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| Rev. | Data | Descrizione | Prep. | Contr. | Appr. |
| NUMERO E DATA ORDINE: SAP 3000031569 DEL 3/11/2009 | | | | | |

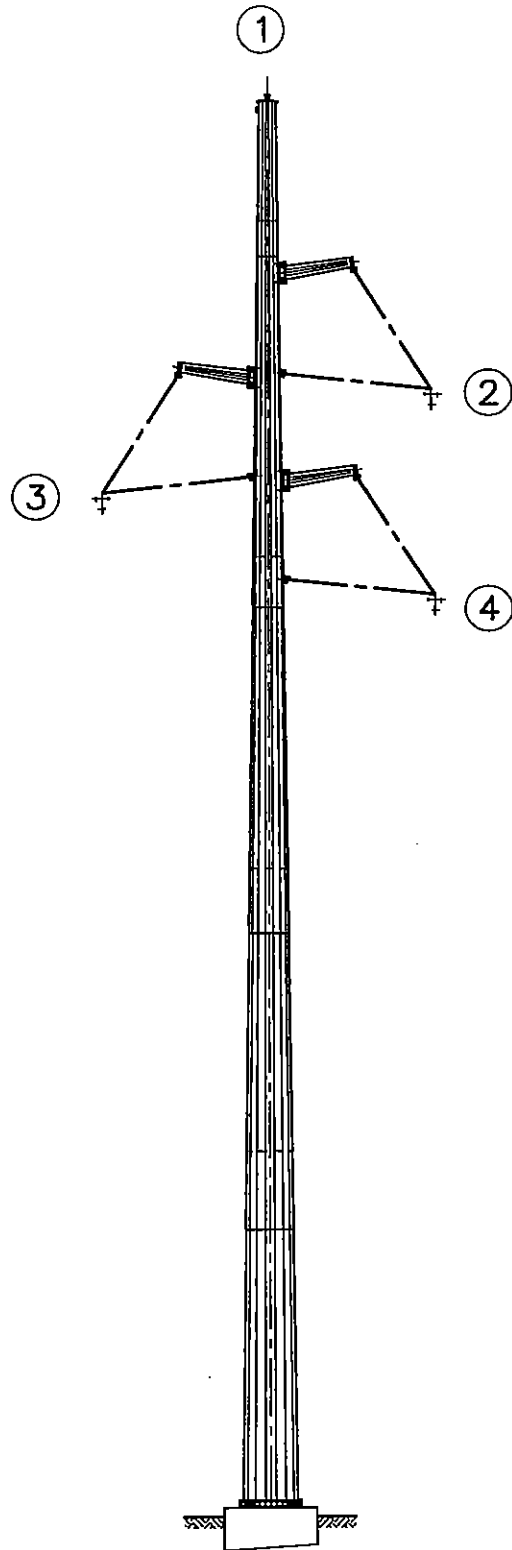


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|------------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-----------|-----------------------------|--------------------------|
| REVISIONI | | | | | | |
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| | 0 | 01/02/2010 | EMMISSIONE | SIDERPALI | P. BERARDI SRI - SVT-LIN | A. POSATI SRI-SVT-LIN |
| | N. | DATA | DESCRIZIONE | ELABORATO | VERIFICATO | APPROVATO |
| | TIPOLOGIA DELL'ELABORATO | | CODIFICA DELL'ELABORATO | | | |
| RELAZIONE DI CALCOLO | | P044SM5200 | | | | |
| PROGETTO | | TITOLO | | | | |
| TE-AR-05-003 | | LINEE 380 kV UNIFICATE TUBOLARI MONOSTELO SEMPLICE TERNA – SOSTEGNO MS 30 RELAZIONE DI CALCOLO PALO Zona A e B | | | | |
| RICAVATO DAL DOC. TERNA | | | | | | |
| P044SM0000 | | | | | | |
| CLASSIFICAZIONE DI SICUREZZA | | | | | | |
| NA | | | | | | |
| NOME DEL FILE | SCALA CAD | FORMATO | SCALA | FOGLIO | | |
| P044SM5200_00.pdf | 1 unità = NA | A4 | NA | 00/-- | | |

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RELAZIONE DI CALCOLO

PROGETTO ESECUTIVO
DI PALI MOMOSTELO AUTOPORTANTI
PER LINEE ELETTRICHE COMPATTE A 380 kV

SOSTEGNO TIPO MST 30

TIPO DI SOSTEGNO

- Altezza fuori terra del sostegno in opera = 46.48 m
- Dispositivo di attacco alla fondazione : con piastra di base e tirafondi
- Numero dei tronchi costituenti il sostegno = 5
- Sezione poligonale a 16 lati

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- INDICE GENERALE -

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LEGENDA

- Tabella descrittiva delle sezioni

H = quota del nodo rispetto alla base del palo

Sp = spessore della sezione

Diam = diametro misurato in faccia ed in spigolo

l.FEM = lunghezza dell'elemento finito

b(0) = ampiezza della faccia calcolata secondo le CNR 10022

b = larghezza efficace della faccia

- Geometria delle masse

Sezione min = sezione minima efficace del poligono

W min = modulo d'inerzia minimo efficace del poligono

Jt = momento d'inerzia torsionale

- Tabella dei carichi

H = quota del punto di applicazione dei carichi trasmessi dal conduttore (o fune di guardia)

Eccentricità del conduttore = 1) per bracci a mensole rigide: distanza dall'asse palo. 2) per triangolo isolante: proiezione orizzontale della lunghezza del puntone isolato.

- Tabella delle azioni interne e degli sforzi in fondazione

Tx = Taglio in direzione trasversale

My = Momento in direzione trasversale

Ty = Taglio in direzione longitudinale

Mx = Momento in direzione longitudinale

Mt = Momento torcente

Sig. Amm. = Tensione ammissibile

% uso = Percentuale d'uso della sezione, data dal rapporto tra tensione di calcolo e tensione ammissibile.

Rt = Risultante dei tagli

Rm = Momento risultante

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NORME TECNICHE DI PROGETTAZIONE

- **Generale:** Legge n. 339 del 28/06/86
- D.M. n. 28 del 21/03/88 recante: Norme tecniche per la disciplina della costruzione ed esercizio di linee elettriche aeree esterne
- Norme CEI 11 - 4
- D.M. del 09/01/1996: Norme tecniche e per le strutture metalliche.
- UNI EN 10025 : Prodotti laminati a caldo ..
- C.N.R.10011/88 : Costruzioni di acciaio: istruzioni per il calcolo l'esecuzione, il collaudo e la manutenzione.
- **Per la definizione delle tensioni ammesse nei tronchi pressopiegati:** C.N.R.10022 del 22/11/1984: Costruzioni di profilati di acciaio formati a freddo
- **Per i carichi esterni sulla struttura:** Specifica ENEL

GEOMETRIA SOSTEGNO TUBOLARE MONOSTELO

Sezione trasversale : POLIGONO REGOLARE DI 16 LATI

| Tronco | Diametro testa [mm] | Diametro base [mm] | Lunghezza [mm] | Innesto [mm] | Spessore [mm] |
|--------|---------------------|--------------------|----------------|--------------|---------------|
| 1 | 546.4 | 694.1 | 5125.0 | 1150 | 4.00 |
| 2 | 650.9 | 1016.8 | 12700.0 | 1680 | 8.00 |
| 3 | 950.4 | 1314.0 | 12620.0 | 2170 | 12.00 |
| 4 | 1225.5 | 1572.4 | 12040.0 | 2600 | 14.00 |
| 5 | 1467.5 | 1800.0 | 11600.0 | 0 | 14.00 |

N.B. I diametri sono riferiti al cerchio circoscritto

QUALITA' DEI MATERIALI ADOTTATI

Lamiere in acciaio tipo FE 510 (S 355) UNI EN 10025,

Flange in acciaio tipo FE 510 (S 355) UNI EN 10025,

Tirafondi in acciaio per bulloni classe 8.8 UNI EN 10228.

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NOTE GENERALI

Pali di tipo autoportante a stelo unico, di forma conica costante, ottenuti da lamiera piegata a freddo e saldata nel senso longitudinale. La sezione trasversale forma un poligono regolare; i lati sono uniti da raccordi circolari realizzati in fase di presso-piegatura.

L'incastro nel blocco di fondazione è realizzato mediante piastra e tirafondi o con l'infissione diretta del tronco di base.

I pali sono costituiti da vari tronchi da unire sul luogo di installazione con il metodo di "sovrapposizione ad incastro". Le forze di innesto da applicare sono indicate nel disegno di insieme della struttura.

PRESSOPIEGATURA

La pressopiegatura della lamiera avviene nel rispetto dei raggi di curvatura minimi prescritti dalle norme UNI EN 10025.

CAMPO DI APPLICAZIONE

La presente relazione di calcolo contempla esclusivamente i componenti strutturali espressamente analizzati, tutti gli accessori, le mensole ed i relativi attacchi ecc. non sono esaminati nel presente documento.

METODO DI CALCOLO

Il calcolo delle sollecitazioni viene eseguito considerando i carichi statici specificati nei punti successivi. L'analisi viene condotta tenendo in considerazione degli effetti del II ordine. La soluzione viene ricercata adottando un modello di trave alla Eulero-Bernoulli ed un metodo solutivo alla Newton-Raphson. Le tabelle successive sono formulate in modo tale da consentire di testare manualmente la bontà dell'analisi condotta. La suddivisione dei tronchi per elementi finiti viene condotta a partire dalla testa di ogni tronco, in base al passo ottimale, fino alla sezione corrispondente alla testa del tratto di sovrapposizione. Il programma adottato è GAIA v. 04052000

TENSIONI

Il valore delle sollecitazioni massime viene determinato mediante la relazione dettata dal criterio di Von Mises nel punto ove le tensioni sono massime. Le tensioni ammesse lungo il fusto vengono calcolate secondo le CNR 10022 in base al rapporto lato-spessore della sezione in esame, adottando quindi il momento di inerzia e la sezione ridotta dedotta dal calcolo.

RIPARTIZIONE DEI CARICHI

Al fine di conservare una omogenea ripartizione degli elementi finiti lungo i tronchi, i carichi trasmessi da mensole, isolatori ecc.... vengono ripartiti fra i nodi dell'elemento interessato con il principio dell'equivalenza.

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TABELLA DESCRITTIVA DELLE SEZIONI

| Tronco | Nodo | H [mm] | Sp. [mm] | Diam. faccia [mm] | Diam. spigolo [mm] | l. FEM [mm] | b(0) [mm] | b [mm] |
|--------|------|--------|----------|-------------------|--------------------|-------------|-----------|--------|
| 1 | 1 | 46485 | 4.00 | 535.9 | 546.4 | 795 | 101.03 | 101.03 |
| 1 | 2 | 45690 | 4.00 | 558.4 | 569.3 | 795 | 105.50 | 105.50 |
| 1 | 3 | 44895 | 4.00 | 580.8 | 592.2 | 795 | 109.97 | 109.97 |
| 1 | 4 | 44100 | 4.00 | 603.3 | 615.1 | 795 | 114.44 | 114.44 |
| 1 | 5 | 43305 | 4.00 | 625.8 | 638.0 | 795 | 118.90 | 118.90 |
| 1 | 6 | 42510 | 4.00 | 648.2 | 660.9 | 795 | 123.37 | 121.94 |
| 2 | 7 | 41662 | 8.00 | 662.4 | 675.4 | 848 | 120.62 | 120.62 |
| 2 | 8 | 40815 | 8.00 | 686.3 | 699.8 | 848 | 125.38 | 125.38 |
| 2 | 9 | 39967 | 8.00 | 710.3 | 724.2 | 848 | 130.15 | 130.15 |
| 2 | 10 | 39119 | 8.00 | 734.2 | 748.6 | 848 | 134.91 | 134.91 |
| 2 | 11 | 38272 | 8.00 | 758.2 | 773.0 | 848 | 139.68 | 139.68 |
| 2 | 12 | 37424 | 8.00 | 782.1 | 797.5 | 848 | 144.44 | 144.44 |
| 2 | 13 | 36576 | 8.00 | 806.1 | 821.9 | 848 | 149.20 | 149.20 |
| 2 | 14 | 35728 | 8.00 | 830.1 | 846.3 | 848 | 153.97 | 153.97 |
| 2 | 15 | 34881 | 8.00 | 854.0 | 870.7 | 848 | 158.73 | 158.73 |
| 2 | 16 | 34033 | 8.00 | 878.0 | 895.2 | 848 | 163.50 | 163.50 |
| 2 | 17 | 33185 | 8.00 | 901.9 | 919.6 | 848 | 168.26 | 168.26 |
| 2 | 18 | 32338 | 8.00 | 925.9 | 944.0 | 848 | 173.03 | 173.03 |
| 2 | 19 | 31490 | 8.00 | 949.8 | 968.4 | 848 | 177.79 | 177.79 |
| 3 | 20 | 30619 | 12.00 | 956.8 | 975.5 | 871 | 173.60 | 173.60 |
| 3 | 21 | 29748 | 12.00 | 981.4 | 1000.6 | 871 | 178.50 | 178.50 |
| 3 | 22 | 28878 | 12.00 | 1006.0 | 1025.7 | 871 | 183.39 | 183.39 |
| 3 | 23 | 28007 | 12.00 | 1030.6 | 1050.8 | 871 | 188.29 | 188.29 |
| 3 | 24 | 27136 | 12.00 | 1055.2 | 1075.9 | 871 | 193.18 | 193.18 |
| 3 | 25 | 26265 | 12.00 | 1079.8 | 1101.0 | 871 | 198.08 | 198.08 |
| 3 | 26 | 25394 | 12.00 | 1104.4 | 1126.0 | 871 | 202.97 | 202.97 |
| 3 | 27 | 24523 | 12.00 | 1129.0 | 1151.1 | 871 | 207.87 | 207.87 |
| 3 | 28 | 23653 | 12.00 | 1153.6 | 1176.2 | 871 | 212.76 | 212.76 |
| 3 | 29 | 22782 | 12.00 | 1178.2 | 1201.3 | 871 | 217.66 | 217.66 |
| 3 | 30 | 21911 | 12.00 | 1202.8 | 1226.4 | 871 | 222.55 | 222.55 |
| 3 | 31 | 21040 | 12.00 | 1227.4 | 1251.5 | 871 | 227.44 | 227.44 |
| 4 | 32 | 20182 | 14.00 | 1226.2 | 1250.2 | 858 | 224.41 | 224.41 |
| 4 | 33 | 19324 | 14.00 | 1250.4 | 1274.9 | 858 | 229.23 | 229.23 |
| 4 | 34 | 18465 | 14.00 | 1274.7 | 1299.7 | 858 | 234.06 | 234.06 |
| 4 | 35 | 17607 | 14.00 | 1298.9 | 1324.4 | 858 | 238.88 | 238.88 |
| 4 | 36 | 16749 | 14.00 | 1323.2 | 1349.1 | 858 | 243.70 | 243.70 |
| 4 | 37 | 15891 | 14.00 | 1347.4 | 1373.8 | 858 | 248.53 | 248.53 |
| 4 | 38 | 15033 | 14.00 | 1371.7 | 1398.6 | 858 | 253.35 | 253.35 |
| 4 | 39 | 14175 | 14.00 | 1395.9 | 1423.3 | 858 | 258.17 | 258.17 |
| 4 | 40 | 13316 | 14.00 | 1420.2 | 1448.0 | 858 | 263.00 | 263.00 |
| 4 | 41 | 12458 | 14.00 | 1444.4 | 1472.7 | 858 | 267.82 | 267.82 |
| 4 | 42 | 11600 | 14.00 | 1468.7 | 1497.5 | 858 | 272.64 | 272.64 |
| 5 | 43 | 10771 | 14.00 | 1462.6 | 1491.2 | 829 | 271.43 | 271.43 |
| 5 | 44 | 9943 | 14.00 | 1485.8 | 1515.0 | 829 | 276.06 | 276.06 |
| 5 | 45 | 9114 | 14.00 | 1509.1 | 1538.7 | 829 | 280.69 | 280.69 |
| 5 | 46 | 8286 | 14.00 | 1532.4 | 1562.5 | 829 | 285.33 | 285.33 |
| 5 | 47 | 7457 | 14.00 | 1555.7 | 1586.2 | 829 | 289.96 | 289.96 |
| 5 | 48 | 6629 | 14.00 | 1579.0 | 1610.0 | 829 | 294.60 | 294.60 |
| 5 | 49 | 5800 | 14.00 | 1602.3 | 1633.7 | 829 | 299.23 | 299.23 |
| 5 | 50 | 4971 | 14.00 | 1625.6 | 1657.5 | 829 | 303.86 | 303.86 |
| 5 | 51 | 4143 | 14.00 | 1648.9 | 1681.2 | 829 | 308.50 | 308.50 |
| 5 | 52 | 3314 | 14.00 | 1672.2 | 1705.0 | 829 | 313.13 | 313.13 |
| 5 | 53 | 2486 | 14.00 | 1695.5 | 1728.7 | 829 | 317.77 | 317.77 |
| 5 | 54 | 1657 | 14.00 | 1718.8 | 1752.5 | 829 | 322.40 | 322.40 |
| 5 | 55 | 829 | 14.00 | 1742.1 | 1776.2 | 829 | 327.04 | 327.04 |
| 5 | 56 | 0 | 14.00 | 1765.4 | 1800.0 | 829 | 331.67 | 331.67 |

GEOMETRIA DELLE MASSE

| Tronco | Nodo | Sezione min [mm ²] | W min [mm ³] | Jt [mm ⁴] |
|--------|------|-----------------------------------|--------------------------|-----------------------|
| 1 | 2 | 7058 | 965091 | 550122479 |
| 1 | 3 | 7344 | 1045175 | 619396189 |
| 1 | 4 | 7629 | 1128450 | 694254107 |
| 1 | 5 | 7915 | 1214917 | 774912693 |
| 1 | 6 | 8109 | 1276831 | 819826120 |
| 2 | 7 | 16661 | 2676266 | 1827529487 |
| 2 | 8 | 17271 | 2876970 | 2033909659 |
| 2 | 9 | 17881 | 3084931 | 2255269970 |
| 2 | 10 | 18491 | 3300150 | 2492135253 |
| 2 | 11 | 19101 | 3522626 | 2745030343 |
| 2 | 12 | 19710 | 3752361 | 3014480075 |
| 2 | 13 | 20320 | 3989354 | 3301009283 |
| 2 | 14 | 20930 | 4233605 | 3605142801 |
| 2 | 15 | 21540 | 4485113 | 3927405464 |
| 2 | 16 | 22150 | 4743880 | 4268322107 |
| 2 | 17 | 22760 | 5009904 | 4628417563 |
| 2 | 18 | 23370 | 5283186 | 5008216668 |
| 2 | 19 | 23979 | 5563726 | 5408244255 |
| 3 | 20 | 36082 | 8363850 | 8257365248 |
| 3 | 21 | 37022 | 8807930 | 8913826386 |
| 3 | 22 | 37961 | 9263500 | 9604188726 |
| 3 | 23 | 38901 | 9730558 | 10329305770 |
| 3 | 24 | 39841 | 10209106 | 11090031018 |
| 3 | 25 | 40781 | 10699143 | 11887217972 |
| 3 | 26 | 41720 | 11200670 | 12721720131 |
| 3 | 27 | 42660 | 11713686 | 13594390998 |
| 3 | 28 | 43600 | 12238192 | 14506084073 |
| 3 | 29 | 44540 | 12774186 | 15457652857 |
| 3 | 30 | 45479 | 13321670 | 16449950851 |
| 3 | 31 | 46419 | 13880644 | 17483831556 |
| 4 | 32 | 54011 | 16081443 | 20301778222 |
| 4 | 33 | 55091 | 16734936 | 21535036721 |
| 4 | 34 | 56172 | 17401447 | 22817253647 |
| 4 | 35 | 57252 | 18080975 | 24149381980 |
| 4 | 36 | 58332 | 18773521 | 25532374699 |
| 4 | 37 | 59413 | 19479085 | 26967184783 |
| 4 | 38 | 60493 | 20197666 | 28454765213 |
| 4 | 39 | 61574 | 20929265 | 29996068968 |
| 4 | 40 | 62654 | 21673881 | 31592049027 |
| 4 | 41 | 63735 | 22431515 | 33243658371 |
| 4 | 42 | 64815 | 23202167 | 34951849978 |
| 5 | 43 | 64542 | 23006233 | 34514881639 |
| 5 | 44 | 65580 | 23755732 | 36196145355 |
| 5 | 45 | 66618 | 24517246 | 37931138406 |
| 5 | 46 | 67656 | 25290776 | 39720705885 |
| 5 | 47 | 68694 | 26076322 | 41565692884 |
| 5 | 48 | 69732 | 26873883 | 43466944494 |
| 5 | 49 | 70770 | 27683460 | 45425305808 |
| 5 | 50 | 71808 | 28505052 | 47441621918 |
| 5 | 51 | 72846 | 29338660 | 49516737914 |
| 5 | 52 | 73885 | 30184283 | 51651498890 |
| 5 | 53 | 74923 | 31041923 | 53846749937 |
| 5 | 54 | 75961 | 31911577 | 56103336147 |
| 5 | 55 | 76999 | 32793248 | 58422102612 |
| 5 | 56 | 78037 | 33686934 | 60803894424 |

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CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 1 " MST - EDS - ZONA A - NORMALE - FRECCIA - 0.5 % Hft "

Pressione trasversale del vento = 0.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 5050.00 | 1850.00 | 0.00 | 0.00 |
| 2.00 | 37.16 | 47350.00 | 12100.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 58552 | Fp = -19475 | --- |
| --- | --- | Pa = 49376 | Ta = 31470 | La = 0 | --- |
| --- | --- | Pb = -2026 | Tb = -19370 | Lb = 0 | --- |
| 3.00 | 33.69 | 47350.00 | 12100.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 61767 | Fp = -45545 | --- |
| --- | --- | Pa = 52087 | Ta = -33198 | La = 0 | --- |
| --- | --- | Pb = -4737 | Tb = 45298 | Lb = 0 | --- |
| 4.00 | 30.23 | 47350.00 | 12100.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 58552 | Fp = -19475 | --- |
| --- | --- | Pa = 49376 | Ta = 31470 | La = 0 | --- |
| --- | --- | Pb = -2026 | Tb = -19370 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|------------|--------|----------|----------|--------------------------------|-------|
| 2 | 5483 | 1855 | 1902954 | -0 | -0 | 0 | 215.80 | 0.01 |
| 3 | 5933 | 1855 | 3470741 | -0 | -0 | 0 | 215.80 | 0.02 |
| 4 | 6400 | 1856 | 5045763 | -0 | -0 | -0 | 215.80 | 0.03 |
| 5 | 6886 | 1856 | 6628178 | -0 | -0 | 0 | 215.80 | 0.03 |
| 6 | 8783 | 1858 | 8239054 | -0 | -0 | 0 | 215.80 | 0.04 |
| 7 | 9872 | 1867 | 10142585 | -0 | -0 | 0 | 215.80 | 0.04 |
| 8 | 36589 | 204598 | 136027139 | -0 | -0 | 0 | 215.80 | 0.25 |
| 9 | 63345 | 33375 | 200018141 | -0 | -0 | 0 | 215.80 | 0.34 |
| 10 | 64554 | 33375 | 229285186 | -0 | -0 | 0 | 215.80 | 0.36 |
| 11 | 65802 | 33375 | 258523898 | -0 | -0 | 0 | 215.80 | 0.38 |
| 12 | 93021 | -131544 | 190417517 | -0 | -0 | 0 | 215.80 | 0.27 |
| 13 | 120280 | -19150 | 97538276 | -0 | -0 | -0 | 215.80 | 0.15 |
| 14 | 121648 | -19151 | 82883044 | -0 | -0 | -0 | 215.80 | 0.12 |
| 15 | 123056 | -19153 | 68221780 | -0 | -0 | -0 | 215.80 | 0.10 |
| 16 | 147723 | 68879 | 104742082 | 0 | -0 | -0 | 215.80 | 0.14 |
| 17 | 172430 | 57643 | 279947701 | -0 | -0 | -0 | 215.80 | 0.31 |
| 18 | 173958 | 57639 | 330877483 | -0 | -0 | -0 | 215.80 | 0.34 |
| 19 | 180046 | 57638 | 381788207 | -0 | -0 | -0 | 215.80 | 0.37 |
| 20 | 181456 | 55264 | 433542292 | -0 | -0 | -0 | 215.80 | 0.40 |
| 21 | 182929 | 38259 | 466026227 | -0 | -0 | -0 | 215.80 | 0.28 |
| 22 | 185478 | 38255 | 501239260 | -0 | -0 | -0 | 215.80 | 0.29 |
| 23 | 188090 | 38252 | 536397238 | -0 | -0 | -0 | 215.80 | 0.29 |
| 24 | 190766 | 38249 | 571499156 | -0 | -0 | -0 | 215.80 | 0.29 |
| 25 | 193504 | 38245 | 606544163 | -0 | -0 | -0 | 215.80 | 0.30 |
| 26 | 196305 | 38242 | 641531532 | -0 | -0 | -0 | 215.80 | 0.30 |
| 27 | 199170 | 38238 | 676460639 | -0 | -0 | -0 | 215.80 | 0.30 |
| 28 | 202097 | 38235 | 711330937 | -0 | -0 | -0 | 215.80 | 0.30 |
| 29 | 205088 | 38231 | 746141942 | -0 | -0 | -0 | 215.80 | 0.30 |
| 30 | 208142 | 38228 | 780893216 | -0 | -0 | -0 | 215.80 | 0.30 |
| 31 | 220122 | 38227 | 815645994 | -0 | -0 | -0 | 215.80 | 0.31 |
| 32 | 223696 | 38234 | 850037493 | -0 | -0 | -0 | 215.80 | 0.31 |
| 33 | 227341 | 38220 | 884169270 | -0 | -0 | -0 | 215.80 | 0.27 |
| 34 | 231058 | 38217 | 918247749 | -0 | -0 | -0 | 215.80 | 0.27 |
| 35 | 234847 | 38214 | 952272503 | -0 | -0 | -0 | 215.80 | 0.27 |
| 36 | 238707 | 38211 | 986243176 | -0 | -0 | -0 | 215.80 | 0.27 |
| 37 | 242638 | 38208 | 1020159405 | -0 | -0 | -0 | 215.80 | 0.27 |
| 38 | 246641 | 38205 | 1054020818 | -0 | -0 | -0 | 215.80 | 0.27 |
| 39 | 250715 | 38202 | 1087827034 | -0 | -0 | -0 | 215.80 | 0.27 |
| 40 | 254861 | 38199 | 1121577657 | -0 | -0 | -0 | 215.80 | 0.27 |
| 41 | 259079 | 38196 | 1155272281 | -0 | -0 | -0 | 215.80 | 0.27 |
| 42 | 276145 | 38195 | 1188954089 | -0 | -0 | -0 | 215.80 | 0.27 |
| 43 | 280269 | 38191 | 1221398529 | -0 | -0 | -0 | 215.80 | 0.26 |
| 44 | 284458 | 38188 | 1253801455 | -0 | -0 | -0 | 215.80 | 0.27 |
| 45 | 288714 | 38185 | 1286143091 | -0 | -0 | -0 | 215.80 | 0.27 |
| 46 | 293037 | 38182 | 1318423149 | -0 | -0 | -0 | 215.80 | 0.27 |
| 47 | 297426 | 38179 | 1350641299 | -0 | -0 | -0 | 215.80 | 0.27 |
| 48 | 301881 | 38176 | 1382797193 | -0 | -0 | -0 | 215.80 | 0.27 |
| 49 | 306402 | 38173 | 1414890466 | -0 | -0 | -0 | 215.80 | 0.26 |
| 50 | 310990 | 38169 | 1446920735 | -0 | -0 | -0 | 215.80 | 0.26 |
| 51 | 315644 | 38166 | 1478887602 | -0 | -0 | -0 | 215.80 | 0.26 |
| 52 | 320364 | 38163 | 1510790649 | -0 | -0 | -0 | 215.80 | 0.26 |
| 53 | 325151 | 38160 | 1542629444 | -0 | -0 | -0 | 215.80 | 0.26 |
| 54 | 330004 | 38157 | 1574403537 | -0 | -0 | -0 | 215.80 | 0.26 |
| 55 | 334923 | 38154 | 1606112465 | -0 | -0 | -0 | 215.80 | 0.25 |
| 56 | 339909 | 38151 | 1637755748 | -0 | -0 | -0 | 215.80 | 0.25 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 2 " MST - EDS - ZONA A - NORMALE - FRECCIA - 0.5 % Hft - (-) "

Pressione trasversale del vento = 0.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|---------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 5050.00 | -1850.00 | 0.00 | 0.00 |
| 2.00 | 37.16 | 47350.00 | -12100.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 61767 | Fp = -45545 | --- |
| --- | --- | Pa = 52087 | Ta = 33198 | La = 0 | --- |
| --- | --- | Pb = -4737 | Tb = -45298 | Lb = 0 | --- |
| 3.00 | 33.69 | 47350.00 | -12100.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 58552 | Fp = -19475 | --- |
| --- | --- | Pa = 49376 | Ta = -31470 | La = 0 | --- |
| --- | --- | Pb = -2026 | Tb = 19370 | Lb = 0 | --- |
| 4.00 | 30.23 | 47350.00 | -12100.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 61767 | Fp = -45545 | --- |
| --- | --- | Pa = 52087 | Ta = 33198 | La = 0 | --- |
| --- | --- | Pb = -4737 | Tb = -45298 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|-------------|--------|----------|----------|--------------------------------|-------|
| 2 | 5483 | -1851 | -1815867 | -0 | -0 | 0 | 215.80 | 0.01 |
| 3 | 5933 | -1851 | -3289583 | -0 | -0 | 0 | 215.80 | 0.02 |
| 4 | 6400 | -1851 | -4763300 | -0 | -0 | 0 | 215.80 | 0.03 |
| 5 | 6886 | -1852 | -6236918 | -0 | -0 | 0 | 215.80 | 0.03 |
| 6 | 8783 | -1852 | -7710813 | -0 | -0 | 0 | 215.80 | 0.03 |
| 7 | 9872 | -1855 | -9285301 | -0 | -0 | 0 | 215.80 | 0.04 |
| 8 | 37945 | 211989 | 119620718 | -0 | -0 | 0 | 215.80 | 0.22 |
| 9 | 66057 | 31332 | 182751571 | -0 | -0 | -0 | 215.80 | 0.31 |
| 10 | 67265 | 31332 | 209236179 | -0 | -0 | -0 | 215.80 | 0.33 |
| 11 | 68514 | 31332 | 235675333 | -0 | -0 | -0 | 215.80 | 0.35 |
| 12 | 93021 | -133299 | 164401617 | -0 | -0 | -0 | 215.80 | 0.24 |
| 13 | 117569 | -45446 | 47757333 | -0 | -0 | -0 | 215.80 | 0.09 |
| 14 | 118937 | -45446 | 8891592 | -0 | -0 | -0 | 215.80 | 0.04 |
| 15 | 120345 | -45446 | -29980217 | -0 | -0 | -0 | 215.80 | 0.06 |
| 16 | 147723 | 41728 | -18614756 | 0 | -0 | -0 | 215.80 | 0.05 |
| 17 | 175142 | 7110 | 113924138 | -0 | -0 | -0 | 215.80 | 0.15 |
| 18 | 176669 | 7111 | 119408914 | -0 | -0 | -0 | 215.80 | 0.15 |
| 19 | 182758 | 7111 | 124842570 | -0 | -0 | -0 | 215.80 | 0.15 |
| 20 | 182812 | 1432 | 126688110 | -0 | -0 | -0 | 215.80 | 0.14 |
| 21 | 182929 | -38185 | 86259145 | -0 | -0 | -0 | 215.80 | 0.07 |
| 22 | 185478 | -38184 | 52314832 | -0 | -0 | -0 | 215.80 | 0.05 |
| 23 | 188090 | -38183 | 18353577 | -0 | -0 | -0 | 215.80 | 0.03 |
| 24 | 190766 | -38183 | -15619476 | -0 | -0 | -0 | 215.80 | 0.03 |
| 25 | 193504 | -38182 | -49599725 | -0 | -0 | -0 | 215.80 | 0.05 |
| 26 | 196305 | -38181 | -83583038 | -0 | -0 | -0 | 215.80 | 0.06 |
| 27 | 199170 | -38180 | -117565685 | -0 | -0 | -0 | 215.80 | 0.07 |
| 28 | 202097 | -38179 | -151544294 | -0 | -0 | -0 | 215.80 | 0.08 |
| 29 | 205088 | -38178 | -185515800 | -0 | -0 | -0 | 215.80 | 0.09 |
| 30 | 208142 | -38177 | -219477405 | -0 | -0 | -0 | 215.80 | 0.10 |
| 31 | 220122 | -38178 | -253457048 | -0 | -0 | -0 | 215.80 | 0.11 |
| 32 | 223696 | -38180 | -287031712 | -0 | -0 | -0 | 215.80 | 0.12 |
| 33 | 227341 | -38175 | -320488566 | -0 | -0 | -0 | 215.80 | 0.11 |
| 34 | 231058 | -38175 | -353929651 | -0 | -0 | -0 | 215.80 | 0.12 |
| 35 | 234847 | -38174 | -387353219 | -0 | -0 | -0 | 215.80 | 0.12 |
| 36 | 238707 | -38173 | -420757651 | -0 | -0 | -0 | 215.80 | 0.13 |
| 37 | 242638 | -38172 | -454141424 | -0 | -0 | -0 | 215.80 | 0.13 |
| 38 | 246641 | -38170 | -487503100 | -0 | -0 | -0 | 215.80 | 0.14 |
| 39 | 250715 | -38169 | -520841313 | -0 | -0 | -0 | 215.80 | 0.14 |
| 40 | 254861 | -38168 | -554154765 | -0 | -0 | -0 | 215.80 | 0.14 |
| 41 | 259079 | -38167 | -587442212 | -0 | -0 | -0 | 215.80 | 0.14 |
| 42 | 276145 | -38167 | -620727726 | -0 | -0 | -0 | 215.80 | 0.15 |
| 43 | 280269 | -38166 | -652825681 | -0 | -0 | -0 | 215.80 | 0.15 |
| 44 | 284458 | -38165 | -684903453 | -0 | -0 | -0 | 215.80 | 0.16 |
| 45 | 288714 | -38163 | -716948816 | -0 | -0 | -0 | 215.80 | 0.16 |
| 46 | 293037 | -38162 | -748960832 | -0 | -0 | -0 | 215.80 | 0.16 |
| 47 | 297426 | -38161 | -780938580 | -0 | -0 | -0 | 215.80 | 0.16 |
| 48 | 301881 | -38160 | -812881166 | -0 | -0 | -0 | 215.80 | 0.16 |
| 49 | 306402 | -38159 | -844787718 | -0 | -0 | -0 | 215.80 | 0.17 |
| 50 | 310990 | -38158 | -876657383 | -0 | -0 | -0 | 215.80 | 0.17 |
| 51 | 315644 | -38156 | -908489328 | -0 | -0 | -0 | 215.80 | 0.17 |
| 52 | 320364 | -38155 | -940282732 | -0 | -0 | -0 | 215.80 | 0.17 |
| 53 | 325151 | -38154 | -972036790 | -0 | -0 | -0 | 215.80 | 0.17 |
| 54 | 330004 | -38153 | -1003750707 | -0 | -0 | -0 | 215.80 | 0.17 |
| 55 | 334923 | -38152 | -1035423702 | -0 | -0 | -0 | 215.80 | 0.17 |
| 56 | 339909 | -38151 | -1067054998 | -0 | -0 | -0 | 215.80 | 0.17 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 3 " MST - CVS3 - ZONA A - NORMALE - FRECCIA - 1 % Hft "

Pressione trasversale del vento = 176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 5400.00 | 3050.00 | 2200.00 | 0.00 |
| 2.00 | 37.16 | 49400.00 | 19050.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 60233 | Fp = -13396 | --- |
| --- | --- | Pa = 50793 | Ta = 32373 | La = 0 | --- |
| --- | --- | Pb = -1393 | Tb = -13323 | Lb = 0 | --- |
| 3.00 | 33.69 | 49400.00 | 19050.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 65295 | Fp = -54439 | --- |
| --- | --- | Pa = 55062 | Ta = -35094 | La = 0 | --- |
| --- | --- | Pb = -5662 | Tb = 54144 | Lb = 0 | --- |
| 4.00 | 30.23 | 49400.00 | 19050.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 60233 | Fp = -13396 | --- |
| --- | --- | Pa = 50793 | Ta = 32373 | La = 0 | --- |
| --- | --- | Pb = -1393 | Tb = -13323 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|------------|--------|-----------|----------|--------------------------------|-------|
| 2 | 5833 | 3133 | 3181694 | 2200 | 2166084 | 0 | 215.80 | 0.02 |
| 3 | 6283 | 3212 | 5871032 | 2200 | 3925762 | 0 | 215.80 | 0.04 |
| 4 | 6750 | 3294 | 8634930 | 2201 | 5685927 | 0 | 215.80 | 0.05 |
| 5 | 7236 | 3379 | 11476056 | 2201 | 7446479 | 0 | 215.80 | 0.06 |
| 6 | 9133 | 3469 | 14425998 | 2201 | 9209292 | 0 | 215.80 | 0.07 |
| 7 | 10222 | 3582 | 17919008 | 2202 | 11105659 | 0 | 215.80 | 0.08 |
| 8 | 37648 | 212241 | 149147504 | 2203 | 13026439 | 0 | 215.80 | 0.27 |
| 9 | 65113 | 36218 | 216967379 | 2205 | 14984603 | 0 | 215.80 | 0.37 |
| 10 | 66322 | 36325 | 249158834 | 2205 | 16940953 | 0 | 215.80 | 0.39 |
| 11 | 67570 | 36434 | 281416578 | 2205 | 18895340 | 0 | 215.80 | 0.41 |
| 12 | 96593 | -135582 | 212375533 | 2207 | 20882843 | 0 | 215.80 | 0.30 |
| 13 | 125655 | -11681 | 123122941 | 2209 | 22900282 | -0 | 215.80 | 0.18 |
| 14 | 127024 | -11563 | 115698286 | 2209 | 24912356 | -0 | 215.80 | 0.17 |
| 15 | 128431 | -11442 | 108369243 | 2208 | 26918995 | -0 | 215.80 | 0.15 |
| 16 | 153345 | 80760 | 154820287 | 2210 | 28944770 | -0 | 215.80 | 0.20 |
| 17 | 178298 | 75380 | 350743374 | 2211 | 30987115 | -0 | 215.80 | 0.38 |
| 18 | 179825 | 75508 | 417854613 | 2210 | 33021417 | -0 | 215.80 | 0.42 |
| 19 | 185914 | 75644 | 485068003 | 2210 | 35051731 | -0 | 215.80 | 0.46 |
| 20 | 187640 | 74204 | 554648207 | 2214 | 37204483 | -0 | 215.80 | 0.50 |
| 21 | 189429 | 62598 | 610228128 | 2209 | 39274760 | -0 | 215.80 | 0.36 |
| 22 | 191978 | 62743 | 667782852 | 2209 | 41339964 | -0 | 215.80 | 0.38 |
| 23 | 194590 | 62892 | 725397817 | 2209 | 43400102 | -0 | 215.80 | 0.39 |
| 24 | 197266 | 63044 | 783073443 | 2208 | 45455215 | -0 | 215.80 | 0.40 |
| 25 | 200004 | 63200 | 840810517 | 2208 | 47505345 | -0 | 215.80 | 0.41 |
| 26 | 202805 | 63360 | 898610130 | 2208 | 49550532 | -0 | 215.80 | 0.41 |
| 27 | 205670 | 63523 | 956473626 | 2207 | 51590816 | -0 | 215.80 | 0.42 |
| 28 | 208597 | 63691 | 1014402554 | 2207 | 53626235 | -0 | 215.80 | 0.42 |
| 29 | 211588 | 63862 | 1072398634 | 2207 | 55656826 | -0 | 215.80 | 0.43 |
| 30 | 214642 | 64036 | 1130463727 | 2207 | 57682621 | -0 | 215.80 | 0.43 |
| 31 | 226622 | 64220 | 1188694397 | 2206 | 59707936 | -0 | 215.80 | 0.44 |
| 32 | 230196 | 64417 | 1246470796 | 2207 | 61713631 | -0 | 215.80 | 0.44 |
| 33 | 233841 | 64579 | 1303999228 | 2206 | 63700457 | -0 | 215.80 | 0.40 |
| 34 | 237558 | 64763 | 1361608987 | 2206 | 65683181 | -0 | 215.80 | 0.40 |
| 35 | 241347 | 64950 | 1419302077 | 2205 | 67661813 | -0 | 215.80 | 0.40 |
| 36 | 245207 | 65141 | 1477080648 | 2205 | 69636365 | -0 | 215.80 | 0.40 |
| 37 | 249138 | 65335 | 1534946861 | 2205 | 71606847 | -0 | 215.80 | 0.40 |
| 38 | 253141 | 65534 | 1592902887 | 2205 | 73573266 | -0 | 215.80 | 0.40 |
| 39 | 257215 | 65736 | 1650950897 | 2204 | 75535626 | -0 | 215.80 | 0.40 |
| 40 | 261361 | 65942 | 1709093059 | 2204 | 77493929 | -0 | 215.80 | 0.40 |
| 41 | 265579 | 66151 | 1767331536 | 2204 | 79448173 | -0 | 215.80 | 0.40 |
| 42 | 282645 | 66368 | 1825736937 | 2204 | 81401302 | -0 | 215.80 | 0.40 |
| 43 | 286769 | 66575 | 1882185448 | 2203 | 83281714 | -0 | 215.80 | 0.40 |
| 44 | 290958 | 66785 | 1938745489 | 2203 | 85159148 | -0 | 215.80 | 0.41 |
| 45 | 295214 | 66996 | 1995387832 | 2203 | 87032257 | -0 | 215.80 | 0.41 |
| 46 | 299537 | 67211 | 2052114543 | 2203 | 88901044 | -0 | 215.80 | 0.41 |
| 47 | 303926 | 67429 | 2108927632 | 2202 | 90765506 | -0 | 215.80 | 0.41 |
| 48 | 308381 | 67650 | 2165829087 | 2202 | 92625637 | -0 | 215.80 | 0.41 |
| 49 | 312902 | 67875 | 2222820876 | 2202 | 94481432 | -0 | 215.80 | 0.40 |
| 50 | 317490 | 68104 | 2279904941 | 2202 | 96332882 | -0 | 215.80 | 0.40 |
| 51 | 322144 | 68336 | 2337083206 | 2201 | 98179977 | -0 | 215.80 | 0.40 |
| 52 | 326864 | 68571 | 2394357569 | 2201 | 100022703 | -0 | 215.80 | 0.40 |
| 53 | 331651 | 68810 | 2451729905 | 2201 | 101861048 | -0 | 215.80 | 0.40 |
| 54 | 336504 | 69052 | 2509202069 | 2201 | 103694996 | -0 | 215.80 | 0.40 |
| 55 | 341423 | 69298 | 2566775891 | 2200 | 105524529 | -0 | 215.80 | 0.39 |
| 56 | 346409 | 69547 | 2624453179 | 2200 | 107349629 | -0 | 215.80 | 0.39 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 4 " MST - CVS3 - ZONA A - NORMALE - FRECCIA - 1 % Hft - (-) "

Pressione trasversale del vento = -176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|---------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 5400.00 | -3050.00 | 2200.00 | 0.00 |
| 2.00 | 37.16 | 49400.00 | -19050.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 65295 | Fp = -54439 | --- |
| --- | --- | Pa = 55062 | Ta = 35094 | La = 0 | --- |
| --- | --- | Pb = -5662 | Tb = -54144 | Lb = 0 | --- |
| 3.00 | 33.69 | 49400.00 | -19050.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 60233 | Fp = -13396 | --- |
| --- | --- | Pa = 50793 | Ta = -32373 | La = 0 | --- |
| --- | --- | Pb = -1393 | Tb = 13323 | Lb = 0 | --- |
| 4.00 | 30.23 | 49400.00 | -19050.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 65295 | Fp = -54439 | --- |
| --- | --- | Pa = 55062 | Ta = 35094 | La = 0 | --- |
| --- | --- | Pb = -5662 | Tb = -54144 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|-------------|--------|-----------|----------|--------------------------------|-------|
| 2 | 5833 | -3129 | -3084438 | 2200 | 2166071 | 0 | 215.80 | 0.02 |
| 3 | 6283 | -3207 | -5669200 | 2200 | 3925736 | 0 | 215.80 | 0.04 |
| 4 | 6750 | -3289 | -8320940 | 2201 | 5685888 | -0 | 215.80 | 0.05 |
| 5 | 7236 | -3373 | -11042060 | 2201 | 7446424 | 0 | 215.80 | 0.06 |
| 6 | 9133 | -3462 | -13842492 | 2201 | 9209219 | 0 | 215.80 | 0.07 |
| 7 | 10222 | -3566 | -16977898 | 2201 | 11105541 | 0 | 215.80 | 0.08 |
| 8 | 39782 | 222385 | 117625280 | 2203 | 13029403 | 0 | 215.80 | 0.22 |
| 9 | 69382 | 31296 | 182441564 | 2205 | 14993530 | 0 | 215.80 | 0.31 |
| 10 | 70590 | 31190 | 208422866 | 2205 | 16955610 | 0 | 215.80 | 0.33 |
| 11 | 71839 | 31080 | 234257538 | 2205 | 18915491 | -0 | 215.80 | 0.35 |
| 12 | 96593 | -140716 | 157937536 | 2207 | 20902774 | -0 | 215.80 | 0.23 |
| 13 | 121387 | -55695 | 28697383 | 2208 | 22914752 | -0 | 215.80 | 0.07 |
| 14 | 122755 | -55815 | -19616393 | 2208 | 24921599 | -0 | 215.80 | 0.06 |
| 15 | 124163 | -55938 | -68040184 | 2208 | 26923249 | -0 | 215.80 | 0.11 |
| 16 | 153345 | 34652 | -64458462 | 2209 | 28948693 | -0 | 215.80 | 0.11 |
| 17 | 182567 | -7808 | 60735133 | 2211 | 30994906 | -0 | 215.80 | 0.10 |
| 18 | 184094 | -7940 | 52524921 | 2210 | 33032862 | -0 | 215.80 | 0.09 |
| 19 | 190183 | -8078 | 44135056 | 2210 | 35066609 | -0 | 215.80 | 0.09 |
| 20 | 189775 | -15031 | 30551524 | 2214 | 37221530 | -0 | 215.80 | 0.08 |
| 21 | 189429 | -62506 | -33254109 | 2209 | 39291465 | -0 | 215.80 | 0.05 |
| 22 | 191978 | -62654 | -89425769 | 2209 | 41356333 | -0 | 215.80 | 0.08 |
| 23 | 194590 | -62806 | -145736470 | 2208 | 43416145 | -0 | 215.80 | 0.10 |
| 24 | 197266 | -62962 | -202182103 | 2208 | 45470941 | -0 | 215.80 | 0.12 |
| 25 | 200004 | -63121 | -258759342 | 2208 | 47520763 | -0 | 215.80 | 0.14 |
| 26 | 202805 | -63284 | -315465540 | 2207 | 49565653 | -0 | 215.80 | 0.16 |
| 27 | 205670 | -63451 | -372298636 | 2207 | 51605651 | -0 | 215.80 | 0.18 |
| 28 | 208597 | -63622 | -429257073 | 2207 | 53640795 | -0 | 215.80 | 0.19 |
| 29 | 211588 | -63796 | -486339734 | 2207 | 55671120 | -0 | 215.80 | 0.21 |
| 30 | 214642 | -63974 | -543545883 | 2206 | 57696662 | -0 | 215.80 | 0.22 |
| 31 | 226622 | -64158 | -600936858 | 2206 | 59721725 | -0 | 215.80 | 0.23 |
| 32 | 230196 | -64349 | -657826386 | 2207 | 61727149 | -0 | 215.80 | 0.24 |
| 33 | 233841 | -64523 | -714622282 | 2206 | 63713748 | -0 | 215.80 | 0.23 |
| 34 | 237558 | -64709 | -771540468 | 2205 | 65696255 | -0 | 215.80 | 0.23 |
| 35 | 241347 | -64899 | -828581494 | 2205 | 67674680 | -0 | 215.80 | 0.24 |
| 36 | 245207 | -65093 | -885746115 | 2205 | 69649035 | -0 | 215.80 | 0.25 |
| 37 | 249138 | -65290 | -943035210 | 2205 | 71619330 | -0 | 215.80 | 0.25 |
| 38 | 253141 | -65491 | -1000449767 | 2204 | 73585572 | -0 | 215.80 | 0.26 |
| 39 | 257215 | -65696 | -1057990867 | 2204 | 75547765 | -0 | 215.80 | 0.26 |
| 40 | 261361 | -65904 | -1115659677 | 2204 | 77505910 | -0 | 215.80 | 0.27 |
| 41 | 265579 | -66116 | -1173457432 | 2204 | 79460007 | -0 | 215.80 | 0.27 |
| 42 | 282645 | -66333 | -1231434513 | 2204 | 81412992 | -0 | 215.80 | 0.28 |
| 43 | 286769 | -66544 | -1287508651 | 2203 | 83293277 | -0 | 215.80 | 0.28 |
| 44 | 290958 | -66755 | -1343717463 | 2203 | 85170591 | -0 | 215.80 | 0.29 |
| 45 | 295214 | -66969 | -1400039868 | 2203 | 87043592 | -0 | 215.80 | 0.29 |
| 46 | 299537 | -67186 | -1456477211 | 2203 | 88912279 | -0 | 215.80 | 0.30 |
| 47 | 303926 | -67407 | -1513030845 | 2202 | 90776651 | -0 | 215.80 | 0.30 |
| 48 | 308381 | -67631 | -1569702153 | 2202 | 92636703 | -0 | 215.80 | 0.30 |
| 49 | 312902 | -67858 | -1626492537 | 2202 | 94492429 | -0 | 215.80 | 0.30 |
| 50 | 317490 | -68089 | -1683403419 | 2202 | 96343818 | -0 | 215.80 | 0.30 |
| 51 | 322144 | -68323 | -1740436235 | 2201 | 98190862 | -0 | 215.80 | 0.30 |
| 52 | 326864 | -68561 | -1797592433 | 2201 | 100033548 | -0 | 215.80 | 0.31 |
| 53 | 331651 | -68802 | -1854873473 | 2201 | 101871861 | -0 | 215.80 | 0.31 |
| 54 | 336504 | -69047 | -1912280821 | 2201 | 103705785 | -0 | 215.80 | 0.31 |
| 55 | 341423 | -69295 | -1969815950 | 2200 | 105535305 | -0 | 215.80 | 0.31 |
| 56 | 346409 | -69546 | -2027480336 | 2200 | 107360401 | -0 | 215.80 | 0.31 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 5 " MST - MSA - ZONA A - NORMALE - RESISTENZA - 3 x 31.5 "

Pressione trasversale del vento = 706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 6840.00 | 6880.00 | 6000.00 | 0.00 |
| 2.00 | 37.16 | 52780.00 | 41740.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 61512 | Fp = 8726 | --- |
| --- | --- | Pa = 51872 | Ta = 33061 | La = 0 | --- |
| --- | --- | Pb = 908 | Tb = 8679 | Lb = 0 | --- |
| 3.00 | 33.69 | 52780.00 | 41740.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 72604 | Fp = -81203 | --- |
| --- | --- | Pa = 61226 | Ta = -39022 | La = 0 | --- |
| --- | --- | Pb = -8446 | Tb = 80762 | Lb = 0 | --- |
| 4.00 | 30.23 | 52780.00 | 41740.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 61512 | Fp = 8726 | --- |
| --- | --- | Pa = 51872 | Ta = 33061 | La = 0 | --- |
| --- | --- | Pb = 908 | Tb = 8679 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm²] | % Uso |
|-------------|-----------------------------|---------------|-----------------|---------------|-----------------|-----------------|-------------------------------------|--------------|
| 2 | 7273 | 7203 | 7293430 | 6002 | 5914487 | 0 | 215.80 | 0.05 |
| 3 | 7723 | 7518 | 13581259 | 6002 | 10720489 | 0 | 215.80 | 0.09 |
| 4 | 8190 | 7845 | 20146445 | 6002 | 15527654 | 0 | 215.80 | 0.12 |
| 5 | 8676 | 8185 | 26999157 | 6002 | 20335652 | 0 | 215.80 | 0.14 |
| 6 | 10573 | 8542 | 34203081 | 6002 | 25149531 | 0 | 215.80 | 0.17 |
| 7 | 11662 | 8968 | 42772702 | 6005 | 30334133 | 0 | 215.80 | 0.20 |
| 8 | 39627 | 222380 | 182347415 | 6009 | 35581665 | 0 | 215.80 | 0.33 |
| 9 | 67632 | 42967 | 257987948 | 6015 | 40933674 | -0 | 215.80 | 0.44 |
| 10 | 68841 | 43393 | 297522665 | 6015 | 46280363 | -0 | 215.80 | 0.47 |
| 11 | 70089 | 43833 | 337413322 | 6015 | 51621323 | -0 | 215.80 | 0.50 |
| 12 | 103344 | -139847 | 269976158 | 6022 | 57067624 | -0 | 215.80 | 0.39 |
| 13 | 136639 | 14589 | 199726267 | 6028 | 62609272 | -0 | 215.80 | 0.29 |
| 14 | 138007 | 15066 | 217586100 | 6027 | 68134555 | -0 | 215.80 | 0.30 |
| 15 | 139415 | 15556 | 235845191 | 6027 | 73643280 | -0 | 215.80 | 0.30 |
| 16 | 163476 | 115205 | 312740223 | 6030 | 79200495 | -0 | 215.80 | 0.37 |
| 17 | 187577 | 130510 | 565154952 | 6033 | 84799413 | -0 | 215.80 | 0.60 |
| 18 | 189105 | 131036 | 682712751 | 6032 | 90374894 | -0 | 215.80 | 0.68 |
| 19 | 195193 | 131584 | 800740886 | 6031 | 95938092 | -0 | 215.80 | 0.75 |
| 20 | 198070 | 133438 | 926227526 | 6044 | 101850150 | -0 | 215.80 | 0.81 |
| 21 | 201009 | 141407 | 1057029070 | 6029 | 107525374 | -0 | 215.80 | 0.61 |
| 22 | 203558 | 141998 | 1186985552 | 6028 | 113185471 | -0 | 215.80 | 0.65 |
| 23 | 206170 | 142604 | 1317344975 | 6027 | 118830483 | -0 | 215.80 | 0.69 |
| 24 | 208846 | 143225 | 1448111072 | 6026 | 124460548 | -0 | 215.80 | 0.72 |
| 25 | 211584 | 143861 | 1579288708 | 6025 | 130075811 | -0 | 215.80 | 0.74 |
| 26 | 214385 | 144511 | 1710883706 | 6024 | 135676413 | -0 | 215.80 | 0.77 |
| 27 | 217250 | 145177 | 1842902691 | 6023 | 141262491 | -0 | 215.80 | 0.79 |
| 28 | 220177 | 145858 | 1975352963 | 6022 | 146834180 | -0 | 215.80 | 0.81 |
| 29 | 223168 | 146554 | 2108242390 | 6021 | 152391608 | -0 | 215.80 | 0.82 |
| 30 | 226222 | 147265 | 2241579318 | 6020 | 157934896 | -0 | 215.80 | 0.84 |
| 31 | 238202 | 148002 | 2375572115 | 6020 | 163475918 | -0 | 215.80 | 0.85 |
| 32 | 241776 | 148771 | 2508783751 | 6022 | 168964466 | -0 | 215.80 | 0.86 |
| 33 | 245421 | 149462 | 2641737065 | 6018 | 174398362 | -0 | 215.80 | 0.78 |
| 34 | 249138 | 150207 | 2775167970 | 6017 | 179820225 | -0 | 215.80 | 0.79 |
| 35 | 252927 | 150968 | 2909085578 | 6016 | 185230100 | -0 | 215.80 | 0.80 |
| 36 | 256787 | 151743 | 3043499401 | 6016 | 190628043 | -0 | 215.80 | 0.80 |
| 37 | 260718 | 152533 | 3178419042 | 6015 | 196014104 | -0 | 215.80 | 0.81 |
| 38 | 264721 | 153337 | 3313854178 | 6014 | 201388321 | -0 | 215.80 | 0.81 |
| 39 | 268795 | 154157 | 3449814538 | 6013 | 206750727 | -0 | 215.80 | 0.81 |
| 40 | 272941 | 154991 | 3586309891 | 6012 | 212101346 | -0 | 215.80 | 0.82 |
| 41 | 277159 | 155840 | 3723350029 | 6011 | 217440194 | -0 | 215.80 | 0.82 |
| 42 | 294225 | 156711 | 3861092507 | 6011 | 222775366 | -0 | 215.80 | 0.82 |
| 43 | 298349 | 157555 | 3994529482 | 6010 | 227911136 | -0 | 215.80 | 0.82 |
| 44 | 302538 | 158401 | 4128531463 | 6010 | 233038307 | -0 | 215.80 | 0.85 |
| 45 | 306794 | 159258 | 4263037289 | 6009 | 238153051 | -0 | 215.80 | 0.85 |
| 46 | 311117 | 160129 | 4398056066 | 6008 | 243255390 | -0 | 215.80 | 0.85 |
| 47 | 315506 | 161013 | 4533596793 | 6007 | 248345331 | -0 | 215.80 | 0.85 |
| 48 | 319961 | 161911 | 4669668440 | 6006 | 253422877 | -0 | 215.80 | 0.85 |
| 49 | 324482 | 162823 | 4806279946 | 6006 | 258488023 | -0 | 215.80 | 0.85 |
| 50 | 329070 | 163749 | 4943440215 | 6005 | 263540761 | -0 | 215.80 | 0.85 |
| 51 | 333724 | 164688 | 5081158111 | 6004 | 268581074 | -0 | 215.80 | 0.85 |
| 52 | 338444 | 165641 | 5219442460 | 6003 | 273608942 | -0 | 215.80 | 0.85 |
| 53 | 343231 | 166608 | 5358302047 | 6003 | 278624340 | -0 | 215.80 | 0.85 |
| 54 | 348084 | 167589 | 5497745613 | 6002 | 283627238 | -0 | 215.80 | 0.84 |
| 55 | 353003 | 168583 | 5637781856 | 6001 | 288617599 | -0 | 215.80 | 0.84 |
| 56 | 357989 | 169591 | 5778419432 | 6000 | 293595386 | -0 | 215.80 | 0.84 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 6 " MST - MSA - ZONA A - NORMALE - RESISTENZA - 3 x 31.5 "

Pressione trasversale del vento = 706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | 6880.00 | 6000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | 41740.00 | 0.00 | 4.75 |
| -- | --- | --- | Ft = -5546 | Fp = 0 | -- |
| -- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| -- | --- | Pb = 0 | Tb = 41740 | Lb = 0 | --- |
| 3.00 | 33.69 | 0.00 | 41740.00 | 0.00 | -4.75 |
| -- | --- | --- | Ft = 5546 | Fp = -44965 | -- |
| -- | --- | Pa = 4677 | Ta = -2981 | La = 0 | -- |
| -- | --- | Pb = -4677 | Tb = 44721 | Lb = 0 | -- |
| 4.00 | 30.23 | 0.00 | 41740.00 | 0.00 | 4.75 |
| -- | --- | --- | Ft = -5546 | Fp = 0 | --- |
| -- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| -- | --- | Pb = 0 | Tb = 41740 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|------|----------------------|--------|------------|--------|-----------|----------|-------------------|-------|
| 2 | 433 | 7181 | 6995246 | 6000 | 5881921 | 0 | 215.80 | 0.05 |
| 3 | 883 | 7495 | 12980995 | 6000 | 10655771 | -0 | 215.80 | 0.08 |
| 4 | 1350 | 7821 | 19240427 | 6000 | 15431496 | 0 | 215.80 | 0.11 |
| 5 | 1836 | 8160 | 25783859 | 6000 | 20208993 | -0 | 215.80 | 0.14 |
| 6 | 3733 | 8512 | 32663318 | 6000 | 24993403 | -0 | 215.80 | 0.16 |
| 7 | 4822 | 8902 | 40518147 | 6000 | 30117299 | -0 | 215.80 | 0.19 |
| 8 | 6851 | 9297 | 48618939 | 6000 | 35229247 | -0 | 215.80 | 0.11 |
| 9 | 8920 | 9709 | 57132922 | 6000 | 40347751 | 0 | 215.80 | 0.12 |
| 10 | 10128 | 10135 | 66043747 | 6000 | 45469201 | -0 | 215.80 | 0.12 |
| 11 | 11377 | 10575 | 75364190 | 6000 | 50593367 | 0 | 215.80 | 0.13 |
| 12 | 15904 | 4207 | 81202642 | 6001 | 55730362 | -0 | 215.80 | 0.13 |
| 13 | 20470 | 50259 | 122736132 | 6001 | 60879006 | -0 | 215.80 | 0.17 |
| 14 | 21838 | 50742 | 166416708 | 6001 | 66028700 | -0 | 215.80 | 0.21 |
| 15 | 23246 | 51239 | 210552992 | 6001 | 71179199 | -0 | 215.80 | 0.25 |
| 16 | 23255 | 60674 | 260393380 | 6001 | 76326478 | -0 | 215.80 | 0.29 |
| 17 | 23305 | 96996 | 349614837 | 6001 | 81470688 | 0 | 215.80 | 0.36 |
| 18 | 24832 | 97536 | 433006974 | 6001 | 86615360 | 0 | 215.80 | 0.41 |
| 19 | 30921 | 98092 | 517024292 | 6001 | 91770300 | 0 | 215.80 | 0.47 |
| 20 | 33343 | 100448 | 605377693 | 6001 | 97100542 | 0 | 215.80 | 0.52 |
| 21 | 35829 | 141005 | 732606606 | 6001 | 102398585 | 0 | 215.80 | 0.41 |
| 22 | 38378 | 141609 | 856946565 | 6001 | 107698247 | 0 | 215.80 | 0.46 |
| 23 | 40990 | 142228 | 981865446 | 6001 | 112999269 | 0 | 215.80 | 0.50 |
| 24 | 43666 | 142862 | 1107372299 | 6001 | 118301395 | 0 | 215.80 | 0.54 |
| 25 | 46404 | 143511 | 1233476060 | 6001 | 123604371 | 0 | 215.80 | 0.57 |
| 26 | 49205 | 144175 | 1360185567 | 6001 | 128907944 | 0 | 215.80 | 0.60 |
| 27 | 52070 | 144854 | 1487509569 | 6001 | 134211861 | 0 | 215.80 | 0.62 |
| 28 | 54997 | 145549 | 1615456741 | 6001 | 139515872 | 0 | 215.80 | 0.65 |
| 29 | 57988 | 146258 | 1744035691 | 6001 | 144819728 | 0 | 215.80 | 0.67 |
| 30 | 61042 | 146983 | 1873254967 | 6001 | 150123181 | 0 | 215.80 | 0.69 |
| 31 | 73022 | 147724 | 2003294277 | 6001 | 155436732 | 0 | 215.80 | 0.71 |
| 32 | 76596 | 148470 | 2132277580 | 6001 | 160684185 | 0 | 215.80 | 0.72 |
| 33 | 80241 | 149211 | 2261701426 | 6001 | 165918508 | 0 | 215.80 | 0.66 |
| 34 | 83958 | 149968 | 2391771622 | 6001 | 171151787 | 0 | 215.80 | 0.67 |
| 35 | 87747 | 150740 | 2522496133 | 6001 | 176383793 | 0 | 215.80 | 0.68 |
| 36 | 91607 | 151527 | 2653882908 | 6001 | 181614297 | 0 | 215.80 | 0.69 |
| 37 | 95538 | 152328 | 2785939873 | 6001 | 186843075 | 0 | 215.80 | 0.70 |
| 38 | 99541 | 153144 | 2918674929 | 6001 | 192069901 | 0 | 215.80 | 0.70 |
| 39 | 103615 | 153975 | 3052095959 | 6001 | 197294552 | 0 | 215.80 | 0.71 |
| 40 | 107761 | 154820 | 3186210825 | 6001 | 202516805 | 0 | 215.80 | 0.71 |
| 41 | 111979 | 155680 | 3321027370 | 6001 | 207736439 | 0 | 215.80 | 0.72 |
| 42 | 129045 | 156557 | 3456683638 | 6001 | 212960674 | 0 | 215.80 | 0.72 |
| 43 | 133169 | 157415 | 3588291639 | 6001 | 217999688 | 0 | 215.80 | 0.73 |
| 44 | 137358 | 158270 | 3720573281 | 6001 | 223036304 | 0 | 215.80 | 0.76 |
| 45 | 141614 | 159138 | 3853507979 | 6001 | 228068761 | 0 | 215.80 | 0.76 |
| 46 | 145937 | 160020 | 3987102676 | 6001 | 233096877 | 0 | 215.80 | 0.77 |
| 47 | 150326 | 160915 | 4121364299 | 6001 | 238120466 | 0 | 215.80 | 0.77 |
| 48 | 154781 | 161825 | 4256299766 | 6001 | 243139345 | 0 | 215.80 | 0.77 |
| 49 | 159302 | 162747 | 4391915984 | 6001 | 248153331 | 0 | 215.80 | 0.77 |
| 50 | 163890 | 163683 | 4528219850 | 6001 | 253162240 | 0 | 215.80 | 0.77 |
| 51 | 168544 | 164633 | 4665218250 | 6000 | 258165889 | 0 | 215.80 | 0.77 |
| 52 | 173264 | 165597 | 4802918062 | 6000 | 263164095 | 0 | 215.80 | 0.77 |
| 53 | 178051 | 166574 | 4941326150 | 6000 | 268156675 | 0 | 215.80 | 0.77 |
| 54 | 182904 | 167564 | 5080449370 | 6000 | 273143448 | 0 | 215.80 | 0.77 |
| 55 | 187823 | 168569 | 5220294567 | 6000 | 278124230 | 0 | 215.80 | 0.77 |
| 56 | 192809 | 169587 | 5360868574 | 6000 | 283098840 | 0 | 215.80 | 0.77 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 7 " MST - MSA - ZONA B - NORMALE - RESISTENZA - 3 x 31.5 "

Pressione trasversale del vento = 706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 6540.00 | 6680.00 | 5000.00 | 0.00 |
| 2.00 | 37.16 | 51640.00 | 40950.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 60169 | Fp = 8638 | --- |
| --- | --- | Pa = 50739 | Ta = 32339 | La = 0 | --- |
| --- | --- | Pb = 901 | Tb = 8611 | Lb = 0 | --- |
| 3.00 | 33.69 | 51640.00 | 40950.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 71051 | Fp = -79569 | --- |
| --- | --- | Pa = 59916 | Ta = -38187 | La = 0 | --- |
| --- | --- | Pb = -8276 | Tb = 79137 | Lb = 0 | --- |
| 4.00 | 30.23 | 51640.00 | 40950.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 60169 | Fp = 8658 | --- |
| --- | --- | Pa = 50739 | Ta = 32339 | La = 0 | --- |
| --- | --- | Pb = 901 | Tb = 8611 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|------------|--------|-----------|----------|--------------------------------|-------|
| 2 | 6973 | 7001 | 7078118 | 5001 | 4927505 | 0 | 215.80 | 0.05 |
| 3 | 7423 | 7316 | 13187300 | 5001 | 8931289 | 0 | 215.80 | 0.08 |
| 4 | 7890 | 7643 | 19573524 | 5001 | 12936070 | 0 | 215.80 | 0.11 |
| 5 | 8376 | 7983 | 26246973 | 5002 | 16941583 | 0 | 215.80 | 0.13 |
| 6 | 10273 | 8340 | 33270335 | 5002 | 20952043 | 0 | 215.80 | 0.16 |
| 7 | 11362 | 8763 | 41622629 | 5004 | 25270274 | 0 | 215.80 | 0.18 |
| 8 | 38761 | 217521 | 178115060 | 5007 | 29640006 | 0 | 215.80 | 0.32 |
| 9 | 66199 | 42033 | 252054539 | 5012 | 34094864 | -0 | 215.80 | 0.43 |
| 10 | 67408 | 42459 | 290686105 | 5012 | 38545463 | -0 | 215.80 | 0.46 |
| 11 | 68656 | 42899 | 329675522 | 5012 | 42991467 | -0 | 215.80 | 0.48 |
| 12 | 101253 | -136809 | 263639397 | 5017 | 47523323 | -0 | 215.80 | 0.38 |
| 13 | 133889 | 14412 | 194929622 | 5022 | 52132882 | -0 | 215.80 | 0.28 |
| 14 | 135257 | 14889 | 212439176 | 5022 | 56729172 | -0 | 215.80 | 0.29 |
| 15 | 136665 | 15379 | 230350294 | 5021 | 61312031 | -0 | 215.80 | 0.29 |
| 16 | 160245 | 112889 | 305627369 | 5024 | 65934383 | -0 | 215.80 | 0.36 |
| 17 | 183864 | 127981 | 552707685 | 5026 | 70590703 | -0 | 215.80 | 0.58 |
| 18 | 185392 | 128507 | 667870826 | 5026 | 75227984 | -0 | 215.80 | 0.66 |
| 19 | 191480 | 129056 | 783508955 | 5025 | 79855495 | -0 | 215.80 | 0.73 |
| 20 | 194353 | 130891 | 906417955 | 5035 | 84770129 | -0 | 215.80 | 0.80 |
| 21 | 197289 | 138813 | 1034710650 | 5023 | 89491666 | -0 | 215.80 | 0.60 |
| 22 | 199838 | 139405 | 1162174735 | 5022 | 94200945 | -0 | 215.80 | 0.64 |
| 23 | 202450 | 140012 | 1290048853 | 5022 | 98897995 | -0 | 215.80 | 0.67 |
| 24 | 205126 | 140634 | 1418337001 | 5021 | 103582925 | -0 | 215.80 | 0.70 |
| 25 | 207864 | 141270 | 1547044263 | 5020 | 108255846 | -0 | 215.80 | 0.73 |
| 26 | 210665 | 141922 | 1676176634 | 5019 | 112916867 | -0 | 215.80 | 0.75 |
| 27 | 213530 | 142588 | 1805740878 | 5019 | 117566096 | -0 | 215.80 | 0.77 |
| 28 | 216457 | 143270 | 1935744403 | 5018 | 122203636 | -0 | 215.80 | 0.79 |
| 29 | 219448 | 143967 | 2066195163 | 5017 | 126829586 | -0 | 215.80 | 0.81 |
| 30 | 222502 | 144678 | 2197101564 | 5016 | 131444040 | -0 | 215.80 | 0.82 |
| 31 | 234482 | 145416 | 2328668070 | 5016 | 136056862 | -0 | 215.80 | 0.84 |
| 32 | 238056 | 146184 | 2459471809 | 5017 | 140625677 | -0 | 215.80 | 0.85 |
| 33 | 241701 | 146878 | 2590049792 | 5014 | 145149809 | -0 | 215.80 | 0.77 |
| 34 | 245418 | 147624 | 2721112618 | 5014 | 149664141 | -0 | 215.80 | 0.78 |
| 35 | 249207 | 148385 | 2852669415 | 5013 | 154168706 | -0 | 215.80 | 0.78 |
| 36 | 253067 | 149161 | 2984729689 | 5012 | 158663545 | -0 | 215.80 | 0.79 |
| 37 | 256998 | 149951 | 3117303035 | 5012 | 163148692 | -0 | 215.80 | 0.79 |
| 38 | 261001 | 150756 | 3250399116 | 5011 | 167624175 | -0 | 215.80 | 0.79 |
| 39 | 265075 | 151576 | 3384027648 | 5011 | 172090015 | -0 | 215.80 | 0.80 |
| 40 | 269221 | 152411 | 3518198383 | 5010 | 176546227 | -0 | 215.80 | 0.80 |
| 41 | 273439 | 153261 | 3652921095 | 5009 | 180992820 | -0 | 215.80 | 0.80 |
| 42 | 290505 | 154132 | 3788350479 | 5009 | 185436519 | -0 | 215.80 | 0.80 |
| 43 | 294629 | 154977 | 3919563197 | 5008 | 189714341 | -0 | 215.80 | 0.80 |
| 44 | 298818 | 155824 | 4051346050 | 5008 | 193985127 | -0 | 215.80 | 0.84 |
| 45 | 303074 | 156682 | 4183640065 | 5007 | 198245728 | -0 | 215.80 | 0.84 |
| 46 | 307397 | 157553 | 4316454311 | 5006 | 202496156 | -0 | 215.80 | 0.84 |
| 47 | 311786 | 158438 | 4449797763 | 5006 | 206736415 | -0 | 215.80 | 0.84 |
| 48 | 316241 | 159337 | 4583679366 | 5005 | 210966502 | -0 | 215.80 | 0.84 |
| 49 | 320762 | 160249 | 4718108031 | 5004 | 215186411 | -0 | 215.80 | 0.84 |
| 50 | 325350 | 161175 | 4853092640 | 5004 | 219396130 | -0 | 215.80 | 0.83 |
| 51 | 330004 | 162115 | 4988642035 | 5003 | 223595641 | -0 | 215.80 | 0.83 |
| 52 | 334724 | 163069 | 5124765021 | 5003 | 227784926 | -0 | 215.80 | 0.83 |
| 53 | 339511 | 164036 | 5261470362 | 5002 | 231963959 | -0 | 215.80 | 0.83 |
| 54 | 344364 | 165018 | 5398766785 | 5001 | 236132711 | -0 | 215.80 | 0.83 |
| 55 | 349283 | 166012 | 5536662970 | 5001 | 240291150 | -0 | 215.80 | 0.83 |
| 56 | 354269 | 167021 | 5675167558 | 5000 | 244439241 | -0 | 215.80 | 0.82 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 8 " MST - MSA - ZONA B - NORMALE - RESISTENZA - 3 x 31.5 "

Pressione trasversale del vento = 706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|---------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | 6680.00 | 5000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | 40950.00 | 0.00 | 4.75 |
| -- | -- | -- | Ft = -5441 | Fp = 0 | -- |
| -- | -- | Pa = 0 | Ta = 0 | La = 0 | -- |
| -- | -- | Pb = 0 | Tb = 40950 | Lb = 0 | -- |
| 3.00 | 33.69 | 0.00 | 40950.00 | 0.00 | -4.75 |
| -- | -- | -- | Ft = 5441 | Fp = -44114 | -- |
| -- | -- | Pa = 4588 | Ta = -2924 | La = 0 | -- |
| -- | -- | Pb = -4588 | Tb = 43874 | Lb = 0 | -- |
| 4.00 | 30.23 | 0.00 | 40950.00 | 0.00 | 4.75 |
| -- | -- | -- | Ft = -5441 | Fp = 0 | -- |
| -- | -- | Pa = 0 | Ta = 0 | La = 0 | -- |
| -- | -- | Pb = 0 | Tb = 40950 | Lb = 0 | -- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|------|----------------------|--------|------------|--------|-----------|----------|-------------------|-------|
| 2 | 433 | 6981 | 6798992 | 5000 | 4901601 | 0 | 215.80 | 0.04 |
| 3 | 883 | 7295 | 12625227 | 5000 | 8879809 | -0 | 215.80 | 0.07 |
| 4 | 1350 | 7621 | 18724879 | 5000 | 12859580 | 0 | 215.80 | 0.10 |
| 5 | 1836 | 7960 | 25108261 | 5000 | 16840827 | -0 | 215.80 | 0.13 |
| 6 | 3733 | 8312 | 31826633 | 5000 | 20827835 | -0 | 215.80 | 0.15 |
| 7 | 4822 | 8702 | 39506229 | 5000 | 25097748 | -0 | 215.80 | 0.17 |
| 8 | 6851 | 9097 | 47433443 | 5000 | 29357705 | -0 | 215.80 | 0.10 |
| 9 | 8920 | 9509 | 55772675 | 5000 | 33623124 | 0 | 215.80 | 0.11 |
| 10 | 10128 | 9935 | 64508098 | 5000 | 37890999 | 0 | 215.80 | 0.12 |
| 11 | 11377 | 10374 | 73652477 | 5000 | 42161137 | 0 | 215.80 | 0.12 |
| 12 | 15859 | 4136 | 79386813 | 5000 | 46441848 | -0 | 215.80 | 0.12 |
| 13 | 20382 | 49326 | 120146901 | 5001 | 50732158 | -0 | 215.80 | 0.17 |
| 14 | 21750 | 49808 | 163021235 | 5001 | 55023354 | -0 | 215.80 | 0.20 |
| 15 | 23157 | 50306 | 206350747 | 5001 | 59315232 | -0 | 215.80 | 0.24 |
| 16 | 23211 | 59572 | 255285938 | 5001 | 63604533 | -0 | 215.80 | 0.28 |
| 17 | 23305 | 95216 | 342866588 | 5001 | 67891374 | 0 | 215.80 | 0.35 |
| 18 | 24832 | 95756 | 424736960 | 5001 | 72178600 | 0 | 215.80 | 0.40 |
| 19 | 30921 | 96312 | 507229753 | 5001 | 76474383 | 0 | 215.80 | 0.46 |
| 20 | 33343 | 98634 | 593988531 | 5001 | 80916250 | 0 | 215.80 | 0.51 |
| 21 | 35829 | 138435 | 718896328 | 5001 | 85331285 | 0 | 215.80 | 0.41 |
| 22 | 38378 | 139039 | 840979866 | 5001 | 89747669 | 0 | 215.80 | 0.45 |
| 23 | 40990 | 139658 | 963641632 | 5001 | 94165187 | 0 | 215.80 | 0.49 |
| 24 | 43666 | 140292 | 1086890754 | 5001 | 98583624 | 0 | 215.80 | 0.52 |
| 25 | 46404 | 140941 | 1210736244 | 5001 | 103002770 | 0 | 215.80 | 0.56 |
| 26 | 49205 | 141605 | 1335187019 | 5001 | 107422414 | 0 | 215.80 | 0.59 |
| 27 | 52070 | 142284 | 1460251909 | 5001 | 111842344 | 0 | 215.80 | 0.61 |
| 28 | 54997 | 142978 | 1585939670 | 5001 | 116262352 | 0 | 215.80 | 0.64 |
| 29 | 57988 | 143688 | 1712258990 | 5001 | 120682231 | 0 | 215.80 | 0.66 |
| 30 | 61042 | 144412 | 1839218502 | 5001 | 125101775 | 0 | 215.80 | 0.68 |
| 31 | 73022 | 145154 | 1966994988 | 5001 | 129529734 | 0 | 215.80 | 0.69 |
| 32 | 76596 | 145900 | 2093744958 | 5001 | 133902610 | 0 | 215.80 | 0.71 |
| 33 | 80241 | 146640 | 2220938963 | 5001 | 138264545 | 0 | 215.80 | 0.65 |
| 34 | 83958 | 147398 | 2348779420 | 5001 | 142625611 | 0 | 215.80 | 0.66 |
| 35 | 87747 | 148170 | 2477274373 | 5001 | 146985614 | 0 | 215.80 | 0.67 |
| 36 | 91607 | 148957 | 2606431854 | 5001 | 151344367 | 0 | 215.80 | 0.68 |
| 37 | 95538 | 149758 | 2736259867 | 5001 | 155701682 | 0 | 215.80 | 0.68 |
| 38 | 99541 | 150574 | 2866766398 | 5001 | 160057369 | 0 | 215.80 | 0.69 |
| 39 | 103615 | 151405 | 2997959408 | 5001 | 164411245 | 0 | 215.80 | 0.70 |
| 40 | 107761 | 152250 | 3129846840 | 5001 | 168763122 | 0 | 215.80 | 0.70 |
| 41 | 111979 | 153110 | 3262436618 | 5001 | 173112816 | 0 | 215.80 | 0.71 |
| 42 | 129045 | 153986 | 3395864615 | 5001 | 177466345 | 0 | 215.80 | 0.71 |
| 43 | 133169 | 154844 | 3525322632 | 5001 | 181665522 | 0 | 215.80 | 0.71 |
| 44 | 137358 | 155699 | 3655454926 | 5001 | 185862702 | 0 | 215.80 | 0.75 |
| 45 | 141614 | 156568 | 3786241460 | 5001 | 190056416 | 0 | 215.80 | 0.75 |
| 46 | 145937 | 157450 | 3917689249 | 5001 | 194246512 | 0 | 215.80 | 0.75 |
| 47 | 150326 | 158345 | 4049805291 | 5001 | 198432836 | 0 | 215.80 | 0.75 |
| 48 | 154781 | 159254 | 4182596576 | 5001 | 202615235 | 0 | 215.80 | 0.75 |
| 49 | 159302 | 160177 | 4316070080 | 5000 | 206793557 | 0 | 215.80 | 0.76 |
| 50 | 163890 | 161113 | 4450232774 | 5000 | 210967647 | 0 | 215.80 | 0.76 |
| 51 | 168544 | 162063 | 4585091614 | 5000 | 215137354 | 0 | 215.80 | 0.76 |
| 52 | 173264 | 163027 | 4720653546 | 5000 | 219302526 | 0 | 215.80 | 0.76 |
| 53 | 178051 | 164004 | 4856925509 | 5000 | 223463009 | 0 | 215.80 | 0.76 |
| 54 | 182904 | 164994 | 4993914426 | 5000 | 227618653 | 0 | 215.80 | 0.76 |
| 55 | 187823 | 165999 | 5131627214 | 5000 | 231769304 | 0 | 215.80 | 0.76 |
| 56 | 192809 | 167017 | 5270070776 | 5000 | 235914813 | 0 | 215.80 | 0.76 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 9 " MST - MSB - ZONA B - NORMALE - RESISTENZA - 3 x 31.5 "

