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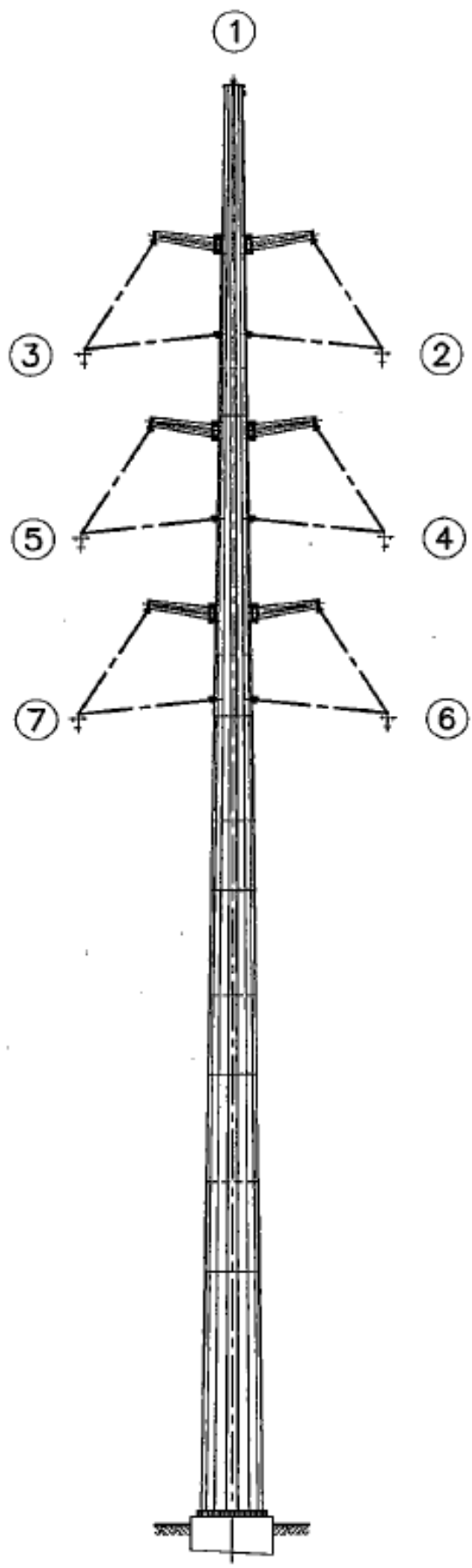


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RELAZIONE DI CALCOLO		P045DP5600				
PROGETTO		TITOLO				
TE-AR-05-003		<b>LINEE 380 kV UNIFICATE TUBOLARI MONOSTELO          DOPPIA TERNA – SOSTEGNO PD 30          RELAZIONE DI CALCOLO PALO          Zona A e B</b>				
RICAVATO DAL DOC. TERNA						
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**PROGETTO ESECUTIVO**  
**DI PALI MONOSTELO AUTOPORTANTI**  
**PER LINEE ELETTRICHE COMPATTE A 380 kV**

-----  
**SOSTEGNO TIPO PDT 30**  
-----

-----  
**RELAZIONE DI CALCOLO**  
-----

**TIPO DI SOSTEGNO**

- Altezza fuori terra del sostegno in opera = 53.36 m
- Dispositivo di attacco alla fondazione : con piastra di base e tirafondi
- Numero dei tronchi costituenti il sostegno = 7
- Sezione poligonale a 16 lati

3	-	-	-	-	-
2	-	-	-	-	-
0	MODIFICA CIMINO	01/01/2010	CHIUSI	BOTTARELLI	CHIUSI
0	Emissione	21/01/2000	CHIUSI	BOTTARELLI	CHIUSI
N°	DESCRIZIONE	DATA	ESEGUITO	CONTR.TO	APPROVATO
NTF = 1208-cei				<b>P045DP5600</b>	

**- INDICE GENERALE -**

<b>- Legenda</b>	pg. 3
<b>- Norme tecniche di progettazione</b>	pg. 4
<b>- Geometria del sostegno tubolare monostelo</b>	pg. 5
<b>- Qualità dei materiali adottati</b>	pg. 5
<b>- Note generali</b>	pg. 6
<b>- Tabella descrittiva delle sezioni</b>	pg. 7
<b>- Geometria delle masse</b>	pg. 8
<b>- Condizioni di carico</b>	pg. 9 +
<b>- Verifica sismica: delucidazioni tecniche</b>	pg. 181
<b>- Verifica dei tirafondi/viti</b>	pg. 182
<b>- Verifica della flangia di base/intermedia</b>	pg. 182
<b>- Linea elastica</b>	pg. 184
<b>- Sforzi trasmessi alla fondazione</b>	pg. 186
<b>- Combinazioni più sfavorevoli</b>	pg. 188

## 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 mensola 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

## 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 e successivi aggiornamenti (D.M. 05/08/1998, DM 16/01/1991)
- 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.10011/97 : Costruzioni di acciaio: istruzioni per il calcolo l'esecuzione, il collaudo e la manutenzione.
- UNI ENV 1993-1-1 Eurocodice 3-Parte 1-1: Regole generali e regole per gli edifici, 05/04; Parte 1-8: progettazione dei collegamenti, 08/05.
- CEI EN50341-1: Linee elettriche aeree a tensione alternate maggiore di 45 kV. Parte prima: prescrizioni generali e specifiche comuni, 07/05.
- **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 TERNA S.p.A.

## 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	450.0	1006.1	5500.0	0	6.00
2	1006.1	1214.3	6500.0	2010	6.00
3	1135.6	1551.9	13000.0	2580	9.00
4	1448.9	1737.1	9000.0	2890	13.00
5	1616.0	1926.6	9700.0	3200	16.00
6	1789.5	2152.6	11340.0	3560	19.00
7	1997.8	2400.0	12560.0	0	20.00

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 ISO 898.

## **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.



## 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	2	52443	6.00	532.3	542.7	917	97.52	97.52
1	3	51527	6.00	623.2	635.4	917	115.60	115.60
1	4	50610	6.00	714.1	728.0	917	133.68	133.68
1	5	49693	6.00	805.0	820.7	917	151.76	151.76
1	6	48777	6.00	895.9	913.4	917	169.84	169.84
1	7	47860	6.00	986.8	1006.1	917	187.93	184.22
2	8	46962	6.00	1015.0	1034.9	917	193.54	186.68
2	9	46064	6.00	1043.2	1063.6	917	199.15	189.00
2	10	45166	6.00	1071.4	1092.4	917	204.76	191.20
2	11	44268	6.00	1099.6	1121.2	917	210.37	193.28
2	12	43370	6.00	1127.8	1149.9	917	215.98	195.25
3	13	42423	9.00	1143.5	1165.9	917	214.93	214.93
3	14	41475	9.00	1173.3	1196.3	917	220.85	220.85
3	15	40528	9.00	1203.0	1226.6	917	226.77	226.77
3	16	39581	9.00	1232.8	1256.9	917	232.69	232.69
3	17	38634	9.00	1262.5	1287.3	917	238.60	238.60
3	18	37686	9.00	1292.3	1317.6	917	244.52	244.52
3	19	36739	9.00	1322.0	1347.9	917	250.44	250.44
3	20	35792	9.00	1351.8	1378.3	917	256.36	256.36
3	21	34845	9.00	1381.5	1408.6	917	262.27	262.27
3	22	33897	9.00	1411.3	1438.9	917	268.19	268.19
3	23	32950	9.00	1441.0	1469.3	917	274.11	272.71
4	24	32077	13.00	1448.5	1476.9	917	270.02	270.02
4	25	31204	13.00	1475.9	1504.8	917	275.47	275.47
4	26	30331	13.00	1503.3	1532.8	917	280.92	280.92
4	27	29459	13.00	1530.7	1560.7	917	286.38	286.38
4	28	28586	13.00	1558.1	1588.7	917	291.83	291.83
4	29	27713	13.00	1585.5	1616.6	917	297.28	297.28
4	30	26840	13.00	1613.0	1644.6	917	302.74	302.74
5	31	25911	16.00	1614.1	1645.7	917	298.79	298.79
5	32	24983	16.00	1643.3	1675.5	917	304.59	304.59
5	33	24054	16.00	1672.4	1705.2	917	310.39	310.39
5	34	23126	16.00	1701.6	1734.9	917	316.19	316.19
5	35	22197	16.00	1730.8	1764.7	917	321.99	321.99
5	36	21269	16.00	1759.9	1794.4	917	327.79	327.79
5	37	20340	16.00	1789.1	1824.1	917	333.59	333.59
6	38	19368	19.00	1785.7	1820.6	917	328.73	328.73
6	39	18395	19.00	1816.2	1851.8	917	334.81	334.81
6	40	17423	19.00	1846.7	1882.9	917	340.88	340.88
6	41	16450	19.00	1877.3	1914.1	917	346.96	346.96
6	42	15478	19.00	1907.8	1945.2	917	353.03	353.03
6	43	14505	19.00	1938.4	1976.3	917	359.11	359.11
6	44	13533	19.00	1968.9	2007.5	917	365.18	365.18
6	45	12560	19.00	1999.4	2038.6	917	371.26	371.26
7	46	11594	20.00	1989.8	2028.7	898	367.94	367.94
7	47	10628	20.00	2020.1	2059.7	898	373.98	373.98
7	48	9662	20.00	2050.4	2090.6	898	380.01	380.01
7	49	8695	20.00	2080.8	2121.6	898	386.05	386.05
7	50	7729	20.00	2111.1	2152.5	898	392.08	392.08
7	51	6763	20.00	2141.5	2183.4	898	398.12	398.12
7	52	5797	20.00	2171.8	2214.4	898	404.15	404.15
7	53	4831	20.00	2202.2	2245.3	898	410.19	410.19
7	54	3865	20.00	2232.5	2276.2	898	416.23	416.23
7	55	2898	20.00	2262.9	2307.2	898	422.26	422.26
7	56	1932	20.00	2293.2	2338.1	898	428.30	428.30
7	57	966	20.00	2323.5	2369.1	898	434.33	434.33
7	58	0	20.00	2353.9	2400.0	898	440.37	440.37

## GEOMETRIA DELLE MASSE

Tronco	Nodo	Sezione min [mm <sup>2</sup> ]	W min [mm <sup>3</sup> ]	Jt [mm <sup>4</sup> ]
1	2	10049	1299164	711722656
1	3	11785	1789656	1144106139
1	4	13521	2358549	1723510063
1	5	15257	3005841	2471449908
1	6	16993	3731535	3409441153
1	7	18372	4433319	4305011816
2	8	18609	4682358	4615541508
2	9	18832	4940023	4936345687
2	10	19042	5206775	5267424836
2	11	19242	5483089	5608779386
2	12	19431	5769457	5960409725
3	13	32497	9087772	10623731565
3	14	33349	9572548	11477006299
3	15	34201	10069922	12374788263
3	16	35053	10579892	13318208951
3	17	35906	11102461	14308399854
3	18	36758	11637627	15346492464
3	19	37610	12185390	16433618274
3	20	38462	12745751	17570908777
3	21	39314	13318709	18759495464
3	22	40167	13904264	20000509829
3	23	40818	14210346	20387665593
4	24	59391	20991334	31151679323
4	25	60525	21804349	32959635393
4	26	61659	22632813	34836223949
4	27	62794	23476725	36782723554
4	28	63928	24336086	38800412771
4	29	65062	25210897	40890570163
4	30	66196	26101155	43054474292
5	31	81378	31991681	53004848403
5	32	82863	33175669	55939915570
5	33	84348	34381173	58981379624
5	34	85833	35608194	62131134870
5	35	87318	36856731	65391075613
5	36	88803	38126785	68763096158
5	37	90288	39418356	72249090809
6	38	106829	46392521	85157483817
6	39	108675	48018875	89618258241
6	40	110522	49673252	94232150515
6	41	112369	51355653	99001744426
6	42	114216	53066077	103929623762
6	43	116062	54804525	109018372310
6	44	117909	56570996	114270573860
6	45	119756	58365491	119688812199
7	46	125379	60743339	124097888039
7	47	127310	62638607	129882232085
7	48	129242	64562995	135843581222
7	49	131173	66516502	141984603053
7	50	133105	68499130	148307965178
7	51	135036	70510878	154816335200
7	52	136968	72551745	161512380720
7	53	138899	74621733	168398769341
7	54	140831	76720840	175478168663
7	55	142762	78849068	182753246288
7	56	144693	81006415	190226669818
7	57	146625	83192882	197901106855
7	58	148556	85408470	205779225000

## CONDIZIONI GENERALI DI CARICO

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

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]
<b>1.00</b>	53.55	5900.00	3650.00	0.00	0.00
<b>2.00</b>	43.82	53100.00	24100.00	0.00	4.75
---	---	---	Ft = 64263	Fp = -10496	---
---	---	Pa = 54192	Ta = 34539	La = 0	---
---	---	Pb = -1092	Tb = -10439	Lb = 0	---
<b>3.00</b>	43.82	53100.00	24100.00	0.00	-4.75
---	---	---	Ft = 70667	Fp = -62420	---
---	---	Pa = 59592	Ta = -37981	La = 0	---
---	---	Pb = -6492	Tb = 62081	Lb = 0	---
<b>4.00</b>	37.02	53100.00	24100.00	0.00	4.75
---	---	---	Ft = 64263	Fp = -10496	---
---	---	Pa = 54192	Ta = 34539	La = 0	---
---	---	Pb = -1092	Tb = -10439	Lb = 0	---
<b>5.00</b>	37.02	53100.00	24100.00	0.00	-4.75
---	---	---	Ft = 70667	Fp = -62420	---
---	---	Pa = 59592	Ta = -37981	La = 0	---
---	---	Pb = -6492	Tb = 62081	Lb = 0	---
<b>6.00</b>	30.22	53100.00	24100.00	0.00	4.75
---	---	---	Ft = 64263	Fp = -10496	---
---	---	Pa = 54192	Ta = 34539	La = 0	---
---	---	Pb = -1092	Tb = -10439	Lb = 0	---
<b>7.00</b>	30.22	53100.00	24100.00	0.00	-4.75
---	---	---	Ft = 70667	Fp = -62420	---
---	---	Pa = 59592	Ta = -37981	La = 0	---
---	---	Pb = -6492	Tb = 62081	Lb = 0	---

