 3 | |
| 8 | 32 | 1387 | 142 | -0 | 0 | -0 | 52 | 41.5 | 20.5 | 11.9 | 0.0 | 62.4 | 3 | |
| 9 | 32 | -507 | 201 | 0 | 0 | 0 | 73 | 15.2 | 29.2 | 16.8 | 0.0 | 47.4 | 3 | |
| 10 | 32 | -508 | 201 | -0 | 0 | -0 | 73 | 15.2 | 29.1 | 16.8 | 0.0 | 47.4 | 3 | |
| 11 | 32 | 367 | 201 | 0 | 0 | 0 | 73 | 11.0 | 29.3 | 16.8 | 0.0 | 43.8 | 3 | |
| 12 | 32 | 383 | 142 | -0 | 0 | -0 | 52 | 11.5 | 20.8 | 11.9 | 0.0 | 34.2 | 3 | |
| 13 | 32 | -129 | 517 | 0 | 0 | 0 | 187 | 3.9 | 74.5 | 43.2 | 0.0 | 92.7 | 3 | |
| 14 | 32 | 19 | -168 | -0 | 0 | -0 | -61 | 0.6 | 24.2 | 14.0 | 0.0 | 29.6 | 3 | |
| 15 | 32 | -134 | 541 | 0 | 0 | 0 | 196 | 4.0 | 77.9 | 45.2 | 0.0 | 96.9 | 3 | |
| 1 | 64 | -151 | 468 | 0 | 0 | 0 | 402 | 4.5 | 159.7 | 39.1 | 0.0 | 164.3 | 1 | |
| 5 | 64 | -1518 | 107 | 0 | 0 | 0 | 92 | 45.4 | 36.5 | 8.9 | 0.0 | 81.9 | 1 | |
| 6 | 64 | -1518 | 107 | -0 | 0 | -0 | 92 | 45.4 | 36.5 | 8.9 | 0.0 | 81.9 | 1 | |
| 7 | 64 | 1387 | 107 | 0 | 0 | 0 | 92 | 41.5 | 36.6 | 8.9 | 0.0 | 78.1 | 1 | |
| 8 | 64 | 1387 | 107 | -0 | 0 | -0 | 92 | 41.5 | 36.4 | 8.9 | 0.0 | 77.9 | 1 | |
| 9 | 64 | -507 | 150 | 0 | 0 | 0 | 129 | 15.2 | 51.6 | 12.6 | 0.0 | 66.8 | 1 | |
| 10 | 64 | -508 | 150 | -0 | 0 | -0 | 129 | 15.2 | 51.5 | 12.6 | 0.0 | 66.8 | 1 | |
| 11 | 64 | 367 | 150 | 0 | 0 | 0 | 129 | 11.0 | 51.7 | 12.6 | 0.0 | 62.6 | 1 | |
| 12 | 64 | 383 | 107 | -0 | 0 | -0 | 92 | 11.5 | 36.6 | 8.9 | 0.0 | 48.1 | 1 | |
| 13 | 64 | -129 | 388 | 0 | 0 | 0 | 333 | 3.9 | 132.3 | 32.4 | 0.0 | 136.2 | 1 | |
| 14 | 64 | 19 | -126 | -0 | 0 | -0 | -108 | 0.6 | 43.0 | 10.5 | 0.0 | 43.5 | 1 | |
| 15 | 64 | -134 | 405 | 0 | 0 | 0 | 348 | 4.0 | 138.3 | 33.9 | 0.0 | 142.3 | 1 | |
| 1 | 97 | -151 | 312 | 0 | 0 | 0 | 528 | 4.5 | 209.6 | 26.1 | 0.0 | 214.1 | 1 | |
| 5 | 97 | -1518 | 71 | 0 | 0 | 0 | 120 | 45.4 | 47.8 | 5.9 | 0.0 | 93.3 | 1 | |
| 6 | 97 | -1518 | 71 | -0 | 0 | -0 | 120 | 45.4 | 47.9 | 5.9 | 0.0 | 93.3 | 1 | |
| 7 | 97 | 1387 | 71 | 0 | 0 | 0 | 120 | 41.5 | 47.9 | 5.9 | 0.0 | 89.5 | 1 | |
| 8 | 97 | 1387 | 71 | -0 | 0 | -0 | 120 | 41.5 | 47.8 | 5.9 | 0.0 | 89.3 | 1 | |
| 9 | 97 | -507 | 100 | 0 | 0 | 0 | 170 | 15.2 | 67.6 | 8.4 | 0.0 | 82.8 | 1 | |
| 10 | 97 | -508 | 100 | -0 | 0 | -0 | 170 | 15.2 | 67.5 | 8.4 | 0.0 | 82.8 | 1 | |
| 11 | 97 | 367 | 100 | 0 | 0 | 0 | 170 | 11.0 | 67.6 | 8.4 | 0.0 | 78.6 | 1 | |
| 12 | 97 | 383 | 71 | -0 | 0 | -0 | 120 | 11.5 | 48.0 | 5.9 | 0.0 | 59.4 | 1 | |
| 13 | 97 | -129 | 259 | 0 | 0 | 0 | 437 | 3.9 | 173.6 | 21.6 | 0.0 | 177.5 | 1 | |
| 14 | 97 | 19 | -84 | -0 | 0 | -0 | -142 | 0.6 | 56.4 | 7.0 | 0.0 | 56.9 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|-------|------|----|---|----|------|------|-------|------|-----|-------|---|
| 15 | 97 | -134 | 270 | 0 | 0 | 0 | 457 | 4.0 | 181.4 | 22.6 | 0.0 | 185.4 | 1 |
| 1 | 129 | -151 | 156 | 0 | 0 | 0 | 603 | 4.5 | 239.5 | 13.0 | 0.0 | 244.0 | 1 |
| 5 | 129 | -1518 | 36 | 0 | 0 | 0 | 138 | 45.4 | 54.7 | 3.0 | 0.0 | 100.1 | 1 |
| 6 | 129 | -1518 | 36 | -0 | 0 | -0 | 138 | 45.4 | 54.7 | 3.0 | 0.0 | 100.1 | 1 |
| 7 | 129 | 1387 | 36 | 0 | 0 | 0 | 138 | 41.5 | 54.7 | 3.0 | 0.0 | 96.3 | 1 |
| 8 | 129 | 1387 | 36 | -0 | 0 | -0 | 138 | 41.5 | 54.6 | 3.0 | 0.0 | 96.1 | 1 |
| 9 | 129 | -507 | 50 | 0 | 0 | 0 | 194 | 15.2 | 77.2 | 4.2 | 0.0 | 92.4 | 1 |
| 10 | 129 | -508 | 50 | -0 | 0 | -0 | 194 | 15.2 | 77.1 | 4.2 | 0.0 | 92.3 | 1 |
| 11 | 129 | 367 | 50 | 0 | 0 | 0 | 194 | 11.0 | 77.2 | 4.2 | 0.0 | 88.2 | 1 |
| 12 | 129 | 383 | 36 | -0 | 0 | -0 | 138 | 11.5 | 54.8 | 3.0 | 0.0 | 66.2 | 1 |
| 13 | 129 | -129 | 129 | 0 | 0 | 0 | 500 | 3.9 | 198.4 | 10.8 | 0.0 | 202.3 | 1 |
| 14 | 129 | 19 | -42 | -0 | 0 | -0 | -162 | 0.6 | 64.4 | 3.5 | 0.0 | 65.0 | 1 |
| 15 | 129 | -134 | 135 | 0 | 0 | 0 | 522 | 4.0 | 207.3 | 11.3 | 0.0 | 211.3 | 1 |
| 1 | 161 | -151 | 0 | 0 | 0 | 0 | 628 | 4.5 | 249.4 | 0.0 | 0.0 | 253.9 | 1 |
| 5 | 161 | -1518 | 0 | 0 | 0 | 0 | 143 | 45.4 | 56.9 | 0.0 | 0.0 | 102.4 | 1 |
| 6 | 161 | -1518 | 0 | -0 | 0 | -0 | 143 | 45.4 | 56.9 | 0.0 | 0.0 | 102.4 | 1 |
| 7 | 161 | 1387 | 0 | 0 | 0 | 0 | 143 | 41.5 | 57.0 | 0.0 | 0.0 | 98.5 | 1 |
| 8 | 161 | 1387 | 0 | -0 | 0 | -0 | 143 | 41.5 | 56.9 | 0.0 | 0.0 | 98.4 | 1 |
| 9 | 161 | -507 | -0 | 0 | 0 | 0 | 202 | 15.2 | 80.3 | 0.0 | 0.0 | 95.5 | 1 |
| 10 | 161 | -508 | -0 | -0 | 0 | -0 | 202 | 15.2 | 80.3 | 0.0 | 0.0 | 95.5 | 1 |
| 11 | 161 | 367 | -0 | 0 | 0 | 0 | 202 | 11.0 | 80.4 | 0.0 | 0.0 | 91.3 | 1 |
| 12 | 161 | 383 | 0 | -0 | 0 | -0 | 143 | 11.5 | 57.0 | 0.0 | 0.0 | 68.5 | 1 |
| 13 | 161 | -129 | 0 | 0 | 0 | 0 | 521 | 3.9 | 206.6 | 0.0 | 0.0 | 210.5 | 1 |
| 14 | 161 | 19 | 0 | -0 | 0 | -0 | -169 | 0.6 | 67.1 | 0.0 | 0.0 | 67.7 | 1 |
| 15 | 161 | -134 | -0 | 0 | 0 | 0 | 544 | 4.0 | 215.9 | 0.0 | 0.0 | 219.9 | 1 |