Pressione trasversale del vento = 176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 10860.00 | 6030.00 | 8000.00 | 0.00 |
| 2.00 | 37.16 | 69900.00 | 29920.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 84834 | Fp = -15761 | --- |
| --- | --- | Pa = 71539 | Ta = 45596 | La = 0 | --- |
| --- | --- | Pb = -1639 | Tb = -15676 | Lb = 0 | --- |
| 3.00 | 33.69 | 69900.00 | 29920.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 92785 | Fp = -80224 | --- |
| --- | --- | Pa = 78244 | Ta = -49869 | La = 0 | --- |
| --- | --- | Pb = -8344 | Tb = 79789 | Lb = 0 | --- |
| 4.00 | 30.23 | 69900.00 | 29920.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 84834 | Fp = -15761 | --- |
| --- | --- | Pa = 71539 | Ta = 45596 | La = 0 | --- |
| --- | --- | Pb = -1639 | Tb = -15676 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|------------|--------|-----------|----------|--------------------------------|-------|
| 2 | 11293 | 6142 | 6381878 | 8005 | 7913380 | 0 | 215.80 | 0.06 |
| 3 | 11743 | 6221 | 11725095 | 8005 | 14348418 | 0 | 215.80 | 0.10 |
| 4 | 12210 | 6304 | 17147605 | 8005 | 20784402 | 0 | 215.80 | 0.13 |
| 5 | 12696 | 6390 | 22651878 | 8005 | 27220714 | 0 | 215.80 | 0.15 |
| 6 | 14593 | 6483 | 28284428 | 8006 | 33663898 | 0 | 215.80 | 0.18 |
| 7 | 15682 | 6632 | 34999116 | 8013 | 40627474 | 0 | 215.80 | 0.20 |
| 8 | 53481 | 300511 | 221846946 | 8022 | 47708782 | 0 | 215.80 | 0.41 |
| 9 | 91319 | 52615 | 319834850 | 8037 | 54984740 | 0 | 215.80 | 0.55 |
| 10 | 92528 | 52721 | 367575813 | 8037 | 62248903 | 0 | 215.80 | 0.58 |
| 11 | 93776 | 52830 | 415341010 | 8036 | 69500584 | 0 | 215.80 | 0.61 |
| 12 | 134267 | -190592 | 320177901 | 8051 | 76927767 | 0 | 215.80 | 0.47 |
| 13 | 174797 | -12261 | 199288416 | 8065 | 84513758 | -0 | 215.80 | 0.31 |
| 14 | 176165 | -12150 | 194162765 | 8063 | 92069517 | -0 | 215.80 | 0.29 |
| 15 | 177573 | -12038 | 189097234 | 8062 | 99594751 | -0 | 215.80 | 0.27 |
| 16 | 211519 | 118515 | 260484846 | 8071 | 107218760 | -0 | 215.80 | 0.34 |
| 17 | 245504 | 113745 | 545726844 | 8079 | 114928201 | -0 | 215.80 | 0.60 |
| 18 | 247031 | 113857 | 648916796 | 8075 | 122593708 | -0 | 215.80 | 0.66 |
| 19 | 253120 | 113982 | 752127443 | 8073 | 130230822 | -0 | 215.80 | 0.72 |
| 20 | 254723 | 112406 | 860133561 | 8103 | 138419599 | -0 | 215.80 | 0.77 |
| 21 | 256389 | 98549 | 950024469 | 8067 | 146180424 | -0 | 215.80 | 0.57 |
| 22 | 258938 | 98681 | 1042123869 | 8064 | 153912473 | -0 | 215.80 | 0.59 |
| 23 | 261550 | 98817 | 1134174987 | 8062 | 161615889 | -0 | 215.80 | 0.61 |
| 24 | 264226 | 98956 | 1226175813 | 8059 | 169291054 | -0 | 215.80 | 0.62 |
| 25 | 266964 | 99099 | 1318125281 | 8057 | 176938358 | -0 | 215.80 | 0.63 |
| 26 | 269765 | 99245 | 1410023101 | 8054 | 184558191 | -0 | 215.80 | 0.65 |
| 27 | 272630 | 99396 | 1501869632 | 8052 | 192150940 | -0 | 215.80 | 0.66 |
| 28 | 275557 | 99550 | 1593665763 | 8050 | 199716983 | -0 | 215.80 | 0.67 |
| 29 | 278548 | 99708 | 1685412822 | 8047 | 207256689 | -0 | 215.80 | 0.67 |
| 30 | 281602 | 99870 | 1777112497 | 8045 | 214770415 | -0 | 215.80 | 0.68 |
| 31 | 293582 | 100046 | 1868917752 | 8044 | 222274741 | -0 | 215.80 | 0.68 |
| 32 | 297156 | 100262 | 1960008092 | 8047 | 229715971 | -0 | 215.80 | 0.69 |
| 33 | 300801 | 100382 | 2050401457 | 8039 | 237063027 | -0 | 215.80 | 0.62 |
| 34 | 304518 | 100554 | 2140774448 | 8038 | 244388363 | -0 | 215.80 | 0.62 |
| 35 | 308307 | 100731 | 2231129221 | 8036 | 251692180 | -0 | 215.80 | 0.62 |
| 36 | 312167 | 100911 | 2321468349 | 8034 | 258974707 | -0 | 215.80 | 0.62 |
| 37 | 316098 | 101096 | 2411794441 | 8032 | 266236155 | -0 | 215.80 | 0.62 |
| 38 | 320101 | 101284 | 2502110133 | 8030 | 273476720 | -0 | 215.80 | 0.62 |
| 39 | 324175 | 101476 | 2592418067 | 8028 | 280696584 | -0 | 215.80 | 0.62 |
| 40 | 328321 | 101672 | 2682720886 | 8026 | 287895912 | -0 | 215.80 | 0.62 |
| 41 | 332539 | 101872 | 2773021222 | 8025 | 295074855 | -0 | 215.80 | 0.62 |
| 42 | 349605 | 102083 | 2863430456 | 8024 | 302244679 | -0 | 215.80 | 0.62 |
| 43 | 353729 | 102279 | 2950655129 | 8021 | 309141404 | -0 | 215.80 | 0.62 |
| 44 | 357918 | 102481 | 3037920979 | 8020 | 316023492 | -0 | 215.80 | 0.64 |
| 45 | 362174 | 102683 | 3125169228 | 8018 | 322884791 | -0 | 215.80 | 0.64 |
| 46 | 366497 | 102888 | 3212402532 | 8017 | 329725441 | -0 | 215.80 | 0.64 |
| 47 | 370886 | 103097 | 3299623410 | 8015 | 336545556 | -0 | 215.80 | 0.63 |
| 48 | 375341 | 103310 | 3386834332 | 8013 | 343345239 | -0 | 215.80 | 0.63 |
| 49 | 379862 | 103526 | 3474037721 | 8012 | 350124581 | -0 | 215.80 | 0.63 |
| 50 | 384450 | 103746 | 3561235945 | 8010 | 356883662 | -0 | 215.80 | 0.62 |
| 51 | 389104 | 103970 | 3648431326 | 8008 | 363622553 | -0 | 215.80 | 0.62 |
| 52 | 393824 | 104197 | 3735626134 | 8007 | 370341313 | -0 | 215.80 | 0.62 |
| 53 | 398611 | 104427 | 3822822585 | 8005 | 377039991 | -0 | 215.80 | 0.61 |
| 54 | 403464 | 104662 | 3910022846 | 8004 | 383718629 | -0 | 215.80 | 0.61 |
| 55 | 408383 | 104900 | 3997229035 | 8002 | 390377258 | -0 | 215.80 | 0.61 |
| 56 | 413369 | 105141 | 4084443215 | 8001 | 397015900 | -0 | 215.80 | 0.60 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 10 " MST - MSB - ZONA B - NORMALE - RESISTENZA - 3 x 31.5 "

Pressione trasversale del vento = 176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|---------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | 6030.00 | 8000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | 29920.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = -3975 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = 29920 | Lb = 0 | --- |
| 3.00 | 33.69 | 0.00 | 29920.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 3975 | Fp = -32231 | --- |
| --- | --- | Pa = 3352 | Ta = -2137 | La = 0 | --- |
| --- | --- | Pb = -3352 | Tb = 32057 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | 29920.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = -3975 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = 29920 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|--------|------------|--------|-----------|----------|--------------------------------|-------|
| 2 | 433 | 6105 | 5978486 | 8000 | 7842561 | 0 | 215.80 | 0.05 |
| 3 | 883 | 6183 | 10913293 | 8000 | 14207694 | -0 | 215.80 | 0.09 |
| 4 | 1350 | 6265 | 15922696 | 8000 | 20575326 | 0 | 215.80 | 0.12 |
| 5 | 1836 | 6349 | 21009365 | 8000 | 26945320 | -0 | 215.80 | 0.14 |
| 6 | 3733 | 6437 | 26204664 | 8000 | 33324529 | -0 | 215.80 | 0.16 |
| 7 | 4822 | 6536 | 31957056 | 8000 | 40156381 | -0 | 215.80 | 0.19 |
| 8 | 6851 | 6634 | 37731169 | 8000 | 46972305 | 0 | 215.80 | 0.11 |
| 9 | 8920 | 6737 | 43636535 | 8000 | 53796968 | 0 | 215.80 | 0.11 |
| 10 | 10128 | 6843 | 49656604 | 8000 | 60625558 | 0 | 215.80 | 0.12 |
| 11 | 11377 | 6953 | 55794814 | 8001 | 67457768 | 0 | 215.80 | 0.13 |
| 12 | 15241 | 2176 | 59238323 | 8001 | 74304257 | 0 | 215.80 | 0.13 |
| 13 | 19146 | 34968 | 88064480 | 8001 | 81163706 | -0 | 215.80 | 0.15 |
| 14 | 20514 | 35089 | 118237436 | 8001 | 88024807 | -0 | 215.80 | 0.18 |
| 15 | 21922 | 35213 | 148539178 | 8001 | 94887233 | -0 | 215.80 | 0.20 |
| 16 | 22593 | 41737 | 182741301 | 8001 | 101747932 | -0 | 215.80 | 0.22 |
| 17 | 23305 | 67528 | 244978000 | 8001 | 108606862 | 0 | 215.80 | 0.27 |
| 18 | 24832 | 67663 | 302820940 | 8001 | 115466407 | 0 | 215.80 | 0.30 |
| 19 | 30921 | 67802 | 360886758 | 8001 | 122339642 | 0 | 215.80 | 0.34 |
| 20 | 33343 | 69218 | 421746665 | 8002 | 129446603 | 0 | 215.80 | 0.37 |
| 21 | 35829 | 98015 | 510247261 | 8001 | 136510642 | 0 | 215.80 | 0.30 |
| 22 | 38378 | 98166 | 596429407 | 8001 | 143576839 | 0 | 215.80 | 0.33 |
| 23 | 40990 | 98320 | 682772850 | 8001 | 150644850 | 0 | 215.80 | 0.35 |
| 24 | 43666 | 98478 | 769278003 | 8001 | 157714333 | 0 | 215.80 | 0.38 |
| 25 | 46404 | 98640 | 855945205 | 8001 | 164784950 | 0 | 215.80 | 0.40 |
| 26 | 49205 | 98806 | 942774737 | 8001 | 171856362 | 0 | 215.80 | 0.42 |
| 27 | 52070 | 98976 | 1029766826 | 8001 | 178928234 | 0 | 215.80 | 0.44 |
| 28 | 54997 | 99149 | 1116921660 | 8001 | 186000232 | 0 | 215.80 | 0.45 |
| 29 | 57988 | 99326 | 1204239387 | 8001 | 193072023 | 0 | 215.80 | 0.47 |
| 30 | 61042 | 99506 | 1291720125 | 8001 | 200143277 | 0 | 215.80 | 0.48 |
| 31 | 73022 | 99692 | 1379479792 | 8002 | 207227994 | 0 | 215.80 | 0.49 |
| 32 | 76596 | 99879 | 1466254580 | 8002 | 214224578 | 0 | 215.80 | 0.50 |
| 33 | 80241 | 100062 | 1553054354 | 8002 | 221203659 | 0 | 215.80 | 0.46 |
| 34 | 83958 | 100251 | 1640012876 | 8001 | 228181348 | 0 | 215.80 | 0.47 |
| 35 | 87747 | 100444 | 1727130155 | 8001 | 235157340 | 0 | 215.80 | 0.47 |
| 36 | 91607 | 100640 | 1814406202 | 8001 | 242131330 | 0 | 215.80 | 0.48 |
| 37 | 95538 | 100839 | 1901841016 | 8001 | 249103019 | 0 | 215.80 | 0.48 |
| 38 | 99541 | 101043 | 1989434595 | 8001 | 256072107 | 0 | 215.80 | 0.48 |
| 39 | 103615 | 101250 | 2077186928 | 8001 | 263038295 | 0 | 215.80 | 0.49 |
| 40 | 107761 | 101460 | 2165098002 | 8001 | 270001286 | 0 | 215.80 | 0.49 |
| 41 | 111979 | 101674 | 2253167800 | 8001 | 276960786 | 0 | 215.80 | 0.49 |
| 42 | 129045 | 101893 | 2341483594 | 8001 | 283926419 | 0 | 215.80 | 0.50 |
| 43 | 133169 | 102107 | 2426875698 | 8001 | 290645092 | 0 | 215.80 | 0.50 |
| 44 | 137358 | 102320 | 2512420280 | 8001 | 297360569 | 0 | 215.80 | 0.52 |
| 45 | 141614 | 102536 | 2598098860 | 8001 | 304070503 | 0 | 215.80 | 0.52 |
| 46 | 145937 | 102755 | 2683911421 | 8001 | 310774647 | 0 | 215.80 | 0.52 |
| 47 | 150326 | 102978 | 2769857946 | 8001 | 317472758 | 0 | 215.80 | 0.52 |
| 48 | 154781 | 103204 | 2855938418 | 8001 | 324164590 | 0 | 215.80 | 0.52 |
| 49 | 159302 | 103434 | 2942152821 | 8001 | 330849897 | 0 | 215.80 | 0.52 |
| 50 | 163890 | 103667 | 3028501139 | 8001 | 337528437 | 0 | 215.80 | 0.52 |
| 51 | 168544 | 103903 | 3114983358 | 8001 | 344199963 | 0 | 215.80 | 0.52 |
| 52 | 173264 | 104143 | 3201599463 | 8000 | 350864234 | 0 | 215.80 | 0.52 |
| 53 | 178051 | 104386 | 3288349440 | 8000 | 357521005 | 0 | 215.80 | 0.52 |
| 54 | 182904 | 104632 | 3375233277 | 8000 | 364170032 | 0 | 215.80 | 0.52 |
| 55 | 187823 | 104882 | 3462250960 | 8000 | 370811073 | 0 | 215.80 | 0.52 |
| 56 | 192809 | 105135 | 3549402477 | 8000 | 377443886 | 0 | 215.80 | 0.52 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 11 " MST - MSA - ZONA A - NORMALE - RESISTENZA - 3 x 31.5 - (-) "

Pressione trasversale del vento = -706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 6840.00 | -6880.00 | 6000.00 | 0.00 |
| 2.00 | 37.16 | 52780.00 | -41740.00 | 0.00 | 4.75 |
| --- | -- | --- | Ft = 72604 | Fp = -81203 | -- |
| --- | -- | Pa = 61226 | Ta = 39022 | La = 0 | -- |
| --- | -- | Pb = -8446 | Tb = -80762 | Lb = 0 | -- |
| 3.00 | 33.69 | 52780.00 | -41740.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 61512 | Fp = 8726 | -- |
| --- | --- | Pa = 51872 | Ta = -33061 | La = 0 | -- |
| --- | --- | Pb = 908 | Tb = -8679 | Lb = 0 | -- |
| 4.00 | 30.23 | 52780.00 | -41740.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 72604 | Fp = -81203 | -- |
| --- | --- | Pa = 61226 | Ta = 39022 | La = 0 | -- |
| --- | --- | Pb = -8446 | Tb = -80762 | Lb = 0 | -- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|------|----------------------|---------|-------------|--------|-----------|----------|-------------------|-------|
| 2 | 7273 | -7197 | -7163734 | 6002 | 5914546 | 0 | 215.80 | 0.05 |
| 3 | 7723 | -7511 | -13314090 | 6002 | 10720610 | 0 | 215.80 | 0.09 |
| 4 | 8190 | -7838 | -19733748 | 6002 | 15527841 | 0 | 215.80 | 0.12 |
| 5 | 8676 | -8178 | -26432598 | 6002 | 20335909 | 0 | 215.80 | 0.14 |
| 6 | 10573 | -8533 | -33451458 | 6002 | 25149871 | 0 | 215.80 | 0.17 |
| 7 | 11662 | -8949 | -41584908 | 6005 | 30334671 | 0 | 215.80 | 0.19 |
| 8 | 44304 | 241976 | 102793478 | 6010 | 35601625 | 0 | 215.80 | 0.20 |
| 9 | 76985 | 29151 | 168699260 | 6017 | 40991043 | -0 | 215.80 | 0.30 |
| 10 | 78194 | 28725 | 191146779 | 6017 | 46373749 | 0 | 215.80 | 0.32 |
| 11 | 79443 | 28285 | 213146663 | 6017 | 51749294 | -0 | 215.80 | 0.33 |
| 12 | 103344 | -155351 | 125367793 | 6022 | 57196276 | 0 | 215.80 | 0.21 |
| 13 | 127286 | -86552 | -37470016 | 6026 | 62707499 | -0 | 215.80 | 0.12 |
| 14 | 128654 | -87031 | -114533378 | 6026 | 68203724 | -0 | 215.80 | 0.18 |
| 15 | 130062 | -87524 | -192016788 | 6025 | 73684771 | -0 | 215.80 | 0.25 |
| 16 | 163476 | 8109 | -215336496 | 6031 | 79242804 | -0 | 215.80 | 0.27 |
| 17 | 196930 | -58325 | -124764335 | 6035 | 84868240 | -0 | 215.80 | 0.19 |
| 18 | 198458 | -58854 | -179496190 | 6034 | 90468831 | -0 | 215.80 | 0.23 |
| 19 | 204546 | -59404 | -234785096 | 6033 | 96055762 | -0 | 215.80 | 0.26 |
| 20 | 202746 | -70220 | -300450786 | 6046 | 101985240 | -0 | 215.80 | 0.30 |
| 21 | 201009 | -141304 | -439943117 | 6029 | 107661203 | -0 | 215.80 | 0.28 |
| 22 | 203558 | -141899 | -568330884 | 6028 | 113322004 | -0 | 215.80 | 0.33 |
| 23 | 206170 | -142509 | -697212028 | 6027 | 118967679 | -0 | 215.80 | 0.38 |
| 24 | 208846 | -143133 | -826585027 | 6026 | 124598370 | -0 | 215.80 | 0.42 |
| 25 | 211584 | -143773 | -956449978 | 6025 | 130214223 | -0 | 215.80 | 0.46 |
| 26 | 214385 | -144427 | -1086808360 | 6024 | 135815380 | -0 | 215.80 | 0.50 |
| 27 | 217250 | -145097 | -1217662842 | 6023 | 141401982 | -0 | 215.80 | 0.53 |
| 28 | 220177 | -145781 | -1349017113 | 6022 | 146974164 | -0 | 215.80 | 0.56 |
| 29 | 223168 | -146480 | -1480875739 | 6021 | 152532056 | -0 | 215.80 | 0.59 |
| 30 | 226222 | -147195 | -1613244042 | 6020 | 158075780 | -0 | 215.80 | 0.61 |
| 31 | 238202 | -147933 | -1746292471 | 6020 | 163617228 | -0 | 215.80 | 0.63 |
| 32 | 241776 | -148697 | -1878507425 | 6022 | 169106225 | -0 | 215.80 | 0.65 |
| 33 | 245421 | -149400 | -2010638108 | 6018 | 174540492 | -0 | 215.80 | 0.60 |
| 34 | 249138 | -150149 | -2143292952 | 6017 | 179962705 | -0 | 215.80 | 0.62 |
| 35 | 252927 | -150912 | -2276479366 | 6017 | 185372910 | -0 | 215.80 | 0.63 |
| 36 | 256787 | -151690 | -2410205227 | 6016 | 190771163 | -0 | 215.80 | 0.64 |
| 37 | 260718 | -152483 | -2544478638 | 6015 | 196157515 | -0 | 215.80 | 0.65 |
| 38 | 264721 | -153290 | -2679307886 | 6014 | 201532006 | -0 | 215.80 | 0.66 |
| 39 | 268795 | -154112 | -2814701424 | 6013 | 206894668 | -0 | 215.80 | 0.67 |
| 40 | 272941 | -154949 | -2950667839 | 6012 | 212245525 | -0 | 215.80 | 0.68 |
| 41 | 277159 | -155801 | -3087215833 | 6012 | 217584596 | -0 | 215.80 | 0.68 |
| 42 | 294225 | -156673 | -3224481224 | 6011 | 222919984 | -0 | 215.80 | 0.69 |
| 43 | 298349 | -157520 | -3357501437 | 6010 | 228055941 | -0 | 215.80 | 0.69 |
| 44 | 302538 | -158369 | -3491112640 | 6010 | 233183289 | -0 | 215.80 | 0.73 |
| 45 | 306794 | -159229 | -3625262701 | 6009 | 238298195 | -0 | 215.80 | 0.73 |
| 46 | 311117 | -160102 | -3759959880 | 6008 | 243400679 | -0 | 215.80 | 0.73 |
| 47 | 315506 | -160989 | -3895212410 | 6007 | 248490750 | -0 | 215.80 | 0.74 |
| 48 | 319961 | -161890 | -4031028551 | 6006 | 253568411 | -0 | 215.80 | 0.74 |
| 49 | 324482 | -162804 | -4167416578 | 6006 | 258633658 | -0 | 215.80 | 0.74 |
| 50 | 329070 | -163733 | -4304384781 | 6005 | 263686483 | -0 | 215.80 | 0.74 |
| 51 | 333724 | -164675 | -4441941452 | 6004 | 268726869 | -0 | 215.80 | 0.74 |
| 52 | 338444 | -165630 | -4580094886 | 6003 | 273754796 | -0 | 215.80 | 0.75 |
| 53 | 343231 | -166600 | -4718853375 | 6003 | 278770240 | -0 | 215.80 | 0.75 |
| 54 | 348084 | -167583 | -4858225201 | 6002 | 283773170 | -0 | 215.80 | 0.75 |
| 55 | 353003 | -168580 | -4998218638 | 6001 | 288763551 | -0 | 215.80 | 0.75 |
| 56 | 357989 | -169590 | -5138841947 | 6000 | 293741343 | -0 | 215.80 | 0.75 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 12 " MST - MSA - ZONA A - NORMALE - RESISTENZA - 3 x 31.5 - (-) "

Pressione trasversale del vento = -706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|---------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | -6880.00 | 6000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | -41740.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 5546 | Fp = -44965 | --- |
| --- | --- | Pa = 4677 | Ta = 2981 | La = 0 | --- |
| --- | --- | Pb = -4677 | Tb = -44721 | Lb = 0 | --- |
| 3.00 | 33.69 | 0.00 | -41740.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = -5546 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = -41740 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | -41740.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 5546 | Fp = -44965 | --- |
| --- | --- | Pa = 4677 | Ta = 2981 | La = 0 | --- |
| --- | --- | Pb = -4677 | Tb = -44721 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|-------------|-----------------------------|---------------|-----------------|---------------|-----------------|-----------------|--------------------------|--------------|
| 2 | 433 | -7181 | -6994995 | 6000 | 5881923 | 0 | 215.80 | 0.05 |
| 3 | 883 | -7495 | -12980234 | 6000 | 10655776 | 0 | 215.80 | 0.08 |
| 4 | 1350 | -7821 | -19238886 | 6000 | 15431505 | 0 | 215.80 | 0.11 |
| 5 | 1836 | -8160 | -25781260 | 6000 | 20209008 | 0 | 215.80 | 0.14 |
| 6 | 3733 | -8512 | -32658594 | 6000 | 24993430 | 0 | 215.80 | 0.16 |
| 7 | 4822 | -8902 | -40507555 | 6000 | 30117360 | 0 | 215.80 | 0.19 |
| 8 | 9189 | 9902 | -36962821 | 6000 | 35238144 | 0 | 215.80 | 0.09 |
| 9 | 13596 | -6731 | -39806323 | 6001 | 40373655 | 0 | 215.80 | 0.09 |
| 10 | 14805 | -7156 | -46332230 | 6001 | 45511451 | -0 | 215.80 | 0.10 |
| 11 | 16054 | -7596 | -53266947 | 6001 | 50651291 | 0 | 215.80 | 0.11 |
| 12 | 15904 | -21780 | -68884218 | 6001 | 55788328 | 0 | 215.80 | 0.12 |
| 13 | 15793 | -53238 | -120524875 | 6001 | 60922732 | 0 | 215.80 | 0.17 |
| 14 | 17161 | -53721 | -166581533 | 6001 | 66058856 | 0 | 215.80 | 0.21 |
| 15 | 18569 | -54218 | -213095169 | 6001 | 71196449 | 0 | 215.80 | 0.25 |
| 16 | 23255 | -51019 | -258065612 | 6001 | 76343774 | 0 | 215.80 | 0.28 |
| 17 | 27981 | -94017 | -331764449 | 6001 | 81499688 | -0 | 215.80 | 0.34 |
| 18 | 29509 | -94557 | -412755797 | 6001 | 86655434 | -0 | 215.80 | 0.40 |
| 19 | 35597 | -95113 | -494368266 | 6001 | 91820838 | -0 | 215.80 | 0.45 |
| 20 | 35682 | -101294 | -582507141 | 6001 | 97158544 | -0 | 215.80 | 0.50 |
| 21 | 35829 | -141005 | -712693104 | 6001 | 102456638 | -0 | 215.80 | 0.40 |
| 22 | 38378 | -141609 | -837024347 | 6001 | 107756352 | -0 | 215.80 | 0.45 |
| 23 | 40990 | -142228 | -961934581 | 6001 | 113057426 | -0 | 215.80 | 0.49 |
| 24 | 43666 | -142862 | -1087432880 | 6001 | 118359604 | -0 | 215.80 | 0.53 |
| 25 | 46404 | -143511 | -1213528200 | 6001 | 123662630 | -0 | 215.80 | 0.56 |
| 26 | 49205 | -144175 | -1340229398 | 6001 | 128966252 | -0 | 215.80 | 0.59 |
| 27 | 52070 | -144855 | -1467545240 | 6001 | 134270218 | -0 | 215.80 | 0.62 |
| 28 | 54997 | -145549 | -1595484417 | 6001 | 139574277 | -0 | 215.80 | 0.64 |
| 29 | 57988 | -146258 | -1724055554 | 6001 | 144878179 | -0 | 215.80 | 0.66 |
| 30 | 61042 | -146983 | -1853267215 | 6001 | 150181678 | -0 | 215.80 | 0.68 |
| 31 | 73022 | -147724 | -1983298100 | 6001 | 155495279 | -0 | 215.80 | 0.70 |
| 32 | 76596 | -148470 | -2112272221 | 6001 | 160742787 | -0 | 215.80 | 0.71 |
| 33 | 80241 | -149211 | -2241688251 | 6001 | 165977157 | -0 | 215.80 | 0.65 |
| 34 | 83958 | -149968 | -2371750854 | 6001 | 171210481 | -0 | 215.80 | 0.67 |
| 35 | 87747 | -150740 | -2502468004 | 6001 | 176442530 | -0 | 215.80 | 0.68 |
| 36 | 91607 | -151527 | -2633847661 | 6001 | 181673077 | -0 | 215.80 | 0.68 |
| 37 | 95538 | -152329 | -2765897762 | 6001 | 186901896 | -0 | 215.80 | 0.69 |
| 38 | 99541 | -153145 | -2898626219 | 6001 | 192128762 | -0 | 215.80 | 0.70 |
| 39 | 103615 | -153975 | -3032040922 | 6001 | 197353451 | -0 | 215.80 | 0.71 |
| 40 | 107761 | -154821 | -3166149743 | 6001 | 202575740 | -0 | 215.80 | 0.71 |
| 41 | 111979 | -155681 | -3300960534 | 6001 | 207795408 | -0 | 215.80 | 0.72 |
| 42 | 129045 | -156557 | -3436610750 | 6001 | 213019679 | -0 | 215.80 | 0.72 |
| 43 | 133169 | -157415 | -3568213371 | 6001 | 218058725 | -0 | 215.80 | 0.72 |
| 44 | 137358 | -158270 | -3700489885 | 6001 | 223095371 | -0 | 215.80 | 0.76 |
| 45 | 141614 | -159138 | -3833419836 | 6001 | 228127857 | -0 | 215.80 | 0.76 |
| 46 | 145937 | -160020 | -3967010174 | 6001 | 233155999 | -0 | 215.80 | 0.76 |
| 47 | 150326 | -160916 | -4101267830 | 6001 | 238179612 | -0 | 215.80 | 0.76 |
| 48 | 154781 | -161825 | -4236199726 | 6001 | 243198513 | -0 | 215.80 | 0.76 |
| 49 | 159302 | -162747 | -4371812775 | 6001 | 248212518 | -0 | 215.80 | 0.77 |
| 50 | 163890 | -163683 | -4508113878 | 6001 | 253221443 | -0 | 215.80 | 0.77 |
| 51 | 168544 | -164633 | -4645109928 | 6000 | 258225106 | -0 | 215.80 | 0.77 |
| 52 | 173264 | -165597 | -4782807804 | 6000 | 263223323 | -0 | 215.80 | 0.77 |
| 53 | 178051 | -166574 | -4921214378 | 6000 | 268215913 | -0 | 215.80 | 0.77 |
| 54 | 182904 | -167564 | -5060336510 | 6000 | 273202692 | -0 | 215.80 | 0.77 |
| 55 | 187823 | -168569 | -5200181049 | 6000 | 278183478 | -0 | 215.80 | 0.77 |
| 56 | 192809 | -169587 | -5340754834 | 6000 | 283158089 | -0 | 215.80 | 0.77 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 13 " MST - MSA - ZONA B - NORMALE - RESISTENZA - 3 x 31.5 - (-)
"

Pressione trasversale del vento = -706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 6540.00 | -6680.00 | 5000.00 | 0.00 |
| 2.00 | 37.16 | 51640.00 | -40950.00 | 0.00 | 4.75 |
| -- | -- | -- | Ft = 71051 | Fp = -79569 | -- |
| -- | -- | Pa = 59916 | Ta = 38187 | La = 0 | -- |
| -- | -- | Pb = -8276 | Tb = -79137 | Lb = 0 | -- |
| 3.00 | 33.69 | 51640.00 | -40950.00 | 0.00 | -4.75 |
| -- | -- | -- | Ft = 60169 | Fp = 8658 | -- |
| -- | -- | Pa = 50739 | Ta = -32339 | La = 0 | -- |
| -- | -- | Pb = 901 | Tb = -8611 | Lb = 0 | -- |
| 4.00 | 30.23 | 51640.00 | -40950.00 | 0.00 | 4.75 |
| -- | -- | -- | Ft = 71051 | Fp = -79569 | -- |
| -- | -- | Pa = 59916 | Ta = 38187 | La = 0 | -- |
| -- | -- | Pb = -8276 | Tb = -79137 | Lb = 0 | -- |

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SIDERPALI S.P.A.

TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|------|----------------------|---------|-------------|--------|-----------|----------|-------------------|-------|
| 2 | 6973 | -6996 | -6956673 | 5001 | 4927551 | 0 | 215.80 | 0.05 |
| 3 | 7423 | -7310 | -12936802 | 5001 | 8931383 | 0 | 215.80 | 0.08 |
| 4 | 7890 | -7637 | -19186095 | 5002 | 12936217 | 0 | 215.80 | 0.11 |
| 5 | 8376 | -7977 | -25714461 | 5002 | 16941784 | 0 | 215.80 | 0.13 |
| 6 | 10273 | -8332 | -32562193 | 5002 | 20952310 | 0 | 215.80 | 0.15 |
| 7 | 11362 | -8745 | -40499412 | 5004 | 25270698 | 0 | 215.80 | 0.18 |
| 8 | 43349 | 236804 | 100812994 | 5008 | 29656268 | 0 | 215.80 | 0.19 |
| 9 | 75376 | 28526 | 165339675 | 5014 | 34141633 | 0 | 215.80 | 0.29 |
| 10 | 76584 | 28100 | 187330857 | 5014 | 38621603 | -0 | 215.80 | 0.31 |
| 11 | 77833 | 27660 | 208876705 | 5014 | 43095810 | -0 | 215.80 | 0.32 |
| 12 | 101253 | -152016 | 123019399 | 5018 | 47628208 | -0 | 215.80 | 0.20 |
| 13 | 124713 | -84825 | -36365159 | 5021 | 52212936 | -0 | 215.80 | 0.11 |
| 14 | 126081 | -85304 | -111839399 | 5021 | 56785509 | -0 | 215.80 | 0.17 |
| 15 | 127489 | -85798 | -187734708 | 5020 | 61345779 | -0 | 215.80 | 0.24 |
| 16 | 160245 | 7757 | -210634058 | 5024 | 65968783 | -0 | 215.80 | 0.26 |
| 17 | 193041 | -57359 | -122176338 | 5028 | 70646715 | -0 | 215.80 | 0.18 |
| 18 | 194568 | -57889 | -175908323 | 5027 | 75304459 | -0 | 215.80 | 0.22 |
| 19 | 200656 | -58440 | -230197253 | 5027 | 79951310 | -0 | 215.80 | 0.25 |
| 20 | 198941 | -69045 | -294628284 | 5037 | 84880132 | -0 | 215.80 | 0.29 |
| 21 | 197289 | -138717 | -431457898 | 5024 | 89602259 | -0 | 215.80 | 0.27 |
| 22 | 199838 | -139312 | -557418770 | 5023 | 94312099 | -0 | 215.80 | 0.32 |
| 23 | 202450 | -139922 | -683876061 | 5022 | 99009678 | -0 | 215.80 | 0.37 |
| 24 | 205126 | -140548 | -810828764 | 5021 | 103695107 | -0 | 215.80 | 0.41 |
| 25 | 207864 | -141188 | -938277414 | 5020 | 108368499 | -0 | 215.80 | 0.45 |
| 26 | 210665 | -141843 | -1066223873 | 5020 | 113029964 | -0 | 215.80 | 0.49 |
| 27 | 213530 | -142513 | -1194671136 | 5019 | 117679611 | -0 | 215.80 | 0.52 |
| 28 | 216457 | -143198 | -1323623174 | 5018 | 122317545 | -0 | 215.80 | 0.55 |
| 29 | 219448 | -143898 | -1453084797 | 5017 | 126943866 | -0 | 215.80 | 0.58 |
| 30 | 222502 | -144613 | -1583061536 | 5016 | 131558668 | -0 | 215.80 | 0.60 |
| 31 | 234482 | -145351 | -1713720919 | 5016 | 136171830 | -0 | 215.80 | 0.62 |
| 32 | 238056 | -146114 | -1843567081 | 5018 | 140741005 | -0 | 215.80 | 0.64 |
| 33 | 241701 | -146819 | -1973354540 | 5015 | 145265433 | -0 | 215.80 | 0.59 |
| 34 | 245418 | -147568 | -2103671435 | 5014 | 149780045 | -0 | 215.80 | 0.60 |
| 35 | 249207 | -148332 | -2234525278 | 5013 | 154284874 | -0 | 215.80 | 0.62 |
| 36 | 253067 | -149111 | -2365924021 | 5013 | 158779961 | -0 | 215.80 | 0.63 |
| 37 | 256998 | -149904 | -2497875833 | 5012 | 163265342 | -0 | 215.80 | 0.64 |
| 38 | 261001 | -150712 | -2630389062 | 5011 | 167741044 | -0 | 215.80 | 0.65 |
| 39 | 265075 | -151535 | -2763472209 | 5011 | 172207089 | -0 | 215.80 | 0.66 |
| 40 | 269221 | -152372 | -2897133906 | 5010 | 176663492 | -0 | 215.80 | 0.66 |
| 41 | 273439 | -153224 | -3031382894 | 5009 | 181110263 | -0 | 215.80 | 0.67 |
| 42 | 290505 | -154096 | -3166352690 | 5009 | 185554135 | -0 | 215.80 | 0.68 |
| 43 | 294629 | -154944 | -3297163863 | 5008 | 189832109 | -0 | 215.80 | 0.68 |
| 44 | 298818 | -155794 | -3428570144 | 5008 | 194103036 | -0 | 215.80 | 0.71 |
| 45 | 303074 | -156654 | -3560521268 | 5007 | 198363766 | -0 | 215.80 | 0.72 |
| 46 | 307397 | -157528 | -3693025504 | 5006 | 202614311 | -0 | 215.80 | 0.72 |
| 47 | 311786 | -158415 | -3826091098 | 5006 | 206854674 | -0 | 215.80 | 0.72 |
| 48 | 316241 | -159316 | -3959726319 | 5005 | 211084854 | -0 | 215.80 | 0.73 |
| 49 | 320762 | -160231 | -4093939452 | 5005 | 215304844 | -0 | 215.80 | 0.73 |
| 50 | 325350 | -161160 | -4228738795 | 5004 | 219514632 | -0 | 215.80 | 0.73 |
| 51 | 330004 | -162102 | -4364132649 | 5003 | 223714203 | -0 | 215.80 | 0.73 |
| 52 | 334724 | -163058 | -4500129316 | 5003 | 227903535 | -0 | 215.80 | 0.73 |
| 53 | 339511 | -164028 | -4636737093 | 5002 | 232082604 | -0 | 215.80 | 0.73 |
| 54 | 344364 | -165012 | -4773964274 | 5001 | 236251383 | -0 | 215.80 | 0.73 |
| 55 | 349283 | -166009 | -4911819137 | 5001 | 240409837 | -0 | 215.80 | 0.74 |
| 56 | 354269 | -167020 | -5050309950 | 5000 | 244557933 | -0 | 215.80 | 0.74 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 14 " MST - MSA - ZONA B - NORMALE - RESISTENZA - 3 x 31.5 - (-) "

Pressione trasversale del vento = -706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | -6680.00 | 5000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | -40950.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 5441 | Fp = -44114 | --- |
| --- | --- | Pa = 4588 | Ta = 2924 | La = 0 | --- |
| --- | --- | Pb = -4588 | Tb = -43874 | Lb = 0 | --- |
| 3.00 | 33.69 | 0.00 | -40950.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = -5441 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = -40950 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | -40950.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 5441 | Fp = -44114 | --- |
| --- | --- | Pa = 4588 | Ta = 2924 | La = 0 | --- |
| --- | --- | Pb = -4588 | Tb = -43874 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|------|----------------------|---------|-------------|--------|-----------|----------|-------------------|-------|
| 2 | 433 | -6981 | -6798746 | 5000 | 4901602 | 0 | 215.80 | 0.04 |
| 3 | 883 | -7295 | -12624480 | 5000 | 8879813 | 0 | 215.80 | 0.07 |
| 4 | 1350 | -7621 | -18723366 | 5000 | 12859587 | 0 | 215.80 | 0.10 |
| 5 | 1836 | -7960 | -25105709 | 5000 | 16840839 | 0 | 215.80 | 0.13 |
| 6 | 3733 | -8312 | -31821994 | 5000 | 20827857 | 0 | 215.80 | 0.15 |
| 7 | 4822 | -8702 | -39495828 | 5000 | 25097798 | 0 | 215.80 | 0.17 |
| 8 | 9145 | 9738 | -35996596 | 5000 | 29364978 | 0 | 215.80 | 0.08 |
| 9 | 13508 | -6587 | -38770032 | 5000 | 33644302 | -0 | 215.80 | 0.09 |
| 10 | 14717 | -7012 | -45163055 | 5000 | 37925540 | 0 | 215.80 | 0.09 |
| 11 | 15965 | -7452 | -51964262 | 5000 | 42208492 | -0 | 215.80 | 0.10 |
| 12 | 15859 | -21377 | -67292346 | 5000 | 46489237 | -0 | 215.80 | 0.11 |
| 13 | 15793 | -52248 | -117970880 | 5000 | 50767906 | 0 | 215.80 | 0.16 |
| 14 | 17161 | -52731 | -163178891 | 5000 | 55048008 | 0 | 215.80 | 0.20 |
| 15 | 18569 | -53228 | -208843249 | 5001 | 59329333 | 0 | 215.80 | 0.24 |
| 16 | 23211 | -50099 | -253000675 | 5001 | 63618673 | -0 | 215.80 | 0.27 |
| 17 | 27893 | -92294 | -325350088 | 5001 | 67915082 | -0 | 215.80 | 0.33 |
| 18 | 29420 | -92834 | -404862748 | 5001 | 72211361 | -0 | 215.80 | 0.39 |
| 19 | 35509 | -93389 | -484993905 | 5001 | 76515699 | -0 | 215.80 | 0.44 |
| 20 | 35638 | -99464 | -571540520 | 5001 | 80963668 | -0 | 215.80 | 0.49 |
| 21 | 35829 | -138435 | -699349391 | 5001 | 85378745 | -0 | 215.80 | 0.39 |
| 22 | 38378 | -139039 | -821424368 | 5001 | 89795172 | -0 | 215.80 | 0.44 |
| 23 | 40990 | -139658 | -944077642 | 5001 | 94212732 | -0 | 215.80 | 0.48 |
| 24 | 43666 | -140292 | -1067318363 | 5001 | 98631211 | -0 | 215.80 | 0.52 |
| 25 | 46404 | -140941 | -1191155563 | 5001 | 103050398 | -0 | 215.80 | 0.55 |
| 26 | 49205 | -141605 | -1315598177 | 5001 | 107470082 | -0 | 215.80 | 0.58 |
| 27 | 52070 | -142284 | -1440655052 | 5001 | 111890052 | -0 | 215.80 | 0.60 |
| 28 | 54997 | -142979 | -1566334961 | 5001 | 116310100 | -0 | 215.80 | 0.63 |
| 29 | 57988 | -143688 | -1692646609 | 5001 | 120730017 | -0 | 215.80 | 0.65 |
| 30 | 61042 | -144412 | -1819598641 | 5001 | 125149597 | -0 | 215.80 | 0.67 |
| 31 | 73022 | -145154 | -1947366852 | 5001 | 129577597 | -0 | 215.80 | 0.69 |
| 32 | 76596 | -145900 | -2074107805 | 5001 | 133950518 | -0 | 215.80 | 0.70 |
| 33 | 80241 | -146640 | -2201294133 | 5001 | 138312492 | -0 | 215.80 | 0.64 |
| 34 | 83958 | -147398 | -2329127132 | 5001 | 142673594 | -0 | 215.80 | 0.65 |
| 35 | 87747 | -148170 | -2457614856 | 5001 | 147033634 | -0 | 215.80 | 0.66 |
| 36 | 91607 | -148957 | -2586765346 | 5001 | 151392422 | -0 | 215.80 | 0.67 |
| 37 | 95538 | -149758 | -2716586619 | 5001 | 155749769 | -0 | 215.80 | 0.68 |
| 38 | 99541 | -150574 | -2847086667 | 5001 | 160105490 | -0 | 215.80 | 0.69 |
| 39 | 103615 | -151405 | -2978273463 | 5001 | 164459396 | -0 | 215.80 | 0.69 |
| 40 | 107761 | -152250 | -3110154958 | 5001 | 168811303 | -0 | 215.80 | 0.70 |
| 41 | 111979 | -153110 | -3242739086 | 5001 | 173161025 | -0 | 215.80 | 0.70 |
| 42 | 129045 | -153986 | -3376161139 | 5001 | 177514583 | -0 | 215.80 | 0.71 |
| 43 | 133169 | -154845 | -3505613873 | 5001 | 181713787 | -0 | 215.80 | 0.71 |
| 44 | 137358 | -155700 | -3635741130 | 5001 | 185910991 | -0 | 215.80 | 0.74 |
| 45 | 141614 | -156568 | -3766523002 | 5001 | 190104729 | -0 | 215.80 | 0.75 |
| 46 | 145937 | -157450 | -3897966509 | 5001 | 194294846 | -0 | 215.80 | 0.75 |
| 47 | 150326 | -158345 | -4030078655 | 5001 | 198481189 | -0 | 215.80 | 0.75 |
| 48 | 154781 | -159254 | -4162866433 | 5001 | 202663606 | -0 | 215.80 | 0.75 |
| 49 | 159302 | -160177 | -4296336826 | 5000 | 206841943 | -0 | 215.80 | 0.75 |
| 50 | 163890 | -161113 | -4430496806 | 5000 | 211016047 | -0 | 215.80 | 0.75 |
| 51 | 168544 | -162063 | -4565353336 | 5000 | 215185765 | -0 | 215.80 | 0.75 |
| 52 | 173264 | -163027 | -4700913368 | 5000 | 219350946 | -0 | 215.80 | 0.75 |
| 53 | 178051 | -164004 | -4837183844 | 5000 | 223511437 | -0 | 215.80 | 0.75 |
| 54 | 182904 | -164994 | -4974171692 | 5000 | 227667086 | -0 | 215.80 | 0.75 |
| 55 | 187823 | -165999 | -511883834 | 5000 | 231817741 | -0 | 215.80 | 0.75 |
| 56 | 192809 | -167017 | -5250327178 | 5000 | 235963250 | -0 | 215.80 | 0.75 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 15 " MST - MSB - ZONA B - NORMALE - RESISTENZA - 3 x 31.5 - (-)
"

Pressione trasversale del vento = -176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 10860.00 | -6030.00 | 8000.00 | 0.00 |
| 2.00 | 37.16 | 69900.00 | -29920.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 92785 | Fp = -80224 | --- |
| --- | --- | Pa = 78244 | Ta = 49869 | La = 0 | --- |
| --- | --- | Pb = -8344 | Tb = -79789 | Lb = 0 | --- |
| 3.00 | 33.69 | 69900.00 | -29920.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 84834 | Fp = -15761 | --- |
| --- | --- | Pa = 71539 | Ta = -45596 | La = 0 | --- |
| --- | --- | Pb = -1639 | Tb = 15676 | Lb = 0 | --- |
| 4.00 | 30.23 | 69900.00 | -29920.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 92785 | Fp = -80224 | --- |
| --- | --- | Pa = 78244 | Ta = 49869 | La = 0 | --- |
| --- | --- | Pb = -8344 | Tb = -79789 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|------|----------------------|---------|-------------|--------|-----------|----------|-------------------|-------|
| 2 | 11293 | -6124 | -6106961 | 8005 | 7913474 | 0 | 345.28 | 0.04 |
| 3 | 11743 | -6203 | -11164852 | 8005 | 14348609 | -0 | 345.28 | 0.06 |
| 4 | 12210 | -6285 | -16291274 | 8005 | 20784695 | -0 | 345.28 | 0.08 |
| 5 | 12696 | -6370 | -21488344 | 8005 | 27221112 | -0 | 345.28 | 0.09 |
| 6 | 14593 | -6460 | -26772492 | 8006 | 33664416 | 0 | 345.28 | 0.11 |
| 7 | 15682 | -6584 | -32687439 | 8013 | 40628265 | 0 | 345.28 | 0.12 |
| 8 | 56833 | 314513 | 157023249 | 8023 | 47728863 | 0 | 345.28 | 0.19 |
| 9 | 98024 | 42977 | 247351596 | 8040 | 55041963 | 0 | 345.28 | 0.27 |
| 10 | 99232 | 42870 | 282508992 | 8040 | 62341908 | -0 | 345.28 | 0.29 |
| 11 | 100481 | 42761 | 317472885 | 8040 | 69627963 | 0 | 345.28 | 0.30 |
| 12 | 134267 | -200271 | 207704054 | 8052 | 77056063 | 0 | 345.28 | 0.20 |
| 13 | 168093 | -82951 | 20398670 | 8063 | 84612236 | -0 | 345.28 | 0.09 |
| 14 | 169461 | -83068 | -52406296 | 8062 | 92139496 | -0 | 345.28 | 0.10 |
| 15 | 170869 | -83188 | -125312134 | 8060 | 99637571 | -0 | 345.28 | 0.13 |
| 16 | 211519 | 44915 | -124891185 | 8071 | 107262684 | -0 | 345.28 | 0.13 |
| 17 | 252209 | -17999 | 45318493 | 8082 | 114998735 | -0 | 345.28 | 0.11 |
| 18 | 253736 | -18124 | 26478000 | 8078 | 122689442 | -0 | 345.28 | 0.10 |
| 19 | 259825 | -18257 | 7433496 | 8076 | 130350377 | -0 | 345.28 | 0.10 |
| 20 | 258075 | -28508 | -20020226 | 8105 | 138556832 | -0 | 345.28 | 0.10 |
| 21 | 256389 | -98306 | -120700890 | 8067 | 146318644 | -0 | 345.28 | 0.09 |
| 22 | 258938 | -98448 | -210049405 | 8065 | 154051629 | -0 | 345.28 | 0.11 |
| 23 | 261550 | -98593 | -299513542 | 8062 | 161755927 | -0 | 345.28 | 0.13 |
| 24 | 264226 | -98742 | -389081590 | 8060 | 169431922 | -0 | 345.28 | 0.15 |
| 25 | 266964 | -98894 | -478743638 | 8057 | 177080007 | -0 | 345.28 | 0.16 |
| 26 | 269765 | -99050 | -568491324 | 8055 | 184700574 | -0 | 345.28 | 0.18 |
| 27 | 272630 | -99210 | -658317621 | 8052 | 192294013 | -0 | 345.28 | 0.20 |
| 28 | 275557 | -99373 | -748216655 | 8050 | 199860705 | -0 | 345.28 | 0.21 |
| 29 | 278548 | -99540 | -838183549 | 8048 | 207401021 | -0 | 345.28 | 0.22 |
| 30 | 281602 | -99711 | -928214294 | 8045 | 214915318 | -0 | 345.28 | 0.23 |
| 31 | 293582 | -99892 | -1018407937 | 8044 | 222420196 | -0 | 345.28 | 0.25 |
| 32 | 297156 | -100095 | -1107801561 | 8048 | 229862007 | -0 | 345.28 | 0.25 |
| 33 | 300801 | -100243 | -1196798048 | 8040 | 237209542 | -0 | 345.28 | 0.24 |
| 34 | 304518 | -100423 | -1285856494 | 8038 | 244535329 | -0 | 345.28 | 0.24 |
| 35 | 308307 | -100607 | -1374975815 | 8036 | 251839569 | -0 | 345.28 | 0.25 |
| 36 | 312167 | -100794 | -1464155437 | 8034 | 259122494 | -0 | 345.28 | 0.25 |
| 37 | 316098 | -100985 | -1553395064 | 8032 | 266384315 | -0 | 345.28 | 0.26 |
| 38 | 320101 | -101180 | -1642694640 | 8030 | 273625229 | -0 | 345.28 | 0.26 |
| 39 | 324175 | -101379 | -1732054319 | 8028 | 280845419 | -0 | 345.28 | 0.27 |
| 40 | 328321 | -101581 | -1821474430 | 8026 | 288045050 | -0 | 345.28 | 0.27 |
| 41 | 332539 | -101787 | -1910955464 | 8025 | 295224274 | -0 | 345.28 | 0.27 |
| 42 | 349605 | -102001 | -2000578044 | 8024 | 302394369 | -0 | 345.28 | 0.28 |
| 43 | 353729 | -102205 | -2087116978 | 8022 | 309291329 | -0 | 345.28 | 0.28 |
| 44 | 357918 | -102412 | -2173741161 | 8020 | 316173637 | -0 | 345.28 | 0.29 |
| 45 | 362174 | -102620 | -2260406446 | 8019 | 323035137 | -0 | 345.28 | 0.29 |
| 46 | 366497 | -102831 | -2347113856 | 8017 | 329875968 | -0 | 345.28 | 0.30 |
| 47 | 370886 | -103046 | -2433864420 | 8015 | 336696245 | -0 | 345.28 | 0.30 |
| 48 | 375341 | -103265 | -2520659220 | 8013 | 343496070 | -0 | 345.28 | 0.30 |
| 49 | 379862 | -103487 | -2607499377 | 8012 | 350275537 | -0 | 345.28 | 0.30 |
| 50 | 384450 | -103712 | -2694386049 | 8010 | 357034726 | -0 | 345.28 | 0.30 |
| 51 | 389104 | -103941 | -2781320422 | 8008 | 363773706 | -0 | 345.28 | 0.30 |
| 52 | 393824 | -104174 | -2868303706 | 8007 | 370492539 | -0 | 345.28 | 0.30 |
| 53 | 398611 | -104410 | -2955337127 | 8005 | 377191273 | -0 | 345.28 | 0.30 |
| 54 | 403464 | -104649 | -3042421925 | 8004 | 383869951 | -0 | 345.28 | 0.30 |
| 55 | 408383 | -104892 | -3129559350 | 8002 | 390528603 | -0 | 345.28 | 0.30 |
| 56 | 413369 | -105139 | -3216750657 | 8001 | 397167254 | -0 | 345.28 | 0.30 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 16 " MST - MSB - ZONA B - NORMALE - RESISTENZA - 3 x 31.5 - (-)
"

Pressione trasversale del vento = -176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | -6030.00 | 8000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | -29920.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 3975 | Fp = -32231 | --- |
| --- | --- | Pa = 3352 | Ta = 2137 | La = 0 | --- |
| --- | --- | Pb = -3352 | Tb = -32057 | Lb = 0 | --- |
| 3.00 | 33.69 | 0.00 | -29920.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = -3975 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = -29920 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | -29920.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 3975 | Fp = -32231 | --- |
| --- | --- | Pa = 3352 | Ta = 2137 | La = 0 | --- |
| --- | --- | Pb = -3352 | Tb = -32057 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|------|----------------------|---------|-------------|--------|------------|----------|-------------------|-------|
| 2 | 433 | -6105 | -5978303 | 8000 | 7842562 | 0 | 345.28 | 0.03 |
| 3 | 883 | -6183 | -10912739 | 8000 | 14207698 | 0 | 345.28 | 0.05 |
| 4 | 1350 | -6265 | -15921573 | 8000 | 20575334 | -0 | 345.28 | 0.07 |
| 5 | 1836 | -6349 | -21007471 | 8000 | 26945334 | 0 | 345.28 | 0.09 |
| 6 | 3733 | -6438 | -26201222 | 8000 | 33324555 | 0 | 345.28 | 0.10 |
| 7 | 4822 | -6536 | -31949337 | 8000 | 40156439 | 0 | 345.28 | 0.12 |
| 8 | 8527 | 7129 | -29358907 | 8000 | 46980804 | 0 | 345.28 | 0.06 |
| 9 | 12272 | -4601 | -31166117 | 8001 | 53821714 | 0 | 345.28 | 0.06 |
| 10 | 13481 | -4708 | -35443319 | 8001 | 60665920 | -0 | 345.28 | 0.07 |
| 11 | 14729 | -4818 | -39838236 | 8001 | 67513103 | -0 | 345.28 | 0.07 |
| 12 | 15241 | -14773 | -50291483 | 8001 | 74359630 | 0 | 345.28 | 0.08 |
| 13 | 15793 | -37104 | -86395604 | 8001 | 81205473 | 0 | 345.28 | 0.09 |
| 14 | 17161 | -37225 | -118304437 | 8001 | 88053608 | 0 | 345.28 | 0.11 |
| 15 | 18569 | -37349 | -150342589 | 8001 | 94903700 | -0 | 345.28 | 0.12 |
| 16 | 22593 | -34816 | -181053921 | 8001 | 101764443 | -0 | 345.28 | 0.14 |
| 17 | 26657 | -65392 | -232132516 | 8001 | 108634554 | -0 | 345.28 | 0.16 |
| 18 | 28185 | -65527 | -288223893 | 8001 | 115504678 | -0 | 345.28 | 0.18 |
| 19 | 34273 | -65667 | -344535876 | 8001 | 122387910 | -0 | 345.28 | 0.20 |
| 20 | 35020 | -69824 | -405219865 | 8002 | 129502002 | -0 | 345.28 | 0.23 |
| 21 | 35829 | -98015 | -495840010 | 8001 | 136566090 | -0 | 345.28 | 0.18 |
| 22 | 38378 | -98166 | -582015788 | 8001 | 143632337 | -0 | 345.28 | 0.20 |
| 23 | 40990 | -98320 | -668352915 | 8001 | 150700397 | -0 | 345.28 | 0.22 |
| 24 | 43666 | -98479 | -754851820 | 8001 | 157769929 | -0 | 345.28 | 0.23 |
| 25 | 46404 | -98640 | -841512856 | 8001 | 164840594 | -0 | 345.28 | 0.25 |
| 26 | 49205 | -98806 | -928336317 | 8001 | 171912054 | -0 | 345.28 | 0.26 |
| 27 | 52070 | -98976 | -1015322445 | 8001 | 178983972 | -0 | 345.28 | 0.27 |
| 28 | 54997 | -99149 | -1102471439 | 8001 | 186056016 | -0 | 345.28 | 0.28 |
| 29 | 57988 | -99326 | -1189783459 | 8001 | 193127851 | -0 | 345.28 | 0.29 |
| 30 | 61042 | -99506 | -1277258635 | 8001 | 200199149 | -0 | 345.28 | 0.30 |
| 31 | 73022 | -99692 | -1365012147 | 8002 | 207283914 | -0 | 345.28 | 0.30 |
| 32 | 76596 | -99879 | -1451780227 | 8002 | 214280550 | -0 | 345.28 | 0.31 |
| 33 | 80241 | -100062 | -1538574292 | 8002 | 221259676 | -0 | 345.28 | 0.28 |
| 34 | 83958 | -100251 | -1625527267 | 8002 | 228237408 | -0 | 345.28 | 0.29 |
| 35 | 87747 | -100444 | -1712639170 | 8002 | 235213442 | -0 | 345.28 | 0.29 |
| 36 | 91607 | -100640 | -1799910017 | 8001 | 242187473 | -0 | 345.28 | 0.30 |
| 37 | 95538 | -100839 | -1887339818 | 8001 | 249159201 | -0 | 345.28 | 0.30 |
| 38 | 99541 | -101043 | -1974928575 | 8001 | 256128326 | -0 | 345.28 | 0.30 |
| 39 | 103615 | -101250 | -2062676287 | 8001 | 263094550 | -0 | 345.28 | 0.30 |
| 40 | 107761 | -101460 | -2150582945 | 8001 | 270057576 | -0 | 345.28 | 0.31 |
| 41 | 111979 | -101674 | -2238648540 | 8001 | 277017108 | -0 | 345.28 | 0.31 |
| 42 | 129045 | -101893 | -2326959913 | 8001 | 283982776 | -0 | 345.28 | 0.31 |
| 43 | 133169 | -102107 | -2412348087 | 8001 | 290701480 | -0 | 345.28 | 0.31 |
| 44 | 137358 | -102320 | -2497888923 | 8001 | 297416987 | -0 | 345.28 | 0.32 |
| 45 | 141614 | -102536 | -2583564035 | 8001 | 304126947 | -0 | 345.28 | 0.32 |
| 46 | 145937 | -102755 | -2669373412 | 8001 | 310831117 | -0 | 345.28 | 0.32 |
| 47 | 150326 | -102978 | -2755317039 | 8001 | 317529250 | -0 | 345.28 | 0.32 |
| 48 | 154781 | -103204 | -2841394903 | 8001 | 3242211102 | -0 | 345.28 | 0.32 |
| 49 | 159302 | -103434 | -2927606991 | 8001 | 330906428 | -0 | 345.28 | 0.32 |
| 50 | 163890 | -103667 | -3013953292 | 8001 | 337584983 | -0 | 345.28 | 0.32 |
| 51 | 168544 | -103903 | -3100433793 | 8001 | 344256523 | -0 | 345.28 | 0.32 |
| 52 | 173264 | -104143 | -3187048484 | 8000 | 350920804 | -0 | 345.28 | 0.32 |
| 53 | 178051 | -104386 | -3273797355 | 8000 | 357577584 | -0 | 345.28 | 0.32 |
| 54 | 182904 | -104632 | -3360680397 | 8000 | 364226617 | -0 | 345.28 | 0.32 |
| 55 | 187823 | -104882 | -3447697600 | 8000 | 370867662 | -0 | 345.28 | 0.32 |
| 56 | 192809 | -105135 | -3534848955 | 8000 | 377500477 | -0 | 345.28 | 0.32 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 17 " MST - MSA - ZONA A - NORMALE - RESISTENZA - 2 x 40.5 "

Pressione trasversale del vento = 706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|---------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 7060.00 | 7040.00 | 6000.00 | 0.00 |
| 2.00 | 37.16 | 54320.00 | 38720.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 63870 | Fp = 4416 | --- |
| --- | --- | Pa = 53861 | Ta = 34328 | La = 0 | --- |
| --- | --- | Pb = 459 | Tb = 4392 | Lb = 0 | --- |
| 3.00 | 33.69 | 54320.00 | 38720.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 74159 | Fp = -79007 | --- |
| --- | --- | Pa = 62537 | Ta = -39858 | La = 0 | --- |
| --- | --- | Pb = -8217 | Tb = 78578 | Lb = 0 | --- |
| 4.00 | 30.23 | 54320.00 | 38720.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 63870 | Fp = 4416 | --- |
| --- | --- | Pa = 53861 | Ta = 34328 | La = 0 | --- |
| --- | --- | Pb = 459 | Tb = 4392 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|------------|--------|-----------|----------|--------------------------------|-------|
| 2 | 7493 | 7364 | 7450205 | 6002 | 5915609 | 0 | 215.80 | 0.05 |
| 3 | 7943 | 7678 | 13864605 | 6002 | 10722720 | 0 | 215.80 | 0.09 |
| 4 | 8410 | 8006 | 20555714 | 6002 | 15530970 | 0 | 215.80 | 0.12 |
| 5 | 8896 | 8346 | 27533658 | 6002 | 20340024 | 0 | 215.80 | 0.15 |
| 6 | 10793 | 8702 | 34860365 | 6003 | 25154925 | 0 | 215.80 | 0.17 |
| 7 | 11882 | 9128 | 43552981 | 6005 | 30341639 | 0 | 215.80 | 0.20 |
| 8 | 40841 | 230705 | 188242238 | 6009 | 35594552 | 0 | 215.80 | 0.34 |
| 9 | 69841 | 44398 | 266489160 | 6016 | 40955983 | 0 | 215.80 | 0.45 |
| 10 | 71049 | 44824 | 307227262 | 6016 | 46311770 | -0 | 215.80 | 0.49 |
| 11 | 72298 | 45264 | 348315316 | 6016 | 51661496 | -0 | 215.80 | 0.51 |
| 12 | 105984 | -143737 | 278873760 | 6023 | 57118054 | -0 | 215.80 | 0.40 |
| 13 | 139711 | 10896 | 202922956 | 6029 | 62671294 | -0 | 215.80 | 0.30 |
| 14 | 141079 | 11373 | 217559702 | 6029 | 68207674 | -0 | 215.80 | 0.30 |
| 15 | 142487 | 11862 | 232592159 | 6028 | 73727000 | -0 | 215.80 | 0.30 |
| 16 | 167656 | 114257 | 307840289 | 6032 | 79297718 | -0 | 215.80 | 0.36 |
| 17 | 192865 | 125903 | 560693564 | 6035 | 84912701 | -0 | 215.80 | 0.59 |
| 18 | 194393 | 126428 | 674248259 | 6034 | 90503410 | -0 | 215.80 | 0.67 |
| 19 | 200481 | 126976 | 788261303 | 6033 | 96081043 | -0 | 215.80 | 0.74 |
| 20 | 203134 | 128294 | 909230882 | 6047 | 102012844 | -0 | 215.80 | 0.80 |
| 21 | 205849 | 132510 | 1031530770 | 6031 | 107700328 | -0 | 215.80 | 0.60 |
| 22 | 208398 | 133101 | 1153597910 | 6030 | 113372141 | -0 | 215.80 | 0.64 |
| 23 | 211010 | 133706 | 1276065259 | 6029 | 119028330 | -0 | 215.80 | 0.67 |
| 24 | 213686 | 134327 | 1398937347 | 6027 | 124669049 | -0 | 215.80 | 0.69 |
| 25 | 216424 | 134962 | 1522219766 | 6026 | 130294453 | -0 | 215.80 | 0.72 |
| 26 | 219225 | 135613 | 1645919004 | 6025 | 135904695 | -0 | 215.80 | 0.74 |
| 27 | 222090 | 136278 | 1770042298 | 6024 | 141499927 | -0 | 215.80 | 0.76 |
| 28 | 225017 | 136959 | 1894597516 | 6023 | 147080296 | -0 | 215.80 | 0.78 |
| 29 | 228008 | 137654 | 2019593053 | 6022 | 152645942 | -0 | 215.80 | 0.79 |
| 30 | 231062 | 138365 | 2145037744 | 6021 | 158196998 | -0 | 215.80 | 0.80 |
| 31 | 243042 | 139102 | 2271131007 | 6021 | 163745385 | -0 | 215.80 | 0.82 |
| 32 | 246616 | 139871 | 2396540078 | 6023 | 169241735 | -0 | 215.80 | 0.83 |
| 33 | 250261 | 140562 | 2521713702 | 6019 | 174682085 | -0 | 215.80 | 0.75 |
| 34 | 253978 | 141307 | 2647367633 | 6018 | 180110043 | -0 | 215.80 | 0.76 |
| 35 | 257767 | 142067 | 2773511328 | 6017 | 185525663 | -0 | 215.80 | 0.76 |
| 36 | 261627 | 142842 | 2900154630 | 6016 | 190929012 | -0 | 215.80 | 0.77 |
| 37 | 265558 | 143632 | 3027307462 | 6015 | 196320147 | -0 | 215.80 | 0.77 |
| 38 | 269561 | 144437 | 3154979809 | 6015 | 201699117 | -0 | 215.80 | 0.77 |
| 39 | 273635 | 145256 | 3283181700 | 6014 | 207065962 | -0 | 215.80 | 0.78 |
| 40 | 277781 | 146090 | 3411923192 | 6013 | 212420716 | -0 | 215.80 | 0.78 |
| 41 | 281999 | 146939 | 3541214359 | 6012 | 217763402 | -0 | 215.80 | 0.78 |
| 42 | 299065 | 147810 | 3671205803 | 6012 | 223102144 | -0 | 215.80 | 0.78 |
| 43 | 303189 | 148654 | 3797167055 | 6011 | 228241025 | -0 | 215.80 | 0.78 |
| 44 | 307378 | 149501 | 3923697284 | 6010 | 233371108 | -0 | 215.80 | 0.81 |
| 45 | 311634 | 150357 | 4050737905 | 6009 | 238488496 | -0 | 215.80 | 0.81 |
| 46 | 315957 | 151228 | 4178298249 | 6008 | 243593218 | -0 | 215.80 | 0.81 |
| 47 | 320346 | 152112 | 4306387540 | 6007 | 248685289 | -0 | 215.80 | 0.81 |
| 48 | 324801 | 153011 | 4435014969 | 6007 | 253764716 | -0 | 215.80 | 0.81 |
| 49 | 329322 | 153923 | 4564189691 | 6006 | 258831503 | -0 | 215.80 | 0.81 |
| 50 | 333910 | 154848 | 4693920824 | 6005 | 263885644 | -0 | 215.80 | 0.81 |
| 51 | 338564 | 155788 | 4824217445 | 6004 | 268927131 | -0 | 215.80 | 0.81 |
| 52 | 343284 | 156741 | 4955088591 | 6003 | 273955949 | -0 | 215.80 | 0.81 |
| 53 | 348071 | 157708 | 5086543254 | 6003 | 278972078 | -0 | 215.80 | 0.80 |
| 54 | 352924 | 158689 | 5218590384 | 6002 | 283975491 | -0 | 215.80 | 0.80 |
| 55 | 357843 | 159683 | 5351238884 | 6001 | 288966158 | -0 | 215.80 | 0.80 |
| 56 | 362829 | 160691 | 5484497613 | 6000 | 293944046 | -0 | 215.80 | 0.80 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 18 " MST - MSA - ZONA A - NORMALE - RESISTENZA - 2 x 40.5 "

Pressione trasversale del vento = 706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | 7040.00 | 6000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | 38720.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = -5145 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = 38720 | Lb = 0 | --- |
| 3.00 | 33.69 | 0.00 | 38720.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 5145 | Fp = -41711 | --- |
| --- | --- | Pa = 4338 | Ta = -2765 | La = 0 | --- |
| --- | --- | Pb = -4338 | Tb = 41485 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | 38720.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = -5145 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = 38720 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|--------|------------|--------|-----------|----------|--------------------------------|-------|
| 2 | 433 | 7341 | 7151373 | 6000 | 5881921 | 0 | 215.80 | 0.05 |
| 3 | 883 | 7655 | 13262949 | 6000 | 10655771 | 0 | 215.80 | 0.08 |
| 4 | 1350 | 7981 | 19647481 | 6000 | 15431496 | 0 | 215.80 | 0.11 |
| 5 | 1836 | 8320 | 26315254 | 6000 | 20208992 | 0 | 215.80 | 0.14 |
| 6 | 3733 | 8672 | 33316157 | 6000 | 24993401 | 0 | 215.80 | 0.16 |
| 7 | 4822 | 9062 | 41290664 | 6000 | 30117296 | 0 | 215.80 | 0.19 |
| 8 | 6851 | 9457 | 49515619 | 6000 | 35229243 | 0 | 215.80 | 0.11 |
| 9 | 8920 | 9869 | 58150293 | 6000 | 40347744 | 0 | 215.80 | 0.12 |
| 10 | 10128 | 10294 | 67179772 | 6000 | 45469193 | 0 | 215.80 | 0.12 |
| 11 | 11377 | 10734 | 76616759 | 6000 | 50593357 | 0 | 215.80 | 0.13 |
| 12 | 15734 | 4860 | 82848960 | 6001 | 55729808 | 0 | 215.80 | 0.14 |
| 13 | 20132 | 47614 | 122219647 | 6001 | 60877415 | -0 | 215.80 | 0.17 |
| 14 | 21500 | 48097 | 163612124 | 6001 | 66026120 | -0 | 215.80 | 0.21 |
| 15 | 22908 | 48594 | 205458252 | 6001 | 71175679 | -0 | 215.80 | 0.24 |
| 16 | 23086 | 57384 | 252631614 | 6001 | 76322510 | -0 | 215.80 | 0.28 |
| 17 | 23305 | 91116 | 336373310 | 6001 | 81466717 | 0 | 215.80 | 0.34 |
| 18 | 24832 | 91656 | 414740823 | 6001 | 86611385 | 0 | 215.80 | 0.40 |
| 19 | 30921 | 92211 | 493724553 | 6001 | 91766322 | 0 | 215.80 | 0.45 |
| 20 | 33343 | 94439 | 576803407 | 6001 | 97096558 | 0 | 215.80 | 0.49 |
| 21 | 35829 | 132105 | 695975584 | 6001 | 102394598 | 0 | 215.80 | 0.39 |
| 22 | 38378 | 132708 | 812506372 | 6001 | 107694256 | 0 | 215.80 | 0.44 |
| 23 | 40990 | 133327 | 929613640 | 6001 | 112995274 | 0 | 215.80 | 0.47 |
| 24 | 43666 | 133961 | 1047306693 | 6001 | 118297397 | 0 | 215.80 | 0.51 |
| 25 | 46404 | 134610 | 1165594722 | 6001 | 123600370 | 0 | 215.80 | 0.54 |
| 26 | 49205 | 135274 | 1284486827 | 6001 | 128903939 | 0 | 215.80 | 0.56 |
| 27 | 52070 | 135954 | 1403992027 | 6001 | 134207853 | 0 | 215.80 | 0.59 |
| 28 | 54997 | 136648 | 1524119266 | 6001 | 139511861 | 0 | 215.80 | 0.61 |
| 29 | 57988 | 137357 | 1644877427 | 6001 | 144815713 | 0 | 215.80 | 0.63 |
| 30 | 61042 | 138082 | 1766275336 | 6001 | 150119163 | 0 | 215.80 | 0.65 |
| 31 | 73022 | 138823 | 1888483139 | 6001 | 155432711 | 0 | 215.80 | 0.67 |
| 32 | 76596 | 139569 | 2009737486 | 6001 | 160680160 | 0 | 215.80 | 0.68 |
| 33 | 80241 | 140310 | 2131443703 | 6001 | 165914480 | 0 | 215.80 | 0.62 |
| 34 | 83958 | 141067 | 2253796496 | 6001 | 171147756 | 0 | 215.80 | 0.63 |
| 35 | 87747 | 141839 | 2376804104 | 6001 | 176379758 | 0 | 215.80 | 0.64 |
| 36 | 91607 | 142626 | 2500474750 | 6001 | 181610260 | 0 | 215.80 | 0.65 |
| 37 | 95538 | 143428 | 2624816634 | 6001 | 186839035 | 0 | 215.80 | 0.66 |
| 38 | 99541 | 144244 | 2749837933 | 6001 | 192065858 | 0 | 215.80 | 0.66 |
| 39 | 103615 | 145074 | 2875546803 | 6001 | 197290507 | 0 | 215.80 | 0.67 |
| 40 | 107761 | 145920 | 3001951381 | 6001 | 202512757 | 0 | 215.80 | 0.67 |
| 41 | 111979 | 146780 | 3129059786 | 6001 | 207732389 | 0 | 215.80 | 0.68 |
| 42 | 129045 | 147656 | 3257002873 | 6001 | 212956621 | 0 | 215.80 | 0.68 |
| 43 | 133169 | 148514 | 3381168424 | 6001 | 217995632 | 0 | 215.80 | 0.69 |
| 44 | 137358 | 149369 | 3506009678 | 6001 | 223032246 | 0 | 215.80 | 0.72 |
| 45 | 141614 | 150237 | 3631507874 | 6001 | 228064702 | 0 | 215.80 | 0.72 |
| 46 | 145937 | 151119 | 3757670201 | 6001 | 233092816 | 0 | 215.80 | 0.72 |
| 47 | 150326 | 152015 | 3884503829 | 6001 | 238116404 | 0 | 215.80 | 0.72 |
| 48 | 154781 | 152924 | 4012015922 | 6001 | 243135281 | 0 | 215.80 | 0.72 |
| 49 | 159302 | 153847 | 4140213628 | 6001 | 248149266 | 0 | 215.80 | 0.73 |
| 50 | 163890 | 154783 | 4269104090 | 6001 | 253158174 | 0 | 215.80 | 0.73 |
| 51 | 168544 | 155733 | 4398694436 | 6000 | 258161822 | 0 | 215.80 | 0.73 |
| 52 | 173264 | 156696 | 4528991785 | 6000 | 263160027 | 0 | 215.80 | 0.73 |
| 53 | 178051 | 157674 | 4660003245 | 6000 | 268152607 | 0 | 215.80 | 0.73 |
| 54 | 182904 | 158664 | 4791735911 | 6000 | 273139379 | 0 | 215.80 | 0.73 |
| 55 | 187823 | 159669 | 4924196870 | 6000 | 278120160 | 0 | 215.80 | 0.73 |
| 56 | 192809 | 160687 | 5057393195 | 6000 | 283094770 | 0 | 215.80 | 0.73 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 19 " MST - MSA - ZONA B - NORMALE - RESISTENZA - 2 x 40.5 "