**TABELLA DESCRITTIVA DELLE AZIONI INTERNE.**

<b>Nodo</b>	<b>Carico verticale [N]</b>	<b>T<sub>x</sub> [N]</b>	<b>My [Nmm]</b>	<b>T<sub>y</sub> [N]</b>	<b>Mx [Nmm]</b>	<b>Mt [Nmm]</b>	<b>σ<sub>amm.</sub> [N/mm<sup>2</sup>]</b>	<b>% Usa</b>
2	6610	3654	4107439	-0	-0	0	215.80	0.02
3	7443	3654	7550049	-0	-0	0	215.80	0.02
4	8399	3655	11004497	-0	-0	0	215.80	0.02
5	9477	3655	14472265	-0	-0	0	215.80	0.03
6	10678	3656	17954854	-0	-0	0	215.80	0.03
7	12002	3657	21453769	-0	-0	0	215.80	0.03
8	72728	-18608	-204044	-0	-0	0	215.80	0.02
9	133491	281	6605926	-0	-0	-0	215.80	0.04
10	134900	281	8470056	-0	-0	-0	215.80	0.04
11	135707	2967	11971930	0	-0	-0	215.80	0.04
12	133399	51920	67570435	-0	-0	-0	215.80	0.09
13	135772	51920	118445147	-0	-0	-0	215.80	0.08
14	138208	51919	169332839	-0	-0	-0	215.80	0.10
15	200098	21957	199218451	-0	-0	-0	215.80	0.12
16	262050	48534	249485630	-0	-0	-0	215.80	0.14
17	264673	48532	298606116	-0	-0	-0	215.80	0.16
18	267358	48529	347705797	-0	-0	-0	215.80	0.17
19	266313	102949	445319992	0	-0	-0	215.80	0.20
20	265330	100162	542460055	-0	-0	-0	215.80	0.23
21	268202	100159	640281243	-0	-0	-0	215.80	0.25
22	338348	79082	724641640	-0	-0	-0	215.80	0.28
23	400736	96757	813411465	-0	-0	-0	215.80	0.31
24	404734	96752	901595511	-0	-0	-0	215.80	0.23
25	408807	96747	989705462	-0	-0	-0	215.80	0.24
26	409165	132761	1101667778	0	-0	-0	215.80	0.26
27	409599	148378	1239288764	-0	-0	-0	215.80	0.27
28	413902	148374	1372205924	-0	-0	-0	215.80	0.29
29	432526	148374	1505159611	-0	-0	-0	215.80	0.31
30	436982	148369	1638022177	-0	-0	-0	215.80	0.32
31	442808	148365	1779267823	-0	-0	-0	215.80	0.28
32	448741	148360	1920414804	-0	-0	-0	215.80	0.29
33	454780	148356	2061468433	-0	-0	-0	215.80	0.30
34	460926	148352	2202423351	-0	-0	-0	215.80	0.31
35	467178	148347	2343274590	-0	-0	-0	215.80	0.32
36	495081	148347	2484157714	-0	-0	-0	215.80	0.33
37	501546	148343	2624921052	-0	-0	-0	215.80	0.33
38	509556	148338	2772218443	-0	-0	-0	215.80	0.30
39	517705	148334	2919390560	-0	-0	-0	215.80	0.30
40	525993	148330	3066442662	-0	-0	-0	215.80	0.31
41	534419	148325	3213370531	-0	-0	-0	215.80	0.31
42	542984	148321	3360170143	-0	-0	-0	215.80	0.32
43	551687	148317	3506837593	-0	-0	-0	215.80	0.32
44	592387	148316	3653503153	-0	-0	-0	215.80	0.32
45	601367	148311	3800019091	-0	-0	-0	215.80	0.32
46	610708	148307	3945428173	-0	-0	-0	215.80	0.32
47	620192	148302	4090682622	-0	-0	-0	215.80	0.33
48	629820	148298	4235777995	-0	-0	-0	215.80	0.33
49	639592	148293	4380711006	-0	-0	-0	215.80	0.33
50	649508	148288	4525478409	-0	-0	-0	215.80	0.33
51	659568	148284	4670076999	-0	-0	-0	215.80	0.33
52	669771	148279	4814503607	-0	-0	-0	215.80	0.33
53	680119	148275	4958755092	-0	-0	-0	215.80	0.33
54	690610	148270	5102828337	-0	-0	-0	215.80	0.33
55	701246	148266	5246720244	-0	-0	-0	215.80	0.33
56	712025	148261	5390427735	-0	-0	-0	215.80	0.33
57	722948	148257	5533947741	-0	-0	-0	215.80	0.33
58	734015	148252	5677277206	-0	-0	-0	215.80	0.33

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 2 " PDT - CVS3 - ZONA A - NORMALE - FRECCIA - 1.0 % "

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]
<b>1.00</b>	53.55	6400.00	5100.00	2200.00	0.00
<b>2.00</b>	43.82	55850.00	32550.00	0.00	4.75
---	---	---	Ft = 66634	Fp = -3281	---
---	---	Pa = 56191	Ta = 35814	La = 0	---
---	---	Pb = -341	Tb = -3264	Lb = 0	---
<b>3.00</b>	43.82	55850.00	32550.00	0.00	-4.75
---	---	---	Ft = 75283	Fp = -73411	---
---	---	Pa = 63485	Ta = -40462	La = 0	---
---	---	Pb = -7635	Tb = 73012	Lb = 0	---
<b>4.00</b>	37.02	55850.00	32550.00	0.00	4.75
---	---	---	Ft = 66634	Fp = -3281	---
---	---	Pa = 56191	Ta = 35814	La = 0	---
---	---	Pb = -341	Tb = -3264	Lb = 0	---
<b>5.00</b>	37.02	55850.00	32550.00	0.00	-4.75
---	---	---	Ft = 75283	Fp = -73411	---
---	---	Pa = 63485	Ta = -40462	La = 0	---
---	---	Pb = -7635	Tb = 73012	Lb = 0	---
<b>6.00</b>	30.22	55850.00	32550.00	0.00	4.75
---	---	---	Ft = 66634	Fp = -3281	---
---	---	Pa = 56191	Ta = 35814	La = 0	---
---	---	Pb = -341	Tb = -3264	Lb = 0	---
<b>7.00</b>	30.22	55850.00	32550.00	0.00	-4.75
---	---	---	Ft = 75283	Fp = -73411	---
---	---	Pa = 63485	Ta = -40462	La = 0	---
---	---	Pb = -7635	Tb = 73012	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	7110	5177	5814822	2200	2429911	0	215.80	0.03
3	7943	5264	10779513	2200	4453268	0	215.80	0.03
4	8899	5365	15853000	2200	6477070	0	215.80	0.04
5	9977	5481	21050812	2200	8501358	0	215.80	0.04
6	11178	5612	26388503	2200	10526185	0	215.80	0.04
7	12502	5757	31881632	2200	12551606	0	215.80	0.04
8	76174	-24151	3618337	2202	14577517	-0	215.80	0.03
9	139884	1527	14043777	2203	16642089	-0	215.80	0.05
10	141293	1692	17936998	2203	18703890	-0	215.80	0.06
11	141904	5489	24189785	2203	20762212	-0	215.80	0.06
12	139399	71779	100954479	2203	22815158	-0	215.80	0.12
13	141772	71966	171607853	2203	24977711	-0	215.80	0.11
14	144208	72156	242458042	2203	27137681	-0	215.80	0.14
15	209044	31890	285220437	2204	29327228	-0	215.80	0.16
16	273943	67991	355790166	2205	31543518	-0	215.80	0.19
17	276566	68193	425000769	2205	33754987	-0	215.80	0.21
18	279250	68399	494376948	2205	35961568	-0	215.80	0.23
19	278009	142114	629469931	2204	38161546	-0	215.80	0.27
20	276830	138570	764118646	2204	40355051	-0	215.80	0.31
21	279702	138790	899892985	2204	42543716	-0	215.80	0.35
22	352795	110557	1017781451	2205	44752295	-0	215.80	0.38
23	418129	134668	1141914161	2205	46975240	-0	215.80	0.42
24	422126	134881	1265102954	2205	49017092	-0	215.80	0.31
25	426200	135096	1388374892	2205	51053780	-0	215.80	0.33
26	426361	183964	1544046643	2205	53085280	-0	215.80	0.35
27	426599	205286	1734561212	2204	55111687	-0	215.80	0.37
28	430902	205515	1918917735	2204	57134047	-0	215.80	0.40
29	449526	205754	2103527966	2204	59155574	-0	215.80	0.42
30	453982	205990	2288216352	2204	61172902	-0	215.80	0.44
31	459808	206246	2484793959	2204	63314646	-0	215.80	0.39
32	465741	206503	2681470891	2204	65452238	-0	215.80	0.40
33	471780	206766	2878259506	2204	67586091	-0	215.80	0.41
34	477926	207032	3075156634	2203	69716201	-0	215.80	0.43
35	484178	207304	3272159664	2203	71842568	-0	215.80	0.44
36	512081	207586	3469463389	2203	73968694	-0	215.80	0.45
37	518546	207867	3666859187	2203	76090863	-0	215.80	0.46
38	526556	208166	3873708075	2203	78309379	-0	215.80	0.41
39	534705	208465	4080671105	2203	80523972	-0	215.80	0.42
40	542993	208769	4287761119	2203	82734912	-0	215.80	0.42
41	551419	209079	4494977238	2202	84942185	-0	215.80	0.43
42	559984	209394	4702318854	2202	87145776	-0	215.80	0.43
43	568687	209714	4909785533	2202	89345668	-0	215.80	0.44
44	609387	210044	5117565665	2202	91544971	-0	215.80	0.44
45	618367	210375	5325456438	2202	93740286	-0	215.80	0.45
46	627708	210708	5532100427	2202	95917334	-0	215.80	0.45
47	637192	211039	5738847131	2202	98090412	-0	215.80	0.45
48	646820	211376	5945695199	2202	100259476	-0	215.80	0.45
49	656592	211717	6152644940	2201	102424508	-0	215.80	0.45
50	666508	212064	6359696718	2201	104585488	-0	215.80	0.45
51	676568	212416	6566850947	2201	106742395	-0	215.80	0.45
52	686771	212773	6774108084	2201	108895207	-0	215.80	0.46
53	697119	213136	6981468622	2201	111043899	-0	215.80	0.46
54	707610	213504	7188933081	2201	113188447	-0	215.80	0.46
55	718246	213876	7396502003	2200	115328824	-0	215.80	0.46
56	729025	214254	7604175947	2200	117465003	-0	215.80	0.46
57	739948	214638	7811955486	2200	119596955	-0	215.80	0.46
58	751015	215026	8019841198	2200	121724651	-0	215.80	0.46

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 3 " PDT - 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

<b>Livello</b>	<b>H [m]</b>	<b>Verticali [N]</b>	<b>Trasversali [N]</b>	<b>Longitudinali [N]</b>	<b>Eccentricità del conduttore [m]</b>
<b>1.00</b>	53.55	8310.00	9960.00	6000.00	0.00
<b>2.00</b>	43.82	60940.00	58800.00	0.00	4.75
---	---	---	Ft = 69613	Fp = 21502	---
---	---	Pa = 58704	Ta = 37415	La = 0	---
---	---	Pb = 2236	Tb = 21385	Lb = 0	---
<b>3.00</b>	43.82	60940.00	58800.00	0.00	-4.75
---	---	---	Ft = 85238	Fp = -105183	---
---	---	Pa = 71880	Ta = -45813	La = 0	---
---	---	Pb = -10940	Tb = 104613	Lb = 0	---
<b>4.00</b>	37.02	60940.00	58800.00	0.00	4.75
---	---	---	Ft = 69613	Fp = 21502	---
---	---	Pa = 58704	Ta = 37415	La = 0	---
---	---	Pb = 2236	Tb = 21385	Lb = 0	---
<b>5.00</b>	37.02	60940.00	58800.00	0.00	-4.75
---	---	---	Ft = 85238	Fp = -105183	---
---	---	Pa = 71880	Ta = -45813	La = 0	---
---	---	Pb = -10940	Tb = 104613	Lb = 0	---
<b>6.00</b>	30.22	60940.00	58800.00	0.00	4.75
---	---	---	Ft = 69613	Fp = 21502	---
---	---	Pa = 58704	Ta = 37415	La = 0	---
---	---	Pb = 2236	Tb = 21385	Lb = 0	---
<b>7.00</b>	30.22	60940.00	58800.00	0.00	-4.75
---	---	---	Ft = 85238	Fp = -105183	---
---	---	Pa = 71880	Ta = -45813	La = 0	---
---	---	Pb = -10940	Tb = 104613	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Us0
2	9020	10262	11553484	6001	6631724	0	215.80	0.05
3	9853	10608	21607847	6001	12154486	0	215.80	0.07
4	10809	11012	32063340	6001	17678262	0	215.80	0.08
5	11887	11476	42977870	6001	23203180	0	215.80	0.08
6	13088	11999	54409413	6001	28729403	0	215.80	0.08
7	14412	12581	66415951	6001	34257105	0	215.80	0.08
8	83538	-41076	18014436	6005	39796595	0	215.80	0.06
9	152701	5691	40121567	6010	45451305	-0	215.80	0.09
10	154110	6352	50752982	6010	51097535	-0	215.80	0.10
11	154357	13583	65965535	6010	56732706	-0	215.80	0.11
12	151489	133713	208875103	6009	62351629	-0	215.80	0.21
13	153862	134466	341364822	6009	68269512	-0	215.80	0.20
14	156298	135229	474602315	6009	74179417	-0	215.80	0.25
15	226588	62943	557800331	6013	80177475	-0	215.80	0.29
16	296940	128621	691930393	6016	86255242	-0	215.80	0.34
17	299563	129438	824016312	6016	92318397	-0	215.80	0.38
18	302247	130273	956820681	6015	98366755	-0	215.80	0.42
19	300643	263906	1208748865	6015	104395181	-0	215.80	0.50
20	299100	257985	1460292479	6014	110404088	-0	215.80	0.57
21	301972	258877	1714313168	6013	116398394	-0	215.80	0.63
22	380518	208400	1936739486	6016	122451463	-0	215.80	0.69
23	451306	252487	2171141170	6018	128547435	-0	215.80	0.76
24	455303	253354	2403421593	6017	134145091	-0	215.80	0.57
25	459377	254229	2636243319	6016	139727189	-0	215.80	0.60
26	459175	343002	2927985002	6016	145293642	-0	215.80	0.63
27	459049	382025	3283066989	6015	150844750	-0	215.80	0.68
28	463352	382953	3627443046	6014	156383663	-0	215.80	0.72
29	481976	383910	3972717523	6014	161919239	-0	215.80	0.77
30	486432	384870	4318564207	6014	167442238	-0	215.80	0.80
31	492258	385911	4687166053	6013	173304697	-0	215.80	0.71
32	498191	386953	5056446268	6012	179154693	-0	215.80	0.73
33	504230	388015	5426439551	6012	184993460	-0	215.80	0.76
34	510376	389096	5797148936	6011	190821008	-0	215.80	0.78
35	516628	390197	6168578615	6011	196637357	-0	215.80	0.80
36	544531	391329	6541107972	6011	202452151	-0	215.80	0.82
37	550996	392466	6914349803	6010	208255196	-0	215.80	0.84
38	559006	393679	7306067301	6010	214320733	-0	215.80	0.75
39	567155	394889	7698601563	6009	220374613	-0	215.80	0.77
40	575443	396121	8091989296	6008	226417657	-0	215.80	0.78
41	583869	397374	8486239526	6008	232449841	-0	215.80	0.79
42	592434	398649	8881361837	6008	238471142	-0	215.80	0.80
43	601137	399944	9277366147	6007	244481535	-0	215.80	0.81
44	641837	401271	9674621856	6007	250489582	-0	215.80	0.82
45	650817	402607	10072753684	6006	256485962	-0	215.80	0.83
46	660158	403955	10469163903	6006	262431696	-0	215.80	0.82
47	669642	405297	10866433651	6005	268365855	-0	215.80	0.83
48	679270	406659	11264570753	6005	274288328	-0	215.80	0.83
49	689042	408042	11663586343	6004	280199084	-0	215.80	0.84
50	698958	409446	12063491645	6004	286098083	-0	215.80	0.84
51	709018	410870	12464297976	6003	291985285	-0	215.80	0.84
52	719221	412316	12866016722	6003	297860641	-0	215.80	0.85
53	729569	413782	13268659328	6003	303724103	-0	215.80	0.85
54	740060	415269	13672237277	6002	309575616	-0	215.80	0.85
55	750696	416777	14076762085	6002	315415122	-0	215.80	0.85
56	761475	418305	14482245287	6001	321242559	-0	215.80	0.85
57	772398	419855	14888698427	6001	327057862	-0	215.80	0.85
58	783465	421425	15296133051	6000	332860964	-0	215.80	0.85



## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 4 " PDT - 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]
<b>1.00</b>	53.55	0.00	9960.00	6000.00	0.00
<b>2.00</b>	43.82	0.00	58800.00	0.00	4.75
---	---	---	Ft = -7812	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 58800	Lb = 0	---
<b>3.00</b>	43.82	0.00	58800.00	0.00	-4.75
---	---	---	Ft = 7812	Fp = -63342	---
---	---	Pa = 6588	Ta = -4199	La = 0	---
---	---	Pb = -6588	Tb = 62999	Lb = 0	---
<b>4.00</b>	37.02	0.00	58800.00	0.00	4.75
---	---	---	Ft = -7812	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 58800	Lb = 0	---
<b>5.00</b>	37.02	0.00	58800.00	0.00	-4.75
---	---	---	Ft = 7812	Fp = -63342	---
---	---	Pa = 6588	Ta = -4199	La = 0	---
---	---	Pb = -6588	Tb = 62999	Lb = 0	---
<b>6.00</b>	30.22	0.00	58800.00	0.00	4.75
---	---	---	Ft = -7812	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 58800	Lb = 0	---
<b>7.00</b>	30.22	0.00	58800.00	0.00	-4.75
---	---	---	Ft = 7812	Fp = -63342	---
---	---	Pa = 6588	Ta = -4199	La = 0	---
---	---	Pb = -6588	Tb = 62999	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Us0
2	710	10246	11258338	6000	6611638	0	215.80	0.05
3	1543	10591	21017612	6000	12115045	-0	215.80	0.06
4	2499	10994	31178100	6000	17620289	0	215.80	0.07
5	3577	11457	41797455	6000	23127427	-0	215.80	0.07
6	4778	11978	52933325	6000	28636523	-0	215.80	0.08
7	6102	12558	64643360	6000	34147645	0	215.80	0.08
8	13230	-14016	45379432	6000	39558355	0	215.80	0.06
9	20396	9632	60727514	6000	44980018	-0	215.80	0.08
10	21804	10294	70659986	6000	50402491	-0	215.80	0.08
11	23109	14760	83538089	6000	55825356	-0	215.80	0.09
12	21299	133469	215653511	6000	61243902	0	215.80	0.19
13	23672	134224	343575569	6000	66961399	0	215.80	0.18
14	26108	134989	472292988	6000	72680504	0	215.80	0.23
15	34400	99189	575457491	6000	78408890	0	215.80	0.27
16	42755	132384	703592276	6000	84145678	0	215.80	0.32
17	45377	133209	831189332	6000	89883120	0	215.80	0.35
18	48062	134053	959644929	6000	95621002	0	215.80	0.39
19	47515	255151	1192436288	6000	101355580	0	215.80	0.46
20	47030	257600	1438408578	6000	107087008	0	215.80	0.53
21	49902	258504	1684711345	6000	112818599	0	215.80	0.59
22	66451	233691	1915052772	6000	118562475	0	215.80	0.65
23	75241	256178	2151175890	6001	124310284	0	215.80	0.71
24	79238	257066	2377462919	6001	129605992	0	215.80	0.53
25	83311	257959	2604569469	6001	134901533	0	215.80	0.56
26	84167	327108	2877268912	6001	140195023	0	215.80	0.60
27	85099	381593	3224939636	6000	145486504	0	215.80	0.64
28	89402	382536	3560756430	6000	150778015	0	215.80	0.69
29	108026	383499	3897737486	6001	156077629	0	215.80	0.72
30	112482	384476	4235582154	6001	161376524	0	215.80	0.76
31	118308	385534	4596000143	6001	167013316	0	215.80	0.67
32	124241	386592	4957421446	6001	172649690	0	215.80	0.70
33	130280	387669	5319862004	6001	178285714	0	215.80	0.72
34	136426	388766	5683330379	6001	183921190	0	215.80	0.75
35	142678	389881	6047835024	6001	189555922	0	215.80	0.77
36	170581	391019	6413742917	6001	195198731	0	215.80	0.79
37	177046	392172	6780686165	6001	200839871	0	215.80	0.81
38	185056	393400	7166154258	6001	206746391	0	215.80	0.72
39	193205	394626	7552777947	6001	212651302	0	215.80	0.74
40	201493	395873	7940574986	6001	218554634	0	215.80	0.75
41	209919	397140	8329554379	6001	224456164	0	215.80	0.76
42	218484	398428	8719725069	6001	230355672	0	215.80	0.77
43	227187	399738	9111095939	6001	236252937	0	215.80	0.78
44	267887	401070	9504021275	6001	242155814	0	215.80	0.79
45	276867	402421	9898139101	6001	248055365	0	215.80	0.80
46	286208	403784	10290872723	6001	253912979	0	215.80	0.80
47	295692	405140	10684775477	6000	259766935	0	215.80	0.80
48	305320	406517	11079854421	6000	265616996	0	215.80	0.81
49	315092	407914	11476117890	6000	271462959	0	215.80	0.81
50	325008	409332	11873574197	6000	277304620	0	215.80	0.81
51	335068	410771	12272231638	6000	283141775	0	215.80	0.82
52	345271	412230	12672098489	6000	288974222	0	215.80	0.82
53	355619	413710	13073183010	6000	294801761	0	215.80	0.82
54	366110	415210	13475493445	6000	300624188	0	215.80	0.83
55	376746	416731	13879038023	6000	306441303	0	215.80	0.83
56	387525	418273	14283824956	6000	312252906	0	215.80	0.83
57	398448	419836	14689862444	6000	318058796	0	215.80	0.83
58	409515	421419	15097158673	6000	323858775	0	215.80	0.83

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 5 " PDT - 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]
<b>1.00</b>	53.55	7910.00	9540.00	5000.00	0.00
<b>2.00</b>	43.82	59440.00	57240.00	0.00	4.75
---	---	---	Ft = 67915	Fp = 20851	---
---	---	Pa = 57271	Ta = 36502	La = 0	---
---	---	Pb = 2169	Tb = 20738	Lb = 0	---
<b>3.00</b>	43.82	59440.00	57240.00	0.00	-4.75
---	---	---	Ft = 83125	Fp = -102473	---
---	---	Pa = 70098	Ta = -44677	La = 0	---
---	---	Pb = -10658	Tb = 101917	Lb = 0	---
<b>4.00</b>	37.02	59440.00	57240.00	0.00	4.75
---	---	---	Ft = 67915	Fp = 20851	---
---	---	Pa = 57271	Ta = 36502	La = 0	---
---	---	Pb = 2169	Tb = 20738	Lb = 0	---
<b>5.00</b>	37.02	59440.00	57240.00	0.00	-4.75
---	---	---	Ft = 83125	Fp = -102473	---
---	---	Pa = 70098	Ta = -44677	La = 0	---
---	---	Pb = -10658	Tb = 101917	Lb = 0	---
<b>6.00</b>	30.22	59440.00	57240.00	0.00	4.75
---	---	---	Ft = 67915	Fp = 20851	---
---	---	Pa = 57271	Ta = 36502	La = 0	---
---	---	Pb = 2169	Tb = 20738	Lb = 0	---
<b>7.00</b>	30.22	59440.00	57240.00	0.00	-4.75
---	---	---	Ft = 83125	Fp = -102473	---
---	---	Pa = 70098	Ta = -44677	La = 0	---
---	---	Pb = -10658	Tb = 101917	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usò
2	8620	9840	11067963	5000	5525612	0	215.80	0.05
3	9453	10186	20713809	5001	10127119	0	215.80	0.06
4	10409	10591	30760001	5001	14729507	0	215.80	0.07
5	11487	11055	41264332	5001	19332878	0	215.80	0.07
6	12688	11578	52284659	5001	23937365	0	215.80	0.07
7	14012	12159	63878843	5001	28543109	0	215.80	0.08
8	81531	-40063	16628428	5004	33156125	0	215.80	0.06
9	149087	5475	37975743	5008	37862776	-0	215.80	0.09
10	150496	6136	48168085	5008	42562577	-0	215.80	0.09
11	150850	13193	62840376	5008	47253537	-0	215.80	0.10
12	148089	130156	201842902	5007	51931332	-0	215.80	0.20
13	150462	130908	330716024	5007	56858256	-0	215.80	0.19
14	152898	131671	460337900	5007	61778749	-0	215.80	0.25
15	221581	61320	541213550	5010	66770881	-0	215.80	0.28
16	290326	125273	671638050	5013	71827789	-0	215.80	0.33
17	292948	126090	800097210	5013	76872869	-0	215.80	0.37
18	295633	126925	929281205	5012	81905968	-0	215.80	0.41
19	294136	257037	1174458347	5012	86922915	-0	215.80	0.48
20	292700	251298	1419291815	5011	91924043	-0	215.80	0.55
21	295572	252191	1666564949	5011	96913336	-0	215.80	0.62
22	372511	203074	1883063581	5013	101950515	-0	215.80	0.67
23	441692	246014	2111205720	5014	107022538	-0	215.80	0.74
24	445689	246883	2337315542	5014	111680352	-0	215.80	0.55
25	449763	247759	2563980624	5013	116325555	-0	215.80	0.58
26	449668	334202	2848032713	5012	120958078	-0	215.80	0.62
27	449649	372214	3193775440	5012	125578162	-0	215.80	0.66
28	453952	373144	3529125228	5011	130188361	-0	215.80	0.71
29	472576	374101	3865379117	5011	134796036	-0	215.80	0.74
30	477032	375063	4202220312	5011	139393498	-0	215.80	0.78
31	482858	376105	4561258474	5010	144273810	-0	215.80	0.69
32	488791	377148	4920991554	5010	149144008	-0	215.80	0.72
33	494830	378211	5281453266	5009	154005094	-0	215.80	0.74
34	500976	379294	5642647144	5009	158857073	-0	215.80	0.76
35	507228	380395	6004577811	5009	163699955	-0	215.80	0.78
36	535131	381528	6367615076	5008	168541759	-0	215.80	0.80
37	541596	382666	6731382550	5008	173373999	-0	215.80	0.82
38	549606	383880	7113196272	5008	178425048	-0	215.80	0.73
39	557755	385091	7495845289	5007	183466611	-0	215.80	0.75
40	566043	386324	7879365355	5007	188499351	-0	215.80	0.76
41	574469	387579	8263765759	5006	193523246	-0	215.80	0.77
42	583034	388854	8649056315	5006	198538271	-0	215.80	0.78
43	591737	390150	9035247152	5006	203544402	-0	215.80	0.79
44	632437	391477	9422698418	5006	208548755	-0	215.80	0.80
45	641417	392814	9811045172	5005	213543573	-0	215.80	0.80
46	650758	394164	10197753444	5005	218496382	-0	215.80	0.80
47	660242	395506	10585340712	5004	223439723	-0	215.80	0.81
48	669870	396870	10973815061	5004	228373501	-0	215.80	0.81
49	679642	398254	11363187746	5004	233297684	-0	215.80	0.82
50	689558	399658	11753470109	5003	238212237	-0	215.80	0.82
51	699618	401084	12144673577	5003	243117122	-0	215.80	0.82
52	709821	402530	12536809643	5002	248012296	-0	215.80	0.82
53	720169	403997	12929889855	5002	252897714	-0	215.80	0.83
54	730660	405485	13323925798	5002	257773327	-0	215.80	0.83
55	741296	406994	13718929085	5001	262639083	-0	215.80	0.83
56	752075	408523	14114911349	5001	267494928	-0	215.80	0.83
57	762998	410074	14511884230	5001	272340805	-0	215.80	0.83
58	774065	411645	14909859367	5000	277176653	-0	215.80	0.83

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 6 " PDT - 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]
<b>1.00</b>	53.55	0.00	9540.00	5000.00	0.00
<b>2.00</b>	43.82	0.00	57240.00	0.00	4.75
---	---	---	Ft = -7605	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 57240	Lb = 0	---
<b>3.00</b>	43.82	0.00	57240.00	0.00	-4.75
---	---	---	Ft = 7605	Fp = -61662	---
---	---	Pa = 6413	Ta = -4088	La = 0	---
---	---	Pb = -6413	Tb = 61328	Lb = 0	---
<b>4.00</b>	37.02	0.00	57240.00	0.00	4.75
---	---	---	Ft = -7605	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 57240	Lb = 0	---
<b>5.00</b>	37.02	0.00	57240.00	0.00	-4.75
---	---	---	Ft = 7605	Fp = -61662	---
---	---	Pa = 6413	Ta = -4088	La = 0	---
---	---	Pb = -6413	Tb = 61328	Lb = 0	---
<b>6.00</b>	30.22	0.00	57240.00	0.00	4.75
---	---	---	Ft = -7605	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 57240	Lb = 0	---
<b>7.00</b>	30.22	0.00	57240.00	0.00	-4.75
---	---	---	Ft = 7605	Fp = -61662	---
---	---	Pa = 6413	Ta = -4088	La = 0	---
---	---	Pb = -6413	Tb = 61328	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	710	9826	10795006	5000	5509698	0	215.80	0.04
3	1543	10171	20167919	5000	10095871	0	215.80	0.06
4	2499	10574	29941223	5000	14683574	-0	215.80	0.07
5	3577	11037	40172476	5000	19272856	-0	215.80	0.07
6	4778	11558	50919235	5000	23863769	-0	215.80	0.07
7	6102	12138	62239054	5000	28456370	-0	215.80	0.07
8	13143	-13714	43420594	5000	32965169	0	215.80	0.06
9	20221	9324	58308631	5000	37482981	-0	215.80	0.07
10	21630	9985	67940563	5000	42001477	-0	215.80	0.08
11	23022	14351	80458931	5000	46520421	-0	215.80	0.08
12	21299	129929	209070478	5000	51035876	0	215.80	0.18
13	23672	130684	333619017	5000	55800456	0	215.80	0.18
14	26108	131449	458961119	5000	60566376	0	215.80	0.23
15	34313	96620	559445438	5000	65339935	0	215.80	0.26
16	42580	128955	684255343	5000	70120409	0	215.80	0.31
17	45202	129780	808562677	5000	74901437	0	215.80	0.34
18	47887	130624	933727173	5000	79682840	0	215.80	0.38
19	47428	248533	1160483733	5000	84461576	0	215.80	0.45
20	47030	250939	1400096319	5000	89237765	0	215.80	0.52
21	49902	251844	1640053417	5000	94014089	0	215.80	0.58
22	66363	227714	1864493924	5000	98800585	0	215.80	0.63
23	75066	249628	2094584444	5000	103590301	0	215.80	0.69
24	79063	250517	2315102405	5000	108003283	0	215.80	0.52
25	83137	251410	2536439020	5000	112416130	0	215.80	0.55
26	84080	318749	2802182040	5000	116827322	0	215.80	0.58
27	85099	371812	3140930712	5000	121236888	0	215.80	0.63
28	89402	372756	3468161866	5000	125646480	0	215.80	0.67
29	108026	373719	3796549035	5000	130062824	0	215.80	0.71
30	112482	374696	4125799591	5000	134478569	0	215.80	0.74
31	118308	375753	4477074278	5000	139175895	0	215.80	0.66
32	124241	376812	4829351807	5000	143872872	0	215.80	0.68
33	130280	377889	5182648162	5000	148569557	0	215.80	0.71
34	136426	378985	5536972141	5000	153265786	0	215.80	0.73
35	142678	380101	5892332431	5000	157961396	0	215.80	0.75
36	170581	381238	6249087193	5001	162663735	0	215.80	0.77
37	177046	382392	6606878281	5001	167364684	0	215.80	0.79
38	185056	383620	6982762042	5001	172286783	0	215.80	0.71
39	193205	384845	7359802390	5001	177207541	0	215.80	0.72
40	201493	386092	7738017138	5000	182126983	0	215.80	0.73
41	209919	387360	8117415575	5000	187044924	0	215.80	0.74
42	218484	388648	8498006931	5000	191961180	0	215.80	0.75
43	227187	389957	8879800375	5000	196875567	0	215.80	0.76
44	267887	391290	9263141816	5000	201794630	0	215.80	0.77
45	276867	392641	9647678869	5000	206710921	0	215.80	0.78
46	286208	394003	10030897554	5000	211592266	0	215.80	0.78
47	295692	395360	10415288982	5000	216470561	0	215.80	0.78
48	305320	396736	10800860531	5000	221345612	0	215.80	0.79
49	315092	398134	11187620819	5000	226217247	0	215.80	0.79
50	325008	399552	11575578444	5000	231085297	0	215.80	0.79
51	335068	400990	11964741985	5000	235949592	0	215.80	0.80
52	345271	402450	12355120003	5000	240809965	0	215.80	0.80
53	355619	403929	12746721040	5000	245666246	0	215.80	0.80
54	366110	405430	13139553625	5000	250518269	0	215.80	0.81
55	376746	406951	13533626267	5000	255365864	0	215.80	0.81
56	387525	408493	13928947463	5000	260208866	0	215.80	0.81
57	398448	410056	14325525693	5000	265047109	0	215.80	0.81
58	409515	411639	14723369423	5000	269880424	0	215.80	0.81