| 1 | 193 | -151 | -156 | 0 | 0 | 0 | 603 | 4.5 | 239.4 | 13.0 | 0.0 | 244.0 | 1 |
| 5 | 193 | -1518 | -36 | 0 | 0 | 0 | 138 | 45.4 | 54.6 | 3.0 | 0.0 | 100.1 | 1 |
| 6 | 193 | -1518 | -36 | -0 | 0 | -0 | 138 | 45.4 | 54.6 | 3.0 | 0.0 | 100.1 | 1 |
| 7 | 193 | 1387 | -36 | 0 | 0 | 0 | 138 | 41.5 | 54.7 | 3.0 | 0.0 | 96.2 | 1 |
| 8 | 193 | 1387 | -36 | -0 | 0 | -0 | 138 | 41.5 | 54.6 | 3.0 | 0.0 | 96.1 | 1 |
| 9 | 193 | -507 | -50 | 0 | 0 | 0 | 194 | 15.2 | 77.1 | 4.2 | 0.0 | 92.3 | 1 |
| 10 | 193 | -508 | -50 | -0 | 0 | -0 | 194 | 15.2 | 77.1 | 4.2 | 0.0 | 92.3 | 1 |
| 11 | 193 | 367 | -50 | 0 | 0 | 0 | 194 | 11.0 | 77.1 | 4.2 | 0.0 | 88.1 | 1 |
| 12 | 193 | 383 | -36 | -0 | 0 | -0 | 138 | 11.5 | 54.7 | 3.0 | 0.0 | 66.2 | 1 |
| 13 | 193 | -129 | -129 | 0 | 0 | 0 | 500 | 3.9 | 198.4 | 10.8 | 0.0 | 202.2 | 1 |
| 14 | 193 | 19 | 42 | -0 | 0 | -0 | -162 | 0.6 | 64.4 | 3.5 | 0.0 | 65.0 | 1 |
| 15 | 193 | -134 | -135 | 0 | 0 | 0 | 522 | 4.0 | 207.3 | 11.3 | 0.0 | 211.3 | 1 |
| 1 | 225 | -151 | -312 | 0 | 0 | 0 | 528 | 4.5 | 209.5 | 26.1 | 0.0 | 214.0 | 1 |
| 5 | 225 | -1518 | -71 | 0 | 0 | 0 | 120 | 45.4 | 47.8 | 5.9 | 0.0 | 93.2 | 1 |
| 6 | 225 | -1518 | -71 | -0 | 0 | -0 | 120 | 45.4 | 47.8 | 5.9 | 0.0 | 93.3 | 1 |
| 7 | 225 | 1387 | -71 | 0 | 0 | 0 | 120 | 41.5 | 47.8 | 5.9 | 0.0 | 89.4 | 1 |
| 8 | 225 | 1387 | -71 | -0 | 0 | -0 | 120 | 41.5 | 47.8 | 5.9 | 0.0 | 89.3 | 1 |
| 9 | 225 | -507 | -100 | 0 | 0 | 0 | 170 | 15.2 | 67.4 | 8.4 | 0.0 | 82.6 | 1 |
| 10 | 225 | -508 | -100 | -0 | 0 | -0 | 170 | 15.2 | 67.4 | 8.4 | 0.0 | 82.6 | 1 |
| 11 | 225 | 367 | -100 | 0 | 0 | 0 | 170 | 11.0 | 67.4 | 8.4 | 0.0 | 78.4 | 1 |
| 12 | 225 | 383 | -71 | -0 | 0 | -0 | 120 | 11.5 | 47.9 | 5.9 | 0.0 | 59.3 | 1 |
| 13 | 225 | -129 | -259 | 0 | 0 | 0 | 437 | 3.9 | 173.6 | 21.6 | 0.0 | 177.4 | 1 |
| 14 | 225 | 19 | 84 | -0 | 0 | -0 | -142 | 0.6 | 56.4 | 7.0 | 0.0 | 56.9 | 1 |
| 15 | 225 | -134 | -270 | 0 | 0 | 0 | 457 | 4.0 | 181.4 | 22.6 | 0.0 | 185.4 | 1 |
| 1 | 258 | -151 | -468 | 0 | 0 | 0 | 402 | 4.5 | 159.6 | 39.1 | 0.0 | 164.1 | 1 |
| 5 | 258 | -1518 | -107 | 0 | 0 | 0 | 92 | 45.4 | 36.4 | 8.9 | 0.0 | 81.9 | 1 |
| 6 | 258 | -1518 | -107 | -0 | 0 | -0 | 92 | 45.4 | 36.4 | 8.9 | 0.0 | 81.9 | 1 |
| 7 | 258 | 1387 | -107 | 0 | 0 | 0 | 92 | 41.5 | 36.4 | 8.9 | 0.0 | 78.0 | 1 |
| 8 | 258 | 1387 | -107 | -0 | 0 | -0 | 92 | 41.5 | 36.4 | 8.9 | 0.0 | 77.9 | 1 |
| 9 | 258 | -507 | -150 | 0 | 0 | 0 | 129 | 15.2 | 51.4 | 12.6 | 0.0 | 66.5 | 1 |
| 10 | 258 | -508 | -150 | -0 | 0 | -0 | 129 | 15.2 | 51.3 | 12.6 | 0.0 | 66.6 | 1 |
| 11 | 258 | 367 | -150 | 0 | 0 | 0 | 129 | 11.0 | 51.4 | 12.6 | 0.0 | 62.4 | 1 |
| 12 | 258 | 383 | -107 | -0 | 0 | -0 | 92 | 11.5 | 36.5 | 8.9 | 0.0 | 47.9 | 1 |
| 13 | 258 | -129 | -388 | 0 | 0 | 0 | 333 | 3.9 | 132.2 | 32.4 | 0.0 | 136.1 | 1 |
| 14 | 258 | 19 | 126 | -0 | 0 | -0 | -108 | 0.6 | 42.9 | 10.5 | 0.0 | 43.5 | 1 |
| 15 | 258 | -134 | -405 | 0 | 0 | 0 | 348 | 4.0 | 138.2 | 33.9 | 0.0 | 142.2 | 1 |
| 1 | 290 | -151 | -624 | 0 | 0 | 0 | 226 | 4.5 | 89.8 | 52.2 | 0.0 | 111.8 | 3 |
| 5 | 290 | -1518 | -142 | 0 | 0 | 0 | 52 | 45.4 | 20.5 | 11.9 | 0.0 | 66.2 | 3 |
| 6 | 290 | -1518 | -142 | -0 | 0 | -0 | 52 | 45.4 | 20.5 | 11.9 | 0.0 | 66.2 | 3 |
| 7 | 290 | 1387 | -142 | 0 | 0 | 0 | 52 | 41.5 | 20.5 | 11.9 | 0.0 | 62.4 | 3 |
| 8 | 290 | 1387 | -142 | -0 | 0 | -0 | 52 | 41.5 | 20.5 | 11.9 | 0.0 | 62.4 | 3 |
| 9 | 290 | -507 | -201 | 0 | 0 | 0 | 73 | 15.2 | 28.9 | 16.8 | 0.0 | 47.4 | 3 |
| 10 | 290 | -508 | -201 | -0 | 0 | -0 | 73 | 15.2 | 28.9 | 16.8 | 0.0 | 47.4 | 3 |
| 11 | 290 | 367 | -201 | 0 | 0 | 0 | 73 | 11.0 | 28.9 | 16.8 | 0.0 | 43.7 | 3 |
| 12 | 290 | 383 | -142 | -0 | 0 | -0 | 52 | 11.5 | 20.5 | 11.9 | 0.0 | 34.2 | 3 |
| 13 | 290 | -129 | -517 | 0 | 0 | 0 | 187 | 3.9 | 74.4 | 43.2 | 0.0 | 92.7 | 3 |
| 14 | 290 | 19 | 168 | -0 | 0 | -0 | -61 | 0.6 | 24.2 | 14.0 | 0.0 | 29.6 | 3 |
| 15 | 290 | -134 | -541 | 0 | 0 | 0 | 196 | 4.0 | 77.7 | 45.2 | 0.0 | 96.9 | 3 |
| 1 | 322 | -151 | -781 | 0 | 0 | -0 | 0 | 4.5 | 0.0 | 65.2 | 0.0 | 113.0 | 4 |
| 5 | 322 | -1518 | -178 | 0 | 0 | 0 | -0 | 45.4 | 0.0 | 14.9 | 0.0 | 52.2 | 4 |
| 6 | 322 | -1518 | -178 | -0 | 0 | 0 | -0 | 45.4 | 0.0 | 14.9 | 0.0 | 52.2 | 4 |
| 7 | 322 | 1387 | -178 | 0 | 0 | 0 | -0 | 41.5 | 0.0 | 14.9 | 0.0 | 48.9 | 4 |
| 8 | 322 | 1387 | -178 | -0 | 0 | 0 | -0 | 41.5 | 0.0 | 14.9 | 0.0 | 48.9 | 4 |
| 9 | 322 | -507 | -251 | 0 | 0 | 0 | -0 | 15.2 | 0.0 | 21.0 | 0.0 | 39.3 | 4 |
| 10 | 322 | -508 | -251 | -0 | 0 | 0 | -0 | 15.2 | 0.0 | 21.0 | 0.0 | 39.4 | 4 |
| 11 | 322 | 367 | -251 | 0 | 0 | 0 | -0 | 11.0 | 0.0 | 21.0 | 0.0 | 37.9 | 4 |
| 12 | 322 | 383 | -178 | -0 | 0 | 0 | -0 | 11.5 | 0.0 | 14.9 | 0.0 | 28.2 | 4 |