Pressione trasversale del vento = 706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 6940.00 | 6950.00 | 6000.00 | 0.00 |
| 2.00 | 37.16 | 53420.00 | 38100.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 62809 | Fp = 4366 | --- |
| --- | --- | Pa = 52966 | Ta = 33758 | La = 0 | --- |
| --- | --- | Pb = 454 | Tb = 4342 | Lb = 0 | --- |
| 3.00 | 33.69 | 53420.00 | 38100.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 72933 | Fp = -77721 | --- |
| --- | --- | Pa = 61504 | Ta = -39199 | La = 0 | --- |
| --- | --- | Pb = -8084 | Tb = 77299 | Lb = 0 | --- |
| 4.00 | 30.23 | 53420.00 | 38100.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 62809 | Fp = 4366 | --- |
| --- | --- | Pa = 52966 | Ta = 33758 | La = 0 | --- |
| --- | --- | Pb = 454 | Tb = 4342 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|------------|--------|-----------|----------|--------------------------------|-------|
| 2 | 7373 | 7273 | 7352111 | 6002 | 5914996 | 0 | 215.80 | 0.05 |
| 3 | 7823 | 7587 | 13684807 | 6002 | 10721500 | 0 | 215.80 | 0.09 |
| 4 | 8290 | 7915 | 20293955 | 6002 | 15529157 | 0 | 215.80 | 0.12 |
| 5 | 8776 | 8254 | 27189684 | 6002 | 20337633 | 0 | 215.80 | 0.14 |
| 6 | 10673 | 8611 | 34433147 | 6002 | 25151974 | 0 | 215.80 | 0.17 |
| 7 | 11762 | 9035 | 43023139 | 6005 | 30337532 | -0 | 215.80 | 0.20 |
| 8 | 40274 | 226936 | 185342611 | 6009 | 35587889 | 0 | 215.80 | 0.34 |
| 9 | 68826 | 43728 | 262311940 | 6015 | 40944912 | -0 | 215.80 | 0.45 |
| 10 | 70034 | 44154 | 302402553 | 6015 | 46296440 | -0 | 215.80 | 0.48 |
| 11 | 71283 | 44594 | 342844511 | 6015 | 51642059 | -0 | 215.80 | 0.50 |
| 12 | 104450 | -141270 | 274576259 | 6022 | 57092669 | -0 | 215.80 | 0.39 |
| 13 | 137657 | 10828 | 199913360 | 6028 | 62638291 | -0 | 215.80 | 0.29 |
| 14 | 139025 | 11305 | 214345428 | 6028 | 68167381 | -0 | 215.80 | 0.29 |
| 15 | 140433 | 11795 | 229174777 | 6027 | 73679744 | -0 | 215.80 | 0.29 |
| 16 | 165222 | 112501 | 303217735 | 6031 | 79242615 | -0 | 215.80 | 0.36 |
| 17 | 190051 | 123982 | 551934800 | 6034 | 84848983 | -0 | 215.80 | 0.59 |
| 18 | 191578 | 124508 | 663674219 | 6033 | 90431526 | -0 | 215.80 | 0.66 |
| 19 | 197667 | 125056 | 775875448 | 6032 | 96001417 | -0 | 215.80 | 0.72 |
| 20 | 200316 | 126360 | 894892581 | 6045 | 101922199 | -0 | 215.80 | 0.79 |
| 21 | 203029 | 130542 | 1015292455 | 6030 | 107602554 | -0 | 215.80 | 0.59 |
| 22 | 205578 | 131133 | 1135471708 | 6029 | 113267555 | -0 | 215.80 | 0.63 |
| 23 | 208190 | 131740 | 1256056456 | 6028 | 118917244 | -0 | 215.80 | 0.66 |
| 24 | 210866 | 132361 | 1377051428 | 6027 | 124551768 | -0 | 215.80 | 0.68 |
| 25 | 213604 | 132997 | 1498462376 | 6026 | 130171274 | -0 | 215.80 | 0.71 |
| 26 | 216405 | 133648 | 1620295919 | 6025 | 135775909 | -0 | 215.80 | 0.73 |
| 27 | 219270 | 134314 | 1742559398 | 6024 | 141365818 | -0 | 215.80 | 0.75 |
| 28 | 222197 | 134995 | 1865260760 | 6023 | 146941139 | -0 | 215.80 | 0.76 |
| 29 | 225188 | 135692 | 1988408463 | 6022 | 152502005 | -0 | 215.80 | 0.78 |
| 30 | 228242 | 136403 | 2112011391 | 6021 | 158048543 | -0 | 215.80 | 0.79 |
| 31 | 240222 | 137140 | 2236266042 | 6020 | 163592648 | -0 | 215.80 | 0.80 |
| 32 | 243796 | 137908 | 2359850625 | 6022 | 169084460 | -0 | 215.80 | 0.81 |
| 33 | 247441 | 138601 | 2483224060 | 6018 | 174521057 | -0 | 215.80 | 0.74 |
| 34 | 251158 | 139347 | 2607083209 | 6018 | 179945471 | -0 | 215.80 | 0.74 |
| 35 | 254947 | 140108 | 2731437540 | 6017 | 185357750 | -0 | 215.80 | 0.75 |
| 36 | 258807 | 140883 | 2856296894 | 6016 | 190757955 | -0 | 215.80 | 0.75 |
| 37 | 262738 | 141674 | 2981671186 | 6015 | 196146139 | -0 | 215.80 | 0.76 |
| 38 | 266741 | 142479 | 3107570394 | 6014 | 201522345 | -0 | 215.80 | 0.76 |
| 39 | 270815 | 143298 | 3234004534 | 6013 | 206886609 | -0 | 215.80 | 0.76 |
| 40 | 274961 | 144133 | 3360983653 | 6013 | 212238958 | -0 | 215.80 | 0.77 |
| 41 | 279179 | 144982 | 3488517813 | 6012 | 217579413 | -0 | 215.80 | 0.77 |
| 42 | 296245 | 145853 | 3616755473 | 6011 | 222916079 | -0 | 215.80 | 0.77 |
| 43 | 300369 | 146698 | 3741030189 | 6010 | 228053151 | -0 | 215.80 | 0.77 |
| 44 | 304558 | 147545 | 3865877709 | 6010 | 233181541 | -0 | 215.80 | 0.80 |
| 45 | 308814 | 148402 | 3991241081 | 6009 | 238297392 | -0 | 215.80 | 0.80 |
| 46 | 313137 | 149274 | 4117129612 | 6008 | 243400729 | -0 | 215.80 | 0.80 |
| 47 | 317526 | 150158 | 4243552507 | 6007 | 248491561 | -0 | 215.80 | 0.80 |
| 48 | 321981 | 151057 | 4370518936 | 6006 | 253569895 | -0 | 215.80 | 0.80 |
| 49 | 326502 | 151969 | 4498038038 | 6006 | 258635728 | -0 | 215.80 | 0.80 |
| 50 | 331090 | 152896 | 4626118915 | 6005 | 263689053 | -0 | 215.80 | 0.80 |
| 51 | 335744 | 153835 | 4754770626 | 6004 | 268729858 | -0 | 215.80 | 0.80 |
| 52 | 340464 | 154789 | 4884002194 | 6003 | 273758124 | -0 | 215.80 | 0.79 |
| 53 | 345251 | 155756 | 5013822598 | 6003 | 278773828 | -0 | 215.80 | 0.79 |
| 54 | 350104 | 156738 | 5144240774 | 6002 | 283776941 | -0 | 215.80 | 0.79 |
| 55 | 355023 | 157733 | 5275265615 | 6001 | 288767431 | -0 | 215.80 | 0.79 |
| 56 | 360009 | 158741 | 5406905969 | 6000 | 293745259 | -0 | 215.80 | 0.79 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 20 " MST - MSA - ZONA B - NORMALE - RESISTENZA - 2 x 40.5 "

Pressione trasversale del vento = 706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|---------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | 6950.00 | 6000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | 38100.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = -5062 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = 38100 | Lb = 0 | --- |
| 3.00 | 33.69 | 0.00 | 38100.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 5062 | Fp = -41043 | --- |
| --- | --- | Pa = 4269 | Ta = -2721 | La = 0 | --- |
| --- | --- | Pb = -4269 | Tb = 40821 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | 38100.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = -5062 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = 38100 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|-------------|-----------------------------|---------------|-----------------|---------------|-----------------|-----------------|--------------------------|--------------|
| 2 | 433 | 7251 | 7062995 | 6000 | 5881921 | 0 | 215.80 | 0.05 |
| 3 | 883 | 7565 | 13102661 | 6000 | 10655771 | 0 | 215.80 | 0.08 |
| 4 | 1350 | 7891 | 19415095 | 6000 | 15431496 | 0 | 215.80 | 0.11 |
| 5 | 1836 | 8230 | 26010578 | 6000 | 20208992 | 0 | 215.80 | 0.14 |
| 6 | 3733 | 8582 | 32938453 | 6000 | 24993401 | 0 | 215.80 | 0.16 |
| 7 | 4822 | 8972 | 40832620 | 6000 | 30117295 | 0 | 215.80 | 0.19 |
| 8 | 6851 | 9367 | 48978401 | 6000 | 35229242 | 0 | 215.80 | 0.11 |
| 9 | 8920 | 9779 | 57533054 | 6000 | 40347743 | 0 | 215.80 | 0.12 |
| 10 | 10128 | 10204 | 66482032 | 6000 | 45469191 | 0 | 215.80 | 0.12 |
| 11 | 11377 | 10644 | 75838031 | 6000 | 50593355 | 0 | 215.80 | 0.13 |
| 12 | 15700 | 4871 | 82045973 | 6001 | 55729694 | -0 | 215.80 | 0.13 |
| 13 | 20062 | 46949 | 120867392 | 6001 | 60877088 | -0 | 215.80 | 0.17 |
| 14 | 21430 | 47431 | 161684854 | 6001 | 66025591 | -0 | 215.80 | 0.21 |
| 15 | 22838 | 47928 | 202955527 | 6001 | 71174956 | -0 | 215.80 | 0.24 |
| 16 | 23052 | 56585 | 249476046 | 6001 | 76321695 | -0 | 215.80 | 0.27 |
| 17 | 23305 | 89785 | 331987434 | 6001 | 81465901 | 0 | 215.80 | 0.34 |
| 18 | 24832 | 90325 | 409218066 | 6001 | 86610569 | 0 | 215.80 | 0.39 |
| 19 | 30921 | 90881 | 487062865 | 6001 | 91765505 | 0 | 215.80 | 0.44 |
| 20 | 33343 | 93083 | 568949732 | 6001 | 97095740 | 0 | 215.80 | 0.49 |
| 21 | 35829 | 130154 | 686359403 | 6001 | 102393779 | 0 | 215.80 | 0.39 |
| 22 | 38378 | 130758 | 801178475 | 6001 | 107693437 | 0 | 215.80 | 0.43 |
| 23 | 40990 | 131377 | 916573499 | 6001 | 112994454 | 0 | 215.80 | 0.47 |
| 24 | 43666 | 132011 | 1032553835 | 6001 | 118296576 | 0 | 215.80 | 0.50 |
| 25 | 46404 | 132660 | 1149128734 | 6001 | 123599548 | 0 | 215.80 | 0.53 |
| 26 | 49205 | 133324 | 1266307355 | 6001 | 128903117 | 0 | 215.80 | 0.56 |
| 27 | 52070 | 134003 | 1384098775 | 6001 | 134207030 | 0 | 215.80 | 0.58 |
| 28 | 54997 | 134698 | 1502512000 | 6001 | 139511037 | 0 | 215.80 | 0.60 |
| 29 | 57988 | 135407 | 1621555974 | 6001 | 144814889 | 0 | 215.80 | 0.62 |
| 30 | 61042 | 136132 | 1741239587 | 6001 | 150118338 | 0 | 215.80 | 0.64 |
| 31 | 73022 | 136873 | 1861730805 | 6001 | 155431885 | 0 | 215.80 | 0.66 |
| 32 | 76596 | 137619 | 1981290974 | 6001 | 160679333 | 0 | 215.80 | 0.67 |
| 33 | 80241 | 138359 | 2101305607 | 6001 | 165913653 | 0 | 215.80 | 0.61 |
| 34 | 83958 | 139117 | 2221966884 | 6001 | 171146928 | 0 | 215.80 | 0.62 |
| 35 | 87747 | 139889 | 2343283104 | 6001 | 176378930 | 0 | 215.80 | 0.63 |
| 36 | 91607 | 140676 | 2465262552 | 6001 | 181609431 | 0 | 215.80 | 0.64 |
| 37 | 95538 | 141477 | 2587913488 | 6001 | 186838205 | 0 | 215.80 | 0.65 |
| 38 | 99541 | 142293 | 2711244151 | 6001 | 192065028 | 0 | 215.80 | 0.65 |
| 39 | 103615 | 143124 | 2835262757 | 6001 | 197289676 | 0 | 215.80 | 0.66 |
| 40 | 107761 | 143969 | 2959977506 | 6001 | 202511926 | 0 | 215.80 | 0.67 |
| 41 | 111979 | 144829 | 3085396575 | 6001 | 207731557 | 0 | 215.80 | 0.67 |
| 42 | 129045 | 145705 | 3211649198 | 6001 | 212955789 | 0 | 215.80 | 0.67 |
| 43 | 133169 | 146564 | 3334183657 | 6001 | 217994800 | 0 | 215.80 | 0.68 |
| 44 | 137358 | 147419 | 3457394292 | 6001 | 223031414 | 0 | 215.80 | 0.71 |
| 45 | 141614 | 148287 | 3581262752 | 6001 | 228063869 | 0 | 215.80 | 0.71 |
| 46 | 145937 | 149169 | 3705796279 | 6001 | 233091982 | 0 | 215.80 | 0.71 |
| 47 | 150326 | 150065 | 3831002099 | 6001 | 238115570 | 0 | 215.80 | 0.71 |
| 48 | 154781 | 150974 | 3956887428 | 6001 | 243134447 | 0 | 215.80 | 0.71 |
| 49 | 159302 | 151897 | 4083459470 | 6001 | 248148431 | 0 | 215.80 | 0.72 |
| 50 | 163890 | 152833 | 4210725420 | 6001 | 253157339 | 0 | 215.80 | 0.72 |
| 51 | 168544 | 153783 | 4338692459 | 6000 | 258160987 | 0 | 215.80 | 0.72 |
| 52 | 173264 | 154746 | 4467367761 | 6000 | 263159192 | 0 | 215.80 | 0.72 |
| 53 | 178051 | 155723 | 4596758486 | 6000 | 268151771 | 0 | 215.80 | 0.72 |
| 54 | 182904 | 156714 | 4726871785 | 6000 | 273138543 | 0 | 215.80 | 0.72 |
| 55 | 187823 | 157719 | 4857714795 | 6000 | 278119325 | 0 | 215.80 | 0.72 |
| 56 | 192809 | 158737 | 4989294644 | 6000 | 283093935 | 0 | 215.80 | 0.72 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 21 " MST - MSB - ZONA B - NORMALE - RESISTENZA - 2 x 40.5 "

Pressione trasversale del vento = 176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 11320.00 | 6350.00 | 8000.00 | 0.00 |
| 2.00 | 37.16 | 69540.00 | 28220.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 84603 | Fp = -17345 | --- |
| --- | --- | Pa = 71344 | Ta = 45471 | La = 0 | --- |
| --- | --- | Pb = -1804 | Tb = -17251 | Lb = 0 | --- |
| 3.00 | 33.69 | 69540.00 | 28220.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 92102 | Fp = -78145 | --- |
| --- | --- | Pa = 77668 | Ta = -49502 | La = 0 | --- |
| --- | --- | Pb = -8128 | Tb = 77722 | Lb = 0 | --- |
| 4.00 | 30.23 | 69540.00 | 28220.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 84603 | Fp = -17345 | --- |
| --- | --- | Pa = 71344 | Ta = 45471 | La = 0 | --- |
| --- | --- | Pb = -1804 | Tb = -17251 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|-------------|-----------------------------|---------------|-----------------|---------------|-----------------|-----------------|--------------------------|--------------|
| 2 | 11753 | 6462 | 6702400 | 8005 | 7916395 | 0 | 215.80 | 0.06 |
| 3 | 12203 | 6542 | 12306461 | 8005 | 14354396 | 0 | 215.80 | 0.10 |
| 4 | 12670 | 6624 | 17989266 | 8005 | 20793268 | 0 | 215.80 | 0.13 |
| 5 | 13156 | 6710 | 23753223 | 8006 | 27232367 | 0 | 215.80 | 0.16 |
| 6 | 15053 | 6803 | 29643542 | 8006 | 33678197 | 0 | 215.80 | 0.18 |
| 7 | 16142 | 6952 | 36634081 | 8013 | 40647156 | 0 | 215.80 | 0.21 |
| 8 | 53843 | 300026 | 223226800 | 8022 | 47730557 | 0 | 215.80 | 0.41 |
| 9 | 91584 | 52803 | 321166050 | 8037 | 55008037 | -0 | 215.80 | 0.55 |
| 10 | 92792 | 52908 | 368993814 | 8037 | 62273655 | -0 | 215.80 | 0.59 |
| 11 | 94041 | 53017 | 416844043 | 8037 | 69526723 | -0 | 215.80 | 0.62 |
| 12 | 134161 | -189135 | 322462899 | 8051 | 76953464 | -0 | 215.80 | 0.47 |
| 13 | 174321 | -13292 | 201156002 | 8065 | 84537326 | -0 | 215.80 | 0.31 |
| 14 | 175689 | -13181 | 194987417 | 8063 | 92091035 | -0 | 215.80 | 0.29 |
| 15 | 177097 | -13068 | 188877968 | 8061 | 99614301 | -0 | 215.80 | 0.27 |
| 16 | 211053 | 116758 | 258766058 | 8071 | 107236470 | -0 | 215.80 | 0.33 |
| 17 | 245049 | 110519 | 540286651 | 8078 | 114944193 | -0 | 215.80 | 0.59 |
| 18 | 246576 | 110632 | 640514987 | 8075 | 122608059 | -0 | 215.80 | 0.65 |
| 19 | 252665 | 110757 | 740762773 | 8073 | 130243612 | -0 | 215.80 | 0.71 |
| 20 | 254185 | 108975 | 845491637 | 8102 | 138429761 | -0 | 215.80 | 0.76 |
| 21 | 255769 | 93750 | 930744202 | 8067 | 146188626 | -0 | 215.80 | 0.55 |
| 22 | 258318 | 93882 | 1018435011 | 8064 | 153918798 | -0 | 215.80 | 0.57 |
| 23 | 260930 | 94018 | 1106081672 | 8062 | 161620420 | -0 | 215.80 | 0.59 |
| 24 | 263606 | 94158 | 1193682758 | 8059 | 169293873 | -0 | 215.80 | 0.61 |
| 25 | 266344 | 94302 | 1281237705 | 8057 | 176939545 | -0 | 215.80 | 0.62 |
| 26 | 269145 | 94449 | 1368746663 | 8054 | 184557825 | -0 | 215.80 | 0.63 |
| 27 | 272010 | 94600 | 1456210368 | 8052 | 192149097 | -0 | 215.80 | 0.64 |
| 28 | 274937 | 94754 | 1543630040 | 8049 | 199713739 | -0 | 215.80 | 0.65 |
| 29 | 277928 | 94913 | 1631007299 | 8047 | 207252118 | -0 | 215.80 | 0.65 |
| 30 | 280982 | 95076 | 1718344084 | 8045 | 214764589 | -0 | 215.80 | 0.66 |
| 31 | 292962 | 95253 | 1805787883 | 8044 | 222267728 | -0 | 215.80 | 0.66 |
| 32 | 296536 | 95467 | 1892560795 | 8047 | 229707700 | -0 | 215.80 | 0.67 |
| 33 | 300181 | 95589 | 1978670161 | 8039 | 237053716 | -0 | 215.80 | 0.60 |
| 34 | 303898 | 95763 | 2064765819 | 8037 | 244378069 | -0 | 215.80 | 0.60 |
| 35 | 307687 | 95940 | 2150850066 | 8035 | 251680960 | -0 | 215.80 | 0.60 |
| 36 | 311547 | 96121 | 2236925588 | 8034 | 258962616 | -0 | 215.80 | 0.60 |
| 37 | 315478 | 96306 | 2322995103 | 8032 | 266223246 | -0 | 215.80 | 0.60 |
| 38 | 319481 | 96495 | 2409061340 | 8030 | 273463046 | -0 | 215.80 | 0.60 |
| 39 | 323555 | 96687 | 2495127033 | 8028 | 280682195 | -0 | 215.80 | 0.60 |
| 40 | 327701 | 96884 | 2581194909 | 8026 | 287880858 | -0 | 215.80 | 0.60 |
| 41 | 331919 | 97084 | 2667267675 | 8024 | 295059183 | -0 | 215.80 | 0.60 |
| 42 | 348985 | 97296 | 2753452505 | 8024 | 302228435 | -0 | 215.80 | 0.60 |
| 43 | 353109 | 97492 | 2836608296 | 8021 | 309124662 | -0 | 215.80 | 0.60 |
| 44 | 357298 | 97695 | 2919810666 | 8020 | 316006284 | -0 | 215.80 | 0.62 |
| 45 | 361554 | 97897 | 3003003402 | 8018 | 322867161 | -0 | 215.80 | 0.61 |
| 46 | 365877 | 98103 | 3086189208 | 8017 | 329707430 | -0 | 215.80 | 0.61 |
| 47 | 370266 | 98313 | 3169370649 | 8015 | 336527204 | -0 | 215.80 | 0.61 |
| 48 | 374721 | 98526 | 3252550240 | 8013 | 343326587 | -0 | 215.80 | 0.61 |
| 49 | 379242 | 98743 | 3335730448 | 8012 | 350105667 | -0 | 215.80 | 0.60 |
| 50 | 383830 | 98963 | 3418913688 | 8010 | 356864525 | -0 | 215.80 | 0.60 |
| 51 | 388484 | 99187 | 3502102327 | 8008 | 363603228 | -0 | 215.80 | 0.60 |
| 52 | 393204 | 99415 | 3585298677 | 8007 | 370321837 | -0 | 215.80 | 0.59 |
| 53 | 397991 | 99646 | 3668505002 | 8005 | 377020399 | -0 | 215.80 | 0.59 |
| 54 | 402844 | 99881 | 3751723514 | 8004 | 383698955 | -0 | 215.80 | 0.59 |
| 55 | 407763 | 100119 | 3834956375 | 8002 | 390357535 | -0 | 215.80 | 0.58 |
| 56 | 412749 | 100361 | 3918205698 | 8001 | 396996162 | -0 | 215.80 | 0.58 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 22 " MST - MSB - ZONA B - NORMALE - RESISTENZA - 2 x 40.5 "

Pressione trasversale del vento = 176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|---------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | 6350.00 | 8000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | 28220.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = -3749 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = 28220 | Lb = 0 | --- |
| 3.00 | 33.69 | 0.00 | 28220.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 3749 | Fp = -30400 | --- |
| --- | --- | Pa = 3162 | Ta = -2015 | La = 0 | --- |
| --- | --- | Pb = -3162 | Tb = 30235 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | 28220.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = -3749 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = 28220 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|--------|------------|--------|-----------|----------|--------------------------------|-------|
| 2 | 433 | 6425 | 6291781 | 8000 | 7842561 | 0 | 215.80 | 0.05 |
| 3 | 883 | 6503 | 11480364 | 8000 | 14207694 | -0 | 215.80 | 0.09 |
| 4 | 1350 | 6585 | 16743204 | 8000 | 20575325 | 0 | 215.80 | 0.12 |
| 5 | 1836 | 6669 | 22082952 | 8000 | 26945319 | -0 | 215.80 | 0.14 |
| 6 | 3733 | 6757 | 27529965 | 8000 | 33324528 | -0 | 215.80 | 0.17 |
| 7 | 4822 | 6856 | 33546089 | 8000 | 40156379 | -0 | 215.80 | 0.19 |
| 8 | 6851 | 6954 | 39586001 | 8000 | 46972302 | 0 | 215.80 | 0.11 |
| 9 | 8920 | 7057 | 45755464 | 8000 | 53796963 | 0 | 215.80 | 0.12 |
| 10 | 10128 | 7163 | 52038596 | 8000 | 60625552 | 0 | 215.80 | 0.12 |
| 11 | 11377 | 7273 | 58438786 | 8001 | 67457760 | 0 | 215.80 | 0.13 |
| 12 | 15146 | 2774 | 62302220 | 8001 | 74303841 | 0 | 215.80 | 0.13 |
| 13 | 18955 | 33709 | 90111036 | 8001 | 81162512 | -0 | 215.80 | 0.15 |
| 14 | 20323 | 33830 | 119196150 | 8001 | 88022872 | -0 | 215.80 | 0.18 |
| 15 | 21731 | 33954 | 148408904 | 8001 | 94884592 | -0 | 215.80 | 0.20 |
| 16 | 22498 | 40115 | 181308367 | 8001 | 101744955 | -0 | 215.80 | 0.22 |
| 17 | 23305 | 64448 | 240657580 | 8001 | 108603882 | 0 | 215.80 | 0.26 |
| 18 | 24832 | 64583 | 295869253 | 8001 | 115463425 | 0 | 215.80 | 0.30 |
| 19 | 30921 | 64722 | 351299154 | 8001 | 122336657 | 0 | 215.80 | 0.33 |
| 20 | 33343 | 66065 | 409394228 | 8002 | 129443614 | 0 | 215.80 | 0.36 |
| 21 | 35829 | 93235 | 493562619 | 8001 | 136507650 | 0 | 215.80 | 0.29 |
| 22 | 38378 | 93385 | 575551978 | 8001 | 143573845 | 0 | 215.80 | 0.32 |
| 23 | 40990 | 93540 | 657701314 | 8001 | 150641853 | 0 | 215.80 | 0.34 |
| 24 | 43666 | 93698 | 740011170 | 8001 | 157711334 | 0 | 215.80 | 0.37 |
| 25 | 46404 | 93860 | 822482020 | 8001 | 164781948 | 0 | 215.80 | 0.39 |
| 26 | 49205 | 94026 | 905114282 | 8001 | 171853358 | 0 | 215.80 | 0.40 |
| 27 | 52070 | 94195 | 987908326 | 8001 | 178925227 | 0 | 215.80 | 0.42 |
| 28 | 54997 | 94368 | 1070864482 | 8001 | 185997222 | 0 | 215.80 | 0.44 |
| 29 | 57988 | 94545 | 1153983043 | 8001 | 193069011 | 0 | 215.80 | 0.45 |
| 30 | 61042 | 94726 | 1237264275 | 8001 | 200140263 | 0 | 215.80 | 0.46 |
| 31 | 73022 | 94911 | 1320819115 | 8002 | 207224977 | 0 | 215.80 | 0.47 |
| 32 | 76596 | 95098 | 1403444271 | 8002 | 214221558 | 0 | 215.80 | 0.48 |
| 33 | 80241 | 95282 | 1486100285 | 8002 | 221200637 | 0 | 215.80 | 0.44 |
| 34 | 83958 | 95471 | 1568915133 | 8001 | 228178324 | 0 | 215.80 | 0.45 |
| 35 | 87747 | 95663 | 1651888972 | 8001 | 235154313 | 0 | 215.80 | 0.45 |
| 36 | 91607 | 95859 | 1735021955 | 8001 | 242128301 | 0 | 215.80 | 0.46 |
| 37 | 95538 | 96039 | 1818314230 | 8001 | 249099988 | 0 | 215.80 | 0.46 |
| 38 | 99541 | 96262 | 1901765939 | 8001 | 256069074 | 0 | 215.80 | 0.46 |
| 39 | 103615 | 96469 | 1985377218 | 8001 | 263035260 | 0 | 215.80 | 0.47 |
| 40 | 107761 | 96680 | 2069148200 | 8001 | 269998249 | 0 | 215.80 | 0.47 |
| 41 | 111979 | 96894 | 2153079013 | 8001 | 276957747 | 0 | 215.80 | 0.47 |
| 42 | 129045 | 97113 | 2237253162 | 8001 | 283923379 | 0 | 215.80 | 0.48 |
| 43 | 133169 | 97326 | 2318648920 | 8001 | 290642050 | 0 | 215.80 | 0.48 |
| 44 | 137358 | 97539 | 2400198226 | 8001 | 297357526 | 0 | 215.80 | 0.50 |
| 45 | 141614 | 97755 | 2481883556 | 8001 | 304067458 | 0 | 215.80 | 0.50 |
| 46 | 145937 | 97975 | 2563705026 | 8001 | 310771601 | 0 | 215.80 | 0.50 |
| 47 | 150326 | 98198 | 2645662750 | 8001 | 317469710 | 0 | 215.80 | 0.50 |
| 48 | 154781 | 98424 | 2727756841 | 8001 | 324161541 | 0 | 215.80 | 0.50 |
| 49 | 159302 | 98654 | 2809987412 | 8001 | 330846847 | 0 | 215.80 | 0.50 |
| 50 | 163890 | 98886 | 2892354578 | 8001 | 337525386 | 0 | 215.80 | 0.50 |
| 51 | 168544 | 99123 | 2974858453 | 8001 | 344196912 | 0 | 215.80 | 0.50 |
| 52 | 173264 | 99363 | 3057499154 | 8000 | 350861182 | 0 | 215.80 | 0.50 |
| 53 | 178051 | 99606 | 3140276795 | 8000 | 357517952 | 0 | 215.80 | 0.50 |
| 54 | 182904 | 99852 | 3223191492 | 8000 | 364166979 | 0 | 215.80 | 0.50 |
| 55 | 187823 | 100102 | 3306243361 | 8000 | 370808020 | 0 | 215.80 | 0.49 |
| 56 | 192809 | 100355 | 3389432517 | 8000 | 377440833 | 0 | 215.80 | 0.49 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 23 " MST - MSA - ZONA A - NORMALE - RESISTENZA - 2 x 40.5 - (-) "

Pressione trasversale del vento = -706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 7060.00 | -7040.00 | 6000.00 | 0.00 |
| 2.00 | 37.16 | 54320.00 | -38720.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 74159 | Fp = -79007 | --- |
| --- | --- | Pa = 62537 | Ta = 39858 | La = 0 | --- |
| --- | --- | Pb = -8217 | Tb = -78578 | Lb = 0 | --- |
| 3.00 | 33.69 | 54320.00 | -38720.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 63870 | Fp = 4416 | --- |
| --- | --- | Pa = 53861 | Ta = -34328 | La = 0 | --- |
| --- | --- | Pb = 459 | Tb = -4392 | Lb = 0 | --- |
| 4.00 | 30.23 | 54320.00 | -38720.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 74159 | Fp = -79007 | --- |
| --- | --- | Pa = 62537 | Ta = 39858 | La = 0 | --- |
| --- | --- | Pb = -8217 | Tb = -78578 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|-------------|-----------------------------|---------------|-----------------|---------------|-----------------|-----------------|--------------------------|--------------|
| 2 | 7493 | -7357 | -7312301 | 6002 | 5915666 | 0 | 215.80 | 0.05 |
| 3 | 7943 | -7671 | -13580779 | 6002 | 10722836 | 0 | 215.80 | 0.09 |
| 4 | 8410 | -7998 | -20117662 | 6002 | 15531150 | -0 | 215.80 | 0.12 |
| 5 | 8896 | -8338 | -26932789 | 6002 | 20340270 | -0 | 215.80 | 0.14 |
| 6 | 10793 | -8692 | -34064533 | 6003 | 25155250 | -0 | 215.80 | 0.17 |
| 7 | 11882 | -9107 | -42298531 | 6006 | 30342152 | -0 | 215.80 | 0.20 |
| 8 | 45180 | 247204 | 105296627 | 6011 | 35613139 | -0 | 215.80 | 0.21 |
| 9 | 78517 | 29831 | 172811356 | 6018 | 41009378 | -0 | 215.80 | 0.31 |
| 10 | 79726 | 29405 | 195946289 | 6018 | 46398682 | -0 | 215.80 | 0.32 |
| 11 | 80974 | 28965 | 218633727 | 6018 | 51780594 | -0 | 215.80 | 0.34 |
| 12 | 105984 | -160069 | 128371370 | 6023 | 57237803 | -0 | 215.80 | 0.21 |
| 13 | 131034 | -84955 | -35563586 | 6028 | 62762762 | -0 | 215.80 | 0.12 |
| 14 | 132402 | -85434 | -111129643 | 6027 | 68272129 | -0 | 215.80 | 0.18 |
| 15 | 133810 | -85927 | -187113389 | 6027 | 73765723 | -0 | 215.80 | 0.25 |
| 16 | 167656 | 12662 | -207166501 | 6032 | 79337226 | -0 | 215.80 | 0.27 |
| 17 | 201542 | -51600 | -106916474 | 6037 | 84976907 | -0 | 215.80 | 0.18 |
| 18 | 203070 | -52130 | -155708187 | 6036 | 90591004 | -0 | 215.80 | 0.21 |
| 19 | 209158 | -52680 | -205052615 | 6035 | 96190742 | -0 | 215.80 | 0.24 |
| 20 | 207472 | -63220 | -264347637 | 6048 | 102138784 | -0 | 215.80 | 0.28 |
| 21 | 205849 | -132397 | -395544185 | 6031 | 107826975 | -0 | 215.80 | 0.25 |
| 22 | 208398 | -132992 | -515952247 | 6030 | 113499461 | -0 | 215.80 | 0.30 |
| 23 | 211010 | -133602 | -636856535 | 6029 | 119156285 | -0 | 215.80 | 0.35 |
| 24 | 213686 | -134227 | -758255983 | 6028 | 124797602 | -0 | 215.80 | 0.39 |
| 25 | 216424 | -134866 | -880151105 | 6027 | 130423570 | -0 | 215.80 | 0.43 |
| 26 | 219225 | -135521 | -1002543763 | 6026 | 136034343 | -0 | 215.80 | 0.46 |
| 27 | 222090 | -136190 | -1125436977 | 6025 | 141630076 | -0 | 215.80 | 0.49 |
| 28 | 225017 | -136875 | -1248834766 | 6024 | 147210917 | -0 | 215.80 | 0.52 |
| 29 | 228008 | -137575 | -1372742002 | 6022 | 152777006 | -0 | 215.80 | 0.55 |
| 30 | 231062 | -138289 | -1497164298 | 6021 | 158328478 | -0 | 215.80 | 0.57 |
| 31 | 243042 | -139027 | -1622261788 | 6021 | 163877271 | -0 | 215.80 | 0.59 |
| 32 | 246616 | -139790 | -1746620202 | 6023 | 169374050 | -0 | 215.80 | 0.61 |
| 33 | 250261 | -140495 | -1870926882 | 6019 | 174814753 | -0 | 215.80 | 0.56 |
| 34 | 253978 | -141243 | -1995763163 | 6018 | 180243045 | -0 | 215.80 | 0.58 |
| 35 | 257767 | -142007 | -2121136684 | 6017 | 185658979 | -0 | 215.80 | 0.59 |
| 36 | 261627 | -142785 | -2247055541 | 6016 | 191062624 | -0 | 215.80 | 0.60 |
| 37 | 265558 | -143578 | -2373528051 | 6016 | 196454037 | -0 | 215.80 | 0.61 |
| 38 | 269561 | -144386 | -2500562714 | 6015 | 201833267 | -0 | 215.80 | 0.62 |
| 39 | 273635 | -145208 | -2628168189 | 6014 | 207200356 | -0 | 215.80 | 0.63 |
| 40 | 277781 | -146045 | -2756353270 | 6013 | 212555336 | -0 | 215.80 | 0.63 |
| 41 | 281999 | -146897 | -2885126864 | 6012 | 217898234 | -0 | 215.80 | 0.64 |
| 42 | 299065 | -147769 | -3014617064 | 6012 | 223237181 | -0 | 215.80 | 0.65 |
| 43 | 303189 | -148617 | -3140140546 | 6011 | 228376242 | -0 | 215.80 | 0.65 |
| 44 | 307378 | -149466 | -3266260385 | 6010 | 233506492 | -0 | 215.80 | 0.68 |
| 45 | 311634 | -150326 | -3392927465 | 6009 | 238624033 | -0 | 215.80 | 0.69 |
| 46 | 315957 | -151199 | -3520150215 | 6008 | 243728893 | -0 | 215.80 | 0.69 |
| 47 | 320346 | -152087 | -3647937036 | 6008 | 248821087 | -0 | 215.80 | 0.69 |
| 48 | 324801 | -152988 | -3776296359 | 6007 | 253900624 | -0 | 215.80 | 0.69 |
| 49 | 329322 | -153902 | -3905236630 | 6006 | 258967507 | -0 | 215.80 | 0.70 |
| 50 | 333910 | -154831 | -4034766308 | 6005 | 264021731 | -0 | 215.80 | 0.70 |
| 51 | 338564 | -155773 | -4164893857 | 6004 | 269063287 | -0 | 215.80 | 0.70 |
| 52 | 343284 | -156729 | -4295627742 | 6003 | 274092161 | -0 | 215.80 | 0.70 |
| 53 | 348071 | -157699 | -4426976428 | 6003 | 279108333 | -0 | 215.80 | 0.70 |
| 54 | 352924 | -158682 | -4558948370 | 6002 | 284111776 | -0 | 215.80 | 0.70 |
| 55 | 357843 | -159679 | -4691552015 | 6001 | 289102462 | -0 | 215.80 | 0.70 |
| 56 | 362829 | -160690 | -4824795797 | 6000 | 294080356 | -0 | 215.80 | 0.70 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 24 " MST - MSA - ZONA A - NORMALE - RESISTENZA - 2 x 40.5 - (-) "

Pressione trasversale del vento = -706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | -7040.00 | 6000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | -38720.00 | 0.00 | 4.75 |
| -- | -- | -- | Ft = 5145 | Fp = -41711 | -- |
| -- | -- | Pa = 4338 | Ta = 2765 | La = 0 | -- |
| -- | -- | Pb = -4338 | Tb = -41485 | Lb = 0 | -- |
| 3.00 | 33.69 | 0.00 | -38720.00 | 0.00 | -4.75 |
| -- | -- | -- | Ft = -5145 | Fp = 0 | -- |
| -- | -- | Pa = 0 | Ta = 0 | La = 0 | -- |
| -- | -- | Pb = 0 | Tb = -38720 | Lb = 0 | -- |
| 4.00 | 30.23 | 0.00 | -38720.00 | 0.00 | 4.75 |
| -- | -- | -- | Ft = 5145 | Fp = -41711 | -- |
| -- | -- | Pa = 4338 | Ta = 2765 | La = 0 | -- |
| -- | -- | Pb = -4338 | Tb = -41485 | Lb = 0 | -- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|------|----------------------|---------|-------------|--------|-----------|----------|-------------------|-------|
| 2 | 433 | -7341 | -7151140 | 6000 | 5881922 | 0 | 215.80 | 0.05 |
| 3 | 883 | -7655 | -13262241 | 6000 | 10655775 | 0 | 215.80 | 0.08 |
| 4 | 1350 | -7981 | -19646048 | 6000 | 15431504 | 0 | 215.80 | 0.11 |
| 5 | 1836 | -8320 | -26312837 | 6000 | 20209006 | -0 | 215.80 | 0.14 |
| 6 | 3733 | -8672 | -33311763 | 6000 | 24993426 | 0 | 215.80 | 0.16 |
| 7 | 4822 | -9062 | -41280811 | 6000 | 30117352 | 0 | 215.80 | 0.19 |
| 8 | 9020 | 8353 | -38699277 | 6000 | 35237495 | -0 | 215.80 | 0.09 |
| 9 | 13258 | -7106 | -42066637 | 6000 | 40371772 | -0 | 215.80 | 0.10 |
| 10 | 14467 | -7531 | -48876620 | 6001 | 45508381 | -0 | 215.80 | 0.10 |
| 11 | 15715 | -7971 | -56093338 | 6001 | 50647083 | -0 | 215.80 | 0.11 |
| 12 | 15734 | -21162 | -71396876 | 6001 | 55783573 | -0 | 215.80 | 0.12 |
| 13 | 15793 | -50378 | -120150724 | 6001 | 60917971 | -0 | 215.80 | 0.17 |
| 14 | 17161 | -50861 | -163754627 | 6001 | 66054090 | -0 | 215.80 | 0.21 |
| 15 | 18569 | -51358 | -207813325 | 6001 | 71191676 | -0 | 215.80 | 0.24 |
| 16 | 23086 | -48427 | -250469131 | 6001 | 76338549 | -0 | 215.80 | 0.28 |
| 17 | 27643 | -88352 | -319804273 | 6001 | 81493612 | -0 | 215.80 | 0.33 |
| 18 | 29171 | -88892 | -395937752 | 6001 | 86648552 | -0 | 215.80 | 0.38 |
| 19 | 35259 | -89448 | -472683797 | 6001 | 91813195 | -0 | 215.80 | 0.43 |
| 20 | 35513 | -95224 | -555558581 | 6001 | 97150354 | -0 | 215.80 | 0.48 |
| 21 | 35829 | -132105 | -677473832 | 6001 | 102448442 | -0 | 215.80 | 0.38 |
| 22 | 38378 | -132708 | -793996507 | 6001 | 107748148 | -0 | 215.80 | 0.43 |
| 23 | 40990 | -133327 | -911095730 | 6001 | 113049215 | -0 | 215.80 | 0.46 |
| 24 | 43666 | -133961 | -1028780821 | 6001 | 118351385 | -0 | 215.80 | 0.50 |
| 25 | 46404 | -134610 | -1147060995 | 6001 | 123654404 | -0 | 215.80 | 0.53 |
| 26 | 49205 | -135274 | -1265945367 | 6001 | 128958019 | -0 | 215.80 | 0.56 |
| 27 | 52070 | -135954 | -1385442972 | 6001 | 134261978 | -0 | 215.80 | 0.58 |
| 28 | 54997 | -136648 | -1505562771 | 6001 | 139566030 | -0 | 215.80 | 0.60 |
| 29 | 57988 | -137357 | -1626313662 | 6001 | 144869926 | -0 | 215.80 | 0.62 |
| 30 | 61042 | -138082 | -1747704484 | 6001 | 150173418 | -0 | 215.80 | 0.64 |
| 31 | 73022 | -138823 | -1869904445 | 6001 | 155487013 | -0 | 215.80 | 0.66 |
| 32 | 76596 | -139569 | -1991150248 | 6001 | 160734512 | -0 | 215.80 | 0.67 |
| 33 | 80241 | -140310 | -2112849191 | 6001 | 165968876 | -0 | 215.80 | 0.62 |
| 34 | 83958 | -141067 | -2235194918 | 6001 | 171202194 | -0 | 215.80 | 0.63 |
| 35 | 87747 | -141839 | -2358195675 | 6001 | 176434237 | -0 | 215.80 | 0.64 |
| 36 | 91607 | -142626 | -2481859698 | 6001 | 181664778 | -0 | 215.80 | 0.65 |
| 37 | 95538 | -143428 | -2606195194 | 6001 | 186893591 | -0 | 215.80 | 0.65 |
| 38 | 99541 | -144244 | -2731210350 | 6001 | 192120451 | -0 | 215.80 | 0.66 |
| 39 | 103615 | -145074 | -2856913332 | 6001 | 197345134 | -0 | 215.80 | 0.66 |
| 40 | 107761 | -145920 | -2983312285 | 6001 | 202567419 | -0 | 215.80 | 0.67 |
| 41 | 111979 | -146780 | -3110415336 | 6001 | 207787082 | -0 | 215.80 | 0.67 |
| 42 | 129045 | -147656 | -3238352790 | 6001 | 213011348 | -0 | 215.80 | 0.68 |
| 43 | 133169 | -148514 | -3362513335 | 6001 | 218050389 | -0 | 215.80 | 0.68 |
| 44 | 137358 | -149369 | -3487349816 | 6001 | 223087031 | -0 | 215.80 | 0.71 |
| 45 | 141614 | -150237 | -3612843595 | 6001 | 228119513 | -0 | 215.80 | 0.72 |
| 46 | 145937 | -151119 | -3739001865 | 6001 | 233147651 | -0 | 215.80 | 0.72 |
| 47 | 150326 | -152015 | -3865831801 | 6001 | 238171261 | -0 | 215.80 | 0.72 |
| 48 | 154781 | -152924 | -3993340571 | 6001 | 243190159 | -0 | 215.80 | 0.72 |
| 49 | 159302 | -153847 | -4121535328 | 6001 | 248204161 | -0 | 215.80 | 0.72 |
| 50 | 163890 | -154783 | -4250423219 | 6001 | 253213084 | -0 | 215.80 | 0.72 |
| 51 | 168544 | -155733 | -4380011377 | 6000 | 258216745 | -0 | 215.80 | 0.72 |
| 52 | 173264 | -156696 | -4510306925 | 6000 | 263214961 | -0 | 215.80 | 0.72 |
| 53 | 178051 | -157674 | -4641316975 | 6000 | 268207549 | -0 | 215.80 | 0.72 |
| 54 | 182904 | -158664 | -4773048629 | 6000 | 273194327 | -0 | 215.80 | 0.72 |
| 55 | 187823 | -159669 | -4905508976 | 6000 | 278175112 | -0 | 215.80 | 0.72 |
| 56 | 192809 | -160687 | -5038705095 | 6000 | 283149723 | -0 | 215.80 | 0.72 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 25 " MST - MSA - ZONA B - NORMALE - RESISTENZA - 2 x 40.5 - (-)
"

Pressione trasversale del vento = -706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 6940.00 | -6950.00 | 6000.00 | 0.00 |
| 2.00 | 37.16 | 53420.00 | -38100.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 72933 | Fp = -77721 | --- |
| --- | --- | Pa = 61504 | Ta = 39199 | La = 0 | --- |
| --- | --- | Pb = -8084 | Tb = -77299 | Lb = 0 | --- |
| 3.00 | 33.69 | 53420.00 | -38100.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 62809 | Fp = 4366 | --- |
| --- | --- | Pa = 52966 | Ta = -33758 | La = 0 | --- |
| --- | --- | Pb = 454 | Tb = -4342 | Lb = 0 | --- |
| 4.00 | 30.23 | 53420.00 | -38100.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 72933 | Fp = -77721 | --- |
| --- | --- | Pa = 61504 | Ta = 39199 | La = 0 | --- |
| --- | --- | Pb = -8084 | Tb = -77299 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|-------------|-----------------------------|---------------|-----------------|---------------|-----------------|-----------------|--------------------------|--------------|
| 2 | 7373 | -7266 | -7218826 | 6002 | 5915050 | 0 | 215.80 | 0.05 |
| 3 | 7823 | -7580 | -13410357 | 6002 | 10721612 | 0 | 215.80 | 0.09 |
| 4 | 8290 | -7907 | -19870178 | 6002 | 15529330 | 0 | 215.80 | 0.12 |
| 5 | 8776 | -8247 | -26608136 | 6002 | 20337871 | 0 | 215.80 | 0.14 |
| 6 | 10673 | -8602 | -33662223 | 6002 | 25152289 | 0 | 215.80 | 0.17 |
| 7 | 11762 | -9015 | -41806276 | 6005 | 30338030 | 0 | 215.80 | 0.19 |
| 8 | 44543 | 243054 | 103305629 | 6010 | 35606138 | 0 | 215.80 | 0.20 |
| 9 | 77363 | 29269 | 169665921 | 6018 | 40997351 | 0 | 215.80 | 0.30 |
| 10 | 78572 | 28843 | 192374683 | 6018 | 46381799 | 0 | 215.80 | 0.32 |
| 11 | 79820 | 28403 | 214637828 | 6018 | 51759029 | 0 | 215.80 | 0.33 |
| 12 | 104450 | -157505 | 125825412 | 6023 | 57210269 | 0 | 215.80 | 0.21 |
| 13 | 129119 | -83663 | -35454568 | 6027 | 62728096 | -0 | 215.80 | 0.12 |
| 14 | 130487 | -84143 | -109837186 | 6027 | 68230638 | -0 | 215.80 | 0.18 |
| 15 | 131895 | -84636 | -184638071 | 6026 | 73717714 | -0 | 215.80 | 0.25 |
| 16 | 165222 | 12312 | -204432095 | 6031 | 79281341 | -0 | 215.80 | 0.26 |
| 17 | 198588 | -50914 | -105928375 | 6036 | 84911957 | -0 | 215.80 | 0.17 |
| 18 | 200116 | -51444 | -154007724 | 6035 | 90517458 | -0 | 215.80 | 0.21 |
| 19 | 206204 | -51995 | -202639405 | 6034 | 96109048 | -0 | 215.80 | 0.24 |
| 20 | 204585 | -62369 | -261043966 | 6047 | 102045765 | -0 | 215.80 | 0.27 |
| 21 | 203029 | -130434 | -390219715 | 6030 | 107726804 | -0 | 215.80 | 0.25 |
| 22 | 205578 | -131030 | -508792248 | 6029 | 113392455 | -0 | 215.80 | 0.30 |
| 23 | 208190 | -131640 | -627863056 | 6028 | 119042758 | -0 | 215.80 | 0.35 |
| 24 | 210866 | -132265 | -747431469 | 6027 | 124677860 | -0 | 215.80 | 0.39 |
| 25 | 213604 | -132905 | -867498341 | 6026 | 130297911 | -0 | 215.80 | 0.42 |
| 26 | 216405 | -133560 | -988065829 | 6025 | 135903061 | -0 | 215.80 | 0.46 |
| 27 | 219270 | -134230 | -1109137208 | 6024 | 141493454 | -0 | 215.80 | 0.49 |
| 28 | 222197 | -134915 | -1230716715 | 6023 | 147069230 | -0 | 215.80 | 0.51 |
| 29 | 225188 | -135615 | -1352809414 | 6022 | 152630525 | -0 | 215.80 | 0.54 |
| 30 | 228242 | -136330 | -1475421080 | 6021 | 158177466 | -0 | 215.80 | 0.56 |
| 31 | 240222 | -137068 | -1598709711 | 6021 | 163721964 | -0 | 215.80 | 0.58 |
| 32 | 243796 | -137831 | -1721274873 | 6022 | 169214191 | -0 | 215.80 | 0.60 |
| 33 | 247441 | -138537 | -1843807008 | 6019 | 174651130 | -0 | 215.80 | 0.55 |
| 34 | 251158 | -139286 | -1966872570 | 6018 | 180075867 | -0 | 215.80 | 0.57 |
| 35 | 254947 | -140050 | -2090479279 | 6017 | 185488451 | -0 | 215.80 | 0.58 |
| 36 | 258807 | -140828 | -2214635293 | 6016 | 190888943 | -0 | 215.80 | 0.59 |
| 37 | 262738 | -141622 | -2339348982 | 6015 | 196277396 | -0 | 215.80 | 0.60 |
| 38 | 266741 | -142430 | -2464628895 | 6014 | 201653854 | -0 | 215.80 | 0.61 |
| 39 | 270815 | -143252 | -2590483734 | 6013 | 207018354 | -0 | 215.80 | 0.62 |
| 40 | 274961 | -144090 | -2716922327 | 6013 | 212370923 | -0 | 215.80 | 0.62 |
| 41 | 279179 | -144942 | -2843953616 | 6012 | 217711583 | -0 | 215.80 | 0.63 |
| 42 | 296245 | -145814 | -2971703992 | 6012 | 223048448 | -0 | 215.80 | 0.64 |
| 43 | 300369 | -146662 | -3095553078 | 6010 | 228185694 | -0 | 215.80 | 0.64 |
| 44 | 304558 | -147512 | -3220001541 | 6010 | 233314247 | -0 | 215.80 | 0.67 |
| 45 | 308814 | -148372 | -3345001641 | 6009 | 238430246 | -0 | 215.80 | 0.68 |
| 46 | 313137 | -149246 | -3470561819 | 6008 | 243533717 | -0 | 215.80 | 0.68 |
| 47 | 317526 | -150134 | -3596690488 | 6007 | 248624669 | -0 | 215.80 | 0.68 |
| 48 | 321981 | -151035 | -3723396089 | 6007 | 253703109 | -0 | 215.80 | 0.68 |
| 49 | 326502 | -151950 | -3850687077 | 6006 | 258769035 | -0 | 215.80 | 0.69 |
| 50 | 331090 | -152879 | -3978571920 | 6005 | 263822440 | -0 | 215.80 | 0.69 |
| 51 | 335744 | -153821 | -4107059090 | 6004 | 268863312 | -0 | 215.80 | 0.69 |
| 52 | 340464 | -154778 | -4236157061 | 6003 | 273891633 | -0 | 215.80 | 0.69 |
| 53 | 345251 | -155748 | -4365874304 | 6003 | 278907379 | -0 | 215.80 | 0.69 |
| 54 | 350104 | -156731 | -4496219283 | 6002 | 283910522 | -0 | 215.80 | 0.69 |
| 55 | 355023 | -157729 | -4627200452 | 6001 | 288901030 | -0 | 215.80 | 0.69 |
| 56 | 360009 | -158740 | -4758826251 | 6000 | 293878864 | -0 | 215.80 | 0.70 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 26 " MST - MSA - ZONA B - NORMALE - RESISTENZA - 2 x 40.5 - (-)
"

Pressione trasversale del vento = -706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | -6950.00 | 6000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | -38100.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 5062 | Fp = -41043 | --- |
| --- | --- | Pa = 4269 | Ta = 2721 | La = 0 | --- |
| --- | --- | Pb = -4269 | Tb = -40821 | Lb = 0 | --- |
| 3.00 | 33.69 | 0.00 | -38100.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = -5062 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = -38100 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | -38100.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 5062 | Fp = -41043 | --- |
| --- | --- | Pa = 4269 | Ta = 2721 | La = 0 | --- |
| --- | --- | Pb = -4269 | Tb = -40821 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|------|----------------------|---------|-------------|--------|-----------|----------|-------------------|-------|
| 2 | 433 | -7251 | -7062766 | 6000 | 5881922 | 0 | 215.80 | 0.05 |
| 3 | 883 | -7565 | -13101964 | 6000 | 10655775 | 0 | 215.80 | 0.08 |
| 4 | 1350 | -7891 | -19413683 | 6000 | 15431504 | 0 | 215.80 | 0.11 |
| 5 | 1836 | -8230 | -26008197 | 6000 | 20209006 | 0 | 215.80 | 0.14 |
| 6 | 3733 | -8582 | -32934127 | 6000 | 24993425 | 0 | 215.80 | 0.16 |
| 7 | 4822 | -8972 | -40822919 | 6000 | 30117350 | 0 | 215.80 | 0.19 |
| 8 | 8985 | 8158 | -38334366 | 6000 | 35237361 | 0 | 215.80 | 0.09 |
| 9 | 13189 | -7060 | -41704294 | 6000 | 40371385 | 0 | 215.80 | 0.10 |
| 10 | 14397 | -7486 | -48467571 | 6001 | 45507751 | 0 | 215.80 | 0.10 |
| 11 | 15646 | -7925 | -55637113 | 6001 | 50646219 | 0 | 215.80 | 0.11 |
| 12 | 15700 | -20912 | -70771147 | 6001 | 55782596 | 0 | 215.80 | 0.12 |
| 13 | 15793 | -49668 | -118827214 | 6001 | 60916994 | 0 | 215.80 | 0.17 |
| 14 | 17161 | -50151 | -161822412 | 6001 | 66053111 | 0 | 215.80 | 0.21 |
| 15 | 18569 | -50648 | -205271927 | 6001 | 71190696 | 0 | 215.80 | 0.24 |
| 16 | 23052 | -47772 | -247347234 | 6001 | 76337477 | 0 | 215.80 | 0.27 |
| 17 | 27574 | -87066 | -315681111 | 6001 | 81492365 | -0 | 215.80 | 0.32 |
| 18 | 29101 | -87606 | -390711871 | 6001 | 86647139 | -0 | 215.80 | 0.38 |
| 19 | 35190 | -88162 | -466353241 | 6001 | 91811626 | -0 | 215.80 | 0.42 |
| 20 | 35478 | -93855 | -548038142 | 6001 | 97148673 | -0 | 215.80 | 0.47 |
| 21 | 35829 | -130155 | -668146956 | 6001 | 102446759 | -0 | 215.80 | 0.38 |
| 22 | 38378 | -130758 | -782958040 | 6001 | 107746464 | -0 | 215.80 | 0.42 |
| 23 | 40990 | -131377 | -898345141 | 6001 | 113047529 | -0 | 215.80 | 0.46 |
| 24 | 43666 | -132011 | -1014317638 | 6001 | 118349698 | -0 | 215.80 | 0.49 |
| 25 | 46404 | -132660 | -1130884801 | 6001 | 123652716 | -0 | 215.80 | 0.52 |
| 26 | 49205 | -133324 | -1248055806 | 6001 | 128956329 | -0 | 215.80 | 0.55 |
| 27 | 52070 | -134004 | -1365839747 | 6001 | 134260287 | -0 | 215.80 | 0.57 |
| 28 | 54997 | -134698 | -1484245646 | 6001 | 139564338 | -0 | 215.80 | 0.60 |
| 29 | 57988 | -135407 | -1603282461 | 6001 | 144868232 | -0 | 215.80 | 0.62 |
| 30 | 61042 | -136132 | -1722959095 | 6001 | 150171723 | -0 | 215.80 | 0.63 |
| 31 | 73022 | -136873 | -1843442590 | 6001 | 155485316 | -0 | 215.80 | 0.65 |
| 32 | 76596 | -137619 | -1962994346 | 6001 | 160732814 | -0 | 215.80 | 0.67 |
| 33 | 80241 | -138360 | -2083001815 | 6001 | 165967176 | -0 | 215.80 | 0.61 |
| 34 | 83958 | -139117 | -2203656133 | 6001 | 171200493 | -0 | 215.80 | 0.62 |
| 35 | 87747 | -139889 | -2324965607 | 6001 | 176432535 | -0 | 215.80 | 0.63 |
| 36 | 91607 | -140676 | -2446938532 | 6001 | 181663074 | -0 | 215.80 | 0.64 |
| 37 | 95538 | -141477 | -2569583178 | 6001 | 186891886 | -0 | 215.80 | 0.64 |
| 38 | 99541 | -142293 | -2692907793 | 6001 | 192118745 | -0 | 215.80 | 0.65 |
| 39 | 103615 | -143124 | -2816920601 | 6001 | 197343427 | -0 | 215.80 | 0.66 |
| 40 | 107761 | -143970 | -2941629810 | 6001 | 202565711 | -0 | 215.80 | 0.66 |
| 41 | 111979 | -144830 | -3067043606 | 6001 | 207785373 | -0 | 215.80 | 0.67 |
| 42 | 129045 | -145706 | -3193290682 | 6001 | 213009638 | -0 | 215.80 | 0.67 |
| 43 | 133169 | -146564 | -3315820212 | 6001 | 218048678 | -0 | 215.80 | 0.67 |
| 44 | 137358 | -147419 | -3439026146 | 6001 | 223085319 | -0 | 215.80 | 0.70 |
| 45 | 141614 | -148287 | -3562890256 | 6001 | 228117800 | -0 | 215.80 | 0.71 |
| 46 | 145937 | -149169 | -3687419789 | 6001 | 233145938 | -0 | 215.80 | 0.71 |
| 47 | 150326 | -150065 | -3812621973 | 6001 | 238169547 | -0 | 215.80 | 0.71 |
| 48 | 154781 | -150974 | -3938504030 | 6001 | 243188444 | -0 | 215.80 | 0.71 |
| 49 | 159302 | -151897 | -4065073168 | 6001 | 248202445 | -0 | 215.80 | 0.71 |
| 50 | 163890 | -152833 | -4192336585 | 6001 | 253211368 | -0 | 215.80 | 0.71 |
| 51 | 168544 | -153783 | -4320301470 | 6000 | 258215028 | -0 | 215.80 | 0.71 |
| 52 | 173264 | -154746 | -4448974999 | 6000 | 263213244 | -0 | 215.80 | 0.71 |
| 53 | 178051 | -155724 | -4578364336 | 6000 | 268205832 | -0 | 215.80 | 0.72 |
| 54 | 182904 | -156714 | -4708476637 | 6000 | 273192610 | -0 | 215.80 | 0.72 |
| 55 | 187823 | -157719 | -4839319044 | 6000 | 278173395 | -0 | 215.80 | 0.72 |
| 56 | 192809 | -158737 | -4970898690 | 6000 | 283148006 | -0 | 215.80 | 0.72 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 27 " MST - MSB - ZONA B - NORMALE - RESISTENZA - 2 x 40.5 - (-)
"

Pressione trasversale del vento = -176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 11320.00 | -6350.00 | 8000.00 | 0.00 |
| 2.00 | 37.16 | 69540.00 | -28220.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 92102 | Fp = -78145 | --- |
| --- | --- | Pa = 77668 | Ta = 49502 | La = 0 | --- |
| --- | --- | Pb = -8128 | Tb = -77722 | Lb = 0 | --- |
| 3.00 | 33.69 | 69540.00 | -28220.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 84603 | Fp = -17345 | --- |
| --- | --- | Pa = 71344 | Ta = -45471 | La = 0 | --- |
| --- | --- | Pb = -1804 | Tb = 17251 | Lb = 0 | --- |
| 4.00 | 30.23 | 69540.00 | -28220.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 92102 | Fp = -78145 | --- |
| --- | --- | Pa = 77668 | Ta = 49502 | La = 0 | --- |
| --- | --- | Pb = -8128 | Tb = -77722 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|-------------|--------|-----------|----------|--------------------------------|-------|
| 2 | 11753 | -6443 | -6417621 | 8005 | 7916487 | 0 | 215.80 | 0.06 |
| 3 | 12203 | -6522 | -11726568 | 8005 | 14354585 | 0 | 215.80 | 0.10 |
| 4 | 12670 | -6604 | -17103578 | 8005 | 20793556 | -0 | 215.80 | 0.13 |
| 5 | 13156 | -6689 | -22550707 | 8006 | 27232758 | 0 | 215.80 | 0.15 |
| 6 | 15053 | -6779 | -28083355 | 8006 | 33678703 | 0 | 215.80 | 0.18 |
| 7 | 16142 | -6902 | -34254650 | 8013 | 40647929 | 0 | 215.80 | 0.20 |
| 8 | 57005 | 311833 | 153786127 | 8024 | 47749527 | 0 | 215.80 | 0.29 |
| 9 | 97908 | 42299 | 243209883 | 8040 | 55062045 | 0 | 215.80 | 0.43 |
| 10 | 99116 | 42193 | 277869934 | 8040 | 62361416 | -0 | 215.80 | 0.45 |
| 11 | 100365 | 42083 | 312338883 | 8040 | 69646909 | -0 | 215.80 | 0.47 |
| 12 | 134161 | -199715 | 202842250 | 8052 | 77074514 | -0 | 215.80 | 0.32 |
| 13 | 167997 | -81432 | 17523332 | 8063 | 84630249 | -0 | 215.80 | 0.15 |
| 14 | 169365 | -81549 | -53855422 | 8061 | 92157077 | -0 | 215.80 | 0.16 |
| 15 | 170773 | -81669 | -125333717 | 8060 | 99654725 | -0 | 215.80 | 0.21 |
| 16 | 211053 | 45831 | -123789888 | 8071 | 107277935 | -0 | 215.80 | 0.21 |
| 17 | 251372 | -15265 | 47799823 | 8081 | 115010752 | -0 | 215.80 | 0.17 |
| 18 | 252900 | -15390 | 31491183 | 8078 | 122698383 | -0 | 215.80 | 0.17 |
| 19 | 258988 | -15524 | 14981074 | 8076 | 130356398 | -0 | 215.80 | 0.17 |
| 20 | 257347 | -25509 | -9611575 | 8105 | 138559216 | -0 | 215.80 | 0.17 |
| 21 | 255769 | -93508 | -105605058 | 8067 | 146319009 | -0 | 215.80 | 0.13 |
| 22 | 258318 | -93650 | -190565433 | 8065 | 154050062 | -0 | 215.80 | 0.16 |
| 23 | 260930 | -93796 | -275644302 | 8062 | 161752514 | -0 | 215.80 | 0.19 |
| 24 | 263606 | -93946 | -360830613 | 8060 | 169426748 | -0 | 215.80 | 0.22 |
| 25 | 266344 | -94098 | -446115027 | 8057 | 177073155 | -0 | 215.80 | 0.25 |
| 26 | 269145 | -94255 | -531489682 | 8055 | 184692126 | -0 | 215.80 | 0.27 |
| 27 | 272010 | -94415 | -616947991 | 8052 | 192284048 | -0 | 215.80 | 0.30 |
| 28 | 274937 | -94579 | -702484463 | 8050 | 199849300 | -0 | 215.80 | 0.32 |
| 29 | 277928 | -94747 | -788094562 | 8047 | 207388253 | -0 | 215.80 | 0.34 |
| 30 | 280982 | -94918 | -873774575 | 8045 | 214901261 | -0 | 215.80 | 0.36 |
| 31 | 292962 | -95099 | -959618366 | 8044 | 222404919 | -0 | 215.80 | 0.37 |
| 32 | 296536 | -95302 | -1044706740 | 8048 | 229845439 | -0 | 215.80 | 0.39 |
| 33 | 300181 | -95452 | -1129429224 | 8040 | 237191905 | -0 | 215.80 | 0.36 |
| 34 | 303898 | -95632 | -1214219714 | 8038 | 244516683 | -0 | 215.80 | 0.37 |
| 35 | 307687 | -95816 | -1299077293 | 8036 | 251819973 | -0 | 215.80 | 0.38 |
| 36 | 311547 | -96004 | -1384001529 | 8034 | 259102003 | -0 | 215.80 | 0.39 |
| 37 | 315478 | -96196 | -1468992254 | 8032 | 266362984 | -0 | 215.80 | 0.39 |
| 38 | 319481 | -96391 | -1554049533 | 8030 | 273603112 | -0 | 215.80 | 0.40 |
| 39 | 323555 | -96591 | -1639173627 | 8028 | 280822568 | -0 | 215.80 | 0.41 |
| 40 | 327701 | -96793 | -1724364972 | 8026 | 288021516 | -0 | 215.80 | 0.41 |
| 41 | 331919 | -97000 | -1809624152 | 8025 | 295200106 | -0 | 215.80 | 0.42 |
| 42 | 348985 | -97214 | -1895027744 | 8024 | 302369613 | -0 | 215.80 | 0.42 |
| 43 | 353109 | -97418 | -1977502505 | 8022 | 309266061 | -0 | 215.80 | 0.42 |
| 44 | 357298 | -97626 | -2060067601 | 8020 | 316147891 | -0 | 215.80 | 0.45 |
| 45 | 361554 | -97834 | -2142681354 | 8018 | 323008956 | -0 | 215.80 | 0.45 |
| 46 | 365877 | -98046 | -2225344846 | 8017 | 329849396 | -0 | 215.80 | 0.45 |
| 47 | 370266 | -98262 | -2308059166 | 8015 | 336669323 | -0 | 215.80 | 0.45 |
| 48 | 374721 | -98481 | -2390825451 | 8013 | 343468840 | -0 | 215.80 | 0.45 |
| 49 | 379242 | -98703 | -2473644880 | 8012 | 350248038 | -0 | 215.80 | 0.46 |
| 50 | 383830 | -98929 | -2556518666 | 8010 | 357006996 | -0 | 215.80 | 0.46 |
| 51 | 388484 | -99159 | -2639448048 | 8008 | 363745784 | -0 | 215.80 | 0.46 |
| 52 | 393204 | -99391 | -2722434291 | 8007 | 370464461 | -0 | 215.80 | 0.46 |
| 53 | 397991 | -99628 | -2805478674 | 8005 | 377163076 | -0 | 215.80 | 0.46 |
| 54 | 402844 | -99868 | -2888582492 | 8004 | 383841669 | -0 | 215.80 | 0.46 |
| 55 | 407763 | -100111 | -2971747046 | 8002 | 390500272 | -0 | 215.80 | 0.46 |
| 56 | 412749 | -100358 | -3054973647 | 8001 | 397138906 | -0 | 215.80 | 0.46 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 28 " MST - MSB - ZONA B - NORMALE - RESISTENZA - 2 x 40.5 - (-)
"

Pressione trasversale del vento = -176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: normale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | -6350.00 | 8000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | -28220.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 3749 | Fp = -30400 | --- |
| --- | --- | Pa = 3162 | Ta = 2015 | La = 0 | --- |
| --- | --- | Pb = -3162 | Tb = -30235 | Lb = 0 | --- |
| 3.00 | 33.69 | 0.00 | -28220.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = -3749 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = -28220 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | -28220.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 3749 | Fp = -30400 | --- |
| --- | --- | Pa = 3162 | Ta = 2015 | La = 0 | --- |
| --- | --- | Pb = -3162 | Tb = -30235 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|-------------|--------|-----------|----------|--------------------------------|-------|
| 2 | 433 | -6425 | -6291608 | 8000 | 7842562 | 0 | 215.80 | 0.05 |
| 3 | 883 | -6503 | -11479840 | 8000 | 14207698 | 0 | 215.80 | 0.09 |
| 4 | 1350 | -6585 | -16742144 | 8000 | 20575333 | 0 | 215.80 | 0.12 |
| 5 | 1836 | -6669 | -22081164 | 8000 | 26945332 | 0 | 215.80 | 0.14 |
| 6 | 3733 | -6757 | -27526715 | 8000 | 33324552 | 0 | 215.80 | 0.17 |
| 7 | 4822 | -6856 | -33538800 | 8000 | 40156433 | 0 | 215.80 | 0.19 |
| 8 | 8432 | 6027 | -31688202 | 8000 | 46980318 | 0 | 215.80 | 0.10 |
| 9 | 12082 | -5043 | -33989887 | 8001 | 53820302 | -0 | 215.80 | 0.11 |
| 10 | 13290 | -5149 | -38626679 | 8001 | 60663618 | 0 | 215.80 | 0.11 |
| 11 | 14539 | -5259 | -43380100 | 8001 | 67509947 | -0 | 215.80 | 0.12 |
| 12 | 15146 | -14655 | -53855010 | 8001 | 74356064 | -0 | 215.80 | 0.12 |
| 13 | 15793 | -35724 | -88530883 | 8001 | 81201903 | 0 | 215.80 | 0.15 |
| 14 | 17161 | -35844 | -119255870 | 8001 | 88050034 | 0 | 215.80 | 0.18 |
| 15 | 18569 | -35969 | -150109003 | 8001 | 94900121 | -0 | 215.80 | 0.20 |
| 16 | 22498 | -33587 | -179716032 | 8001 | 101760525 | 0 | 215.80 | 0.22 |
| 17 | 26467 | -62433 | -228538543 | 8001 | 108629997 | -0 | 215.80 | 0.25 |
| 18 | 27994 | -62568 | -282095612 | 8001 | 115499518 | -0 | 215.80 | 0.29 |
| 19 | 34083 | -62707 | -335868798 | 8001 | 122382178 | -0 | 215.80 | 0.32 |
| 20 | 34924 | -66637 | -393796065 | 8002 | 129495860 | -0 | 215.80 | 0.35 |
| 21 | 35829 | -93235 | -479963566 | 8001 | 136559943 | -0 | 215.80 | 0.28 |
| 22 | 38378 | -93385 | -561946910 | 8001 | 143626184 | -0 | 215.80 | 0.31 |
| 23 | 40990 | -93540 | -644090280 | 8001 | 150694239 | -0 | 215.80 | 0.34 |
| 24 | 43666 | -93698 | -726394233 | 8001 | 157763766 | -0 | 215.80 | 0.36 |
| 25 | 46404 | -93860 | -808859258 | 8001 | 164834425 | -0 | 215.80 | 0.38 |
| 26 | 49205 | -94026 | -891485786 | 8001 | 171905880 | -0 | 215.80 | 0.40 |
| 27 | 52070 | -94195 | -974274199 | 8001 | 178977793 | -0 | 215.80 | 0.42 |
| 28 | 54997 | -94368 | -1057224839 | 8001 | 186049832 | -0 | 215.80 | 0.43 |
| 29 | 57988 | -94545 | -1140338009 | 8001 | 193121662 | -0 | 215.80 | 0.44 |
| 30 | 61042 | -94726 | -1223613986 | 8001 | 200192955 | -0 | 215.80 | 0.46 |
| 31 | 73022 | -94911 | -1307163011 | 8002 | 207277715 | -0 | 215.80 | 0.47 |
| 32 | 76596 | -95098 | -1389781832 | 8002 | 214274345 | -0 | 215.80 | 0.48 |
| 33 | 80241 | -95282 | -1472432452 | 8002 | 221253466 | -0 | 215.80 | 0.44 |
| 34 | 83958 | -95471 | -1555242061 | 8002 | 228231194 | -0 | 215.80 | 0.44 |
| 35 | 87747 | -95663 | -1638210820 | 8002 | 235207222 | -0 | 215.80 | 0.45 |
| 36 | 91607 | -95859 | -1721338892 | 8001 | 242181249 | -0 | 215.80 | 0.45 |
| 37 | 95538 | -96059 | -1804626431 | 8001 | 249152973 | -0 | 215.80 | 0.46 |
| 38 | 99541 | -96262 | -1888073585 | 8001 | 256122094 | -0 | 215.80 | 0.46 |
| 39 | 103615 | -96469 | -1971680498 | 8001 | 263088314 | -0 | 215.80 | 0.46 |
| 40 | 107761 | -96680 | -2055447309 | 8001 | 270051336 | -0 | 215.80 | 0.47 |
| 41 | 111979 | -96894 | -2139374152 | 8001 | 277010865 | -0 | 215.80 | 0.47 |
| 42 | 129045 | -97113 | -2223544125 | 8001 | 283976529 | -0 | 215.80 | 0.47 |
| 43 | 133169 | -97326 | -2304936171 | 8001 | 290695229 | -0 | 215.80 | 0.47 |
| 44 | 137358 | -97539 | -2386481937 | 8001 | 297410732 | -0 | 215.80 | 0.49 |
| 45 | 141614 | -97755 | -2468163992 | 8001 | 304120690 | -0 | 215.80 | 0.50 |
| 46 | 145937 | -97975 | -2549982454 | 8001 | 310824857 | -0 | 215.80 | 0.50 |
| 47 | 150326 | -98198 | -2631937441 | 8001 | 317522987 | -0 | 215.80 | 0.50 |
| 48 | 154781 | -98424 | -2714029067 | 8001 | 324214837 | -0 | 215.80 | 0.50 |
| 49 | 159302 | -98654 | -2796257452 | 8001 | 330900161 | -0 | 215.80 | 0.50 |
| 50 | 163890 | -98886 | -2878622711 | 8001 | 337578714 | -0 | 215.80 | 0.50 |
| 51 | 168544 | -99123 | -2961124965 | 8001 | 344250253 | -0 | 215.80 | 0.50 |
| 52 | 173264 | -99363 | -3043764330 | 8000 | 350914533 | -0 | 215.80 | 0.49 |
| 53 | 178051 | -99606 | -3126540926 | 8000 | 357571311 | -0 | 215.80 | 0.49 |
| 54 | 182904 | -99852 | -3209454872 | 8000 | 364220344 | -0 | 215.80 | 0.49 |
| 55 | 187823 | -100102 | -3292506287 | 8000 | 370861389 | -0 | 215.80 | 0.49 |
| 56 | 192809 | -100355 | -3375695290 | 8000 | 377494203 | -0 | 215.80 | 0.49 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 29 " MST - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 3 x 31.5 "