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 7 " PDT - 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]
<b>1.00</b>	53.55	12660.00	9800.00	8000.00	0.00
<b>2.00</b>	43.82	79360.00	49660.00	0.00	4.75
---	---	---	Ft = 94231	Fp = -991	---
---	---	Pa = 79463	Ta = 50646	La = 0	---
---	---	Pb = -103	Tb = -986	Lb = 0	---
<b>3.00</b>	43.82	79360.00	49660.00	0.00	-4.75
---	---	---	Ft = 107427	Fp = -107984	---
---	---	Pa = 90591	Ta = -57738	La = 0	---
---	---	Pb = -11231	Tb = 107398	Lb = 0	---
<b>4.00</b>	37.02	79360.00	49660.00	0.00	4.75
---	---	---	Ft = 94231	Fp = -991	---
---	---	Pa = 79463	Ta = 50646	La = 0	---
---	---	Pb = -103	Tb = -986	Lb = 0	---
<b>5.00</b>	37.02	79360.00	49660.00	0.00	-4.75
---	---	---	Ft = 107427	Fp = -107984	---
---	---	Pa = 90591	Ta = -57738	La = 0	---
---	---	Pb = -11231	Tb = 107398	Lb = 0	---
<b>6.00</b>	30.22	79360.00	49660.00	0.00	4.75
---	---	---	Ft = 94231	Fp = -991	---
---	---	Pa = 79463	Ta = 50646	La = 0	---
---	---	Pb = -103	Tb = -986	Lb = 0	---
<b>7.00</b>	30.22	79360.00	49660.00	0.00	-4.75
---	---	---	Ft = 107427	Fp = -107984	---
---	---	Pa = 90591	Ta = -57738	La = 0	---
---	---	Pb = -11231	Tb = 107398	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Us0
2	13370	9896	11257836	8002	8856943	0	215.80	0.06
3	14203	9984	20803617	8002	16234735	0	215.80	0.07
4	15159	10086	30466740	8002	23613280	0	215.80	0.08
5	16237	10203	40264007	8002	30992790	0	215.80	0.08
6	17438	10335	50212330	8002	38373556	0	215.80	0.08
7	18762	10482	60328630	8002	45755879	0	215.80	0.08
8	107623	-35146	19622523	8012	53205146	0	215.80	0.08
9	196522	4030	38647026	8022	60855921	-0	215.80	0.12
10	197931	4193	47620360	8022	68491147	-0	215.80	0.12
11	196862	9891	60056866	8022	76104216	-0	215.80	0.13
12	192679	110927	179924961	8021	83688154	-0	215.80	0.21
13	195052	111111	290507552	8020	91670868	-0	215.80	0.18
14	197488	111298	401273550	8020	99638657	-0	215.80	0.23
15	287513	49834	469846742	8028	107760695	-0	215.80	0.26
16	377601	104874	581474104	8036	116022272	-0	215.80	0.31
17	380223	105067	690871631	8035	124257423	-0	215.80	0.34
18	382908	105263	800357754	8034	132465885	-0	215.80	0.37
19	379988	217600	1009885161	8032	140638603	-0	215.80	0.43
20	377130	212063	1218506631	8030	148776387	-0	215.80	0.49
21	380002	212271	1428655044	8029	156888052	-0	215.80	0.54
22	478284	169126	1611984479	8035	165099946	-0	215.80	0.60
23	568807	205829	1805250567	8039	173387404	-0	215.80	0.66
24	572804	206021	1996545402	8037	180989270	-0	215.80	0.49
25	576878	206219	2187758252	8036	188563335	-0	215.80	0.51
26	575360	280640	2428170374	8034	196109340	-0	215.80	0.54
27	573919	313035	2721504664	8032	203627876	-0	215.80	0.58
28	578222	313248	3005237052	8031	211124616	-0	215.80	0.62
29	596846	313479	3289150469	8030	218611727	-0	215.80	0.65
30	601302	313700	3572964728	8029	226076690	-0	215.80	0.68
31	607128	313940	3874800045	8027	233994933	-0	215.80	0.60
32	613061	314182	4176540409	8026	241891085	-0	215.80	0.62
33	619100	314430	4478209904	8025	249767331	-0	215.80	0.64
34	625246	314682	4779799793	8024	257623779	-0	215.80	0.66
35	631498	314940	5081302707	8023	265460550	-0	215.80	0.67
36	659401	315216	5383019509	8022	273290892	-0	215.80	0.69
37	665866	315482	5684621856	8021	281101001	-0	215.80	0.70
38	673876	315767	6000388271	8020	289259761	-0	215.80	0.63
39	682025	316052	6316053273	8019	297398429	-0	215.80	0.64
40	690313	316343	6631641024	8017	305518463	-0	215.80	0.65
41	698739	316640	6947147880	8016	313619924	-0	215.80	0.66
42	707304	316942	7262570871	8015	321702874	-0	215.80	0.66
43	716007	317250	7577907414	8014	329767370	-0	215.80	0.67
44	756707	317574	7893448440	8014	337825160	-0	215.80	0.68
45	765687	317891	8208876961	8013	345863639	-0	215.80	0.68
46	775028	318212	8522135148	8012	353830672	-0	215.80	0.68
47	784512	318531	8835272295	8011	361778713	-0	215.80	0.68
48	794140	318855	9148284353	8010	369707675	-0	215.80	0.69
49	803912	319184	9461170509	8009	377617594	-0	215.80	0.69
50	813828	319519	9773930063	8008	385508499	-0	215.80	0.69
51	823888	319859	10086562424	8007	393380407	-0	215.80	0.69
52	834091	320205	10399067092	8006	401233331	-0	215.80	0.69
53	844439	320556	10711443639	8005	409067275	-0	215.80	0.69
54	854930	320912	11023691696	8004	416882235	-0	215.80	0.69
55	865566	321274	11335810936	8003	424678200	-0	215.80	0.69
56	876345	321641	11647801066	8002	432455155	-0	215.80	0.69
57	887268	322014	11959661816	8001	440213074	-0	215.80	0.69
58	898335	322392	12271392927	8000	447951929	-0	215.80	0.69



## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 8 " PDT - 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

<b>Livello</b>	<b>H [m]</b>	<b>Verticali [N]</b>	<b>Trasversali [N]</b>	<b>Longitudinali [N]</b>	<b>Eccentricità del conduttore [m]</b>
<b>1.00</b>	53.55	0.00	9800.00	8000.00	0.00
<b>2.00</b>	43.82	0.00	49660.00	0.00	4.75
---	---	---	Ft = -6598	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 49660	Lb = 0	---
<b>3.00</b>	43.82	0.00	49660.00	0.00	-4.75
---	---	---	Ft = 6598	Fp = -53496	---
---	---	Pa = 5564	Ta = -3546	La = 0	---
---	---	Pb = -5564	Tb = 53206	Lb = 0	---
<b>4.00</b>	37.02	0.00	49660.00	0.00	4.75
---	---	---	Ft = -6598	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 49660	Lb = 0	---
<b>5.00</b>	37.02	0.00	49660.00	0.00	-4.75
---	---	---	Ft = 6598	Fp = -53496	---
---	---	Pa = 5564	Ta = -3546	La = 0	---
---	---	Pb = -5564	Tb = 53206	Lb = 0	---
<b>6.00</b>	30.22	0.00	49660.00	0.00	4.75
---	---	---	Ft = -6598	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 49660	Lb = 0	---
<b>7.00</b>	30.22	0.00	49660.00	0.00	-4.75
---	---	---	Ft = 6598	Fp = -53496	---
---	---	Pa = 5564	Ta = -3546	La = 0	---
---	---	Pb = -5564	Tb = 53206	Lb = 0	---

**TABELLA DESCRITTIVA DELLE AZIONI INTERNE.**

<b>Nodo</b>	<b>Carico verticale [N]</b>	<b>T<sub>x</sub> [N]</b>	<b>My [Nmm]</b>	<b>T<sub>y</sub> [N]</b>	<b>Mx [Nmm]</b>	<b>Mt [Nmm]</b>	<b>σ<sub>amm.</sub> [N/mm<sup>2</sup>]</b>	<b>% Usa</b>
2	710	9871	10881136	8000	8815517	0	215.80	0.05
3	1543	9957	20050642	8000	16153393	-0	215.80	0.07
4	2499	10058	29337976	8000	23493717	-0	215.80	0.07
5	3577	10174	38759579	8000	30836567	-0	215.80	0.08
6	4778	10304	48331893	8000	38182027	-0	215.80	0.08
7	6102	10449	58071370	8000	45530187	-0	215.80	0.08
8	12718	-12367	41299678	8000	52743290	-0	215.80	0.07
9	19372	7222	53395329	8000	59969914	-0	215.80	0.08
10	20780	7387	60562252	8000	67197712	-0	215.80	0.09
11	22597	10755	69865790	8000	74427162	-0	215.80	0.09
12	21299	110596	179514542	8000	81651885	0	215.80	0.16
13	23672	110785	285088091	8000	89275207	0	215.80	0.16
14	26108	110976	390899696	8000	96900673	0	215.80	0.20
15	33888	80274	474665984	8000	104537624	0	215.80	0.23
16	41730	107829	579045992	8000	112184967	0	215.80	0.26
17	44353	108035	682505123	8001	119833260	0	215.80	0.29
18	47038	108246	786211517	8001	127482218	0	215.80	0.32
19	47003	210006	977562469	8000	135127581	0	215.80	0.38
20	47030	211547	1179560763	8000	142769476	0	215.80	0.44
21	49902	211773	1381326479	8000	150411587	0	215.80	0.49
22	65939	190267	1569064630	8001	158069458	0	215.80	0.53
23	74217	208696	1761135967	8001	165732027	0	215.80	0.59
24	78214	208917	1945014964	8001	172791953	0	215.80	0.44
25	82287	209140	2129121065	8001	179851706	0	215.80	0.46
26	83655	267000	2351271158	8001	186909226	0	215.80	0.49
27	85099	312464	2636267747	8001	193964525	0	215.80	0.53
28	89402	312699	2910761188	8001	201019864	0	215.80	0.56
29	108026	312941	3185726946	8001	208086006	0	215.80	0.59
30	112482	313184	3460913359	8001	215151190	0	215.80	0.62
31	118308	313448	3753930585	8001	222666903	0	215.80	0.55
32	124241	313712	4047208691	8001	230182058	0	215.80	0.57
33	130280	313980	4340750644	8001	237696747	0	215.80	0.59
34	136426	314254	4634553399	8001	245210705	0	215.80	0.61
35	142678	314532	4928613830	8001	252723673	0	215.80	0.63
36	170581	314817	5223218066	8001	260247407	0	215.80	0.64
37	177046	315104	5518059261	8001	267768918	0	215.80	0.66
38	185056	315410	5827121961	8001	275644268	0	215.80	0.59
39	193205	315716	6136451141	8001	283517473	0	215.80	0.60
40	201493	316026	6446049833	8001	291388573	0	215.80	0.61
41	209919	316342	6755913971	8001	299257271	0	215.80	0.62
42	218484	316663	7066039456	8001	307123273	0	215.80	0.63
43	227187	316989	7376422155	8001	314986286	0	215.80	0.63
44	267887	317322	7687335492	8001	322856779	0	215.80	0.64
45	276867	317658	7998477243	8001	330722840	0	215.80	0.65
46	286208	317997	8307811572	8001	338532984	0	215.80	0.64
47	295692	318335	8617357635	8001	346338252	0	215.80	0.65
48	305320	318677	8927110152	8001	354138327	0	215.80	0.65
49	315092	319025	9237064890	8001	361932938	0	215.80	0.66
50	325008	319378	9547217615	8001	369721814	0	215.80	0.66
51	335068	319736	9857564094	8000	377504683	0	215.80	0.66
52	345271	320099	10168100100	8000	385281275	0	215.80	0.66
53	355619	320467	10478821404	8000	393051323	0	215.80	0.66
54	366110	320840	10789723786	8000	400814556	0	215.80	0.66
55	376746	321218	11100803025	8000	408570707	0	215.80	0.67
56	387525	321601	11412054910	8000	416319509	0	215.80	0.67
57	398448	321990	11723475231	8000	424060696	0	215.80	0.67
58	409515	322384	12035059785	8000	431794001	0	215.80	0.67

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 9 " PDT - 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