| | | | | | | | | | | | | | |
|----|-----|------|------|----|---|---|----|-----|-----|------|-----|------|---|
| 13 | 322 | -129 | -647 | 0 | 0 | 0 | 0 | 3.9 | 0.0 | 54.0 | 0.0 | 93.6 | 4 |
| 14 | 322 | 19 | 210 | -0 | 0 | 0 | 0 | 0.6 | 0.0 | 17.5 | 0.0 | 30.4 | 4 |
| 15 | 322 | -134 | -676 | 0 | 0 | 0 | -0 | 4.0 | 0.0 | 56.5 | 0.0 | 97.9 | 4 |

ASTA NUM. 4 NI 129 NF 123 Lungh. 706.5 cm SEZ. 8 Ps IPE 220

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

qy medio: 0.2622 0.2320 0.5800 1.9952 1.1600 4.2294 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf (Fx) | Sf (M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|-----|------|------|----|-------|----|------|---------|--------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | 27 | 1653 | -0 | 0 | 0 | 0 | 0.8 | 0.0 | 138.1 | 0.0 | 239.2 | 4 | |
| 5 | 0 | -544 | 380 | -0 | 0 | 0 | 0 | 16.3 | 0.0 | 31.7 | 0.0 | 57.3 | 4 | |
| 6 | 0 | -544 | 380 | 0 | 0 | 0 | 0 | 16.3 | 0.0 | 31.7 | 0.0 | 57.3 | 4 | |
| 7 | 0 | 553 | 380 | -0 | 0 | 0 | 0 | 16.6 | 0.0 | 31.7 | 0.0 | 57.4 | 4 | |
| 8 | 0 | 553 | 380 | 0 | 0 | 0 | 0 | 16.5 | 0.0 | 31.7 | 0.0 | 57.4 | 4 | |
| 9 | 0 | -157 | 534 | -0 | 0 | 0 | 0 | 4.7 | 0.0 | 44.6 | 0.0 | 77.5 | 4 | |
| 10 | 0 | -158 | 534 | 0 | 0 | 0 | 0 | 4.7 | 0.0 | 44.6 | 0.0 | 77.5 | 4 | |
| 11 | 0 | 175 | 534 | -0 | 0 | 0 | 0 | 5.2 | 0.0 | 44.6 | 0.0 | 77.5 | 4 | |
| 12 | 0 | 171 | 380 | 0 | 0 | 0 | 0 | 5.1 | 0.0 | 31.7 | 0.0 | 55.2 | 4 | |
| 13 | 0 | 23 | 1370 | -0 | 0 | 0 | 0 | 0.7 | 0.0 | 114.5 | 0.0 | 198.2 | 4 | |
| 14 | 0 | -3 | -440 | 0 | 0 | 0 | 0 | 0.1 | 0.0 | 36.8 | 0.0 | 63.7 | 4 | |
| 15 | 0 | 24 | 1432 | -0 | 0 | 0 | 0 | 0.7 | 0.0 | 119.6 | 0.0 | 207.2 | 4 | |
| 1 | 71 | 27 | 1322 | -0 | 0 | 0 | 1051 | 0.8 | 417.1 | 110.5 | 0.0 | 417.9 | 1 | |
| 5 | 71 | -544 | 304 | -0 | 0 | 0 | 241 | 16.3 | 95.8 | 25.4 | 0.0 | 112.0 | 1 | |
| 6 | 71 | -544 | 304 | 0 | 0 | -0 | 241 | 16.3 | 95.7 | 25.4 | 0.0 | 112.0 | 1 | |
| 7 | 71 | 553 | 304 | -0 | 0 | 0 | 241 | 16.6 | 95.8 | 25.4 | 0.0 | 112.3 | 1 | |
| 8 | 71 | 553 | 304 | 0 | 0 | -0 | 241 | 16.5 | 95.8 | 25.4 | 0.0 | 112.3 | 1 | |
| 9 | 71 | -157 | 427 | -0 | 0 | 0 | 340 | 4.7 | 134.8 | 35.7 | 0.0 | 139.5 | 1 | |
| 10 | 71 | -158 | 427 | 0 | 0 | -0 | 340 | 4.7 | 134.8 | 35.7 | 0.0 | 139.5 | 1 | |
| 11 | 71 | 175 | 427 | -0 | 0 | 0 | 340 | 5.2 | 134.8 | 35.7 | 0.0 | 140.1 | 1 | |
| 12 | 71 | 171 | 304 | 0 | 0 | -0 | 241 | 5.1 | 95.8 | 25.4 | 0.0 | 100.9 | 1 | |
| 13 | 71 | 23 | 1096 | -0 | 0 | 0 | 871 | 0.7 | 345.7 | 91.6 | 0.0 | 346.4 | 1 | |
| 14 | 71 | -3 | -352 | 0 | 0 | -0 | -280 | 0.1 | 111.0 | 29.4 | 0.0 | 111.1 | 1 | |
| 15 | 71 | 24 | 1146 | -0 | 0 | 0 | 910 | 0.7 | 361.2 | 95.7 | 0.0 | 362.0 | 1 | |
| 1 | 141 | 27 | 992 | -0 | 0 | 0 | 1868 | 0.8 | 741.5 | 82.9 | 0.0 | 742.3 | 1 | |
| 5 | 141 | -544 | 228 | -0 | 0 | 0 | 429 | 16.3 | 170.2 | 19.0 | 0.0 | 186.5 | 1 | |
| 6 | 141 | -544 | 228 | 0 | 0 | -0 | 429 | 16.3 | 170.2 | 19.0 | 0.0 | 186.5 | 1 | |
| 7 | 141 | 553 | 228 | -0 | 0 | 0 | 429 | 16.6 | 170.2 | 19.0 | 0.0 | 186.8 | 1 | |
| 8 | 141 | 553 | 228 | 0 | 0 | -0 | 429 | 16.5 | 170.2 | 19.0 | 0.0 | 186.8 | 1 | |
| 9 | 141 | -157 | 321 | -0 | 0 | 0 | 604 | 4.7 | 239.7 | 26.8 | 0.0 | 244.4 | 1 | |
| 10 | 141 | -158 | 321 | 0 | 0 | -0 | 604 | 4.7 | 239.7 | 26.8 | 0.0 | 244.4 | 1 | |
| 11 | 141 | 175 | 321 | -0 | 0 | 0 | 604 | 5.2 | 239.7 | 26.8 | 0.0 | 244.9 | 1 | |
| 12 | 141 | 171 | 228 | 0 | 0 | -0 | 429 | 5.1 | 170.3 | 19.0 | 0.0 | 175.4 | 1 | |
| 13 | 141 | 23 | 822 | -0 | 0 | 0 | 1549 | 0.7 | 614.6 | 68.7 | 0.0 | 615.3 | 1 | |
| 14 | 141 | -3 | -264 | 0 | 0 | -0 | -497 | 0.1 | 197.4 | 22.1 | 0.0 | 197.5 | 1 | |
| 15 | 141 | 24 | 859 | -0 | 0 | 0 | 1618 | 0.7 | 642.2 | 71.8 | 0.0 | 642.9 | 1 | |
| 1 | 212 | 27 | 661 | -0 | 0 | 0 | 2452 | 0.8 | 973.2 | 55.2 | 0.0 | 974.0 | 1 | |
| 5 | 212 | -544 | 152 | -0 | 0 | 0 | 563 | 16.3 | 223.4 | 12.7 | 0.0 | 239.7 | 1 | |
| 6 | 212 | -544 | 152 | 0 | 0 | -0 | 563 | 16.3 | 223.4 | 12.7 | 0.0 | 239.7 | 1 | |
| 7 | 212 | 553 | 152 | -0 | 0 | 0 | 563 | 16.6 | 223.4 | 12.7 | 0.0 | 240.0 | 1 | |
| 8 | 212 | 553 | 152 | 0 | 0 | -0 | 563 | 16.5 | 223.4 | 12.7 | 0.0 | 240.0 | 1 | |
| 9 | 212 | -157 | 214 | -0 | 0 | 0 | 793 | 4.7 | 314.6 | 17.9 | 0.0 | 319.3 | 1 | |
| 10 | 212 | -158 | 214 | 0 | 0 | -0 | 793 | 4.7 | 314.6 | 17.9 | 0.0 | 319.3 | 1 | |
| 11 | 212 | 175 | 214 | -0 | 0 | 0 | 793 | 5.2 | 314.6 | 17.9 | 0.0 | 319.9 | 1 | |
| 12 | 212 | 171 | 152 | 0 | 0 | -0 | 563 | 5.1 | 223.5 | 12.7 | 0.0 | 228.6 | 1 | |
| 13 | 212 | 23 | 548 | -0 | 0 | 0 | 2033 | 0.7 | 806.7 | 45.8 | 0.0 | 807.4 | 1 | |
| 14 | 212 | -3 | -176 | 0 | 0 | -0 | -653 | 0.1 | 259.1 | 14.7 | 0.0 | 259.2 | 1 | |
| 15 | 212 | 24 | 573 | -0 | 0 | 0 | 2124 | 0.7 | 842.9 | 47.9 | 0.0 | 843.6 | 1 | |
| 1 | 283 | 27 | 331 | -0 | 0 | 0 | 2803 | 0.8 | 1112.2 | 27.6 | 0.0 | 1113.0 | 1 | |
| 5 | 283 | -544 | 76 | -0 | 0 | 0 | 643 | 16.3 | 255.4 | 6.3 | 0.0 | 271.6 | 1 | |
| 6 | 283 | -544 | 76 | 0 | 0 | -0 | 643 | 16.3 | 255.3 | 6.3 | 0.0 | 271.6 | 1 | |
| 7 | 283 | 553 | 76 | -0 | 0 | 0 | 643 | 16.6 | 255.4 | 6.3 | 0.0 | 271.9 | 1 | |
| 8 | 283 | 553 | 76 | 0 | 0 | -0 | 643 | 16.5 | 255.3 | 6.3 | 0.0 | 271.9 | 1 | |