Pressione trasversale del vento = 706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 3420.00 | 3440.00 | 29500.00 | 0.00 |
| 2.00 | 37.16 | 52780.00 | 41740.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 61512 | Fp = 8726 | --- |
| --- | --- | Pa = 51872 | Ta = 33061 | La = 0 | --- |
| --- | --- | Pb = 908 | Tb = 8679 | Lb = 0 | --- |
| 3.00 | 33.69 | 52780.00 | 41740.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 72604 | Fp = -81203 | --- |
| --- | --- | Pa = 61226 | Ta = -39022 | La = 0 | --- |
| --- | --- | Pb = -8446 | Tb = 80762 | Lb = 0 | --- |
| 4.00 | 30.23 | 45820.00 | 35550.00 | 54500.00 | 4.75 |
| --- | --- | --- | Ft = 67020 | Fp = 18139 | --- |
| --- | --- | Pa = 46527 | Ta = 21325 | La = 43268 | --- |
| --- | --- | Pb = -707 | Tb = 14225 | Lb = 11232 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Usa |
|------|----------------------------|-----------|------------|-----------|------------|-----------|--------------------------------------|----------|
| 2 | 3853 | 3751 | 3756386 | 29507 | 29038531 | 0 | 345.28 | 0.10 |
| 3 | 4303 | 4065 | 7142119 | 29508 | 52632815 | 0 | 345.28 | 0.16 |
| 4 | 4770 | 4393 | 10804048 | 29509 | 76239532 | 0 | 345.28 | 0.22 |
| 5 | 5256 | 4732 | 14752599 | 29510 | 99857797 | 0 | 345.28 | 0.26 |
| 6 | 7153 | 5088 | 19047224 | 29513 | 123526943 | 0 | 345.28 | 0.30 |
| 7 | 8242 | 5500 | 24321381 | 29530 | 149050168 | 0 | 345.28 | 0.35 |
| 8 | 36207 | 218913 | 160660002 | 29566 | 175168213 | 0 | 345.28 | 0.26 |
| 9 | 64212 | 39488 | 232942150 | 29616 | 202100011 | 0 | 345.28 | 0.32 |
| 10 | 65421 | 39914 | 269122618 | 29617 | 229019782 | 0 | 345.28 | 0.34 |
| 11 | 66669 | 40354 | 305663488 | 29617 | 255925775 | 0 | 345.28 | 0.36 |
| 12 | 99924 | -143339 | 234744456 | 29672 | 283702779 | 0 | 345.28 | 0.32 |
| 13 | 133219 | 11085 | 160886333 | 29725 | 312300089 | 0 | 345.28 | 0.29 |
| 14 | 134587 | 11563 | 175147989 | 29722 | 340829801 | 0 | 345.28 | 0.30 |
| 15 | 135995 | 12054 | 189819091 | 29717 | 369290829 | 0 | 345.28 | 0.30 |
| 16 | 157383 | 103009 | 257953728 | 30423 | 398562786 | 0 | 345.28 | 0.33 |
| 17 | 178811 | 115248 | 483302823 | 73035 | 466845526 | 122405428 | 345.28 | 0.43 |
| 18 | 180339 | 115776 | 587029343 | 73026 | 532682773 | 122405428 | 345.28 | 0.48 |
| 19 | 186427 | 116327 | 691243749 | 73023 | 598499149 | 122405428 | 345.28 | 0.52 |
| 20 | 188497 | 117103 | 801468217 | 73602 | 668189379 | 122405428 | 345.28 | 0.57 |
| 21 | 190629 | 131699 | 922444717 | 84236 | 746275804 | 128901598 | 345.28 | 0.43 |
| 22 | 193178 | 132293 | 1043083066 | 84229 | 823346213 | 128901598 | 345.28 | 0.45 |
| 23 | 195790 | 132902 | 1164153246 | 84221 | 900325486 | 128901598 | 345.28 | 0.48 |
| 24 | 198466 | 133525 | 1285659453 | 84214 | 977209217 | 128901598 | 345.28 | 0.50 |
| 25 | 201204 | 134164 | 1407606902 | 84207 | 1053993578 | 128901598 | 345.28 | 0.51 |
| 26 | 204005 | 134817 | 1530001666 | 84199 | 1130675216 | 128901598 | 345.28 | 0.53 |
| 27 | 206870 | 135486 | 1652850542 | 84191 | 1207251180 | 128901598 | 345.28 | 0.54 |
| 28 | 209797 | 136169 | 1776160938 | 84184 | 1283718852 | 128901598 | 345.28 | 0.56 |
| 29 | 212788 | 136867 | 1899940777 | 84176 | 1360075894 | 128901598 | 345.28 | 0.57 |
| 30 | 215842 | 137581 | 2024198415 | 84168 | 1436320198 | 128901598 | 345.28 | 0.58 |
| 31 | 227822 | 138319 | 2149124822 | 84167 | 1512570481 | 128901598 | 345.28 | 0.59 |
| 32 | 231396 | 139084 | 2273341575 | 84182 | 1588011193 | 128901598 | 345.28 | 0.59 |
| 33 | 235041 | 139785 | 2397418003 | 84152 | 1662930053 | 128901598 | 345.28 | 0.54 |
| 34 | 238758 | 140533 | 2521998467 | 84146 | 1737745091 | 128901598 | 345.28 | 0.54 |
| 35 | 242547 | 141295 | 2647092046 | 84139 | 1812454757 | 128901598 | 345.28 | 0.55 |
| 36 | 246407 | 142072 | 2772708159 | 84132 | 1887057712 | 128901598 | 345.28 | 0.55 |
| 37 | 250338 | 142865 | 2898856315 | 84125 | 1961552656 | 128901598 | 345.28 | 0.55 |
| 38 | 254341 | 143671 | 3025546098 | 84119 | 2035938319 | 128901598 | 345.28 | 0.55 |
| 39 | 258415 | 144493 | 3152787144 | 84112 | 2110213448 | 128901598 | 345.28 | 0.56 |
| 40 | 262561 | 145329 | 3280589131 | 84105 | 2184376807 | 128901598 | 345.28 | 0.56 |
| 41 | 266779 | 146180 | 3408961763 | 84099 | 2258427163 | 128901598 | 345.28 | 0.56 |
| 42 | 283845 | 147052 | 3538050370 | 84096 | 2332450461 | 128901598 | 345.28 | 0.56 |
| 43 | 287969 | 147899 | 3663164727 | 84088 | 2403766689 | 128901598 | 345.28 | 0.56 |
| 44 | 292158 | 148747 | 3788862631 | 84083 | 2474998959 | 128901598 | 345.28 | 0.58 |
| 45 | 296414 | 149606 | 3915090840 | 84076 | 2546106358 | 128901598 | 345.28 | 0.58 |
| 46 | 300737 | 150479 | 4041858338 | 84069 | 2617088010 | 128901598 | 345.28 | 0.58 |
| 47 | 305126 | 151365 | 4169174024 | 84062 | 2687942973 | 128901598 | 345.28 | 0.58 |
| 48 | 309581 | 152265 | 4297046779 | 84055 | 2758670289 | 128901598 | 345.28 | 0.58 |
| 49 | 314102 | 153179 | 4425485456 | 84048 | 2829268978 | 128901598 | 345.28 | 0.58 |
| 50 | 318690 | 154107 | 4554498882 | 84042 | 2899738039 | 128901598 | 345.28 | 0.58 |
| 51 | 323344 | 155048 | 4684095856 | 84035 | 2970076450 | 128901598 | 345.28 | 0.58 |
| 52 | 328064 | 156003 | 4814285140 | 84029 | 3040283167 | 128901598 | 345.28 | 0.58 |
| 53 | 332851 | 156972 | 4945075468 | 84022 | 3110357123 | 128901598 | 345.28 | 0.57 |
| 54 | 337704 | 157954 | 5076475535 | 84016 | 3180297228 | 128901598 | 345.28 | 0.57 |
| 55 | 342623 | 158951 | 5208494002 | 84009 | 3250102370 | 128901598 | 345.28 | 0.57 |
| 56 | 347609 | 159961 | 5341139493 | 84003 | 3319771415 | 128901598 | 345.28 | 0.57 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 30 " MST - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 3 x 31.5 "

Pressione trasversale del vento = 706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | 3440.00 | 29500.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | 41740.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = -5546 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = 41740 | Lb = 0 | --- |
| 3.00 | 33.69 | 0.00 | 41740.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 5546 | Fp = -44965 | --- |
| --- | --- | Pa = 4677 | Ta = -2981 | La = 0 | --- |
| --- | --- | Pb = -4677 | Tb = 44721 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | 35550.00 | 54500.00 | 4.75 |
| --- | --- | --- | Ft = 14933 | Fp = 54719 | --- |
| --- | --- | Pa = 8543 | Ta = 2068 | La = 12073 | --- |
| --- | --- | Pb = -8543 | Tb = 33482 | Lb = 42427 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|------|----------------------|--------|------------|--------|------------|----------|-------------------|-------|
| 2 | 433 | 3741 | 3622833 | 29500 | 28922734 | 0 | 345.28 | 0.10 |
| 3 | 883 | 4055 | 6871347 | 29500 | 52400864 | -0 | 345.28 | 0.16 |
| 4 | 1350 | 4381 | 10392350 | 29500 | 75891743 | 0 | 345.28 | 0.21 |
| 5 | 1836 | 4720 | 14196214 | 29501 | 99394991 | 0 | 345.28 | 0.26 |
| 6 | 3733 | 5072 | 18331666 | 29501 | 122946227 | -0 | 345.28 | 0.30 |
| 7 | 4822 | 5462 | 23246186 | 29503 | 148215739 | -0 | 345.28 | 0.34 |
| 8 | 6851 | 5857 | 28414256 | 29502 | 173404684 | -0 | 345.28 | 0.19 |
| 9 | 8920 | 6269 | 33991199 | 29503 | 198642424 | 0 | 345.28 | 0.20 |
| 10 | 10128 | 6695 | 39962969 | 29503 | 223904264 | 0 | 345.28 | 0.22 |
| 11 | 11377 | 7134 | 46342463 | 29503 | 249189364 | 0 | 345.28 | 0.22 |
| 12 | 15904 | 767 | 49231388 | 29505 | 274573688 | 0 | 345.28 | 0.23 |
| 13 | 20470 | 46819 | 87807439 | 29506 | 300051661 | -0 | 345.28 | 0.24 |
| 14 | 21838 | 47302 | 128529610 | 29506 | 325545515 | -0 | 345.28 | 0.26 |
| 15 | 23246 | 47799 | 169706655 | 29507 | 351054334 | 0 | 345.28 | 0.27 |
| 16 | 27527 | 70847 | 224556657 | 29697 | 376744984 | 0 | 345.28 | 0.29 |
| 17 | 31847 | 95627 | 333013688 | 41581 | 413280191 | 34152869 | 345.28 | 0.33 |
| 18 | 33375 | 96167 | 415433397 | 41581 | 449172146 | 34152869 | 345.28 | 0.36 |
| 19 | 39463 | 96723 | 498463250 | 41582 | 485155612 | 34152869 | 345.28 | 0.39 |
| 20 | 37615 | 91972 | 581437082 | 43381 | 523451666 | 34152869 | 345.28 | 0.41 |
| 21 | 35829 | 131375 | 694569669 | 84008 | 600762501 | 58692252 | 345.28 | 0.32 |
| 22 | 38378 | 131979 | 810461089 | 84008 | 674582361 | 58692252 | 345.28 | 0.35 |
| 23 | 40990 | 132598 | 926928782 | 84009 | 748424308 | 58692252 | 345.28 | 0.38 |
| 24 | 43666 | 133232 | 1043982066 | 84009 | 822285694 | 58692252 | 345.28 | 0.40 |
| 25 | 46404 | 133881 | 1161630154 | 84009 | 896163824 | 58692252 | 345.28 | 0.42 |
| 26 | 49205 | 134545 | 1279882163 | 84009 | 970055967 | 58692252 | 345.28 | 0.44 |
| 27 | 52070 | 135224 | 1398747132 | 84009 | 1043959364 | 58692252 | 345.28 | 0.45 |
| 28 | 54997 | 135918 | 1518234025 | 84010 | 1117871230 | 58692252 | 345.28 | 0.47 |
| 29 | 57988 | 136628 | 1638351746 | 84010 | 1191788761 | 58692252 | 345.28 | 0.48 |
| 30 | 61042 | 137352 | 1759109141 | 84010 | 1265709141 | 58692252 | 345.28 | 0.50 |
| 31 | 73022 | 138094 | 1880675707 | 84011 | 1339735966 | 58692252 | 345.28 | 0.51 |
| 32 | 76596 | 138839 | 2001297330 | 84012 | 1412804871 | 58692252 | 345.28 | 0.52 |
| 33 | 80241 | 139580 | 2122371567 | 84011 | 1485748807 | 58692252 | 345.28 | 0.47 |
| 34 | 83958 | 140338 | 2244092372 | 84011 | 1558687676 | 58692252 | 345.28 | 0.48 |
| 35 | 87747 | 141110 | 2366468000 | 84011 | 1631618744 | 58692252 | 345.28 | 0.48 |
| 36 | 91607 | 141896 | 2489506698 | 84010 | 1704539287 | 58692252 | 345.28 | 0.49 |
| 37 | 95538 | 142698 | 2613216685 | 84010 | 1777446578 | 58692252 | 345.28 | 0.49 |
| 38 | 99541 | 143514 | 2737606162 | 84010 | 1850337897 | 58692252 | 345.28 | 0.50 |
| 39 | 103615 | 144345 | 2862683304 | 84010 | 1923210524 | 58692252 | 345.28 | 0.50 |
| 40 | 107761 | 145190 | 2988456270 | 84009 | 1996061741 | 58692252 | 345.28 | 0.50 |
| 41 | 111979 | 146050 | 3114933201 | 84009 | 2068888837 | 58692252 | 345.28 | 0.50 |
| 42 | 129045 | 146926 | 3242244440 | 84010 | 2141767463 | 58692252 | 345.28 | 0.51 |
| 43 | 133169 | 147784 | 3365800259 | 84009 | 2212081977 | 58692252 | 345.28 | 0.51 |
| 44 | 137358 | 148639 | 3490031917 | 84009 | 2282373713 | 58692252 | 345.28 | 0.53 |
| 45 | 141614 | 149508 | 3614920785 | 84008 | 2352623707 | 58692252 | 345.28 | 0.53 |
| 46 | 145937 | 150389 | 3740474071 | 84008 | 2422829590 | 58692252 | 345.28 | 0.53 |
| 47 | 150326 | 151285 | 3866698965 | 84007 | 2492988987 | 58692252 | 345.28 | 0.53 |
| 48 | 154781 | 152194 | 3993602649 | 84006 | 2563099531 | 58692252 | 345.28 | 0.53 |
| 49 | 159302 | 153117 | 4121192293 | 84006 | 2633158859 | 58692252 | 345.28 | 0.53 |
| 50 | 163890 | 154053 | 4249475057 | 84005 | 2703164611 | 58692252 | 345.28 | 0.53 |
| 51 | 168544 | 155003 | 4378458090 | 84004 | 2773114433 | 58692252 | 345.28 | 0.53 |
| 52 | 173264 | 155967 | 4508148528 | 84003 | 2843005974 | 58692252 | 345.28 | 0.53 |
| 53 | 178051 | 156944 | 4638553499 | 84003 | 2912836885 | 58692252 | 345.28 | 0.53 |
| 54 | 182904 | 157934 | 4769680119 | 84002 | 2982604825 | 58692252 | 345.28 | 0.53 |
| 55 | 187823 | 158939 | 4901535492 | 84001 | 3052307455 | 58692252 | 345.28 | 0.53 |
| 56 | 192809 | 159957 | 5034126711 | 84000 | 3121942438 | 58692252 | 345.28 | 0.53 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 31 " MST - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 3 x 31.5 "

Pressione trasversale del vento = 706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|---------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 6840.00 | 6880.00 | 6000.00 | 0.00 |
| 2.00 | 37.16 | 45820.00 | 35550.00 | 54500.00 | 4.75 |
| --- | --- | --- | Ft = 67020 | Fp = 18139 | --- |
| --- | --- | Pa = 46527 | Ta = 21325 | La = 43268 | --- |
| --- | --- | Pb = -707 | Tb = 14225 | Lb = 11232 | --- |
| 3.00 | 33.69 | 52780.00 | 41740.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 72604 | Fp = -81203 | --- |
| --- | --- | Pa = 61226 | Ta = -39022 | La = 0 | --- |
| --- | --- | Pb = -8446 | Tb = 80762 | Lb = 0 | --- |
| 4.00 | 30.23 | 45820.00 | 35550.00 | 54500.00 | 4.75 |
| --- | --- | --- | Ft = 67020 | Fp = 18139 | --- |
| --- | --- | Pa = 46527 | Ta = 21325 | La = 43268 | --- |
| --- | --- | Pb = -707 | Tb = 14225 | Lb = 11232 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|------------|--------|------------|-----------|--------------------------------|-------|
| 2 | 7273 | 7199 | 7249267 | 6018 | 6137877 | 0 | 345.28 | 0.03 |
| 3 | 7723 | 7514 | 13490284 | 6019 | 11180663 | -0 | 345.28 | 0.06 |
| 4 | 8190 | 7841 | 20005916 | 6020 | 16238486 | -0 | 345.28 | 0.07 |
| 5 | 8676 | 8180 | 26806238 | 6021 | 21311496 | -0 | 345.28 | 0.09 |
| 6 | 10573 | 8536 | 33947147 | 6025 | 26444125 | -0 | 345.28 | 0.11 |
| 7 | 11662 | 8955 | 42368252 | 6054 | 32379976 | -0 | 345.28 | 0.13 |
| 8 | 36954 | 199163 | 167460819 | 12531 | 42635650 | -0 | 345.28 | 0.19 |
| 9 | 62286 | 31180 | 227784538 | 49412 | 91771944 | 118259860 | 345.28 | 0.26 |
| 10 | 63495 | 31606 | 256747728 | 49413 | 135817373 | 118259860 | 345.28 | 0.28 |
| 11 | 64743 | 32046 | 286073322 | 49414 | 179876529 | 118259860 | 345.28 | 0.31 |
| 12 | 97191 | -152646 | 207227290 | 51488 | 226226012 | 118259860 | 345.28 | 0.27 |
| 13 | 129679 | 8312 | 131181805 | 60780 | 283319705 | 123775396 | 345.28 | 0.26 |
| 14 | 131047 | 8791 | 142788503 | 60776 | 338996254 | 123775396 | 345.28 | 0.29 |
| 15 | 132455 | 9282 | 154813442 | 60771 | 394615606 | 123775396 | 345.28 | 0.31 |
| 16 | 153843 | 100235 | 220283270 | 61484 | 451195209 | 123775396 | 345.28 | 0.34 |
| 17 | 175271 | 112473 | 442952482 | 104102 | 546924576 | 246180824 | 345.28 | 0.45 |
| 18 | 176799 | 113002 | 544012441 | 104092 | 640196154 | 246180824 | 345.28 | 0.51 |
| 19 | 182887 | 113553 | 645568643 | 104088 | 733459791 | 246180824 | 345.28 | 0.56 |
| 20 | 184957 | 114319 | 752926306 | 104695 | 831875910 | 246180824 | 345.28 | 0.61 |
| 21 | 187089 | 128927 | 871198525 | 115297 | 938117155 | 252676994 | 345.28 | 0.46 |
| 22 | 189638 | 129522 | 989142326 | 115288 | 1043326446 | 252676994 | 345.28 | 0.49 |
| 23 | 192250 | 130131 | 1107527850 | 115279 | 1148425982 | 252676994 | 345.28 | 0.51 |
| 24 | 194926 | 130755 | 1226359359 | 115270 | 1253409145 | 252676994 | 345.28 | 0.54 |
| 25 | 197664 | 131395 | 1345642103 | 115261 | 1358270139 | 252676994 | 345.28 | 0.56 |
| 26 | 200465 | 132049 | 1465382168 | 115251 | 1463003860 | 252676994 | 345.28 | 0.57 |
| 27 | 203330 | 132718 | 1585586346 | 115242 | 1567605786 | 252676994 | 345.28 | 0.59 |
| 28 | 206257 | 133402 | 1706262027 | 115232 | 1672071881 | 252676994 | 345.28 | 0.60 |
| 29 | 209248 | 134101 | 1827417103 | 115223 | 1776398519 | 252676994 | 345.28 | 0.62 |
| 30 | 212302 | 134816 | 1949059890 | 115213 | 1880582413 | 252676994 | 345.28 | 0.63 |
| 31 | 224282 | 135554 | 2071375656 | 115212 | 1984780742 | 252676994 | 345.28 | 0.64 |
| 32 | 227856 | 136318 | 2193000858 | 115231 | 2087859254 | 252676994 | 345.28 | 0.65 |
| 33 | 231501 | 137021 | 2314523330 | 115193 | 2190258276 | 252676994 | 345.28 | 0.59 |
| 34 | 235218 | 137770 | 2436558384 | 115185 | 2292524257 | 252676994 | 345.28 | 0.59 |
| 35 | 239007 | 138533 | 2559115061 | 115176 | 2394654827 | 252676994 | 345.28 | 0.60 |
| 36 | 242867 | 139311 | 2682202730 | 115168 | 2496647905 | 252676994 | 345.28 | 0.60 |
| 37 | 246798 | 140103 | 2805830851 | 115159 | 2598501475 | 252676994 | 345.28 | 0.60 |
| 38 | 250801 | 140911 | 2930008957 | 115151 | 2700213576 | 252676994 | 345.28 | 0.60 |
| 39 | 254875 | 141733 | 3054746638 | 115142 | 2801782288 | 252676994 | 345.28 | 0.61 |
| 40 | 259021 | 142570 | 3180053527 | 115134 | 2903205717 | 252676994 | 345.28 | 0.61 |
| 41 | 263239 | 143421 | 3305939285 | 115126 | 3004481994 | 252676994 | 345.28 | 0.61 |
| 42 | 280305 | 144294 | 3432545326 | 115123 | 3105725653 | 252676994 | 345.28 | 0.61 |
| 43 | 284429 | 145141 | 3555273115 | 115112 | 3203275507 | 252676994 | 345.28 | 0.61 |
| 44 | 288618 | 145990 | 3678590342 | 115106 | 3300715704 | 252676994 | 345.28 | 0.64 |
| 45 | 292874 | 146850 | 3802446244 | 115097 | 3397992095 | 252676994 | 345.28 | 0.63 |
| 46 | 297197 | 147723 | 3926849753 | 115088 | 3495103320 | 252676994 | 345.28 | 0.63 |
| 47 | 301586 | 148610 | 4051809730 | 115079 | 3592047951 | 252676994 | 345.28 | 0.63 |
| 48 | 306041 | 149511 | 4177335013 | 115070 | 3688824536 | 252676994 | 345.28 | 0.63 |
| 49 | 310562 | 150425 | 4303434422 | 115062 | 3785431606 | 252676994 | 345.28 | 0.63 |
| 50 | 315150 | 151353 | 4430116751 | 115053 | 3881867669 | 252676994 | 345.28 | 0.63 |
| 51 | 319804 | 152295 | 4557390766 | 115045 | 3978131211 | 252676994 | 345.28 | 0.63 |
| 52 | 324524 | 153251 | 4685265205 | 115037 | 4074220689 | 252676994 | 345.28 | 0.63 |
| 53 | 329311 | 154220 | 4813748774 | 115028 | 4170134541 | 252676994 | 345.28 | 0.62 |
| 54 | 334164 | 155203 | 4942850149 | 115020 | 4265871175 | 252676994 | 345.28 | 0.62 |
| 55 | 339083 | 156200 | 5072577971 | 115012 | 4361428974 | 252676994 | 345.28 | 0.62 |
| 56 | 344069 | 157210 | 5202940848 | 115004 | 4456806295 | 252676994 | 345.28 | 0.62 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 32 " MST - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 3 x 31.5 "

Pressione trasversale del vento = 706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | 6880.00 | 6000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | 35550.00 | 54500.00 | 4.75 |
| --- | --- | --- | Ft = 14933 | Fp = 54719 | --- |
| --- | --- | Pa = 8543 | Ta = 2068 | La = 12073 | --- |
| --- | --- | Pb = -8543 | Tb = 33482 | Lb = 42427 | --- |
| 3.00 | 33.69 | 0.00 | 41740.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 5546 | Fp = -44965 | --- |
| --- | --- | Pa = 4677 | Ta = -2981 | La = 0 | --- |
| --- | --- | Pb = -4677 | Tb = 44721 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | 35550.00 | 54500.00 | 4.75 |
| --- | --- | --- | Ft = 14933 | Fp = 54719 | --- |
| --- | --- | Pa = 8543 | Ta = 2068 | La = 12073 | --- |
| --- | --- | Pb = -8543 | Tb = 33482 | Lb = 42427 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Usa |
|------|----------------------------|-----------|------------|-----------|------------|-----------|--------------------------------------|----------|
| 2 | 433 | 7181 | 6994926 | 6000 | 5891894 | 0 | 345.28 | 0.03 |
| 3 | 883 | 7495 | 12980022 | 6000 | 10686062 | -0 | 345.28 | 0.05 |
| 4 | 1350 | 7821 | 19238458 | 6001 | 15492820 | 0 | 345.28 | 0.07 |
| 5 | 1836 | 8160 | 25780538 | 6001 | 20312438 | 0 | 345.28 | 0.08 |
| 6 | 3733 | 8512 | 32657282 | 6002 | 25181430 | -0 | 345.28 | 0.10 |
| 7 | 4822 | 8903 | 40504614 | 6004 | 30538917 | -0 | 345.28 | 0.12 |
| 8 | 11122 | 43870 | 69837684 | 7803 | 37004268 | -0 | 345.28 | 0.09 |
| 9 | 17463 | 11781 | 85968839 | 18080 | 54239436 | 32996196 | 345.28 | 0.11 |
| 10 | 18671 | 12207 | 96887502 | 18080 | 70078298 | 32996196 | 345.28 | 0.12 |
| 11 | 19920 | 12647 | 108210621 | 18081 | 85946874 | 32996196 | 345.28 | 0.12 |
| 12 | 20175 | -5694 | 108555886 | 25655 | 106331868 | 32996196 | 345.28 | 0.13 |
| 13 | 20470 | 44070 | 142753374 | 60508 | 163340365 | 53831219 | 345.28 | 0.17 |
| 14 | 21838 | 44553 | 181159183 | 60508 | 215205456 | 53831219 | 345.28 | 0.21 |
| 15 | 23246 | 45050 | 220018181 | 60509 | 267096746 | 53831219 | 345.28 | 0.24 |
| 16 | 27527 | 68098 | 272549815 | 60700 | 319193306 | 53831219 | 345.28 | 0.27 |
| 17 | 31847 | 92878 | 378687708 | 72584 | 382157481 | 87984088 | 345.28 | 0.33 |
| 18 | 33375 | 93418 | 458786308 | 72584 | 444487123 | 87984088 | 345.28 | 0.37 |
| 19 | 39463 | 93974 | 539494245 | 72585 | 506937385 | 87984088 | 345.28 | 0.41 |
| 20 | 37615 | 89223 | 620083195 | 74385 | 572497823 | 87984088 | 345.28 | 0.44 |
| 21 | 35829 | 128626 | 730825749 | 115011 | 676976850 | 112523471 | 345.28 | 0.35 |
| 22 | 38378 | 129229 | 844326194 | 115011 | 777974375 | 112523471 | 345.28 | 0.38 |
| 23 | 40990 | 129848 | 958401979 | 115011 | 879002670 | 112523471 | 345.28 | 0.41 |
| 24 | 43666 | 130482 | 1073062446 | 115012 | 980058269 | 112523471 | 345.28 | 0.44 |
| 25 | 46404 | 131131 | 1188316835 | 115012 | 1081137635 | 112523471 | 345.28 | 0.46 |
| 26 | 49205 | 131795 | 1304174300 | 115012 | 1182237173 | 112523471 | 345.28 | 0.48 |
| 27 | 52070 | 132475 | 1420643914 | 115012 | 1283353238 | 112523471 | 345.28 | 0.50 |
| 28 | 54997 | 133169 | 1537734685 | 115012 | 1384482143 | 112523471 | 345.28 | 0.52 |
| 29 | 57988 | 133878 | 1655455561 | 115013 | 1485620170 | 112523471 | 345.28 | 0.53 |
| 30 | 61042 | 134603 | 1773815436 | 115013 | 1586763574 | 112523471 | 345.28 | 0.54 |
| 31 | 73022 | 135344 | 1892983392 | 115014 | 1688046623 | 112523471 | 345.28 | 0.56 |
| 32 | 76596 | 136090 | 2011239997 | 115016 | 1788012569 | 112523471 | 345.28 | 0.57 |
| 33 | 80241 | 136831 | 2129949273 | 115014 | 1887817671 | 112523471 | 345.28 | 0.52 |
| 34 | 83958 | 137588 | 2249304625 | 115014 | 1987617501 | 112523471 | 345.28 | 0.52 |
| 35 | 87747 | 138360 | 2369314370 | 115014 | 2087408399 | 112523471 | 345.28 | 0.53 |
| 36 | 91607 | 139147 | 2489986809 | 115014 | 2187186713 | 112523471 | 345.28 | 0.54 |
| 37 | 95538 | 139948 | 2611330223 | 115013 | 2286948788 | 112523471 | 345.28 | 0.54 |
| 38 | 99541 | 140764 | 2733352870 | 115013 | 2386690971 | 112523471 | 345.28 | 0.54 |
| 39 | 103615 | 141595 | 2856062989 | 115013 | 2486409612 | 112523471 | 345.28 | 0.55 |
| 40 | 107761 | 142440 | 2979468799 | 115012 | 2586101061 | 112523471 | 345.28 | 0.55 |
| 41 | 111979 | 143300 | 3103578502 | 115012 | 2685761671 | 112523471 | 345.28 | 0.55 |
| 42 | 129045 | 144176 | 3228521710 | 115013 | 2785490586 | 112523471 | 345.28 | 0.56 |
| 43 | 133169 | 145035 | 3349791454 | 115012 | 2881714157 | 112523471 | 345.28 | 0.56 |
| 44 | 137358 | 145890 | 3471737044 | 115011 | 2977908422 | 112523471 | 345.28 | 0.58 |
| 45 | 141614 | 146758 | 3594340079 | 115011 | 3074048411 | 112523471 | 345.28 | 0.58 |
| 46 | 145937 | 147640 | 3717607833 | 115010 | 3170130912 | 112523471 | 345.28 | 0.58 |
| 47 | 150326 | 148535 | 3841547559 | 115009 | 3266152713 | 112523471 | 345.28 | 0.58 |
| 48 | 154781 | 149444 | 3966166503 | 115008 | 3362110607 | 112523471 | 345.28 | 0.58 |
| 49 | 159302 | 150367 | 4091471898 | 115007 | 3458001396 | 112523471 | 345.28 | 0.58 |
| 50 | 163890 | 151303 | 4217470966 | 115006 | 3553821885 | 112523471 | 345.28 | 0.58 |
| 51 | 168544 | 152253 | 4344170919 | 115006 | 3649568887 | 112523471 | 345.28 | 0.58 |
| 52 | 173264 | 153217 | 4471578957 | 115005 | 3745239220 | 112523471 | 345.28 | 0.58 |
| 53 | 178051 | 154194 | 4599702270 | 115004 | 3840829706 | 112523471 | 345.28 | 0.58 |
| 54 | 182904 | 155184 | 4728548035 | 115003 | 3936337175 | 112523471 | 345.28 | 0.58 |
| 55 | 187823 | 156189 | 4858123419 | 115002 | 4031758461 | 112523471 | 345.28 | 0.58 |
| 56 | 192809 | 157207 | 4988435577 | 115001 | 4127090406 | 112523471 | 345.28 | 0.58 |



CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 33 " MST - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 "

Pressione trasversale del vento = 706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 3270.00 | 3340.00 | 27500.00 | 0.00 |
| 2.00 | 37.16 | 51640.00 | 40950.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 60169 | Fp = 8658 | --- |
| --- | --- | Pa = 50739 | Ta = 32339 | La = 0 | --- |
| --- | --- | Pb = 901 | Tb = 8611 | Lb = 0 | --- |
| 3.00 | 33.69 | 51640.00 | 40950.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 71051 | Fp = -79569 | --- |
| --- | --- | Pa = 59916 | Ta = -38187 | La = 0 | --- |
| --- | --- | Pb = -8276 | Tb = 79137 | Lb = 0 | --- |
| 4.00 | 30.23 | 44870.00 | 34890.00 | 52000.00 | 4.75 |
| --- | --- | --- | Ft = 65031 | Fp = 17354 | --- |
| --- | --- | Pa = 45465 | Ta = 21160 | La = 41403 | --- |
| --- | --- | Pb = -595 | Tb = 13730 | Lb = 10597 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|------------|--------|------------|-----------|--------------------------------|-------|
| 2 | 3703 | 3650 | 3649889 | 27506 | 27065792 | 0 | 345.28 | 0.09 |
| 3 | 4153 | 3965 | 6947311 | 27507 | 49056572 | 0 | 345.28 | 0.15 |
| 4 | 4620 | 4292 | 10520612 | 27508 | 71059110 | 0 | 345.28 | 0.20 |
| 5 | 5106 | 4631 | 14380215 | 27509 | 93072606 | -0 | 345.28 | 0.24 |
| 6 | 7003 | 4987 | 18584652 | 27512 | 115134024 | -0 | 345.28 | 0.28 |
| 7 | 8092 | 5397 | 23749592 | 27527 | 138921058 | -0 | 345.28 | 0.32 |
| 8 | 35491 | 214156 | 157109257 | 27559 | 163254445 | 0 | 345.28 | 0.25 |
| 9 | 62929 | 38656 | 227800102 | 27605 | 188336131 | 0 | 345.28 | 0.31 |
| 10 | 64138 | 39083 | 263186798 | 27605 | 213407727 | 0 | 345.28 | 0.33 |
| 11 | 65386 | 39523 | 298935416 | 27606 | 238467634 | 0 | 345.28 | 0.35 |
| 12 | 97983 | -140197 | 229533274 | 27656 | 264329479 | 0 | 345.28 | 0.30 |
| 13 | 130619 | 11012 | 157337676 | 27703 | 290947004 | -0 | 345.28 | 0.27 |
| 14 | 131987 | 11490 | 171370780 | 27700 | 317503743 | -0 | 345.28 | 0.28 |
| 15 | 133395 | 11982 | 185814944 | 27697 | 343998710 | -0 | 345.28 | 0.29 |
| 16 | 154337 | 100919 | 252529505 | 28371 | 371254937 | 0 | 345.28 | 0.31 |
| 17 | 175319 | 113383 | 473347991 | 69144 | 435827131 | 117129009 | 345.28 | 0.42 |
| 18 | 176847 | 113912 | 575285461 | 69136 | 498064896 | 117129009 | 345.28 | 0.46 |
| 19 | 182935 | 114462 | 677714170 | 69134 | 560286856 | 117129009 | 345.28 | 0.50 |
| 20 | 185061 | 115298 | 786050714 | 69677 | 626134661 | 117129009 | 345.28 | 0.55 |
| 21 | 187249 | 129341 | 904801260 | 79714 | 699946871 | 123257981 | 345.28 | 0.41 |
| 22 | 189798 | 129935 | 1023194589 | 79707 | 772803543 | 123257981 | 345.28 | 0.44 |
| 23 | 192410 | 130545 | 1142025139 | 79701 | 845577295 | 123257981 | 345.28 | 0.46 |
| 24 | 195086 | 131169 | 1261297371 | 79694 | 918263948 | 123257981 | 345.28 | 0.48 |
| 25 | 197824 | 131808 | 1381016717 | 79688 | 990859857 | 123257981 | 345.28 | 0.50 |
| 26 | 200625 | 132462 | 1501189430 | 79681 | 1063361822 | 123257981 | 345.28 | 0.51 |
| 27 | 203490 | 133131 | 1621822454 | 79674 | 1135767015 | 123257981 | 345.28 | 0.53 |
| 28 | 206417 | 133815 | 1742923319 | 79667 | 1208072919 | 123257981 | 345.28 | 0.54 |
| 29 | 209408 | 134514 | 1864500045 | 79660 | 1280277276 | 123257981 | 345.28 | 0.55 |
| 30 | 212462 | 135229 | 1986561068 | 79653 | 1352378046 | 123257981 | 345.28 | 0.56 |
| 31 | 224442 | 135967 | 2109294014 | 79652 | 1424487027 | 123257981 | 345.28 | 0.57 |
| 32 | 228016 | 136731 | 2231335016 | 79666 | 1495826184 | 123257981 | 345.28 | 0.57 |
| 33 | 231661 | 137434 | 2353262496 | 79639 | 1566681612 | 123257981 | 345.28 | 0.52 |
| 34 | 235378 | 138182 | 2475699876 | 79633 | 1637441364 | 123257981 | 345.28 | 0.53 |
| 35 | 239167 | 138945 | 2598656264 | 79626 | 1708103931 | 123257981 | 345.28 | 0.53 |
| 36 | 243027 | 139723 | 2722141092 | 79620 | 1778667996 | 123257981 | 345.28 | 0.53 |
| 37 | 246958 | 140516 | 2846163878 | 79614 | 1849132281 | 123257981 | 345.28 | 0.54 |
| 38 | 250961 | 141323 | 2970734210 | 79608 | 1919495535 | 123257981 | 345.28 | 0.54 |
| 39 | 255035 | 142145 | 3095861728 | 79602 | 1989756528 | 123257981 | 345.28 | 0.54 |
| 40 | 259181 | 142982 | 3221556109 | 79596 | 2059914041 | 123257981 | 345.28 | 0.54 |
| 41 | 263399 | 143833 | 3347827057 | 79590 | 2129966862 | 123257981 | 345.28 | 0.54 |
| 42 | 280465 | 144705 | 3474817427 | 79588 | 2199995977 | 123257981 | 345.28 | 0.54 |
| 43 | 284589 | 145553 | 3597913438 | 79580 | 2267466649 | 123257981 | 345.28 | 0.54 |
| 44 | 288778 | 146401 | 3721597236 | 79576 | 2334859413 | 123257981 | 345.28 | 0.57 |
| 45 | 293034 | 147261 | 3845817421 | 79569 | 2402136094 | 123257981 | 345.28 | 0.57 |
| 46 | 297357 | 148134 | 3970582958 | 79563 | 2469295818 | 123257981 | 345.28 | 0.57 |
| 47 | 301746 | 149021 | 4095902737 | 79557 | 2536337656 | 123257981 | 345.28 | 0.56 |
| 48 | 306201 | 149922 | 4221785624 | 79550 | 2603260660 | 123257981 | 345.28 | 0.56 |
| 49 | 310722 | 150836 | 4348240463 | 79544 | 2670063864 | 123257981 | 345.28 | 0.56 |
| 50 | 315310 | 151764 | 4475276071 | 79538 | 2736746284 | 123257981 | 345.28 | 0.56 |
| 51 | 319964 | 152706 | 4602901234 | 79532 | 2803306917 | 123257981 | 345.28 | 0.56 |
| 52 | 324684 | 153661 | 4731124710 | 79526 | 2869744739 | 123257981 | 345.28 | 0.56 |
| 53 | 329471 | 154630 | 4859955223 | 79520 | 2936058705 | 123257981 | 345.28 | 0.56 |
| 54 | 334324 | 155613 | 4989401462 | 79514 | 3002247751 | 123257981 | 345.28 | 0.56 |
| 55 | 339243 | 156610 | 5119472082 | 79509 | 3068310792 | 123257981 | 345.28 | 0.55 |
| 56 | 344229 | 157620 | 5250175705 | 79503 | 3134246723 | 123257981 | 345.28 | 0.55 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 34 " MST - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 "

Pressione trasversale del vento = 706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | 3340.00 | 27500.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | 40950.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = -5441 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = 40950 | Lb = 0 | --- |
| 3.00 | 33.69 | 0.00 | 40950.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 5441 | Fp = -44114 | --- |
| --- | --- | Pa = 4588 | Ta = -2924 | La = 0 | --- |
| --- | --- | Pb = -4588 | Tb = 43874 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | 34890.00 | 52000.00 | 4.75 |
| --- | --- | --- | Ft = 13867 | Fp = 53044 | --- |
| --- | --- | Pa = 8007 | Ta = 2030 | La = 11138 | --- |
| --- | --- | Pb = -8007 | Tb = 32860 | Lb = 40862 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------------|-----------|------------|-----------|------------|----------|--------------------------------------|----------|
| 2 | 433 | 3641 | 3524606 | 27500 | 26961933 | 0 | 345.28 | 0.09 |
| 3 | 883 | 3955 | 6693159 | 27500 | 48848453 | -0 | 345.28 | 0.15 |
| 4 | 1350 | 4281 | 10133961 | 27500 | 70746927 | -0 | 345.28 | 0.20 |
| 5 | 1836 | 4620 | 13857376 | 27501 | 92656999 | -0 | 345.28 | 0.24 |
| 6 | 3733 | 4972 | 17911435 | 27501 | 114612074 | -0 | 345.28 | 0.28 |
| 7 | 4822 | 5362 | 22735992 | 27503 | 138169870 | -0 | 345.28 | 0.32 |
| 8 | 6851 | 5757 | 27815593 | 27502 | 161652144 | -0 | 345.28 | 0.18 |
| 9 | 8920 | 6169 | 33302974 | 27503 | 185180223 | 0 | 345.28 | 0.19 |
| 10 | 10128 | 6595 | 39184564 | 27503 | 208730950 | 0 | 345.28 | 0.20 |
| 11 | 11377 | 7034 | 45473246 | 27503 | 232303549 | 0 | 345.28 | 0.21 |
| 12 | 15859 | 796 | 48343551 | 27504 | 255968351 | 0 | 345.28 | 0.22 |
| 13 | 20382 | 45985 | 86231914 | 27506 | 279720221 | 0 | 345.28 | 0.23 |
| 14 | 21750 | 46468 | 126233571 | 27506 | 303487159 | -0 | 345.28 | 0.24 |
| 15 | 23157 | 46965 | 166689520 | 27506 | 327268317 | 0 | 345.28 | 0.25 |
| 16 | 27215 | 68993 | 220219404 | 27682 | 351214253 | 0 | 345.28 | 0.27 |
| 17 | 31312 | 93909 | 325809115 | 38646 | 385162421 | 31508723 | 345.28 | 0.31 |
| 18 | 32840 | 94449 | 406742007 | 38646 | 418517792 | 31508723 | 345.28 | 0.34 |
| 19 | 38928 | 95004 | 488282949 | 38647 | 451959749 | 31508723 | 345.28 | 0.37 |
| 20 | 37347 | 90651 | 569963396 | 40379 | 487592997 | 31508723 | 345.28 | 0.39 |
| 21 | 35829 | 129035 | 681301482 | 79508 | 560817267 | 55142741 | 345.28 | 0.31 |
| 22 | 38378 | 129639 | 795138029 | 79508 | 630678967 | 55142741 | 345.28 | 0.34 |
| 23 | 40990 | 130257 | 909550220 | 79508 | 700561600 | 55142741 | 345.28 | 0.36 |
| 24 | 43666 | 130891 | 1024547445 | 79508 | 770462667 | 55142741 | 345.28 | 0.38 |
| 25 | 46404 | 131540 | 1140138987 | 79509 | 840379626 | 55142741 | 345.28 | 0.41 |
| 26 | 49205 | 132204 | 1256334037 | 79509 | 910309902 | 55142741 | 345.28 | 0.42 |
| 27 | 52070 | 132884 | 1373141707 | 79509 | 980250888 | 55142741 | 345.28 | 0.44 |
| 28 | 54997 | 133578 | 1490571036 | 79509 | 1050199957 | 55142741 | 345.28 | 0.45 |
| 29 | 57988 | 134287 | 1608631003 | 79509 | 1120154462 | 55142741 | 345.28 | 0.47 |
| 30 | 61042 | 135012 | 1727330530 | 79509 | 1190111742 | 55142741 | 345.28 | 0.48 |
| 31 | 73022 | 135753 | 1846836405 | 79510 | 1260169437 | 55142741 | 345.28 | 0.49 |
| 32 | 76596 | 136499 | 1965424156 | 79512 | 1329320224 | 55142741 | 345.28 | 0.50 |
| 33 | 80241 | 137240 | 2084467762 | 79510 | 1398353288 | 55142741 | 345.28 | 0.46 |
| 34 | 83958 | 137997 | 2204158036 | 79510 | 1467381647 | 55142741 | 345.28 | 0.46 |
| 35 | 87747 | 138769 | 2324503311 | 79510 | 1536402718 | 55142741 | 345.28 | 0.47 |
| 36 | 91607 | 139556 | 2445511905 | 79510 | 1605413924 | 55142741 | 345.28 | 0.47 |
| 37 | 95538 | 140358 | 2567192114 | 79510 | 1674412693 | 55142741 | 345.28 | 0.48 |
| 38 | 99541 | 141174 | 2689552210 | 79509 | 1743396451 | 55142741 | 345.28 | 0.48 |
| 39 | 103615 | 142004 | 2812600445 | 79509 | 1812362628 | 55142741 | 345.28 | 0.48 |
| 40 | 107761 | 142850 | 2936345050 | 79509 | 1881308657 | 55142741 | 345.28 | 0.49 |
| 41 | 111979 | 143710 | 3060794240 | 79509 | 1950231975 | 55142741 | 345.28 | 0.49 |
| 42 | 129045 | 144586 | 3186076355 | 79509 | 2019203942 | 55142741 | 345.28 | 0.49 |
| 43 | 133169 | 145444 | 3307674361 | 79509 | 2085749431 | 55142741 | 345.28 | 0.49 |
| 44 | 137358 | 146299 | 3429948797 | 79508 | 2152273464 | 55142741 | 345.28 | 0.52 |
| 45 | 141614 | 147167 | 3552881538 | 79508 | 2218758147 | 55142741 | 345.28 | 0.52 |
| 46 | 145937 | 148049 | 3676479856 | 79507 | 2285201237 | 55142741 | 345.28 | 0.52 |
| 47 | 150326 | 148945 | 3800751010 | 79507 | 2351600491 | 55142741 | 345.28 | 0.52 |
| 48 | 154781 | 149854 | 3925702244 | 79506 | 2417953670 | 55142741 | 345.28 | 0.52 |
| 49 | 159302 | 150777 | 4051340794 | 79505 | 2484258538 | 55142741 | 345.28 | 0.52 |
| 50 | 163890 | 151713 | 4177673885 | 79505 | 2550512865 | 55142741 | 345.28 | 0.52 |
| 51 | 168544 | 152663 | 4304708729 | 79504 | 2616714424 | 55142741 | 345.28 | 0.52 |
| 52 | 173264 | 153626 | 4432452530 | 79503 | 2682860993 | 55142741 | 345.28 | 0.52 |
| 53 | 178051 | 154604 | 4560912479 | 79503 | 2748950350 | 55142741 | 345.28 | 0.52 |
| 54 | 182904 | 155594 | 4690095755 | 79502 | 2814980282 | 55142741 | 345.28 | 0.52 |
| 55 | 187823 | 156599 | 4820009528 | 79501 | 2880948576 | 55142741 | 345.28 | 0.52 |
| 56 | 192809 | 157617 | 4950660955 | 79500 | 2946853024 | 55142741 | 345.28 | 0.52 |

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CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 35 " MST - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 "

Pressione trasversale del vento = 706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 6540.00 | 6680.00 | 5000.00 | 0.00 |
| 2.00 | 37.16 | 44870.00 | 34890.00 | 52000.00 | 4.75 |
| --- | --- | --- | Ft = 65031 | Fp = 17354 | --- |
| --- | --- | Pa = 45465 | Ta = 21160 | La = 41403 | --- |
| --- | --- | Pb = -595 | Tb = 13730 | Lb = 10597 | --- |
| 3.00 | 33.69 | 51640.00 | 40950.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 71051 | Fp = -79569 | --- |
| --- | --- | Pa = 59916 | Ta = -38187 | La = 0 | --- |
| --- | --- | Pb = -8276 | Tb = 79137 | Lb = 0 | --- |
| 4.00 | 30.23 | 44870.00 | 34890.00 | 52000.00 | 4.75 |
| --- | --- | --- | Ft = 65031 | Fp = 17354 | --- |
| --- | --- | Pa = 45465 | Ta = 21160 | La = 41403 | --- |
| --- | --- | Pb = -595 | Tb = 13730 | Lb = 10597 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|------------|--------|------------|-----------|--------------------------------|-------|
| 2 | 6973 | 6998 | 7037153 | 5015 | 5131518 | 0 | 345.28 | 0.03 |
| 3 | 7423 | 7312 | 13102803 | 5016 | 9352093 | 0 | 345.28 | 0.05 |
| 4 | 7890 | 7639 | 19442838 | 5017 | 13586900 | 0 | 345.28 | 0.07 |
| 5 | 8376 | 7979 | 26067349 | 5018 | 17836131 | 0 | 345.28 | 0.08 |
| 6 | 10273 | 8334 | 33031469 | 5022 | 22141621 | 0 | 345.28 | 0.10 |
| 7 | 11362 | 8751 | 41243758 | 5049 | 27157112 | 0 | 345.28 | 0.12 |
| 8 | 36123 | 194673 | 163493538 | 11245 | 36289802 | 0 | 345.28 | 0.19 |
| 9 | 60924 | 30807 | 222728524 | 46533 | 82593942 | 113162140 | 345.28 | 0.25 |
| 10 | 62133 | 31233 | 251290260 | 46534 | 124027600 | 113162140 | 345.28 | 0.27 |
| 11 | 63381 | 31673 | 280215879 | 46535 | 165475525 | 113162140 | 345.28 | 0.30 |
| 12 | 95230 | -148975 | 203328970 | 48489 | 209062914 | 113162140 | 345.28 | 0.25 |
| 13 | 127119 | 8270 | 128947960 | 57253 | 262767356 | 118365909 | 345.28 | 0.24 |
| 14 | 128487 | 8749 | 140364889 | 57250 | 315137883 | 118365909 | 345.28 | 0.27 |
| 15 | 129895 | 9241 | 152201128 | 57245 | 367457687 | 118365909 | 345.28 | 0.29 |
| 16 | 150837 | 98177 | 216289950 | 57926 | 420677511 | 118365909 | 345.28 | 0.33 |
| 17 | 171819 | 110639 | 434468278 | 98706 | 511342481 | 235494918 | 345.28 | 0.43 |
| 18 | 173347 | 111169 | 533778200 | 98696 | 599661949 | 235494918 | 345.28 | 0.49 |
| 19 | 179435 | 111720 | 633587148 | 98693 | 687978548 | 235494918 | 345.28 | 0.53 |
| 20 | 181561 | 112546 | 739101474 | 99261 | 781127065 | 235494918 | 345.28 | 0.58 |
| 21 | 183749 | 126600 | 855185780 | 109269 | 881708883 | 241623890 | 345.28 | 0.44 |
| 22 | 186298 | 127195 | 970922116 | 109262 | 981320667 | 241623890 | 345.28 | 0.47 |
| 23 | 188910 | 127805 | 1087105090 | 109254 | 1080832519 | 241623890 | 345.28 | 0.49 |
| 24 | 191586 | 128430 | 1203739232 | 109245 | 1180238178 | 241623890 | 345.28 | 0.52 |
| 25 | 194324 | 129070 | 1320830021 | 109237 | 1279532145 | 241623890 | 345.28 | 0.54 |
| 26 | 197125 | 129724 | 1438383729 | 109229 | 1378709567 | 241623890 | 345.28 | 0.55 |
| 27 | 199990 | 130394 | 1556407307 | 109220 | 1477766129 | 241623890 | 345.28 | 0.57 |
| 28 | 202917 | 131079 | 1674908273 | 109212 | 1576697971 | 241623890 | 345.28 | 0.58 |
| 29 | 205908 | 131779 | 1793894625 | 109203 | 1675501612 | 241623890 | 345.28 | 0.59 |
| 30 | 208962 | 132494 | 1913374767 | 109194 | 1774173891 | 241623890 | 345.28 | 0.61 |
| 31 | 220942 | 133233 | 2033530765 | 109193 | 1872863110 | 241623890 | 345.28 | 0.62 |
| 32 | 224516 | 133995 | 2153014017 | 109211 | 1970486219 | 241623890 | 345.28 | 0.62 |
| 33 | 228161 | 134701 | 2272419983 | 109176 | 2067478340 | 241623890 | 345.28 | 0.57 |
| 34 | 231878 | 135450 | 2392344053 | 109169 | 2164347658 | 241623890 | 345.28 | 0.57 |
| 35 | 235667 | 136213 | 2512795305 | 109161 | 2261091875 | 241623890 | 345.28 | 0.57 |
| 36 | 239527 | 136992 | 2633783126 | 109153 | 2357708963 | 241623890 | 345.28 | 0.58 |
| 37 | 243458 | 137785 | 2755316992 | 109145 | 2454196953 | 241623890 | 345.28 | 0.58 |
| 38 | 247461 | 138593 | 2877406448 | 109138 | 2550553929 | 241623890 | 345.28 | 0.58 |
| 39 | 251535 | 139416 | 3000061091 | 109130 | 2646778015 | 241623890 | 345.28 | 0.59 |
| 40 | 255681 | 140253 | 3123290561 | 109122 | 2742867360 | 241623890 | 345.28 | 0.59 |
| 41 | 259899 | 141105 | 3247104525 | 109115 | 2838820136 | 241623890 | 345.28 | 0.59 |
| 42 | 276965 | 141977 | 3371642009 | 109113 | 2934744468 | 241623890 | 345.28 | 0.59 |
| 43 | 281089 | 142825 | 3492379757 | 109103 | 3027172368 | 241623890 | 345.28 | 0.59 |
| 44 | 285278 | 143675 | 3613710975 | 109097 | 3119498330 | 241623890 | 345.28 | 0.61 |
| 45 | 289534 | 144535 | 3735586665 | 109089 | 3211671739 | 241623890 | 345.28 | 0.61 |
| 46 | 293857 | 145408 | 3858015749 | 109081 | 3303691254 | 241623890 | 345.28 | 0.61 |
| 47 | 298246 | 146296 | 3981007079 | 109073 | 3395555469 | 241623890 | 345.28 | 0.61 |
| 48 | 302701 | 147197 | 4104569487 | 109065 | 3487262959 | 241623890 | 345.28 | 0.61 |
| 49 | 307222 | 148112 | 4228711785 | 109057 | 3578812284 | 241623890 | 345.28 | 0.61 |
| 50 | 311810 | 149041 | 4353442760 | 109049 | 3670201982 | 241623890 | 345.28 | 0.61 |
| 51 | 316464 | 149983 | 4478771174 | 109041 | 3761430570 | 241623890 | 345.28 | 0.61 |
| 52 | 321184 | 150939 | 4604705760 | 109034 | 3852496546 | 241623890 | 345.28 | 0.61 |
| 53 | 325971 | 151909 | 4731255220 | 109026 | 3943398381 | 241623890 | 345.28 | 0.60 |
| 54 | 330824 | 152892 | 4858428227 | 109018 | 4034134526 | 241623890 | 345.28 | 0.60 |
| 55 | 335743 | 153889 | 4986233419 | 109011 | 4124703407 | 241623890 | 345.28 | 0.60 |
| 56 | 340729 | 154900 | 5114679404 | 109004 | 4215103426 | 241623890 | 345.28 | 0.60 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 36 " MST - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 "

Pressione trasversale del vento = 706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | 6680.00 | 5000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | 34890.00 | 52000.00 | 4.75 |
| --- | --- | --- | Ft = 13867 | Fp = 53044 | --- |
| --- | --- | Pa = 8007 | Ta = 2030 | La = 11138 | --- |
| --- | --- | Pb = -8007 | Tb = 32860 | Lb = 40862 | --- |
| 3.00 | 33.69 | 0.00 | 40950.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 5441 | Fp = -44114 | --- |
| --- | --- | Pa = 4588 | Ta = -2924 | La = 0 | --- |
| --- | --- | Pb = -4588 | Tb = 43874 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | 34890.00 | 52000.00 | 4.75 |
| --- | --- | --- | Ft = 13867 | Fp = 53044 | --- |
| --- | --- | Pa = 8007 | Ta = 2030 | La = 11138 | --- |
| --- | --- | Pb = -8007 | Tb = 32860 | Lb = 40862 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|--------|------------|--------|------------|-----------|--------------------------------|-------|
| 2 | 433 | 6981 | 6798655 | 5000 | 4911087 | 0 | 345.28 | 0.03 |
| 3 | 883 | 7295 | 12624202 | 5000 | 8908621 | 0 | 345.28 | 0.05 |
| 4 | 1350 | 7621 | 18722803 | 5001 | 12917909 | 0 | 345.28 | 0.06 |
| 5 | 1836 | 7960 | 25104760 | 5001 | 16939221 | 0 | 345.28 | 0.08 |
| 6 | 3733 | 8312 | 31820269 | 5001 | 21006680 | -0 | 345.28 | 0.09 |
| 7 | 4822 | 8703 | 39491960 | 5004 | 25498778 | -0 | 345.28 | 0.11 |
| 8 | 10855 | 41517 | 67325833 | 6663 | 31006628 | -0 | 345.28 | 0.08 |
| 9 | 16927 | 11543 | 82887691 | 16144 | 46446008 | 30441600 | 345.28 | 0.10 |
| 10 | 18136 | 11969 | 93577067 | 16145 | 60597961 | 30441600 | 345.28 | 0.11 |
| 11 | 19384 | 12408 | 104670531 | 16145 | 74778166 | 30441600 | 345.28 | 0.12 |
| 12 | 19863 | -5115 | 105292693 | 23441 | 93314284 | 30441600 | 345.28 | 0.12 |
| 13 | 20382 | 43266 | 138913463 | 57007 | 147128727 | 50507928 | 345.28 | 0.16 |
| 14 | 21750 | 43749 | 176623060 | 57008 | 195989171 | 50507928 | 345.28 | 0.19 |
| 15 | 23157 | 44246 | 214785319 | 57008 | 244874544 | 50507928 | 345.28 | 0.23 |
| 16 | 27215 | 66273 | 266021039 | 57184 | 293945910 | 50507928 | 345.28 | 0.26 |
| 17 | 31312 | 91189 | 369315726 | 68148 | 353040351 | 82016651 | 345.28 | 0.32 |
| 18 | 32840 | 91729 | 447951729 | 68148 | 411550336 | 82016651 | 345.28 | 0.36 |
| 19 | 38928 | 92285 | 527194946 | 68150 | 470174501 | 82016651 | 345.28 | 0.39 |
| 20 | 37347 | 87932 | 606515132 | 69883 | 531749098 | 82016651 | 345.28 | 0.42 |
| 21 | 35829 | 126315 | 715488465 | 109010 | 630825791 | 105650669 | 345.28 | 0.33 |
| 22 | 38378 | 126919 | 826959329 | 109010 | 726548933 | 105650669 | 345.28 | 0.36 |
| 23 | 40990 | 127538 | 939004922 | 109011 | 822301280 | 105650669 | 345.28 | 0.39 |
| 24 | 43666 | 128172 | 1051634658 | 109011 | 918079560 | 105650669 | 345.28 | 0.42 |
| 25 | 46404 | 128821 | 1164857851 | 109011 | 1013880430 | 105650669 | 345.28 | 0.44 |
| 26 | 49205 | 129485 | 1278683726 | 109011 | 1109700494 | 105650669 | 345.28 | 0.46 |
| 27 | 52070 | 130164 | 1393121433 | 109012 | 1205536307 | 105650669 | 345.28 | 0.48 |
| 28 | 54997 | 130859 | 1508180055 | 109012 | 1301384385 | 105650669 | 345.28 | 0.50 |
| 29 | 57988 | 131568 | 1623868616 | 109012 | 1397241212 | 105650669 | 345.28 | 0.51 |
| 30 | 61042 | 132292 | 1740196087 | 109012 | 1493103248 | 105650669 | 345.28 | 0.52 |
| 31 | 73022 | 133034 | 1857328756 | 109013 | 1589097182 | 105650669 | 345.28 | 0.54 |
| 32 | 76596 | 133780 | 1973576457 | 109015 | 1683842303 | 105650669 | 345.28 | 0.55 |
| 33 | 80241 | 134520 | 2090280192 | 109013 | 1778435748 | 105650669 | 345.28 | 0.50 |
| 34 | 83958 | 135278 | 2207630132 | 109013 | 1873024322 | 105650669 | 345.28 | 0.51 |
| 35 | 87747 | 136050 | 2325634665 | 109013 | 1967604561 | 105650669 | 345.28 | 0.51 |
| 36 | 91607 | 136837 | 2444302170 | 109013 | 2062173011 | 105650669 | 345.28 | 0.52 |
| 37 | 95538 | 137638 | 2563641001 | 109013 | 2156726213 | 105650669 | 345.28 | 0.52 |
| 38 | 99541 | 138454 | 2683659489 | 109012 | 2251260711 | 105650669 | 345.28 | 0.53 |
| 39 | 103615 | 139285 | 2804365949 | 109012 | 2345773050 | 105650669 | 345.28 | 0.53 |
| 40 | 107761 | 140130 | 2925768673 | 109012 | 2440259776 | 105650669 | 345.28 | 0.53 |
| 41 | 111979 | 140990 | 3047875938 | 109011 | 2534717437 | 105650669 | 345.28 | 0.53 |
| 42 | 129045 | 141866 | 3170815308 | 109012 | 2629239670 | 105650669 | 345.28 | 0.54 |
| 43 | 133169 | 142724 | 3290151690 | 109011 | 2720439828 | 105650669 | 345.28 | 0.54 |
| 44 | 137358 | 143579 | 3410164531 | 109011 | 2811612351 | 105650669 | 345.28 | 0.56 |
| 45 | 141614 | 144448 | 3530835946 | 109010 | 2902733648 | 105650669 | 345.28 | 0.56 |
| 46 | 145937 | 145330 | 3652173271 | 109009 | 2993800675 | 105650669 | 345.28 | 0.56 |
| 47 | 150326 | 146225 | 3774183826 | 109009 | 3084810391 | 105650669 | 345.28 | 0.56 |
| 48 | 154781 | 147134 | 3896874921 | 109008 | 3175759761 | 105650669 | 345.28 | 0.56 |
| 49 | 159302 | 148057 | 4020253853 | 109007 | 3266645754 | 105650669 | 345.28 | 0.56 |
| 50 | 163890 | 148993 | 4144327911 | 109006 | 3357465346 | 105650669 | 345.28 | 0.56 |
| 51 | 168544 | 149943 | 4269104369 | 109005 | 3448215518 | 105650669 | 345.28 | 0.56 |
| 52 | 173264 | 150907 | 4394590494 | 109004 | 3538893256 | 105650669 | 345.28 | 0.56 |
| 53 | 178051 | 151884 | 4520793537 | 109003 | 3629495553 | 105650669 | 345.28 | 0.56 |
| 54 | 182904 | 152874 | 4647720742 | 109002 | 3720019407 | 105650669 | 345.28 | 0.56 |
| 55 | 187823 | 153879 | 4775379338 | 109001 | 3810461818 | 105650669 | 345.28 | 0.56 |
| 56 | 192809 | 154897 | 4903776546 | 109000 | 3900819796 | 105650669 | 345.28 | 0.56 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 37 " MST - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 "

Pressione trasversale del vento = 176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 5430.00 | 3020.00 | 36000.00 | 0.00 |
| 2.00 | 37.16 | 69900.00 | 29920.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 84834 | Fp = -15761 | --- |
| --- | --- | Pa = 71539 | Ta = 45596 | La = 0 | --- |
| --- | --- | Pb = -1639 | Tb = -15676 | Lb = 0 | --- |
| 3.00 | 33.69 | 69900.00 | 29920.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 92785 | Fp = -80224 | --- |
| --- | --- | Pa = 78244 | Ta = -49869 | La = 0 | --- |
| --- | --- | Pb = -8344 | Tb = 79789 | Lb = 0 | --- |
| 4.00 | 30.23 | 60080.00 | 25130.00 | 63000.00 | 4.75 |
| --- | --- | --- | Ft = 90389 | Fp = 354 | --- |
| --- | --- | Pa = 60104 | Ta = 24867 | La = 62764 | --- |
| --- | --- | Pb = -24 | Tb = 263 | Lb = 236 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Usa |
|------|----------------------------|-----------|------------|-----------|------------|-----------|--------------------------------------|----------|
| 2 | 5863 | 3110 | 3200884 | 36018 | 35525771 | 0 | 345.28 | 0.12 |
| 3 | 6313 | 3189 | 5918547 | 36019 | 64407226 | -0 | 345.28 | 0.20 |
| 4 | 6780 | 3272 | 8714487 | 36020 | 93302845 | 0 | 345.28 | 0.26 |
| 5 | 7266 | 3357 | 11591500 | 36022 | 122211157 | 0 | 345.28 | 0.32 |
| 6 | 9163 | 3449 | 14591783 | 36027 | 151180553 | -0 | 345.28 | 0.37 |
| 7 | 10252 | 3574 | 18236595 | 36060 | 182506689 | -0 | 345.28 | 0.42 |
| 8 | 48051 | 297453 | 202071953 | 36142 | 214882984 | -0 | 345.28 | 0.33 |
| 9 | 85889 | 49533 | 296857560 | 36251 | 248648023 | 0 | 345.28 | 0.40 |
| 10 | 87098 | 49639 | 341404447 | 36252 | 282378975 | 0 | 345.28 | 0.43 |
| 11 | 88346 | 49748 | 385984275 | 36252 | 316072912 | 0 | 345.28 | 0.45 |
| 12 | 128837 | -193696 | 287450226 | 36360 | 351099959 | 0 | 345.28 | 0.39 |
| 13 | 169367 | -15387 | 163010192 | 36463 | 387381893 | 0 | 345.28 | 0.35 |
| 14 | 170735 | -15273 | 154347856 | 36455 | 423543258 | -0 | 345.28 | 0.35 |
| 15 | 172143 | -15157 | 145759456 | 36445 | 459582170 | 0 | 345.28 | 0.35 |
| 16 | 200371 | 96866 | 202675223 | 37486 | 496894937 | -0 | 345.28 | 0.37 |
| 17 | 228638 | 89847 | 438268851 | 99314 | 590884454 | 177558756 | 345.28 | 0.48 |
| 18 | 230166 | 89965 | 519876092 | 99294 | 681290731 | 177558756 | 345.28 | 0.52 |
| 19 | 236254 | 90095 | 601547453 | 99283 | 771608207 | 177558756 | 345.28 | 0.57 |
| 20 | 238665 | 90414 | 688046564 | 99505 | 867238018 | 177558756 | 345.28 | 0.61 |
| 21 | 241139 | 90617 | 772120860 | 99479 | 959830696 | 177695106 | 345.28 | 0.45 |
| 22 | 243688 | 90754 | 856191490 | 99463 | 1052242238 | 177695106 | 345.28 | 0.47 |
| 23 | 246300 | 90894 | 940261617 | 99447 | 1144484534 | 177695106 | 345.28 | 0.48 |
| 24 | 248976 | 91038 | 1024328710 | 99430 | 1236552485 | 177695106 | 345.28 | 0.50 |
| 25 | 251714 | 91186 | 1108391123 | 99414 | 1328441876 | 177695106 | 345.28 | 0.51 |
| 26 | 254515 | 91338 | 1192447953 | 99397 | 1420149224 | 177695106 | 345.28 | 0.52 |
| 27 | 257380 | 91493 | 1276498913 | 99381 | 1511671649 | 177695106 | 345.28 | 0.53 |
| 28 | 260307 | 91652 | 1360544238 | 99364 | 1603006775 | 177695106 | 345.28 | 0.54 |
| 29 | 263298 | 91815 | 1444584589 | 99348 | 1694152637 | 177695106 | 345.28 | 0.54 |
| 30 | 266352 | 91981 | 1528620990 | 99331 | 1785107609 | 177695106 | 345.28 | 0.55 |
| 31 | 278332 | 92161 | 1612787045 | 99325 | 1876020044 | 177695106 | 345.28 | 0.56 |
| 32 | 281906 | 92370 | 1696279291 | 99353 | 1966045082 | 177695106 | 345.28 | 0.56 |
| 33 | 285551 | 92505 | 1779224616 | 99294 | 2055266465 | 177695106 | 345.28 | 0.50 |
| 34 | 289268 | 92682 | 1862185651 | 99280 | 2144317319 | 177695106 | 345.28 | 0.51 |
| 35 | 293057 | 92862 | 1945164092 | 99266 | 2233196618 | 177695106 | 345.28 | 0.51 |
| 36 | 296917 | 93046 | 2028161986 | 99252 | 2321903711 | 177695106 | 345.28 | 0.51 |
| 37 | 300848 | 93235 | 2111181436 | 99238 | 2410437984 | 177695106 | 345.28 | 0.51 |
| 38 | 304851 | 93427 | 2194224592 | 99225 | 2498798853 | 177695106 | 345.28 | 0.51 |
| 39 | 308925 | 93622 | 2277293635 | 99212 | 2586985743 | 177695106 | 345.28 | 0.51 |
| 40 | 313071 | 93822 | 2360390763 | 99198 | 2674998081 | 177695106 | 345.28 | 0.51 |
| 41 | 317289 | 94025 | 2443518185 | 99185 | 2762835290 | 177695106 | 345.28 | 0.51 |
| 42 | 334355 | 94238 | 2526774281 | 99180 | 2850604155 | 177695106 | 345.28 | 0.51 |
| 43 | 338479 | 94438 | 2607132599 | 99163 | 2935116008 | 177695106 | 345.28 | 0.51 |
| 44 | 342668 | 94643 | 2687555214 | 99153 | 3019500181 | 177695106 | 345.28 | 0.52 |
| 45 | 346924 | 94848 | 2767992437 | 99140 | 3103698436 | 177695106 | 345.28 | 0.52 |
| 46 | 351247 | 95057 | 2848446535 | 99127 | 3187710564 | 177695106 | 345.28 | 0.52 |
| 47 | 355636 | 95269 | 2928919676 | 99114 | 3271536232 | 177695106 | 345.28 | 0.52 |
| 48 | 360091 | 95485 | 3009413996 | 99101 | 3355175064 | 177695106 | 345.28 | 0.52 |
| 49 | 364612 | 95705 | 3089931603 | 99089 | 3438626642 | 177695106 | 345.28 | 0.51 |
| 50 | 369200 | 95928 | 3170474572 | 99076 | 3521890504 | 177695106 | 345.28 | 0.51 |
| 51 | 373854 | 96154 | 3251044942 | 99064 | 3604966144 | 177695106 | 345.28 | 0.51 |
| 52 | 378574 | 96384 | 3331644719 | 99052 | 3687853009 | 177695106 | 345.28 | 0.51 |
| 53 | 383361 | 96618 | 3412275872 | 99040 | 3770550503 | 177695106 | 345.28 | 0.50 |
| 54 | 388214 | 96855 | 3492940334 | 99028 | 3853057986 | 177695106 | 345.28 | 0.50 |
| 55 | 393133 | 97096 | 3573640004 | 99017 | 3935374772 | 177695106 | 345.28 | 0.50 |
| 56 | 398119 | 97340 | 3654376741 | 99006 | 4017500131 | 177695106 | 345.28 | 0.49 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 38 " MST - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 "

Pressione trasversale del vento = 176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | 3020.00 | 36000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | 29920.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = -3975 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = 29920 | Lb = 0 | --- |
| 3.00 | 33.69 | 0.00 | 29920.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 3975 | Fp = -32231 | --- |
| --- | --- | Pa = 3352 | Ta = -2137 | La = 0 | --- |
| --- | --- | Pb = -3352 | Tb = 32057 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | 25130.00 | 63000.00 | 4.75 |
| --- | --- | --- | Ft = 24194 | Fp = 50074 | --- |
| --- | --- | Pa = 11823 | Ta = 382 | La = 21105 | --- |
| --- | --- | Pb = -11823 | Tb = 24748 | Lb = 41895 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Usa |
|------|----------------------------|-----------|------------|-----------|------------|----------|--------------------------------------|----------|
| 2 | 433 | 3095 | 3027716 | 36000 | 35295488 | 0 | 345.28 | 0.12 |
| 3 | 883 | 3173 | 5567629 | 36000 | 63946661 | 0 | 345.28 | 0.19 |
| 4 | 1350 | 3255 | 8181190 | 36001 | 92613337 | 0 | 345.28 | 0.26 |
| 5 | 1836 | 3339 | 10871123 | 36001 | 121295049 | 0 | 345.28 | 0.31 |
| 6 | 3733 | 3427 | 13666191 | 36001 | 150035106 | -0 | 345.28 | 0.36 |
| 7 | 4822 | 3526 | 16847949 | 36004 | 180871275 | -0 | 345.28 | 0.41 |
| 8 | 6851 | 3624 | 20057464 | 36003 | 211609464 | -0 | 345.28 | 0.23 |
| 9 | 8920 | 3727 | 23394913 | 36003 | 242406942 | 0 | 345.28 | 0.25 |
| 10 | 10128 | 3833 | 26845568 | 36004 | 273233680 | 0 | 345.28 | 0.26 |
| 11 | 11377 | 3943 | 30412983 | 36004 | 304088647 | 0 | 345.28 | 0.27 |
| 12 | 15241 | -834 | 31280265 | 36006 | 335045046 | 0 | 345.28 | 0.28 |
| 13 | 19146 | 31958 | 57525259 | 36007 | 366097229 | 0 | 345.28 | 0.29 |
| 14 | 20514 | 32079 | 85116410 | 36007 | 397169785 | -0 | 345.28 | 0.30 |
| 15 | 21922 | 32203 | 112835826 | 36008 | 428261584 | 0 | 345.28 | 0.31 |
| 16 | 28505 | 57528 | 155406365 | 36341 | 459691629 | 0 | 345.28 | 0.32 |
| 17 | 35128 | 64903 | 243432281 | 57117 | 510099184 | 59706182 | 345.28 | 0.35 |
| 18 | 36655 | 65038 | 299233505 | 57117 | 559374798 | 59706182 | 345.28 | 0.37 |
| 19 | 42744 | 65177 | 355244368 | 57118 | 608757793 | 59706182 | 345.28 | 0.39 |
| 20 | 39255 | 57022 | 408156283 | 58895 | 660837677 | 59706182 | 345.28 | 0.41 |
| 21 | 35829 | 90215 | 482515695 | 99010 | 751301774 | 83937461 | 345.28 | 0.31 |
| 22 | 38378 | 90366 | 561856237 | 99010 | 838323346 | 83937461 | 345.28 | 0.33 |
| 23 | 40990 | 90520 | 641355920 | 99011 | 925370791 | 83937461 | 345.28 | 0.36 |
| 24 | 43666 | 90678 | 721015368 | 99011 | 1012440938 | 83937461 | 345.28 | 0.37 |
| 25 | 46404 | 90840 | 800835142 | 99011 | 1099530566 | 83937461 | 345.28 | 0.39 |
| 26 | 49205 | 91006 | 880815746 | 99011 | 1186636414 | 83937461 | 345.28 | 0.40 |
| 27 | 52070 | 91175 | 960957639 | 99011 | 1273755190 | 83937461 | 345.28 | 0.42 |
| 28 | 54997 | 91348 | 1041261239 | 99012 | 1360883573 | 83937461 | 345.28 | 0.43 |
| 29 | 57988 | 91525 | 1121726934 | 99012 | 1448018226 | 83937461 | 345.28 | 0.44 |
| 30 | 61042 | 91706 | 1202355079 | 99012 | 1535155791 | 83937461 | 345.28 | 0.45 |
| 31 | 73022 | 91892 | 1283253489 | 99013 | 1622420633 | 83937461 | 345.28 | 0.45 |
| 32 | 76596 | 92078 | 1363257103 | 99015 | 1708558197 | 83937461 | 345.28 | 0.46 |
| 33 | 80241 | 92262 | 1443295254 | 99013 | 1794545403 | 83937461 | 345.28 | 0.42 |
| 34 | 83958 | 92451 | 1523492292 | 99013 | 1880526141 | 83937461 | 345.28 | 0.42 |
| 35 | 87747 | 92643 | 1603848461 | 99013 | 1966497160 | 83937461 | 345.28 | 0.43 |
| 36 | 91607 | 92839 | 1684364008 | 99013 | 2052455227 | 83937461 | 345.28 | 0.43 |
| 37 | 95538 | 93039 | 1765039173 | 99012 | 2138397107 | 83937461 | 345.28 | 0.43 |
| 38 | 99541 | 93242 | 1845874190 | 99012 | 2224319569 | 83937461 | 345.28 | 0.43 |
| 39 | 103615 | 93449 | 1926869286 | 99012 | 2310219387 | 83937461 | 345.28 | 0.44 |
| 40 | 107761 | 93660 | 2008024686 | 99011 | 2396093338 | 83937461 | 345.28 | 0.44 |
| 41 | 111979 | 93874 | 2089340613 | 99011 | 2481938205 | 83937461 | 345.28 | 0.44 |
| 42 | 129045 | 94093 | 2170898200 | 99012 | 2567844477 | 83937461 | 345.28 | 0.44 |
| 43 | 133169 | 94306 | 2249769182 | 99011 | 2650727247 | 83937461 | 345.28 | 0.44 |
| 44 | 137358 | 94519 | 2328794382 | 99011 | 2733582607 | 83937461 | 345.28 | 0.46 |
| 45 | 141614 | 94735 | 2407956879 | 99010 | 2816387914 | 83937461 | 345.28 | 0.46 |
| 46 | 145937 | 94955 | 2487256873 | 99009 | 2899140359 | 83937461 | 345.28 | 0.46 |
| 47 | 150326 | 95178 | 2566694558 | 99008 | 2981837138 | 83937461 | 345.28 | 0.46 |
| 48 | 154781 | 95404 | 2646270130 | 99008 | 3064475448 | 83937461 | 345.28 | 0.46 |
| 49 | 159302 | 95634 | 2725983785 | 99007 | 3147052493 | 83937461 | 345.28 | 0.46 |
| 50 | 163890 | 95866 | 2805835720 | 99006 | 3229565483 | 83937461 | 345.28 | 0.45 |
| 51 | 168544 | 96103 | 2885826131 | 99005 | 3312011630 | 83937461 | 345.28 | 0.45 |
| 52 | 173264 | 96343 | 2965955215 | 99004 | 3394388153 | 83937461 | 345.28 | 0.45 |
| 53 | 178051 | 96586 | 3046223168 | 99003 | 3476692274 | 83937461 | 345.28 | 0.45 |
| 54 | 182904 | 96832 | 3126630189 | 99002 | 3558921221 | 83937461 | 345.28 | 0.45 |
| 55 | 187823 | 97082 | 3207176473 | 99001 | 3641072227 | 83937461 | 345.28 | 0.45 |
| 56 | 192809 | 97335 | 3287862218 | 99000 | 3723142528 | 83937461 | 345.28 | 0.45 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 39 " MST - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 "