<b>Livello</b>	<b>H [m]</b>	<b>Verticali [N]</b>	<b>Trasversali [N]</b>	<b>Longitudinali [N]</b>	<b>Eccentricità del conduttore [m]</b>
<b>1.00</b>	53.55	8610.00	10280.00	6000.00	0.00
<b>2.00</b>	43.82	62420.00	55630.00	0.00	4.75
---	---	---	Ft = 71915	Fp = 17071	---
---	---	Pa = 60645	Ta = 38652	La = 0	---
---	---	Pb = 1775	Tb = 16978	Lb = 0	---
<b>3.00</b>	43.82	62420.00	55630.00	0.00	-4.75
---	---	---	Ft = 86697	Fp = -102784	---
---	---	Pa = 73110	Ta = -46597	La = 0	---
---	---	Pb = -10690	Tb = 102227	Lb = 0	---
<b>4.00</b>	37.02	62420.00	55630.00	0.00	4.75
---	---	---	Ft = 71915	Fp = 17071	---
---	---	Pa = 60645	Ta = 38652	La = 0	---
---	---	Pb = 1775	Tb = 16978	Lb = 0	---
<b>5.00</b>	37.02	62420.00	55630.00	0.00	-4.75
---	---	---	Ft = 86697	Fp = -102784	---
---	---	Pa = 73110	Ta = -46597	La = 0	---
---	---	Pb = -10690	Tb = 102227	Lb = 0	---
<b>6.00</b>	30.22	62420.00	55630.00	0.00	4.75
---	---	---	Ft = 71915	Fp = 17071	---
---	---	Pa = 60645	Ta = 38652	La = 0	---
---	---	Pb = 1775	Tb = 16978	Lb = 0	---
<b>7.00</b>	30.22	62420.00	55630.00	0.00	-4.75
---	---	---	Ft = 86697	Fp = -102784	---
---	---	Pa = 73110	Ta = -46597	La = 0	---
---	---	Pb = -10690	Tb = 102227	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	9320	10582	11904050	6001	6632474	0	215.80	0.05
3	10153	10928	22248551	6001	12155957	0	215.80	0.07
4	11109	11333	32992762	6001	17680426	0	215.80	0.08
5	12187	11796	44194420	6001	23206006	0	215.80	0.08
6	13388	12319	55911333	6001	28732868	0	215.80	0.08
7	14712	12901	68201317	6001	34261188	0	215.80	0.08
8	85424	-37823	23434245	6006	39804328	0	215.80	0.07
9	156172	6464	45486997	6010	45465519	-0	215.80	0.10
10	157581	7125	56713174	6010	51117980	-0	215.80	0.11
11	157723	14002	72300705	6010	56758946	-0	215.80	0.12
12	154749	127693	208727385	6010	62383224	-0	215.80	0.21
13	157122	128445	335399017	6010	68306471	-0	215.80	0.20
14	159558	129208	462814648	6009	74221488	-0	215.80	0.25
15	231434	60867	543004541	6013	80226825	-0	215.80	0.28
16	303371	123053	671494365	6017	86313833	-0	215.80	0.34
17	305994	123870	798086333	6016	92385820	-0	215.80	0.37
18	308679	124704	925394647	6016	98442603	-0	215.80	0.41
19	306968	251179	1165437102	6015	104478914	-0	215.80	0.48
20	305320	245624	1405148804	6014	110495185	-0	215.80	0.55
21	308192	246516	1647242210	6014	116496464	-0	215.80	0.61
22	388324	198814	1859550443	6017	122557798	-0	215.80	0.67
23	460698	240578	2083287771	6019	128663119	-0	215.80	0.73
24	464695	241445	2304892588	6018	134268882	-0	215.80	0.55
25	468768	242320	2527041046	6017	139858675	-0	215.80	0.57
26	468461	326355	2804963461	6016	145432400	-0	215.80	0.61
27	468229	363323	3142842506	6016	150990369	-0	215.80	0.66
28	472532	364250	3470627740	6015	156535820	-0	215.80	0.70
29	491156	365207	3799301274	6015	162077629	-0	215.80	0.73
30	495612	366168	4128551955	6014	167606547	-0	215.80	0.77
31	501438	367208	4479503528	6013	173474965	-0	215.80	0.68
32	507371	368250	4831138839	6013	179330599	-0	215.80	0.70
33	513410	369312	5183492420	6012	185174715	-0	215.80	0.73
34	519556	370394	5536567923	6012	191007330	-0	215.80	0.75
35	525808	371494	5890370132	6011	196828467	-0	215.80	0.77
36	553711	372626	6245262168	6011	202647795	-0	215.80	0.79
37	560176	373764	6600875028	6010	208455106	-0	215.80	0.81
38	568186	374976	6974138161	6010	214524831	-0	215.80	0.72
39	576335	376186	7348226873	6009	220582633	-0	215.80	0.73
40	584623	377419	7723177645	6009	226629353	-0	215.80	0.75
41	593049	378672	8099000060	6008	232664973	-0	215.80	0.76
42	601614	379946	8475704249	6008	238689477	-0	215.80	0.76
43	610317	381241	8853300662	6007	244702843	-0	215.80	0.77
44	651017	382568	9232143022	6007	250713653	-0	215.80	0.78
45	659997	383905	9611873965	6007	256712576	-0	215.80	0.79
46	669338	385253	9990016103	6006	262660624	-0	215.80	0.79
47	678822	386595	10369031034	6006	268596887	-0	215.80	0.79
48	688450	387957	10748927171	6005	274521260	-0	215.80	0.80
49	698222	389340	11129716129	6005	280433714	-0	215.80	0.80
50	708138	390744	11511409611	6004	286334216	-0	215.80	0.80
51	718198	392169	11894019405	6004	292222728	-0	215.80	0.81
52	728401	393615	12277557367	6003	298099209	-0	215.80	0.81
53	738749	395081	12662035407	6003	303963611	-0	215.80	0.81
54	749240	396568	13047465473	6002	309815884	-0	215.80	0.81
55	759876	398076	13433859540	6002	315655976	-0	215.80	0.81
56	770655	399605	13821229601	6001	321483826	-0	215.80	0.82
57	781578	401155	14209587655	6001	327299376	-0	215.80	0.82
58	792645	402725	14598945704	6000	333102559	-0	215.80	0.82

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 10 " PDT - 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]
<b>1.00</b>	53.55	0.00	10280.00	6000.00	0.00
<b>2.00</b>	43.82	0.00	55630.00	0.00	4.75
---	---	---	Ft = -7391	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 55630	Lb = 0	---
<b>3.00</b>	43.82	0.00	55630.00	0.00	-4.75
---	---	---	Ft = 7391	Fp = -59928	---
---	---	Pa = 6233	Ta = -3973	La = 0	---
---	---	Pb = -6233	Tb = 59603	Lb = 0	---
<b>4.00</b>	37.02	0.00	55630.00	0.00	4.75
---	---	---	Ft = -7391	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 55630	Lb = 0	---
<b>5.00</b>	37.02	0.00	55630.00	0.00	-4.75
---	---	---	Ft = 7391	Fp = -59928	---
---	---	Pa = 6233	Ta = -3973	La = 0	---
---	---	Pb = -6233	Tb = 59603	Lb = 0	---
<b>6.00</b>	30.22	0.00	55630.00	0.00	4.75
---	---	---	Ft = -7391	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 55630	Lb = 0	---
<b>7.00</b>	30.22	0.00	55630.00	0.00	-4.75
---	---	---	Ft = 7391	Fp = -59928	---
---	---	Pa = 6233	Ta = -3973	La = 0	---
---	---	Pb = -6233	Tb = 59603	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Uso
2	710	10566	11609909	6000	6611638	0	215.80	0.05
3	1543	10911	21660417	6000	12115045	0	215.80	0.06
4	2499	11314	32110825	6000	17620289	0	215.80	0.07
5	3577	11777	43018607	6000	23127427	-0	215.80	0.08
6	4778	12298	54441234	6000	28636522	-0	215.80	0.08
7	6102	12878	66436179	6000	34147644	-0	215.80	0.08
8	13053	-12230	49135768	6000	39558047	0	215.80	0.07
9	20040	10178	64609558	6000	44979122	-0	215.80	0.08
10	21449	10840	74992021	6000	50401032	-0	215.80	0.09
11	22932	15102	88199811	6000	55823627	-0	215.80	0.09
12	21299	127449	214254922	6000	61242172	0	215.80	0.18
13	23672	128204	336440029	6000	66959667	0	215.80	0.18
14	26108	128969	459417155	6000	72678770	0	215.80	0.23
15	34223	95141	558255835	6000	78406922	0	215.80	0.26
16	42399	126589	680756491	6000	84143266	0	215.80	0.31
17	45022	127414	802790988	6000	89880284	0	215.80	0.34
18	47707	128259	925681310	6000	95617763	0	215.80	0.38
19	47337	242875	1147331305	6000	101352148	0	215.80	0.44
20	47030	245239	1381501287	6000	107083574	0	215.80	0.51
21	49902	246144	1616030297	6000	112815162	0	215.80	0.57
22	66273	222718	1835504224	6000	118558874	0	215.80	0.62
23	74886	244043	2060493128	6001	124306377	0	215.80	0.68
24	78883	244931	2276093010	6001	129601820	0	215.80	0.51
25	82956	245824	2492510613	6001	134897109	0	215.80	0.54
26	83990	311295	2752109617	6001	140190478	0	215.80	0.57
27	85099	362892	3082685166	6000	145481956	0	215.80	0.62
28	89402	363836	3402090398	6000	150773465	0	215.80	0.65
29	108026	364798	3722644720	6001	156073076	0	215.80	0.69
30	112482	365775	4044062053	6001	161371969	0	215.80	0.73
31	118308	366833	4387002812	6001	167008759	0	215.80	0.64
32	124241	367891	4730945844	6001	172645130	0	215.80	0.67
33	130280	368969	5075907191	6001	178281151	0	215.80	0.69
34	136426	370065	5421895854	6001	183916625	0	215.80	0.71
35	142678	371181	5768920726	6001	189551355	0	215.80	0.73
36	170581	372318	6117332592	6001	195194161	0	215.80	0.75
37	177046	373471	6466781458	6001	200835299	0	215.80	0.77
38	185056	374699	6833928879	6001	206741816	0	215.80	0.69
39	193205	375925	7202233591	6001	212646724	0	215.80	0.70
40	201493	377172	7571713480	6001	218550054	0	215.80	0.72
41	209919	378439	7942378084	6001	224451582	0	215.80	0.73
42	218484	379727	8314236885	6001	230351088	0	215.80	0.74
43	227187	381037	8687299304	6001	236248351	0	215.80	0.74
44	267887	382369	9061904141	6001	242151225	0	215.80	0.75
45	276867	383720	9437707163	6001	248050774	0	215.80	0.76
46	286208	385083	9812251559	6001	253908386	0	215.80	0.76
47	295692	386439	10187971712	6000	259762340	0	215.80	0.76
48	305320	387816	10564875278	6000	265612400	0	215.80	0.77
49	315092	389213	10942971133	6000	271458361	0	215.80	0.77
50	325008	390631	11322268125	6000	277300020	0	215.80	0.78
51	335068	392070	11702775089	6000	283137174	0	215.80	0.78
52	345271	393529	12084500837	6000	288969621	0	215.80	0.78
53	355619	395009	12467454166	6000	294797158	0	215.80	0.79
54	366110	396510	12851643855	6000	300619585	0	215.80	0.79
55	376746	398031	13237078668	6000	306436699	0	215.80	0.79
56	387525	399573	13623767353	6000	312248301	0	215.80	0.79
57	398448	401135	14011718641	6000	318054192	0	215.80	0.79
58	409515	402719	14400941252	6000	323854171	0	215.80	0.79

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 11 " PDT - 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]
<b>1.00</b>	53.55	8460.00	10110.00	6000.00	0.00
<b>2.00</b>	43.82	61220.00	54380.00	0.00	4.75
---	---	---	Ft = 70556	Fp = 16548	---
---	---	Pa = 59499	Ta = 37922	La = 0	---
---	---	Pb = 1721	Tb = 16458	Lb = 0	---
<b>3.00</b>	43.82	61220.00	54380.00	0.00	-4.75
---	---	---	Ft = 85007	Fp = -100614	---
---	---	Pa = 71685	Ta = -45688	La = 0	---
---	---	Pb = -10465	Tb = 100068	Lb = 0	---
<b>4.00</b>	37.02	61220.00	54380.00	0.00	4.75
---	---	---	Ft = 70556	Fp = 16548	---
---	---	Pa = 59499	Ta = 37922	La = 0	---
---	---	Pb = 1721	Tb = 16458	Lb = 0	---
<b>5.00</b>	37.02	61220.00	54380.00	0.00	-4.75
---	---	---	Ft = 85007	Fp = -100614	---
---	---	Pa = 71685	Ta = -45688	La = 0	---
---	---	Pb = -10465	Tb = 100068	Lb = 0	---
<b>6.00</b>	30.22	61220.00	54380.00	0.00	4.75
---	---	---	Ft = 70556	Fp = 16548	---
---	---	Pa = 59499	Ta = 37922	La = 0	---
---	---	Pb = 1721	Tb = 16458	Lb = 0	---
<b>7.00</b>	30.22	61220.00	54380.00	0.00	-4.75
---	---	---	Ft = 85007	Fp = -100614	---
---	---	Pa = 71685	Ta = -45688	La = 0	---
---	---	Pb = -10465	Tb = 100068	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Usa
2	9170	10411	11704933	6001	6632092	0	215.80	0.05
3	10003	10757	21881213	6001	12155207	0	215.80	0.07
4	10959	11162	32456575	6001	17679320	0	215.80	0.08
5	12037	11625	43488670	6001	23204560	0	215.80	0.08
6	13238	12148	55035218	6001	28731092	0	215.80	0.08
7	14562	12730	67153947	6001	34259092	0	215.80	0.08
8	83988	-36845	23469240	6006	39799448	0	215.80	0.07
9	153451	6458	45077035	6010	45455560	-0	215.80	0.10
10	154860	7119	56115029	6010	51103138	-0	215.80	0.11
11	155087	13857	71432957	6010	56739566	-0	215.80	0.11
12	152199	125009	204891787	6009	62359654	-0	215.80	0.21
13	154572	125762	328836928	6009	68278704	-0	215.80	0.19
14	157008	126525	453526571	6009	74189721	-0	215.80	0.24
15	227598	59734	532029828	6013	80189299	-0	215.80	0.28
16	298250	120538	657727524	6016	86268954	-0	215.80	0.33
17	300873	121354	781590002	6016	92333914	-0	215.80	0.37
18	303557	122190	906173415	6015	98383993	-0	215.80	0.40
19	301933	245842	1140981692	6015	104414031	-0	215.80	0.47
20	300370	240433	1375491242	6014	110424446	-0	215.80	0.54
21	303242	241325	1612351938	6013	116420178	-0	215.80	0.60
22	382088	194713	1820086503	6016	122474916	-0	215.80	0.65
23	453176	235559	2038985842	6018	128572756	-0	215.80	0.72
24	457173	236427	2255809211	6017	134172033	-0	215.80	0.53
25	461247	237303	2473186770	6016	139755669	-0	215.80	0.56
26	461025	319471	2745109315	6016	145323576	-0	215.80	0.60
27	460879	355629	3075665994	6015	150876056	-0	215.80	0.64
28	465182	356558	3396379119	6014	156416278	-0	215.80	0.68
29	483806	357515	3717984812	6014	161953101	-0	215.80	0.72
30	488262	358476	4040179180	6014	167477284	-0	215.80	0.75
31	494088	359518	4383636746	6013	173340935	-0	215.80	0.66
32	500021	360561	4727790713	6012	179192059	-0	215.80	0.69
33	506060	361624	5072674875	6012	185031896	-0	215.80	0.71
34	512206	362706	5418293278	6011	190860458	-0	215.80	0.73
35	518458	363807	5764651048	6011	196677765	-0	215.80	0.75
36	546361	364940	6112103917	6011	202493466	-0	215.80	0.77
37	552826	366078	6460291243	6010	208297365	-0	215.80	0.79
38	560836	367291	6825792006	6010	214363739	-0	215.80	0.71
39	568985	368503	7192132608	6009	220418404	-0	215.80	0.72
40	577273	369736	7559348801	6009	226462183	-0	215.80	0.73
41	585699	370990	7927450380	6008	232495055	-0	215.80	0.74
42	594264	372265	8296447657	6008	238516997	-0	215.80	0.75
43	602967	373561	8666351251	6007	244527985	-0	215.80	0.76
44	643667	374888	9037507731	6007	250536584	-0	215.80	0.77
45	652647	376225	9409567734	6006	256533474	-0	215.80	0.77
46	661988	377574	9780103866	6006	262479671	-0	215.80	0.77
47	671472	378917	10151527821	6005	268414251	-0	215.80	0.78
48	681100	380280	10523848218	6005	274337104	-0	215.80	0.78
49	690872	381664	10897076768	6004	280248200	-0	215.80	0.78
50	700788	383068	11271225271	6004	286147500	-0	215.80	0.79
51	710848	384494	11646305604	6003	292034964	-0	215.80	0.79
52	721051	385940	12022329710	6003	297910546	-0	215.80	0.79
53	731399	387407	12399309582	6003	303774196	-0	215.80	0.79
54	741890	388895	12777257250	6002	309625861	-0	215.80	0.80
55	752526	390404	13156184769	6002	315465484	-0	215.80	0.80
56	763305	391933	13536104210	6001	321293003	-0	215.80	0.80
57	774228	393484	13917027651	6001	327108356	-0	215.80	0.80
58	785295	395055	14298967168	6000	332911474	-0	215.80	0.80



## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 12 " PDT - 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