REALIZZAZIONE DEGLI INTERVENTI DI MANUTENZIONE STRAORDINARIA E RIQUALIFICAZIONE PREVISTI ALL'INTERNO DEL PALAZZO DEL GHIACCIO DI TORRE PELLICE

| | | | | | | | | | | | | | |
|----|-----|------|-------|----|---|----|------|------|--------|-------|-----|--------|---|
| 9 | 283 | -157 | 107 | -0 | 0 | 0 | 906 | 4.7 | 359.6 | 8.9 | 0.0 | 364.3 | 1 |
| 10 | 283 | -158 | 107 | 0 | 0 | -0 | 906 | 4.7 | 359.6 | 8.9 | 0.0 | 364.3 | 1 |
| 11 | 283 | 175 | 107 | -0 | 0 | 0 | 906 | 5.2 | 359.6 | 8.9 | 0.0 | 364.8 | 1 |
| 12 | 283 | 171 | 76 | 0 | 0 | -0 | 643 | 5.1 | 255.4 | 6.3 | 0.0 | 260.5 | 1 |
| 13 | 283 | 23 | 274 | -0 | 0 | 0 | 2323 | 0.7 | 922.0 | 22.9 | 0.0 | 922.7 | 1 |
| 14 | 283 | -3 | -88 | 0 | 0 | -0 | -746 | 0.1 | 296.1 | 7.4 | 0.0 | 296.2 | 1 |
| 15 | 283 | 24 | 286 | -0 | 0 | 0 | 2428 | 0.7 | 963.3 | 23.9 | 0.0 | 964.0 | 1 |
| 1 | 353 | 27 | 0 | -0 | 0 | 0 | 2920 | 0.8 | 1158.6 | 0.0 | 0.0 | 1159.4 | 1 |
| 5 | 353 | -544 | -0 | -0 | 0 | 0 | 670 | 16.3 | 266.0 | 0.0 | 0.0 | 282.3 | 1 |
| 6 | 353 | -544 | -0 | 0 | 0 | -0 | 670 | 16.3 | 266.0 | 0.0 | 0.0 | 282.3 | 1 |
| 7 | 353 | 553 | -0 | -0 | 0 | 0 | 670 | 16.6 | 266.0 | 0.0 | 0.0 | 282.6 | 1 |
| 8 | 353 | 553 | -0 | 0 | 0 | -0 | 670 | 16.5 | 266.0 | 0.0 | 0.0 | 282.5 | 1 |
| 9 | 353 | -157 | 0 | -0 | 0 | 0 | 944 | 4.7 | 374.6 | 0.0 | 0.0 | 379.3 | 1 |
| 10 | 353 | -158 | 0 | 0 | 0 | -0 | 944 | 4.7 | 374.6 | 0.0 | 0.0 | 379.3 | 1 |
| 11 | 353 | 175 | 0 | -0 | 0 | 0 | 944 | 5.2 | 374.6 | 0.0 | 0.0 | 379.8 | 1 |
| 12 | 353 | 171 | -0 | 0 | 0 | -0 | 670 | 5.1 | 266.1 | 0.0 | 0.0 | 271.2 | 1 |
| 13 | 353 | 23 | -0 | -0 | 0 | 0 | 2420 | 0.7 | 960.4 | 0.0 | 0.0 | 961.1 | 1 |
| 14 | 353 | -3 | 0 | 0 | 0 | -0 | -777 | 0.1 | 308.5 | 0.0 | 0.0 | 308.5 | 1 |
| 15 | 353 | 24 | -0 | -0 | 0 | 0 | 2529 | 0.7 | 1003.5 | 0.0 | 0.0 | 1004.2 | 1 |
| 1 | 424 | 27 | -331 | -0 | 0 | 0 | 2803 | 0.8 | 1112.2 | 27.6 | 0.0 | 1113.0 | 1 |
| 5 | 424 | -544 | -76 | -0 | 0 | 0 | 643 | 16.3 | 255.4 | 6.3 | 0.0 | 271.7 | 1 |
| 6 | 424 | -544 | -76 | 0 | 0 | -0 | 643 | 16.3 | 255.3 | 6.3 | 0.0 | 271.6 | 1 |
| 7 | 424 | 553 | -76 | -0 | 0 | 0 | 643 | 16.6 | 255.4 | 6.3 | 0.0 | 271.9 | 1 |
| 8 | 424 | 553 | -76 | 0 | 0 | -0 | 643 | 16.5 | 255.4 | 6.3 | 0.0 | 271.9 | 1 |
| 9 | 424 | -157 | -107 | -0 | 0 | 0 | 906 | 4.7 | 359.6 | 8.9 | 0.0 | 364.3 | 1 |
| 10 | 424 | -158 | -107 | 0 | 0 | -0 | 906 | 4.7 | 359.6 | 8.9 | 0.0 | 364.3 | 1 |
| 11 | 424 | 175 | -107 | -0 | 0 | 0 | 906 | 5.2 | 359.6 | 8.9 | 0.0 | 364.9 | 1 |
| 12 | 424 | 171 | -76 | 0 | 0 | -0 | 643 | 5.1 | 255.5 | 6.3 | 0.0 | 260.6 | 1 |
| 13 | 424 | 23 | -274 | -0 | 0 | 0 | 2323 | 0.7 | 922.0 | 22.9 | 0.0 | 922.7 | 1 |
| 14 | 424 | -3 | 88 | 0 | 0 | -0 | -746 | 0.1 | 296.1 | 7.4 | 0.0 | 296.2 | 1 |
| 15 | 424 | 24 | -286 | -0 | 0 | 0 | 2428 | 0.7 | 963.4 | 23.9 | 0.0 | 964.1 | 1 |
| 1 | 495 | 27 | -661 | -0 | 0 | 0 | 2452 | 0.8 | 973.2 | 55.2 | 0.0 | 974.0 | 1 |
| 5 | 495 | -544 | -152 | -0 | 0 | 0 | 563 | 16.3 | 223.5 | 12.7 | 0.0 | 239.7 | 1 |
| 6 | 495 | -544 | -152 | 0 | 0 | -0 | 563 | 16.3 | 223.4 | 12.7 | 0.0 | 239.7 | 1 |
| 7 | 495 | 553 | -152 | -0 | 0 | 0 | 563 | 16.6 | 223.5 | 12.7 | 0.0 | 240.0 | 1 |
| 8 | 495 | 553 | -152 | 0 | 0 | -0 | 563 | 16.5 | 223.4 | 12.7 | 0.0 | 240.0 | 1 |
| 9 | 495 | -157 | -214 | -0 | 0 | 0 | 793 | 4.7 | 314.7 | 17.9 | 0.0 | 319.4 | 1 |
| 10 | 495 | -158 | -214 | 0 | 0 | -0 | 793 | 4.7 | 314.7 | 17.9 | 0.0 | 319.4 | 1 |
| 11 | 495 | 175 | -214 | -0 | 0 | 0 | 793 | 5.2 | 314.7 | 17.9 | 0.0 | 320.0 | 1 |
| 12 | 495 | 171 | -152 | 0 | 0 | -0 | 563 | 5.1 | 223.6 | 12.7 | 0.0 | 228.7 | 1 |
| 13 | 495 | 23 | -548 | -0 | 0 | 0 | 2033 | 0.7 | 806.8 | 45.8 | 0.0 | 807.4 | 1 |
| 14 | 495 | -3 | 176 | 0 | 0 | -0 | -653 | 0.1 | 259.1 | 14.7 | 0.0 | 259.2 | 1 |
| 15 | 495 | 24 | -573 | -0 | 0 | 0 | 2124 | 0.7 | 842.9 | 47.9 | 0.0 | 843.7 | 1 |
| 1 | 565 | 27 | -992 | -0 | 0 | 0 | 1868 | 0.8 | 741.5 | 82.9 | 0.0 | 742.3 | 1 |
| 5 | 565 | -544 | -228 | -0 | 0 | 0 | 429 | 16.3 | 170.3 | 19.0 | 0.0 | 186.6 | 1 |
| 6 | 565 | -544 | -228 | 0 | 0 | -0 | 429 | 16.3 | 170.3 | 19.0 | 0.0 | 186.5 | 1 |
| 7 | 565 | 553 | -228 | -0 | 0 | 0 | 429 | 16.6 | 170.3 | 19.0 | 0.0 | 186.8 | 1 |
| 8 | 565 | 553 | -228 | 0 | 0 | -0 | 429 | 16.5 | 170.3 | 19.0 | 0.0 | 186.8 | 1 |
| 9 | 565 | -157 | -321 | -0 | 0 | 0 | 604 | 4.7 | 239.9 | 26.8 | 0.0 | 244.6 | 1 |
| 10 | 565 | -158 | -321 | 0 | 0 | -0 | 604 | 4.7 | 239.8 | 26.8 | 0.0 | 244.5 | 1 |
| 11 | 565 | 175 | -321 | -0 | 0 | 0 | 604 | 5.2 | 239.9 | 26.8 | 0.0 | 245.1 | 1 |
| 12 | 565 | 171 | -228 | 0 | 0 | -0 | 429 | 5.1 | 170.4 | 19.0 | 0.0 | 175.5 | 1 |
| 13 | 565 | 23 | -822 | -0 | 0 | 0 | 1549 | 0.7 | 614.7 | 68.7 | 0.0 | 615.4 | 1 |
| 14 | 565 | -3 | 264 | 0 | 0 | -0 | -497 | 0.1 | 197.4 | 22.1 | 0.0 | 197.5 | 1 |
| 15 | 565 | 24 | -859 | -0 | 0 | 0 | 1618 | 0.7 | 642.3 | 71.8 | 0.0 | 643.0 | 1 |
| 1 | 636 | 27 | -1322 | -0 | 0 | 0 | 1051 | 0.8 | 417.2 | 110.5 | 0.0 | 417.9 | 1 |
| 5 | 636 | -544 | -304 | -0 | 0 | 0 | 241 | 16.3 | 95.8 | 25.4 | 0.0 | 112.1 | 1 |
| 6 | 636 | -544 | -304 | 0 | 0 | -0 | 241 | 16.3 | 95.8 | 25.4 | 0.0 | 112.1 | 1 |
| 7 | 636 | 553 | -304 | -0 | 0 | 0 | 241 | 16.6 | 95.8 | 25.4 | 0.0 | 112.4 | 1 |
| 8 | 636 | 553 | -304 | 0 | 0 | -0 | 241 | 16.5 | 95.8 | 25.4 | 0.0 | 112.3 | 1 |
| 9 | 636 | -157 | -427 | -0 | 0 | 0 | 340 | 4.7 | 135.0 | 35.7 | 0.0 | 139.7 | 1 |
| 10 | 636 | -158 | -427 | 0 | 0 | -0 | 340 | 4.7 | 135.0 | 35.7 | 0.0 | 139.7 | 1 |
| 11 | 636 | 175 | -427 | -0 | 0 | 0 | 340 | 5.2 | 135.0 | 35.7 | 0.0 | 140.3 | 1 |
| 12 | 636 | 171 | -304 | 0 | 0 | -0 | 241 | 5.1 | 95.9 | 25.4 | 0.0 | 101.1 | 1 |
| 13 | 636 | 23 | -1096 | -0 | 0 | 0 | 871 | 0.7 | 345.8 | 91.6 | 0.0 | 346.5 | 1 |
| 14 | 636 | -3 | 352 | 0 | 0 | -0 | -280 | 0.1 | 111.1 | 29.4 | 0.0 | 111.1 | 1 |
| 15 | 636 | 24 | -1146 | -0 | 0 | 0 | 910 | 0.7 | 361.3 | 95.7 | 0.0 | 362.0 | 1 |
| 1 | 707 | 27 | -1653 | -0 | 0 | 0 | 0 | 0.8 | 0.1 | 138.1 | 0.0 | 239.2 | 4 |
| 5 | 707 | -544 | -380 | -0 | 0 | 0 | 0 | 16.3 | 0.1 | 31.7 | 0.0 | 57.3 | 4 |
| 6 | 707 | -544 | -380 | 0 | 0 | -0 | 0 | 16.3 | 0.0 | 31.7 | 0.0 | 57.3 | 4 |
| 7 | 707 | 553 | -380 | -0 | 0 | 0 | 0 | 16.6 | 0.1 | 31.7 | 0.0 | 57.4 | 4 |
| 8 | 707 | 553 | -380 | 0 | 0 | -0 | 0 | 16.5 | 0.1 | 31.7 | 0.0 | 57.4 | 4 |
| 9 | 707 | -157 | -534 | -0 | 0 | 0 | 0 | 4.7 | 0.3 | 44.6 | 0.0 | 77.5 | 4 |
| 10 | 707 | -158 | -534 | 0 | 0 | -0 | 0 | 4.7 | 0.2 | 44.6 | 0.0 | 77.5 | 4 |
| 11 | 707 | 175 | -534 | -0 | 0 | 0 | 0 | 5.2 | 0.3 | 44.6 | 0.0 | 77.5 | 4 |
| 12 | 707 | 171 | -380 | 0 | 0 | -0 | 0 | 5.1 | 0.2 | 31.7 | 0.0 | 55.2 | 4 |
| 13 | 707 | 23 | -1370 | -0 | 0 | 0 | -0 | 0.7 | 0.1 | 114.5 | 0.0 | 198.2 | 4 |
| 14 | 707 | -3 | 440 | 0 | 0 | -0 | -0 | 0.1 | 0.0 | 36.8 | 0.0 | 63.7 | 4 |
| 15 | 707 | 24 | -1432 | -0 | 0 | 0 | -0 | 0.7 | 0.1 | 119.6 | 0.0 | 207.2 | 4 |