Pressione trasversale del vento = 176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 10860.00 | 6030.00 | 8000.00 | 0.00 |
| 2.00 | 37.16 | 60080.00 | 25130.00 | 63000.00 | 4.75 |
| --- | --- | --- | Ft = 90389 | Fp = 354 | --- |
| --- | --- | Pa = 60104 | Ta = 24867 | La = 62764 | --- |
| --- | --- | Pb = -24 | Tb = 263 | Lb = 236 | --- |
| 3.00 | 33.69 | 69900.00 | 29920.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 92785 | Fp = -80224 | --- |
| --- | --- | Pa = 78244 | Ta = -49869 | La = 0 | --- |
| --- | --- | Pb = -8344 | Tb = 79789 | Lb = 0 | --- |
| 4.00 | 30.23 | 60080.00 | 25130.00 | 63000.00 | 4.75 |
| --- | --- | --- | Ft = 90389 | Fp = 354 | --- |
| --- | --- | Pa = 60104 | Ta = 24867 | La = 62764 | --- |
| --- | --- | Pb = -24 | Tb = 263 | Lb = 236 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|------------|--------|------------|-----------|--------------------------------|-------|
| 2 | 11293 | 6132 | 6286886 | 8044 | 8353942 | 0 | 345.28 | 0.04 |
| 3 | 11743 | 6211 | 11531514 | 8046 | 15246221 | 0 | 345.28 | 0.06 |
| 4 | 12210 | 6293 | 16851717 | 8048 | 22156689 | 0 | 345.28 | 0.08 |
| 5 | 12696 | 6378 | 22249845 | 8049 | 29085294 | 0 | 345.28 | 0.10 |
| 6 | 14593 | 6470 | 27762015 | 8055 | 36086788 | 0 | 345.28 | 0.11 |
| 7 | 15682 | 6605 | 34200384 | 8118 | 44331928 | -0 | 345.28 | 0.13 |
| 8 | 47763 | 251500 | 190575522 | 17530 | 58887892 | -0 | 345.28 | 0.22 |
| 9 | 79884 | 31782 | 260249903 | 71063 | 129997929 | 171545281 | 345.28 | 0.31 |
| 10 | 81092 | 31888 | 289321874 | 71064 | 193707139 | 171545281 | 345.28 | 0.34 |
| 11 | 82341 | 31998 | 318442710 | 71063 | 257417048 | 171545281 | 345.28 | 0.37 |
| 12 | 123639 | -206623 | 207292283 | 71247 | 322919320 | 171545281 | 345.28 | 0.33 |
| 13 | 164977 | -17211 | 82903385 | 71576 | 390309398 | 171661049 | 345.28 | 0.33 |
| 14 | 166345 | -17097 | 72179341 | 71565 | 457562397 | 171661049 | 345.28 | 0.36 |
| 15 | 167753 | -16980 | 61557448 | 71553 | 524694436 | 171661049 | 345.28 | 0.38 |
| 16 | 195981 | 95039 | 116405876 | 72610 | 593338432 | 171661049 | 345.28 | 0.42 |
| 17 | 224248 | 88016 | 349906622 | 134452 | 718878831 | 349219804 | 345.28 | 0.52 |
| 18 | 225776 | 88137 | 429455505 | 134428 | 840801186 | 349219804 | 345.28 | 0.57 |
| 19 | 231864 | 88268 | 509093747 | 134415 | 962630990 | 349219804 | 345.28 | 0.63 |
| 20 | 234275 | 88568 | 593300872 | 134691 | 1091452153 | 349219804 | 345.28 | 0.67 |
| 21 | 236749 | 88794 | 675346714 | 134601 | 1216331754 | 349356155 | 345.28 | 0.50 |
| 22 | 239298 | 88932 | 757410339 | 134582 | 1340994815 | 349356155 | 345.28 | 0.53 |
| 23 | 241910 | 89074 | 839494342 | 134561 | 1465449825 | 349356155 | 345.28 | 0.55 |
| 24 | 244586 | 89220 | 921595517 | 134541 | 1589689071 | 349356155 | 345.28 | 0.57 |
| 25 | 247324 | 89370 | 1003711578 | 134520 | 1713706083 | 349356155 | 345.28 | 0.58 |
| 26 | 250125 | 89523 | 1085841018 | 134500 | 1837495423 | 349356155 | 345.28 | 0.60 |
| 27 | 252990 | 89680 | 1167982980 | 134479 | 1961052513 | 349356155 | 345.28 | 0.61 |
| 28 | 255917 | 89840 | 1250137157 | 134458 | 2084373495 | 349356155 | 345.28 | 0.62 |
| 29 | 258908 | 90005 | 1332303704 | 134438 | 2207455101 | 349356155 | 345.28 | 0.63 |
| 30 | 261962 | 90173 | 1414483161 | 134418 | 2330294559 | 349356155 | 345.28 | 0.64 |
| 31 | 273942 | 90353 | 1496801153 | 134411 | 2453086931 | 349356155 | 345.28 | 0.64 |
| 32 | 277516 | 90560 | 1578448956 | 134445 | 2574662969 | 349356155 | 345.28 | 0.65 |
| 33 | 281161 | 90700 | 1659603431 | 134371 | 2695199002 | 349356155 | 345.28 | 0.59 |
| 34 | 284878 | 90878 | 1740787068 | 134354 | 2815516868 | 349356155 | 345.28 | 0.59 |
| 35 | 288667 | 91060 | 1822001271 | 134336 | 2935614819 | 349356155 | 345.28 | 0.59 |
| 36 | 292527 | 91245 | 1903247780 | 134319 | 3055491600 | 349356155 | 345.28 | 0.59 |
| 37 | 296458 | 91435 | 1984528415 | 134302 | 3175146035 | 349356155 | 345.28 | 0.59 |
| 38 | 300461 | 91628 | 2065845057 | 134285 | 3294576998 | 349356155 | 345.28 | 0.59 |
| 39 | 304535 | 91825 | 2147199634 | 134268 | 3413783400 | 349356155 | 345.28 | 0.59 |
| 40 | 308681 | 92025 | 2228594109 | 134251 | 3532764171 | 349356155 | 345.28 | 0.59 |
| 41 | 312899 | 92230 | 2310030467 | 134235 | 3651518245 | 349356155 | 345.28 | 0.59 |
| 42 | 329965 | 92443 | 2391602081 | 134228 | 3770186803 | 349356155 | 345.28 | 0.59 |
| 43 | 334089 | 92645 | 2470347989 | 134207 | 3884463370 | 349356155 | 345.28 | 0.59 |
| 44 | 338278 | 92851 | 2549166344 | 134194 | 3998574271 | 349356155 | 345.28 | 0.61 |
| 45 | 342534 | 93057 | 2628010508 | 134178 | 4112443120 | 349356155 | 345.28 | 0.61 |
| 46 | 346857 | 93267 | 2706882562 | 134161 | 4226069402 | 349356155 | 345.28 | 0.61 |
| 47 | 351246 | 93480 | 2785784503 | 134145 | 4339452448 | 349356155 | 345.28 | 0.61 |
| 48 | 355701 | 93697 | 2864718310 | 134128 | 4452591546 | 349356155 | 345.28 | 0.60 |
| 49 | 360222 | 93917 | 2943685941 | 134112 | 4565485936 | 349356155 | 345.28 | 0.60 |
| 50 | 364810 | 94141 | 3022689327 | 134097 | 4678134805 | 349356155 | 345.28 | 0.60 |
| 51 | 369464 | 94369 | 3101730378 | 134081 | 4790537291 | 349356155 | 345.28 | 0.59 |
| 52 | 374184 | 94600 | 3180810973 | 134066 | 4902692478 | 349356155 | 345.28 | 0.59 |
| 53 | 378971 | 94834 | 3259932967 | 134051 | 5014599399 | 349356155 | 345.28 | 0.59 |
| 54 | 383824 | 95073 | 3339098183 | 134036 | 5126257033 | 349356155 | 345.28 | 0.59 |
| 55 | 388743 | 95314 | 3418308416 | 134022 | 5237664306 | 349356155 | 345.28 | 0.58 |
| 56 | 393729 | 95559 | 3497565431 | 134007 | 5348820093 | 349356155 | 345.28 | 0.58 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 40 " MST - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 "

Pressione trasversale del vento = 176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | 6030.00 | 8000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | 25130.00 | 63000.00 | 4.75 |
| --- | --- | --- | Ft = 24194 | Fp = 50074 | --- |
| --- | --- | Pa = 11823 | Ta = 382 | La = 21105 | --- |
| --- | --- | Pb = -11823 | Tb = 24748 | Lb = 41895 | --- |
| 3.00 | 33.69 | 0.00 | 29920.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 3975 | Fp = -32231 | --- |
| --- | --- | Pa = 3352 | Ta = -2137 | La = 0 | --- |
| --- | --- | Pb = -3352 | Tb = 32057 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | 25130.00 | 63000.00 | 4.75 |
| --- | --- | --- | Ft = 24194 | Fp = 50074 | --- |
| --- | --- | Pa = 11823 | Ta = 382 | La = 21105 | --- |
| --- | --- | Pb = -11823 | Tb = 24748 | Lb = 41895 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|------|----------------------------|-----------|------------|-----------|------------|-----------|-------------------------|----------|
| 2 | 433 | 6105 | 5978482 | 8000 | 7854604 | 0 | 345.28 | 0.03 |
| 3 | 883 | 6183 | 10913283 | 8000 | 14244269 | 0 | 345.28 | 0.05 |
| 4 | 1350 | 6265 | 15922676 | 8001 | 20649373 | 0 | 345.28 | 0.07 |
| 5 | 1836 | 6349 | 21009331 | 8001 | 27070228 | 0 | 345.28 | 0.09 |
| 6 | 3733 | 6438 | 26204603 | 8002 | 33551570 | 0 | 345.28 | 0.10 |
| 7 | 4822 | 6536 | 31956919 | 8005 | 40665482 | 0 | 345.28 | 0.12 |
| 8 | 12762 | 54111 | 66848840 | 11151 | 49750421 | 0 | 345.28 | 0.09 |
| 9 | 20743 | 7123 | 80799939 | 29116 | 77626655 | 57684082 | 345.28 | 0.12 |
| 10 | 21951 | 7230 | 87397260 | 29117 | 103044529 | 57684082 | 345.28 | 0.13 |
| 11 | 23200 | 7339 | 94107581 | 29117 | 128496459 | 57684082 | 345.28 | 0.14 |
| 12 | 21153 | -12890 | 88475798 | 36595 | 158329352 | 57684082 | 345.28 | 0.15 |
| 13 | 19146 | 30179 | 111137363 | 71009 | 224249006 | 78257511 | 345.28 | 0.20 |
| 14 | 20514 | 30300 | 137237663 | 71010 | 285095629 | 78257511 | 345.28 | 0.23 |
| 15 | 21922 | 30424 | 163464999 | 71010 | 345973674 | 78257511 | 345.28 | 0.26 |
| 16 | 28505 | 55748 | 204545652 | 71344 | 407229397 | 78257511 | 345.28 | 0.30 |
| 17 | 35128 | 63124 | 291082964 | 92120 | 487501966 | 137963693 | 345.28 | 0.35 |
| 18 | 36655 | 63259 | 345393543 | 92121 | 566652179 | 137963693 | 345.28 | 0.39 |
| 19 | 42744 | 63398 | 399913748 | 92122 | 645943111 | 137963693 | 345.28 | 0.42 |
| 20 | 39255 | 55243 | 451297004 | 93900 | 728829106 | 137963693 | 345.28 | 0.45 |
| 21 | 35829 | 88436 | 524117804 | 134013 | 849972960 | 162194972 | 345.28 | 0.35 |
| 22 | 38378 | 88586 | 601919078 | 134014 | 967684955 | 162194972 | 345.28 | 0.38 |
| 23 | 40990 | 88741 | 679878822 | 134014 | 1085432576 | 162194972 | 345.28 | 0.40 |
| 24 | 43666 | 88899 | 757997655 | 134014 | 1203211718 | 162194972 | 345.28 | 0.43 |
| 25 | 46404 | 89061 | 836276136 | 134015 | 1321018193 | 162194972 | 345.28 | 0.45 |
| 26 | 49205 | 89227 | 914714773 | 134015 | 1438847751 | 162194972 | 345.28 | 0.47 |
| 27 | 52070 | 89396 | 993314032 | 134015 | 1556696087 | 162194972 | 345.28 | 0.48 |
| 28 | 54997 | 89569 | 1072074343 | 134015 | 1674558854 | 162194972 | 345.28 | 0.50 |
| 29 | 57988 | 89746 | 1150996105 | 134015 | 1792431666 | 162194972 | 345.28 | 0.51 |
| 30 | 61042 | 89927 | 1230079692 | 134015 | 1910310113 | 162194972 | 345.28 | 0.52 |
| 31 | 73022 | 90112 | 1309433615 | 134017 | 2028353875 | 162194972 | 345.28 | 0.53 |
| 32 | 76596 | 90299 | 1387915209 | 134020 | 2144865345 | 162194972 | 345.28 | 0.54 |
| 33 | 80241 | 90483 | 1466430068 | 134017 | 2261185020 | 162194972 | 345.28 | 0.49 |
| 34 | 83958 | 90672 | 1545103284 | 134017 | 2377497843 | 162194972 | 345.28 | 0.50 |
| 35 | 87747 | 90864 | 1623935129 | 134017 | 2493799511 | 162194972 | 345.28 | 0.50 |
| 36 | 91607 | 91060 | 1702925877 | 134017 | 2610085736 | 162194972 | 345.28 | 0.50 |
| 37 | 95538 | 91260 | 1782075795 | 134016 | 2726352226 | 162194972 | 345.28 | 0.51 |
| 38 | 99541 | 91463 | 1861385147 | 134016 | 2842594695 | 162194972 | 345.28 | 0.51 |
| 39 | 103615 | 91670 | 1940854192 | 134016 | 2958808857 | 162194972 | 345.28 | 0.51 |
| 40 | 107761 | 91880 | 2020483184 | 134015 | 3074990429 | 162194972 | 345.28 | 0.51 |
| 41 | 111979 | 92094 | 2100272377 | 134015 | 3191135136 | 162194972 | 345.28 | 0.52 |
| 42 | 129045 | 92313 | 2180302998 | 134015 | 3307360389 | 162194972 | 345.28 | 0.52 |
| 43 | 133169 | 92527 | 2257699417 | 134014 | 3419498999 | 162194972 | 345.28 | 0.52 |
| 44 | 137358 | 92740 | 2335249817 | 134014 | 3531602659 | 162194972 | 345.28 | 0.54 |
| 45 | 141614 | 92956 | 2412937302 | 134013 | 3643641850 | 162194972 | 345.28 | 0.54 |
| 46 | 145937 | 93175 | 2490762107 | 134012 | 3755612814 | 162194972 | 345.28 | 0.54 |
| 47 | 150326 | 93398 | 2568724464 | 134011 | 3867511794 | 162194972 | 345.28 | 0.54 |
| 48 | 154781 | 93624 | 2646824605 | 134010 | 3979335039 | 162194972 | 345.28 | 0.54 |
| 49 | 159302 | 93854 | 2725062762 | 134009 | 4091078804 | 162194972 | 345.28 | 0.54 |
| 50 | 163890 | 94087 | 2803439168 | 134008 | 4202739354 | 162194972 | 345.28 | 0.54 |
| 51 | 168544 | 94323 | 2881954055 | 134007 | 4314312957 | 162194972 | 345.28 | 0.53 |
| 52 | 173264 | 94563 | 2960607657 | 134006 | 4425795891 | 162194972 | 345.28 | 0.53 |
| 53 | 178051 | 94806 | 3039400205 | 134004 | 4537184439 | 162194972 | 345.28 | 0.53 |
| 54 | 182904 | 95052 | 3118331932 | 134003 | 4648474889 | 162194972 | 345.28 | 0.53 |
| 55 | 187823 | 95302 | 3197403071 | 134002 | 4759663538 | 162194972 | 345.28 | 0.53 |
| 56 | 192809 | 95555 | 3276613854 | 134001 | 4870746688 | 162194972 | 345.28 | 0.53 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 41 " MST - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 3 x 31.5 - (-) "

Pressione trasversale del vento = -706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 3420.00 | -3440.00 | 29500.00 | 0.00 |
| 2.00 | 37.16 | 52780.00 | -41740.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 72604 | Fp = -81203 | --- |
| --- | --- | Pa = 61226 | Ta = 39022 | La = 0 | --- |
| --- | --- | Pb = -8446 | Tb = -80762 | Lb = 0 | --- |
| 3.00 | 33.69 | 52780.00 | -41740.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 61512 | Fp = 8726 | --- |
| --- | --- | Pa = 51872 | Ta = -33061 | La = 0 | --- |
| --- | --- | Pb = 908 | Tb = -8679 | Lb = 0 | --- |
| 4.00 | 30.23 | 45820.00 | -35550.00 | 54500.00 | 4.75 |
| --- | --- | --- | Ft = 98151 | Fp = -40337 | --- |
| --- | --- | Pa = 28705 | Ta = -26781 | La = 89958 | --- |
| --- | --- | Pb = 17115 | Tb = -8769 | Lb = -35458 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|------|----------------------|---------|-------------|--------|------------|-----------|-------------------|-------|
| 2 | 3853 | -3749 | -3712579 | 29508 | 29048468 | 0 | 345.28 | 0.10 |
| 3 | 4303 | -4064 | -7049472 | 29509 | 52653832 | 0 | 345.28 | 0.16 |
| 4 | 4770 | -4391 | -10657344 | 29510 | 76272811 | 0 | 345.28 | 0.22 |
| 5 | 5256 | -4730 | -14546439 | 29510 | 99904563 | -0 | 345.28 | 0.26 |
| 6 | 7153 | -5085 | -18761180 | 29514 | 123591830 | -0 | 345.28 | 0.30 |
| 7 | 8242 | -5493 | -23838597 | 29532 | 149159683 | -0 | 345.28 | 0.35 |
| 8 | 40884 | 245426 | 123454646 | 29580 | 175532871 | -0 | 345.28 | 0.24 |
| 9 | 73565 | 32602 | 192200458 | 29643 | 202945436 | -0 | 345.28 | 0.29 |
| 10 | 74774 | 32176 | 217481201 | 29644 | 230341690 | 0 | 345.28 | 0.31 |
| 11 | 76023 | 31736 | 242307212 | 29644 | 257719645 | 0 | 345.28 | 0.32 |
| 12 | 99924 | -151899 | 157291389 | 29686 | 285765515 | 0 | 345.28 | 0.28 |
| 13 | 123866 | -83100 | -2851436 | 29725 | 314442410 | -0 | 345.28 | 0.26 |
| 14 | 125234 | -83579 | -77233452 | 29721 | 343061069 | -0 | 345.28 | 0.27 |
| 15 | 126642 | -84072 | -152049793 | 29717 | 371620558 | -0 | 345.28 | 0.29 |
| 16 | 143796 | -41133 | -202719417 | 31151 | 401357785 | -0 | 345.28 | 0.31 |
| 17 | 160990 | -120615 | -244535127 | 119714 | 511733294 | 254489354 | 345.28 | 0.37 |
| 18 | 162518 | -121147 | -351611518 | 119706 | 617151455 | 254489354 | 345.28 | 0.43 |
| 19 | 168606 | -121700 | -459229391 | 119704 | 722557540 | 254489354 | 345.28 | 0.49 |
| 20 | 179586 | -109256 | -564894392 | 118323 | 832052305 | 254489354 | 345.28 | 0.55 |
| 21 | 190629 | -131650 | -675239490 | 84252 | 906672095 | 233980999 | 345.28 | 0.41 |
| 22 | 193178 | -132246 | -795273988 | 84245 | 984121649 | 233980999 | 345.28 | 0.43 |
| 23 | 195790 | -132857 | -915774798 | 84237 | 1061458403 | 233980999 | 345.28 | 0.45 |
| 24 | 198466 | -133482 | -1036744129 | 84229 | 1138679203 | 233980999 | 345.28 | 0.47 |
| 25 | 201204 | -134123 | -1158185393 | 84221 | 1215781352 | 233980999 | 345.28 | 0.49 |
| 26 | 204005 | -134778 | -1280103020 | 84213 | 1292762531 | 233980999 | 345.28 | 0.51 |
| 27 | 206870 | -135448 | -1402502315 | 84205 | 1369620729 | 233980999 | 345.28 | 0.52 |
| 28 | 209797 | -136133 | -1525389323 | 84197 | 1446354185 | 233980999 | 345.28 | 0.53 |
| 29 | 212788 | -136834 | -1648770721 | 84189 | 1522961343 | 233980999 | 345.28 | 0.55 |
| 30 | 215842 | -137549 | -1772653726 | 84180 | 1599440811 | 233980999 | 345.28 | 0.56 |
| 31 | 227822 | -138288 | -1897214017 | 84179 | 1675920906 | 233980999 | 345.28 | 0.56 |
| 32 | 231396 | -139050 | -2021044129 | 84195 | 1751604304 | 233980999 | 345.28 | 0.57 |
| 33 | 235041 | -139756 | -2144801245 | 84163 | 1826723599 | 233980999 | 345.28 | 0.52 |
| 34 | 238758 | -140506 | -2269080280 | 84156 | 1901727834 | 233980999 | 345.28 | 0.52 |
| 35 | 242547 | -141270 | -2393889681 | 84149 | 1976615866 | 233980999 | 345.28 | 0.53 |
| 36 | 246407 | -142048 | -2519238255 | 84141 | 2051386742 | 233980999 | 345.28 | 0.53 |
| 37 | 250338 | -142842 | -2645134948 | 84134 | 2126039514 | 233980999 | 345.28 | 0.54 |
| 38 | 254341 | -143650 | -2771588825 | 84127 | 2200573239 | 233980999 | 345.28 | 0.54 |
| 39 | 258415 | -144473 | -2898609043 | 84120 | 2274986966 | 233980999 | 345.28 | 0.54 |
| 40 | 262561 | -145310 | -3026204840 | 84113 | 2349279733 | 233980999 | 345.28 | 0.54 |
| 41 | 266779 | -146162 | -3154385513 | 84106 | 2423450565 | 233980999 | 345.28 | 0.54 |
| 42 | 283845 | -147035 | -3283287617 | 84103 | 2497590912 | 233980999 | 345.28 | 0.55 |
| 43 | 287969 | -147883 | -3408238974 | 84094 | 2569009440 | 233980999 | 345.28 | 0.55 |
| 44 | 292158 | -148732 | -3533783966 | 84089 | 2640337676 | 233980999 | 345.28 | 0.57 |
| 45 | 296414 | -149593 | -3659872896 | 84081 | 2711532486 | 233980999 | 345.28 | 0.57 |
| 46 | 300737 | -150467 | -3786514432 | 84074 | 2782593190 | 233980999 | 345.28 | 0.57 |
| 47 | 305126 | -151354 | -3913717185 | 84066 | 2853519029 | 233980999 | 345.28 | 0.57 |
| 48 | 309581 | -152256 | -4041489770 | 84059 | 2924309209 | 233980999 | 345.28 | 0.57 |
| 49 | 314102 | -153171 | -4169840794 | 84052 | 2994962908 | 233980999 | 345.28 | 0.57 |
| 50 | 318690 | -154099 | -4298778853 | 84045 | 3065479268 | 233980999 | 345.28 | 0.57 |
| 51 | 323344 | -155042 | -4428312533 | 84038 | 3135857401 | 233980999 | 345.28 | 0.56 |
| 52 | 328064 | -155998 | -4558450401 | 84031 | 3206096386 | 233980999 | 345.28 | 0.56 |
| 53 | 332851 | -156968 | -4689201004 | 84024 | 3276195272 | 233980999 | 345.28 | 0.56 |
| 54 | 337704 | -157952 | -4820572871 | 84017 | 3346153075 | 233980999 | 345.28 | 0.56 |
| 55 | 342623 | -158949 | -4952574504 | 84010 | 3415968782 | 233980999 | 345.28 | 0.56 |
| 56 | 347609 | -159960 | -5085214382 | 84003 | 3485641349 | 233980999 | 345.28 | 0.56 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 42 " MST - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 3 x 31.5 - (-) "

Pressione trasversale del vento = -706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | -3440.00 | 29500.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | -41740.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 5546 | Fp = -44965 | --- |
| --- | --- | Pa = 4677 | Ta = 2981 | La = 0 | --- |
| --- | --- | Pb = -4677 | Tb = -44721 | Lb = 0 | --- |
| 3.00 | 33.69 | 0.00 | -41740.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = -5546 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = -41740 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | -35550.00 | 54500.00 | 4.75 |
| --- | --- | --- | Ft = 59918 | Fp = 7816 | --- |
| --- | --- | Pa = 4896 | Ta = -34925 | La = 48439 | --- |
| --- | --- | Pb = -4896 | Tb = -625 | Lb = 6061 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|-------------|--------|------------|-----------|--------------------------------|-------|
| 2 | 433 | -3741 | -3623186 | 29500 | 28923541 | 0 | 345.28 | 0.10 |
| 3 | 883 | -4055 | -6872420 | 29500 | 52403314 | -0 | 345.28 | 0.16 |
| 4 | 1350 | -4381 | -10394522 | 29500 | 75896704 | -0 | 345.28 | 0.21 |
| 5 | 1836 | -4720 | -14199877 | 29501 | 99403358 | -0 | 345.28 | 0.26 |
| 6 | 3733 | -5072 | -18338324 | 29501 | 122961436 | -0 | 345.28 | 0.30 |
| 7 | 4822 | -5462 | -23261115 | 29503 | 148249842 | -0 | 345.28 | 0.34 |
| 8 | 9189 | 13342 | -16791567 | 29503 | 173519075 | 0 | 345.28 | 0.19 |
| 9 | 13596 | -3291 | -16707113 | 29505 | 198904660 | 0 | 345.28 | 0.20 |
| 10 | 14805 | -3716 | -20305185 | 29505 | 224313355 | 0 | 345.28 | 0.21 |
| 11 | 16054 | -4156 | -24312373 | 29505 | 249744338 | -0 | 345.28 | 0.22 |
| 12 | 15904 | -18340 | -37003514 | 29505 | 275159821 | 0 | 345.28 | 0.23 |
| 13 | 15793 | -49798 | -85719391 | 29505 | 300561043 | -0 | 345.28 | 0.24 |
| 14 | 17161 | -50281 | -128851897 | 29505 | 325984093 | -0 | 345.28 | 0.26 |
| 15 | 18569 | -50778 | -172442195 | 29506 | 351428093 | 0 | 345.28 | 0.27 |
| 16 | 23365 | -47825 | -214632260 | 30268 | 377404323 | 0 | 345.28 | 0.28 |
| 17 | 28201 | -128483 | -319074634 | 77947 | 446709485 | 137034180 | 345.28 | 0.34 |
| 18 | 29728 | -129023 | -429281862 | 77948 | 513414006 | 137034180 | 345.28 | 0.39 |
| 19 | 35817 | -129579 | -540107846 | 77949 | 580220497 | 137034180 | 345.28 | 0.44 |
| 20 | 35792 | -134067 | -657244981 | 78209 | 649311460 | 137034180 | 345.28 | 0.49 |
| 21 | 35829 | -131375 | -775504288 | 84009 | 723664383 | 140539505 | 345.28 | 0.37 |
| 22 | 38378 | -131979 | -891431973 | 84009 | 797539512 | 140539505 | 345.28 | 0.40 |
| 23 | 40990 | -132598 | -1007935635 | 84009 | 871436281 | 140539505 | 345.28 | 0.42 |
| 24 | 43666 | -133232 | -1125024505 | 84009 | 945351901 | 140539505 | 345.28 | 0.44 |
| 25 | 46404 | -133881 | -1242707710 | 84010 | 1019283552 | 140539505 | 345.28 | 0.46 |
| 26 | 49205 | -134545 | -1360994290 | 84010 | 1093228383 | 140539505 | 345.28 | 0.48 |
| 27 | 52070 | -135224 | -1479893208 | 84010 | 1167183521 | 140539505 | 345.28 | 0.49 |
| 28 | 54997 | -135918 | -1599413359 | 84010 | 1241146075 | 140539505 | 345.28 | 0.50 |
| 29 | 57988 | -136628 | -1719563581 | 84010 | 1315113141 | 140539505 | 345.28 | 0.52 |
| 30 | 61042 | -137352 | -1840352657 | 84010 | 1389081804 | 140539505 | 345.28 | 0.53 |
| 31 | 73022 | -138094 | -1961954278 | 84012 | 1463162056 | 140539505 | 345.28 | 0.54 |
| 32 | 76596 | -138840 | -2082614099 | 84013 | 1536289178 | 140539505 | 345.28 | 0.54 |
| 33 | 80241 | -139580 | -2203720852 | 84011 | 1609282669 | 140539505 | 345.28 | 0.50 |
| 34 | 83958 | -140338 | -2325473248 | 84011 | 1682269686 | 140539505 | 345.28 | 0.50 |
| 35 | 87747 | -141110 | -2447879499 | 84011 | 1755247425 | 140539505 | 345.28 | 0.51 |
| 36 | 91607 | -141897 | -2570947807 | 84011 | 1828213095 | 140539505 | 345.28 | 0.51 |
| 37 | 95538 | -142698 | -2694686349 | 84011 | 1901163906 | 140539505 | 345.28 | 0.51 |
| 38 | 99541 | -143514 | -2819103283 | 84011 | 1974097073 | 140539505 | 345.28 | 0.52 |
| 39 | 103615 | -144345 | -2944206748 | 84010 | 2047009816 | 140539505 | 345.28 | 0.52 |
| 40 | 107761 | -145190 | -3070004862 | 84010 | 2119899361 | 140539505 | 345.28 | 0.52 |
| 41 | 111979 | -146050 | -3196505728 | 84010 | 2192762936 | 140539505 | 345.28 | 0.52 |
| 42 | 129045 | -146926 | -3323842146 | 84010 | 2265679938 | 140539505 | 345.28 | 0.53 |
| 43 | 133169 | -147784 | -3447420345 | 84010 | 2336028560 | 140539505 | 345.28 | 0.53 |
| 44 | 137358 | -148639 | -3571673341 | 84009 | 2406352816 | 140539505 | 345.28 | 0.55 |
| 45 | 141614 | -149508 | -3696581955 | 84009 | 2476632905 | 140539505 | 345.28 | 0.55 |
| 46 | 145937 | -150390 | -3822153376 | 84008 | 2546866426 | 140539505 | 345.28 | 0.55 |
| 47 | 150326 | -151285 | -3948394775 | 84007 | 2617050977 | 140539505 | 345.28 | 0.55 |
| 48 | 154781 | -152194 | -4075313313 | 84007 | 2687184160 | 140539505 | 345.28 | 0.55 |
| 49 | 159302 | -153117 | -4202916140 | 84006 | 2757263580 | 140539505 | 345.28 | 0.55 |
| 50 | 163890 | -154053 | -4331210397 | 84005 | 2827286849 | 140539505 | 345.28 | 0.55 |
| 51 | 168544 | -155003 | -4460203211 | 84004 | 2897251579 | 140539505 | 345.28 | 0.55 |
| 52 | 173264 | -155967 | -4589901701 | 84004 | 2967155389 | 140539505 | 345.28 | 0.55 |
| 53 | 178051 | -156944 | -4720312972 | 84003 | 3036995902 | 140539505 | 345.28 | 0.55 |
| 54 | 182904 | -157934 | -4851444119 | 84002 | 3106770743 | 140539505 | 345.28 | 0.54 |
| 55 | 187823 | -158939 | -4983302228 | 84001 | 3176477542 | 140539505 | 345.28 | 0.54 |
| 56 | 192809 | -159957 | -5115894371 | 84000 | 3246113932 | 140539505 | 345.28 | 0.54 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 43 " MST - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 3 x 31.5 - (-) "

Pressione trasversale del vento = -706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 6840.00 | -6880.00 | 6000.00 | 0.00 |
| 2.00 | 37.16 | 45820.00 | -35550.00 | 54500.00 | 4.75 |
| --- | --- | --- | Ft = 98151 | Fp = -40337 | --- |
| --- | --- | Pa = 28705 | Ta = -26781 | La = 89958 | --- |
| --- | --- | Pb = 17115 | Tb = -8769 | Lb = -35458 | --- |
| 3.00 | 33.69 | 52780.00 | -41740.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 61512 | Fp = 8726 | --- |
| --- | --- | Pa = 51872 | Ta = -33061 | La = 0 | --- |
| --- | --- | Pb = 908 | Tb = -8679 | Lb = 0 | --- |
| 4.00 | 30.23 | 45820.00 | -35550.00 | 54500.00 | 4.75 |
| --- | --- | --- | Ft = 98151 | Fp = -40337 | --- |
| --- | --- | Pa = 28705 | Ta = -26781 | La = 89958 | --- |
| --- | --- | Pb = 17115 | Tb = -8769 | Lb = -35458 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|-------------|--------|------------|-----------|--------------------------------|-------|
| 2 | 7273 | -7199 | -7259970 | 6019 | 6193462 | 0 | 345.28 | 0.03 |
| 3 | 7723 | -7513 | -13512331 | 6020 | 11295167 | 0 | 345.28 | 0.06 |
| 4 | 8190 | -7840 | -20039973 | 6021 | 16415361 | 0 | 345.28 | 0.08 |
| 5 | 8676 | -8180 | -26852992 | 6022 | 21554314 | 0 | 345.28 | 0.09 |
| 6 | 10573 | -8535 | -34009174 | 6026 | 26766258 | -0 | 345.28 | 0.11 |
| 7 | 11662 | -8953 | -42466275 | 6058 | 32889049 | 0 | 345.28 | 0.13 |
| 8 | 28044 | 101777 | 16485319 | 19470 | 47166594 | 0 | 345.28 | 0.06 |
| 9 | 44465 | -36591 | -1340878 | 96067 | 141106294 | 245870431 | 345.28 | 0.15 |
| 10 | 45674 | -37018 | -34419623 | 96069 | 224448372 | 245870431 | 345.28 | 0.22 |
| 11 | 46922 | -37459 | -67911794 | 96070 | 307809492 | 245870431 | 345.28 | 0.28 |
| 12 | 83604 | -176869 | -184854117 | 89825 | 388897818 | 245870431 | 345.28 | 0.37 |
| 13 | 120326 | -80370 | -331610929 | 60778 | 440800333 | 228457929 | 345.28 | 0.44 |
| 14 | 121694 | -80849 | -404464149 | 60775 | 496947934 | 228457929 | 345.28 | 0.48 |
| 15 | 123102 | -81342 | -477677163 | 60770 | 553013193 | 228457929 | 345.28 | 0.52 |
| 16 | 140256 | -38406 | -526771516 | 62212 | 610392672 | 228457929 | 345.28 | 0.54 |
| 17 | 157450 | -117891 | -567027022 | 150781 | 748531530 | 482947283 | 345.28 | 0.59 |
| 18 | 158978 | -118422 | -672468404 | 150772 | 881667542 | 482947283 | 345.28 | 0.66 |
| 19 | 165066 | -118974 | -778402867 | 150770 | 1014785132 | 482947283 | 345.28 | 0.72 |
| 20 | 176046 | -106543 | -882606685 | 149423 | 1153480263 | 482947283 | 345.28 | 0.78 |
| 21 | 187089 | -128926 | -991171405 | 115322 | 1256629847 | 462438929 | 345.28 | 0.57 |
| 22 | 189638 | -129521 | -1109382518 | 115313 | 1362571900 | 462438929 | 345.28 | 0.59 |
| 23 | 192250 | -130131 | -1228020120 | 115303 | 1468362465 | 462438929 | 345.28 | 0.61 |
| 24 | 194926 | -130755 | -1347089352 | 115293 | 1573997327 | 462438929 | 345.28 | 0.63 |
| 25 | 197664 | -131395 | -1466596259 | 115284 | 1679472871 | 462438929 | 345.28 | 0.65 |
| 26 | 200465 | -132049 | -1586547653 | 115274 | 1784785975 | 462438929 | 345.28 | 0.66 |
| 27 | 203330 | -132719 | -1706950985 | 115263 | 1889933920 | 462438929 | 345.28 | 0.67 |
| 28 | 206257 | -133403 | -1827814245 | 115253 | 1994914317 | 462438929 | 345.28 | 0.68 |
| 29 | 209248 | -134102 | -1949145875 | 115243 | 2099725040 | 462438929 | 345.28 | 0.69 |
| 30 | 212302 | -134817 | -2070954693 | 115232 | 2204364179 | 462438929 | 345.28 | 0.70 |
| 31 | 224282 | -135555 | -2193432842 | 115231 | 2309007766 | 462438929 | 345.28 | 0.71 |
| 32 | 227856 | -136319 | -2315229555 | 115251 | 2412556582 | 462438929 | 345.28 | 0.71 |
| 33 | 231501 | -137022 | -2436893719 | 115211 | 2515344119 | 462438929 | 345.28 | 0.64 |
| 34 | 235218 | -137771 | -2559062539 | 115201 | 2617976910 | 462438929 | 345.28 | 0.65 |
| 35 | 239007 | -138534 | -2681745351 | 115192 | 2720453366 | 462438929 | 345.28 | 0.65 |
| 36 | 242867 | -139312 | -2804951790 | 115183 | 2822772143 | 462438929 | 345.28 | 0.65 |
| 37 | 246798 | -140105 | -2928691566 | 115173 | 2924931903 | 462438929 | 345.28 | 0.65 |
| 38 | 250801 | -140912 | -3052974438 | 115164 | 3026931310 | 462438929 | 345.28 | 0.65 |
| 39 | 254875 | -141734 | -3177810208 | 115155 | 3128769016 | 462438929 | 345.28 | 0.65 |
| 40 | 259021 | -142571 | -3303208701 | 115146 | 3230443659 | 462438929 | 345.28 | 0.65 |
| 41 | 263239 | -143422 | -3429179756 | 115137 | 3331953856 | 462438929 | 345.28 | 0.65 |
| 42 | 280305 | -144295 | -3555868732 | 115134 | 3433424964 | 462438929 | 345.28 | 0.65 |
| 43 | 284429 | -145142 | -3678669022 | 115122 | 3531173644 | 462438929 | 345.28 | 0.65 |
| 44 | 288618 | -145991 | -3802054268 | 115115 | 3628800384 | 462438929 | 345.28 | 0.67 |
| 45 | 292874 | -146850 | -3925972135 | 115105 | 3726246717 | 462438929 | 345.28 | 0.67 |
| 46 | 297197 | -147724 | -4050431695 | 115096 | 3823511662 | 462438929 | 345.28 | 0.67 |
| 47 | 301586 | -148611 | -4175441932 | 115086 | 3920594133 | 462438929 | 345.28 | 0.67 |
| 48 | 306041 | -149511 | -4301011803 | 115077 | 4017493000 | 462438929 | 345.28 | 0.67 |
| 49 | 310562 | -150426 | -4427150234 | 115067 | 4114207091 | 462438929 | 345.28 | 0.66 |
| 50 | 315150 | -151354 | -4553866120 | 115058 | 4210735188 | 462438929 | 345.28 | 0.66 |
| 51 | 319804 | -152296 | -4681168321 | 115049 | 4307076031 | 462438929 | 345.28 | 0.66 |
| 52 | 324524 | -153251 | -4809065661 | 115040 | 4403228317 | 462438929 | 345.28 | 0.66 |
| 53 | 329311 | -154220 | -4937566926 | 115031 | 4499190700 | 462438929 | 345.28 | 0.65 |
| 54 | 334164 | -155203 | -5066680865 | 115022 | 4594961792 | 462438929 | 345.28 | 0.65 |
| 55 | 339083 | -156200 | -5196416189 | 115013 | 4690540165 | 462438929 | 345.28 | 0.65 |
| 56 | 344069 | -157210 | -5326781567 | 115004 | 4785924347 | 462438929 | 345.28 | 0.65 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 44 " MST - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 3 x 31.5 - (-) "

Pressione trasversale del vento = -706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | -6880.00 | 6000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | -35550.00 | 54500.00 | 4.75 |
| --- | --- | --- | Ft = 59918 | Fp = 7816 | --- |
| --- | --- | Pa = 4896 | Ta = -34925 | La = 48439 | --- |
| --- | --- | Pb = -4896 | Tb = -625 | Lb = 6061 | --- |
| 3.00 | 33.69 | 0.00 | -41740.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = -5546 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = -41740 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | -35550.00 | 54500.00 | 4.75 |
| --- | --- | --- | Ft = 59918 | Fp = 7816 | --- |
| --- | --- | Pa = 4896 | Ta = -34925 | La = 48439 | --- |
| --- | --- | Pb = -4896 | Tb = -625 | Lb = 6061 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|------|----------------------------|-----------|-------------|-----------|------------|-----------|-------------------------|----------|
| 2 | 433 | -7181 | -6996582 | 6000 | 5894394 | 0 | 345.28 | 0.03 |
| 3 | 883 | -7495 | -12985052 | 6000 | 10693654 | -0 | 345.28 | 0.05 |
| 4 | 1350 | -7821 | -19248641 | 6001 | 15508189 | -0 | 345.28 | 0.07 |
| 5 | 1836 | -8160 | -25797715 | 6001 | 20338364 | -0 | 345.28 | 0.09 |
| 6 | 3733 | -8512 | -32688503 | 6002 | 25228554 | -0 | 345.28 | 0.10 |
| 7 | 4822 | -8903 | -40574622 | 6004 | 30644586 | -0 | 345.28 | 0.12 |
| 8 | 9299 | 5136 | -39877403 | 13220 | 40325280 | -0 | 345.28 | 0.06 |
| 9 | 13816 | -44637 | -79253073 | 54446 | 92666040 | 132393172 | 345.28 | 0.13 |
| 10 | 15025 | -45062 | -117973948 | 54446 | 139320833 | 132393172 | 345.28 | 0.17 |
| 11 | 16273 | -45502 | -157104592 | 54446 | 186010128 | 132393172 | 345.28 | 0.22 |
| 12 | 16013 | -52083 | -200382883 | 55528 | 233326812 | 132393172 | 345.28 | 0.26 |
| 13 | 15793 | -47049 | -241474211 | 60506 | 285857645 | 135369349 | 345.28 | 0.29 |
| 14 | 17161 | -47531 | -282328220 | 60507 | 337681792 | 135369349 | 345.28 | 0.32 |
| 15 | 18569 | -48029 | -323638293 | 60507 | 389536366 | 135369349 | 345.28 | 0.35 |
| 16 | 23365 | -45076 | -363554427 | 61270 | 441955424 | 135369349 | 345.28 | 0.37 |
| 17 | 28201 | -125734 | -465727226 | 108950 | 537734037 | 272403528 | 345.28 | 0.44 |
| 18 | 29728 | -126274 | -573661064 | 108950 | 630917991 | 272403528 | 345.28 | 0.50 |
| 19 | 35817 | -126830 | -682217669 | 108952 | 724238557 | 272403528 | 345.28 | 0.55 |
| 20 | 35792 | -131318 | -797042217 | 109213 | 820669050 | 272403528 | 345.28 | 0.60 |
| 21 | 35829 | -128626 | -912956966 | 115011 | 922245254 | 275908854 | 345.28 | 0.45 |
| 22 | 38378 | -129230 | -1026538902 | 115012 | 1023352837 | 275908854 | 345.28 | 0.48 |
| 23 | 40990 | -129849 | -1140695516 | 115012 | 1124490297 | 275908854 | 345.28 | 0.50 |
| 24 | 43666 | -130483 | -1255435949 | 115012 | 1225653895 | 275908854 | 345.28 | 0.53 |
| 25 | 46404 | -131132 | -1370769252 | 115013 | 1326839840 | 275908854 | 345.28 | 0.54 |
| 26 | 49205 | -131796 | -1486704402 | 115013 | 1428044296 | 275908854 | 345.28 | 0.56 |
| 27 | 52070 | -132475 | -1603250305 | 115013 | 1529263393 | 275908854 | 345.28 | 0.58 |
| 28 | 54997 | -133169 | -1720415812 | 115013 | 1630493234 | 275908854 | 345.28 | 0.59 |
| 29 | 57988 | -133879 | -1838209722 | 115013 | 1731729898 | 275908854 | 345.28 | 0.60 |
| 30 | 61042 | -134603 | -1956640788 | 115013 | 1832969451 | 275908854 | 345.28 | 0.61 |
| 31 | 73022 | -135345 | -2075887519 | 115015 | 1934358889 | 275908854 | 345.28 | 0.62 |
| 32 | 76596 | -136091 | -2194229961 | 115017 | 2034440764 | 275908854 | 345.28 | 0.63 |
| 33 | 80241 | -136831 | -2313012302 | 115015 | 2134344546 | 275908854 | 345.28 | 0.57 |
| 34 | 83958 | -137589 | -2432438646 | 115015 | 2234240254 | 275908854 | 345.28 | 0.58 |
| 35 | 87747 | -138361 | -2552517204 | 115015 | 2334124089 | 275908854 | 345.28 | 0.58 |
| 36 | 91607 | -139147 | -2673256181 | 115015 | 2433992265 | 275908854 | 345.28 | 0.58 |
| 37 | 95538 | -139949 | -2794663761 | 115014 | 2533841000 | 275908854 | 345.28 | 0.59 |
| 38 | 99541 | -140765 | -2916748111 | 115014 | 2633666517 | 275908854 | 345.28 | 0.59 |
| 39 | 103615 | -141596 | -3039517380 | 115014 | 2733465043 | 275908854 | 345.28 | 0.59 |
| 40 | 107761 | -142441 | -3162979700 | 115013 | 2833232813 | 275908854 | 345.28 | 0.59 |
| 41 | 111979 | -143301 | -3287143189 | 115013 | 2932960665 | 275908854 | 345.28 | 0.59 |
| 42 | 129045 | -144177 | -3412142979 | 115014 | 3032771398 | 275908854 | 345.28 | 0.60 |
| 43 | 133169 | -145035 | -3533463014 | 115013 | 3129062889 | 275908854 | 345.28 | 0.60 |
| 44 | 137358 | -145890 | -3655456553 | 115012 | 3225321912 | 275908854 | 345.28 | 0.62 |
| 45 | 141614 | -146758 | -3778103961 | 115011 | 3321521829 | 275908854 | 345.28 | 0.62 |
| 46 | 145937 | -147640 | -3901412466 | 115011 | 3417659368 | 275908854 | 345.28 | 0.62 |
| 47 | 150326 | -148536 | -4025389281 | 115010 | 3513731258 | 275908854 | 345.28 | 0.62 |
| 48 | 154781 | -149445 | -4150041604 | 115009 | 3609734233 | 275908854 | 345.28 | 0.62 |
| 49 | 159302 | -150367 | -4275376623 | 115008 | 3705665032 | 275908854 | 345.28 | 0.62 |
| 50 | 163890 | -151304 | -4401401517 | 115007 | 3801520401 | 275908854 | 345.28 | 0.62 |
| 51 | 168544 | -152253 | -4528123451 | 115006 | 3897297090 | 275908854 | 345.28 | 0.61 |
| 52 | 173264 | -153217 | -4655549581 | 115005 | 3992991856 | 275908854 | 345.28 | 0.61 |
| 53 | 178051 | -154194 | -4783687050 | 115004 | 4088601461 | 275908854 | 345.28 | 0.61 |
| 54 | 182904 | -155184 | -4912542990 | 115003 | 4184122672 | 275908854 | 345.28 | 0.61 |
| 55 | 187823 | -156189 | -5042124521 | 115002 | 4279552261 | 275908854 | 345.28 | 0.61 |
| 56 | 192809 | -157207 | -5172438754 | 115001 | 4374887007 | 275908854 | 345.28 | 0.61 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 45 " MST - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 - (-) "

Pressione trasversale del vento = -706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 3270.00 | -3340.00 | 27500.00 | 0.00 |
| 2.00 | 37.16 | 51640.00 | -40950.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 71051 | Fp = -79569 | --- |
| --- | --- | Pa = 59916 | Ta = 38187 | La = 0 | --- |
| --- | --- | Pb = -8276 | Tb = -79137 | Lb = 0 | --- |
| 3.00 | 33.69 | 51640.00 | -40950.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 60169 | Fp = 8658 | --- |
| --- | --- | Pa = 50739 | Ta = -32339 | La = 0 | --- |
| --- | --- | Pb = 901 | Tb = -8611 | Lb = 0 | --- |
| 4.00 | 30.23 | 44870.00 | -34890.00 | 52000.00 | 4.75 |
| --- | --- | --- | Ft = 95342 | Fp = -40239 | --- |
| --- | --- | Pa = 27738 | Ta = -26229 | La = 87365 | --- |
| --- | --- | Pb = 17132 | Tb = -8661 | Lb = -35365 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|------|----------------------|---------|-------------|--------|------------|-----------|-------------------|-------|
| 2 | 3703 | -3649 | -3608760 | 27507 | 27075176 | 0 | 345.28 | 0.09 |
| 3 | 4153 | -3963 | -6860132 | 27508 | 49076464 | 0 | 345.28 | 0.15 |
| 4 | 4620 | -4290 | -10382284 | 27509 | 71090673 | 0 | 345.28 | 0.20 |
| 5 | 5106 | -4629 | -14185459 | 27509 | 93117045 | 0 | 345.28 | 0.24 |
| 6 | 7003 | -4984 | -18313490 | 27513 | 115195897 | -0 | 345.28 | 0.28 |
| 7 | 8092 | -5391 | -23289723 | 27529 | 139025989 | 0 | 345.28 | 0.32 |
| 8 | 40079 | 240153 | 120849258 | 27573 | 163599016 | 0 | 345.28 | 0.23 |
| 9 | 72106 | 31876 | 188129485 | 27630 | 189131847 | 0 | 345.28 | 0.28 |
| 10 | 73314 | 31449 | 212867610 | 27631 | 214650882 | 0 | 345.28 | 0.30 |
| 11 | 74563 | 31009 | 237153511 | 27631 | 240154312 | 0 | 345.28 | 0.31 |
| 12 | 97983 | -148666 | 153974920 | 27669 | 266275359 | 0 | 345.28 | 0.27 |
| 13 | 121443 | -81474 | -2796977 | 27704 | 292980382 | 0 | 345.28 | 0.24 |
| 14 | 122811 | -81953 | -75671636 | 27701 | 319633394 | 0 | 345.28 | 0.26 |
| 15 | 124219 | -82446 | -148981055 | 27697 | 346233543 | 0 | 345.28 | 0.28 |
| 16 | 140886 | -41021 | -198996021 | 29088 | 373957972 | 0 | 345.28 | 0.29 |
| 17 | 157592 | -118367 | -240973530 | 115097 | 479978697 | 247154098 | 345.28 | 0.35 |
| 18 | 159120 | -118899 | -345977392 | 115090 | 581191738 | 247154098 | 345.28 | 0.41 |
| 19 | 165208 | -119452 | -451523377 | 115088 | 682397222 | 247154098 | 345.28 | 0.47 |
| 20 | 176197 | -106983 | -554961432 | 113701 | 787431307 | 247154098 | 345.28 | 0.52 |
| 21 | 187249 | -129295 | -663063424 | 79729 | 857823582 | 226699475 | 345.28 | 0.39 |
| 22 | 189798 | -129891 | -780877504 | 79723 | 931046652 | 226699475 | 345.28 | 0.41 |
| 23 | 192410 | -130502 | -899161774 | 79716 | 1004165935 | 226699475 | 345.28 | 0.44 |
| 24 | 195086 | -131128 | -1017918799 | 79709 | 1077178453 | 226699475 | 345.28 | 0.46 |
| 25 | 197824 | -131769 | -1137152292 | 79702 | 1150081651 | 226699475 | 345.28 | 0.47 |
| 26 | 200625 | -132425 | -1256866941 | 79694 | 1222873320 | 226699475 | 345.28 | 0.49 |
| 27 | 203490 | -133096 | -1377068267 | 79687 | 1295551533 | 226699475 | 345.28 | 0.50 |
| 28 | 206417 | -133782 | -1497762502 | 79680 | 1368114598 | 226699475 | 345.28 | 0.52 |
| 29 | 209408 | -134482 | -1618956479 | 79672 | 1440561007 | 226699475 | 345.28 | 0.53 |
| 30 | 212462 | -135198 | -1740657549 | 79665 | 1512889406 | 226699475 | 345.28 | 0.54 |
| 31 | 224442 | -135937 | -1863038437 | 79664 | 1585221015 | 226699475 | 345.28 | 0.55 |
| 32 | 228016 | -136699 | -1984707568 | 79678 | 1656795324 | 226699475 | 345.28 | 0.55 |
| 33 | 231661 | -137407 | -2106327866 | 79649 | 1727845006 | 226699475 | 345.28 | 0.50 |
| 34 | 235378 | -138156 | -2228475208 | 79642 | 1798788160 | 226699475 | 345.28 | 0.51 |
| 35 | 239167 | -138921 | -2351158099 | 79636 | 1869623665 | 226699475 | 345.28 | 0.51 |
| 36 | 243027 | -139700 | -2474385390 | 79629 | 1940350575 | 226699475 | 345.28 | 0.52 |
| 37 | 246958 | -140494 | -2598166063 | 79623 | 2010967950 | 226699475 | 345.28 | 0.52 |
| 38 | 250961 | -141302 | -2722509215 | 79616 | 2081474851 | 226699475 | 345.28 | 0.52 |
| 39 | 255035 | -142126 | -2847424030 | 79610 | 2151870334 | 226699475 | 345.28 | 0.52 |
| 40 | 259181 | -142964 | -2972919768 | 79603 | 2222153446 | 226699475 | 345.28 | 0.53 |
| 41 | 263399 | -143816 | -3099005745 | 79597 | 2292323221 | 226699475 | 345.28 | 0.53 |
| 42 | 280465 | -144689 | -3225816265 | 79595 | 2362466050 | 226699475 | 345.28 | 0.53 |
| 43 | 284589 | -145538 | -3348735065 | 79586 | 2430036123 | 226699475 | 345.28 | 0.53 |
| 44 | 288778 | -146387 | -3472291357 | 79581 | 2497522149 | 226699475 | 345.28 | 0.55 |
| 45 | 293034 | -147248 | -3596377164 | 79574 | 2564883791 | 226699475 | 345.28 | 0.55 |
| 46 | 297357 | -148122 | -3721021153 | 79568 | 2632120366 | 226699475 | 345.28 | 0.55 |
| 47 | 301746 | -149011 | -3846231938 | 79561 | 2699231115 | 226699475 | 345.28 | 0.55 |
| 48 | 306201 | -149912 | -3972018135 | 79554 | 2766215251 | 226699475 | 345.28 | 0.55 |
| 49 | 310722 | -150828 | -4098388352 | 79548 | 2833071958 | 226699475 | 345.28 | 0.55 |
| 50 | 315310 | -151757 | -4225351188 | 79541 | 2899800389 | 226699475 | 345.28 | 0.55 |
| 51 | 319964 | -152700 | -4352915228 | 79535 | 2966399667 | 226699475 | 345.28 | 0.55 |
| 52 | 324684 | -153656 | -4481089043 | 79528 | 3032868887 | 226699475 | 345.28 | 0.55 |
| 53 | 329471 | -154627 | -4609881182 | 79522 | 3099207114 | 226699475 | 345.28 | 0.55 |
| 54 | 334324 | -155611 | -4739300175 | 79515 | 3165413387 | 226699475 | 345.28 | 0.54 |
| 55 | 339243 | -156608 | -4869354529 | 79509 | 3231486712 | 226699475 | 345.28 | 0.54 |
| 56 | 344229 | -157620 | -5000052727 | 79503 | 3297426073 | 226699475 | 345.28 | 0.54 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 46 " MST - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 - (-) "

Pressione trasversale del vento = -706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | -3340.00 | 27500.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | -40950.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 5441 | Fp = -44114 | --- |
| --- | --- | Pa = 4588 | Ta = 2924 | La = 0 | --- |
| --- | --- | Pb = -4588 | Tb = -43874 | Lb = 0 | --- |
| 3.00 | 33.69 | 0.00 | -40950.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = -5441 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = -40950 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | -34890.00 | 52000.00 | 4.75 |
| --- | --- | --- | Ft = 58016 | Fp = 7012 | --- |
| --- | --- | Pa = 4429 | Ta = -34276 | La = 46598 | --- |
| --- | --- | Pb = -4429 | Tb = -614 | Lb = 5402 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|------|----------------------|---------|-------------|--------|------------|-----------|-------------------|-------|
| 2 | 433 | -3641 | -3524968 | 27500 | 26962720 | 0 | 345.28 | 0.09 |
| 3 | 883 | -3955 | -6694258 | 27500 | 48850842 | -0 | 345.28 | 0.15 |
| 4 | 1350 | -4281 | -10136185 | 27500 | 70751762 | -0 | 345.28 | 0.20 |
| 5 | 1836 | -4620 | -13861128 | 27501 | 92665156 | -0 | 345.28 | 0.24 |
| 6 | 3733 | -4972 | -17918255 | 27501 | 114626901 | -0 | 345.28 | 0.28 |
| 7 | 4822 | -5362 | -22751284 | 27503 | 138203117 | -0 | 345.28 | 0.32 |
| 8 | 9145 | 13079 | -16412592 | 27503 | 161760183 | -0 | 345.28 | 0.18 |
| 9 | 13508 | -3247 | -16343688 | 27504 | 185425628 | 0 | 345.28 | 0.19 |
| 10 | 14717 | -3672 | -19894521 | 27505 | 209112958 | 0 | 345.28 | 0.20 |
| 11 | 15965 | -4112 | -23853866 | 27505 | 232821416 | 0 | 345.28 | 0.21 |
| 12 | 15859 | -18036 | -36341408 | 27505 | 256516515 | 0 | 345.28 | 0.22 |
| 13 | 15793 | -48908 | -84180682 | 27505 | 280199360 | -0 | 345.28 | 0.23 |
| 14 | 17161 | -49391 | -126550082 | 27505 | 303902871 | -0 | 345.28 | 0.24 |
| 15 | 18569 | -49888 | -169376665 | 27505 | 327626241 | -0 | 345.28 | 0.25 |
| 16 | 23131 | -47597 | -211174952 | 28238 | 351854828 | -0 | 345.28 | 0.27 |
| 17 | 27733 | -126154 | -314598464 | 74106 | 417759173 | 131825709 | 345.28 | 0.32 |
| 18 | 29261 | -126694 | -422804177 | 74106 | 481161994 | 131825709 | 345.28 | 0.37 |
| 19 | 35349 | -127249 | -531626405 | 74107 | 544661492 | 131825709 | 345.28 | 0.42 |
| 20 | 35558 | -131367 | -646478877 | 74339 | 610324116 | 131825709 | 345.28 | 0.47 |
| 21 | 35829 | -129035 | -762411305 | 79508 | 680664209 | 134949945 | 345.28 | 0.36 |
| 22 | 38378 | -129639 | -876284202 | 79508 | 750579808 | 134949945 | 345.28 | 0.38 |
| 23 | 40990 | -130258 | -990732448 | 79509 | 820515902 | 134949945 | 345.28 | 0.41 |
| 24 | 43666 | -130892 | -1105765342 | 79509 | 890469860 | 134949945 | 345.28 | 0.43 |
| 25 | 46404 | -131541 | -1221392085 | 79509 | 960439014 | 134949945 | 345.28 | 0.44 |
| 26 | 49205 | -132205 | -1337621787 | 79509 | 1030420671 | 134949945 | 345.28 | 0.46 |
| 27 | 52070 | -132884 | -1454463487 | 79509 | 1100412116 | 134949945 | 345.28 | 0.48 |
| 28 | 54997 | -133578 | -1571926153 | 79510 | 1170410616 | 134949945 | 345.28 | 0.49 |
| 29 | 57988 | -134288 | -1690018697 | 79510 | 1240413427 | 134949945 | 345.28 | 0.50 |
| 30 | 61042 | -135012 | -1808749980 | 79510 | 1310417794 | 134949945 | 345.28 | 0.51 |
| 31 | 73022 | -135753 | -1928290994 | 79511 | 1380527591 | 134949945 | 345.28 | 0.52 |
| 32 | 76596 | -136499 | -2046917033 | 79512 | 1449735152 | 134949945 | 345.28 | 0.53 |
| 33 | 80241 | -137240 | -2165993231 | 79511 | 1518816543 | 134949945 | 345.28 | 0.48 |
| 34 | 83958 | -137997 | -2285715172 | 79511 | 1587891857 | 134949945 | 345.28 | 0.49 |
| 35 | 87747 | -138770 | -2406091141 | 79511 | 1656958441 | 134949945 | 345.28 | 0.49 |
| 36 | 91607 | -139556 | -2527129416 | 79510 | 1726013657 | 134949945 | 345.28 | 0.49 |
| 37 | 95538 | -140358 | -2648838247 | 79510 | 1795054865 | 134949945 | 345.28 | 0.50 |
| 38 | 99541 | -141174 | -2771225866 | 79510 | 1864079434 | 134949945 | 345.28 | 0.50 |
| 39 | 103615 | -142005 | -2894300485 | 79510 | 1933084734 | 134949945 | 345.28 | 0.50 |
| 40 | 107761 | -142850 | -3018070297 | 79509 | 2002068140 | 134949945 | 345.28 | 0.51 |
| 41 | 111979 | -143710 | -3142543479 | 79509 | 2071027033 | 134949945 | 345.28 | 0.51 |
| 42 | 129045 | -144586 | -3267850834 | 79510 | 2140036424 | 134949945 | 345.28 | 0.51 |
| 43 | 133169 | -145444 | -3389471272 | 79509 | 2206615176 | 134949945 | 345.28 | 0.51 |
| 44 | 137358 | -146299 | -3511767096 | 79509 | 2273170923 | 134949945 | 345.28 | 0.53 |
| 45 | 141614 | -147168 | -3634719630 | 79508 | 2339684955 | 134949945 | 345.28 | 0.53 |
| 46 | 145937 | -148049 | -3758336126 | 79508 | 2406154999 | 134949945 | 345.28 | 0.53 |
| 47 | 150326 | -148945 | -3882623823 | 79507 | 2472578783 | 134949945 | 345.28 | 0.53 |
| 48 | 154781 | -149854 | -4007589946 | 79506 | 2538954039 | 134949945 | 345.28 | 0.53 |
| 49 | 159302 | -150777 | -4133241711 | 79506 | 2605278501 | 134949945 | 345.28 | 0.53 |
| 50 | 163890 | -151713 | -4259586322 | 79505 | 2671549910 | 134949945 | 345.28 | 0.53 |
| 51 | 168544 | -152663 | -4386630971 | 79504 | 2737766008 | 134949945 | 345.28 | 0.53 |
| 52 | 173264 | -153627 | -4514382842 | 79503 | 2803924542 | 134949945 | 345.28 | 0.53 |
| 53 | 178051 | -154604 | -4642849105 | 79503 | 2870023263 | 134949945 | 345.28 | 0.53 |
| 54 | 182904 | -155594 | -4772036920 | 79502 | 2936059925 | 134949945 | 345.28 | 0.53 |
| 55 | 187823 | -156599 | -4901953435 | 79501 | 3002032285 | 134949945 | 345.28 | 0.53 |
| 56 | 192809 | -157617 | -5032605787 | 79500 | 3067938105 | 134949945 | 345.28 | 0.53 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 47 " MST - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 "

Pressione trasversale del vento = -706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 6540.00 | -6680.00 | 5000.00 | 0.00 |
| 2.00 | 37.16 | 44870.00 | -34890.00 | 52000.00 | 4.75 |
| --- | --- | --- | Ft = 95342 | Fp = -40239 | --- |
| --- | --- | Pa = 27738 | Ta = -26229 | La = 87365 | --- |
| --- | --- | Pb = 17132 | Tb = -8661 | Lb = -35365 | --- |
| 3.00 | 33.69 | 51640.00 | -40950.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 60169 | Fp = 8658 | --- |
| --- | --- | Pa = 50739 | Ta = -32339 | La = 0 | --- |
| --- | --- | Pb = 901 | Tb = -8611 | Lb = 0 | --- |
| 4.00 | 30.23 | 44870.00 | -34890.00 | 52000.00 | 4.75 |
| --- | --- | --- | Ft = 95342 | Fp = -40239 | --- |
| --- | --- | Pa = 27738 | Ta = -26229 | La = 87365 | --- |
| --- | --- | Pb = 17132 | Tb = -8661 | Lb = -35365 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|------|----------------------|---------|-------------|--------|------------|-----------|-------------------|-------|
| 2 | 6973 | -6997 | -7047250 | 5017 | 5184005 | 0 | 345.28 | 0.03 |
| 3 | 7423 | -7312 | -13123631 | 5018 | 9460353 | -0 | 345.28 | 0.05 |
| 4 | 7890 | -7639 | -19475051 | 5019 | 13754339 | 0 | 345.28 | 0.07 |
| 5 | 8376 | -7978 | -26111625 | 5020 | 18066273 | 0 | 345.28 | 0.08 |
| 6 | 10273 | -8334 | -33090349 | 5024 | 22447667 | -0 | 345.28 | 0.10 |
| 7 | 11362 | -8750 | -41337152 | 5052 | 27642549 | 0 | 345.28 | 0.12 |
| 8 | 27260 | 98182 | 15514303 | 18077 | 40744661 | 0 | 345.28 | 0.05 |
| 9 | 43197 | -35832 | -2134048 | 92464 | 131176258 | 238783602 | 345.28 | 0.14 |
| 10 | 44406 | -36259 | -34492058 | 92465 | 211316109 | 238783602 | 345.28 | 0.21 |
| 11 | 45655 | -36700 | -67262839 | 92467 | 291475166 | 238783602 | 345.28 | 0.27 |
| 12 | 81779 | -172607 | -181364024 | 86230 | 369272501 | 238783602 | 345.28 | 0.35 |
| 13 | 117943 | -78772 | -324941105 | 57253 | 417870751 | 221416721 | 345.28 | 0.43 |
| 14 | 119311 | -79252 | -396277899 | 57250 | 470709373 | 221416721 | 345.28 | 0.46 |
| 15 | 120719 | -79745 | -467978062 | 57246 | 523472738 | 221416721 | 345.28 | 0.50 |
| 16 | 137386 | -38323 | -516409607 | 58644 | 577486478 | 221416721 | 345.28 | 0.52 |
| 17 | 154092 | -115670 | -556817258 | 144659 | 709908206 | 468570819 | 345.28 | 0.57 |
| 18 | 155620 | -116202 | -660179778 | 144650 | 837479135 | 468570819 | 345.28 | 0.64 |
| 19 | 161708 | -116755 | -764038605 | 144649 | 965037044 | 468570819 | 345.28 | 0.69 |
| 20 | 172697 | -104297 | -866000715 | 143292 | 1097832588 | 468570819 | 345.28 | 0.75 |
| 21 | 183749 | -126599 | -972322241 | 109294 | 1195357395 | 448116195 | 345.28 | 0.55 |
| 22 | 186298 | -127194 | -1088314703 | 109285 | 1295677901 | 448116195 | 345.28 | 0.57 |
| 23 | 188910 | -127805 | -1204739256 | 109277 | 1395858250 | 448116195 | 345.28 | 0.59 |
| 24 | 191586 | -128430 | -1321601268 | 109268 | 1495894490 | 448116195 | 345.28 | 0.61 |
| 25 | 194324 | -129070 | -1438906973 | 109259 | 1595783218 | 448116195 | 345.28 | 0.62 |
| 26 | 197125 | -129725 | -1556663336 | 109250 | 1695521484 | 448116195 | 345.28 | 0.64 |
| 27 | 199990 | -130395 | -1674877934 | 109241 | 1795106707 | 448116195 | 345.28 | 0.65 |
| 28 | 202917 | -131080 | -1793558855 | 109231 | 1894536605 | 448116195 | 345.28 | 0.66 |
| 29 | 205908 | -131780 | -1912714622 | 109222 | 1993809141 | 448116195 | 345.28 | 0.67 |
| 30 | 208962 | -132495 | -2032354115 | 109213 | 2092922471 | 448116195 | 345.28 | 0.68 |
| 31 | 220942 | -133233 | -2152666092 | 109212 | 2192043428 | 448116195 | 345.28 | 0.68 |
| 32 | 224516 | -133997 | -2272314128 | 109230 | 2290122659 | 448116195 | 345.28 | 0.69 |
| 33 | 228161 | -134702 | -2391856258 | 109193 | 2387491663 | 448116195 | 345.28 | 0.62 |
| 34 | 231878 | -135451 | -2511908904 | 109185 | 2484716884 | 448116195 | 345.28 | 0.62 |
| 35 | 235667 | -136214 | -2632481422 | 109176 | 2581796777 | 448116195 | 345.28 | 0.63 |
| 36 | 239527 | -136993 | -2753583453 | 109168 | 2678730015 | 448116195 | 345.28 | 0.63 |
| 37 | 243458 | -137786 | -2875224710 | 109159 | 2775515282 | 448116195 | 345.28 | 0.63 |
| 38 | 247461 | -138594 | -2997414953 | 109151 | 2872151259 | 448116195 | 345.28 | 0.63 |
| 39 | 251535 | -139417 | -3120163978 | 109142 | 2968636618 | 448116195 | 345.28 | 0.63 |
| 40 | 255681 | -140254 | -3243481609 | 109134 | 3064970015 | 448116195 | 345.28 | 0.63 |
| 41 | 259899 | -141106 | -3367377679 | 109126 | 3161150089 | 448116195 | 345.28 | 0.63 |
| 42 | 276965 | -141978 | -3491995060 | 109123 | 3257295603 | 448116195 | 345.28 | 0.63 |
| 43 | 281089 | -142826 | -3612802662 | 109112 | 3349916882 | 448116195 | 345.28 | 0.63 |
| 44 | 285278 | -143675 | -3734199428 | 109106 | 3442424308 | 448116195 | 345.28 | 0.65 |
| 45 | 289534 | -144535 | -3856134843 | 109097 | 3534763060 | 448116195 | 345.28 | 0.65 |
| 46 | 293857 | -145409 | -3978617959 | 109088 | 3626932158 | 448116195 | 345.28 | 0.65 |
| 47 | 298246 | -146297 | -4101657747 | 109079 | 3718930526 | 448116195 | 345.28 | 0.65 |
| 48 | 302701 | -147198 | -4225263151 | 109071 | 3810757046 | 448116195 | 345.28 | 0.64 |
| 49 | 307222 | -148113 | -4349443084 | 109062 | 3902410562 | 448116195 | 345.28 | 0.64 |
| 50 | 311810 | -149041 | -4474206429 | 109054 | 3993889874 | 448116195 | 345.28 | 0.64 |
| 51 | 316464 | -149983 | -4599562036 | 109045 | 4085193744 | 448116195 | 345.28 | 0.64 |
| 52 | 321184 | -150939 | -4725518718 | 109037 | 4176320894 | 448116195 | 345.28 | 0.64 |
| 53 | 325971 | -151909 | -4852085256 | 109028 | 4267270007 | 448116195 | 345.28 | 0.63 |
| 54 | 330824 | -152892 | -4979270389 | 109020 | 4358039724 | 448116195 | 345.28 | 0.63 |
| 55 | 335743 | -153889 | -5107082823 | 109012 | 4448628652 | 448116195 | 345.28 | 0.63 |
| 56 | 340729 | -154900 | -5235531224 | 109004 | 4539035359 | 448116195 | 345.28 | 0.62 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 48 " MST - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 "

Pressione trasversale del vento = -706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | -6680.00 | 5000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | -34890.00 | 52000.00 | 4.75 |
| --- | --- | --- | Ft = 58016 | Fp = 7012 | --- |
| --- | --- | Pa = 4429 | Ta = -34276 | La = 46598 | --- |
| --- | --- | Pb = -4429 | Tb = -614 | Lb = 5402 | --- |
| 3.00 | 33.69 | 0.00 | -40950.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = -5441 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = -40950 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | -34890.00 | 52000.00 | 4.75 |
| --- | --- | --- | Ft = 58016 | Fp = 7012 | --- |
| --- | --- | Pa = 4429 | Ta = -34276 | La = 46598 | --- |
| --- | --- | Pb = -4429 | Tb = -614 | Lb = 5402 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Usa |
|------|----------------------------|-----------|-------------|-----------|------------|-----------|--------------------------------------|----------|
| 2 | 433 | -6981 | -6800326 | 5000 | 4913526 | 0 | 345.28 | 0.03 |
| 3 | 883 | -7295 | -12629279 | 5000 | 8916026 | 0 | 345.28 | 0.05 |
| 4 | 1350 | -7621 | -18733083 | 5001 | 12932902 | 0 | 345.28 | 0.06 |
| 5 | 1836 | -7960 | -25122100 | 5001 | 16964511 | 0 | 345.28 | 0.08 |
| 6 | 3733 | -8312 | -31851788 | 5002 | 21052650 | 0 | 345.28 | 0.09 |
| 7 | 4822 | -8703 | -39562634 | 5004 | 25601857 | -0 | 345.28 | 0.11 |
| 8 | 9065 | 3557 | -39770085 | 11945 | 34246466 | -0 | 345.28 | 0.06 |
| 9 | 13348 | -43787 | -78618418 | 51604 | 83919465 | 127361100 | 345.28 | 0.12 |
| 10 | 14557 | -44213 | -116594657 | 51604 | 128122261 | 127361100 | 345.28 | 0.16 |
| 11 | 15805 | -44653 | -154980200 | 51605 | 172357974 | 127361100 | 345.28 | 0.21 |
| 12 | 15779 | -50658 | -197165918 | 52569 | 217159554 | 127361100 | 345.28 | 0.24 |
| 13 | 15793 | -46188 | -237460028 | 57006 | 266614861 | 130013714 | 345.28 | 0.28 |
| 14 | 17161 | -46671 | -277575444 | 57006 | 315442136 | 130013714 | 345.28 | 0.31 |
| 15 | 18569 | -47168 | -318146339 | 57007 | 364298286 | 130013714 | 345.28 | 0.33 |
| 16 | 23131 | -44877 | -357694550 | 57740 | 413688798 | 130013714 | 345.28 | 0.36 |
| 17 | 27733 | -123434 | -458871814 | 103608 | 504782712 | 261839424 | 345.28 | 0.42 |
| 18 | 29261 | -123974 | -564827636 | 103608 | 593380854 | 261839424 | 345.28 | 0.48 |
| 19 | 35349 | -124530 | -671404002 | 103610 | 682108736 | 261839424 | 345.28 | 0.53 |
| 20 | 35558 | -128648 | -783967976 | 103843 | 773786112 | 261839424 | 345.28 | 0.58 |
| 21 | 35829 | -126316 | -897581042 | 109011 | 870032382 | 264963660 | 345.28 | 0.44 |
| 22 | 38378 | -126919 | -1009133400 | 109011 | 965862886 | 264963660 | 345.28 | 0.46 |
| 23 | 40990 | -127538 | -1121259826 | 109011 | 1061721723 | 264963660 | 345.28 | 0.49 |
| 24 | 43666 | -128172 | -1233969530 | 109012 | 1157605355 | 264963660 | 345.28 | 0.51 |
| 25 | 46404 | -128821 | -1347271639 | 109012 | 1253510192 | 264963660 | 345.28 | 0.53 |
| 26 | 49205 | -129485 | -1461175201 | 109012 | 1349432603 | 264963660 | 345.28 | 0.54 |
| 27 | 52070 | -130165 | -1575689199 | 109012 | 1445368923 | 264963660 | 345.28 | 0.56 |
| 28 | 54997 | -130859 | -1690822560 | 109013 | 1541315463 | 264963660 | 345.28 | 0.57 |
| 29 | 57988 | -131568 | -1806584157 | 109013 | 1637268511 | 264963660 | 345.28 | 0.58 |
| 30 | 61042 | -132293 | -1922982822 | 109013 | 1733224339 | 264963660 | 345.28 | 0.59 |
| 31 | 73022 | -133034 | -2040194268 | 109014 | 1829322056 | 264963660 | 345.28 | 0.60 |
| 32 | 76596 | -133780 | -2156527809 | 109016 | 1924180264 | 264963660 | 345.28 | 0.61 |
| 33 | 80241 | -134521 | -2273304612 | 109014 | 2018869970 | 264963660 | 345.28 | 0.55 |
| 34 | 83958 | -135278 | -2390725545 | 109014 | 2113552073 | 264963660 | 345.28 | 0.56 |
| 35 | 87747 | -136050 | -2508798894 | 109014 | 2208222971 | 264963660 | 345.28 | 0.56 |
| 36 | 91607 | -136837 | -2627532939 | 109014 | 2302879081 | 264963660 | 345.28 | 0.56 |
| 37 | 95538 | -137639 | -2746935937 | 109014 | 2397516821 | 264963660 | 345.28 | 0.57 |
| 38 | 99541 | -138455 | -2867016131 | 109013 | 2492132610 | 264963660 | 345.28 | 0.57 |
| 39 | 103615 | -139285 | -2987781742 | 109013 | 2586722877 | 264963660 | 345.28 | 0.57 |
| 40 | 107761 | -140131 | -3109240979 | 109013 | 2681284053 | 264963660 | 345.28 | 0.57 |
| 41 | 111979 | -140990 | -3231402032 | 109012 | 2775812576 | 264963660 | 345.28 | 0.57 |
| 42 | 129045 | -141867 | -3354397985 | 109013 | 2870409354 | 264963660 | 345.28 | 0.58 |
| 43 | 133169 | -142725 | -3473784660 | 109012 | 2961675768 | 264963660 | 345.28 | 0.58 |
| 44 | 137358 | -143580 | -3593845452 | 109012 | 3052911462 | 264963660 | 345.28 | 0.60 |
| 45 | 141614 | -144448 | -3714561240 | 109011 | 3144091218 | 264963660 | 345.28 | 0.60 |
| 46 | 145937 | -145330 | -3835939318 | 109010 | 3235211935 | 264963660 | 345.28 | 0.60 |
| 47 | 150326 | -146225 | -3957986962 | 109009 | 3326270513 | 264963660 | 345.28 | 0.60 |
| 48 | 154781 | -147134 | -4080711437 | 109008 | 3417263858 | 264963660 | 345.28 | 0.60 |
| 49 | 159302 | -148057 | -4204119995 | 109007 | 3508188881 | 264963660 | 345.28 | 0.60 |
| 50 | 163890 | -148993 | -4328219880 | 109007 | 3599042498 | 264963660 | 345.28 | 0.60 |
| 51 | 168544 | -149943 | -4453018320 | 109006 | 3689821629 | 264963660 | 345.28 | 0.59 |
| 52 | 173264 | -150907 | -4578522537 | 109005 | 3780523203 | 264963660 | 345.28 | 0.59 |
| 53 | 178051 | -151884 | -4704739737 | 109004 | 3871144150 | 264963660 | 345.28 | 0.59 |
| 54 | 182904 | -152874 | -4831677117 | 109003 | 3961681408 | 264963660 | 345.28 | 0.59 |
| 55 | 187823 | -153879 | -4959341861 | 109002 | 4052131919 | 264963660 | 345.28 | 0.59 |
| 56 | 192809 | -154897 | -5087741144 | 109001 | 4142492630 | 264963660 | 345.28 | 0.59 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 49 " MST - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 - (-) "