<b>Livello</b>	<b>H [m]</b>	<b>Verticali [N]</b>	<b>Trasversali [N]</b>	<b>Longitudinali [N]</b>	<b>Eccentricità del conduttore [m]</b>
<b>1.00</b>	53.55	0.00	10110.00	6000.00	0.00
<b>2.00</b>	43.82	0.00	54380.00	0.00	4.75
---	---	---	Ft = -7225	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 54380	Lb = 0	---
<b>3.00</b>	43.82	0.00	54380.00	0.00	-4.75
---	---	---	Ft = 7225	Fp = -58581	---
---	---	Pa = 6093	Ta = -3883	La = 0	---
---	---	Pb = -6093	Tb = 58263	Lb = 0	---
<b>4.00</b>	37.02	0.00	54380.00	0.00	4.75
---	---	---	Ft = -7225	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 54380	Lb = 0	---
<b>5.00</b>	37.02	0.00	54380.00	0.00	-4.75
---	---	---	Ft = 7225	Fp = -58581	---
---	---	Pa = 6093	Ta = -3883	La = 0	---
---	---	Pb = -6093	Tb = 58263	Lb = 0	---
<b>6.00</b>	30.22	0.00	54380.00	0.00	4.75
---	---	---	Ft = -7225	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 54380	Lb = 0	---
<b>7.00</b>	30.22	0.00	54380.00	0.00	-4.75
---	---	---	Ft = 7225	Fp = -58581	---
---	---	Pa = 6093	Ta = -3883	La = 0	---
---	---	Pb = -6093	Tb = 58263	Lb = 0	---

**TABELLA DESCRITTIVA DELLE AZIONI INTERNE.**

<b>Nodo</b>	<b>Carico verticale [N]</b>	<b>T<sub>x</sub> [N]</b>	<b>My [Nmm]</b>	<b>T<sub>y</sub> [N]</b>	<b>Mx [Nmm]</b>	<b>Mt [Nmm]</b>	<b>σ<sub>amm.</sub> [N/mm<sup>2</sup>]</b>	<b>% Usa</b>
2	710	10396	11422165	6000	6611638	0	215.80	0.05
3	1543	10741	21315844	6000	12115045	-0	215.80	0.06
4	2499	11144	31608814	6000	17620288	0	215.80	0.07
5	3577	11606	42358476	6000	23127426	-0	215.80	0.08
6	4778	12128	53622228	6000	28636522	-0	215.80	0.08
7	6102	12708	65457469	6000	34147643	-0	215.80	0.08
8	12983	-11821	48664377	6000	39557926	0	215.80	0.07
9	19900	10097	63920409	6000	44978769	-0	215.80	0.08
10	21309	10759	74212947	6000	50400456	-0	215.80	0.09
11	22862	14941	87283200	6000	55822945	-0	215.80	0.09
12	21299	124779	210681118	6000	61241490	0	215.80	0.18
13	23672	125533	330321784	6000	66958984	0	215.80	0.18
14	26108	126299	450753073	6000	72678086	0	215.80	0.22
15	34153	93249	547603368	6000	78406147	0	215.80	0.26
16	42259	124008	667599485	6000	84142315	0	215.80	0.30
17	44882	124833	787157627	6000	89879166	0	215.80	0.34
18	47567	125678	907570496	6000	95616486	0	215.80	0.37
19	47267	237738	1124544277	6000	101350795	0	215.80	0.44
20	47030	240069	1353777428	6000	107082220	0	215.80	0.50
21	49902	240973	1583380857	6000	112813807	0	215.80	0.56
22	66203	218095	1798286090	6000	118557454	0	215.80	0.61
23	74746	238962	2018601064	6001	124304836	0	215.80	0.67
24	78743	239850	2229725591	6001	129600175	0	215.80	0.50
25	82816	240743	2441667132	6001	134895365	0	215.80	0.53
26	83920	304763	2695839154	6001	140188686	0	215.80	0.56
27	85099	355222	3019412497	6000	145480163	0	215.80	0.60
28	89402	356165	3332085085	6000	150771671	0	215.80	0.64
29	108026	357128	3645900381	6001	156071282	0	215.80	0.68
30	112482	358105	3960578487	6001	161370173	0	215.80	0.71
31	118308	359163	4296349341	6001	167006962	0	215.80	0.63
32	124241	360221	4633122079	6001	172643332	0	215.80	0.65
33	130280	361298	4970912779	6001	178279352	0	215.80	0.68
34	136426	362395	5309730624	6001	183914825	0	215.80	0.70
35	142678	363510	5649584690	6001	189549554	0	215.80	0.72
36	170581	364647	5990818943	6001	195192359	0	215.80	0.74
37	177046	365801	6333090928	6001	200833496	0	215.80	0.75
38	185056	367029	6692722541	6001	206740012	0	215.80	0.68
39	193205	368254	7053512196	6001	212644919	0	215.80	0.69
40	201493	369501	7415477824	6001	218548248	0	215.80	0.70
41	209919	370769	7778629188	6001	224449775	0	215.80	0.71
42	218484	372057	8142975992	6001	230349280	0	215.80	0.72
43	227187	373366	8508527879	6001	236246542	0	215.80	0.73
44	267887	374699	8875617157	6001	242149416	0	215.80	0.74
45	276867	376050	9243907031	6001	248048964	0	215.80	0.74
46	286208	377413	9610989866	6001	253906575	0	215.80	0.74
47	295692	378769	9979251251	6000	259760529	0	215.80	0.75
48	305320	380146	10348699090	6000	265610588	0	215.80	0.75
49	315092	381543	10719342481	6000	271456548	0	215.80	0.76
50	325008	382961	11091190495	6000	277298207	0	215.80	0.76
51	335068	384400	11464252186	6000	283135361	0	215.80	0.77
52	345271	385859	11838536591	6000	288967807	0	215.80	0.77
53	355619	387339	12214052728	6000	294795344	0	215.80	0.77
54	366110	388840	12590809596	6000	300617770	0	215.80	0.77
55	376746	390361	12968816180	6000	306434884	0	215.80	0.77
56	387525	391903	13348081448	6000	312246486	0	215.80	0.78
57	398448	393465	13728614354	6000	318052376	0	215.80	0.78
58	409515	395049	14110423834	6000	323852355	0	215.80	0.78

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 13 " PDT - 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]
<b>1.00</b>	53.55	13260.00	10420.00	8000.00	0.00
<b>2.00</b>	43.82	79140.00	48260.00	0.00	4.75
---	---	---	Ft = 94137	Fp = -2348	---
---	---	Pa = 79384	Ta = 50596	La = 0	---
---	---	Pb = -244	Tb = -2336	Lb = 0	---
<b>3.00</b>	43.82	79140.00	48260.00	0.00	-4.75
---	---	---	Ft = 106961	Fp = -106325	---
---	---	Pa = 90199	Ta = -57488	La = 0	---
---	---	Pb = -11059	Tb = 105748	Lb = 0	---
<b>4.00</b>	37.02	79140.00	48260.00	0.00	4.75
---	---	---	Ft = 94137	Fp = -2348	---
---	---	Pa = 79384	Ta = 50596	La = 0	---
---	---	Pb = -244	Tb = -2336	Lb = 0	---
<b>5.00</b>	37.02	79140.00	48260.00	0.00	-4.75
---	---	---	Ft = 106961	Fp = -106325	---
---	---	Pa = 90199	Ta = -57488	La = 0	---
---	---	Pb = -11059	Tb = 105748	Lb = 0	---
<b>6.00</b>	30.22	79140.00	48260.00	0.00	4.75
---	---	---	Ft = 94137	Fp = -2348	---
---	---	Pa = 79384	Ta = 50596	La = 0	---
---	---	Pb = -244	Tb = -2336	Lb = 0	---
<b>7.00</b>	30.22	79140.00	48260.00	0.00	-4.75
---	---	---	Ft = 106961	Fp = -106325	---
---	---	Pa = 90199	Ta = -57488	La = 0	---
---	---	Pb = -11059	Tb = 105748	Lb = 0	---

**TABELLA DESCRITTIVA DELLE AZIONI INTERNE.**

<b>Nodo</b>	<b>Carico verticale [N]</b>	<b>T<sub>x</sub> [N]</b>	<b>My [Nmm]</b>	<b>T<sub>y</sub> [N]</b>	<b>Mx [Nmm]</b>	<b>Mt [Nmm]</b>	<b>σ<sub>amm.</sub> [N/mm<sup>2</sup>]</b>	<b>% Usa</b>
2	13970	10517	11952436	8002	8858911	0	215.80	0.06
3	14803	10604	22077489	8002	16238590	0	215.80	0.08
4	15759	10707	32319146	8002	23618935	0	215.80	0.08
5	16837	10824	42694146	8002	31000160	-0	215.80	0.09
6	18038	10955	53219350	8002	38382566	0	215.80	0.09
7	19362	11102	63911630	8002	45766464	0	215.80	0.09
8	107988	-33234	25220310	8012	53216669	-0	215.80	0.09
9	196650	4843	44597579	8022	60867815	-0	215.80	0.12
10	198059	5007	54209377	8022	68503392	-0	215.80	0.13
11	197007	10548	67188802	8022	76116825	-0	215.80	0.13
12	192839	108741	184572481	8021	83701139	-0	215.80	0.21
13	195212	108925	292984478	8020	91684224	-0	215.80	0.18
14	197648	109112	401578002	8020	99652361	-0	215.80	0.23
15	287438	49387	469185651	8028	107774299	-0	215.80	0.26
16	377289	102881	578649710	8036	116035360	-0	215.80	0.31
17	379912	103074	685949312	8035	124270015	-0	215.80	0.34
18	382597	103270	793337642	8034	132478000	-0	215.80	0.37
19	379692	212446	997948996	8032	140650285	-0	215.80	0.43
20	376850	207071	1201682256	8030	148787677	-0	215.80	0.49
21	379722	207280	1406902534	8029	156898970	-0	215.80	0.54
22	477768	165358	1586073070	8035	165110201	-0	215.80	0.59
23	568055	201033	1774910816	8039	173396740	-0	215.80	0.65
24	572053	201226	1961754632	8037	180997807	-0	215.80	0.48
25	576126	201424	2148521417	8035	188571112	-0	215.80	0.50
26	574625	273754	2383103396	8034	196116404	-0	215.80	0.53
27	573199	305241	2669118680	8032	203634274	-0	215.80	0.57
28	577502	305455	2945806379	8031	211130379	-0	215.80	0.60
29	596126	305686	3222675254	8030	218616885	-0	215.80	0.64
30	600582	305907	3499451576	8029	226081273	-0	215.80	0.66
31	606408	306148	3793807047	8027	233998936	-0	215.80	0.59
32	612341	306390	4088075015	8026	241894539	-0	215.80	0.61
33	618380	306639	4382279239	8025	249770264	-0	215.80	0.63
34	624526	306892	4676411364	8024	257626217	-0	215.80	0.64
35	630778	307150	4970464368	8023	265462521	-0	215.80	0.66
36	658681	307426	5264732423	8022	273292423	-0	215.80	0.68
37	665146	307693	5558894825	8021	281102117	-0	215.80	0.69
38	673156	307978	5866878665	8020	289260469	-0	215.80	0.62
39	681305	308263	6174770404	8019	297398756	-0	215.80	0.63
40	689593	308555	6482593806	8017	305518433	-0	215.80	0.63
41	698019	308853	6790345473	8016	313619559	-0	215.80	0.64
42	706584	309155	7098022657	8015	321702197	-0	215.80	0.65
43	715287	309463	7405622988	8014	329766405	-0	215.80	0.66
44	755987	309788	7713430830	8014	337823927	-0	215.80	0.66
45	764967	310105	8021136649	8013	345862160	-0	215.80	0.67
46	774308	310426	8326733041	8012	353828970	-0	215.80	0.66
47	783792	310746	8632219102	8011	361776807	-0	215.80	0.67
48	793420	311070	8937591014	8010	369705585	-0	215.80	0.67
49	803192	311400	9242848118	8009	377615341	-0	215.80	0.67
50	813108	311736	9547989862	8008	385506100	-0	215.80	0.67
51	823168	312076	9853015800	8007	393377882	-0	215.80	0.68
52	833371	312422	10157925571	8006	401230698	-0	215.80	0.68
53	843719	312774	10462718885	8005	409064551	-0	215.80	0.68
54	854210	313130	10767395507	8004	416879437	-0	215.80	0.68
55	864846	313493	11071955245	8003	424675347	-0	215.80	0.68
56	875625	313860	11376397934	8002	432452261	-0	215.80	0.68
57	886548	314233	11680723434	8001	440210157	-0	215.80	0.68
58	897615	314611	11984931615	8000	447949004	-0	215.80	0.68

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 14 " PDT - 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]
<b>1.00</b>	53.55	0.00	10420.00	8000.00	0.00
<b>2.00</b>	43.82	0.00	48260.00	0.00	4.75
---	---	---	Ft = -6412	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 48260	Lb = 0	---
<b>3.00</b>	43.82	0.00	48260.00	0.00	-4.75
---	---	---	Ft = 6412	Fp = -51988	---
---	---	Pa = 5407	Ta = -3446	La = 0	---
---	---	Pb = -5407	Tb = 51706	Lb = 0	---
<b>4.00</b>	37.02	0.00	48260.00	0.00	4.75
---	---	---	Ft = -6412	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 48260	Lb = 0	---
<b>5.00</b>	37.02	0.00	48260.00	0.00	-4.75
---	---	---	Ft = 6412	Fp = -51988	---
---	---	Pa = 5407	Ta = -3446	La = 0	---
---	---	Pb = -5407	Tb = 51706	Lb = 0	---
<b>6.00</b>	30.22	0.00	48260.00	0.00	4.75
---	---	---	Ft = -6412	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 48260	Lb = 0	---
<b>7.00</b>	30.22	0.00	48260.00	0.00	-4.75
---	---	---	Ft = 6412	Fp = -51988	---
---	---	Pa = 5407	Ta = -3446	La = 0	---
---	---	Pb = -5407	Tb = 51706	Lb = 0	---

**TABELLA DESCRITTIVA DELLE AZIONI INTERNE.**

<b>Nodo</b>	<b>Carico verticale [N]</b>	<b>T<sub>x</sub> [N]</b>	<b>My [Nmm]</b>	<b>T<sub>y</sub> [N]</b>	<b>Mx [Nmm]</b>	<b>Mt [Nmm]</b>	<b>σ<sub>amm.</sub> [N/mm<sup>2</sup>]</b>	<b>% Usa</b>
2	710	10491	11563875	8000	8815517	0	215.80	0.05
3	1543	10577	21301060	8000	16153393	-0	215.80	0.07
4	2499	10678	31155639	8000	23493717	-0	215.80	0.08
5	3577	10794	41143978	8000	30836567	-0	215.80	0.08
6	4778	10924	51282448	8000	38182026	-0	215.80	0.08
7	6102	11069	61587427	8000	45530186	0	215.80	0.08
8	12640	-11100	46115203	8000	52743109	0	215.80	0.07
9	19215	7942	58700190	8000	59969387	-0	215.80	0.08
10	20623	8107	66499737	8000	67196854	-0	215.80	0.09
11	22519	11384	76382161	8000	74426145	-0	215.80	0.10
12	21299	108416	183786726	8000	81650867	0	215.80	0.17
13	23672	108605	287282748	8000	89274188	0	215.80	0.16
14	26108	108796	391015478	8000	96899653	0	215.80	0.20
15	33810	78964	473328997	8000	104536466	0	215.80	0.23
16	41574	105749	575679770	8000	112183547	0	215.80	0.26
17	44196	105955	677141314	8001	119831591	0	215.80	0.29
18	46881	106165	778848940	8001	127480312	0	215.80	0.32
19	46924	205063	965737569	8000	135125560	0	215.80	0.38
20	47030	206567	1162980743	8000	142767454	0	215.80	0.43
21	49902	206793	1360003961	8000	150409564	0	215.80	0.48
22	65860	185899	1543401442	8001	158067338	0	215.80	0.52
23	74060	203816	1731015206	8001	165729727	0	215.80	0.58
24	78057	204037	1910597879	8001	172789497	0	215.80	0.43
25	82131	204260	2090406820	8001	179849102	0	215.80	0.45
26	83577	260495	2307194050	8001	186906551	0	215.80	0.48
27	85099	304683	2585062878	8001	193961848	0	215.80	0.52
28	89402	304919	2852730469	8001	201017186	0	215.80	0.55
29	108026	305160	3120864325	8001	208083326	0	215.80	0.58
30	112482	305404	3389218513	8001	215148508	0	215.80	0.61
31	118308	305668	3674966795	8001	222664220	0	215.80	0.54
32	124241	305931	3960975464	8001	230179373	0	215.80	0.56
33	130280	306200	4247247536	8001	237694061	0	215.80	0.58
34	136426	306473	4533780145	8001	245208018	0	215.80	0.60
35	142678	306751	4820570344	8001	252720984	0	215.80	0.61
36	170581	307036	5107897814	8001	260244717	0	215.80	0.63
37	177046	307324	5395462837	8001	267766226	0	215.80	0.64
38	185056	307630	5696905614	8001	275641574	0	215.80	0.58
39	193205	307935	5998615490	8001	283514778	0	215.80	0.59
40	201493	308246	6300595560	8001	291385877	0	215.80	0.60
41	209919	308561	6602841973	8001	299254574	0	215.80	0.61
42	218484	308882	6905350853	8001	307120575	0	215.80	0.61
43	227187	309208	7208118286	8001	314983586	0	215.80	0.62
44	267887	309542	7511411484	8001	322854078	0	215.80	0.63
45	276867	309878	7814935346	8001	330720137	0	215.80	0.63
46	286208	310217	8116703900	8001	338530280	0	215.80	0.63
47	295692	310555	8418686821	8001	346335547	0	215.80	0.63
48	305320	310897	8720879076	8001	354135621	0	215.80	0.64
49	315092	311245	9023276652	8001	361930231	0	215.80	0.64
50	325008	311597	9325875537	8001	369719106	0	215.80	0.64
51	335068	311955	9628671720	8000	377501974	0	215.80	0.64
52	345271	312318	9931661193	8000	385278567	0	215.80	0.65
53	355619	312686	10234839950	8000	393048613	0	215.80	0.65
54	366110	313060	10538203989	8000	400811846	0	215.80	0.65
55	376746	313438	10841749312	8000	408567997	0	215.80	0.65
56	387525	313821	11145471925	8000	416316799	0	215.80	0.65
57	398448	314210	11449367840	8000	424057985	0	215.80	0.65
58	409515	314604	11753433072	8000	431791290	0	215.80	0.65