ASTA NUM. 19 NI 123 NF 134 Lungh. 322.0 cm SEZ. 8 Ps IPE 220

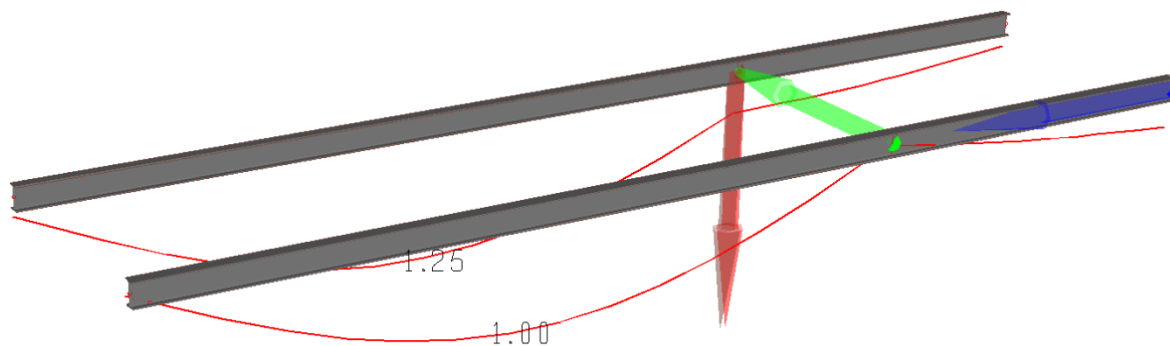
categoria: p.p. y Permanente Domestici Neve Vento qy tot.

qy medio: 0.2622 0.2320 0.5800 1.9952 1.1600 4.2294 daN/cm

| NC | x | Fx | Fy | Fz | Mx | My | Mz | Sf(Fx) | Sf(M) | taglio | tors. | Sf.id. | Loc. | Nota |
|----|-----|------|------|----|-------|----|------|--------|-------|--------|-------|--------|------|------|
| | cm | daN | | | daN*m | | | daN/cm | | | | | | |
| 1 | 0 | 13 | 753 | 0 | 0 | 0 | 0 | 0.4 | 0.1 | 62.9 | 0.0 | 109.0 | 4 | |
| 5 | 0 | -367 | 173 | 0 | 0 | 0 | 0 | 11.0 | 0.1 | 14.4 | 0.0 | 27.3 | 4 | |
| 6 | 0 | -367 | 173 | -0 | 0 | -0 | 0 | 11.0 | 0.0 | 14.4 | 0.0 | 27.3 | 4 | |
| 7 | 0 | 372 | 173 | 0 | 0 | 0 | 0 | 11.1 | 0.1 | 14.4 | 0.0 | 27.4 | 4 | |
| 8 | 0 | 372 | 173 | -0 | 0 | -0 | 0 | 11.1 | 0.1 | 14.4 | 0.0 | 27.4 | 4 | |
| 9 | 0 | -107 | 244 | 0 | 0 | 0 | 0 | 3.2 | 0.3 | 20.3 | 0.0 | 35.4 | 4 | |
| 10 | 0 | -107 | 244 | -0 | 0 | -0 | 0 | 3.2 | 0.2 | 20.3 | 0.0 | 35.4 | 4 | |
| 11 | 0 | 116 | 244 | 0 | 0 | 0 | 0 | 3.5 | 0.3 | 20.3 | 0.0 | 35.4 | 4 | |
| 12 | 0 | 114 | 173 | -0 | 0 | -0 | 0 | 3.4 | 0.2 | 14.4 | 0.0 | 25.3 | 4 | |
| 13 | 0 | 11 | 625 | 0 | 0 | 0 | 0 | 0.3 | 0.1 | 52.2 | 0.0 | 90.4 | 4 | |
| 14 | 0 | -1 | -201 | -0 | 0 | -0 | 0 | 0.0 | 0.0 | 16.8 | 0.0 | 29.0 | 4 | |
| 15 | 0 | 11 | 653 | 0 | 0 | 0 | 0 | 0.3 | 0.1 | 54.5 | 0.0 | 94.4 | 4 | |
| 1 | 32 | 13 | 603 | 0 | 0 | 0 | 218 | 0.4 | 86.7 | 50.4 | 0.0 | 104.9 | 3 | |
| 5 | 32 | -367 | 138 | 0 | 0 | 0 | 50 | 11.0 | 20.0 | 11.6 | 0.0 | 33.1 | 3 | |
| 6 | 32 | -367 | 138 | -0 | 0 | -0 | 50 | 11.0 | 19.9 | 11.6 | 0.0 | 33.1 | 3 | |
| 7 | 32 | 372 | 138 | 0 | 0 | 0 | 50 | 11.1 | 20.0 | 11.6 | 0.0 | 33.3 | 3 | |
| 8 | 32 | 372 | 138 | -0 | 0 | -0 | 50 | 11.1 | 19.9 | 11.6 | 0.0 | 33.3 | 3 | |
| 9 | 32 | -107 | 195 | 0 | 0 | 0 | 71 | 3.2 | 28.2 | 16.3 | 0.0 | 36.3 | 3 | |
| 10 | 32 | -107 | 195 | -0 | 0 | -0 | 71 | 3.2 | 28.2 | 16.3 | 0.0 | 36.3 | 3 | |
| 11 | 32 | 116 | 195 | 0 | 0 | 0 | 71 | 3.5 | 28.2 | 16.3 | 0.0 | 36.5 | 3 | |
| 12 | 32 | 114 | 138 | -0 | 0 | -0 | 50 | 3.4 | 20.1 | 11.6 | 0.0 | 26.7 | 3 | |
| 13 | 32 | 11 | 500 | 0 | 0 | 0 | 181 | 0.3 | 71.9 | 41.7 | 0.0 | 86.9 | 3 | |
| 14 | 32 | -1 | -160 | -0 | 0 | -0 | -58 | 0.0 | 23.1 | 13.4 | 0.0 | 27.9 | 3 | |
| 15 | 32 | 11 | 522 | 0 | 0 | 0 | 189 | 0.3 | 75.1 | 43.6 | 0.0 | 90.8 | 3 | |
| 1 | 64 | 13 | 452 | 0 | 0 | 0 | 388 | 0.4 | 154.1 | 37.8 | 0.0 | 154.5 | 1 | |
| 5 | 64 | -367 | 104 | 0 | 0 | 0 | 89 | 11.0 | 35.4 | 8.7 | 0.0 | 46.4 | 1 | |
| 6 | 64 | -367 | 104 | -0 | 0 | -0 | 89 | 11.0 | 35.4 | 8.7 | 0.0 | 46.4 | 1 | |
| 7 | 64 | 372 | 104 | 0 | 0 | 0 | 89 | 11.1 | 35.4 | 8.7 | 0.0 | 46.6 | 1 | |
| 8 | 64 | 372 | 104 | -0 | 0 | -0 | 89 | 11.1 | 35.4 | 8.7 | 0.0 | 46.5 | 1 | |
| 9 | 64 | -107 | 146 | 0 | 0 | 0 | 125 | 3.2 | 50.0 | 12.2 | 0.0 | 53.2 | 1 | |
| 10 | 64 | -107 | 146 | -0 | 0 | -0 | 125 | 3.2 | 49.9 | 12.2 | 0.0 | 53.2 | 1 | |
| 11 | 64 | 116 | 146 | 0 | 0 | 0 | 125 | 3.5 | 50.0 | 12.2 | 0.0 | 53.5 | 1 | |
| 12 | 64 | 114 | 104 | -0 | 0 | -0 | 89 | 3.4 | 35.5 | 8.7 | 0.0 | 38.9 | 1 | |
| 13 | 64 | 11 | 375 | 0 | 0 | 0 | 322 | 0.3 | 127.7 | 31.3 | 0.0 | 128.1 | 1 | |
| 14 | 64 | -1 | -120 | -0 | 0 | -0 | -103 | 0.0 | 41.0 | 10.1 | 0.0 | 41.1 | 1 | |
| 15 | 64 | 11 | 392 | 0 | 0 | 0 | 336 | 0.3 | 133.5 | 32.7 | 0.0 | 133.8 | 1 | |
| 1 | 97 | 13 | 301 | 0 | 0 | 0 | 509 | 0.4 | 202.2 | 25.2 | 0.0 | 202.6 | 1 | |
| 5 | 97 | -367 | 69 | 0 | 0 | 0 | 117 | 11.0 | 46.5 | 5.8 | 0.0 | 57.4 | 1 | |
| 6 | 97 | -367 | 69 | -0 | 0 | -0 | 117 | 11.0 | 46.4 | 5.8 | 0.0 | 57.4 | 1 | |
| 7 | 97 | 372 | 69 | 0 | 0 | 0 | 117 | 11.1 | 46.5 | 5.8 | 0.0 | 57.6 | 1 | |
| 8 | 97 | 372 | 69 | -0 | 0 | -0 | 117 | 11.1 | 46.4 | 5.8 | 0.0 | 57.6 | 1 | |
| 9 | 97 | -107 | 97 | 0 | 0 | 0 | 165 | 3.2 | 65.5 | 8.1 | 0.0 | 68.7 | 1 | |
| 10 | 97 | -107 | 97 | -0 | 0 | -0 | 165 | 3.2 | 65.5 | 8.1 | 0.0 | 68.7 | 1 | |
| 11 | 97 | 116 | 97 | 0 | 0 | 0 | 165 | 3.5 | 65.5 | 8.1 | 0.0 | 69.0 | 1 | |
| 12 | 97 | 114 | 69 | -0 | 0 | -0 | 117 | 3.4 | 46.6 | 5.8 | 0.0 | 50.0 | 1 | |
| 13 | 97 | 11 | 250 | 0 | 0 | 0 | 422 | 0.3 | 167.6 | 20.9 | 0.0 | 168.0 | 1 | |
| 14 | 97 | -1 | -80 | -0 | 0 | -0 | -136 | 0.0 | 53.8 | 6.7 | 0.0 | 53.9 | 1 | |
| 15 | 97 | 11 | 261 | 0 | 0 | 0 | 441 | 0.3 | 175.1 | 21.8 | 0.0 | 175.5 | 1 | |
| 1 | 129 | 13 | 151 | 0 | 0 | 0 | 582 | 0.4 | 231.1 | 12.6 | 0.0 | 231.5 | 1 | |
| 5 | 129 | -367 | 35 | 0 | 0 | 0 | 134 | 11.0 | 53.1 | 2.9 | 0.0 | 64.1 | 1 | |
| 6 | 129 | -367 | 35 | -0 | 0 | -0 | 134 | 11.0 | 53.1 | 2.9 | 0.0 | 64.0 | 1 | |
| 7 | 129 | 372 | 35 | 0 | 0 | 0 | 134 | 11.1 | 53.1 | 2.9 | 0.0 | 64.2 | 1 | |
| 8 | 129 | 372 | 35 | -0 | 0 | -0 | 134 | 11.1 | 53.1 | 2.9 | 0.0 | 64.2 | 1 | |
| 9 | 129 | -107 | 49 | 0 | 0 | 0 | 188 | 3.2 | 74.8 | 4.1 | 0.0 | 78.0 | 1 | |
| 10 | 129 | -107 | 49 | -0 | 0 | -0 | 188 | 3.2 | 74.8 | 4.1 | 0.0 | 78.0 | 1 | |
| 11 | 129 | 116 | 49 | 0 | 0 | 0 | 188 | 3.5 | 74.8 | 4.1 | 0.0 | 78.3 | 1 | |
| 12 | 129 | 114 | 35 | -0 | 0 | -0 | 134 | 3.4 | 53.2 | 2.9 | 0.0 | 56.6 | 1 | |
| 13 | 129 | 11 | 125 | 0 | 0 | 0 | 483 | 0.3 | 191.6 | 10.4 | 0.0 | 191.9 | 1 | |
| 14 | 129 | -1 | -40 | -0 | 0 | -0 | -155 | 0.0 | 61.5 | 3.4 | 0.0 | 61.6 | 1 | |
| 15 | 129 | 11 | 130 | 0 | 0 | 0 | 504 | 0.3 | 200.1 | 10.9 | 0.0 | 200.5 | 1 | |