Pressione trasversale del vento = -176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 5430.00 | -3020.00 | 36000.00 | 0.00 |
| 2.00 | 37.16 | 69900.00 | -29920.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 92785 | Fp = -80224 | --- |
| --- | --- | Pa = 78244 | Ta = 49869 | La = 0 | --- |
| --- | --- | Pb = -8344 | Tb = -79789 | Lb = 0 | --- |
| 3.00 | 33.69 | 69900.00 | -29920.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 84834 | Fp = -15761 | --- |
| --- | --- | Pa = 71539 | Ta = -45596 | La = 0 | --- |
| --- | --- | Pb = -1639 | Tb = 15676 | Lb = 0 | --- |
| 4.00 | 30.23 | 60080.00 | -25130.00 | 63000.00 | 4.75 |
| --- | --- | --- | Ft = 110696 | Fp = -42402 | --- |
| --- | --- | Pa = 47731 | Ta = -7612 | La = 99586 | --- |
| --- | --- | Pb = 12349 | Tb = -17518 | Lb = -36586 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Usa |
|------|----------------------------|-----------|-------------|-----------|------------|-----------|--------------------------------------|----------|
| 2 | 5863 | -3105 | -3100596 | 36019 | 35538099 | 0 | 345.28 | 0.12 |
| 3 | 6313 | -3184 | -5710463 | 36020 | 64432805 | 0 | 345.28 | 0.20 |
| 4 | 6780 | -3266 | -8390828 | 36022 | 93342630 | 0 | 345.28 | 0.26 |
| 5 | 7266 | -3351 | -11144217 | 36023 | 122266138 | -0 | 345.28 | 0.32 |
| 6 | 9163 | -3442 | -13990612 | 36029 | 151254451 | -0 | 345.28 | 0.37 |
| 7 | 10252 | -3557 | -17267477 | 36064 | 182625816 | 0 | 345.28 | 0.42 |
| 8 | 51403 | 317530 | 174943436 | 36160 | 215246161 | 0 | 345.28 | 0.31 |
| 9 | 92594 | 45991 | 267675565 | 36286 | 249470158 | -0 | 345.28 | 0.38 |
| 10 | 93802 | 45884 | 305232054 | 36286 | 283655825 | 0 | 345.28 | 0.41 |
| 11 | 95051 | 45775 | 342590201 | 36285 | 317799932 | 0 | 345.28 | 0.42 |
| 12 | 128837 | -197259 | 235128406 | 36379 | 353108802 | 0 | 345.28 | 0.37 |
| 13 | 162663 | -79941 | 50035994 | 36468 | 389516315 | 0 | 345.28 | 0.33 |
| 14 | 164031 | -80058 | -20570017 | 36459 | 425810821 | -0 | 345.28 | 0.33 |
| 15 | 165439 | -80177 | -91291768 | 36448 | 461990577 | 0 | 345.28 | 0.35 |
| 16 | 190832 | -1457 | -117016531 | 38064 | 499746311 | 0 | 345.28 | 0.36 |
| 17 | 216266 | -72429 | -67895078 | 136131 | 627021104 | 281727774 | 345.28 | 0.41 |
| 18 | 217793 | -72555 | -132930428 | 136112 | 748729368 | 281727774 | 345.28 | 0.47 |
| 19 | 223882 | -72689 | -198131649 | 136102 | 870351563 | 281727774 | 345.28 | 0.52 |
| 20 | 232479 | -63943 | -261752306 | 134784 | 997505878 | 281727774 | 345.28 | 0.56 |
| 21 | 241139 | -90495 | -338653049 | 99502 | 1087459446 | 260566795 | 345.28 | 0.41 |
| 22 | 243688 | -90637 | -421370488 | 99485 | 1180258628 | 260566795 | 345.28 | 0.43 |
| 23 | 246300 | -90782 | -504167477 | 99468 | 1272865616 | 260566795 | 345.28 | 0.45 |
| 24 | 248976 | -90931 | -587036760 | 99451 | 1365276669 | 260566795 | 345.28 | 0.46 |
| 25 | 251714 | -91084 | -669972391 | 99434 | 1457488806 | 260566795 | 345.28 | 0.47 |
| 26 | 254515 | -91240 | -752969541 | 99416 | 1549499668 | 260566795 | 345.28 | 0.48 |
| 27 | 257380 | -91400 | -836024341 | 99399 | 1641307406 | 260566795 | 345.28 | 0.49 |
| 28 | 260307 | -91564 | -919133742 | 99382 | 1732910585 | 260566795 | 345.28 | 0.50 |
| 29 | 263298 | -91731 | -1002295400 | 99364 | 1824308102 | 260566795 | 345.28 | 0.51 |
| 30 | 266352 | -91902 | -1085507576 | 99347 | 1915499123 | 260566795 | 345.28 | 0.52 |
| 31 | 278332 | -92084 | -1168875926 | 99341 | 2006640005 | 260566795 | 345.28 | 0.52 |
| 32 | 281906 | -92287 | -1251527861 | 99370 | 2096905684 | 260566795 | 345.28 | 0.53 |
| 33 | 285551 | -92436 | -1333780972 | 99308 | 2186325304 | 260566795 | 345.28 | 0.48 |
| 34 | 289268 | -92616 | -1416090209 | 99293 | 2275562810 | 260566795 | 345.28 | 0.48 |
| 35 | 293057 | -92800 | -1498455708 | 99279 | 2364617632 | 260566795 | 345.28 | 0.48 |
| 36 | 296917 | -92988 | -1580877999 | 99264 | 2453489552 | 260566795 | 345.28 | 0.48 |
| 37 | 300848 | -93179 | -1663357787 | 99250 | 2542178359 | 260566795 | 345.28 | 0.48 |
| 38 | 304851 | -93375 | -1745895929 | 99236 | 2630683838 | 260566795 | 345.28 | 0.48 |
| 39 | 308925 | -93574 | -1828493406 | 99222 | 2719005758 | 260566795 | 345.28 | 0.48 |
| 40 | 313071 | -93776 | -1911151307 | 99208 | 2807143866 | 260566795 | 345.28 | 0.48 |
| 41 | 317289 | -93983 | -1993870815 | 99194 | 2895097877 | 260566795 | 345.28 | 0.48 |
| 42 | 334355 | -94197 | -2076734343 | 99188 | 2982979147 | 260566795 | 345.28 | 0.48 |
| 43 | 338479 | -94401 | -2156750281 | 99171 | 3067589037 | 260566795 | 345.28 | 0.48 |
| 44 | 342668 | -94608 | -2236852359 | 99161 | 3152064990 | 260566795 | 345.28 | 0.50 |
| 45 | 346924 | -94817 | -2316998224 | 99147 | 3236346670 | 260566795 | 345.28 | 0.50 |
| 46 | 351247 | -95028 | -2397189355 | 99133 | 3320434093 | 260566795 | 345.28 | 0.50 |
| 47 | 355636 | -95244 | -2477427203 | 99119 | 3404327131 | 260566795 | 345.28 | 0.50 |
| 48 | 360091 | -95462 | -2557713240 | 99106 | 3488025600 | 260566795 | 345.28 | 0.50 |
| 49 | 364612 | -95685 | -2638048948 | 99093 | 3571529261 | 260566795 | 345.28 | 0.49 |
| 50 | 369200 | -95910 | -2718435821 | 99080 | 3654837817 | 260566795 | 345.28 | 0.49 |
| 51 | 373854 | -96140 | -2798875357 | 99067 | 3737950918 | 260566795 | 345.28 | 0.49 |
| 52 | 378574 | -96372 | -2879369052 | 99054 | 3820868157 | 260566795 | 345.28 | 0.49 |
| 53 | 383361 | -96609 | -2959918405 | 99042 | 3903589073 | 260566795 | 345.28 | 0.49 |
| 54 | 388214 | -96848 | -3040524906 | 99030 | 3986113151 | 260566795 | 345.28 | 0.48 |
| 55 | 393133 | -97092 | -3121190041 | 99018 | 4068439825 | 260566795 | 345.28 | 0.48 |
| 56 | 398119 | -97339 | -3201915285 | 99006 | 4150568476 | 260566795 | 345.28 | 0.48 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 50 " MST - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 - (-) "

Pressione trasversale del vento = -176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | -3020.00 | 36000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | -29920.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 3975 | Fp = -32231 | --- |
| --- | --- | Pa = 3352 | Ta = 2137 | La = 0 | --- |
| --- | --- | Pb = -3352 | Tb = -32057 | Lb = 0 | --- |
| 3.00 | 33.69 | 0.00 | -29920.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = -3975 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = -29920 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | -25130.00 | 63000.00 | 4.75 |
| --- | --- | --- | Ft = 55993 | Fp = 16919 | --- |
| --- | --- | Pa = 9245 | Ta = -25768 | La = 48844 | --- |
| --- | --- | Pb = -9245 | Tb = 638 | Lb = 14156 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Usa |
|------|----------------------------|-----------|-------------|-----------|------------|-----------|--------------------------------------|----------|
| 2 | 433 | -3095 | -3027780 | 36000 | 35296104 | 0 | 345.28 | 0.12 |
| 3 | 883 | -3173 | -5567824 | 36000 | 63948530 | 0 | 345.28 | 0.19 |
| 4 | 1350 | -3255 | -8181585 | 36001 | 92617123 | 0 | 345.28 | 0.26 |
| 5 | 1836 | -3339 | -10871789 | 36001 | 121301435 | -0 | 345.28 | 0.31 |
| 6 | 3733 | -3427 | -13667401 | 36002 | 150046712 | -0 | 345.28 | 0.36 |
| 7 | 4822 | -3526 | -16850663 | 36004 | 180897300 | -0 | 345.28 | 0.41 |
| 8 | 8527 | 10139 | -11697599 | 36003 | 211702485 | -0 | 345.28 | 0.23 |
| 9 | 12272 | -1591 | -10938152 | 36005 | 242623882 | -0 | 345.28 | 0.25 |
| 10 | 13481 | -1698 | -12648157 | 36005 | 273573417 | 0 | 345.28 | 0.26 |
| 11 | 14729 | -1807 | -14475479 | 36006 | 304550068 | -0 | 345.28 | 0.27 |
| 12 | 15241 | -11763 | -22361668 | 36006 | 335529246 | 0 | 345.28 | 0.28 |
| 13 | 15793 | -34094 | -55899299 | 36006 | 366511252 | -0 | 345.28 | 0.29 |
| 14 | 17161 | -34215 | -85241568 | 36006 | 397518538 | -0 | 345.28 | 0.30 |
| 15 | 18569 | -34339 | -114713229 | 36007 | 428549999 | -0 | 345.28 | 0.31 |
| 16 | 25540 | -22878 | -137765372 | 36776 | 460192180 | -0 | 345.28 | 0.31 |
| 17 | 32550 | -90288 | -197689666 | 84855 | 535594655 | 138179764 | 345.28 | 0.35 |
| 18 | 34077 | -90423 | -274978652 | 84855 | 608372263 | 138179764 | 345.28 | 0.39 |
| 19 | 40166 | -90562 | -352482767 | 84857 | 681265202 | 138179764 | 345.28 | 0.43 |
| 20 | 37966 | -97996 | -436874803 | 85460 | 756833625 | 138179764 | 345.28 | 0.46 |
| 21 | 35829 | -90215 | -521396331 | 99010 | 845041546 | 146367139 | 345.28 | 0.35 |
| 22 | 38378 | -90366 | -600754278 | 99011 | 932105272 | 146367139 | 345.28 | 0.37 |
| 23 | 40990 | -90520 | -680271224 | 99011 | 1019194528 | 146367139 | 345.28 | 0.39 |
| 24 | 43666 | -90678 | -759947752 | 99011 | 1106306039 | 146367139 | 345.28 | 0.40 |
| 25 | 46404 | -90840 | -839784380 | 99012 | 1193436486 | 146367139 | 345.28 | 0.42 |
| 26 | 49205 | -91006 | -919781576 | 99012 | 1280582518 | 146367139 | 345.28 | 0.43 |
| 27 | 52070 | -91175 | -999939762 | 99012 | 1367740756 | 146367139 | 345.28 | 0.44 |
| 28 | 54997 | -91349 | -1080259326 | 99012 | 1454907798 | 146367139 | 345.28 | 0.45 |
| 29 | 57988 | -91525 | -1160740619 | 99012 | 1542080229 | 146367139 | 345.28 | 0.46 |
| 30 | 61042 | -91706 | -1241383969 | 99012 | 1629254619 | 146367139 | 345.28 | 0.47 |
| 31 | 73022 | -91892 | -1322299203 | 99014 | 1716560209 | 146367139 | 345.28 | 0.48 |
| 32 | 76596 | -92079 | -1402321151 | 99016 | 1802742175 | 146367139 | 345.28 | 0.48 |
| 33 | 80241 | -92262 | -1482374908 | 99014 | 1888767176 | 146367139 | 345.28 | 0.44 |
| 34 | 83958 | -92451 | -1562587107 | 99013 | 1974784635 | 146367139 | 345.28 | 0.44 |
| 35 | 87747 | -92643 | -1642957973 | 99013 | 2060791250 | 146367139 | 345.28 | 0.44 |
| 36 | 91607 | -92839 | -1723487732 | 99013 | 2146783734 | 146367139 | 345.28 | 0.45 |
| 37 | 95538 | -93039 | -1804176602 | 99013 | 2232758805 | 146367139 | 345.28 | 0.45 |
| 38 | 99541 | -93242 | -1885024797 | 99013 | 2318713184 | 146367139 | 345.28 | 0.45 |
| 39 | 103615 | -93449 | -1966032526 | 99012 | 2404643599 | 146367139 | 345.28 | 0.45 |
| 40 | 107761 | -93660 | -2047199997 | 99012 | 2490546781 | 146367139 | 345.28 | 0.45 |
| 41 | 111979 | -93874 | -2128527410 | 99011 | 2576419470 | 146367139 | 345.28 | 0.45 |
| 42 | 129045 | -94093 | -2210097083 | 99012 | 2662355011 | 146367139 | 345.28 | 0.45 |
| 43 | 133169 | -94306 | -2288978806 | 99011 | 2745263794 | 146367139 | 345.28 | 0.45 |
| 44 | 137358 | -94519 | -2368014246 | 99011 | 2828143957 | 146367139 | 345.28 | 0.47 |
| 45 | 141614 | -94735 | -2447186221 | 99010 | 2910972216 | 146367139 | 345.28 | 0.47 |
| 46 | 145937 | -94955 | -2526494918 | 99009 | 2993745742 | 146367139 | 345.28 | 0.47 |
| 47 | 150326 | -95178 | -2605940525 | 99009 | 3076461705 | 146367139 | 345.28 | 0.47 |
| 48 | 154781 | -95404 | -2685523226 | 99008 | 3159117281 | 146367139 | 345.28 | 0.47 |
| 49 | 159302 | -95634 | -2765243208 | 99007 | 3241709650 | 146367139 | 345.28 | 0.47 |
| 50 | 163890 | -95867 | -2845100659 | 99006 | 3324235999 | 146367139 | 345.28 | 0.46 |
| 51 | 168544 | -96103 | -2925095765 | 99005 | 3406693516 | 146367139 | 345.28 | 0.46 |
| 52 | 173264 | -96343 | -3005228713 | 99004 | 3489079397 | 146367139 | 345.28 | 0.46 |
| 53 | 178051 | -96586 | -3085499690 | 99003 | 3571390841 | 146367139 | 345.28 | 0.46 |
| 54 | 182904 | -96832 | -3165908884 | 99002 | 3653625051 | 146367139 | 345.28 | 0.46 |
| 55 | 187823 | -97082 | -3246456481 | 99001 | 3735779237 | 146367139 | 345.28 | 0.46 |
| 56 | 192809 | -97335 | -3327142669 | 99001 | 3817850611 | 146367139 | 345.28 | 0.45 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 51 " MST - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 "

Pressione trasversale del vento = -176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 10860.00 | -6030.00 | 8000.00 | 0.00 |
| 2.00 | 37.16 | 60080.00 | -25130.00 | 63000.00 | 4.75 |
| -- | -- | -- | Ft = 110696 | Fp = -42402 | -- |
| -- | -- | Pa = 47731 | Ta = -7612 | La = 99586 | -- |
| -- | -- | Pb = 12349 | Tb = -17518 | Lb = -36586 | -- |
| 3.00 | 33.69 | 69900.00 | -29920.00 | 0.00 | -4.75 |
| -- | -- | -- | Ft = 84834 | Fp = -15761 | -- |
| -- | -- | Pa = 71539 | Ta = -45596 | La = 0 | -- |
| -- | -- | Pb = -1639 | Tb = 15676 | Lb = 0 | -- |
| 4.00 | 30.23 | 60080.00 | -25130.00 | 63000.00 | 4.75 |
| -- | -- | -- | Ft = 110696 | Fp = -42402 | -- |
| -- | -- | Pa = 47731 | Ta = -7612 | La = 99586 | -- |
| -- | -- | Pb = 12349 | Tb = -17518 | Lb = -36586 | -- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|-------------|--------|------------|-----------|--------------------------------|-------|
| 2 | 11293 | -6130 | -6251063 | 8047 | 8423631 | 0 | 345.28 | 0.04 |
| 3 | 11743 | -6209 | -11458513 | 8049 | 15388238 | -0 | 345.28 | 0.06 |
| 4 | 12210 | -6291 | -16740135 | 8050 | 22373762 | 0 | 345.28 | 0.08 |
| 5 | 12696 | -6376 | -22098233 | 8052 | 29380242 | 0 | 345.28 | 0.10 |
| 6 | 14593 | -6467 | -27565005 | 8058 | 36470056 | 0 | 345.28 | 0.11 |
| 7 | 15682 | -6600 | -33899164 | 8125 | 44917931 | 0 | 345.28 | 0.13 |
| 8 | 41577 | 183578 | 75638524 | 23000 | 62705307 | -0 | 345.28 | 0.11 |
| 9 | 67511 | -14489 | 90799132 | 107853 | 169240731 | 272186353 | 345.28 | 0.20 |
| 10 | 68719 | -14596 | 76771078 | 107854 | 264030508 | 272186353 | 345.28 | 0.27 |
| 11 | 69968 | -14706 | 62604900 | 107855 | 358821852 | 272186353 | 345.28 | 0.33 |
| 12 | 114100 | -221231 | -74547283 | 101484 | 451859746 | 272186353 | 345.28 | 0.39 |
| 13 | 158273 | -78218 | -249149904 | 71584 | 515340936 | 254219745 | 345.28 | 0.47 |
| 14 | 159641 | -78333 | -319315397 | 71574 | 583140550 | 254219745 | 345.28 | 0.51 |
| 15 | 161049 | -78451 | -389503245 | 71562 | 650790151 | 254219745 | 345.28 | 0.54 |
| 16 | 186442 | 263 | -414751018 | 73194 | 720255141 | 254219745 | 345.28 | 0.56 |
| 17 | 211876 | -70716 | -365189594 | 171275 | 879453505 | 535947519 | 345.28 | 0.61 |
| 18 | 213403 | -70838 | -429687069 | 171252 | 1033013819 | 535947519 | 345.28 | 0.67 |
| 19 | 219492 | -70971 | -494279961 | 171240 | 1186459590 | 535947519 | 345.28 | 0.73 |
| 20 | 228089 | -62251 | -557619150 | 169986 | 1347321267 | 535947519 | 345.28 | 0.79 |
| 21 | 236749 | -88774 | -633786823 | 134639 | 1469946943 | 514786541 | 345.28 | 0.57 |
| 22 | 239298 | -88914 | -715716181 | 134618 | 1595360081 | 514786541 | 345.28 | 0.59 |
| 23 | 241910 | -89057 | -797673832 | 134597 | 1720520858 | 514786541 | 345.28 | 0.61 |
| 24 | 244586 | -89203 | -879656104 | 134575 | 1845424180 | 514786541 | 345.28 | 0.63 |
| 25 | 247324 | -89354 | -961660288 | 134554 | 1970065956 | 514786541 | 345.28 | 0.64 |
| 26 | 250125 | -89507 | -1043684491 | 134532 | 2094442919 | 514786541 | 345.28 | 0.65 |
| 27 | 252990 | -89665 | -1125727502 | 134510 | 2218552476 | 514786541 | 345.28 | 0.66 |
| 28 | 255917 | -89826 | -1207788691 | 134488 | 2342392581 | 514786541 | 345.28 | 0.67 |
| 29 | 258908 | -89992 | -1289867918 | 134466 | 2465961631 | 514786541 | 345.28 | 0.68 |
| 30 | 261962 | -90161 | -1371965450 | 134444 | 2589258376 | 514786541 | 345.28 | 0.68 |
| 31 | 273942 | -90341 | -1454204093 | 134437 | 2712493612 | 514786541 | 345.28 | 0.69 |
| 32 | 277516 | -90547 | -1535768290 | 134474 | 2834536231 | 514786541 | 345.28 | 0.69 |
| 33 | 281161 | -90689 | -1616853884 | 134395 | 2955456701 | 514786541 | 345.28 | 0.62 |
| 34 | 284878 | -90868 | -1697972644 | 134376 | 3076136598 | 514786541 | 345.28 | 0.62 |
| 35 | 288667 | -91050 | -1779125824 | 134358 | 3196575053 | 514786541 | 345.28 | 0.62 |
| 36 | 292527 | -91236 | -1860315016 | 134339 | 3316771646 | 514786541 | 345.28 | 0.62 |
| 37 | 296458 | -91426 | -1941541901 | 134321 | 3436725973 | 514786541 | 345.28 | 0.62 |
| 38 | 300461 | -91620 | -2022808234 | 134303 | 3556437622 | 514786541 | 345.28 | 0.62 |
| 39 | 304535 | -91817 | -2104115825 | 134285 | 3675906162 | 514786541 | 345.28 | 0.62 |
| 40 | 308681 | -92018 | -2185466527 | 134267 | 3795131134 | 514786541 | 345.28 | 0.62 |
| 41 | 312899 | -92223 | -2266862225 | 134250 | 3914112039 | 514786541 | 345.28 | 0.62 |
| 42 | 329965 | -92437 | -2348394678 | 134242 | 4032999044 | 514786541 | 345.28 | 0.62 |
| 43 | 334089 | -92639 | -2427106430 | 134220 | 4147466164 | 514786541 | 345.28 | 0.61 |
| 44 | 338278 | -92845 | -2505892798 | 134207 | 4261755479 | 514786541 | 345.28 | 0.64 |
| 45 | 342534 | -93052 | -2584707885 | 134189 | 4375786528 | 514786541 | 345.28 | 0.63 |
| 46 | 346857 | -93262 | -2663553690 | 134171 | 4489559225 | 514786541 | 345.28 | 0.63 |
| 47 | 351246 | -93476 | -2742432141 | 134154 | 4603073296 | 514786541 | 345.28 | 0.63 |
| 48 | 355701 | -93694 | -2821345151 | 134137 | 4716328397 | 514786541 | 345.28 | 0.63 |
| 49 | 360222 | -93914 | -2900294616 | 134120 | 4829324109 | 514786541 | 345.28 | 0.62 |
| 50 | 364810 | -94139 | -2979282412 | 134103 | 4942059940 | 514786541 | 345.28 | 0.62 |
| 51 | 369464 | -94367 | -3058310392 | 134086 | 5054535325 | 514786541 | 345.28 | 0.62 |
| 52 | 374184 | -94598 | -3137380390 | 134070 | 5166749628 | 514786541 | 345.28 | 0.61 |
| 53 | 378971 | -94833 | -3216494209 | 134054 | 5278702141 | 514786541 | 345.28 | 0.61 |
| 54 | 383824 | -95072 | -3295653632 | 134038 | 5390392084 | 514786541 | 345.28 | 0.60 |
| 55 | 388743 | -95314 | -3374860414 | 134023 | 5501818611 | 514786541 | 345.28 | 0.60 |
| 56 | 393729 | -95559 | -3454116280 | 134008 | 5612980807 | 514786541 | 345.28 | 0.60 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 52 " MST - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 - (-) "

Pressione trasversale del vento = -176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | -6030.00 | 8000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | -25130.00 | 63000.00 | 4.75 |
| --- | --- | --- | Ft = 55993 | Fp = 16919 | --- |
| --- | --- | Pa = 9245 | Ta = -25768 | La = 48844 | --- |
| --- | --- | Pb = -9245 | Tb = 638 | Lb = 14156 | --- |
| 3.00 | 33.69 | 0.00 | -29920.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = -3975 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = -29920 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | -25130.00 | 63000.00 | 4.75 |
| --- | --- | --- | Ft = 55993 | Fp = 16919 | --- |
| --- | --- | Pa = 9245 | Ta = -25768 | La = 48844 | --- |
| --- | --- | Pb = -9245 | Tb = 638 | Lb = 14156 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|--------|-------------|--------|------------|-----------|--------------------------------|-------|
| 2 | 433 | -6105 | -5979101 | 8000 | 7856511 | 0 | 345.28 | 0.03 |
| 3 | 883 | -6183 | -10915161 | 8000 | 14250061 | -0 | 345.28 | 0.05 |
| 4 | 1350 | -6265 | -15926477 | 8001 | 20661098 | -0 | 345.28 | 0.07 |
| 5 | 1836 | -6349 | -21015743 | 8001 | 27090007 | -0 | 345.28 | 0.09 |
| 6 | 3733 | -6438 | -26216258 | 8002 | 33587521 | -0 | 345.28 | 0.10 |
| 7 | 4822 | -6536 | -31983052 | 8005 | 40746094 | -0 | 345.28 | 0.12 |
| 8 | 11474 | 26605 | -17511154 | 15282 | 52288450 | -0 | 345.28 | 0.06 |
| 9 | 18165 | -32509 | -42734884 | 56854 | 106951519 | 133499958 | 345.28 | 0.12 |
| 10 | 19374 | -32615 | -70830767 | 56855 | 155883979 | 133499958 | 345.28 | 0.16 |
| 11 | 20622 | -32725 | -99043690 | 56855 | 204853656 | 133499958 | 345.28 | 0.20 |
| 12 | 18188 | -44083 | -134233916 | 59381 | 255226058 | 133499958 | 345.28 | 0.24 |
| 13 | 15793 | -32315 | -163044887 | 71008 | 317716689 | 140451402 | 345.28 | 0.28 |
| 14 | 17161 | -32435 | -190915175 | 71008 | 378518843 | 140451402 | 345.28 | 0.31 |
| 15 | 18569 | -32559 | -218913699 | 71009 | 439356056 | 140451402 | 345.28 | 0.34 |
| 16 | 25540 | -21099 | -240500932 | 71779 | 500854493 | 140451402 | 345.28 | 0.36 |
| 17 | 32550 | -88509 | -298966397 | 119859 | 606161956 | 278631166 | 345.28 | 0.42 |
| 18 | 34077 | -88644 | -374793214 | 119859 | 708851440 | 278631166 | 345.28 | 0.47 |
| 19 | 40166 | -88783 | -450837412 | 119861 | 811693259 | 278631166 | 345.28 | 0.51 |
| 20 | 37966 | -96217 | -533741138 | 120466 | 918128406 | 278631166 | 345.28 | 0.56 |
| 21 | 35829 | -88436 | -616748237 | 134014 | 1037058112 | 286818541 | 345.28 | 0.42 |
| 22 | 38378 | -88586 | -694590968 | 134014 | 1154854059 | 286818541 | 345.28 | 0.45 |
| 23 | 40990 | -88741 | -772591832 | 134015 | 1272684952 | 286818541 | 345.28 | 0.47 |
| 24 | 43666 | -88899 | -850751346 | 134015 | 1390546474 | 286818541 | 345.28 | 0.49 |
| 25 | 46404 | -89061 | -929069972 | 134015 | 1508434247 | 286818541 | 345.28 | 0.51 |
| 26 | 49205 | -89227 | -1007548129 | 134016 | 1626343835 | 286818541 | 345.28 | 0.52 |
| 27 | 52070 | -89396 | -1086186198 | 134016 | 1744270765 | 286818541 | 345.28 | 0.53 |
| 28 | 54997 | -89569 | -1164984529 | 134016 | 1862210525 | 286818541 | 345.28 | 0.55 |
| 29 | 57988 | -89746 | -1243943445 | 134016 | 1980158577 | 286818541 | 345.28 | 0.56 |
| 30 | 61042 | -89927 | -1323063249 | 134016 | 2098110366 | 286818541 | 345.28 | 0.57 |
| 31 | 73022 | -90113 | -1402457246 | 134018 | 2216235281 | 286818541 | 345.28 | 0.57 |
| 32 | 76596 | -90299 | -1480982508 | 134021 | 2332835181 | 286818541 | 345.28 | 0.58 |
| 33 | 80241 | -90483 | -1559534538 | 134018 | 2449230129 | 286818541 | 345.28 | 0.53 |
| 34 | 83958 | -90672 | -1638243869 | 134018 | 2565616087 | 286818541 | 345.28 | 0.53 |
| 35 | 87747 | -90864 | -1717110720 | 134018 | 2681988647 | 286818541 | 345.28 | 0.53 |
| 36 | 91607 | -91060 | -1796135317 | 134017 | 2798343418 | 286818541 | 345.28 | 0.54 |
| 37 | 95538 | -91260 | -1875317879 | 134017 | 2914676013 | 286818541 | 345.28 | 0.54 |
| 38 | 99541 | -91463 | -1954658621 | 134017 | 3030982049 | 286818541 | 345.28 | 0.54 |
| 39 | 103615 | -91670 | -2034157756 | 134016 | 3147257147 | 286818541 | 345.28 | 0.54 |
| 40 | 107761 | -91881 | -2113815497 | 134016 | 3263496936 | 286818541 | 345.28 | 0.54 |
| 41 | 111979 | -92095 | -2193632052 | 134015 | 3379697053 | 286818541 | 345.28 | 0.54 |
| 42 | 129045 | -92313 | -2273691458 | 134016 | 3495980598 | 286818541 | 345.28 | 0.54 |
| 43 | 133169 | -92527 | -2351113461 | 134015 | 3608171017 | 286818541 | 345.28 | 0.54 |
| 44 | 137358 | -92740 | -2428688254 | 134014 | 3720324074 | 286818541 | 345.28 | 0.57 |
| 45 | 141614 | -92956 | -2506398312 | 134014 | 3832408978 | 286818541 | 345.28 | 0.56 |
| 46 | 145937 | -93175 | -2584243849 | 134013 | 3944421926 | 286818541 | 345.28 | 0.56 |
| 47 | 150326 | -93398 | -2662225073 | 134012 | 4056359113 | 286818541 | 345.28 | 0.56 |
| 48 | 154781 | -93624 | -2740342195 | 134010 | 4168216745 | 286818541 | 345.28 | 0.56 |
| 49 | 159302 | -93854 | -2818595423 | 134009 | 4279991030 | 286818541 | 345.28 | 0.56 |
| 50 | 163890 | -94087 | -2896984967 | 134008 | 4391678185 | 286818541 | 345.28 | 0.56 |
| 51 | 168544 | -94323 | -2975511037 | 134007 | 4503274434 | 286818541 | 345.28 | 0.56 |
| 52 | 173264 | -94563 | -3054173842 | 134006 | 4614776006 | 286818541 | 345.28 | 0.55 |
| 53 | 178051 | -94806 | -3132973591 | 134005 | 4726179137 | 286818541 | 345.28 | 0.55 |
| 54 | 182904 | -95052 | -3211910495 | 134003 | 4837480070 | 286818541 | 345.28 | 0.55 |
| 55 | 187823 | -95302 | -3290984762 | 134002 | 4948675052 | 286818541 | 345.28 | 0.55 |
| 56 | 192809 | -95555 | -3370196600 | 134001 | 5059760339 | 286818541 | 345.28 | 0.54 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 53 " MST - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 2 x 40.5 "

Pressione trasversale del vento = 706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 3530.00 | 3520.00 | 31000.00 | 0.00 |
| 2.00 | 37.16 | 54320.00 | 38720.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 63870 | Fp = 4416 | --- |
| --- | --- | Pa = 53861 | Ta = 34328 | La = 0 | --- |
| --- | --- | Pb = 459 | Tb = 4392 | Lb = 0 | --- |
| 3.00 | 33.69 | 54320.00 | 38720.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 74159 | Fp = -79007 | --- |
| --- | --- | Pa = 62537 | Ta = -39858 | La = 0 | --- |
| --- | --- | Pb = -8217 | Tb = 78578 | Lb = 0 | --- |
| 4.00 | 30.23 | 54320.00 | 38720.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 63870 | Fp = 4416 | --- |
| --- | --- | Pa = 53861 | Ta = 34328 | La = 0 | --- |
| --- | --- | Pb = 459 | Tb = 4392 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|------|----------------------|---------|------------|--------|------------|----------|-------------------|-------|
| 2 | 3963 | 3832 | 3841606 | 31005 | 30476771 | 0 | 345.28 | 0.10 |
| 3 | 4413 | 4146 | 7298037 | 31005 | 55227716 | 0 | 345.28 | 0.17 |
| 4 | 4880 | 4474 | 11030947 | 31006 | 79986773 | 0 | 345.28 | 0.23 |
| 5 | 5366 | 4813 | 15050765 | 31006 | 104752825 | 0 | 345.28 | 0.27 |
| 6 | 7263 | 5169 | 19417763 | 31008 | 129553104 | 0 | 345.28 | 0.31 |
| 7 | 8352 | 5583 | 24779909 | 31019 | 156194846 | 0 | 345.28 | 0.36 |
| 8 | 37311 | 227164 | 166236818 | 31042 | 183256353 | 0 | 345.28 | 0.27 |
| 9 | 66311 | 40850 | 241184320 | 31074 | 210878277 | 0 | 345.28 | 0.33 |
| 10 | 67519 | 41276 | 278629858 | 31074 | 238473947 | -0 | 345.28 | 0.36 |
| 11 | 68768 | 41717 | 316432587 | 31074 | 266041261 | -0 | 345.28 | 0.37 |
| 12 | 102454 | -147291 | 243640904 | 31108 | 294160646 | -0 | 345.28 | 0.33 |
| 13 | 136181 | 7335 | 164280675 | 31141 | 322780021 | -0 | 345.28 | 0.30 |
| 14 | 137549 | 7813 | 175520570 | 31138 | 351315627 | -0 | 345.28 | 0.30 |
| 15 | 138957 | 8304 | 187168836 | 31135 | 379766432 | -0 | 345.28 | 0.31 |
| 16 | 164126 | 110695 | 259001805 | 31154 | 408484408 | -0 | 345.28 | 0.33 |
| 17 | 189335 | 122338 | 508414318 | 31171 | 437432897 | -0 | 345.28 | 0.43 |
| 18 | 190863 | 122865 | 618547181 | 31164 | 466259389 | -0 | 345.28 | 0.47 |
| 19 | 196951 | 123414 | 729150549 | 31161 | 495021414 | -0 | 345.28 | 0.51 |
| 20 | 199604 | 124716 | 846440872 | 31227 | 525589960 | -0 | 345.28 | 0.54 |
| 21 | 202319 | 128952 | 965273223 | 31149 | 554924278 | -0 | 345.28 | 0.40 |
| 22 | 204868 | 129544 | 1083886223 | 31144 | 584179942 | -0 | 345.28 | 0.42 |
| 23 | 207480 | 130151 | 1202912975 | 31139 | 613357168 | -0 | 345.28 | 0.44 |
| 24 | 210156 | 130773 | 1322357987 | 31134 | 642456687 | -0 | 345.28 | 0.45 |
| 25 | 212894 | 131410 | 1442226806 | 31129 | 671479239 | -0 | 345.28 | 0.47 |
| 26 | 215695 | 132062 | 1562525852 | 31124 | 700425562 | -0 | 345.28 | 0.48 |
| 27 | 218560 | 132729 | 1683262285 | 31119 | 729296376 | -0 | 345.28 | 0.49 |
| 28 | 221487 | 133411 | 1804443882 | 31114 | 758092381 | -0 | 345.28 | 0.50 |
| 29 | 224478 | 134108 | 1926078937 | 31109 | 786814245 | -0 | 345.28 | 0.51 |
| 30 | 227532 | 134820 | 2048176184 | 31104 | 815462603 | -0 | 345.28 | 0.51 |
| 31 | 239512 | 135557 | 2170927494 | 31103 | 844098764 | -0 | 345.28 | 0.52 |
| 32 | 243086 | 136324 | 2293019299 | 31111 | 872464264 | -0 | 345.28 | 0.53 |
| 33 | 246731 | 137019 | 2414924007 | 31093 | 900546022 | -0 | 345.28 | 0.48 |
| 34 | 250448 | 137766 | 2537320117 | 31089 | 928565239 | -0 | 345.28 | 0.48 |
| 35 | 254237 | 138527 | 2660217020 | 31084 | 956522160 | -0 | 345.28 | 0.48 |
| 36 | 258097 | 139303 | 2783624466 | 31080 | 984417086 | -0 | 345.28 | 0.49 |
| 37 | 262028 | 140094 | 2907552292 | 31076 | 1012250274 | -0 | 345.28 | 0.49 |
| 38 | 266031 | 140900 | 3032010401 | 31072 | 1040021940 | -0 | 345.28 | 0.49 |
| 39 | 270105 | 141720 | 3157008742 | 31067 | 1067732257 | -0 | 345.28 | 0.49 |
| 40 | 274251 | 142555 | 3282557298 | 31063 | 1095381359 | -0 | 345.28 | 0.49 |
| 41 | 278469 | 143405 | 3408666074 | 31059 | 1122969341 | -0 | 345.28 | 0.49 |
| 42 | 295535 | 144276 | 3535480529 | 31058 | 1150537995 | -0 | 345.28 | 0.49 |
| 43 | 299659 | 145122 | 3658387638 | 31052 | 1177075941 | -0 | 345.28 | 0.49 |
| 44 | 303848 | 145969 | 3781871267 | 31049 | 1203569255 | -0 | 345.28 | 0.51 |
| 45 | 308104 | 146827 | 3905875986 | 31045 | 1229998095 | -0 | 345.28 | 0.51 |
| 46 | 312427 | 147699 | 4030411053 | 31041 | 1256362573 | -0 | 345.28 | 0.51 |
| 47 | 316816 | 148584 | 4155485629 | 31037 | 1282662739 | -0 | 345.28 | 0.51 |
| 48 | 321271 | 149483 | 4281108847 | 31033 | 1308898611 | -0 | 345.28 | 0.51 |
| 49 | 325792 | 150396 | 4407289811 | 31029 | 1335070175 | -0 | 345.28 | 0.51 |
| 50 | 330380 | 151323 | 4534037590 | 31025 | 1361177388 | -0 | 345.28 | 0.51 |
| 51 | 335034 | 152263 | 4661361217 | 31021 | 1387220178 | -0 | 345.28 | 0.51 |
| 52 | 339754 | 153217 | 4789269690 | 31017 | 1413198444 | -0 | 345.28 | 0.51 |
| 53 | 344541 | 154185 | 4917771965 | 31013 | 1439112061 | -0 | 345.28 | 0.51 |
| 54 | 349394 | 155167 | 5046876961 | 31009 | 1464960876 | -0 | 345.28 | 0.50 |
| 55 | 354313 | 156162 | 5176593552 | 31006 | 1490744715 | -0 | 345.28 | 0.50 |
| 56 | 359299 | 157171 | 5306930574 | 31002 | 1516463376 | -0 | 345.28 | 0.50 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 54 " MST - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 2 x 40.5 "

Pressione trasversale del vento = 706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | 3520.00 | 31000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | 38720.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = -5145 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = 38720 | Lb = 0 | --- |
| 3.00 | 33.69 | 0.00 | 38720.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 5145 | Fp = -41711 | --- |
| --- | --- | Pa = 4338 | Ta = -2765 | La = 0 | --- |
| --- | --- | Pb = -4338 | Tb = 41485 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | 38720.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = -5145 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = 38720 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Usa |
|------|----------------------------|-----------|------------|-----------|------------|----------|--------------------------------------|----------|
| 2 | 433 | 3821 | 3700646 | 31000 | 30389925 | 0 | 345.28 | 0.10 |
| 3 | 883 | 4135 | 7011563 | 31000 | 55054818 | 0 | 345.28 | 0.17 |
| 4 | 1350 | 4461 | 10594337 | 31000 | 79729395 | 0 | 345.28 | 0.22 |
| 5 | 1836 | 4800 | 14459312 | 31000 | 104413126 | 0 | 345.28 | 0.27 |
| 6 | 3733 | 5152 | 18653361 | 31001 | 129132572 | 0 | 345.28 | 0.31 |
| 7 | 4822 | 5542 | 23621850 | 31002 | 155606028 | 0 | 345.28 | 0.36 |
| 8 | 6851 | 5937 | 28847797 | 31001 | 182017753 | 0 | 345.28 | 0.20 |
| 9 | 8920 | 6349 | 34479616 | 31002 | 208463346 | 0 | 345.28 | 0.21 |
| 10 | 10128 | 6774 | 40504512 | 31002 | 234924163 | 0 | 345.28 | 0.23 |
| 11 | 11377 | 7214 | 46935323 | 31002 | 261399010 | 0 | 345.28 | 0.23 |
| 12 | 15734 | 1340 | 50154139 | 31003 | 287937340 | 0 | 345.28 | 0.24 |
| 13 | 20132 | 44094 | 86504897 | 31003 | 314533309 | -0 | 345.28 | 0.25 |
| 14 | 21500 | 44577 | 124876800 | 31004 | 341134955 | -0 | 345.28 | 0.27 |
| 15 | 22908 | 45074 | 163701853 | 31004 | 367741008 | -0 | 345.28 | 0.28 |
| 16 | 23086 | 53863 | 207855742 | 31004 | 394332968 | -0 | 345.28 | 0.29 |
| 17 | 23305 | 87595 | 288579503 | 31004 | 420911370 | 0 | 345.28 | 0.31 |
| 18 | 24832 | 88135 | 363928810 | 31004 | 447492155 | 0 | 345.28 | 0.34 |
| 19 | 30921 | 88691 | 439888311 | 31004 | 474125995 | 0 | 345.28 | 0.36 |
| 20 | 33343 | 90919 | 519840093 | 31007 | 501665550 | 0 | 345.28 | 0.38 |
| 21 | 35829 | 128584 | 635904087 | 31005 | 529038754 | 0 | 345.28 | 0.29 |
| 22 | 38378 | 129188 | 749325741 | 31005 | 556420322 | 0 | 345.28 | 0.31 |
| 23 | 40990 | 129807 | 863323079 | 31005 | 583808918 | 0 | 345.28 | 0.33 |
| 24 | 43666 | 130441 | 977905553 | 31005 | 611203219 | 0 | 345.28 | 0.35 |
| 25 | 46404 | 131090 | 1093082505 | 31005 | 638601911 | 0 | 345.28 | 0.36 |
| 26 | 49205 | 131754 | 1208863183 | 31005 | 666003685 | 0 | 345.28 | 0.38 |
| 27 | 52070 | 132433 | 1325256753 | 31005 | 693407239 | 0 | 345.28 | 0.39 |
| 28 | 54997 | 133127 | 1442272307 | 31005 | 720811280 | 0 | 345.28 | 0.40 |
| 29 | 57988 | 133837 | 1559918875 | 31005 | 748214518 | 0 | 345.28 | 0.41 |
| 30 | 61042 | 134561 | 1678205427 | 31005 | 775615675 | 0 | 345.28 | 0.42 |
| 31 | 73022 | 135302 | 1797295948 | 31006 | 803069006 | 0 | 345.28 | 0.43 |
| 32 | 76596 | 136048 | 1915471793 | 31007 | 830180825 | 0 | 345.28 | 0.44 |
| 33 | 80241 | 136789 | 2034107208 | 31006 | 857224813 | 0 | 345.28 | 0.40 |
| 34 | 83958 | 137546 | 2153389813 | 31006 | 884263405 | 0 | 345.28 | 0.41 |
| 35 | 87747 | 138319 | 2273327979 | 31006 | 911295417 | 0 | 345.28 | 0.41 |
| 36 | 91607 | 139105 | 2393930064 | 31006 | 938319675 | 0 | 345.28 | 0.42 |
| 37 | 95538 | 139907 | 2515204400 | 31006 | 965335012 | 0 | 345.28 | 0.42 |
| 38 | 99541 | 140723 | 2637159296 | 31005 | 992340267 | 0 | 345.28 | 0.42 |
| 39 | 103615 | 141554 | 2759803039 | 31005 | 1019334284 | 0 | 345.28 | 0.43 |
| 40 | 107761 | 142399 | 2883143897 | 31005 | 1046315913 | 0 | 345.28 | 0.43 |
| 41 | 111979 | 143259 | 3007190118 | 31005 | 1073284009 | 0 | 345.28 | 0.43 |
| 42 | 129045 | 144135 | 3132068322 | 31005 | 1100275876 | 0 | 345.28 | 0.43 |
| 43 | 133169 | 144993 | 3253277653 | 31005 | 1126310768 | 0 | 345.28 | 0.44 |
| 44 | 137358 | 145848 | 3375164094 | 31005 | 1152333273 | 0 | 345.28 | 0.46 |
| 45 | 141614 | 146717 | 3497709916 | 31004 | 1178334294 | 0 | 345.28 | 0.46 |
| 46 | 145937 | 147599 | 3620922415 | 31004 | 1204312882 | 0 | 345.28 | 0.46 |
| 47 | 150326 | 148494 | 3744808873 | 31004 | 1230268085 | 0 | 345.28 | 0.46 |
| 48 | 154781 | 149404 | 3869376556 | 31003 | 1256198954 | 0 | 345.28 | 0.46 |
| 49 | 159302 | 150326 | 3994632726 | 31003 | 1282104541 | 0 | 345.28 | 0.46 |
| 50 | 163890 | 151263 | 4120584628 | 31003 | 1307983898 | 0 | 345.28 | 0.46 |
| 51 | 168544 | 152213 | 4247239501 | 31002 | 1333836079 | 0 | 345.28 | 0.46 |
| 52 | 173264 | 153176 | 4374604570 | 31002 | 1359660139 | 0 | 345.28 | 0.46 |
| 53 | 178051 | 154153 | 4502687049 | 31001 | 1385455135 | 0 | 345.28 | 0.46 |
| 54 | 182904 | 155144 | 4631494142 | 31001 | 1411220123 | 0 | 345.28 | 0.46 |
| 55 | 187823 | 156149 | 4761033043 | 31001 | 1436954162 | 0 | 345.28 | 0.46 |
| 56 | 192809 | 157167 | 4891310930 | 31000 | 1462656314 | 0 | 345.28 | 0.46 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 55 " MST - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 2 x 40.5 "

Pressione trasversale del vento = 706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 7060.00 | 7040.00 | 6000.00 | 0.00 |
| 2.00 | 37.16 | 43490.00 | 30190.00 | 81000.00 | 4.75 |
| --- | --- | --- | Ft = 78723 | Fp = 25620 | --- |
| --- | --- | Pa = 46906 | Ta = 13654 | La = 61731 | --- |
| --- | --- | Pb = -3416 | Tb = 16536 | Lb = 19269 | --- |
| 3.00 | 33.69 | 54320.00 | 38720.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 74159 | Fp = -79007 | --- |
| --- | --- | Pa = 62537 | Ta = -39858 | La = 0 | --- |
| --- | --- | Pb = -8217 | Tb = 78578 | Lb = 0 | --- |
| 4.00 | 30.23 | 54320.00 | 38720.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 63870 | Fp = 4416 | --- |
| --- | --- | Pa = 53861 | Ta = 34328 | La = 0 | --- |
| --- | --- | Pb = 459 | Tb = 4392 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------------|-----------|------------|-----------|------------|-----------|--------------------------------------|----------|
| 2 | 7493 | 7360 | 7404187 | 6017 | 6142440 | 0 | 345.28 | 0.03 |
| 3 | 7943 | 7674 | 13769894 | 6018 | 11189570 | -0 | 345.28 | 0.06 |
| 4 | 8410 | 8001 | 20409539 | 6019 | 16251498 | -0 | 345.28 | 0.08 |
| 5 | 8896 | 8341 | 27333153 | 6020 | 21328360 | -0 | 345.28 | 0.09 |
| 6 | 10793 | 8696 | 34594803 | 6024 | 26463941 | -0 | 345.28 | 0.11 |
| 7 | 11882 | 9115 | 43134386 | 6053 | 32405000 | -0 | 345.28 | 0.13 |
| 8 | 37364 | 199701 | 168575923 | 15279 | 44288015 | -0 | 345.28 | 0.20 |
| 9 | 62886 | 23669 | 221796630 | 67869 | 111247649 | 168721692 | 345.28 | 0.26 |
| 10 | 64094 | 24095 | 244324168 | 67870 | 170930587 | 168721692 | 345.28 | 0.29 |
| 11 | 65343 | 24536 | 267214450 | 67871 | 230619331 | 168721692 | 345.28 | 0.32 |
| 12 | 97092 | -167078 | 177692313 | 71375 | 293394820 | 168721692 | 345.28 | 0.30 |
| 13 | 128881 | 2273 | 94385240 | 87265 | 373781027 | 178184104 | 345.28 | 0.32 |
| 14 | 130249 | 2751 | 100698230 | 87260 | 451742951 | 178184104 | 345.28 | 0.35 |
| 15 | 131657 | 3243 | 107440082 | 87255 | 529615892 | 178184104 | 345.28 | 0.39 |
| 16 | 156826 | 105630 | 174318321 | 87294 | 608105769 | 178184104 | 345.28 | 0.43 |
| 17 | 182035 | 117269 | 418736823 | 87329 | 687148203 | 178184104 | 345.28 | 0.52 |
| 18 | 183563 | 117798 | 523906689 | 87318 | 766015507 | 178184104 | 345.28 | 0.56 |
| 19 | 189651 | 118348 | 629567539 | 87313 | 844819684 | 178184104 | 345.28 | 0.60 |
| 20 | 192304 | 119627 | 741492458 | 87443 | 927941512 | 178184104 | 345.28 | 0.64 |
| 21 | 195019 | 123890 | 855305289 | 87291 | 1008569722 | 178184104 | 345.28 | 0.47 |
| 22 | 197568 | 124484 | 968920934 | 87283 | 1089070948 | 178184104 | 345.28 | 0.49 |
| 23 | 200180 | 125093 | 1082972669 | 87273 | 1169441064 | 178184104 | 345.28 | 0.51 |
| 24 | 202856 | 125717 | 1197464963 | 87264 | 1249677373 | 178184104 | 345.28 | 0.53 |
| 25 | 205594 | 126356 | 1312403278 | 87255 | 1329777615 | 178184104 | 345.28 | 0.54 |
| 26 | 208395 | 127009 | 1427793923 | 87245 | 1409739888 | 178184104 | 345.28 | 0.56 |
| 27 | 211260 | 127678 | 1543643914 | 87235 | 1489562574 | 178184104 | 345.28 | 0.57 |
| 28 | 214187 | 128362 | 1659960866 | 87226 | 1569244291 | 178184104 | 345.28 | 0.58 |
| 29 | 217178 | 129060 | 1776752904 | 87216 | 1648783838 | 178184104 | 345.28 | 0.59 |
| 30 | 220232 | 129774 | 1894028573 | 87207 | 1728180161 | 178184104 | 345.28 | 0.60 |
| 31 | 232212 | 130512 | 2011968166 | 87205 | 1807570825 | 178184104 | 345.28 | 0.60 |
| 32 | 235786 | 131277 | 2129279723 | 87223 | 1886146929 | 178184104 | 345.28 | 0.61 |
| 33 | 239431 | 131978 | 2246482821 | 87186 | 1964106081 | 178184104 | 345.28 | 0.55 |
| 34 | 243148 | 132726 | 2364195548 | 87178 | 2041937494 | 178184104 | 345.28 | 0.55 |
| 35 | 246937 | 133489 | 2482427156 | 87169 | 2119640223 | 178184104 | 345.28 | 0.56 |
| 36 | 250797 | 134267 | 2601187231 | 87161 | 2197213523 | 178184104 | 345.28 | 0.56 |
| 37 | 254728 | 135059 | 2720485449 | 87153 | 2274656641 | 178184104 | 345.28 | 0.56 |
| 38 | 258731 | 135866 | 2840331556 | 87144 | 2351968817 | 178184104 | 345.28 | 0.56 |
| 39 | 262805 | 136688 | 2960735354 | 87136 | 2429149268 | 178184104 | 345.28 | 0.56 |
| 40 | 266951 | 137524 | 3081706687 | 87128 | 2506197190 | 178184104 | 345.28 | 0.56 |
| 41 | 271169 | 138376 | 3203255426 | 87120 | 2583111754 | 178184104 | 345.28 | 0.56 |
| 42 | 288235 | 139248 | 3325519190 | 87117 | 2659990403 | 178184104 | 345.28 | 0.56 |
| 43 | 292359 | 140095 | 3444054032 | 87107 | 2734038600 | 178184104 | 345.28 | 0.56 |
| 44 | 296548 | 140943 | 3563177650 | 87100 | 2807988358 | 178184104 | 345.28 | 0.58 |
| 45 | 300804 | 141802 | 3682839657 | 87092 | 2881793285 | 178184104 | 345.28 | 0.58 |
| 46 | 305127 | 142675 | 3803049175 | 87083 | 2955452828 | 178184104 | 345.28 | 0.58 |
| 47 | 309516 | 143562 | 3923815245 | 87075 | 3028966341 | 178184104 | 345.28 | 0.58 |
| 48 | 313971 | 144463 | 4045146888 | 87067 | 3102333135 | 178184104 | 345.28 | 0.58 |
| 49 | 318492 | 145377 | 4167053101 | 87059 | 3175552481 | 178184104 | 345.28 | 0.58 |
| 50 | 323080 | 146305 | 4289542857 | 87051 | 3248623612 | 178184104 | 345.28 | 0.58 |
| 51 | 327734 | 147246 | 4412625099 | 87043 | 3321545720 | 178184104 | 345.28 | 0.57 |
| 52 | 332454 | 148202 | 4536308739 | 87035 | 3394317959 | 178184104 | 345.28 | 0.57 |
| 53 | 337241 | 149171 | 4660602656 | 87027 | 3466939444 | 178184104 | 345.28 | 0.57 |
| 54 | 342094 | 150154 | 4785515698 | 87019 | 3539409255 | 178184104 | 345.28 | 0.57 |
| 55 | 347013 | 151150 | 4911056676 | 87011 | 3611726433 | 178184104 | 345.28 | 0.57 |
| 56 | 351999 | 152160 | 5037234367 | 87004 | 3683889986 | 178184104 | 345.28 | 0.56 |

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CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 56 " MST - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 2 x 40.5 "

Pressione trasversale del vento = 706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | 7040.00 | 6000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | 30190.00 | 81000.00 | 4.75 |
| --- | --- | --- | Ft = 32126 | Fp = 62713 | --- |
| --- | --- | Pa = 15388 | Ta = 50 | La = 28201 | --- |
| --- | --- | Pb = -15388 | Tb = 30140 | Lb = 52799 | --- |
| 3.00 | 33.69 | 0.00 | 38720.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 5145 | Fp = -41711 | --- |
| --- | --- | Pa = 4338 | Ta = -2765 | La = 0 | --- |
| --- | --- | Pb = -4338 | Tb = 41485 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | 38720.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = -5145 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = 38720 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|--------|------------|--------|------------|-----------|--------------------------------|-------|
| 2 | 433 | 7341 | 7151113 | 6000 | 5892347 | 0 | 345.28 | 0.03 |
| 3 | 883 | 7655 | 13262159 | 6000 | 10687438 | -0 | 345.28 | 0.05 |
| 4 | 1350 | 7981 | 19645881 | 6001 | 15495605 | -0 | 345.28 | 0.07 |
| 5 | 1836 | 8320 | 26312555 | 6001 | 20317137 | -0 | 345.28 | 0.09 |
| 6 | 3733 | 8672 | 33311251 | 6002 | 25189970 | -0 | 345.28 | 0.10 |
| 7 | 4822 | 9063 | 41279663 | 6004 | 30558068 | -0 | 345.28 | 0.12 |
| 8 | 14545 | 71186 | 87420564 | 10207 | 38559577 | -0 | 345.28 | 0.11 |
| 9 | 24308 | 9927 | 106210079 | 34211 | 71589776 | 77076883 | 345.28 | 0.13 |
| 10 | 25517 | 10352 | 115724095 | 34211 | 101316835 | 77076883 | 345.28 | 0.15 |
| 11 | 26765 | 10792 | 125636657 | 34211 | 131070556 | 77076883 | 345.28 | 0.16 |
| 12 | 23429 | -15525 | 119528744 | 43636 | 166338482 | 77076883 | 345.28 | 0.17 |
| 13 | 20132 | 39085 | 148691431 | 87008 | 247078943 | 103005295 | 345.28 | 0.23 |
| 14 | 21500 | 39568 | 182823317 | 87008 | 321408626 | 103005295 | 345.28 | 0.27 |
| 15 | 22908 | 40065 | 217405923 | 87008 | 395760170 | 103005295 | 345.28 | 0.31 |
| 16 | 23086 | 48854 | 257314927 | 87008 | 470098183 | 103005295 | 345.28 | 0.35 |
| 17 | 23305 | 82586 | 333791710 | 87008 | 544421804 | 103005295 | 345.28 | 0.39 |
| 18 | 24832 | 83126 | 404892137 | 87008 | 618760488 | 103005295 | 345.28 | 0.43 |
| 19 | 30921 | 83682 | 476600299 | 87009 | 693214307 | 103005295 | 345.28 | 0.46 |
| 20 | 33343 | 85910 | 552179344 | 87014 | 770072114 | 103005295 | 345.28 | 0.50 |
| 21 | 35829 | 123575 | 663871788 | 87010 | 846604864 | 103005295 | 345.28 | 0.38 |
| 22 | 38378 | 124179 | 772920264 | 87010 | 923162651 | 103005295 | 345.28 | 0.40 |
| 23 | 40990 | 124797 | 882542865 | 87011 | 999742489 | 103005295 | 345.28 | 0.42 |
| 24 | 43666 | 125431 | 992749129 | 87011 | 1076341385 | 103005295 | 345.28 | 0.44 |
| 25 | 46404 | 126080 | 1103548489 | 87011 | 1152956312 | 103005295 | 345.28 | 0.46 |
| 26 | 49205 | 126745 | 1214950293 | 87011 | 1229584222 | 103005295 | 345.28 | 0.47 |
| 27 | 52070 | 127424 | 1326963809 | 87011 | 1306222049 | 103005295 | 345.28 | 0.49 |
| 28 | 54997 | 128118 | 1439598240 | 87012 | 1382866713 | 103005295 | 345.28 | 0.50 |
| 29 | 57988 | 128827 | 1552862726 | 87012 | 1459515126 | 103005295 | 345.28 | 0.51 |
| 30 | 61042 | 129552 | 1666766357 | 87012 | 1536164192 | 103005295 | 345.28 | 0.52 |
| 31 | 73022 | 130293 | 1781470368 | 87013 | 1612932952 | 103005295 | 345.28 | 0.53 |
| 32 | 76596 | 131039 | 1895319405 | 87015 | 1688718378 | 103005295 | 345.28 | 0.53 |
| 33 | 80241 | 131780 | 2009630818 | 87013 | 1764358461 | 103005295 | 345.28 | 0.49 |
| 34 | 83958 | 132537 | 2124588969 | 87013 | 1839990715 | 103005295 | 345.28 | 0.49 |
| 35 | 87747 | 133309 | 2240202355 | 87013 | 1915612176 | 103005295 | 345.28 | 0.50 |
| 36 | 91607 | 134096 | 2356479458 | 87013 | 1991219900 | 103005295 | 345.28 | 0.50 |
| 37 | 95538 | 134897 | 2473428740 | 87012 | 2066810947 | 103005295 | 345.28 | 0.50 |
| 38 | 99541 | 135714 | 2591058639 | 87012 | 2142382382 | 103005295 | 345.28 | 0.50 |
| 39 | 103615 | 136544 | 2709377571 | 87012 | 2217931278 | 103005295 | 345.28 | 0.51 |
| 40 | 107761 | 137390 | 2828393934 | 87011 | 2293454712 | 103005295 | 345.28 | 0.51 |
| 41 | 111979 | 138250 | 2948116108 | 87011 | 2368949770 | 103005295 | 345.28 | 0.51 |
| 42 | 129045 | 139126 | 3068668209 | 87012 | 2444501681 | 103005295 | 345.28 | 0.51 |
| 43 | 133169 | 139984 | 3185702079 | 87011 | 2517390068 | 103005295 | 345.28 | 0.51 |
| 44 | 137358 | 140839 | 3303413565 | 87010 | 2590251947 | 103005295 | 345.28 | 0.53 |
| 45 | 141614 | 141707 | 3421785621 | 87010 | 2663066139 | 103005295 | 345.28 | 0.53 |
| 46 | 145937 | 142589 | 3540825668 | 87009 | 2735830134 | 103005295 | 345.28 | 0.53 |
| 47 | 150326 | 143485 | 3660541112 | 87008 | 2808541419 | 103005295 | 345.28 | 0.53 |
| 48 | 154781 | 144394 | 3780939346 | 87007 | 2881197487 | 103005295 | 345.28 | 0.53 |
| 49 | 159302 | 145317 | 3902027756 | 87007 | 2953795833 | 103005295 | 345.28 | 0.53 |
| 50 | 163890 | 146253 | 4023813711 | 87006 | 3026333959 | 103005295 | 345.28 | 0.53 |
| 51 | 168544 | 147203 | 4146304574 | 87005 | 3098809368 | 103005295 | 345.28 | 0.53 |
| 52 | 173264 | 148166 | 4269507694 | 87004 | 3171219569 | 103005295 | 345.28 | 0.53 |
| 53 | 178051 | 149143 | 4393430408 | 87003 | 3243562074 | 103005295 | 345.28 | 0.53 |
| 54 | 182904 | 150134 | 4518080044 | 87002 | 3315834400 | 103005295 | 345.28 | 0.53 |
| 55 | 187823 | 151139 | 4643463917 | 87001 | 3388034066 | 103005295 | 345.28 | 0.53 |
| 56 | 192809 | 152157 | 4769589330 | 87000 | 3460158598 | 103005295 | 345.28 | 0.53 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 57 " MST - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 "

Pressione trasversale del vento = 706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 3470.00 | 3480.00 | 30200.00 | 0.00 |
| 2.00 | 37.16 | 53420.00 | 38100.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 62809 | Fp = 4366 | --- |
| --- | --- | Pa = 52966 | Ta = 33758 | La = 0 | --- |
| --- | --- | Pb = 454 | Tb = 4342 | Lb = 0 | --- |
| 3.00 | 33.69 | 53420.00 | 38100.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 72933 | Fp = -77721 | --- |
| --- | --- | Pa = 61504 | Ta = -39199 | La = 0 | --- |
| --- | --- | Pb = -8084 | Tb = 77299 | Lb = 0 | --- |
| 4.00 | 30.23 | 53420.00 | 38100.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 62809 | Fp = 4366 | --- |
| --- | --- | Pa = 52966 | Ta = 33758 | La = 0 | --- |
| --- | --- | Pb = 454 | Tb = 4342 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|------------|--------|------------|----------|--------------------------------|-------|
| 2 | 3903 | 3791 | 3797700 | 30204 | 29688742 | 0 | 345.28 | 0.10 |
| 3 | 4353 | 4106 | 7217364 | 30205 | 53799432 | 0 | 345.28 | 0.16 |
| 4 | 4820 | 4433 | 10913239 | 30205 | 77918051 | 0 | 345.28 | 0.22 |
| 5 | 5306 | 4773 | 14895747 | 30206 | 102043520 | 0 | 345.28 | 0.27 |
| 6 | 7203 | 5129 | 19224386 | 30208 | 126202354 | 0 | 345.28 | 0.31 |
| 7 | 8292 | 5541 | 24537259 | 30218 | 152153563 | -0 | 345.28 | 0.35 |
| 8 | 36804 | 223446 | 163674698 | 30240 | 178505308 | 0 | 345.28 | 0.27 |
| 9 | 65356 | 40232 | 237397107 | 30270 | 205393753 | -0 | 345.28 | 0.33 |
| 10 | 66564 | 40658 | 274247398 | 30270 | 232257309 | -0 | 345.28 | 0.35 |
| 11 | 67813 | 41099 | 311456003 | 30270 | 259093949 | -0 | 345.28 | 0.37 |
| 12 | 100980 | -144773 | 239891715 | 30303 | 286459198 | -0 | 345.28 | 0.32 |
| 13 | 134187 | 7319 | 161875423 | 30333 | 314303159 | -0 | 345.28 | 0.29 |
| 14 | 135555 | 7797 | 172966233 | 30331 | 342067090 | -0 | 345.28 | 0.30 |
| 15 | 136963 | 8288 | 184466544 | 30328 | 369749996 | -0 | 345.28 | 0.30 |
| 16 | 161752 | 108991 | 255150504 | 30345 | 397688704 | -0 | 345.28 | 0.33 |
| 17 | 186581 | 120469 | 500483801 | 30361 | 425848111 | -0 | 345.28 | 0.43 |
| 18 | 188108 | 120997 | 608857741 | 30355 | 453890845 | -0 | 345.28 | 0.46 |
| 19 | 194197 | 121546 | 717705119 | 30353 | 481872840 | -0 | 345.28 | 0.50 |
| 20 | 196846 | 122835 | 833105834 | 30415 | 511598743 | -0 | 345.28 | 0.53 |
| 21 | 199559 | 127036 | 950094295 | 30341 | 540141249 | -0 | 345.28 | 0.39 |
| 22 | 202108 | 127628 | 1066875063 | 30337 | 568608671 | -0 | 345.28 | 0.41 |
| 23 | 204720 | 128236 | 1184074395 | 30332 | 597001202 | -0 | 345.28 | 0.43 |
| 24 | 207396 | 128859 | 1301697001 | 30327 | 625319519 | -0 | 345.28 | 0.45 |
| 25 | 210134 | 129496 | 1419748594 | 30322 | 653564307 | -0 | 345.28 | 0.46 |
| 26 | 212935 | 130149 | 1538235732 | 30317 | 681736248 | -0 | 345.28 | 0.47 |
| 27 | 215800 | 130816 | 1657165681 | 30313 | 709836010 | -0 | 345.28 | 0.48 |
| 28 | 218727 | 131498 | 1776546306 | 30308 | 737864238 | -0 | 345.28 | 0.49 |
| 29 | 221718 | 132196 | 1896385972 | 30303 | 765821550 | -0 | 345.28 | 0.50 |
| 30 | 224772 | 132909 | 2016693465 | 30298 | 793708527 | -0 | 345.28 | 0.51 |
| 31 | 236752 | 133646 | 2137657874 | 30297 | 821584770 | -0 | 345.28 | 0.51 |
| 32 | 240326 | 134413 | 2257976810 | 30306 | 849196095 | -0 | 345.28 | 0.52 |
| 33 | 243971 | 135110 | 2378131491 | 30288 | 876534829 | -0 | 345.28 | 0.47 |
| 34 | 247688 | 135857 | 2498782621 | 30284 | 903813654 | -0 | 345.28 | 0.47 |
| 35 | 251477 | 136619 | 2619939607 | 30280 | 931032783 | -0 | 345.28 | 0.48 |
| 36 | 255337 | 137395 | 2741612204 | 30276 | 958192482 | -0 | 345.28 | 0.48 |
| 37 | 259268 | 138186 | 2863810248 | 30272 | 985292976 | -0 | 345.28 | 0.48 |
| 38 | 263271 | 138992 | 2986543636 | 30268 | 1012334450 | -0 | 345.28 | 0.48 |
| 39 | 267345 | 139813 | 3109822316 | 30264 | 1039317048 | -0 | 345.28 | 0.48 |
| 40 | 271491 | 140649 | 3233656262 | 30260 | 1066240877 | -0 | 345.28 | 0.48 |
| 41 | 275709 | 141499 | 3358055473 | 30256 | 1093106007 | -0 | 345.28 | 0.48 |
| 42 | 292775 | 142371 | 3483163357 | 30255 | 1119953070 | -0 | 345.28 | 0.49 |
| 43 | 296899 | 143216 | 3604429132 | 30250 | 1145797324 | -0 | 345.28 | 0.49 |
| 44 | 301088 | 144064 | 3726275031 | 30247 | 1171598669 | -0 | 345.28 | 0.51 |
| 45 | 305344 | 144923 | 3848647173 | 30243 | 1197337964 | -0 | 345.28 | 0.50 |
| 46 | 309667 | 145795 | 3971554796 | 30239 | 1223015297 | -0 | 345.28 | 0.50 |
| 47 | 314056 | 146680 | 4095007046 | 30235 | 1248630699 | -0 | 345.28 | 0.50 |
| 48 | 318511 | 147580 | 4219013043 | 30231 | 1274184170 | -0 | 345.28 | 0.50 |
| 49 | 323032 | 148493 | 4343581876 | 30227 | 1299675679 | -0 | 345.28 | 0.50 |
| 50 | 327620 | 149420 | 4468722600 | 30224 | 1325105168 | -0 | 345.28 | 0.50 |
| 51 | 332274 | 150361 | 4594444238 | 30220 | 1350472550 | -0 | 345.28 | 0.50 |
| 52 | 336994 | 151315 | 4720755775 | 30216 | 1375777712 | -0 | 345.28 | 0.50 |
| 53 | 341781 | 152284 | 4847666158 | 30212 | 1401020517 | -0 | 345.28 | 0.50 |
| 54 | 346634 | 153266 | 4975184295 | 30209 | 1426200801 | -0 | 345.28 | 0.50 |
| 55 | 351553 | 154261 | 5103319054 | 30205 | 1451318380 | -0 | 345.28 | 0.49 |
| 56 | 356539 | 155271 | 5232079263 | 30202 | 1476373046 | -0 | 345.28 | 0.49 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 58 " MST - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 "

Pressione trasversale del vento = 706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | 3480.00 | 30200.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | 38100.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = -5062 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = 38100 | Lb = 0 | --- |
| 3.00 | 33.69 | 0.00 | 38100.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 5062 | Fp = -41043 | --- |
| --- | --- | Pa = 4269 | Ta = -2721 | La = 0 | --- |
| --- | --- | Pb = -4269 | Tb = 40821 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | 38100.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = -5062 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = 38100 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Usa |
|------|----------------------------|-----------|------------|-----------|------------|----------|-------------------------|----------|
| 2 | 433 | 3781 | 3661284 | 30200 | 29605669 | 0 | 345.28 | 0.10 |
| 3 | 883 | 4095 | 6940074 | 30200 | 53634048 | 0 | 345.28 | 0.16 |
| 4 | 1350 | 4421 | 10490546 | 30200 | 77671862 | 0 | 345.28 | 0.22 |
| 5 | 1836 | 4760 | 14323044 | 30200 | 101718593 | 0 | 345.28 | 0.26 |
| 6 | 3733 | 5112 | 18483936 | 30201 | 125800117 | 0 | 345.28 | 0.30 |
| 7 | 4822 | 5502 | 23414785 | 30202 | 151590385 | 0 | 345.28 | 0.35 |
| 8 | 6851 | 5897 | 28604157 | 30201 | 177320516 | 0 | 345.28 | 0.20 |
| 9 | 8920 | 6309 | 34198609 | 30202 | 203083640 | 0 | 345.28 | 0.21 |
| 10 | 10128 | 6734 | 40185683 | 30202 | 228861595 | 0 | 345.28 | 0.22 |
| 11 | 11377 | 7174 | 46578207 | 30202 | 254653219 | 0 | 345.28 | 0.23 |
| 12 | 15700 | 1401 | 49815634 | 30203 | 280506127 | -0 | 345.28 | 0.24 |
| 13 | 20062 | 43478 | 85660143 | 30203 | 306414676 | -0 | 345.28 | 0.25 |
| 14 | 21430 | 43961 | 123500054 | 30203 | 332328807 | -0 | 345.28 | 0.26 |
| 15 | 22838 | 44458 | 161792677 | 30204 | 358247281 | -0 | 345.28 | 0.27 |
| 16 | 23052 | 53115 | 205336666 | 30204 | 384152533 | -0 | 345.28 | 0.28 |
| 17 | 23305 | 86315 | 284872987 | 30203 | 410045037 | 0 | 345.28 | 0.31 |
| 18 | 24832 | 86855 | 359128287 | 30204 | 435939863 | 0 | 345.28 | 0.33 |
| 19 | 30921 | 87411 | 433991815 | 30204 | 461886374 | 0 | 345.28 | 0.35 |
| 20 | 33343 | 89612 | 512796029 | 30206 | 488715226 | 0 | 345.28 | 0.37 |
| 21 | 35829 | 126684 | 627141667 | 30204 | 515382021 | 0 | 345.28 | 0.28 |
| 22 | 38378 | 127288 | 738895770 | 30205 | 542056964 | 0 | 345.28 | 0.30 |
| 23 | 40990 | 127906 | 851225040 | 30205 | 568738754 | 0 | 345.28 | 0.32 |
| 24 | 43666 | 128540 | 964138982 | 30205 | 595426101 | 0 | 345.28 | 0.34 |
| 25 | 46404 | 129189 | 1077646996 | 30205 | 622117727 | 0 | 345.28 | 0.36 |
| 26 | 49205 | 129854 | 1191758386 | 30205 | 648812355 | 0 | 345.28 | 0.37 |
| 27 | 52070 | 130533 | 1306482376 | 30205 | 675508717 | 0 | 345.28 | 0.38 |
| 28 | 54997 | 131227 | 1421828117 | 30205 | 702205553 | 0 | 345.28 | 0.40 |
| 29 | 57988 | 131936 | 1537804697 | 30205 | 728901608 | 0 | 345.28 | 0.41 |
| 30 | 61042 | 132661 | 1654421148 | 30205 | 755595635 | 0 | 345.28 | 0.42 |
| 31 | 73022 | 133402 | 1771839364 | 30206 | 782340489 | 0 | 345.28 | 0.43 |
| 32 | 76596 | 134148 | 1888364760 | 30207 | 808752645 | 0 | 345.28 | 0.43 |
| 33 | 80241 | 134889 | 2005352211 | 30206 | 835098720 | 0 | 345.28 | 0.40 |
| 34 | 83958 | 135646 | 2122986910 | 30206 | 861439539 | 0 | 345.28 | 0.40 |
| 35 | 87747 | 136418 | 2241277289 | 30206 | 887773947 | 0 | 345.28 | 0.41 |
| 36 | 91607 | 137205 | 2360231764 | 30206 | 914100802 | 0 | 345.28 | 0.41 |
| 37 | 95538 | 138007 | 2479858726 | 30205 | 940418966 | 0 | 345.28 | 0.41 |
| 38 | 99541 | 138823 | 2600166543 | 30205 | 966727308 | 0 | 345.28 | 0.42 |
| 39 | 103615 | 139654 | 2721163561 | 30205 | 993024703 | 0 | 345.28 | 0.42 |
| 40 | 107761 | 140499 | 2842858108 | 30205 | 1019310029 | 0 | 345.28 | 0.42 |
| 41 | 111979 | 141359 | 2965258491 | 30205 | 1045582172 | 0 | 345.28 | 0.43 |
| 42 | 129045 | 142235 | 3088489766 | 30205 | 1071877472 | 0 | 345.28 | 0.43 |
| 43 | 133169 | 143093 | 3208109998 | 30205 | 1097240494 | 0 | 345.28 | 0.43 |
| 44 | 137358 | 143948 | 3328407791 | 30205 | 1122591448 | 0 | 345.28 | 0.45 |
| 45 | 141614 | 144817 | 3449365815 | 30204 | 1147921473 | 0 | 345.28 | 0.45 |
| 46 | 145937 | 145699 | 3570991416 | 30204 | 1173229644 | 0 | 345.28 | 0.45 |
| 47 | 150326 | 146594 | 3693291928 | 30204 | 1198515034 | 0 | 345.28 | 0.45 |
| 48 | 154781 | 147503 | 3816274673 | 30203 | 1223776718 | 0 | 345.28 | 0.45 |
| 49 | 159302 | 148426 | 3939946961 | 30203 | 1249013772 | 0 | 345.28 | 0.45 |
| 50 | 163890 | 149363 | 4064316092 | 30203 | 1274225273 | 0 | 345.28 | 0.45 |
| 51 | 168544 | 150313 | 4189389355 | 30202 | 1299410300 | 0 | 345.28 | 0.45 |
| 52 | 173264 | 151276 | 4315174029 | 30202 | 1324567932 | 0 | 345.28 | 0.45 |
| 53 | 178051 | 152253 | 4441677379 | 30201 | 1349697250 | 0 | 345.28 | 0.45 |
| 54 | 182904 | 153244 | 4568906660 | 30201 | 1374797334 | 0 | 345.28 | 0.45 |
| 55 | 187823 | 154248 | 4696869118 | 30201 | 1399867269 | 0 | 345.28 | 0.45 |
| 56 | 192809 | 155267 | 4825571984 | 30200 | 1424906139 | 0 | 345.28 | 0.45 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 59 " MST - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 "