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 15 " PDT - 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]
<b>1.00</b>	53.55	4160.00	4980.00	29500.00	0.00
<b>2.00</b>	43.82	60940.00	58800.00	0.00	4.75
---	---	---	Ft = 69613	Fp = 21502	---
---	---	Pa = 58704	Ta = 37415	La = 0	---
---	---	Pb = 2236	Tb = 21385	Lb = 0	---
<b>3.00</b>	43.82	60940.00	58800.00	0.00	-4.75
---	---	---	Ft = 85238	Fp = -105183	---
---	---	Pa = 71880	Ta = -45813	La = 0	---
---	---	Pb = -10940	Tb = 104613	Lb = 0	---
<b>4.00</b>	37.02	60940.00	58800.00	0.00	4.75
---	---	---	Ft = 69613	Fp = 21502	---
---	---	Pa = 58704	Ta = 37415	La = 0	---
---	---	Pb = 2236	Tb = 21385	Lb = 0	---
<b>5.00</b>	37.02	60940.00	58800.00	0.00	-4.75
---	---	---	Ft = 85238	Fp = -105183	---
---	---	Pa = 71880	Ta = -45813	La = 0	---
---	---	Pb = -10940	Tb = 104613	Lb = 0	---
<b>6.00</b>	30.22	52620.00	49770.00	54500.00	4.75
---	---	---	Ft = 71459	Fp = 26858	---
---	---	Pa = 52591	Ta = 27125	La = 40059	---
---	---	Pb = 29	Tb = 22645	Lb = 14441	---
<b>7.00</b>	30.22	60940.00	58800.00	0.00	-4.75
---	---	---	Ft = 85238	Fp = -105183	---
---	---	Pa = 71880	Ta = -45813	La = 0	---
---	---	Pb = -10940	Tb = 104613	Lb = 0	---

**TABELLA DESCRITTIVA DELLE AZIONI INTERNE.**

<b>Nodo</b>	<b>Carico verticale [N]</b>	<b>T<sub>x</sub> [N]</b>	<b>My [Nmm]</b>	<b>T<sub>y</sub> [N]</b>	<b>Mx [Nmm]</b>	<b>Mt [Nmm]</b>	<b>σ<sub>amm.</sub> [N/mm<sup>2</sup>]</b>	<b>% Usa</b>
2	4870	5273	5906826	29502	32570438	0	345.28	0.08
3	5703	5619	11234733	29503	59692814	-0	345.28	0.10
4	6659	6024	16962673	29503	86825110	-0	345.28	0.11
5	7737	6488	23148353	29504	113968150	-0	345.28	0.11
6	8938	7011	29849491	29504	141122867	-0	345.28	0.11
7	10262	7593	37123804	29505	168290227	-0	345.28	0.11
8	79388	-46075	-16067964	29537	195706665	0	345.28	0.13
9	148551	682	1102370	29569	223880525	-0	345.28	0.15
10	149960	1344	6803691	29569	252017809	0	345.28	0.16
11	150207	8575	17095972	29568	280102563	0	345.28	0.17
12	147339	128706	155101937	29565	308100676	0	345.28	0.20
13	149712	129459	282426792	29564	337597035	0	345.28	0.15
14	152148	130223	410506340	29564	367062053	0	345.28	0.18
15	222438	57929	488422442	29591	397163013	0	345.28	0.20
16	292790	123600	617154436	29617	427857842	-0	345.28	0.23
17	295413	124417	743855690	29614	458488016	-0	345.28	0.25
18	298097	125253	871289187	29611	489052583	-0	345.28	0.27
19	296493	258888	1117867992	29607	519513852	-0	345.28	0.32
20	294950	252969	1364083718	29602	549873905	-0	345.28	0.36
21	297822	253862	1612791099	29598	580169323	-0	345.28	0.39
22	373312	178833	1813271380	33755	613663831	-0	345.28	0.43
23	441044	237166	2023538981	69692	687626082	124009993	345.28	0.47
24	445041	238035	2241655844	69686	751217505	124009993	345.28	0.35
25	449114	238912	2460339113	69681	814731635	124009993	345.28	0.37
26	447809	322207	2734095702	75644	881983913	124009993	345.28	0.39
27	446579	367969	3076938506	84111	959642154	136308290	345.28	0.42
28	450882	368899	3408305269	84107	1035496404	136308290	345.28	0.44
29	469506	369857	3740580818	84106	1111355194	136308290	345.28	0.47
30	473962	370819	4073455448	84102	1187135266	136308290	345.28	0.49
31	479788	371861	4428286289	84098	1267668815	136308290	345.28	0.43
32	485721	372905	4783823971	84094	1348119838	136308290	345.28	0.45
33	491760	373969	5140101121	84090	1428494214	136308290	345.28	0.47
34	497906	375052	5497121292	84086	1508789369	136308290	345.28	0.48
35	504158	376154	5854889112	84082	1589002954	136308290	345.28	0.49
36	532061	377287	6213767125	84082	1669222662	136308290	345.28	0.51
37	538526	378426	6573386648	84078	1749351785	136308290	345.28	0.52
38	546536	379640	6950867886	84074	1833177436	136308290	345.28	0.46
39	554685	380852	7329195755	84070	1916909917	136308290	345.28	0.47
40	562973	382086	7708405238	84066	2000554051	136308290	345.28	0.48
41	571399	383341	8088505631	84062	2084107815	136308290	345.28	0.49
42	579964	384616	8469506749	84059	2167569290	136308290	345.28	0.49
43	588667	385913	8851418720	84055	2250936612	136308290	345.28	0.50
44	629367	387240	9234595249	84054	2334292298	136308290	345.28	0.50
45	638347	388578	9618678367	84050	2417543821	136308290	345.28	0.51
46	647688	389928	10001161769	84047	2500147857	136308290	345.28	0.51
47	657172	391271	10384535132	84043	2582645746	136308290	345.28	0.51
48	666800	392635	10768806607	84039	2665035163	136308290	345.28	0.51
49	676572	394019	11153987443	84035	2747314545	136308290	345.28	0.52
50	686488	395424	11540088980	84031	2829482339	136308290	345.28	0.52
51	696548	396850	11927122645	84027	2911537004	136308290	345.28	0.52
52	706751	398297	12315099933	84024	2993477005	136308290	345.28	0.52
53	717099	399765	12704032396	84020	3075300810	136308290	345.28	0.52
54	727590	401253	13093931628	84016	3157006892	136308290	345.28	0.52
55	738226	402762	13484809253	84013	3238593726	136308290	345.28	0.52
56	749005	404292	13876676915	84009	3320059781	136308290	345.28	0.53
57	759928	405843	14269546270	84005	3401403531	136308290	345.28	0.53
58	770995	407415	14663428976	84002	3482623440	136308290	345.28	0.53



## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 16 " PDT - 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]
<b>1.00</b>	53.55	0.00	4980.00	29500.00	0.00
<b>2.00</b>	43.82	0.00	58800.00	0.00	4.75
---	---	---	Ft = -7812	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 58800	Lb = 0	---
<b>3.00</b>	43.82	0.00	58800.00	0.00	-4.75
---	---	---	Ft = 7812	Fp = -63342	---
---	---	Pa = 6588	Ta = -4199	La = 0	---
---	---	Pb = -6588	Tb = 62999	Lb = 0	---
<b>4.00</b>	37.02	0.00	58800.00	0.00	4.75
---	---	---	Ft = -7812	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 58800	Lb = 0	---
<b>5.00</b>	37.02	0.00	58800.00	0.00	-4.75
---	---	---	Ft = 7812	Fp = -63342	---
---	---	Pa = 6588	Ta = -4199	La = 0	---
---	---	Pb = -6588	Tb = 62999	Lb = 0	---
<b>6.00</b>	30.22	0.00	49770.00	54500.00	4.75
---	---	---	Ft = 9788	Fp = 67317	---
---	---	Pa = 6246	Ta = 2306	La = 7174	---
---	---	Pb = -6246	Tb = 47464	Lb = 47326	---
<b>7.00</b>	30.22	0.00	58800.00	0.00	-4.75
---	---	---	Ft = 7812	Fp = -63342	---
---	---	Pa = 6588	Ta = -4199	La = 0	---
---	---	Pb = -6588	Tb = 62999	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	710	5266	5770519	29500	32508741	0	345.28	0.07
3	1543	5611	10961620	29500	59570468	0	345.28	0.10
4	2499	6014	16552197	29500	86643271	0	345.28	0.11
5	3577	6477	22599826	29500	113727699	-0	345.28	0.11
6	4778	6998	29162078	29500	140824324	0	345.28	0.11
7	6102	7578	36296516	29500	167933747	0	345.28	0.11
8	13230	-18996	12538801	29501	194564163	0	345.28	0.12
9	20396	4652	23382434	29502	221263468	0	345.28	0.13
10	21804	5314	28809477	29502	247969701	0	345.28	0.14
11	23109	9780	37181540	29502	274680590	0	345.28	0.15
12	21299	128489	164794904	29502	301366439	-0	345.28	0.18
13	23672	129244	287965974	29502	329529809	-0	345.28	0.14
14	26108	130009	411930509	29502	357706455	0	345.28	0.17
15	34400	94209	510332513	29502	385947043	0	345.28	0.19
16	42755	127403	633695900	29503	414247379	-0	345.28	0.21
17	45377	128228	756520414	29503	442556690	-0	345.28	0.23
18	48062	129073	880202487	29503	470874060	-0	345.28	0.25
19	47515	250171	1108223195	29503	499173933	-0	345.28	0.29
20	47030	252619	1349427567	29503	527457205	-0	345.28	0.33
21	49902	253524	1590961622	29503	555747563	-0	345.28	0.37
22	69573	252940	1832853833	30245	584641323	-0	345.28	0.41
23	81486	253505	2074464137	36679	620771295	22209241	345.28	0.45
24	85483	254393	2298496647	36679	653266513	22209241	345.28	0.33
25	89557	255286	2523342959	36679	685767527	22209241	345.28	0.35
26	87290	302774	2778865931	56236	730810895	22209241	345.28	0.37
27	85099	367582	3114699964	84004	810254245	62514163	345.28	0.40
28	89402	368526	3438220454	84004	884018860	62514163	345.28	0.43
29	108026	369489	3762893740	84005	957857177	62514163	345.28	0.45
30	112482	370466	4088430216	84005	1031696630	62514163	345.28	0.47
31	118308	371523	4435753401	84005	1110253963	62514163	345.28	0.42
32	124241	372582	4784079144	84005	1188814681	62514163	345.28	0.43
33	130280	373659	5133423458	84005	1267378499	62514163	345.28	0.45
34	136426	374755	5483795235	84005	1345943357	62514163	345.28	0.46
35	142678	375871	5835203260	84005	1424507176	62514163	345.28	0.48
36	170581	377008	6188002268	84005	1503148916	62514163	345.28	0.49
37	177046	378162	6541837898	84005	1581781311	62514163	345.28	0.50
38	185056	379390	6913579310	84005	1664125830	62514163	345.28	0.45
39	193205	380615	7286477622	84005	1746460905	62514163	345.28	0.46
40	201493	381862	7660550683	84005	1828786070	62514163	345.28	0.46
41	209919	383129	8035807898	84005	1911098835	62514163	345.28	0.47
42	218484	384418	8412258618	84005	1993396703	62514163	345.28	0.48
43	227187	385727	8789912127	84005	2075677173	62514163	345.28	0.48
44	267887	387060	9169111023	84005	2158014758	62514163	345.28	0.49
45	276867	388411	9549506722	84005	2240324185	62514163	345.28	0.49
46	286208	389773	9928612351	84004	2322066698	62514163	345.28	0.49
47	295692	391130	10308892121	84004	2403776823	62514163	345.28	0.50
48	305320	392506	10690353543	84004	2485451791	62514163	345.28	0.50
49	315092	393904	11073005356	84004	2567089131	62514163	345.28	0.50
50	325008	395322	11456856275	84003	2648686374	62514163	345.28	0.50
51	335068	396760	11841915001	84003	2730241053	62514163	345.28	0.51
52	345271	398220	12228190213	84003	2811750705	62514163	345.28	0.51
53	355619	399699	12615690573	84002	2893212870	62514163	345.28	0.51
54	366110	401200	13004424728	84002	2974625091	62514163	345.28	0.51
55	376746	402721	13394401308	84001	3055984914	62514163	345.28	0.51
56	387525	404263	13785628928	84001	3137289891	62514163	345.28	0.51
57	398448	405826	14178116186	84001	3218537574	62514163	345.28	0.51
58	409515	407409	14571871669	84000	3299725521	62514163	345.28	0.51