| | | | | | | | | | | | | | |
|----|-----|------|------|----|---|----|------|------|-------|------|-----|-------|---|
| 1 | 161 | 13 | 0 | 0 | 0 | 0 | 606 | 0.4 | 240.7 | 0.0 | 0.0 | 241.1 | 1 |
| 5 | 161 | -367 | 0 | 0 | 0 | 0 | 139 | 11.0 | 55.3 | 0.0 | 0.0 | 66.3 | 1 |
| 6 | 161 | -367 | 0 | -0 | 0 | -0 | 139 | 11.0 | 55.3 | 0.0 | 0.0 | 66.3 | 1 |
| 7 | 161 | 372 | 0 | 0 | 0 | 0 | 139 | 11.1 | 55.3 | 0.0 | 0.0 | 66.4 | 1 |
| 8 | 161 | 372 | 0 | -0 | 0 | -0 | 139 | 11.1 | 55.3 | 0.0 | 0.0 | 66.4 | 1 |
| 9 | 161 | -107 | -0 | 0 | 0 | 0 | 196 | 3.2 | 77.9 | 0.0 | 0.0 | 81.1 | 1 |
| 10 | 161 | -107 | -0 | -0 | 0 | -0 | 196 | 3.2 | 77.9 | 0.0 | 0.0 | 81.1 | 1 |
| 11 | 161 | 116 | -0 | 0 | 0 | 0 | 196 | 3.5 | 77.9 | 0.0 | 0.0 | 81.4 | 1 |
| 12 | 161 | 114 | 0 | -0 | 0 | -0 | 139 | 3.4 | 55.4 | 0.0 | 0.0 | 58.8 | 1 |
| 13 | 161 | 11 | -0 | 0 | 0 | 0 | 503 | 0.3 | 199.5 | 0.0 | 0.0 | 199.9 | 1 |
| 14 | 161 | -1 | 0 | -0 | 0 | -0 | -161 | 0.0 | 64.1 | 0.0 | 0.0 | 64.1 | 1 |
| 15 | 161 | 11 | 0 | 0 | 0 | 0 | 525 | 0.3 | 208.5 | 0.0 | 0.0 | 208.8 | 1 |
| | | | | | | | | | | | | | |
| 1 | 193 | 13 | -151 | 0 | 0 | 0 | 582 | 0.4 | 231.1 | 12.6 | 0.0 | 231.5 | 1 |
| 5 | 193 | -367 | -35 | 0 | 0 | 0 | 134 | 11.0 | 53.1 | 2.9 | 0.0 | 64.0 | 1 |
| 6 | 193 | -367 | -35 | -0 | 0 | -0 | 134 | 11.0 | 53.1 | 2.9 | 0.0 | 64.0 | 1 |
| 7 | 193 | 372 | -35 | 0 | 0 | 0 | 134 | 11.1 | 53.1 | 2.9 | 0.0 | 64.2 | 1 |
| 8 | 193 | 372 | -35 | -0 | 0 | -0 | 134 | 11.1 | 53.1 | 2.9 | 0.0 | 64.2 | 1 |
| 9 | 193 | -107 | -49 | 0 | 0 | 0 | 188 | 3.2 | 74.8 | 4.1 | 0.0 | 78.0 | 1 |
| 10 | 193 | -107 | -49 | -0 | 0 | -0 | 188 | 3.2 | 74.8 | 4.1 | 0.0 | 78.0 | 1 |
| 11 | 193 | 116 | -49 | 0 | 0 | 0 | 188 | 3.5 | 74.8 | 4.1 | 0.0 | 78.3 | 1 |
| 12 | 193 | 114 | -35 | -0 | 0 | -0 | 134 | 3.4 | 53.1 | 2.9 | 0.0 | 56.5 | 1 |
| 13 | 193 | 11 | -125 | 0 | 0 | 0 | 483 | 0.3 | 191.5 | 10.4 | 0.0 | 191.9 | 1 |
| 14 | 193 | -1 | 40 | -0 | 0 | -0 | -155 | 0.0 | 61.5 | 3.4 | 0.0 | 61.6 | 1 |
| 15 | 193 | 11 | -130 | 0 | 0 | 0 | 504 | 0.3 | 200.1 | 10.9 | 0.0 | 200.5 | 1 |
| | | | | | | | | | | | | | |
| 1 | 225 | 13 | -301 | 0 | 0 | 0 | 509 | 0.4 | 202.2 | 25.2 | 0.0 | 202.6 | 1 |
| 5 | 225 | -367 | -69 | 0 | 0 | 0 | 117 | 11.0 | 46.4 | 5.8 | 0.0 | 57.4 | 1 |
| 6 | 225 | -367 | -69 | -0 | 0 | -0 | 117 | 11.0 | 46.4 | 5.8 | 0.0 | 57.4 | 1 |
| 7 | 225 | 372 | -69 | 0 | 0 | 0 | 117 | 11.1 | 46.4 | 5.8 | 0.0 | 57.6 | 1 |
| 8 | 225 | 372 | -69 | -0 | 0 | -0 | 117 | 11.1 | 46.4 | 5.8 | 0.0 | 57.6 | 1 |
| 9 | 225 | -107 | -97 | 0 | 0 | 0 | 165 | 3.2 | 65.4 | 8.1 | 0.0 | 68.6 | 1 |
| 10 | 225 | -107 | -97 | -0 | 0 | -0 | 165 | 3.2 | 65.4 | 8.1 | 0.0 | 68.6 | 1 |
| 11 | 225 | 116 | -97 | 0 | 0 | 0 | 165 | 3.5 | 65.4 | 8.1 | 0.0 | 68.9 | 1 |
| 12 | 225 | 114 | -69 | -0 | 0 | -0 | 117 | 3.4 | 46.5 | 5.8 | 0.0 | 49.9 | 1 |
| 13 | 225 | 11 | -250 | 0 | 0 | 0 | 422 | 0.3 | 167.6 | 20.9 | 0.0 | 167.9 | 1 |
| 14 | 225 | -1 | 80 | -0 | 0 | -0 | -136 | 0.0 | 53.8 | 6.7 | 0.0 | 53.9 | 1 |
| 15 | 225 | 11 | -261 | 0 | 0 | 0 | 441 | 0.3 | 175.1 | 21.8 | 0.0 | 175.5 | 1 |
| | | | | | | | | | | | | | |
| 1 | 258 | 13 | -452 | 0 | 0 | 0 | 388 | 0.4 | 154.0 | 37.8 | 0.0 | 154.4 | 1 |
| 5 | 258 | -367 | -104 | 0 | 0 | 0 | 89 | 11.0 | 35.4 | 8.7 | 0.0 | 46.3 | 1 |
| 6 | 258 | -367 | -104 | -0 | 0 | -0 | 89 | 11.0 | 35.4 | 8.7 | 0.0 | 46.3 | 1 |
| 7 | 258 | 372 | -104 | 0 | 0 | 0 | 89 | 11.1 | 35.4 | 8.7 | 0.0 | 46.5 | 1 |
| 8 | 258 | 372 | -104 | -0 | 0 | -0 | 89 | 11.1 | 35.4 | 8.7 | 0.0 | 46.5 | 1 |
| 9 | 258 | -107 | -146 | 0 | 0 | 0 | 125 | 3.2 | 49.8 | 12.2 | 0.0 | 53.0 | 1 |
| 10 | 258 | -107 | -146 | -0 | 0 | -0 | 125 | 3.2 | 49.8 | 12.2 | 0.0 | 53.0 | 1 |
| 11 | 258 | 116 | -146 | 0 | 0 | 0 | 125 | 3.5 | 49.8 | 12.2 | 0.0 | 53.3 | 1 |
| 12 | 258 | 114 | -104 | -0 | 0 | -0 | 89 | 3.4 | 35.4 | 8.7 | 0.0 | 38.8 | 1 |
| 13 | 258 | 11 | -375 | 0 | 0 | 0 | 322 | 0.3 | 127.7 | 31.3 | 0.0 | 128.0 | 1 |
| 14 | 258 | -1 | 120 | -0 | 0 | -0 | -103 | 0.0 | 41.0 | 10.1 | 0.0 | 41.1 | 1 |
| 15 | 258 | 11 | -391 | 0 | 0 | 0 | 336 | 0.3 | 133.4 | 32.7 | 0.0 | 133.8 | 1 |
| | | | | | | | | | | | | | |
| 1 | 290 | 13 | -603 | 0 | 0 | 0 | 218 | 0.4 | 86.6 | 50.4 | 0.0 | 104.9 | 3 |
| 5 | 290 | -367 | -138 | 0 | 0 | 0 | 50 | 11.0 | 19.9 | 11.6 | 0.0 | 33.1 | 3 |
| 6 | 290 | -367 | -138 | -0 | 0 | -0 | 50 | 11.0 | 19.9 | 11.6 | 0.0 | 33.1 | 3 |
| 7 | 290 | 372 | -138 | 0 | 0 | 0 | 50 | 11.1 | 19.9 | 11.6 | 0.0 | 33.3 | 3 |
| 8 | 290 | 372 | -138 | -0 | 0 | -0 | 50 | 11.1 | 19.9 | 11.6 | 0.0 | 33.3 | 3 |
| 9 | 290 | -107 | -195 | 0 | 0 | 0 | 71 | 3.2 | 28.0 | 16.3 | 0.0 | 36.3 | 3 |
| 10 | 290 | -107 | -195 | -0 | 0 | -0 | 71 | 3.2 | 28.0 | 16.3 | 0.0 | 36.3 | 3 |
| 11 | 290 | 116 | -195 | 0 | 0 | 0 | 71 | 3.5 | 28.0 | 16.3 | 0.0 | 36.5 | 3 |
| 12 | 290 | 114 | -138 | -0 | 0 | -0 | 50 | 3.4 | 19.9 | 11.6 | 0.0 | 26.7 | 3 |
| 13 | 290 | 11 | -500 | 0 | 0 | 0 | 181 | 0.3 | 71.8 | 41.7 | 0.0 | 86.9 | 3 |
| 14 | 290 | -1 | 160 | -0 | 0 | -0 | -58 | 0.0 | 23.1 | 13.4 | 0.0 | 27.9 | 3 |
| 15 | 290 | 11 | -522 | 0 | 0 | 0 | 189 | 0.3 | 75.0 | 43.6 | 0.0 | 90.8 | 3 |
| | | | | | | | | | | | | | |
| 1 | 322 | 13 | -753 | 0 | 0 | -0 | 0 | 0.4 | 0.0 | 62.9 | 0.0 | 109.0 | 4 |
| 5 | 322 | -367 | -173 | 0 | 0 | 0 | -0 | 11.0 | 0.0 | 14.4 | 0.0 | 27.3 | 4 |
| 6 | 322 | -367 | -173 | -0 | 0 | 0 | -0 | 11.0 | 0.0 | 14.4 | 0.0 | 27.3 | 4 |
| 7 | 322 | 372 | -173 | 0 | 0 | 0 | -0 | 11.1 | 0.0 | 14.4 | 0.0 | 27.4 | 4 |
| 8 | 322 | 372 | -173 | -0 | 0 | 0 | -0 | 11.1 | 0.0 | 14.4 | 0.0 | 27.4 | 4 |
| 9 | 322 | -107 | -244 | 0 | 0 | 0 | -0 | 3.2 | 0.0 | 20.3 | 0.0 | 35.4 | 4 |
| 10 | 322 | -107 | -244 | -0 | 0 | 0 | -0 | 3.2 | 0.0 | 20.3 | 0.0 | 35.4 | 4 |
| 11 | 322 | 116 | -244 | 0 | 0 | 0 | -0 | 3.5 | 0.0 | 20.3 | 0.0 | 35.4 | 4 |
| 12 | 322 | 114 | -173 | -0 | 0 | 0 | -0 | 3.4 | 0.0 | 14.4 | 0.0 | 25.3 | 4 |
| 13 | 322 | 11 | -625 | 0 | 0 | 0 | 0 | 0.3 | 0.0 | 52.2 | 0.0 | 90.4 | 4 |
| 14 | 322 | -1 | 201 | -0 | 0 | 0 | 0 | 0.0 | 0.0 | 16.8 | 0.0 | 29.0 | 4 |
| 15 | 322 | 11 | -653 | 0 | 0 | 0 | 0 | 0.3 | 0.0 | 54.5 | 0.0 | 94.4 | 4 |