Pressione trasversale del vento = 706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 6940.00 | 6950.00 | 6000.00 | 0.00 |
| 2.00 | 37.16 | 42820.00 | 29730.00 | 78000.00 | 4.75 |
| --- | --- | --- | Ft = 76607 | Fp = 24477 | --- |
| --- | --- | Pa = 45981 | Ta = 13780 | La = 59704 | --- |
| --- | --- | Pb = -3161 | Tb = 15950 | Lb = 18296 | --- |
| 3.00 | 33.69 | 53420.00 | 38100.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 72933 | Fp = -77721 | --- |
| --- | --- | Pa = 61504 | Ta = -39199 | La = 0 | --- |
| --- | --- | Pb = -8084 | Tb = 77299 | Lb = 0 | --- |
| 4.00 | 30.23 | 53420.00 | 38100.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 62809 | Fp = 4366 | --- |
| --- | --- | Pa = 52966 | Ta = 33758 | La = 0 | --- |
| --- | --- | Pb = 454 | Tb = 4342 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Usa |
|------|----------------------------|-----------|------------|-----------|------------|-----------|--------------------------------------|----------|
| 2 | 7373 | 7269 | 7307923 | 6016 | 6129790 | 0 | 345.28 | 0.03 |
| 3 | 7823 | 7583 | 13593818 | 6017 | 11163787 | -0 | 345.28 | 0.06 |
| 4 | 8290 | 7910 | 20153460 | 6018 | 16212089 | 0 | 345.28 | 0.07 |
| 5 | 8776 | 8250 | 26996883 | 6019 | 21274817 | 0 | 345.28 | 0.09 |
| 6 | 10673 | 8605 | 34177563 | 6023 | 26394341 | -0 | 345.28 | 0.11 |
| 7 | 11762 | 9023 | 42619718 | 6050 | 32298535 | -0 | 345.28 | 0.13 |
| 8 | 36781 | 195915 | 165689749 | 14971 | 43937094 | -0 | 345.28 | 0.19 |
| 9 | 61840 | 23699 | 218306575 | 65833 | 108826689 | 163180456 | 345.28 | 0.26 |
| 10 | 63049 | 24125 | 240796876 | 65834 | 166678740 | 163180456 | 345.28 | 0.29 |
| 11 | 64297 | 24565 | 263650925 | 65835 | 224536723 | 163180456 | 345.28 | 0.31 |
| 12 | 95657 | -163687 | 176064552 | 69161 | 285330329 | 163180456 | 345.28 | 0.29 |
| 13 | 127057 | 2369 | 94190447 | 84248 | 362849968 | 172165252 | 345.28 | 0.31 |
| 14 | 128425 | 2848 | 100475605 | 84244 | 438067638 | 172165252 | 345.28 | 0.34 |
| 15 | 129833 | 3340 | 107189785 | 84240 | 513200778 | 172165252 | 345.28 | 0.38 |
| 16 | 154622 | 104039 | 173041390 | 84276 | 588920086 | 172165252 | 345.28 | 0.42 |
| 17 | 179451 | 115513 | 413504748 | 84308 | 665164299 | 172165252 | 345.28 | 0.50 |
| 18 | 180978 | 116042 | 517038357 | 84298 | 741242067 | 172165252 | 345.28 | 0.55 |
| 19 | 187067 | 116593 | 621064786 | 84294 | 817261653 | 172165252 | 345.28 | 0.59 |
| 20 | 189716 | 117860 | 731236506 | 84416 | 897420208 | 172165252 | 345.28 | 0.63 |
| 21 | 192429 | 122086 | 843327712 | 84274 | 975204639 | 172165252 | 345.28 | 0.46 |
| 22 | 194978 | 122681 | 955232389 | 84265 | 1052868759 | 172165252 | 345.28 | 0.48 |
| 23 | 197590 | 123290 | 1067576965 | 84257 | 1130408629 | 172165252 | 345.28 | 0.50 |
| 24 | 200266 | 123915 | 1180366123 | 84248 | 1207821656 | 172165252 | 345.28 | 0.52 |
| 25 | 203004 | 124554 | 1293605505 | 84239 | 1285105656 | 172165252 | 345.28 | 0.53 |
| 26 | 205805 | 125208 | 1407301565 | 84230 | 1362258785 | 172165252 | 345.28 | 0.54 |
| 27 | 208670 | 125877 | 1521461444 | 84221 | 1439279466 | 172165252 | 345.28 | 0.56 |
| 28 | 211597 | 126561 | 1636092860 | 84212 | 1516166342 | 172165252 | 345.28 | 0.57 |
| 29 | 214588 | 127261 | 1751204018 | 84203 | 1592918230 | 172165252 | 345.28 | 0.57 |
| 30 | 217642 | 127975 | 1866803536 | 84194 | 1669534081 | 172165252 | 345.28 | 0.58 |
| 31 | 229622 | 128713 | 1983069250 | 84193 | 1746146632 | 172165252 | 345.28 | 0.59 |
| 32 | 233196 | 129477 | 2098720716 | 84210 | 1821970129 | 172165252 | 345.28 | 0.59 |
| 33 | 236841 | 130180 | 2214283494 | 84175 | 1897205259 | 172165252 | 345.28 | 0.54 |
| 34 | 240558 | 130928 | 2330360196 | 84168 | 1972318931 | 172165252 | 345.28 | 0.54 |
| 35 | 244347 | 131692 | 2446960102 | 84160 | 2047310203 | 172165252 | 345.28 | 0.54 |
| 36 | 248207 | 132470 | 2564092812 | 84152 | 2122178319 | 172165252 | 345.28 | 0.55 |
| 37 | 252138 | 133262 | 2681768013 | 84144 | 2196922519 | 172165252 | 345.28 | 0.55 |
| 38 | 256141 | 134070 | 2799995461 | 84136 | 2271542030 | 172165252 | 345.28 | 0.55 |
| 39 | 260215 | 134892 | 2918784965 | 84128 | 2346036063 | 172165252 | 345.28 | 0.55 |
| 40 | 264361 | 135729 | 3038146370 | 84121 | 2420403806 | 172165252 | 345.28 | 0.55 |
| 41 | 268579 | 136580 | 3158089553 | 84113 | 2494644424 | 172165252 | 345.28 | 0.55 |
| 42 | 285645 | 137453 | 3278750300 | 84111 | 2568851921 | 172165252 | 345.28 | 0.55 |
| 43 | 289769 | 138300 | 3395742980 | 84101 | 2640329126 | 172165252 | 345.28 | 0.55 |
| 44 | 293958 | 139149 | 3513327570 | 84095 | 2711712395 | 172165252 | 345.28 | 0.57 |
| 45 | 298214 | 140009 | 3631455051 | 84087 | 2782957318 | 172165252 | 345.28 | 0.57 |
| 46 | 302537 | 140882 | 3750134536 | 84079 | 2854063327 | 172165252 | 345.28 | 0.57 |
| 47 | 306926 | 141769 | 3869375059 | 84071 | 2925029768 | 172165252 | 345.28 | 0.57 |
| 48 | 311381 | 142670 | 3989185635 | 84063 | 2995855944 | 172165252 | 345.28 | 0.57 |
| 49 | 315902 | 143584 | 4109575257 | 84055 | 3066541124 | 172165252 | 345.28 | 0.57 |
| 50 | 320490 | 144513 | 4230552891 | 84048 | 3137084535 | 172165252 | 345.28 | 0.56 |
| 51 | 325144 | 145455 | 4352127474 | 84040 | 3207485370 | 172165252 | 345.28 | 0.56 |
| 52 | 329864 | 146410 | 4474307915 | 84033 | 3277742784 | 172165252 | 345.28 | 0.56 |
| 53 | 334651 | 147380 | 4597103091 | 84025 | 3347855896 | 172165252 | 345.28 | 0.56 |
| 54 | 339504 | 148363 | 4720521845 | 84018 | 3417823790 | 172165252 | 345.28 | 0.56 |
| 55 | 344423 | 149360 | 4844572987 | 84011 | 3487645515 | 172165252 | 345.28 | 0.55 |
| 56 | 349409 | 150370 | 4969265293 | 84004 | 3557320086 | 172165252 | 345.28 | 0.55 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 60 " MST - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 "

Pressione trasversale del vento = 706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | 6950.00 | 6000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | 29730.00 | 78000.00 | 4.75 |
| --- | --- | --- | Ft = 30618 | Fp = 60907 | --- |
| --- | --- | Pa = 14762 | Ta = 189 | La = 26823 | --- |
| --- | --- | Pb = -14762 | Tb = 29541 | Lb = 51177 | --- |
| 3.00 | 33.69 | 0.00 | 38100.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 5062 | Fp = -41043 | --- |
| --- | --- | Pa = 4269 | Ta = -2721 | La = 0 | --- |
| --- | --- | Pb = -4269 | Tb = 40821 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | 38100.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = -5062 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = 38100 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------------|-----------|------------|-----------|------------|----------|--------------------------------------|----------|
| 2 | 433 | 7251 | 7062731 | 6000 | 5891944 | 0 | 345.28 | 0.03 |
| 3 | 883 | 7565 | 13101858 | 6000 | 10686211 | 0 | 345.28 | 0.05 |
| 4 | 1350 | 7891 | 19413468 | 6001 | 15493122 | 0 | 345.28 | 0.07 |
| 5 | 1836 | 8230 | 26007833 | 6001 | 20312947 | -0 | 345.28 | 0.09 |
| 6 | 3733 | 8582 | 32933465 | 6002 | 25182356 | -0 | 345.28 | 0.10 |
| 7 | 4822 | 8972 | 40821435 | 6004 | 30540994 | -0 | 345.28 | 0.12 |
| 8 | 14232 | 68604 | 85348507 | 10002 | 38397677 | -0 | 345.28 | 0.10 |
| 9 | 23682 | 9975 | 103774091 | 32833 | 70056072 | 73312529 | 345.28 | 0.13 |
| 10 | 24890 | 10401 | 113300840 | 32833 | 98573163 | 73312529 | 345.28 | 0.15 |
| 11 | 26139 | 10840 | 123226078 | 32833 | 127116168 | 73312529 | 345.28 | 0.16 |
| 12 | 23081 | -14602 | 117677324 | 41969 | 161012023 | 73312529 | 345.28 | 0.17 |
| 13 | 20062 | 38579 | 146506875 | 84007 | 238990793 | 98444069 | 345.28 | 0.22 |
| 14 | 21430 | 39062 | 180199825 | 84008 | 310755754 | 98444069 | 345.28 | 0.26 |
| 15 | 22838 | 39559 | 214343118 | 84008 | 382541864 | 98444069 | 345.28 | 0.30 |
| 16 | 23052 | 48216 | 253735405 | 84008 | 454315804 | 98444069 | 345.28 | 0.34 |
| 17 | 23305 | 81416 | 329117981 | 84007 | 526076689 | 98444069 | 345.28 | 0.38 |
| 18 | 24832 | 81956 | 399217676 | 84008 | 597852114 | 98444069 | 345.28 | 0.42 |
| 19 | 30921 | 82512 | 469923193 | 84009 | 669738722 | 98444069 | 345.28 | 0.45 |
| 20 | 33343 | 84713 | 544450655 | 84014 | 743946499 | 98444069 | 345.28 | 0.48 |
| 21 | 35829 | 121785 | 654520710 | 84010 | 817840350 | 98444069 | 345.28 | 0.37 |
| 22 | 38378 | 122388 | 761997638 | 84010 | 891758372 | 98444069 | 345.28 | 0.39 |
| 23 | 40990 | 123007 | 870048208 | 84010 | 965697684 | 98444069 | 345.28 | 0.41 |
| 24 | 43666 | 123641 | 978682010 | 84011 | 1039655395 | 98444069 | 345.28 | 0.43 |
| 25 | 46404 | 124290 | 1087908532 | 84011 | 1113628582 | 98444069 | 345.28 | 0.45 |
| 26 | 49205 | 124954 | 1197737176 | 84011 | 1187614303 | 98444069 | 345.28 | 0.46 |
| 27 | 52070 | 125633 | 1308177267 | 84011 | 1261609595 | 98444069 | 345.28 | 0.47 |
| 28 | 54997 | 126328 | 1419238063 | 84011 | 1335611486 | 98444069 | 345.28 | 0.49 |
| 29 | 57988 | 127037 | 1530928763 | 84011 | 1409616993 | 98444069 | 345.28 | 0.50 |
| 30 | 61042 | 127762 | 1643258512 | 84011 | 1483623128 | 98444069 | 345.28 | 0.51 |
| 31 | 73022 | 128503 | 1756386514 | 84013 | 1557744843 | 98444069 | 345.28 | 0.52 |
| 32 | 76596 | 129249 | 1868680086 | 84014 | 1630917146 | 98444069 | 345.28 | 0.52 |
| 33 | 80241 | 129989 | 1981438459 | 84012 | 1703949094 | 98444069 | 345.28 | 0.47 |
| 34 | 83958 | 130747 | 2094843639 | 84012 | 1776973477 | 98444069 | 345.28 | 0.48 |
| 35 | 87747 | 131519 | 2208904180 | 84012 | 1849987437 | 98444069 | 345.28 | 0.48 |
| 36 | 91607 | 132306 | 2323628621 | 84012 | 1922988128 | 98444069 | 345.28 | 0.49 |
| 37 | 95538 | 133107 | 2439025478 | 84012 | 1995972713 | 98444069 | 345.28 | 0.49 |
| 38 | 99541 | 133923 | 2555103247 | 84012 | 2068938357 | 98444069 | 345.28 | 0.49 |
| 39 | 103615 | 134754 | 2671870399 | 84011 | 2141882234 | 98444069 | 345.28 | 0.50 |
| 40 | 107761 | 135599 | 2789335390 | 84011 | 2214801522 | 98444069 | 345.28 | 0.50 |
| 41 | 111979 | 136459 | 2907506655 | 84010 | 2287693407 | 98444069 | 345.28 | 0.50 |
| 42 | 129045 | 137335 | 3026506802 | 84011 | 2360640192 | 98444069 | 345.28 | 0.50 |
| 43 | 133169 | 138194 | 3142043239 | 84010 | 2431015284 | 98444069 | 345.28 | 0.50 |
| 44 | 137358 | 139049 | 3258257735 | 84010 | 2501364778 | 98444069 | 345.28 | 0.52 |
| 45 | 141614 | 139917 | 3375133623 | 84009 | 2571668223 | 98444069 | 345.28 | 0.52 |
| 46 | 145937 | 140799 | 3492678375 | 84009 | 2641923194 | 98444069 | 345.28 | 0.52 |
| 47 | 150326 | 141695 | 3610899446 | 84008 | 2712127266 | 98444069 | 345.28 | 0.52 |
| 48 | 154781 | 142604 | 3729804281 | 84007 | 2782278017 | 98444069 | 345.28 | 0.52 |
| 49 | 159302 | 143526 | 3849400311 | 84006 | 2852373031 | 98444069 | 345.28 | 0.52 |
| 50 | 163890 | 144463 | 3969694958 | 84006 | 2922409892 | 98444069 | 345.28 | 0.52 |
| 51 | 168544 | 145413 | 4090695633 | 84005 | 2992386193 | 98444069 | 345.28 | 0.52 |
| 52 | 173264 | 146376 | 4212409734 | 84004 | 3062299525 | 98444069 | 345.28 | 0.52 |
| 53 | 178051 | 147353 | 4334844649 | 84003 | 3132147489 | 98444069 | 345.28 | 0.52 |
| 54 | 182904 | 148344 | 4458007753 | 84002 | 3201927686 | 98444069 | 345.28 | 0.52 |
| 55 | 187823 | 149349 | 4581906410 | 84001 | 3271637720 | 98444069 | 345.28 | 0.52 |
| 56 | 192809 | 150367 | 4706547974 | 84000 | 3341275203 | 98444069 | 345.28 | 0.52 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 61 " MST - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 "

Pressione trasversale del vento = 176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 5660.00 | 3180.00 | 39000.00 | 0.00 |
| 2.00 | 37.16 | 69540.00 | 28220.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 84603 | Fp = -17345 | --- |
| --- | --- | Pa = 71344 | Ta = 45471 | La = 0 | --- |
| --- | --- | Pb = -1804 | Tb = -17251 | Lb = 0 | --- |
| 3.00 | 33.69 | 69540.00 | 28220.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 92102 | Fp = -78145 | --- |
| --- | --- | Pa = 77668 | Ta = -49502 | La = 0 | --- |
| --- | --- | Pb = -8128 | Tb = 77722 | Lb = 0 | --- |
| 4.00 | 30.23 | 69540.00 | 28220.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 84603 | Fp = -17345 | --- |
| --- | --- | Pa = 71344 | Ta = 45471 | La = 0 | --- |
| --- | --- | Pb = -1804 | Tb = -17251 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Usa |
|------|----------------------------|-----------|------------|-----------|------------|----------|--------------------------------------|----------|
| 2 | 6093 | 3272 | 3375776 | 39012 | 38411319 | 0 | 345.28 | 0.13 |
| 3 | 6543 | 3351 | 6239485 | 39012 | 69618358 | 0 | 345.28 | 0.21 |
| 4 | 7010 | 3434 | 9182237 | 39013 | 100834182 | 0 | 345.28 | 0.28 |
| 5 | 7496 | 3519 | 12206842 | 39014 | 132056923 | 0 | 345.28 | 0.34 |
| 6 | 9393 | 3612 | 15357716 | 39017 | 163320698 | 0 | 345.28 | 0.39 |
| 7 | 10482 | 3740 | 19192038 | 39039 | 196968797 | 0 | 345.28 | 0.45 |
| 8 | 48183 | 296821 | 202768577 | 39089 | 231334328 | 0 | 345.28 | 0.34 |
| 9 | 85924 | 49586 | 297608858 | 39157 | 266643285 | -0 | 345.28 | 0.42 |
| 10 | 87132 | 49693 | 342349292 | 39157 | 301900588 | -0 | 345.28 | 0.44 |
| 11 | 88381 | 49802 | 387124349 | 39157 | 337103009 | -0 | 345.28 | 0.46 |
| 12 | 128501 | -192360 | 289596779 | 39223 | 373150978 | -0 | 345.28 | 0.41 |
| 13 | 168661 | -16527 | 165077515 | 39286 | 409964704 | -0 | 345.28 | 0.37 |
| 14 | 170029 | -16414 | 155713030 | 39280 | 446638717 | -0 | 345.28 | 0.37 |
| 15 | 171437 | -16299 | 146423967 | 39273 | 483171552 | -0 | 345.28 | 0.37 |
| 16 | 205393 | 113520 | 213090713 | 39315 | 520188802 | -0 | 345.28 | 0.39 |
| 17 | 239389 | 107276 | 491355699 | 39352 | 557625952 | -0 | 345.28 | 0.49 |
| 18 | 240916 | 107392 | 588353481 | 39339 | 594856927 | -0 | 345.28 | 0.51 |
| 19 | 247005 | 107520 | 685389286 | 39331 | 631956800 | -0 | 345.28 | 0.54 |
| 20 | 248525 | 105712 | 786606356 | 39462 | 671689425 | -0 | 345.28 | 0.57 |
| 21 | 250109 | 90520 | 868609768 | 39301 | 709401336 | -0 | 345.28 | 0.41 |
| 22 | 252658 | 90655 | 953069232 | 39290 | 746978511 | -0 | 345.28 | 0.42 |
| 23 | 255270 | 90793 | 1037502448 | 39279 | 784421603 | -0 | 345.28 | 0.43 |
| 24 | 257946 | 90935 | 1121907833 | 39268 | 821732332 | -0 | 345.28 | 0.43 |
| 25 | 260684 | 91081 | 1206284637 | 39257 | 858912450 | -0 | 345.28 | 0.44 |
| 26 | 263485 | 91231 | 1290632808 | 39246 | 895963713 | -0 | 345.28 | 0.44 |
| 27 | 266350 | 91384 | 1374952867 | 39235 | 932887862 | -0 | 345.28 | 0.45 |
| 28 | 269277 | 91541 | 1459245809 | 39225 | 969686605 | -0 | 345.28 | 0.45 |
| 29 | 272268 | 91702 | 1543513023 | 39214 | 1006361600 | -0 | 345.28 | 0.45 |
| 30 | 275322 | 91867 | 1627756217 | 39203 | 1042914454 | -0 | 345.28 | 0.46 |
| 31 | 287302 | 92045 | 1712115509 | 39199 | 1079425349 | -0 | 345.28 | 0.46 |
| 32 | 290876 | 92257 | 1795821839 | 39216 | 1115624404 | -0 | 345.28 | 0.46 |
| 33 | 294521 | 92385 | 1878921955 | 39179 | 1151377711 | -0 | 345.28 | 0.41 |
| 34 | 298238 | 92561 | 1962022074 | 39171 | 1187028695 | -0 | 345.28 | 0.41 |
| 35 | 302027 | 92740 | 2045124337 | 39162 | 1222578249 | -0 | 345.28 | 0.41 |
| 36 | 305887 | 92922 | 2128231241 | 39153 | 1258027386 | -0 | 345.28 | 0.41 |
| 37 | 309818 | 93109 | 2211345319 | 39145 | 1293377043 | -0 | 345.28 | 0.41 |
| 38 | 313821 | 93299 | 2294469129 | 39136 | 1328628084 | -0 | 345.28 | 0.41 |
| 39 | 317895 | 93494 | 2377605235 | 39128 | 1363781301 | -0 | 345.28 | 0.41 |
| 40 | 322041 | 93692 | 2460756203 | 39120 | 1398837414 | -0 | 345.28 | 0.41 |
| 41 | 326259 | 93894 | 2543924590 | 39112 | 1433797078 | -0 | 345.28 | 0.41 |
| 42 | 343325 | 94106 | 2627212575 | 39108 | 1468714819 | -0 | 345.28 | 0.40 |
| 43 | 347449 | 94304 | 2707586784 | 39098 | 1502305721 | -0 | 345.28 | 0.40 |
| 44 | 351638 | 94508 | 2788016412 | 39092 | 1535827251 | -0 | 345.28 | 0.42 |
| 45 | 355894 | 94712 | 2868448748 | 39084 | 1569250078 | -0 | 345.28 | 0.41 |
| 46 | 360217 | 94919 | 2948886353 | 39076 | 1602574805 | -0 | 345.28 | 0.41 |
| 47 | 364606 | 95130 | 3029331662 | 39068 | 1635801926 | -0 | 345.28 | 0.41 |
| 48 | 369061 | 95345 | 3109787070 | 39061 | 1668931879 | -0 | 345.28 | 0.41 |
| 49 | 373582 | 95563 | 3190254930 | 39053 | 1701965049 | -0 | 345.28 | 0.41 |
| 50 | 378170 | 95785 | 3270737550 | 39046 | 1734901769 | -0 | 345.28 | 0.40 |
| 51 | 382824 | 96010 | 3351237193 | 39038 | 1767742323 | -0 | 345.28 | 0.40 |
| 52 | 387544 | 96239 | 3431756077 | 39031 | 1800486946 | -0 | 345.28 | 0.40 |
| 53 | 392331 | 96472 | 3512296376 | 39024 | 1833135831 | -0 | 345.28 | 0.40 |
| 54 | 397184 | 96708 | 3592860216 | 39017 | 1865689125 | -0 | 345.28 | 0.39 |
| 55 | 402103 | 96947 | 3673449682 | 39010 | 1898146932 | -0 | 345.28 | 0.39 |
| 56 | 407089 | 97190 | 3754066813 | 39003 | 1930509319 | -0 | 345.28 | 0.39 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 62 " MST - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 "

Pressione trasversale del vento = 176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | 3180.00 | 39000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | 28220.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = -3749 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = 28220 | Lb = 0 | --- |
| 3.00 | 33.69 | 0.00 | 28220.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 3749 | Fp = -30400 | --- |
| --- | --- | Pa = 3162 | Ta = -2015 | La = 0 | --- |
| --- | --- | Pb = -3162 | Tb = 30235 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | 28220.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = -3749 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = 28220 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|------|----------------------------|-----------|------------|-----------|------------|----------|-------------------------|----------|
| 2 | 433 | 3255 | 3184166 | 39000 | 38232485 | 0 | 345.28 | 0.13 |
| 3 | 883 | 3333 | 5850565 | 39000 | 69262507 | -0 | 345.28 | 0.21 |
| 4 | 1350 | 3415 | 8590231 | 39000 | 100304712 | 0 | 345.28 | 0.28 |
| 5 | 1836 | 3499 | 11405870 | 39000 | 131358430 | -0 | 345.28 | 0.34 |
| 6 | 3733 | 3587 | 14325121 | 39001 | 162457073 | -0 | 345.28 | 0.39 |
| 7 | 4822 | 3686 | 17634124 | 39002 | 195762347 | -0 | 345.28 | 0.45 |
| 8 | 6851 | 3784 | 20973227 | 39002 | 228989972 | 0 | 345.28 | 0.25 |
| 9 | 8920 | 3887 | 24438418 | 39002 | 262260195 | 0 | 345.28 | 0.27 |
| 10 | 10128 | 3993 | 28015721 | 39002 | 295549565 | 0 | 345.28 | 0.28 |
| 11 | 11377 | 4103 | 31708649 | 39003 | 328856582 | 0 | 345.28 | 0.29 |
| 12 | 15146 | -396 | 32859323 | 39003 | 362231225 | 0 | 345.28 | 0.30 |
| 13 | 18955 | 30539 | 57950391 | 39004 | 395667246 | -0 | 345.28 | 0.31 |
| 14 | 20323 | 30660 | 84317087 | 39004 | 429111501 | -0 | 345.28 | 0.32 |
| 15 | 21731 | 30784 | 110810885 | 39004 | 462562385 | -0 | 345.28 | 0.33 |
| 16 | 22498 | 36945 | 140991929 | 39004 | 496006657 | -0 | 345.28 | 0.34 |
| 17 | 23305 | 61277 | 197623292 | 39004 | 529443926 | 0 | 345.28 | 0.35 |
| 18 | 24832 | 61412 | 250116871 | 39004 | 562884196 | 0 | 345.28 | 0.36 |
| 19 | 30921 | 61551 | 302823254 | 39005 | 596391203 | 0 | 345.28 | 0.37 |
| 20 | 33343 | 62895 | 358102196 | 39008 | 631037619 | 0 | 345.28 | 0.38 |
| 21 | 35829 | 90064 | 439471463 | 39006 | 665474794 | 0 | 345.28 | 0.28 |
| 22 | 38378 | 90215 | 518660842 | 39006 | 699922493 | 0 | 345.28 | 0.29 |
| 23 | 40990 | 90369 | 598009480 | 39006 | 734379033 | 0 | 345.28 | 0.30 |
| 24 | 43666 | 90528 | 677518054 | 39006 | 768842752 | 0 | 345.28 | 0.31 |
| 25 | 46404 | 90689 | 757187173 | 39006 | 803311995 | 0 | 345.28 | 0.32 |
| 26 | 49205 | 90855 | 837017389 | 39006 | 837785118 | 0 | 345.28 | 0.32 |
| 27 | 52070 | 91025 | 917009205 | 39007 | 872260482 | 0 | 345.28 | 0.33 |
| 28 | 54997 | 91198 | 997163082 | 39007 | 906736459 | 0 | 345.28 | 0.34 |
| 29 | 57988 | 91375 | 1077479447 | 39007 | 941211429 | 0 | 345.28 | 0.34 |
| 30 | 61042 | 91555 | 1157958696 | 39007 | 975683781 | 0 | 345.28 | 0.35 |
| 31 | 73022 | 91741 | 1238706217 | 39007 | 1010221765 | 0 | 345.28 | 0.35 |
| 32 | 76596 | 91928 | 1318558979 | 39008 | 1044330097 | 0 | 345.28 | 0.36 |
| 33 | 80241 | 92111 | 1398449532 | 39007 | 1078353106 | 0 | 345.28 | 0.32 |
| 34 | 83958 | 92300 | 1478499472 | 39007 | 1112369329 | 0 | 345.28 | 0.32 |
| 35 | 87747 | 92493 | 1558709075 | 39007 | 1146377276 | 0 | 345.28 | 0.33 |
| 36 | 91607 | 92689 | 1639078615 | 39007 | 1180375470 | 0 | 345.28 | 0.33 |
| 37 | 95538 | 92888 | 1719608360 | 39007 | 1214362443 | 0 | 345.28 | 0.33 |
| 38 | 99541 | 93092 | 1800298569 | 39007 | 1248336735 | 0 | 345.28 | 0.33 |
| 39 | 103615 | 93299 | 1881149496 | 39007 | 1282296891 | 0 | 345.28 | 0.33 |
| 40 | 107761 | 93509 | 1962161393 | 39006 | 1316241465 | 0 | 345.28 | 0.33 |
| 41 | 111979 | 93723 | 2043334506 | 39006 | 1350169017 | 0 | 345.28 | 0.33 |
| 42 | 129045 | 93942 | 2124748523 | 39007 | 1384126471 | 0 | 345.28 | 0.33 |
| 43 | 133169 | 94156 | 2203482008 | 39006 | 1416879995 | 0 | 345.28 | 0.33 |
| 44 | 137358 | 94369 | 2282370306 | 39006 | 1449617937 | 0 | 345.28 | 0.35 |
| 45 | 141614 | 94585 | 2361396825 | 39005 | 1482328856 | 0 | 345.28 | 0.35 |
| 46 | 145937 | 94804 | 2440561779 | 39005 | 1515011554 | 0 | 345.28 | 0.35 |
| 47 | 150326 | 95027 | 2519865377 | 39005 | 1547664838 | 0 | 345.28 | 0.35 |
| 48 | 154781 | 95254 | 2599307830 | 39004 | 1580287511 | 0 | 345.28 | 0.34 |
| 49 | 159302 | 95483 | 2678889348 | 39004 | 1612878381 | 0 | 345.28 | 0.34 |
| 50 | 163890 | 95716 | 2758610143 | 39003 | 1645436257 | 0 | 345.28 | 0.34 |
| 51 | 168544 | 95953 | 2838470427 | 39003 | 1677959946 | 0 | 345.28 | 0.34 |
| 52 | 173264 | 96192 | 2918470411 | 39002 | 1710448262 | 0 | 345.28 | 0.34 |
| 53 | 178051 | 96436 | 2998610306 | 39002 | 1742900016 | 0 | 345.28 | 0.34 |
| 54 | 182904 | 96682 | 3078890326 | 39001 | 1775314024 | 0 | 345.28 | 0.34 |
| 55 | 187823 | 96932 | 3159310683 | 39001 | 1807689100 | 0 | 345.28 | 0.34 |
| 56 | 192809 | 97185 | 3239871587 | 39000 | 1840024062 | 0 | 345.28 | 0.34 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 63 " MST - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 "

Pressione trasversale del vento = 176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 11320.00 | 6350.00 | 8000.00 | 0.00 |
| 2.00 | 37.16 | 54910.00 | 21450.00 | 96000.00 | 4.75 |
| --- | --- | --- | Ft = 102570 | Fp = 15195 | --- |
| --- | --- | Pa = 57456 | Ta = 12407 | La = 84057 | --- |
| --- | --- | Pb = -2546 | Tb = 9043 | Lb = 11943 | --- |
| 3.00 | 33.69 | 69540.00 | 28220.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 92102 | Fp = -78145 | --- |
| --- | --- | Pa = 77668 | Ta = -49502 | La = 0 | --- |
| --- | --- | Pb = -8128 | Tb = 77722 | Lb = 0 | --- |
| 4.00 | 30.23 | 69540.00 | 28220.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 84603 | Fp = -17345 | --- |
| --- | --- | Pa = 71344 | Ta = 45471 | La = 0 | --- |
| --- | --- | Pb = -1804 | Tb = -17251 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|------------|--------|------------|-----------|--------------------------------|-------|
| 2 | 11753 | 6453 | 6606460 | 8043 | 8366350 | 0 | 345.28 | 0.04 |
| 3 | 12203 | 6532 | 12111100 | 8045 | 15270637 | -0 | 345.28 | 0.06 |
| 4 | 12670 | 6614 | 17690886 | 8046 | 22192668 | -0 | 345.28 | 0.08 |
| 5 | 13156 | 6700 | 23348107 | 8048 | 29132355 | -0 | 345.28 | 0.10 |
| 6 | 15053 | 6791 | 29117934 | 8054 | 36143300 | -0 | 345.28 | 0.12 |
| 7 | 16142 | 6927 | 35832489 | 8114 | 44406647 | -0 | 345.28 | 0.14 |
| 8 | 46899 | 239342 | 184837937 | 20687 | 60765192 | -0 | 345.28 | 0.22 |
| 9 | 77696 | 19637 | 240976224 | 92328 | 152276397 | 229740673 | 345.28 | 0.30 |
| 10 | 78904 | 19743 | 259651857 | 92329 | 233866100 | 229740673 | 345.28 | 0.34 |
| 11 | 80153 | 19853 | 278385063 | 92328 | 315447285 | 229740673 | 345.28 | 0.38 |
| 12 | 119902 | -218544 | 156866330 | 94588 | 399941537 | 229740673 | 345.28 | 0.37 |
| 13 | 159691 | -20215 | 31363369 | 104520 | 496288692 | 235605792 | 345.28 | 0.41 |
| 14 | 161059 | -20101 | 17951076 | 104510 | 591036919 | 235605792 | 345.28 | 0.45 |
| 15 | 162467 | -19983 | 4660679 | 104499 | 685623212 | 235605792 | 345.28 | 0.49 |
| 16 | 196423 | 109826 | 67240593 | 104582 | 781271469 | 235605792 | 345.28 | 0.53 |
| 17 | 230419 | 103574 | 341351476 | 104657 | 877870765 | 235605792 | 345.28 | 0.61 |
| 18 | 231946 | 103694 | 434257616 | 104634 | 974166755 | 235605792 | 345.28 | 0.65 |
| 19 | 238035 | 103825 | 527248213 | 104620 | 1070299308 | 235605792 | 345.28 | 0.68 |
| 20 | 239555 | 101979 | 623925461 | 104869 | 1172372920 | 235605792 | 345.28 | 0.72 |
| 21 | 241139 | 86833 | 701889268 | 104567 | 1270482877 | 235605792 | 345.28 | 0.52 |
| 22 | 243688 | 86971 | 782348726 | 104548 | 1368372231 | 235605792 | 345.28 | 0.54 |
| 23 | 246300 | 87113 | 862820636 | 104529 | 1466035830 | 235605792 | 345.28 | 0.55 |
| 24 | 248976 | 87259 | 943302274 | 104509 | 1563471148 | 235605792 | 345.28 | 0.56 |
| 25 | 251714 | 87408 | 1023791805 | 104489 | 1660676335 | 235605792 | 345.28 | 0.57 |
| 26 | 254515 | 87561 | 1104288134 | 104469 | 1757650083 | 235605792 | 345.28 | 0.58 |
| 27 | 257380 | 87717 | 1184790795 | 104449 | 1854391518 | 235605792 | 345.28 | 0.59 |
| 28 | 260307 | 87877 | 1265299841 | 104430 | 1950900108 | 235605792 | 345.28 | 0.59 |
| 29 | 263298 | 88041 | 1345815765 | 104410 | 2047175592 | 235605792 | 345.28 | 0.60 |
| 30 | 266352 | 88209 | 1426339426 | 104390 | 2143217917 | 235605792 | 345.28 | 0.60 |
| 31 | 278332 | 88389 | 1506996519 | 104383 | 2239199666 | 235605792 | 345.28 | 0.60 |
| 32 | 281906 | 88597 | 1587009925 | 104415 | 2334274714 | 235605792 | 345.28 | 0.61 |
| 33 | 285551 | 88735 | 1666518981 | 104346 | 2428416823 | 235605792 | 345.28 | 0.55 |
| 34 | 289268 | 88913 | 1746053510 | 104329 | 2522355576 | 235605792 | 345.28 | 0.55 |
| 35 | 293057 | 89095 | 1825615124 | 104313 | 2616090836 | 235605792 | 345.28 | 0.55 |
| 36 | 296917 | 89280 | 1905205769 | 104296 | 2709622826 | 235605792 | 345.28 | 0.55 |
| 37 | 300848 | 89469 | 1984827459 | 104280 | 2802951741 | 235605792 | 345.28 | 0.54 |
| 38 | 304851 | 89662 | 2064482259 | 104264 | 2896077742 | 235605792 | 345.28 | 0.54 |
| 39 | 308925 | 89858 | 2144172275 | 104249 | 2989000943 | 235605792 | 345.28 | 0.54 |
| 40 | 313071 | 90059 | 2223899635 | 104233 | 3081721407 | 235605792 | 345.28 | 0.54 |
| 41 | 317289 | 90263 | 2303666486 | 104218 | 3174239143 | 235605792 | 345.28 | 0.54 |
| 42 | 334355 | 90477 | 2383565856 | 104211 | 3266675890 | 235605792 | 345.28 | 0.54 |
| 43 | 338479 | 90678 | 2460694930 | 104191 | 3355661074 | 235605792 | 345.28 | 0.53 |
| 44 | 342668 | 90883 | 2537894925 | 104180 | 3444499045 | 235605792 | 345.28 | 0.55 |
| 45 | 346924 | 91089 | 2615118960 | 104164 | 3533124233 | 235605792 | 345.28 | 0.55 |
| 46 | 351247 | 91299 | 2692369245 | 104149 | 3621536889 | 235605792 | 345.28 | 0.55 |
| 47 | 355636 | 91512 | 2769647901 | 104134 | 3709737093 | 235605792 | 345.28 | 0.55 |
| 48 | 360091 | 91729 | 2846957027 | 104119 | 3797724850 | 235605792 | 345.28 | 0.54 |
| 49 | 364612 | 91949 | 2924298693 | 104104 | 3885500093 | 235605792 | 345.28 | 0.54 |
| 50 | 369200 | 92173 | 3001674944 | 104089 | 3973062687 | 235605792 | 345.28 | 0.54 |
| 51 | 373854 | 92400 | 3079087795 | 104075 | 4060412423 | 235605792 | 345.28 | 0.53 |
| 52 | 378574 | 92631 | 3156539230 | 104061 | 4147549025 | 235605792 | 345.28 | 0.53 |
| 53 | 383361 | 92865 | 3234031203 | 104047 | 4234472151 | 235605792 | 345.28 | 0.53 |
| 54 | 388214 | 93103 | 3311565635 | 104033 | 4321181391 | 235605792 | 345.28 | 0.52 |
| 55 | 393133 | 93344 | 3389144416 | 104020 | 4407676273 | 235605792 | 345.28 | 0.52 |
| 56 | 398119 | 93589 | 3466769404 | 104007 | 4493956261 | 235605792 | 345.28 | 0.52 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 64 " MST - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 "

Pressione trasversale del vento = 176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | 6350.00 | 8000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | 21450.00 | 96000.00 | 4.75 |
| --- | --- | --- | Ft = 45431 | Fp = 63444 | --- |
| --- | --- | Pa = 19114 | Ta = -3824 | La = 41036 | --- |
| --- | --- | Pb = -19114 | Tb = 25274 | Lb = 54964 | --- |
| 3.00 | 33.69 | 0.00 | 28220.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 3749 | Fp = -30400 | --- |
| --- | --- | Pa = 3162 | Ta = -2015 | La = 0 | --- |
| --- | --- | Pb = -3162 | Tb = 30235 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | 28220.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = -3749 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = 28220 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|--------|------------|--------|------------|-----------|--------------------------------|-------|
| 2 | 433 | 6425 | 6291682 | 8000 | 7855293 | 0 | 345.28 | 0.03 |
| 3 | 883 | 6503 | 11480062 | 8000 | 14246363 | -0 | 345.28 | 0.06 |
| 4 | 1350 | 6585 | 16742594 | 8001 | 20653611 | 0 | 345.28 | 0.07 |
| 5 | 1836 | 6669 | 22081923 | 8001 | 27077378 | -0 | 345.28 | 0.09 |
| 6 | 3733 | 6758 | 27528095 | 8002 | 33564565 | 0 | 345.28 | 0.10 |
| 7 | 4822 | 6856 | 33541894 | 8005 | 40694620 | -0 | 345.28 | 0.12 |
| 8 | 16408 | 83046 | 86252432 | 14122 | 51692282 | 0 | 345.28 | 0.11 |
| 9 | 28034 | 3240 | 101116947 | 49051 | 99114932 | 112159323 | 345.28 | 0.15 |
| 10 | 29242 | 3346 | 104544192 | 49052 | 141722441 | 112159323 | 345.28 | 0.17 |
| 11 | 30491 | 3456 | 108079218 | 49052 | 184359647 | 112159323 | 345.28 | 0.19 |
| 12 | 24703 | -25058 | 94068170 | 58861 | 232628971 | 112159323 | 345.28 | 0.21 |
| 13 | 18955 | 26940 | 113394467 | 104009 | 328130252 | 139150510 | 345.28 | 0.27 |
| 14 | 20323 | 27061 | 136719544 | 104009 | 416962288 | 139150510 | 345.28 | 0.32 |
| 15 | 21731 | 27185 | 160169945 | 104010 | 505821030 | 139150510 | 345.28 | 0.37 |
| 16 | 22498 | 33346 | 187305671 | 104010 | 594681743 | 139150510 | 345.28 | 0.41 |
| 17 | 23305 | 57678 | 240889965 | 104010 | 683542337 | 139150510 | 345.28 | 0.45 |
| 18 | 24832 | 57813 | 290334964 | 104010 | 772420499 | 139150510 | 345.28 | 0.48 |
| 19 | 30921 | 57952 | 339991589 | 104012 | 861438058 | 139150510 | 345.28 | 0.51 |
| 20 | 33343 | 59296 | 392135939 | 104018 | 953336550 | 139150510 | 345.28 | 0.54 |
| 21 | 35829 | 86465 | 470368996 | 104012 | 1044839060 | 139150510 | 345.28 | 0.40 |
| 22 | 38378 | 86616 | 546420971 | 104013 | 1136371419 | 139150510 | 345.28 | 0.42 |
| 23 | 40990 | 86770 | 622631044 | 104013 | 1227930016 | 139150510 | 345.28 | 0.43 |
| 24 | 43666 | 86928 | 698999941 | 104013 | 1319511236 | 139150510 | 345.28 | 0.45 |
| 25 | 46404 | 87090 | 775528326 | 104014 | 1411111425 | 139150510 | 345.28 | 0.46 |
| 26 | 49205 | 87256 | 852216811 | 104014 | 1502726909 | 139150510 | 345.28 | 0.47 |
| 27 | 52070 | 87425 | 929065963 | 104014 | 1594353990 | 139150510 | 345.28 | 0.48 |
| 28 | 54997 | 87598 | 1006076312 | 104014 | 1685988958 | 139150510 | 345.28 | 0.49 |
| 29 | 57988 | 87775 | 1083248357 | 104014 | 1777628095 | 139150510 | 345.28 | 0.50 |
| 30 | 61042 | 87956 | 1160582568 | 104014 | 1869267673 | 139150510 | 345.28 | 0.50 |
| 31 | 73022 | 88142 | 1238182938 | 104016 | 1961051729 | 139150510 | 345.28 | 0.51 |
| 32 | 76596 | 88328 | 1314931882 | 104018 | 2051661606 | 139150510 | 345.28 | 0.51 |
| 33 | 80241 | 88512 | 1391719850 | 104016 | 2142095389 | 139150510 | 345.28 | 0.46 |
| 34 | 83958 | 88701 | 1468666753 | 104016 | 2232519429 | 139150510 | 345.28 | 0.47 |
| 35 | 87747 | 88893 | 1545772950 | 104016 | 2322930168 | 139150510 | 345.28 | 0.47 |
| 36 | 91607 | 89089 | 1623038800 | 104015 | 2413324066 | 139150510 | 345.28 | 0.47 |
| 37 | 95538 | 89289 | 1700464658 | 104015 | 2503697592 | 139150510 | 345.28 | 0.47 |
| 38 | 99541 | 89492 | 1778050869 | 104015 | 2594047220 | 139150510 | 345.28 | 0.47 |
| 39 | 103615 | 89699 | 1855797777 | 104014 | 2684369434 | 139150510 | 345.28 | 0.47 |
| 40 | 107761 | 89910 | 1933705719 | 104014 | 2774660726 | 139150510 | 345.28 | 0.47 |
| 41 | 111979 | 90124 | 2011775031 | 104013 | 2864917595 | 139150510 | 345.28 | 0.47 |
| 42 | 129045 | 90343 | 2090083943 | 104014 | 2955242942 | 139150510 | 345.28 | 0.47 |
| 43 | 133169 | 90556 | 2165820180 | 104013 | 3042383147 | 139150510 | 345.28 | 0.47 |
| 44 | 137358 | 90769 | 2241711453 | 104013 | 3129491233 | 139150510 | 345.28 | 0.49 |
| 45 | 141614 | 90985 | 2317741581 | 104012 | 3216541655 | 139150510 | 345.28 | 0.49 |
| 46 | 145937 | 91205 | 2393910865 | 104011 | 3303531405 | 139150510 | 345.28 | 0.49 |
| 47 | 150326 | 91428 | 2470219603 | 104010 | 3390457471 | 139150510 | 345.28 | 0.49 |
| 48 | 154781 | 91654 | 2546668092 | 104009 | 3477316848 | 139150510 | 345.28 | 0.49 |
| 49 | 159302 | 91883 | 2623256630 | 104008 | 3564106533 | 139150510 | 345.28 | 0.48 |
| 50 | 163890 | 92116 | 2699985514 | 104007 | 3650823530 | 139150510 | 345.28 | 0.48 |
| 51 | 168544 | 92353 | 2776855043 | 104006 | 3737464848 | 139150510 | 345.28 | 0.48 |
| 52 | 173264 | 92593 | 2853865515 | 104005 | 3824027500 | 139150510 | 345.28 | 0.48 |
| 53 | 178051 | 92836 | 2931017226 | 104004 | 3910508503 | 139150510 | 345.28 | 0.48 |
| 54 | 182904 | 93082 | 3008310476 | 104003 | 3996904881 | 139150510 | 345.28 | 0.47 |
| 55 | 187823 | 93332 | 3085745561 | 104002 | 4083213660 | 139150510 | 345.28 | 0.47 |
| 56 | 192809 | 93585 | 3163322778 | 104001 | 4169431872 | 139150510 | 345.28 | 0.47 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 65 " MST - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-) "

Pressione trasversale del vento = -706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 3530.00 | -3520.00 | 31000.00 | 0.00 |
| 2.00 | 37.16 | 54320.00 | -38720.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 74159 | Fp = -79007 | --- |
| --- | --- | Pa = 62537 | Ta = 39858 | La = 0 | --- |
| --- | --- | Pb = -8217 | Tb = -78578 | Lb = 0 | --- |
| 3.00 | 33.69 | 54320.00 | -38720.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 63870 | Fp = 4416 | --- |
| --- | --- | Pa = 53861 | Ta = -34328 | La = 0 | --- |
| --- | --- | Pb = 459 | Tb = -4392 | Lb = 0 | --- |
| 4.00 | 30.23 | 54320.00 | -38720.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 74159 | Fp = -79007 | --- |
| --- | --- | Pa = 62537 | Ta = 39858 | La = 0 | --- |
| --- | --- | Pb = -8217 | Tb = -78578 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|------|----------------------|---------|-------------|--------|------------|----------|-------------------|-------|
| 2 | 3963 | -3828 | -3769076 | 31005 | 30476924 | 0 | 345.28 | 0.10 |
| 3 | 4413 | -4143 | -7144879 | 31005 | 55228037 | 0 | 345.28 | 0.17 |
| 4 | 4880 | -4469 | -10788767 | 31006 | 79987281 | -0 | 345.28 | 0.23 |
| 5 | 5366 | -4809 | -14710875 | 31006 | 104753538 | -0 | 345.28 | 0.27 |
| 6 | 7263 | -5164 | -18947308 | 31008 | 129554091 | -0 | 345.28 | 0.31 |
| 7 | 8352 | -5569 | -23988545 | 31019 | 156196506 | -0 | 345.28 | 0.36 |
| 8 | 41650 | 250740 | 126778332 | 31048 | 183350749 | -0 | 345.28 | 0.25 |
| 9 | 74987 | 33374 | 197543686 | 31085 | 211151437 | -0 | 345.28 | 0.30 |
| 10 | 76196 | 32948 | 223927166 | 31085 | 238919250 | -0 | 345.28 | 0.32 |
| 11 | 77444 | 32508 | 249860838 | 31085 | 266651882 | -0 | 345.28 | 0.33 |
| 12 | 102454 | -156522 | 162893539 | 31110 | 294774484 | -0 | 345.28 | 0.29 |
| 13 | 127504 | -81403 | 2296525 | 31134 | 323248318 | -0 | 345.28 | 0.27 |
| 14 | 128872 | -81884 | -69941429 | 31132 | 351644903 | -0 | 345.28 | 0.28 |
| 15 | 130280 | -82377 | -142607568 | 31129 | 379963272 | -0 | 345.28 | 0.30 |
| 16 | 164126 | 16216 | -159296111 | 31156 | 408685163 | -0 | 345.28 | 0.31 |
| 17 | 198012 | -48042 | -55640255 | 31181 | 437760566 | -0 | 345.28 | 0.30 |
| 18 | 199540 | -48573 | -101042562 | 31175 | 466707237 | -0 | 345.28 | 0.30 |
| 19 | 205628 | -49125 | -147007291 | 31171 | 495582861 | -0 | 345.28 | 0.31 |
| 20 | 203942 | -59651 | -202673452 | 31236 | 526234810 | -0 | 345.28 | 0.32 |
| 21 | 202319 | -128845 | -330440034 | 31151 | 555572678 | -0 | 345.28 | 0.24 |
| 22 | 204868 | -129442 | -447429099 | 31146 | 584831719 | -0 | 345.28 | 0.26 |
| 23 | 207480 | -130053 | -564925636 | 31141 | 614012130 | -0 | 345.28 | 0.28 |
| 24 | 210156 | -130679 | -682928706 | 31136 | 643114653 | -0 | 345.28 | 0.29 |
| 25 | 212894 | -131319 | -801438906 | 31131 | 672140036 | -0 | 345.28 | 0.31 |
| 26 | 215695 | -131975 | -920458154 | 31126 | 701089026 | -0 | 345.28 | 0.33 |
| 27 | 218560 | -132646 | -1039989504 | 31120 | 729962354 | -0 | 345.28 | 0.34 |
| 28 | 221487 | -133331 | -1160036986 | 31115 | 758760725 | -0 | 345.28 | 0.36 |
| 29 | 224478 | -134032 | -1280605468 | 31110 | 787484816 | -0 | 345.28 | 0.37 |
| 30 | 227532 | -134748 | -1401700547 | 31105 | 816135267 | -0 | 345.28 | 0.38 |
| 31 | 239512 | -135486 | -1523475063 | 31104 | 844773469 | -0 | 345.28 | 0.39 |
| 32 | 243086 | -136248 | -1644536038 | 31113 | 873141125 | -0 | 345.28 | 0.40 |
| 33 | 246731 | -136956 | -1765589993 | 31094 | 901224661 | -0 | 345.28 | 0.37 |
| 34 | 250448 | -137705 | -1887183572 | 31090 | 929245556 | -0 | 345.28 | 0.38 |
| 35 | 254237 | -138470 | -2009324396 | 31085 | 957204059 | -0 | 345.28 | 0.38 |
| 36 | 258097 | -139249 | -2132020520 | 31081 | 985100473 | -0 | 345.28 | 0.39 |
| 37 | 262028 | -140043 | -2255280220 | 31077 | 1012935060 | -0 | 345.28 | 0.39 |
| 38 | 266031 | -140851 | -2379111957 | 31072 | 1040708037 | -0 | 345.28 | 0.40 |
| 39 | 270105 | -141675 | -2503524354 | 31068 | 1068419581 | -0 | 345.28 | 0.40 |
| 40 | 274251 | -142512 | -2628526168 | 31064 | 1096069828 | -0 | 345.28 | 0.41 |
| 41 | 278469 | -143365 | -2754126269 | 31060 | 1123658875 | -0 | 345.28 | 0.41 |
| 42 | 295535 | -144237 | -2880447746 | 31058 | 1151228562 | -0 | 345.28 | 0.41 |
| 43 | 299659 | -145086 | -3002924235 | 31053 | 1177767410 | -0 | 345.28 | 0.42 |
| 44 | 303848 | -145936 | -3126004119 | 31050 | 1204261570 | -0 | 345.28 | 0.44 |
| 45 | 308104 | -146797 | -3249641286 | 31046 | 1230691181 | -0 | 345.28 | 0.44 |
| 46 | 312427 | -147671 | -3373844120 | 31041 | 1257056355 | -0 | 345.28 | 0.44 |
| 47 | 316816 | -148559 | -3498620986 | 31037 | 1283357145 | -0 | 345.28 | 0.44 |
| 48 | 321271 | -149461 | -3623980279 | 31033 | 1309593570 | -0 | 345.28 | 0.44 |
| 49 | 325792 | -150377 | -3749930413 | 31029 | 1335765618 | -0 | 345.28 | 0.44 |
| 50 | 330380 | -151306 | -3876479819 | 31025 | 1361873247 | -0 | 345.28 | 0.44 |
| 51 | 335034 | -152249 | -4003636936 | 31021 | 1387916386 | -0 | 345.28 | 0.44 |
| 52 | 339754 | -153206 | -4131410210 | 31017 | 1413894936 | -0 | 345.28 | 0.44 |
| 53 | 344541 | -154176 | -4259808084 | 31013 | 1439808771 | -0 | 345.28 | 0.44 |
| 54 | 349394 | -155160 | -4388839000 | 31009 | 1465657742 | -0 | 345.28 | 0.45 |
| 55 | 354313 | -156158 | -4518511391 | 31006 | 1491441673 | -0 | 345.28 | 0.45 |
| 56 | 359299 | -157170 | -4648833682 | 31002 | 1517160365 | -0 | 345.28 | 0.45 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 66 " MST - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-) "

Pressione trasversale del vento = -706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | -3520.00 | 31000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | -38720.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 5145 | Fp = -41711 | --- |
| --- | --- | Pa = 4338 | Ta = 2765 | La = 0 | --- |
| --- | --- | Pb = -4338 | Tb = -41485 | Lb = 0 | --- |
| 3.00 | 33.69 | 0.00 | -38720.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = -5145 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = -38720 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | -38720.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 5145 | Fp = -41711 | --- |
| --- | --- | Pa = 4338 | Ta = 2765 | La = 0 | --- |
| --- | --- | Pb = -4338 | Tb = -41485 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|------|----------------------|---------|-------------|--------|------------|----------|-------------------|-------|
| 2 | 433 | -3821 | -3700412 | 31000 | 30389932 | 0 | 345.28 | 0.10 |
| 3 | 883 | -4135 | -7010853 | 31000 | 55054838 | 0 | 345.28 | 0.17 |
| 4 | 1350 | -4461 | -10592899 | 31000 | 79729437 | 0 | 345.28 | 0.22 |
| 5 | 1836 | -4800 | -14456887 | 31000 | 104413197 | -0 | 345.28 | 0.27 |
| 6 | 3733 | -5152 | -18648953 | 31001 | 129132701 | 0 | 345.28 | 0.31 |
| 7 | 4822 | -5542 | -23611965 | 31002 | 155606318 | 0 | 345.28 | 0.36 |
| 8 | 9020 | 11873 | -18026614 | 31002 | 182060389 | -0 | 345.28 | 0.20 |
| 9 | 13258 | -3586 | -18381865 | 31003 | 208587486 | -0 | 345.28 | 0.21 |
| 10 | 14467 | -4011 | -22178370 | 31003 | 235126636 | -0 | 345.28 | 0.22 |
| 11 | 15715 | -4451 | -26380383 | 31003 | 261676595 | -0 | 345.28 | 0.23 |
| 12 | 15734 | -17642 | -38670514 | 31003 | 288215125 | -0 | 345.28 | 0.24 |
| 13 | 15793 | -46858 | -84412181 | 31003 | 314742851 | -0 | 345.28 | 0.25 |
| 14 | 17161 | -47340 | -125002894 | 31003 | 341279463 | -0 | 345.28 | 0.27 |
| 15 | 18569 | -47837 | -166047542 | 31003 | 367823659 | -0 | 345.28 | 0.28 |
| 16 | 23086 | -44906 | -205683849 | 31004 | 394415838 | -0 | 345.28 | 0.29 |
| 17 | 27643 | -84832 | -271994688 | 31004 | 421050330 | -0 | 345.28 | 0.31 |
| 18 | 29171 | -85372 | -345103935 | 31004 | 447684185 | -0 | 345.28 | 0.33 |
| 19 | 35259 | -85928 | -418820056 | 31005 | 474368172 | -0 | 345.28 | 0.35 |
| 20 | 35513 | -91703 | -498563707 | 31007 | 501943496 | -0 | 345.28 | 0.37 |
| 21 | 35829 | -128584 | -617370746 | 31005 | 529316948 | -0 | 345.28 | 0.28 |
| 22 | 38378 | -129188 | -730784260 | 31005 | 556698766 | -0 | 345.28 | 0.31 |
| 23 | 40990 | -129807 | -844773524 | 31005 | 584087609 | -0 | 345.28 | 0.32 |
| 24 | 43666 | -130441 | -959348009 | 31005 | 611482155 | -0 | 345.28 | 0.34 |
| 25 | 46404 | -131090 | -1074517078 | 31005 | 638881088 | -0 | 345.28 | 0.36 |
| 26 | 49205 | -131754 | -1190289996 | 31005 | 666283100 | -0 | 345.28 | 0.37 |
| 27 | 52070 | -132433 | -1306675945 | 31005 | 693686888 | -0 | 345.28 | 0.39 |
| 28 | 54997 | -133127 | -1423684033 | 31005 | 721091157 | -0 | 345.28 | 0.40 |
| 29 | 57988 | -133837 | -1541323305 | 31005 | 748494619 | -0 | 345.28 | 0.41 |
| 30 | 61042 | -134561 | -1659602746 | 31005 | 775895993 | -0 | 345.28 | 0.42 |
| 31 | 73022 | -135303 | -1778685398 | 31006 | 803349566 | -0 | 345.28 | 0.43 |
| 32 | 76596 | -136048 | -1896852668 | 31007 | 830461648 | -0 | 345.28 | 0.44 |
| 33 | 80241 | -136789 | -2015480784 | 31006 | 857505859 | -0 | 345.28 | 0.40 |
| 34 | 83958 | -137547 | -2134756297 | 31006 | 884544669 | -0 | 345.28 | 0.40 |
| 35 | 87747 | -138319 | -2254687590 | 31006 | 911576891 | -0 | 345.28 | 0.41 |
| 36 | 91607 | -139106 | -2375283028 | 31006 | 938601352 | -0 | 345.28 | 0.41 |
| 37 | 95538 | -139907 | -2496550954 | 31006 | 965616886 | -0 | 345.28 | 0.42 |
| 38 | 99541 | -140723 | -2618499686 | 31006 | 992622330 | -0 | 345.28 | 0.42 |
| 39 | 103615 | -141554 | -2741137520 | 31005 | 1019616528 | -0 | 345.28 | 0.42 |
| 40 | 107761 | -142399 | -2864472733 | 31005 | 1046598330 | -0 | 345.28 | 0.43 |
| 41 | 111979 | -143259 | -2988513581 | 31005 | 1073566591 | -0 | 345.28 | 0.43 |
| 42 | 129045 | -144135 | -3113386133 | 31005 | 1100558631 | -0 | 345.28 | 0.43 |
| 43 | 133169 | -144993 | -3234590440 | 31005 | 1126593677 | -0 | 345.28 | 0.43 |
| 44 | 137358 | -145848 | -3356472091 | 31005 | 1152616328 | -0 | 345.28 | 0.45 |
| 45 | 141614 | -146717 | -3479013481 | 31004 | 1178617485 | -0 | 345.28 | 0.45 |
| 46 | 145937 | -147599 | -3602221909 | 31004 | 1204596198 | -0 | 345.28 | 0.46 |
| 47 | 150326 | -148494 | -3726104661 | 31004 | 1230551514 | -0 | 345.28 | 0.46 |
| 48 | 154781 | -149404 | -3850669011 | 31003 | 1256482486 | -0 | 345.28 | 0.46 |
| 49 | 159302 | -150326 | -3975922221 | 31003 | 1282388163 | -0 | 345.28 | 0.46 |
| 50 | 163890 | -151263 | -4101871544 | 31003 | 1308267599 | -0 | 345.28 | 0.46 |
| 51 | 168544 | -152213 | -4228524220 | 31002 | 1334119848 | -0 | 345.28 | 0.46 |
| 52 | 173264 | -153176 | -4355887482 | 31002 | 1359943963 | -0 | 345.28 | 0.46 |
| 53 | 178051 | -154153 | -4483968547 | 31001 | 1385739002 | -0 | 345.28 | 0.46 |
| 54 | 182904 | -155144 | -4612774624 | 31001 | 1411504021 | -0 | 345.28 | 0.46 |
| 55 | 187823 | -156149 | -4742312910 | 31001 | 1437238080 | -0 | 345.28 | 0.46 |
| 56 | 192809 | -157167 | -4872590591 | 31000 | 1462940237 | -0 | 345.28 | 0.46 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 67 " MST - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-) "

Pressione trasversale del vento = -706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 7060.00 | -7040.00 | 6000.00 | 0.00 |
| 2.00 | 37.16 | 43490.00 | -30190.00 | 81000.00 | 4.75 |
| --- | --- | --- | Ft = 108535 | Fp = -21220 | --- |
| --- | --- | Pa = 35120 | Ta = -24645 | La = 99695 | --- |
| --- | --- | Pb = 8370 | Tb = -5545 | Lb = -18695 | --- |
| 3.00 | 33.69 | 54320.00 | -38720.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 63870 | Fp = 4416 | --- |
| --- | --- | Pa = 53861 | Ta = -34328 | La = 0 | --- |
| --- | --- | Pb = 459 | Tb = -4392 | Lb = 0 | --- |
| 4.00 | 30.23 | 54320.00 | -38720.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 74159 | Fp = -79007 | --- |
| --- | --- | Pa = 62537 | Ta = 39858 | La = 0 | --- |
| --- | --- | Pb = -8217 | Tb = -78578 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|-------------|--------|------------|-----------|--------------------------------|-------|
| 2 | 7493 | -7357 | -7370125 | 6018 | 6174341 | 0 | 345.28 | 0.03 |
| 3 | 7943 | -7671 | -13699788 | 6019 | 11255226 | -0 | 345.28 | 0.06 |
| 4 | 8410 | -7998 | -20301340 | 6020 | 16352831 | 0 | 345.28 | 0.08 |
| 5 | 8896 | -8338 | -27184738 | 6021 | 21467358 | -0 | 345.28 | 0.09 |
| 6 | 10793 | -8693 | -34398232 | 6025 | 26648039 | -0 | 345.28 | 0.11 |
| 7 | 11882 | -9108 | -42824539 | 6055 | 32695192 | -0 | 345.28 | 0.13 |
| 8 | 31471 | 127662 | 31999194 | 20924 | 47857916 | -0 | 345.28 | 0.07 |
| 9 | 51100 | -34617 | 20259926 | 105812 | 151288721 | 272481919 | 345.28 | 0.16 |
| 10 | 52308 | -35043 | -11003713 | 105813 | 242961742 | 272481919 | 345.28 | 0.24 |
| 11 | 53557 | -35484 | -42674534 | 105814 | 334640900 | 272481919 | 345.28 | 0.30 |
| 12 | 86861 | -191116 | -167298221 | 102548 | 425539372 | 272481919 | 345.28 | 0.39 |
| 13 | 120204 | -76406 | -313400218 | 87258 | 501428447 | 263301532 | 345.28 | 0.47 |
| 14 | 121572 | -76886 | -382018895 | 87255 | 579497429 | 263301532 | 345.28 | 0.52 |
| 15 | 122980 | -77379 | -450994510 | 87251 | 657457559 | 263301532 | 345.28 | 0.56 |
| 16 | 156826 | 21208 | -464099974 | 87310 | 736366369 | 263301532 | 345.28 | 0.58 |
| 17 | 190712 | -43055 | -356937582 | 87363 | 816126930 | 263301532 | 345.28 | 0.57 |
| 18 | 192240 | -43585 | -398745588 | 87351 | 895664829 | 263301532 | 345.28 | 0.59 |
| 19 | 198328 | -44136 | -441052945 | 87346 | 975103268 | 263301532 | 345.28 | 0.61 |
| 20 | 196642 | -54669 | -493113081 | 87478 | 1058938011 | 263301532 | 345.28 | 0.63 |
| 21 | 195019 | -123853 | -616961736 | 87308 | 1139905550 | 263301532 | 345.28 | 0.46 |
| 22 | 197568 | -124449 | -729991318 | 87299 | 1220726672 | 263301532 | 345.28 | 0.48 |
| 23 | 200180 | -125059 | -843490602 | 87289 | 1301398333 | 263301532 | 345.28 | 0.50 |
| 24 | 202856 | -125684 | -957462112 | 87279 | 1381918897 | 263301532 | 345.28 | 0.52 |
| 25 | 205594 | -126324 | -1071909547 | 87269 | 1462287071 | 263301532 | 345.28 | 0.53 |
| 26 | 208395 | -126979 | -1186837607 | 87259 | 1542501827 | 263301532 | 345.28 | 0.54 |
| 27 | 211260 | -127649 | -1302251846 | 87249 | 1622562350 | 263301532 | 345.28 | 0.55 |
| 28 | 214187 | -128334 | -1418158544 | 87239 | 1702467984 | 263301532 | 345.28 | 0.56 |
| 29 | 217178 | -129034 | -1534564605 | 87228 | 1782218196 | 263301532 | 345.28 | 0.57 |
| 30 | 220232 | -129749 | -1651477459 | 87218 | 1861812540 | 263301532 | 345.28 | 0.58 |
| 31 | 232212 | -130488 | -1769062853 | 87216 | 1941396521 | 263301532 | 345.28 | 0.59 |
| 32 | 235786 | -131250 | -1886000459 | 87235 | 2020176720 | 263301532 | 345.28 | 0.59 |
| 33 | 239431 | -131956 | -2002894801 | 87197 | 2098304387 | 263301532 | 345.28 | 0.54 |
| 34 | 243148 | -132705 | -2120316152 | 87188 | 2176294827 | 263301532 | 345.28 | 0.54 |
| 35 | 246937 | -133469 | -2238273135 | 87179 | 2254147439 | 263301532 | 345.28 | 0.54 |
| 36 | 250797 | -134248 | -2356774733 | 87170 | 2331861808 | 263301532 | 345.28 | 0.54 |
| 37 | 254728 | -135041 | -2475830070 | 87161 | 2409437483 | 263301532 | 345.28 | 0.55 |
| 38 | 258731 | -135849 | -2595448383 | 87152 | 2486873981 | 263301532 | 345.28 | 0.55 |
| 39 | 262805 | -136672 | -2715639004 | 87144 | 2564170777 | 263301532 | 345.28 | 0.55 |
| 40 | 266951 | -137509 | -2836411340 | 87135 | 2641327304 | 263301532 | 345.28 | 0.55 |
| 41 | 271169 | -138362 | -2957774864 | 87127 | 2718342951 | 263301532 | 345.28 | 0.55 |
| 42 | 288235 | -139234 | -3079858854 | 87124 | 2795319713 | 263301532 | 345.28 | 0.55 |
| 43 | 292359 | -140082 | -3198236607 | 87112 | 2869453643 | 263301532 | 345.28 | 0.55 |
| 44 | 296548 | -140931 | -3317212892 | 87106 | 2943483808 | 263301532 | 345.28 | 0.57 |
| 45 | 300804 | -141792 | -3436740730 | 87097 | 3017361959 | 263301532 | 345.28 | 0.57 |
| 46 | 305127 | -142666 | -3556828932 | 87088 | 3091087711 | 263301532 | 345.28 | 0.57 |
| 47 | 309516 | -143554 | -3677486256 | 87079 | 3164660572 | 263301532 | 345.28 | 0.57 |
| 48 | 313971 | -144455 | -3798721463 | 87070 | 3238079996 | 263301532 | 345.28 | 0.57 |
| 49 | 318492 | -145370 | -3920543307 | 87062 | 3311345387 | 263301532 | 345.28 | 0.57 |
| 50 | 323080 | -146299 | -4042960534 | 87053 | 3384456101 | 263301532 | 345.28 | 0.56 |
| 51 | 327734 | -147241 | -4165981878 | 87045 | 3457411444 | 263301532 | 345.28 | 0.56 |
| 52 | 332454 | -148198 | -4289616055 | 87036 | 3530210677 | 263301532 | 345.28 | 0.56 |
| 53 | 337241 | -149168 | -4413871766 | 87028 | 3602853014 | 263301532 | 345.28 | 0.56 |
| 54 | 342094 | -150151 | -4538757690 | 87020 | 3675337624 | 263301532 | 345.28 | 0.56 |
| 55 | 347013 | -151149 | -4664282484 | 87012 | 3747663636 | 263301532 | 345.28 | 0.56 |
| 56 | 351999 | -152160 | -4790454779 | 87004 | 3819830133 | 263301532 | 345.28 | 0.55 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 68 " MST - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-) "

Pressione trasversale del vento = -706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | -7040.00 | 6000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | -30190.00 | 81000.00 | 4.75 |
| --- | --- | --- | Ft = 70328 | Fp = 22883 | --- |
| --- | --- | Pa = 12292 | Ta = -31365 | La = 61735 | --- |
| --- | --- | Pb = -12292 | Tb = 1175 | Lb = 19265 | --- |
| 3.00 | 33.69 | 0.00 | -38720.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = -5145 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = -38720 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | -38720.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 5145 | Fp = -41711 | --- |
| --- | --- | Pa = 4338 | Ta = 2765 | La = 0 | --- |
| --- | --- | Pb = -4338 | Tb = -41485 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|-------------|--------|------------|-----------|--------------------------------|-------|
| 2 | 433 | -7341 | -7151499 | 6000 | 5893923 | 0 | 345.28 | 0.03 |
| 3 | 883 | -7655 | -13263333 | 6000 | 10692224 | -0 | 345.28 | 0.05 |
| 4 | 1350 | -7981 | -19648259 | 6001 | 15505296 | 0 | 345.28 | 0.07 |
| 5 | 1836 | -8320 | -26316566 | 6001 | 20333483 | -0 | 345.28 | 0.09 |
| 6 | 3733 | -8672 | -33318541 | 6002 | 25219683 | -0 | 345.28 | 0.10 |
| 7 | 4822 | -9063 | -41296010 | 6004 | 30624693 | -0 | 345.28 | 0.12 |
| 8 | 12997 | 35165 | -22381198 | 15202 | 41590781 | -0 | 345.28 | 0.05 |
| 9 | 21212 | -41240 | -53978994 | 67744 | 106999665 | 168731169 | 345.28 | 0.12 |
| 10 | 22420 | -41665 | -89977059 | 67744 | 165146991 | 168731169 | 345.28 | 0.18 |
| 11 | 23669 | -42105 | -126378434 | 67745 | 223321971 | 168731169 | 345.28 | 0.23 |
| 12 | 19711 | -57450 | -172233357 | 71182 | 283407509 | 168731169 | 345.28 | 0.28 |
| 13 | 15793 | -41848 | -209545991 | 87006 | 359987558 | 178191879 | 345.28 | 0.32 |
| 14 | 17161 | -42331 | -245920828 | 87007 | 434246402 | 178191879 | 345.28 | 0.36 |
| 15 | 18569 | -42828 | -282747357 | 87007 | 508529531 | 178191879 | 345.28 | 0.40 |
| 16 | 23086 | -39897 | -318167295 | 87008 | 582919268 | 178191879 | 345.28 | 0.43 |
| 17 | 27643 | -79823 | -380262223 | 87010 | 657406211 | 178191879 | 345.28 | 0.47 |
| 18 | 29171 | -80363 | -449152062 | 87010 | 731901996 | 178191879 | 345.28 | 0.50 |
| 19 | 35259 | -80918 | -518648938 | 87011 | 806514073 | 178191879 | 345.28 | 0.53 |
| 20 | 35513 | -86694 | -594064146 | 87016 | 883524751 | 178191879 | 345.28 | 0.56 |
| 21 | 35829 | -123575 | -708527936 | 87011 | 960108898 | 178191879 | 345.28 | 0.42 |
| 22 | 38378 | -124179 | -817596418 | 87011 | 1036717806 | 178191879 | 345.28 | 0.44 |
| 23 | 40990 | -124798 | -927238863 | 87011 | 1113348351 | 178191879 | 345.28 | 0.46 |
| 24 | 43666 | -125432 | -1037464759 | 87011 | 1189997411 | 178191879 | 345.28 | 0.47 |
| 25 | 46404 | -126081 | -1148283493 | 87012 | 1266661843 | 178191879 | 345.28 | 0.49 |
| 26 | 49205 | -126745 | -1259704368 | 87012 | 1343338487 | 178191879 | 345.28 | 0.50 |
| 27 | 52070 | -127424 | -1371736614 | 87012 | 1420024172 | 178191879 | 345.28 | 0.51 |
| 28 | 54997 | -128118 | -1484389392 | 87012 | 1496715720 | 178191879 | 345.28 | 0.52 |
| 29 | 57988 | -128827 | -1597671809 | 87012 | 1573409950 | 178191879 | 345.28 | 0.53 |
| 30 | 61042 | -129552 | -1711592917 | 87012 | 1650103677 | 178191879 | 345.28 | 0.54 |
| 31 | 73022 | -130293 | -1826316268 | 87014 | 1726921854 | 178191879 | 345.28 | 0.55 |
| 32 | 76596 | -131039 | -1940186378 | 87016 | 1802761128 | 178191879 | 345.28 | 0.56 |
| 33 | 80241 | -131780 | -2054515729 | 87014 | 1878447048 | 178191879 | 345.28 | 0.51 |
| 34 | 83958 | -132537 | -2169491308 | 87014 | 1954123835 | 178191879 | 345.28 | 0.51 |
| 35 | 87747 | -133309 | -2285121587 | 87013 | 2029788465 | 178191879 | 345.28 | 0.51 |
| 36 | 91607 | -134096 | -2401415026 | 87013 | 2105437930 | 178191879 | 345.28 | 0.52 |
| 37 | 95538 | -134898 | -2518380061 | 87013 | 2181069230 | 178191879 | 345.28 | 0.52 |
| 38 | 99541 | -135714 | -2636025108 | 87013 | 2256679373 | 178191879 | 345.28 | 0.52 |
| 39 | 103615 | -136544 | -2754358561 | 87012 | 2332265375 | 178191879 | 345.28 | 0.52 |
| 40 | 107761 | -137390 | -2873388798 | 87012 | 2407824260 | 178191879 | 345.28 | 0.52 |
| 41 | 111979 | -138250 | -2993124176 | 87011 | 2483353059 | 178191879 | 345.28 | 0.52 |
| 42 | 129045 | -139126 | -3113690169 | 87012 | 2558940467 | 178191879 | 345.28 | 0.53 |
| 43 | 133169 | -139984 | -3230736385 | 87011 | 2631860402 | 178191879 | 345.28 | 0.53 |
| 44 | 137358 | -140839 | -3348459643 | 87011 | 2704752361 | 178191879 | 345.28 | 0.55 |
| 45 | 141614 | -141707 | -3466842592 | 87010 | 2777594389 | 178191879 | 345.28 | 0.55 |
| 46 | 145937 | -142589 | -3585892644 | 87009 | 2850383949 | 178191879 | 345.28 | 0.55 |
| 47 | 150326 | -143485 | -3705617193 | 87009 | 2923118500 | 178191879 | 345.28 | 0.55 |
| 48 | 154781 | -144394 | -3826023622 | 87008 | 2995795508 | 178191879 | 345.28 | 0.55 |
| 49 | 159302 | -145317 | -3947119304 | 87007 | 3068412439 | 178191879 | 345.28 | 0.55 |
| 50 | 163890 | -146253 | -4068911600 | 87006 | 3140966766 | 178191879 | 345.28 | 0.54 |
| 51 | 168544 | -147203 | -4191407859 | 87005 | 3213455964 | 178191879 | 345.28 | 0.54 |
| 52 | 173264 | -148166 | -4314615421 | 87004 | 3285877515 | 178191879 | 345.28 | 0.54 |
| 53 | 178051 | -149144 | -4438541611 | 87003 | 3358228901 | 178191879 | 345.28 | 0.54 |
| 54 | 182904 | -150134 | -4563193745 | 87002 | 3430507609 | 178191879 | 345.28 | 0.54 |
| 55 | 187823 | -151139 | -4688579127 | 87001 | 3502711132 | 178191879 | 345.28 | 0.54 |
| 56 | 192809 | -152157 | -4814705049 | 87000 | 3574836965 | 178191879 | 345.28 | 0.54 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 69 " MST - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-) "

Pressione trasversale del vento = -706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 3470.00 | -3480.00 | 30200.00 | 0.00 |
| 2.00 | 37.16 | 53420.00 | -38100.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 72933 | Fp = -77721 | --- |
| --- | --- | Pa = 61504 | Ta = 39199 | La = 0 | --- |
| --- | --- | Pb = -8084 | Tb = -77299 | Lb = 0 | --- |
| 3.00 | 33.69 | 53420.00 | -38100.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 62809 | Fp = 4366 | --- |
| --- | --- | Pa = 52966 | Ta = -33758 | La = 0 | --- |
| --- | --- | Pb = 454 | Tb = -4342 | Lb = 0 | --- |
| 4.00 | 30.23 | 53420.00 | -38100.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 72933 | Fp = -77721 | --- |
| --- | --- | Pa = 61504 | Ta = 39199 | La = 0 | --- |
| --- | --- | Pb = -8084 | Tb = -77299 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|-------------|--------|------------|----------|--------------------------------|-------|
| 2 | 3903 | -3788 | -3727530 | 30204 | 29688885 | 0 | 345.28 | 0.10 |
| 3 | 4353 | -4102 | -7069066 | 30205 | 53799734 | 0 | 345.28 | 0.16 |
| 4 | 4820 | -4429 | -10678565 | 30205 | 77918530 | 0 | 345.28 | 0.22 |
| 5 | 5306 | -4769 | -14566161 | 30206 | 102044192 | 0 | 345.28 | 0.27 |
| 6 | 7203 | -5123 | -18767599 | 30208 | 126203286 | 0 | 345.28 | 0.31 |
| 7 | 8292 | -5528 | -23767489 | 30218 | 152155134 | 0 | 345.28 | 0.35 |
| 8 | 41073 | 246540 | 124467975 | 30245 | 178595628 | 0 | 345.28 | 0.24 |
| 9 | 73893 | 32762 | 194028201 | 30280 | 205655148 | 0 | 345.28 | 0.30 |
| 10 | 75102 | 32335 | 219934912 | 30281 | 232683437 | 0 | 345.28 | 0.31 |
| 11 | 76350 | 31895 | 245393791 | 30281 | 259678275 | 0 | 345.28 | 0.33 |
| 12 | 100980 | -154009 | 159824366 | 30304 | 287046553 | 0 | 345.28 | 0.29 |
| 13 | 125649 | -80164 | 1828883 | 30327 | 314751155 | -0 | 345.28 | 0.26 |
| 14 | 127017 | -80644 | -69278738 | 30324 | 342381978 | -0 | 345.28 | 0.27 |
| 15 | 128425 | -81138 | -140814764 | 30322 | 369938081 | -0 | 345.28 | 0.29 |
| 16 | 161752 | 15814 | -157298485 | 30348 | 397880474 | -0 | 345.28 | 0.30 |
| 17 | 195118 | -47408 | -55444535 | 30371 | 426161267 | -0 | 345.28 | 0.29 |
| 18 | 196646 | -47939 | -100189534 | 30365 | 454318946 | -0 | 345.28 | 0.29 |
| 19 | 202734 | -48491 | -145496138 | 30362 | 482409591 | -0 | 345.28 | 0.30 |
| 20 | 201115 | -58852 | -200332717 | 30423 | 512215222 | -0 | 345.28 | 0.31 |
| 21 | 199559 | -126934 | -326133198 | 30343 | 540761070 | -0 | 345.28 | 0.23 |
| 22 | 202108 | -127531 | -441341052 | 30338 | 569231673 | -0 | 345.28 | 0.25 |
| 23 | 204720 | -128142 | -557058039 | 30334 | 597627205 | -0 | 345.28 | 0.27 |
| 24 | 207396 | -128768 | -673283614 | 30329 | 625948350 | -0 | 345.28 | 0.29 |
| 25 | 210134 | -129409 | -790018714 | 30324 | 654195805 | -0 | 345.28 | 0.31 |
| 26 | 212935 | -130066 | -907265555 | 30319 | 682370260 | -0 | 345.28 | 0.32 |
| 27 | 215800 | -130737 | -1025027446 | 30314 | 710472391 | -0 | 345.28 | 0.34 |
| 28 | 218727 | -131423 | -1143308638 | 30309 | 738502851 | -0 | 345.28 | 0.35 |
| 29 | 221718 | -132124 | -1262114194 | 30304 | 766462261 | -0 | 345.28 | 0.36 |
| 30 | 224772 | -132840 | -1381449878 | 30300 | 794351212 | -0 | 345.28 | 0.38 |
| 31 | 236752 | -133578 | -1501466517 | 30298 | 822229381 | -0 | 345.28 | 0.39 |
| 32 | 240326 | -134339 | -1620785099 | 30307 | 849842740 | -0 | 345.28 | 0.40 |
| 33 | 243971 | -135049 | -1740114048 | 30289 | 877183151 | -0 | 345.28 | 0.36 |
| 34 | 247688 | -135799 | -1859986130 | 30285 | 904463560 | -0 | 345.28 | 0.37 |
| 35 | 251477 | -136564 | -1980409047 | 30281 | 931684182 | -0 | 345.28 | 0.38 |
| 36 | 255337 | -137343 | -2101390922 | 30277 | 958845286 | -0 | 345.28 | 0.38 |
| 37 | 259268 | -138137 | -2222940089 | 30273 | 985947101 | -0 | 345.28 | 0.39 |
| 38 | 263271 | -138946 | -2345065062 | 30269 | 1012989813 | -0 | 345.28 | 0.39 |
| 39 | 267345 | -139769 | -2467774508 | 30265 | 1039973570 | -0 | 345.28 | 0.40 |
| 40 | 271491 | -140608 | -2591077225 | 30261 | 1066898481 | -0 | 345.28 | 0.40 |
| 41 | 275709 | -141461 | -2714982121 | 30257 | 1093764617 | -0 | 345.28 | 0.40 |
| 42 | 292775 | -142333 | -2839610669 | 30255 | 1120612657 | -0 | 345.28 | 0.41 |
| 43 | 296899 | -143182 | -2960457690 | 30250 | 1146457764 | -0 | 345.28 | 0.41 |
| 44 | 301088 | -144032 | -3081910919 | 30248 | 1172259909 | -0 | 345.28 | 0.43 |
| 45 | 305344 | -144893 | -3203925548 | 30243 | 1197999932 | -0 | 345.28 | 0.43 |
| 46 | 309667 | -145768 | -3326509973 | 30239 | 1223677924 | -0 | 345.28 | 0.43 |
| 47 | 314056 | -146657 | -3449672576 | 30235 | 1249293916 | -0 | 345.28 | 0.43 |
| 48 | 318511 | -147559 | -3573421763 | 30232 | 1274847910 | -0 | 345.28 | 0.43 |
| 49 | 323032 | -148475 | -3697765962 | 30228 | 1300339878 | -0 | 345.28 | 0.44 |
| 50 | 327620 | -149404 | -3822713617 | 30224 | 1325769760 | -0 | 345.28 | 0.44 |
| 51 | 332274 | -150348 | -3948273178 | 30220 | 1351137472 | -0 | 345.28 | 0.44 |
| 52 | 336994 | -151305 | -4074453099 | 30216 | 1376442902 | -0 | 345.28 | 0.44 |
| 53 | 341781 | -152275 | -4201261837 | 30213 | 1401685914 | -0 | 345.28 | 0.44 |
| 54 | 346634 | -153260 | -4328707843 | 30209 | 1426866345 | -0 | 345.28 | 0.44 |
| 55 | 351553 | -154258 | -4456799559 | 30205 | 1451984012 | -0 | 345.28 | 0.44 |
| 56 | 356539 | -155270 | -4585545421 | 30202 | 1477038708 | -0 | 345.28 | 0.44 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 70 " MST - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-) "

Pressione trasversale del vento = -706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | -3480.00 | 30200.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | -38100.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 5062 | Fp = -41043 | --- |
| --- | --- | Pa = 4269 | Ta = 2721 | La = 0 | --- |
| --- | --- | Pb = -4269 | Tb = -40821 | Lb = 0 | --- |
| 3.00 | 33.69 | 0.00 | -38100.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = -5062 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = -38100 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | -38100.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 5062 | Fp = -41043 | --- |
| --- | --- | Pa = 4269 | Ta = 2721 | La = 0 | --- |
| --- | --- | Pb = -4269 | Tb = -40821 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|-------------|--------|------------|----------|--------------------------------|-------|
| 2 | 433 | -3781 | -3661054 | 30200 | 29605676 | 0 | 345.28 | 0.10 |
| 3 | 883 | -4095 | -6939374 | 30200 | 53634068 | 0 | 345.28 | 0.16 |
| 4 | 1350 | -4421 | -10489130 | 30200 | 77671902 | 0 | 345.28 | 0.22 |
| 5 | 1836 | -4760 | -14320656 | 30200 | 101718661 | 0 | 345.28 | 0.26 |
| 6 | 3733 | -5112 | -18479596 | 30201 | 125800241 | 0 | 345.28 | 0.30 |
| 7 | 4822 | -5502 | -23405051 | 30202 | 151590663 | 0 | 345.28 | 0.35 |
| 8 | 8985 | 11628 | -17955426 | 30202 | 177361385 | 0 | 345.28 | 0.19 |
| 9 | 13189 | -3590 | -18356177 | 30202 | 203202637 | 0 | 345.28 | 0.21 |
| 10 | 14397 | -4015 | -22148921 | 30203 | 229055680 | 0 | 345.28 | 0.22 |
| 11 | 15646 | -4455 | -26346716 | 30203 | 254919303 | 0 | 345.28 | 0.23 |
| 12 | 15700 | -17442 | -38510212 | 30203 | 280772402 | 0 | 345.28 | 0.24 |
| 13 | 15793 | -46197 | -83596886 | 30203 | 306615536 | 0 | 345.28 | 0.25 |
| 14 | 17161 | -46680 | -123621696 | 30203 | 332467326 | 0 | 345.28 | 0.26 |
| 15 | 18569 | -47177 | -164099975 | 30203 | 358326504 | 0 | 345.28 | 0.27 |
| 16 | 23052 | -44301 | -203198726 | 30204 | 384231967 | 0 | 345.28 | 0.28 |
| 17 | 27574 | -83596 | -268551360 | 30204 | 410178237 | -0 | 345.28 | 0.30 |
| 18 | 29101 | -84136 | -340600942 | 30204 | 436123935 | -0 | 345.28 | 0.32 |
| 19 | 35190 | -84692 | -41325517 | 30205 | 462118515 | -0 | 345.28 | 0.34 |
| 20 | 35478 | -90384 | -491853826 | 30207 | 488981654 | -0 | 345.28 | 0.37 |
| 21 | 35829 | -126684 | -608898581 | 30205 | 515648687 | -0 | 345.28 | 0.28 |
| 22 | 38378 | -127288 | -720644668 | 30205 | 542323869 | -0 | 345.28 | 0.30 |
| 23 | 40990 | -127907 | -832965987 | 30205 | 569005896 | -0 | 345.28 | 0.32 |
| 24 | 43666 | -128541 | -945872063 | 30205 | 595693478 | -0 | 345.28 | 0.34 |
| 25 | 46404 | -129190 | -1059372314 | 30205 | 622385335 | -0 | 345.28 | 0.35 |
| 26 | 49205 | -129854 | -1173476062 | 30205 | 649080191 | -0 | 345.28 | 0.37 |
| 27 | 52070 | -130533 | -1288192548 | 30205 | 675776777 | -0 | 345.28 | 0.38 |
| 28 | 54997 | -131227 | -1403530937 | 30205 | 702473833 | -0 | 345.28 | 0.39 |
| 29 | 57988 | -131937 | -1519500334 | 30205 | 729170102 | -0 | 345.28 | 0.40 |
| 30 | 61042 | -132661 | -1636109782 | 30205 | 755864337 | -0 | 345.28 | 0.41 |
| 31 | 73022 | -133402 | -1753520249 | 30206 | 782609423 | -0 | 345.28 | 0.42 |
| 32 | 76596 | -134148 | -1870037202 | 30207 | 809021830 | -0 | 345.28 | 0.43 |
| 33 | 80241 | -134889 | -1987017465 | 30206 | 835368120 | -0 | 345.28 | 0.39 |
| 34 | 83958 | -135646 | -2104645181 | 30206 | 861709147 | -0 | 345.28 | 0.40 |
| 35 | 87747 | -136419 | -2222928791 | 30206 | 888043757 | -0 | 345.28 | 0.40 |
| 36 | 91607 | -137205 | -2341876721 | 30206 | 914370807 | -0 | 345.28 | 0.41 |
| 37 | 95538 | -138007 | -2461497371 | 30206 | 940689159 | -0 | 345.28 | 0.41 |
| 38 | 99541 | -138823 | -2581799118 | 30205 | 966997683 | -0 | 345.28 | 0.41 |
| 39 | 103615 | -139654 | -2702790319 | 30205 | 993295251 | -0 | 345.28 | 0.42 |
| 40 | 107761 | -140499 | -2824479307 | 30205 | 1019580743 | -0 | 345.28 | 0.42 |
| 41 | 111979 | -141359 | -2946874399 | 30205 | 1045853044 | -0 | 345.28 | 0.42 |
| 42 | 129045 | -142235 | -3070100108 | 30205 | 1072148510 | -0 | 345.28 | 0.43 |
| 43 | 133169 | -143093 | -3189715393 | 30205 | 1097511679 | -0 | 345.28 | 0.43 |
| 44 | 137358 | -143948 | -3310008470 | 30205 | 1122862774 | -0 | 345.28 | 0.45 |
| 45 | 141614 | -144817 | -3430962128 | 30204 | 1148192929 | -0 | 345.28 | 0.45 |
| 46 | 145937 | -145699 | -3552583721 | 30204 | 1173501219 | -0 | 345.28 | 0.45 |
| 47 | 150326 | -146594 | -3674880585 | 30204 | 1198786718 | -0 | 345.28 | 0.45 |
| 48 | 154781 | -147503 | -3797860046 | 30203 | 1224048500 | -0 | 345.28 | 0.45 |
| 49 | 159302 | -148426 | -3921529420 | 30203 | 1249285641 | -0 | 345.28 | 0.45 |
| 50 | 163890 | -149363 | -4045896011 | 30203 | 1274497218 | -0 | 345.28 | 0.45 |
| 51 | 168544 | -150313 | -4170967112 | 30202 | 1299682310 | -0 | 345.28 | 0.45 |
| 52 | 173264 | -151276 | -4296750006 | 30202 | 1324839995 | -0 | 345.28 | 0.45 |
| 53 | 178051 | -152253 | -4423251963 | 30201 | 1349969354 | -0 | 345.28 | 0.45 |
| 54 | 182904 | -153244 | -4550480244 | 30201 | 1375069468 | -0 | 345.28 | 0.45 |
| 55 | 187823 | -154249 | -4678442097 | 30201 | 1400139421 | -0 | 345.28 | 0.45 |
| 56 | 192809 | -155267 | -4807144759 | 30200 | 1425178297 | -0 | 345.28 | 0.45 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 71 " MST - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-) "

Pressione trasversale del vento = -706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 6940.00 | -6950.00 | 6000.00 | 0.00 |
| 2.00 | 37.16 | 42820.00 | -29730.00 | 78000.00 | 4.75 |
| --- | --- | --- | Ft = 105807 | Fp = -21781 | --- |
| --- | --- | Pa = 34226 | Ta = -24042 | La = 97189 | --- |
| --- | --- | Pb = 8594 | Tb = -5688 | Lb = -19189 | --- |
| 3.00 | 33.69 | 53420.00 | -38100.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 62809 | Fp = 4366 | --- |
| --- | --- | Pa = 52966 | Ta = -33758 | La = 0 | --- |
| --- | --- | Pb = 454 | Tb = -4342 | Lb = 0 | --- |
| 4.00 | 30.23 | 53420.00 | -38100.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 72933 | Fp = -77721 | --- |
| --- | --- | Pa = 61504 | Ta = 39199 | La = 0 | --- |
| --- | --- | Pb = -8084 | Tb = -77299 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|-------------|--------|------------|-----------|--------------------------------|-------|
| 2 | 7373 | -7266 | -7274861 | 6017 | 6160777 | 0 | 345.28 | 0.03 |
| 3 | 7823 | -7581 | -13525738 | 6018 | 11227593 | 0 | 345.28 | 0.06 |
| 4 | 8290 | -7908 | -20048339 | 6019 | 16310611 | 0 | 345.28 | 0.07 |
| 5 | 8776 | -8247 | -26852626 | 6020 | 21410020 | 0 | 345.28 | 0.09 |
| 6 | 10673 | -8602 | -33986331 | 6024 | 26573571 | 0 | 345.28 | 0.11 |
| 7 | 11762 | -9016 | -42317870 | 6052 | 32581443 | 0 | 345.28 | 0.13 |
| 8 | 30904 | 124262 | 30479661 | 20546 | 47460846 | -0 | 345.28 | 0.07 |
| 9 | 50086 | -33918 | 18894338 | 103298 | 148367606 | 265633460 | 345.28 | 0.16 |
| 10 | 51295 | -34345 | -11725261 | 103300 | 237812253 | 265633460 | 345.28 | 0.23 |
| 11 | 52543 | -34785 | -42751486 | 103301 | 327263262 | 265633460 | 345.28 | 0.30 |
| 12 | 85511 | -187435 | -164934176 | 99942 | 415830660 | 265633460 | 345.28 | 0.38 |
| 13 | 118519 | -75276 | -308670364 | 84243 | 488914566 | 256210327 | 345.28 | 0.46 |
| 14 | 119887 | -75756 | -376234716 | 84240 | 564242896 | 256210327 | 345.28 | 0.51 |
| 15 | 121295 | -76249 | -444158493 | 84236 | 639467203 | 256210327 | 345.28 | 0.55 |
| 16 | 154622 | 20697 | -457133994 | 84291 | 715594107 | 256210327 | 345.28 | 0.57 |
| 17 | 187988 | -42530 | -351845952 | 84341 | 792531089 | 256210327 | 345.28 | 0.55 |
| 18 | 189516 | -43060 | -393071868 | 84330 | 869255625 | 256210327 | 345.28 | 0.58 |
| 19 | 195604 | -43611 | -434798573 | 84325 | 945887012 | 256210327 | 345.28 | 0.59 |
| 20 | 193985 | -53980 | -486105287 | 84450 | 1026735480 | 256210327 | 345.28 | 0.61 |
| 21 | 192429 | -122051 | -608072480 | 84290 | 1104850200 | 256210327 | 345.28 | 0.45 |
| 22 | 194978 | -122647 | -719406794 | 84281 | 1182825733 | 256210327 | 345.28 | 0.47 |
| 23 | 197590 | -123258 | -831213643 | 84272 | 1260659194 | 256210327 | 345.28 | 0.49 |
| 24 | 200266 | -123883 | -943495824 | 84263 | 1338349019 | 256210327 | 345.28 | 0.50 |
| 25 | 203004 | -124524 | -1056257268 | 84253 | 1415893960 | 256210327 | 345.28 | 0.52 |
| 26 | 205805 | -125179 | -1169502874 | 84244 | 1493293021 | 256210327 | 345.28 | 0.53 |
| 27 | 208670 | -125849 | -1283238364 | 84234 | 1570545402 | 256210327 | 345.28 | 0.54 |
| 28 | 211597 | -126535 | -1397470165 | 84225 | 1647650451 | 256210327 | 345.28 | 0.55 |
| 29 | 214588 | -127235 | -1512205300 | 84215 | 1724607630 | 256210327 | 345.28 | 0.56 |
| 30 | 217642 | -127951 | -1627451305 | 84206 | 1801416480 | 256210327 | 345.28 | 0.56 |
| 31 | 229622 | -128689 | -1743371694 | 84204 | 1878217559 | 256210327 | 345.28 | 0.57 |
| 32 | 233196 | -129451 | -1858658525 | 84222 | 1954240124 | 256210327 | 345.28 | 0.58 |
| 33 | 236841 | -130159 | -1973920189 | 84185 | 2029639644 | 256210327 | 345.28 | 0.52 |
| 34 | 240558 | -130908 | -2089712683 | 84177 | 2104908475 | 256210327 | 345.28 | 0.53 |
| 35 | 244347 | -131672 | -2206044678 | 84169 | 2180046007 | 256210327 | 345.28 | 0.53 |
| 36 | 248207 | -132451 | -2322925192 | 84160 | 2255051804 | 256210327 | 345.28 | 0.53 |
| 37 | 252138 | -133245 | -2440363379 | 84152 | 2329925396 | 256210327 | 345.28 | 0.53 |
| 38 | 256141 | -134053 | -2558368501 | 84144 | 2404666280 | 256210327 | 345.28 | 0.53 |
| 39 | 260215 | -134877 | -2676949912 | 84136 | 2479273915 | 256210327 | 345.28 | 0.54 |
| 40 | 264361 | -135714 | -2796117040 | 84128 | 2553747718 | 256210327 | 345.28 | 0.54 |
| 41 | 268579 | -136567 | -2915879374 | 84120 | 2628087064 | 256210327 | 345.28 | 0.54 |
| 42 | 285645 | -137439 | -3036364484 | 84117 | 2702390445 | 256210327 | 345.28 | 0.54 |
| 43 | 289769 | -138288 | -3153203673 | 84106 | 2773951443 | 256210327 | 345.28 | 0.54 |
| 44 | 293958 | -139138 | -3270644286 | 84100 | 2845413310 | 256210327 | 345.28 | 0.56 |
| 45 | 298214 | -139998 | -3388640638 | 84092 | 2916729818 | 256210327 | 345.28 | 0.56 |
| 46 | 302537 | -140873 | -3507201541 | 84083 | 2987900563 | 256210327 | 345.28 | 0.56 |
| 47 | 306926 | -141761 | -3626335758 | 84075 | 3058925037 | 256210327 | 345.28 | 0.56 |
| 48 | 311381 | -142662 | -3746052050 | 84067 | 3129802684 | 256210327 | 345.28 | 0.56 |
| 49 | 315902 | -143578 | -3866359175 | 84059 | 3200532899 | 256210327 | 345.28 | 0.55 |
| 50 | 320490 | -144507 | -3987265882 | 84050 | 3271115030 | 256210327 | 345.28 | 0.55 |
| 51 | 325144 | -145450 | -4108780905 | 84042 | 3341548380 | 256210327 | 345.28 | 0.55 |
| 52 | 329864 | -146406 | -4230912966 | 84035 | 3411832205 | 256210327 | 345.28 | 0.55 |
| 53 | 334651 | -147377 | -4353670767 | 84027 | 3481965720 | 256210327 | 345.28 | 0.55 |
| 54 | 339504 | -148361 | -4477062990 | 84019 | 3551948097 | 256210327 | 345.28 | 0.55 |
| 55 | 344423 | -149358 | -4601098296 | 84011 | 3621778467 | 256210327 | 345.28 | 0.54 |
| 56 | 349409 | -150370 | -4725785321 | 84004 | 3691455921 | 256210327 | 345.28 | 0.54 |

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CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 72 " MST - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-) "

Pressione trasversale del vento = -706.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | -6950.00 | 6000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | -29730.00 | 78000.00 | 4.75 |
| --- | --- | --- | Ft = 68237 | Fp = 21683 | -- |
| --- | --- | Pa = 11712 | Ta = -30747 | La = 59781 | --- |
| --- | --- | Pb = -11712 | Tb = 1017 | Lb = 18219 | --- |
| 3.00 | 33.69 | 0.00 | -38100.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = -5062 | Fp = 0 | -- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = -38100 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | -38100.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 5062 | Fp = -41043 | -- |
| --- | --- | Pa = 4269 | Ta = 2721 | La = 0 | --- |
| --- | --- | Pb = -4269 | Tb = -40821 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|-------------|--------|------------|-----------|--------------------------------|-------|
| 2 | 433 | -7251 | -7063131 | 6000 | 5893493 | 0 | 345.28 | 0.03 |
| 3 | 883 | -7565 | -13103073 | 6000 | 10690916 | -0 | 345.28 | 0.05 |
| 4 | 1350 | -7891 | -19415928 | 6001 | 15502647 | 0 | 345.28 | 0.07 |
| 5 | 1836 | -8230 | -26011984 | 6001 | 20329015 | 0 | 345.28 | 0.09 |
| 6 | 3733 | -8582 | -32941010 | 6002 | 25211561 | 0 | 345.28 | 0.10 |
| 7 | 4822 | -8972 | -40838354 | 6004 | 30606482 | 0 | 345.28 | 0.12 |
| 8 | 12707 | 33024 | -23197377 | 14911 | 41377117 | -0 | 345.28 | 0.05 |
| 9 | 20632 | -40532 | -54459815 | 65790 | 104858359 | 163391521 | 345.28 | 0.12 |
| 10 | 21841 | -40957 | -89831594 | 65790 | 161307967 | 163391521 | 345.28 | 0.18 |
| 11 | 23089 | -41397 | -125606388 | 65790 | 217784549 | 163391521 | 345.28 | 0.22 |
| 12 | 19421 | -56059 | -170422579 | 69041 | 276073900 | 163391521 | 345.28 | 0.27 |
| 13 | 15793 | -41298 | -207210285 | 84006 | 349967653 | 172338395 | 345.28 | 0.32 |
| 14 | 17161 | -41781 | -243112265 | 84006 | 421666799 | 172338395 | 345.28 | 0.36 |
| 15 | 18569 | -42278 | -279465515 | 84007 | 493389379 | 172338395 | 345.28 | 0.39 |
| 16 | 23052 | -39402 | -314440965 | 84008 | 565214082 | 172338395 | 345.28 | 0.42 |
| 17 | 27574 | -78697 | -375670761 | 84009 | 637131873 | 172338395 | 345.28 | 0.46 |
| 18 | 29101 | -79237 | -443594075 | 84009 | 709058228 | 172338395 | 345.28 | 0.49 |
| 19 | 35190 | -79793 | -512122606 | 84011 | 781097047 | 172338395 | 345.28 | 0.52 |
| 20 | 35478 | -85485 | -586488324 | 84015 | 855452676 | 172338395 | 345.28 | 0.54 |
| 21 | 35829 | -121785 | -699285725 | 84010 | 929397042 | 172338395 | 345.28 | 0.41 |
| 22 | 38378 | -122389 | -806782712 | 84011 | 1003365310 | 172338395 | 345.28 | 0.43 |
| 23 | 40990 | -123007 | -914853179 | 84011 | 1077354461 | 172338395 | 345.28 | 0.45 |
| 24 | 43666 | -123641 | -1023506665 | 84011 | 1151361478 | 172338395 | 345.28 | 0.46 |
| 25 | 46404 | -124290 | -1132752612 | 84011 | 1225383322 | 172338395 | 345.28 | 0.48 |
| 26 | 49205 | -124954 | -1242600379 | 84011 | 1299416942 | 172338395 | 345.28 | 0.49 |
| 27 | 52070 | -125634 | -1353059249 | 84012 | 1373459273 | 172338395 | 345.28 | 0.50 |
| 28 | 54997 | -126328 | -1464138442 | 84012 | 1447507245 | 172338395 | 345.28 | 0.51 |
| 29 | 57988 | -127037 | -1575847119 | 84012 | 1521557784 | 172338395 | 345.28 | 0.52 |
| 30 | 61042 | -127762 | -1688194392 | 84012 | 1595607814 | 172338395 | 345.28 | 0.53 |
| 31 | 73022 | -128503 | -1801341785 | 84013 | 1669778100 | 172338395 | 345.28 | 0.54 |
| 32 | 76596 | -129249 | -1913656486 | 84015 | 1743003330 | 172338395 | 345.28 | 0.54 |
| 33 | 80241 | -129990 | -2026432845 | 84013 | 1816080328 | 172338395 | 345.28 | 0.49 |
| 34 | 83958 | -130747 | -2139855501 | 84013 | 1889148483 | 172338395 | 345.28 | 0.50 |
| 35 | 87747 | -131519 | -2253932980 | 84013 | 1962204872 | 172338395 | 345.28 | 0.50 |
| 36 | 91607 | -132306 | -2368673800 | 84013 | 2035246589 | 172338395 | 345.28 | 0.50 |
| 37 | 95538 | -133107 | -2484086452 | 84012 | 2108270738 | 172338395 | 345.28 | 0.51 |
| 38 | 99541 | -133923 | -2600179409 | 84012 | 2181274427 | 172338395 | 345.28 | 0.51 |
| 39 | 103615 | -134754 | -2716961122 | 84012 | 2254254775 | 172338395 | 345.28 | 0.51 |
| 40 | 107761 | -135599 | -2834440023 | 84011 | 2327208907 | 172338395 | 345.28 | 0.51 |
| 41 | 111979 | -136459 | -2952624528 | 84011 | 2400133956 | 172338395 | 345.28 | 0.51 |
| 42 | 129045 | -137335 | -3071638602 | 84012 | 2473115628 | 172338395 | 345.28 | 0.52 |
| 43 | 133169 | -138194 | -3187187419 | 84011 | 2543521729 | 172338395 | 345.28 | 0.51 |
| 44 | 137358 | -139049 | -3303413718 | 84011 | 2613900787 | 172338395 | 345.28 | 0.54 |
| 45 | 141614 | -139917 | -3420300528 | 84010 | 2684231591 | 172338395 | 345.28 | 0.54 |
| 46 | 145937 | -140799 | -3537855312 | 84009 | 2754511690 | 172338395 | 345.28 | 0.54 |
| 47 | 150326 | -141695 | -3656085513 | 84008 | 2824738630 | 172338395 | 345.28 | 0.54 |
| 48 | 154781 | -142604 | -3774998563 | 84008 | 2894909962 | 172338395 | 345.28 | 0.53 |
| 49 | 159302 | -143527 | -3894601886 | 84007 | 2965023241 | 172338395 | 345.28 | 0.53 |
| 50 | 163890 | -144463 | -4014902890 | 84006 | 3035076027 | 172338395 | 345.28 | 0.53 |
| 51 | 168544 | -145413 | -4135908976 | 84005 | 3105065880 | 172338395 | 345.28 | 0.53 |
| 52 | 173264 | -146376 | -4257627530 | 84004 | 3174990368 | 172338395 | 345.28 | 0.53 |
| 53 | 178051 | -147353 | -4380065930 | 84003 | 3244847060 | 172338395 | 345.28 | 0.53 |
| 54 | 182904 | -148344 | -4503231538 | 84002 | 3314633530 | 172338395 | 345.28 | 0.53 |
| 55 | 187823 | -149349 | -4627131709 | 84001 | 3384347356 | 172338395 | 345.28 | 0.53 |
| 56 | 192809 | -150367 | -4751773783 | 84000 | 3453986117 | 172338395 | 345.28 | 0.53 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 73 " MST - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-) "

Pressione trasversale del vento = -176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 5660.00 | -3180.00 | 39000.00 | 0.00 |
| 2.00 | 37.16 | 69540.00 | -28220.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 92102 | Fp = -78145 | --- |
| --- | --- | Pa = 77668 | Ta = 49502 | La = 0 | --- |
| --- | --- | Pb = -8128 | Tb = -77722 | Lb = 0 | --- |
| 3.00 | 33.69 | 69540.00 | -28220.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 84603 | Fp = -17345 | --- |
| --- | --- | Pa = 71344 | Ta = -45471 | La = 0 | --- |
| --- | --- | Pb = -1804 | Tb = 17251 | Lb = 0 | --- |
| 4.00 | 30.23 | 69540.00 | -28220.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 92102 | Fp = -78145 | --- |
| --- | --- | Pa = 77668 | Ta = 49502 | La = 0 | --- |
| --- | --- | Pb = -8128 | Tb = -77722 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|---------|-------------|--------|------------|----------|--------------------------------|-------|
| 2 | 6093 | -3263 | -3229540 | 39012 | 38411547 | 0 | 345.28 | 0.13 |
| 3 | 6543 | -3342 | -5936491 | 39013 | 69618831 | 0 | 345.28 | 0.21 |
| 4 | 7010 | -3424 | -8711581 | 39013 | 100834916 | -0 | 345.28 | 0.28 |
| 5 | 7496 | -3509 | -11557242 | 39014 | 132057937 | 0 | 345.28 | 0.34 |
| 6 | 9393 | -3598 | -14486786 | 39018 | 163322058 | 0 | 345.28 | 0.39 |
| 7 | 10482 | -3710 | -17793293 | 39039 | 196970981 | 0 | 345.28 | 0.45 |
| 8 | 51345 | 315023 | 173117522 | 39096 | 231424212 | 0 | 345.28 | 0.32 |
| 9 | 92248 | 45499 | 265502366 | 39171 | 266902255 | 0 | 345.28 | 0.39 |
| 10 | 93456 | 45392 | 303123065 | 39171 | 302322470 | -0 | 345.28 | 0.42 |
| 11 | 94705 | 45282 | 340552062 | 39170 | 337681413 | -0 | 345.28 | 0.44 |
| 12 | 128501 | -196510 | 234079799 | 39226 | 373733338 | -0 | 345.28 | 0.38 |
| 13 | 162337 | -78220 | 51841275 | 39278 | 410410838 | -0 | 345.28 | 0.34 |
| 14 | 163705 | -78338 | -16468576 | 39272 | 446954644 | -0 | 345.28 | 0.35 |
| 15 | 165113 | -78460 | -84890463 | 39265 | 483363384 | -0 | 345.28 | 0.36 |
| 16 | 205393 | 49046 | -80239056 | 39318 | 520385463 | -0 | 345.28 | 0.37 |
| 17 | 245712 | -12045 | 94503653 | 39365 | 557943809 | -0 | 345.28 | 0.38 |
| 18 | 247240 | -12172 | 81329840 | 39351 | 595289573 | -0 | 345.28 | 0.38 |
| 19 | 253328 | -12307 | 67942676 | 39342 | 632497960 | -0 | 345.28 | 0.38 |
| 20 | 251687 | -22274 | 46732468 | 39472 | 672311000 | -0 | 345.28 | 0.38 |
| 21 | 250109 | -90296 | -46097197 | 39303 | 710027247 | -0 | 345.28 | 0.27 |
| 22 | 252658 | -90440 | -127906155 | 39292 | 747608540 | -0 | 345.28 | 0.27 |
| 23 | 255270 | -90588 | -209846365 | 39281 | 785055509 | -0 | 345.28 | 0.27 |
| 24 | 257946 | -90739 | -291906929 | 39270 | 822369886 | -0 | 345.28 | 0.28 |
| 25 | 260684 | -90893 | -374078613 | 39259 | 859553438 | -0 | 345.28 | 0.28 |
| 26 | 263485 | -91051 | -456353616 | 39248 | 896607931 | -0 | 345.28 | 0.29 |
| 27 | 266350 | -91213 | -538725380 | 39237 | 933535118 | -0 | 345.28 | 0.30 |
| 28 | 269277 | -91378 | -621188417 | 39226 | 970336715 | -0 | 345.28 | 0.30 |
| 29 | 272268 | -91547 | -703738170 | 39216 | 1007014392 | -0 | 345.28 | 0.31 |
| 30 | 275322 | -91720 | -786370888 | 39205 | 1043569760 | -0 | 345.28 | 0.31 |
| 31 | 287302 | -91902 | -869173634 | 39201 | 1080083087 | -0 | 345.28 | 0.32 |
| 32 | 290876 | -92102 | -951240856 | 39217 | 1116284705 | -0 | 345.28 | 0.32 |
| 33 | 294521 | -92257 | -1032991204 | 39181 | 1152040120 | -0 | 345.28 | 0.29 |
| 34 | 298238 | -92439 | -1114820827 | 39172 | 1187693092 | -0 | 345.28 | 0.30 |
| 35 | 302027 | -92625 | -1196728757 | 39163 | 1223244515 | -0 | 345.28 | 0.30 |
| 36 | 305887 | -92814 | -1278714486 | 39154 | 1258695407 | -0 | 345.28 | 0.30 |
| 37 | 309818 | -93007 | -1360777772 | 39146 | 1294046709 | -0 | 345.28 | 0.31 |
| 38 | 313821 | -93203 | -1442918600 | 39137 | 1329299289 | -0 | 345.28 | 0.31 |
| 39 | 317895 | -93403 | -1525137158 | 39129 | 1364453942 | -0 | 345.28 | 0.31 |
| 40 | 322041 | -93607 | -1607433804 | 39121 | 1399511394 | -0 | 345.28 | 0.31 |
| 41 | 326259 | -93815 | -1689809052 | 39113 | 1434472301 | -0 | 345.28 | 0.31 |
| 42 | 343325 | -94030 | -1772334798 | 39109 | 1469391236 | -0 | 345.28 | 0.31 |
| 43 | 347449 | -94235 | -1852044416 | 39099 | 1502983179 | -0 | 345.28 | 0.31 |
| 44 | 351638 | -94444 | -1931852043 | 39093 | 1536505685 | -0 | 345.28 | 0.33 |
| 45 | 355894 | -94653 | -2011719169 | 39085 | 1569929398 | -0 | 345.28 | 0.33 |
| 46 | 360217 | -94866 | -2091646793 | 39077 | 1603254925 | -0 | 345.28 | 0.33 |
| 47 | 364606 | -95083 | -2171635929 | 39069 | 1636482761 | -0 | 345.28 | 0.33 |
| 48 | 369061 | -95303 | -2251687647 | 39061 | 1669613347 | -0 | 345.28 | 0.33 |
| 49 | 373582 | -95526 | -2331803058 | 39053 | 1702647070 | -0 | 345.28 | 0.33 |
| 50 | 378170 | -95753 | -2411983314 | 39046 | 1735584264 | -0 | 345.28 | 0.33 |
| 51 | 382824 | -95984 | -2492229598 | 39038 | 1768425215 | -0 | 345.28 | 0.33 |
| 52 | 387544 | -96217 | -2572543118 | 39031 | 1801170161 | -0 | 345.28 | 0.33 |
| 53 | 392331 | -96455 | -2652925103 | 39024 | 1833819294 | -0 | 345.28 | 0.32 |
| 54 | 397184 | -96696 | -2733376799 | 39017 | 1866372763 | -0 | 345.28 | 0.32 |
| 55 | 402103 | -96940 | -2813899465 | 39010 | 1898830675 | -0 | 345.28 | 0.32 |
| 56 | 407089 | -97188 | -2894494371 | 39003 | 1931193097 | -0 | 345.28 | 0.32 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 74 " MST - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-) "

Pressione trasversale del vento = -176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | -3180.00 | 39000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | -28220.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 3749 | Fp = -30400 | --- |
| --- | --- | Pa = 3162 | Ta = 2015 | La = 0 | --- |
| --- | --- | Pb = -3162 | Tb = -30235 | Lb = 0 | --- |
| 3.00 | 33.69 | 0.00 | -28220.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = -3749 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = -28220 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | -28220.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 3749 | Fp = -30400 | --- |
| --- | --- | Pa = 3162 | Ta = 2015 | La = 0 | --- |
| --- | --- | Pb = -3162 | Tb = -30235 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|------|----------------------------|-----------|-------------|-----------|------------|----------|-------------------------|----------|
| 2 | 433 | -3255 | -3183993 | 39000 | 38232491 | 0 | 345.28 | 0.13 |
| 3 | 883 | -3333 | -5850040 | 39000 | 69262526 | 0 | 345.28 | 0.21 |
| 4 | 1350 | -3415 | -8589168 | 39000 | 100304750 | 0 | 345.28 | 0.28 |
| 5 | 1836 | -3499 | -11404076 | 39000 | 131358496 | 0 | 345.28 | 0.34 |
| 6 | 3733 | -3587 | -14321861 | 39001 | 162457192 | 0 | 345.28 | 0.39 |
| 7 | 4822 | -3686 | -17626813 | 39002 | 195762613 | 0 | 345.28 | 0.45 |
| 8 | 8432 | 9197 | -13072251 | 39002 | 229029048 | 0 | 345.28 | 0.25 |
| 9 | 12082 | -1872 | -12663592 | 39003 | 262373972 | -0 | 345.28 | 0.27 |
| 10 | 13290 | -1979 | -14588720 | 39003 | 295735136 | 0 | 345.28 | 0.28 |
| 11 | 14539 | -2088 | -16629283 | 39003 | 329110993 | -0 | 345.28 | 0.29 |
| 12 | 15146 | -11485 | -24391420 | 39003 | 362485813 | -0 | 345.28 | 0.30 |
| 13 | 15793 | -32554 | -56354630 | 39003 | 395859276 | 0 | 345.28 | 0.31 |
| 14 | 17161 | -32674 | -84366044 | 39004 | 429243914 | 0 | 345.28 | 0.32 |
| 15 | 18569 | -32798 | -112504830 | 39004 | 462638091 | -0 | 345.28 | 0.33 |
| 16 | 22498 | -30417 | -139393423 | 39004 | 496082560 | 0 | 345.28 | 0.34 |
| 17 | 26467 | -59263 | -185493906 | 39005 | 529571237 | -0 | 345.28 | 0.35 |
| 18 | 27994 | -59398 | -236328928 | 39005 | 563060149 | -0 | 345.28 | 0.36 |
| 19 | 34083 | -59537 | -287374860 | 39006 | 596613118 | -0 | 345.28 | 0.37 |
| 20 | 34924 | -63466 | -342483330 | 39009 | 631292319 | -0 | 345.28 | 0.38 |
| 21 | 35829 | -90064 | -425851689 | 39006 | 665729722 | -0 | 345.28 | 0.28 |
| 22 | 38378 | -90215 | -505035035 | 39006 | 700177649 | -0 | 345.28 | 0.29 |
| 23 | 40990 | -90369 | -584377688 | 39006 | 734634416 | -0 | 345.28 | 0.30 |
| 24 | 43666 | -90528 | -663880341 | 39006 | 769098359 | -0 | 345.28 | 0.31 |
| 25 | 46404 | -90690 | -743543617 | 39006 | 803567824 | -0 | 345.28 | 0.31 |
| 26 | 49205 | -90855 | -823368081 | 39007 | 838041165 | -0 | 345.28 | 0.32 |
| 27 | 52070 | -91025 | -903354249 | 39007 | 872516743 | -0 | 345.28 | 0.33 |
| 28 | 54997 | -91198 | -983502593 | 39007 | 906992929 | -0 | 345.28 | 0.33 |
| 29 | 57988 | -91375 | -1063813550 | 39007 | 941468104 | -0 | 345.28 | 0.34 |
| 30 | 61042 | -91555 | -1144287528 | 39007 | 975940655 | -0 | 345.28 | 0.34 |
| 31 | 73022 | -91741 | -1225029217 | 39008 | 1010478860 | -0 | 345.28 | 0.35 |
| 32 | 76596 | -91928 | -1304875623 | 39009 | 1044587433 | -0 | 345.28 | 0.35 |
| 33 | 80241 | -92111 | -1384760766 | 39007 | 1078610647 | -0 | 345.28 | 0.32 |
| 34 | 83958 | -92300 | -1464805450 | 39007 | 1112627069 | -0 | 345.28 | 0.32 |
| 35 | 87747 | -92493 | -1545009958 | 39007 | 1146635209 | -0 | 345.28 | 0.32 |
| 36 | 91607 | -92689 | -1625374572 | 39007 | 1180633590 | -0 | 345.28 | 0.33 |
| 37 | 95538 | -92888 | -1705899565 | 39007 | 1214620743 | -0 | 345.28 | 0.33 |
| 38 | 99541 | -93092 | -1786585206 | 39007 | 1248595208 | -0 | 345.28 | 0.33 |
| 39 | 103615 | -93299 | -1867431754 | 39007 | 1282555530 | -0 | 345.28 | 0.33 |
| 40 | 107761 | -93509 | -1948439467 | 39006 | 1316500263 | -0 | 345.28 | 0.33 |
| 41 | 111979 | -93723 | -2029608597 | 39006 | 1350427965 | -0 | 345.28 | 0.33 |
| 42 | 129045 | -93942 | -2111018425 | 39007 | 1384385578 | -0 | 345.28 | 0.33 |
| 43 | 133169 | -94156 | -2189748186 | 39006 | 1417139242 | -0 | 345.28 | 0.33 |
| 44 | 137358 | -94369 | -2268632934 | 39006 | 1449877320 | -0 | 345.28 | 0.35 |
| 45 | 141614 | -94585 | -2347656168 | 39006 | 1482588362 | -0 | 345.28 | 0.34 |
| 46 | 145937 | -94804 | -2426818105 | 39005 | 1515271175 | -0 | 345.28 | 0.34 |
| 47 | 150326 | -95027 | -2506118957 | 39005 | 1547924563 | -0 | 345.28 | 0.34 |
| 48 | 154781 | -95254 | -2585558938 | 39004 | 1580547330 | -0 | 345.28 | 0.34 |
| 49 | 159302 | -95483 | -2665138263 | 39004 | 1613138283 | -0 | 345.28 | 0.34 |
| 50 | 163890 | -95716 | -2744857146 | 39003 | 1645696231 | -0 | 345.28 | 0.34 |
| 51 | 168544 | -95953 | -2824715802 | 39003 | 1678219982 | -0 | 345.28 | 0.34 |
| 52 | 173264 | -96192 | -2904714446 | 39002 | 1710708349 | -0 | 345.28 | 0.34 |
| 53 | 178051 | -96436 | -2984853294 | 39002 | 1743160143 | -0 | 345.28 | 0.34 |
| 54 | 182904 | -96682 | -3065132561 | 39001 | 1775574179 | -0 | 345.28 | 0.34 |
| 55 | 187823 | -96932 | -3145552461 | 39001 | 1807949272 | -0 | 345.28 | 0.34 |
| 56 | 192809 | -97185 | -3226113212 | 39000 | 1840284240 | -0 | 345.28 | 0.34 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 75 " MST - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-) "

Pressione trasversale del vento = -176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 11320.00 | -6350.00 | 8000.00 | 0.00 |
| 2.00 | 37.16 | 54910.00 | -21450.00 | 96000.00 | 4.75 |
| --- | --- | --- | Ft = 123239 | Fp = -18513 | --- |
| --- | --- | Pa = 48909 | Ta = -14699 | La = 112159 | --- |
| --- | --- | Pb = 6001 | Tb = -6751 | Lb = -16159 | --- |
| 3.00 | 33.69 | 69540.00 | -28220.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = 84603 | Fp = -17345 | --- |
| --- | --- | Pa = 71344 | Ta = -45471 | La = 0 | --- |
| --- | --- | Pb = -1804 | Tb = 17251 | Lb = 0 | --- |
| 4.00 | 30.23 | 69540.00 | -28220.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 92102 | Fp = -78145 | --- |
| --- | --- | Pa = 77668 | Ta = 49502 | La = 0 | --- |
| --- | --- | Pb = -8128 | Tb = -77722 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm2] | % Uso |
|------|----------------------|---------|-------------|--------|------------|-----------|-------------------|-------|
| 2 | 11753 | -6447 | -6519882 | 8045 | 8403928 | 0 | 345.28 | 0.04 |
| 3 | 12203 | -6525 | -11934801 | 8046 | 15347157 | 0 | 345.28 | 0.06 |
| 4 | 12670 | -6607 | -17421620 | 8048 | 22309540 | 0 | 345.28 | 0.08 |
| 5 | 13156 | -6693 | -22982520 | 8049 | 29291035 | 0 | 345.28 | 0.10 |
| 6 | 15053 | -6783 | -28643608 | 8055 | 36349179 | 0 | 345.28 | 0.12 |
| 7 | 16142 | -6910 | -35109100 | 8117 | 44720635 | -0 | 345.28 | 0.13 |
| 8 | 42626 | 186940 | 76607453 | 24862 | 63506803 | 0 | 345.28 | 0.12 |
| 9 | 69149 | -21874 | 85702928 | 120408 | 182001044 | 306550311 | 345.28 | 0.21 |
| 10 | 70357 | -21980 | 65713980 | 120409 | 287256085 | 306550311 | 345.28 | 0.29 |
| 11 | 71606 | -22090 | 45594712 | 120409 | 392501669 | 306550311 | 345.28 | 0.36 |
| 12 | 112467 | -233877 | -100526913 | 117659 | 497827459 | 306550311 | 345.28 | 0.43 |
| 13 | 153367 | -74673 | -270438703 | 104514 | 590884494 | 298614894 | 345.28 | 0.52 |
| 14 | 154735 | -74790 | -336713641 | 104505 | 685745539 | 298614894 | 345.28 | 0.58 |
| 15 | 156143 | -74909 | -403003507 | 104495 | 780425262 | 298614894 | 345.28 | 0.62 |
| 16 | 196423 | 52584 | -396364365 | 104601 | 876469604 | 298614894 | 345.28 | 0.65 |
| 17 | 236742 | -8517 | -219738870 | 104698 | 973737599 | 298614894 | 345.28 | 0.64 |
| 18 | 238270 | -8641 | -230910973 | 104673 | 1070657485 | 298614894 | 345.28 | 0.66 |
| 19 | 244358 | -8773 | -242206532 | 104659 | 1167378009 | 298614894 | 345.28 | 0.68 |
| 20 | 242717 | -18764 | -261551602 | 104911 | 1270115418 | 298614894 | 345.28 | 0.70 |
| 21 | 241139 | -86754 | -352015097 | 104587 | 1368543788 | 298614894 | 345.28 | 0.51 |
| 22 | 243688 | -86895 | -431398122 | 104567 | 1466732775 | 298614894 | 345.28 | 0.52 |
| 23 | 246300 | -87040 | -510857300 | 104547 | 1564678272 | 298614894 | 345.28 | 0.53 |
| 24 | 248976 | -87188 | -590386146 | 104527 | 1662378800 | 298614894 | 345.28 | 0.54 |
| 25 | 251714 | -87340 | -669979399 | 104506 | 1759833465 | 298614894 | 345.28 | 0.55 |
| 26 | 254515 | -87496 | -749632841 | 104485 | 1857041826 | 298614894 | 345.28 | 0.56 |
| 27 | 257380 | -87655 | -829343150 | 104465 | 1954003806 | 298614894 | 345.28 | 0.57 |
| 28 | 260307 | -87819 | -909107769 | 104444 | 2050719600 | 298614894 | 345.28 | 0.57 |
| 29 | 263298 | -87985 | -988924795 | 104424 | 2147189614 | 298614894 | 345.28 | 0.58 |
| 30 | 266352 | -88156 | -1068792890 | 104404 | 2243414406 | 298614894 | 345.28 | 0.58 |
| 31 | 278332 | -88337 | -1148815521 | 104397 | 2339572747 | 298614894 | 345.28 | 0.58 |
| 32 | 281906 | -88540 | -1228160590 | 104430 | 2434833814 | 298614894 | 345.28 | 0.59 |
| 33 | 285551 | -88689 | -1307119085 | 104358 | 2529129163 | 298614894 | 345.28 | 0.53 |
| 34 | 289268 | -88869 | -1386135214 | 104341 | 2623212201 | 298614894 | 345.28 | 0.53 |
| 35 | 293057 | -89053 | -1465209336 | 104324 | 2717083144 | 298614894 | 345.28 | 0.53 |
| 36 | 296917 | -89240 | -1544342190 | 104307 | 2810742549 | 298614894 | 345.28 | 0.53 |
| 37 | 300848 | -89432 | -1623534676 | 104290 | 2904190922 | 298614894 | 345.28 | 0.53 |
| 38 | 304851 | -89627 | -1702787831 | 104273 | 2997428711 | 298614894 | 345.28 | 0.53 |
| 39 | 308925 | -89825 | -1782102805 | 104257 | 3090456294 | 298614894 | 345.28 | 0.53 |
| 40 | 313071 | -90028 | -1861480846 | 104241 | 3183273982 | 298614894 | 345.28 | 0.53 |
| 41 | 317289 | -90234 | -1940923282 | 104225 | 3275882009 | 298614894 | 345.28 | 0.52 |
| 42 | 334355 | -90449 | -2020510445 | 104218 | 3368405650 | 298614894 | 345.28 | 0.52 |
| 43 | 338479 | -90652 | -2097367224 | 104198 | 3457466619 | 298614894 | 345.28 | 0.52 |
| 44 | 342668 | -90859 | -2174312300 | 104186 | 3546375538 | 298614894 | 345.28 | 0.54 |
| 45 | 346924 | -91068 | -2251304621 | 104170 | 3635065217 | 298614894 | 345.28 | 0.54 |
| 46 | 351247 | -91279 | -2328345772 | 104154 | 3723536079 | 298614894 | 345.28 | 0.53 |
| 47 | 355636 | -91494 | -2405437304 | 104138 | 3811788363 | 298614894 | 345.28 | 0.53 |
| 48 | 360091 | -91713 | -2482580785 | 104123 | 3899822222 | 298614894 | 345.28 | 0.53 |
| 49 | 364612 | -91935 | -2559777790 | 104107 | 3987637727 | 298614894 | 345.28 | 0.53 |
| 50 | 369200 | -92161 | -2637029901 | 104092 | 4075234871 | 298614894 | 345.28 | 0.52 |
| 51 | 373854 | -92390 | -2714338702 | 104078 | 4162613566 | 298614894 | 345.28 | 0.52 |
| 52 | 378574 | -92623 | -2791705772 | 104063 | 4249773648 | 298614894 | 345.28 | 0.52 |
| 53 | 383361 | -92859 | -2869132691 | 104049 | 4336714880 | 298614894 | 345.28 | 0.51 |
| 54 | 388214 | -93099 | -2946621028 | 104034 | 4423436949 | 298614894 | 345.28 | 0.51 |
| 55 | 393133 | -93342 | -3024172344 | 104021 | 4509939475 | 298614894 | 345.28 | 0.51 |
| 56 | 398119 | -93589 | -3101788190 | 104007 | 4596222008 | 298614894 | 345.28 | 0.50 |

CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 76 " MST - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-) "

Pressione trasversale del vento = -176.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale

CARICHI CONCENTRATI

| Livello | H [m] | Verticali [N] | Trasversali [N] | Longitudinali [N] | Eccentricità del conduttore [m] |
|-------------|-------|---------------|-----------------|-------------------|---------------------------------|
| 1.00 | 46.67 | 0.00 | -6350.00 | 8000.00 | 0.00 |
| 2.00 | 37.16 | 0.00 | -21450.00 | 96000.00 | 4.75 |
| --- | --- | --- | Ft = 72573 | Fp = 35144 | --- |
| --- | --- | Pa = 16914 | Ta = -26144 | La = 65553 | --- |
| --- | --- | Pb = -16914 | Tb = 4694 | Lb = 30447 | --- |
| 3.00 | 33.69 | 0.00 | -28220.00 | 0.00 | -4.75 |
| --- | --- | --- | Ft = -3749 | Fp = 0 | --- |
| --- | --- | Pa = 0 | Ta = 0 | La = 0 | --- |
| --- | --- | Pb = 0 | Tb = -28220 | Lb = 0 | --- |
| 4.00 | 30.23 | 0.00 | -28220.00 | 0.00 | 4.75 |
| --- | --- | --- | Ft = 3749 | Fp = -30400 | --- |
| --- | --- | Pa = 3162 | Ta = 2015 | La = 0 | --- |
| --- | --- | Pb = -3162 | Tb = -30235 | Lb = 0 | --- |

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TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

| Nodo | Carico verticale [N] | Tx [N] | My [Nmm] | Ty [N] | Mx [Nmm] | Mt [Nmm] | Sig. amm. [N/mm ²] | % Uso |
|------|----------------------|--------|-------------|--------|------------|-----------|--------------------------------|-------|
| 2 | 433 | -6425 | -6291647 | 8000 | 7856445 | 0 | 345.28 | 0.03 |
| 3 | 883 | -6503 | -11479957 | 8000 | 14249860 | 0 | 345.28 | 0.06 |
| 4 | 1350 | -6585 | -16742380 | 8001 | 20660692 | -0 | 345.28 | 0.07 |
| 5 | 1836 | -6669 | -22081562 | 8001 | 27089321 | -0 | 345.28 | 0.09 |
| 6 | 3733 | -6758 | -27527438 | 8002 | 33586274 | -0 | 345.28 | 0.10 |
| 7 | 4822 | -6856 | -33540422 | 8005 | 40743299 | -0 | 345.28 | 0.12 |
| 8 | 15308 | 56983 | -644846 | 17774 | 53908233 | -0 | 345.28 | 0.06 |
| 9 | 25833 | -33207 | -21806323 | 73567 | 125002973 | 179168738 | 345.28 | 0.13 |
| 10 | 27042 | -33313 | -50604617 | 73568 | 188388319 | 179168738 | 345.28 | 0.19 |
| 11 | 28290 | -33423 | -79516759 | 73568 | 251803685 | 179168738 | 345.28 | 0.24 |
| 12 | 22022 | -53478 | -120716396 | 79000 | 318206632 | 179168738 | 345.28 | 0.28 |
| 13 | 15793 | -28954 | -147096942 | 104008 | 410646633 | 194120214 | 345.28 | 0.34 |
| 14 | 17161 | -29075 | -172079500 | 104008 | 499407929 | 194120214 | 345.28 | 0.39 |
| 15 | 18569 | -29199 | -197187812 | 104008 | 588198358 | 194120214 | 345.28 | 0.43 |
| 16 | 22498 | -26817 | -221046679 | 104010 | 677095900 | 194120214 | 345.28 | 0.46 |
| 17 | 26467 | -55664 | -264117416 | 104011 | 766091002 | 194120214 | 345.28 | 0.50 |
| 18 | 27994 | -55799 | -311920307 | 104011 | 855098561 | 194120214 | 345.28 | 0.53 |
| 19 | 34083 | -55938 | -359934419 | 104013 | 944245772 | 194120214 | 345.28 | 0.56 |
| 20 | 34924 | -59867 | -411933113 | 104019 | 1036266069 | 194120214 | 345.28 | 0.58 |
| 21 | 35829 | -86465 | -492181143 | 104013 | 1127806139 | 194120214 | 345.28 | 0.43 |
| 22 | 38378 | -86616 | -568242878 | 104013 | 1219375858 | 194120214 | 345.28 | 0.45 |
| 23 | 40990 | -86770 | -644462632 | 104014 | 1310971513 | 194120214 | 345.28 | 0.46 |
| 24 | 43666 | -86928 | -720841106 | 104014 | 1402589393 | 194120214 | 345.28 | 0.47 |
| 25 | 46404 | -87090 | -797378942 | 104014 | 1494225762 | 194120214 | 345.28 | 0.48 |
| 26 | 49205 | -87256 | -874076731 | 104014 | 1585876860 | 194120214 | 345.28 | 0.49 |
| 27 | 52070 | -87425 | -950935020 | 104015 | 1677538917 | 194120214 | 345.28 | 0.50 |
| 28 | 54997 | -87598 | -1027954321 | 104015 | 1769208149 | 194120214 | 345.28 | 0.51 |
| 29 | 57988 | -87775 | -1105135112 | 104015 | 1860880769 | 194120214 | 345.28 | 0.52 |
| 30 | 61042 | -87956 | -1182477850 | 104015 | 1952552985 | 194120214 | 345.28 | 0.52 |
| 31 | 73022 | -88142 | -1260087655 | 104017 | 2044373156 | 194120214 | 345.28 | 0.53 |
| 32 | 76596 | -88328 | -1336846879 | 104019 | 2135022387 | 194120214 | 345.28 | 0.53 |
| 33 | 80241 | -88512 | -1413643598 | 104016 | 2225489667 | 194120214 | 345.28 | 0.48 |
| 34 | 83958 | -88701 | -1490599003 | 104016 | 2315946253 | 194120214 | 345.28 | 0.48 |
| 35 | 87747 | -88893 | -1567713442 | 104016 | 2406388540 | 194120214 | 345.28 | 0.48 |
| 36 | 91607 | -89089 | -1644987262 | 104016 | 2496812944 | 194120214 | 345.28 | 0.48 |
| 37 | 95538 | -89289 | -1722420804 | 104015 | 2587215887 | 194120214 | 345.28 | 0.48 |
| 38 | 99541 | -89492 | -1800014406 | 104015 | 2677593803 | 194120214 | 345.28 | 0.48 |
| 39 | 103615 | -89699 | -1877768397 | 104015 | 2767943135 | 194120214 | 345.28 | 0.48 |
| 40 | 107761 | -89910 | -1955683108 | 104014 | 2858260335 | 194120214 | 345.28 | 0.48 |
| 41 | 111979 | -90124 | -2033758862 | 104014 | 2948541863 | 194120214 | 345.28 | 0.48 |
| 42 | 129045 | -90343 | -2112074550 | 104015 | 3038893151 | 194120214 | 345.28 | 0.48 |
| 43 | 133169 | -90556 | -2187816811 | 104014 | 3126056412 | 194120214 | 345.28 | 0.48 |
| 44 | 137358 | -90769 | -2263713826 | 104013 | 3213186480 | 194120214 | 345.28 | 0.50 |
| 45 | 141614 | -90985 | -2339749268 | 104012 | 3300257246 | 194120214 | 345.28 | 0.50 |
| 46 | 145937 | -91205 | -2415923433 | 104011 | 3387265679 | 194120214 | 345.28 | 0.50 |
| 47 | 150326 | -91428 | -2492236613 | 104010 | 3474208749 | 194120214 | 345.28 | 0.50 |
| 48 | 154781 | -91654 | -2568689100 | 104009 | 3561083428 | 194120214 | 345.28 | 0.49 |
| 49 | 159302 | -91883 | -2645281186 | 104008 | 3647886695 | 194120214 | 345.28 | 0.49 |
| 50 | 163890 | -92116 | -2722013163 | 104007 | 3734615532 | 194120214 | 345.28 | 0.49 |
| 51 | 168544 | -92353 | -2798885325 | 104006 | 3821266928 | 194120214 | 345.28 | 0.49 |
| 52 | 173264 | -92593 | -2875897963 | 104005 | 3907837874 | 194120214 | 345.28 | 0.49 |
| 53 | 178051 | -92836 | -2953051370 | 104004 | 3994325367 | 194120214 | 345.28 | 0.48 |
| 54 | 182904 | -93082 | -3030345839 | 104003 | 4080726410 | 194120214 | 345.28 | 0.48 |
| 55 | 187823 | -93332 | -3107781660 | 104002 | 4167038007 | 194120214 | 345.28 | 0.48 |
| 56 | 192809 | -93585 | -3185359126 | 104001 | 4253257170 | 194120214 | 345.28 | 0.48 |

VERIFICA DEI TIRAFONDI

La tensione nei tirafondi è valutata considerando simultaneamente carico assiale, il momento flettente, il taglio e la Torsione.

La combinazione più sfavorevole per il calcolo dei tirafondi è la n. 5

Numero dei tirafondi = 40

Diametro dei tirafondi = 39.0 [mm]

Cerchio dei tirafondi = 1950.0 [mm]

Sezione resistente del cerchio di tirafondi = 39040.0 [mm²]

Modulo di resistenza del cerchio di tirafondi = 19032000.0 [mm³]

Le barre per la realizzazione dei tirafondi sono in acciaio tipo: CLASSE 8.8 (EN 20898). La tensione ammissibile è pari a 320 [N/mm²]

Tensione normalizzata nei tirafondi = 0.99 [N/mm²]

VERIFICA DELLA FLANGIA DI BASE

Il dispositivo di fissaggio alla fondazione è costituito da un doppio anello circolare saldato al palo ed opportunamente forato al fine di inserirvi i tirafondi. Le due flange sono collegate ed irrigidite da un gruppo di nervature. Ad ogni tirafondo corrisponde una nervatura.

Le tensioni nella flangia e nelle nervature sono calcolate ripartendo il tiro totale di un tirafondo secondo un traliccio che coinvolge la flangia ed una nervatura. Inoltre localmente si valutano gli effetti delle flessioni, indotte dai tirafondi, sul settore di flangia.

La verifica della stabilità delle nervature compresse è condotta secondo i criteri delle CNR 10011.

Spessore della piastra di base = 50.0 [mm]

Diametro esterno della flangia = 2070.0 [mm]

La combinazione più sfavorevole per il calcolo della flangia è la n. 5

Tensione normalizzata della flangia = 0.54 [N/mm²]

N. 40 nervature spessore = 15 [mm]

Tensione ammissibile nella flangia = 215.8 [N/mm²]

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LINEA ELASTICA

| Cond. n. | Tipo | H [mm] | Freccia trasversale [mm] | Freccia longitudinale [mm] | Freccia totale [mm] | Rotazione totale |
|----------|------|--------|--------------------------|----------------------------|---------------------|------------------|
| 1 | N | 46485 | 422 | 0 | 422 | 1.085° |
| 2 | N | 46485 | 104 | 0 | 104 | 0.011° |
| 3 | N | 46485 | 614 | 34 | 615 | 1.504° |
| 4 | N | 46485 | 272 | 33 | 274 | 0.372° |
| 5 | N | 46485 | 1224 | 94 | 1227 | 2.816° |
| 6 | N | 46485 | 1027 | 90 | 1031 | 2.191° |
| 7 | N | 46485 | 1200 | 78 | 1202 | 2.754° |
| 8 | N | 46485 | 1008 | 75 | 1011 | 2.144° |
| 9 | N | 46485 | 962 | 127 | 970 | 2.389° |
| 10 | N | 46485 | 699 | 120 | 710 | 1.554° |
| 11 | N | 46485 | 825 | 89 | 830 | 1.526° |
| 12 | N | 46485 | 1004 | 89 | 1008 | 2.124° |
| 13 | N | 46485 | 811 | 74 | 815 | 1.491° |
| 14 | N | 46485 | 986 | 74 | 989 | 2.079° |
| 15 | E | 46485 | 454 | 119 | 470 | 0.783° |
| 16 | E | 46485 | 683 | 119 | 694 | 1.508° |
| 17 | N | 46485 | 1173 | 94 | 1177 | 2.732° |
| 18 | N | 46485 | 970 | 90 | 975 | 2.086° |
| 19 | N | 46485 | 1156 | 94 | 1160 | 2.691° |
| 20 | N | 46485 | 957 | 90 | 961 | 2.058° |
| 21 | N | 46485 | 931 | 127 | 940 | 2.337° |
| 22 | N | 46485 | 671 | 120 | 682 | 1.507° |
| 23 | N | 46485 | 767 | 89 | 772 | 1.413° |
| 24 | N | 46485 | 949 | 89 | 953 | 2.024° |
| 25 | N | 46485 | 757 | 89 | 762 | 1.396° |
| 26 | N | 46485 | 936 | 89 | 940 | 1.997° |
| 27 | N | 46485 | 429 | 119 | 445 | 0.749° |
| 28 | N | 46485 | 656 | 119 | 667 | 1.464° |
| 29 | E | 46485 | 1107 | 806 | 1369 | 3.324° |
| 30 | E | 46485 | 958 | 729 | 1204 | 2.828° |
| 31 | E | 46485 | 1067 | 1009 | 1469 | 3.347° |
| 32 | E | 46485 | 977 | 857 | 1300 | 2.830° |
| 33 | E | 46485 | 1087 | 758 | 1325 | 3.198° |
| 34 | E | 46485 | 941 | 686 | 1164 | 2.713° |
| 35 | E | 46485 | 1048 | 951 | 1415 | 3.214° |
| 36 | E | 46485 | 959 | 805 | 1252 | 2.714° |
| 37 | E | 46485 | 833 | 995 | 1298 | 3.395° |
| 38 | E | 46485 | 645 | 882 | 1093 | 2.805° |
| 39 | E | 46485 | 766 | 1250 | 1466 | 3.452° |
| 40 | E | 46485 | 671 | 1033 | 1232 | 2.749° |
| 41 | E | 46485 | 880 | 834 | 1212 | 2.785° |
| 42 | E | 46485 | 977 | 774 | 1247 | 2.927° |
| 43 | E | 46485 | 1077 | 1126 | 1558 | 3.608° |
| 44 | E | 46485 | 1058 | 977 | 1440 | 3.258° |
| 45 | E | 46485 | 865 | 789 | 1171 | 2.663° |
| 46 | E | 46485 | 961 | 730 | 1206 | 2.811° |
| 47 | E | 46485 | 1058 | 1070 | 1505 | 3.473° |
| 48 | E | 46485 | 1040 | 923 | 1391 | 3.136° |
| 49 | E | 46485 | 509 | 986 | 1110 | 2.822° |
| 50 | E | 46485 | 649 | 913 | 1120 | 2.867° |
| 51 | E | 46485 | 691 | 1302 | 1474 | 3.472° |
| 52 | E | 46485 | 705 | 1120 | 1323 | 3.023° |
| 53 | E | 46485 | 1116 | 484 | 1216 | 3.002° |
| 54 | E | 46485 | 918 | 465 | 1029 | 2.460° |
| 55 | E | 46485 | 1031 | 935 | 1392 | 3.265° |
| 56 | E | 46485 | 926 | 825 | 1240 | 2.808° |

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LINEA ELASTICA

| Cond. n. | Tipo | H [mm] | Freccia trasversale [mm] | Freccia longitudinale [mm] | Freccia totale [mm] | Rotazione totale |
|----------|------|--------|--------------------------|----------------------------|---------------------|------------------|
| 57 | E | 46485 | 1099 | 471 | 1196 | 2.947° |
| 58 | E | 46485 | 905 | 453 | 1012 | 2.414° |
| 59 | E | 46485 | 1017 | 904 | 1360 | 3.191° |
| 60 | E | 46485 | 913 | 797 | 1212 | 2.743° |
| 61 | E | 46485 | 878 | 617 | 1073 | 2.964° |
| 62 | E | 46485 | 624 | 585 | 855 | 2.372° |
| 63 | E | 46485 | 760 | 1163 | 1389 | 3.399° |
| 64 | E | 46485 | 638 | 1008 | 1193 | 2.810° |
| 65 | E | 46485 | 714 | 460 | 850 | 1.978° |
| 66 | E | 46485 | 897 | 460 | 1008 | 2.407° |
| 67 | E | 46485 | 884 | 969 | 1312 | 3.115° |
| 68 | E | 46485 | 939 | 887 | 1292 | 2.994° |
| 69 | E | 46485 | 705 | 448 | 836 | 1.937° |
| 70 | E | 46485 | 884 | 448 | 992 | 2.362° |
| 71 | E | 46485 | 873 | 939 | 1282 | 3.043° |
| 72 | E | 46485 | 927 | 859 | 1264 | 2.928° |
| 73 | E | 46485 | 382 | 579 | 694 | 2.033° |
| 74 | E | 46485 | 609 | 579 | 840 | 2.338° |
| 75 | E | 46485 | 564 | 1149 | 1280 | 3.155° |
| 76 | E | 46485 | 639 | 1049 | 1228 | 2.930° |

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SFORZI TRASMESSI ALLA FONDAZIONE

| Cond. | Tipo | Carico verticale [N] | Tx [N] | Ty [N] | Rt [N] | My [Nmm] | Mx [Nmm] | Rm [Nmm] | Mt [Nmm] |
|-------|------|----------------------|---------|--------|--------|-------------|------------|------------|-----------|
| 1 | N | 339909 | 38151 | -0 | 38151 | 1637755748 | -0 | 1637755748 | -0 |
| 2 | N | 339909 | -38151 | -0 | 38151 | -1067054998 | -0 | 1067054998 | -0 |
| 3 | N | 346409 | 69547 | 2200 | 69582 | 2624453179 | 107349629 | 2626647756 | -0 |
| 4 | N | 346409 | -69546 | 2200 | 69581 | -2027480336 | 107360401 | 2030320853 | -0 |
| 5 | N | 357989 | 169591 | 6000 | 169698 | 5778419432 | 293595386 | 5785873260 | -0 |
| 6 | N | 192809 | 169587 | 6000 | 169693 | 5360868574 | 283098840 | 5368338367 | 0 |
| 7 | N | 354269 | 167021 | 5000 | 167096 | 5675167558 | 244439241 | 5680429329 | -0 |
| 8 | N | 192809 | 167017 | 5000 | 167091 | 5270070776 | 235914813 | 5275348499 | 0 |
| 9 | N | 413369 | 105141 | 8001 | 105445 | 4084443215 | 397015900 | 4103693215 | -0 |
| 10 | N | 192809 | 105135 | 8000 | 105439 | 3549402477 | 377443886 | 3569414775 | 0 |
| 11 | N | 357989 | -169590 | 6000 | 169696 | -5138841947 | 293741343 | 5147230375 | -0 |
| 12 | N | 192809 | -169587 | 6000 | 169693 | -5340754834 | 283158089 | 5348255856 | -0 |
| 13 | N | 354269 | -167020 | 5000 | 167095 | -5050309950 | 244557933 | 5056227761 | -0 |
| 14 | N | 192809 | -167017 | 5000 | 167091 | -5250327178 | 235963250 | 5255626902 | -0 |
| 15 | E | 413369 | -105139 | 8001 | 105443 | -3216750657 | 397167254 | 3241176733 | -0 |
| 16 | E | 192809 | -105135 | 8000 | 105439 | -3534848955 | 377500477 | 3554949190 | -0 |
| 17 | N | 362829 | 160691 | 6000 | 160803 | 5484497613 | 293944046 | 5492368994 | -0 |
| 18 | N | 192809 | 160687 | 6000 | 160799 | 5057393195 | 283094770 | 5065310315 | 0 |
| 19 | N | 360009 | 158741 | 6000 | 158855 | 5406905969 | 293745259 | 5414879356 | -0 |
| 20 | N | 192809 | 158737 | 6000 | 158850 | 4989294644 | 283093935 | 4997319603 | 0 |
| 21 | N | 412749 | 100361 | 8001 | 100679 | 3918205698 | 396996162 | 3938266350 | -0 |
| 22 | N | 192809 | 100355 | 8000 | 100674 | 3389432517 | 377440833 | 3410383317 | 0 |
| 23 | N | 362829 | -160690 | 6000 | 160802 | -4824795797 | 294080356 | 4833749863 | -0 |
| 24 | N | 192809 | -160687 | 6000 | 160799 | -5038705095 | 283149723 | 5046654615 | -0 |
| 25 | N | 360009 | -158740 | 6000 | 158853 | -4758826251 | 293878864 | 4767891786 | -0 |
| 26 | N | 192809 | -158737 | 6000 | 158850 | -4970898690 | 283148006 | 4978956374 | -0 |
| 27 | N | 412749 | -100358 | 8001 | 100677 | -3054973647 | 397138906 | 3080679031 | -0 |
| 28 | N | 192809 | -100355 | 8000 | 100674 | -3375695290 | 377494203 | 3396736752 | -0 |
| 29 | E | 347609 | 159961 | 84003 | 180676 | 5341139493 | 3319771415 | 6288772005 | 128901598 |
| 30 | E | 192809 | 159957 | 84000 | 180671 | 5034126711 | 3121942438 | 5923593194 | 58692252 |
| 31 | E | 344069 | 157210 | 115004 | 194784 | 5202940848 | 4456806295 | 6850818624 | 252676994 |
| 32 | E | 192809 | 157207 | 115001 | 194779 | 4988435577 | 4127090406 | 6474362109 | 112523471 |
| 33 | E | 344229 | 157620 | 79503 | 176536 | 5250175705 | 3134246723 | 6114560282 | 123257981 |
| 34 | E | 192809 | 157617 | 79500 | 176531 | 4950660955 | 2946853024 | 5761335490 | 55142741 |
| 35 | E | 340729 | 154900 | 109004 | 189409 | 5114679404 | 4215103426 | 6627747906 | 241623890 |
| 36 | E | 192809 | 154897 | 109000 | 189404 | 4903776546 | 3900819796 | 6266052944 | 105650669 |
| 37 | E | 398119 | 97340 | 99006 | 138842 | 3654376741 | 4017500131 | 5430909378 | 177695106 |
| 38 | E | 192809 | 97335 | 99000 | 138835 | 3287862218 | 3723142528 | 4967074415 | 83937461 |
| 39 | E | 393729 | 95559 | 134007 | 164589 | 3497565431 | 5348820093 | 6390840346 | 349356155 |
| 40 | E | 192809 | 95555 | 134001 | 164581 | 3276613854 | 4870746688 | 5870295704 | 162194972 |
| 41 | E | 347609 | -159960 | 84003 | 180676 | -5085214382 | 3485641349 | 6165152141 | 233980999 |
| 42 | E | 192809 | -159957 | 84000 | 180671 | -5115894371 | 3246113932 | 6058847322 | 140539505 |
| 43 | E | 344069 | -157210 | 115004 | 194785 | -5326781567 | 4785924347 | 7160982735 | 462438929 |
| 44 | E | 192809 | -157207 | 115001 | 194779 | -5172438754 | 4374887007 | 6774493264 | 275908854 |
| 45 | E | 344229 | -157620 | 79503 | 176535 | -5000052727 | 3297426073 | 5989452895 | 226699475 |
| 46 | E | 192809 | -157617 | 79500 | 176531 | -5032605787 | 3067938105 | 5894010963 | 134949945 |
| 47 | E | 340729 | -154900 | 109004 | 189409 | -5235531224 | 4539035359 | 6929186762 | 448116195 |
| 48 | E | 192809 | -154897 | 109001 | 189404 | -5087741144 | 4142492630 | 6560895910 | 264963660 |
| 49 | E | 398119 | -97339 | 99006 | 138842 | -3201915285 | 4150568476 | 5242087386 | 260566795 |
| 50 | E | 192809 | -97335 | 99001 | 138835 | -3327142669 | 3817850611 | 5064174328 | 146367139 |
| 51 | E | 393729 | -95559 | 134008 | 164589 | -3454116280 | 5612980807 | 6590635236 | 514786541 |
| 52 | E | 192809 | -95555 | 134001 | 164581 | -3370196600 | 5059760339 | 6079424299 | 286818541 |
| 53 | E | 359299 | 157171 | 31002 | 160199 | 5306930574 | 1516463376 | 5519345368 | -0 |
| 54 | E | 192809 | 157167 | 31000 | 160195 | 4891310930 | 1462656314 | 5105319393 | 0 |
| 55 | E | 351999 | 152160 | 87004 | 175278 | 5037234367 | 3683889986 | 6240574933 | 178184104 |
| 56 | E | 192809 | 152157 | 87000 | 175273 | 4769589330 | 3460158598 | 5892510492 | 103005295 |

SFORZI TRASMESSI ALLA FONDAZIONE

| Cond. n. | Tipo | Carico verticale [N] | Tx [N] | Ty [N] | Rt [N] | My [Nmm] | Mx [Nmm] | Rm [Nmm] | Mt [Nmm] |
|----------|------|----------------------|---------|--------|--------|-------------|------------|------------|-----------|
| 56 | E | 192809 | 152157 | 87000 | 175273 | 4769589330 | 3460158598 | 5892510492 | 103005295 |
| 57 | E | 356539 | 155271 | 30202 | 158181 | 5232079263 | 1476373046 | 5436389499 | -0 |
| 58 | E | 192809 | 155267 | 30200 | 158176 | 4825571984 | 1424906139 | 5031550704 | 0 |
| 59 | E | 349409 | 150370 | 84004 | 172243 | 4969265293 | 3557320086 | 6111311131 | 172165252 |
| 60 | E | 192809 | 150367 | 84000 | 172239 | 4706547974 | 3341275203 | 5771976595 | 98444069 |
| 61 | E | 407089 | 97190 | 39003 | 104725 | 3754066813 | 1930509319 | 4221360428 | -0 |
| 62 | E | 192809 | 97185 | 39000 | 104719 | 3239871587 | 1840024062 | 3725916860 | 0 |
| 63 | E | 398119 | 93589 | 104007 | 139916 | 3466769404 | 4493956261 | 5675749552 | 235605792 |
| 64 | E | 192809 | 93585 | 104001 | 139908 | 3163322778 | 4169431872 | 5233619506 | 139150510 |
| 65 | E | 359299 | -157170 | 31002 | 160198 | -4648833682 | 1517160365 | 4890136009 | -0 |
| 66 | E | 192809 | -157167 | 31000 | 160195 | -4872590591 | 1462940237 | 5087468251 | -0 |
| 67 | E | 351999 | -152160 | 87004 | 175278 | -4790454779 | 3819830133 | 6126953503 | 263301532 |
| 68 | E | 192809 | -152157 | 87000 | 175273 | -4814705049 | 3574836965 | 5996736115 | 178191879 |
| 69 | E | 356539 | -155270 | 30202 | 158180 | -4585545421 | 1477038708 | 4817558526 | -0 |
| 70 | E | 192809 | -155267 | 30200 | 158176 | -4807144759 | 1425178297 | 5013957909 | -0 |
| 71 | E | 349409 | -150370 | 84004 | 172243 | -4725785321 | 3691455921 | 5996656879 | 256210327 |
| 72 | E | 192809 | -150367 | 84000 | 172239 | -4751773783 | 3453986117 | 5874467992 | 172338395 |
| 73 | E | 407089 | -97188 | 39003 | 104722 | -2894494371 | 1931193097 | 3479598316 | -0 |
| 74 | E | 192809 | -97185 | 39000 | 104719 | -3226113212 | 1840284240 | 3714088386 | -0 |
| 75 | E | 398119 | -93589 | 104007 | 139915 | -3101788190 | 4596222008 | 5544938838 | 298614894 |
| 76 | E | 192809 | -93585 | 104001 | 139908 | -3185359126 | 4253257170 | 5313822477 | 194120214 |

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SFORZI MASSIMI TRASMESSI ALLA FONDAZIONE

CONDIZIONE NORMALE

SFORZO ASSIALE MASSIMO

| Condizione numero | Sforzo assiale [N] |
|-------------------|--------------------|
| 9 | 413369 |

SFORZO ASSIALE MINIMO

| Condizione numero | Sforzo assiale [N] |
|-------------------|--------------------|
| 28 | 192809 |

TAGLIO TRASVERSALE MASSIMO

| Condizione numero | Taglio [N] |
|-------------------|------------|
| 5 | 169591 |

TAGLIO LONGITUDINALE MASSIMO

| Condizione numero | Taglio [N] |
|-------------------|------------|
| 27 | 8001 |

TAGLIO RISULTANTE MASSIMO

| Condizione numero | Taglio [N] |
|-------------------|------------|
| 5 | 169698 |

MOMENTO TRASVERSALE MASSIMO

| Condizione numero | Momento [Nmm] |
|-------------------|---------------|
| 5 | 5778419432 |

MOMENTO LONGITUDINALE MASSIMO

| Condizione numero | Momento [Nmm] |
|-------------------|---------------|
| 27 | 397138906 |

MOMENTO RISULTANTE MASSIMO

| Condizione numero | Momento [Nmm] |
|-------------------|---------------|
| 5 | 5785873260 |

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SFORZI MASSIMI TRASMESSI ALLA FONDAZIONE

CONDIZIONE ECCEZIONALE

SFORZO ASSIALE MASSIMO

| Condizione numero | Sforzo assiale [N] |
|-------------------|--------------------|
| 15 | 413369 |

SFORZO ASSIALE MINIMO

| Condizione numero | Sforzo assiale [N] |
|-------------------|--------------------|
| 74 | 192809 |

TAGLIO TRASVERSALE MASSIMO

| Condizione numero | Taglio [N] |
|-------------------|------------|
| 29 | 159961 |

TAGLIO LONGITUDINALE MASSIMO

| Condizione numero | Taglio [N] |
|-------------------|------------|
| 51 | 134008 |

TAGLIO RISULTANTE MASSIMO

| Condizione numero | Taglio [N] |
|-------------------|------------|
| 43 | 194785 |

MOMENTO TRASVERSALE MASSIMO

| Condizione numero | Momento [Nmm] |
|-------------------|---------------|
| 29 | 5341139493 |

MOMENTO LONGITUDINALE MASSIMO

| Condizione numero | Momento [Nmm] |
|-------------------|---------------|
| 51 | 5612980807 |

MOMENTO RISULTANTE MASSIMO

| Condizione numero | Momento [Nmm] |
|-------------------|---------------|
| 43 | 7160982735 |

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