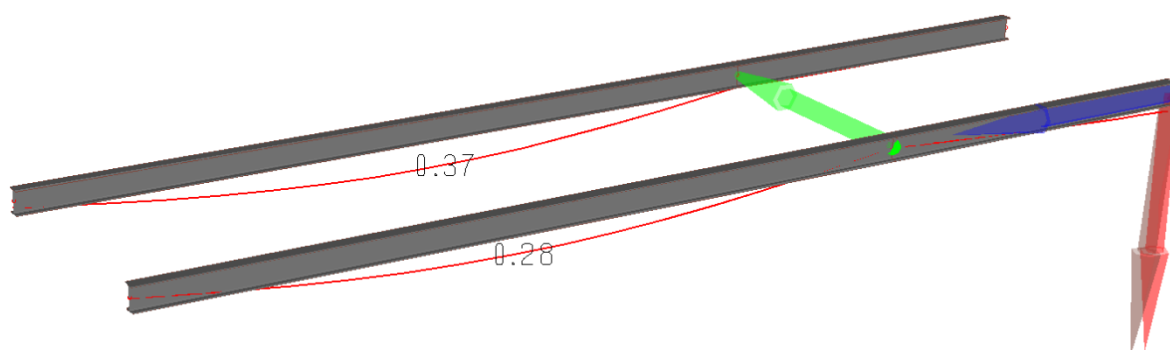
Verifica spostamenti verticali (rif.)4.2.4.2.1 delle NTC 2008)



Prospettiva

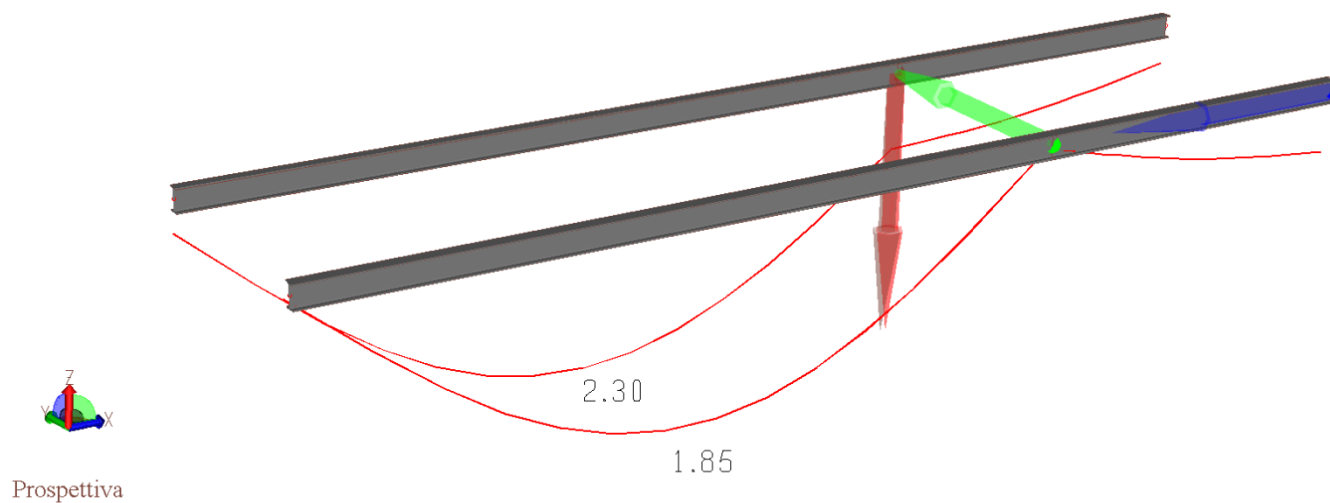
Freccia massima combinazione frequente

280



Prospettiva

Freccia massima combinazione quasi permanente



Freccia massima combinazione rara

Luce di calcolo 320 cm

| | |
|------------------|---|
| Rara | $705/2.30 = 306 > 250 \rightarrow \text{verificato}$ |
| Frequente | $705/1.25 = 564 > 250 \rightarrow \text{verificato}$ |
| Quasi permanente | $705/0.37 = 1905 > 250 \rightarrow \text{verificato}$ |

4.4. VERIFICA CONTROVENTO M12

Si esegue la verifica del controvento M12 con le sollecitazioni del blocco 4 perché maggiore del blocco 1 con il medesimo tirante

Norma : Certific. prodotto ETA - 05 / 0207 (NAD Italy)

Materiale : S 355 ; $\gamma_{M1} = 1,05$, $\gamma_{M2} = 1,25$; Finitura : grezzo

$f_{y,k} = 355 \text{ N/mm}^2$; $f_{u,k} = 510 \text{ N/mm}^2$; E-Modul = 210.000 N/mm^2

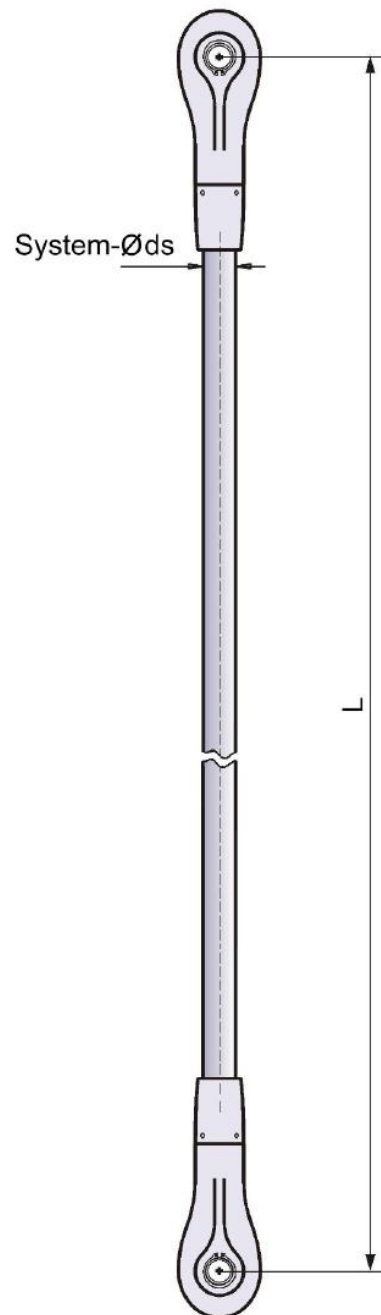
Forza di trazione : $N_{S,d} = 27,37 \text{ kN}$; $\gamma_f = 1,00$; $N_{z,d} = 27,37 \text{ kN}$

Lunghezza del sistema $L = 1.000 \text{ mm}$

Forchetta : M12 ; System - $\varnothing ds = 12 \text{ mm}$

Carico effettivo : $N_{R,d} = 30,88 \text{ kN}$

Carico 88,63 %



Verifica angolare

$N = 2737.00 \text{ daN}$

[Verifica Bulloni] (Classe 8.8)

N. bulloni 1 M12 Inc.Foro=1.0

Distanza bordo = 15

Spessore fazzoletto = 8 (mm)

[Verifica di resistenza del fazzoletto] (S 355 (Fe 510))

Verifica sezione netta: $N_{pl,Rd} = 25908.3 \text{ daN}$ I.R. = 0.11

[Verifica di resistenza del giunto]

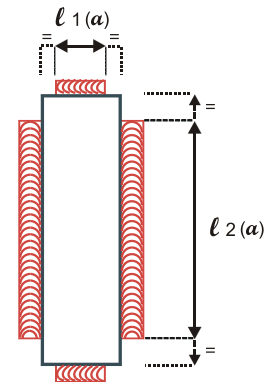
Resistenza a taglio dei bulloni: $F_{v,Rd} = 3265.9 \text{ daN}$ I.R. = 0.84

Rifollamento del fazzoletto: $F_{b,Rd} = 3766.2 \text{ daN}$ I.R. = 0.73

Verifica saldatura

Intestazione: **saldatura fazzoletto**
Metodo di verifica: **Stati limite**
Tipo acciaio: **S 235**

Tipologia del collegamento: **con cordoni d'angolo**
Lunghezza1: 0.000 cm Altezza di gola1: 0.000 cm
Lunghezza2: 5.000 cm Altezza di gola2: 0.500 cm



283

SEZ. Rp B= 0.800 H= 10.000 cm

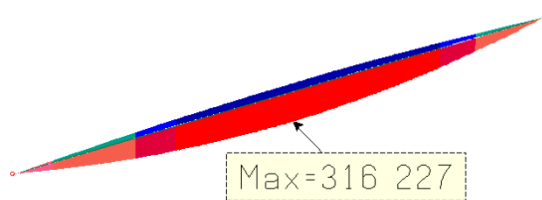
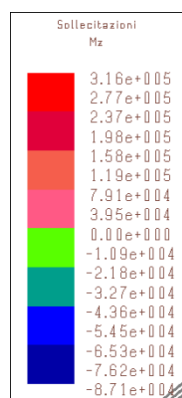
| Fx | Fy | Fz | Mx | My | Mz | Sigma perp. | Tens. par. | Tens. perp. |
|-------|-----|-----|-------|-------|-------|---------------------|---------------------|---------------------|
| daN | daN | daN | daN*m | daN*m | daN*m | daN/cm ² | daN/cm ² | daN/cm ² |
| -2735 | 0 | 0 | 0 | 0 | 0 | 547.0 (2) | 0.0 (1) | 0.0 (1) |

Nota

5. VERIFICA DI AUTOCONTROLLO

Si esegue la verifica di un elemento al fine di dimostrare l'attendibilità dei risultati e delle verifiche effettuate con codice di calcolo.

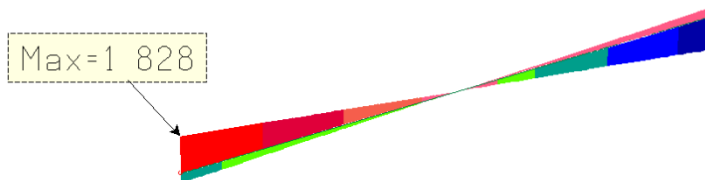
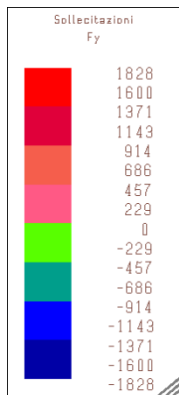
Trave secondaria blocco 1:



Prospettiva

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Sollecitazione: Momento flettente



Prospettiva

Sollecitazione: Taglio

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La lunghezza della trave da verificare è pari a 692 cm

I carichi ad essa applicata allo SLU sono

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 | 3 | Condizione 3 | Variabile: Neve | -0.017200 | 0.000 | -0.017200 | 0.000 | 0.3300 | 0.3300 |

Carico distribuito riferimento globale V

| Descrizione | Cod. | Cond. carico | Tipo Azione/categoria | Val. iniz. | Dist. iniz. nodo I | Val. finale | Dist.fin. nodo I | Aliq.inerz. | Aliq.inerz. SLD |
|-------------|------|--------------|--------------------------|------------|-----------------------|----------------|---------------------|-------------|--------------------|
| Vento | 4 | Condizione 4 | Variabile: Vento | 0.010000 | 0.000 | 0.010000 | 0.000 | 0.0000 | 0.0000 |

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 |
|---|------|--------------|-------------------------------------|------------|-----------------------|----------------|---------------------|-------------|--------------------|
| Categoria 7 - Coperture non accessibili | 1 | Condizione 2 | Variabile: Domestici e residenziali | -0.005000 | 0.000 | -0.005000 | 0.000 | 0.3300 | 0.3300 |
| Peso copertura acciaio | 2 | Condizione 1 | Permanente: Permanente portato | -0.002000 | 0.000 | -0.002000 | 0.000 | 1.0000 | 1.0000 |

5.1. VERIFICA SOLLECITAZIONI

Il carico distribuito quindi risulta essere allo SLU caso neve (peggiorativo)

$$0.0172 \cdot 1.5 + 0.01 \cdot 1.5 \cdot 0.6 + 0.005 \cdot 1.5 \cdot 0 + 0.002 \cdot 1.3 = 0.0374$$

L'area di influenza della trave è di 132.14 cm

Il carico distribuito vale $q = 132.14 \cdot 0.0374 = 4.94 \text{ daN/cm}$

Il momento flettente della trave semplicemente appoggiata $M = 4.94 \cdot 692^2 / 8 = \mathbf{295820 \text{ daN cm}}$

Il taglio della trave $= 4.94 \cdot 692 / 2 = \mathbf{1709.24 \text{ daN}}$

I valori delle sollecitazioni risultano comparabili con quelle eseguite dal programma di calcolo ed esposte nelle pagine precedenti.

Risultano quindi attendibili le sollecitazioni calcolate dal codice di calcolo..

5.2. VERIFICA ELEMENTO

L'elemento strutturale è un **IPE220**

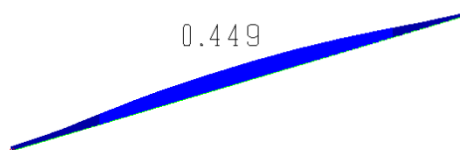
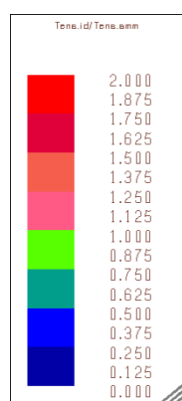
L'acciaio utilizzato: S275

Modulo di resistenza $W = 252 \text{ cm}^3$

Momento flettente sollecitante = $316227 \text{ daN cm} = 31622700 \text{ Nmm}$

Momento flettente resistente = $275 \cdot 252000 / 1.05 = 66000000 \text{ N}$

I.R. 0.48



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Prospettiva

I.R. CALCOLATO DAL CODICE DI CALCOLO = 0.45

Gli indici di resistenza risultano comparabili quindi risulta confermata la verifica eseguita dal software di calcolo.

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