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 17 " PDT - 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]
<b>1.00</b>	53.55	4160.00	4980.00	29500.00	0.00
<b>2.00</b>	43.82	60940.00	58800.00	0.00	4.75
---	---	---	Ft = 69613	Fp = 21502	---
---	---	Pa = 58704	Ta = 37415	La = 0	---
---	---	Pb = 2236	Tb = 21385	Lb = 0	---
<b>3.00</b>	43.82	60940.00	58800.00	0.00	-4.75
---	---	---	Ft = 85238	Fp = -105183	---
---	---	Pa = 71880	Ta = -45813	La = 0	---
---	---	Pb = -10940	Tb = 104613	Lb = 0	---
<b>4.00</b>	37.02	52620.00	49770.00	54500.00	4.75
---	---	---	Ft = 71459	Fp = 26858	---
---	---	Pa = 52591	Ta = 27125	La = 40059	---
---	---	Pb = 29	Tb = 22645	Lb = 14441	---
<b>5.00</b>	37.02	60940.00	58800.00	0.00	-4.75
---	---	---	Ft = 85238	Fp = -105183	---
---	---	Pa = 71880	Ta = -45813	La = 0	---
---	---	Pb = -10940	Tb = 104613	Lb = 0	---
<b>6.00</b>	30.22	60940.00	58800.00	0.00	4.75
---	---	---	Ft = 69613	Fp = 21502	---
---	---	Pa = 58704	Ta = 37415	La = 0	---
---	---	Pb = 2236	Tb = 21385	Lb = 0	---
<b>7.00</b>	30.22	60940.00	58800.00	0.00	-4.75
---	---	---	Ft = 85238	Fp = -105183	---
---	---	Pa = 71880	Ta = -45813	La = 0	---
---	---	Pb = -10940	Tb = 104613	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Usa
2	4870	5273	5904034	29503	32582340	0	345.28	0.08
3	5703	5619	11228672	29503	59718652	-0	345.28	0.10
4	6659	6024	16952796	29504	86867216	-0	345.28	0.11
5	7737	6488	23134043	29504	114029154	0	345.28	0.11
6	8938	7010	29830062	29505	141205699	-0	345.28	0.11
7	10262	7592	37098497	29506	168398113	-0	345.28	0.11
8	79388	-46078	-16137800	29545	196004391	-0	345.28	0.13
9	148551	677	949247	29584	224533321	-0	345.28	0.15
10	149960	1338	6566565	29584	253028734	0	345.28	0.16
11	150207	8570	16774809	29583	281471764	0	345.28	0.17
12	147339	128701	154698472	29579	309820764	0	345.28	0.20
13	149712	129454	281935276	29578	339692525	0	345.28	0.15
14	152148	130218	409925508	29578	369538345	0	345.28	0.18
15	219382	21924	461575895	42439	408941521	0	345.28	0.20
16	286677	113293	580598940	69699	483788263	119838561	345.28	0.23
17	289300	114110	697205170	69696	553016720	119838561	345.28	0.26
18	291985	114947	814554177	69692	622169779	119838561	345.28	0.28
19	289276	246818	1048019146	82909	702058938	119838561	345.28	0.32
20	286630	243921	1286162438	84120	784964909	130828117	345.28	0.36
21	289502	244815	1525962030	84116	867420703	130828117	345.28	0.40
22	368048	194331	1734058388	84141	950499680	130828117	345.28	0.44
23	438836	238414	1954051233	84160	1034057869	130828117	345.28	0.48
24	442833	239284	2173097264	84153	1110906779	130828117	345.28	0.36
25	446907	240161	2392719641	84147	1187636805	130828117	345.28	0.38
26	446705	328937	2671297218	84141	1264237072	130828117	345.28	0.40
27	446579	367962	3013250599	84135	1340707254	130828117	345.28	0.43
28	450882	368892	3344528089	84130	1417076923	130828117	345.28	0.45
29	469506	369850	3676716958	84129	1493436147	130828117	345.28	0.48
30	473962	370812	4009510114	84123	1569686586	130828117	345.28	0.50
31	479788	371855	4364259579	84118	1650689913	130828117	345.28	0.44
32	485721	372899	4719720783	84113	1731582455	130828117	345.28	0.46
33	491760	373963	5075925731	84108	1812373643	130828117	345.28	0.47
34	497906	375047	5432877828	84104	1893061771	130828117	345.28	0.48
35	504158	376149	5790581562	84099	1973645307	130828117	345.28	0.50
36	532061	377282	6149396800	84098	2054227380	130828117	345.28	0.51
37	538526	378421	6508957472	84093	2134696225	130828117	345.28	0.52
38	546536	379636	6886381007	84088	2218854955	130828117	345.28	0.47
39	554685	380848	7264654876	84084	2302899147	130828117	345.28	0.47
40	562973	382082	7643813705	84079	2386835672	130828117	345.28	0.48
41	571399	383337	8023866698	84075	2470663032	130828117	345.28	0.49
42	579964	384613	8404823587	84070	2554379806	130828117	345.28	0.49
43	588667	385910	8786694419	84066	2637984588	130828117	345.28	0.50
44	629367	387237	9169830790	84065	2721572059	130828117	345.28	0.51
45	638347	388575	9553876886	84060	2805037279	130828117	345.28	0.51
46	647688	389925	9936326524	84056	2887836193	130828117	345.28	0.51
47	657172	391268	10319669085	84051	2970511868	130828117	345.28	0.51
48	666800	392632	10703912678	84046	3053062218	130828117	345.28	0.51
49	676572	394017	11089068494	84042	3135486014	130828117	345.28	0.52
50	686488	395423	11475147820	84037	3217782010	130828117	345.28	0.52
51	696548	396849	11862162032	84033	3299948951	130828117	345.28	0.52
52	706751	398296	12250122581	84028	3381985567	130828117	345.28	0.52
53	717099	399764	12639040975	84024	3463890572	130828117	345.28	0.52
54	727590	401252	13028928770	84019	3545662668	130828117	345.28	0.52
55	738226	402761	13419797553	84015	3627300538	130828117	345.28	0.53
56	749005	404292	13811658933	84011	3708802851	130828117	345.28	0.53
57	759928	405843	14204524536	84006	3790168258	130828117	345.28	0.53
58	770995	407414	14598405990	84002	3871395393	130828117	345.28	0.53

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 18 " PDT - 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]
<b>1.00</b>	53.55	0.00	4980.00	29500.00	0.00
<b>2.00</b>	43.82	0.00	58800.00	0.00	4.75
---	---	---	Ft = -7812	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 58800	Lb = 0	---
<b>3.00</b>	43.82	0.00	58800.00	0.00	-4.75
---	---	---	Ft = 7812	Fp = -63342	---
---	---	Pa = 6588	Ta = -4199	La = 0	---
---	---	Pb = -6588	Tb = 62999	Lb = 0	---
<b>4.00</b>	37.02	0.00	49770.00	54500.00	4.75
---	---	---	Ft = 9788	Fp = 67317	---
---	---	Pa = 6246	Ta = 2306	La = 7174	---
---	---	Pb = -6246	Tb = 47464	Lb = 47326	---
<b>5.00</b>	37.02	0.00	58800.00	0.00	-4.75
---	---	---	Ft = 7812	Fp = -63342	---
---	---	Pa = 6588	Ta = -4199	La = 0	---
---	---	Pb = -6588	Tb = 62999	Lb = 0	---
<b>6.00</b>	30.22	0.00	58800.00	0.00	4.75
---	---	---	Ft = -7812	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 58800	Lb = 0	---
<b>7.00</b>	30.22	0.00	58800.00	0.00	-4.75
---	---	---	Ft = 7812	Fp = -63342	---
---	---	Pa = 6588	Ta = -4199	La = 0	---
---	---	Pb = -6588	Tb = 62999	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Uso
2	710	5266	5770377	29500	32510084	0	345.28	0.07
3	1543	5611	10961167	29500	59574730	0	345.28	0.10
4	2499	6014	16551241	29500	86652259	0	345.28	0.11
5	3577	6477	22598151	29500	113743452	-0	345.28	0.11
6	4778	6998	29159442	29500	140849112	-0	345.28	0.11
7	6102	7578	36292653	29501	167970072	-0	345.28	0.11
8	13230	-18996	12532332	29501	194624992	0	345.28	0.12
9	20396	4652	23371948	29502	221362068	0	345.28	0.13
10	21804	5314	28794697	29502	248108675	0	345.28	0.14
11	23109	9780	37162210	29502	274862344	0	345.28	0.15
12	21299	128489	164771382	29502	301587610	0	345.28	0.18
13	23672	129244	287937538	29502	329797181	0	345.28	0.14
14	26108	130009	411896657	29502	358024766	0	345.28	0.17
15	37523	128358	535193673	31801	387938509	0	345.28	0.19
16	49000	129711	659381309	36678	424176345	21462170	345.28	0.22
17	51623	130536	784566385	36678	459432110	21462170	345.28	0.24
18	54307	131381	910604380	36679	494698785	21462170	345.28	0.26
19	50638	233844	1121143821	80013	565562054	21462170	345.28	0.30
20	47030	243589	1355822378	84003	646734887	57477984	345.28	0.35
21	49902	244494	1588788264	84003	726742134	57477984	345.28	0.38
22	66451	219681	1805774116	84004	806870753	57477984	345.28	0.42
23	75241	242167	2028534206	84005	887045658	57477984	345.28	0.46
24	79238	243055	2242507118	84005	960925329	57477984	345.28	0.34
25	83311	243948	2457298447	84005	1034810228	57477984	345.28	0.36
26	84167	313098	2717684662	84005	1108680588	57477984	345.28	0.38
27	85099	367582	3053044206	84005	1182536208	57477984	345.28	0.41
28	89402	368526	3376548848	84005	1256396815	57477984	345.28	0.43
29	108026	369489	3701204297	84006	1330343175	57477984	345.28	0.46
30	112482	370466	4026723496	84005	1404287275	57477984	345.28	0.48
31	118308	371523	4374028770	84006	1482953101	57477984	345.28	0.42
32	124241	372581	4722337065	84006	1561619508	57477984	345.28	0.44
33	130280	373659	5071664330	84006	1640286589	57477984	345.28	0.45
34	136426	374755	5422019496	84006	1718952070	57477984	345.28	0.47
35	142678	375871	5773411378	84006	1797613668	57477984	345.28	0.48
36	170581	377008	6126192484	84006	1876363846	57477984	345.28	0.49
37	177046	378161	6480010913	84006	1955100431	57477984	345.28	0.50
38	185056	379390	6851734964	84006	2037550105	57477984	345.28	0.45
39	193205	380615	7224616570	84006	2119986370	57477984	345.28	0.46
40	201493	381862	7598673536	84006	2202409026	57477984	345.28	0.47
41	209919	383129	7973915298	84006	2284815394	57477984	345.28	0.47
42	218484	384418	8350351236	84006	2367202796	57477984	345.28	0.48
43	227187	385727	8727990665	84005	2449568555	57477984	345.28	0.48
44	267887	387060	9107174407	84006	2531997930	57477984	345.28	0.49
45	276867	388410	9487555873	84006	2614393570	57477984	345.28	0.50
46	286208	389773	9866648280	84005	2696216168	57477984	345.28	0.49
47	295692	391129	10246915772	84005	2778000668	57477984	345.28	0.50
48	305320	392506	10628365885	84005	2859744139	57477984	345.28	0.50
49	315092	393904	11011007377	84004	2941443992	57477984	345.28	0.50
50	325008	395322	11394848984	84004	3023097641	57477984	345.28	0.51
51	335068	396760	11779899424	84003	3104702508	57477984	345.28	0.51
52	345271	398219	12166167395	84003	3186256015	57477984	345.28	0.51
53	355619	399699	12553661579	84003	3267755592	57477984	345.28	0.51
54	366110	401200	12942390640	84002	3349198672	57477984	345.28	0.51
55	376746	402721	13332363225	84002	3430582692	57477984	345.28	0.51
56	387525	404263	13723587968	84001	3511905094	57477984	345.28	0.51
57	398448	405826	14116073485	84001	3593163326	57477984	345.28	0.51
58	409515	407409	14509828379	84000	3674354839	57477984	345.28	0.52

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 19 " PDT - 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]
<b>1.00</b>	53.55	8310.00	9960.00	6000.00	0.00
<b>2.00</b>	43.82	52620.00	49770.00	54500.00	4.75
---	---	---	Ft = 71459	Fp = 26858	---
---	---	Pa = 52591	Ta = 27125	La = 40059	---
---	---	Pb = 29	Tb = 22645	Lb = 14441	---
<b>3.00</b>	43.82	60940.00	58800.00	0.00	-4.75
---	---	---	Ft = 85238	Fp = -105183	---
---	---	Pa = 71880	Ta = -45813	La = 0	---
---	---	Pb = -10940	Tb = 104613	Lb = 0	---
<b>4.00</b>	37.02	52620.00	49770.00	54500.00	4.75
---	---	---	Ft = 71459	Fp = 26858	---
---	---	Pa = 52591	Ta = 27125	La = 40059	---
---	---	Pb = 29	Tb = 22645	Lb = 14441	---
<b>5.00</b>	37.02	60940.00	58800.00	0.00	-4.75
---	---	---	Ft = 85238	Fp = -105183	---
---	---	Pa = 71880	Ta = -45813	La = 0	---
---	---	Pb = -10940	Tb = 104613	Lb = 0	---
<b>6.00</b>	30.22	60940.00	58800.00	0.00	4.75
---	---	---	Ft = 69613	Fp = 21502	---
---	---	Pa = 58704	Ta = 37415	La = 0	---
---	---	Pb = 2236	Tb = 21385	Lb = 0	---
<b>7.00</b>	30.22	60940.00	58800.00	0.00	-4.75
---	---	---	Ft = 85238	Fp = -105183	---
---	---	Pa = 71880	Ta = -45813	La = 0	---
---	---	Pb = -10940	Tb = 104613	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Usa
2	9020	10260	11520638	6007	6769186	0	345.28	0.03
3	9853	10605	21539133	6007	12442061	-0	345.28	0.04
4	10809	11010	31955292	6008	18130453	-0	345.28	0.05
5	11887	11474	42826581	6009	23836344	-0	345.28	0.05
6	13088	11996	54210529	6010	29561758	-0	345.28	0.05
7	14412	12578	66164675	6011	35308729	-0	345.28	0.05
8	80482	-72104	-16329952	42189	69955532	0	345.28	0.06
9	146588	-4641	1260467	46166	114837027	116071853	345.28	0.11
10	147997	-3980	1938177	46165	158625669	116071853	345.28	0.12
11	147141	2345	6625068	46288	202440876	116071853	345.28	0.14
12	143169	124640	138642636	60599	259677210	125455404	345.28	0.18
13	145542	125393	261800158	60598	319371613	125455404	345.28	0.15
14	147978	126156	385713845	60597	379053316	125455404	345.28	0.18
15	215212	17860	433244557	73467	448528932	125455404	345.28	0.20
16	282507	109227	548108037	100735	553677398	245293965	345.28	0.24
17	285130	110045	660561218	100732	653203654	245293965	345.28	0.27
18	287815	110881	773764329	100728	752645974	245293965	345.28	0.30
19	285106	242753	1003094484	113943	862793813	245293965	345.28	0.34
20	282460	239857	1237114453	115153	975925300	256283521	345.28	0.38
21	285332	240751	1472799503	115148	1088588323	256283521	345.28	0.42
22	363878	190266	1676750308	115180	1202079217	256283521	345.28	0.46
23	434666	234347	1892575091	115204	1316211202	256283521	345.28	0.50
24	438663	235218	2107792508	115196	1421196105	256283521	345.28	0.37
25	442737	236096	2323596210	115188	1526032046	256283521	345.28	0.39
26	442535	324872	2598365140	115180	1630702781	256283521	345.28	0.41
27	442409	363897	2936520007	115173	1735207309	256283521	345.28	0.44
28	446712	364828	3264007594	115166	1839584231	256283521	345.28	0.47
29	463336	365786	3592410335	115165	1943952425	256283521	345.28	0.49
30	469792	366749	3921426609	115158	2048181354	256283521	345.28	0.51
31	475618	367793	4272168050	115152	2158916867	256283521	345.28	0.45
32	481551	368837	4623630900	115145	2269509988	256283521	345.28	0.47
33	487590	369902	4975846404	115139	2379972534	256283521	345.28	0.48
34	493736	370986	5328818094	115133	2490301933	256283521	345.28	0.50
35	499988	372089	5682550556	115127	2600495860	256283521	345.28	0.51
36	527891	373222	6037398096	115127	2710691306	256283521	345.28	0.52
37	534356	374362	6393000692	115120	2820739334	256283521	345.28	0.53
38	542366	375577	6766288970	115114	2935841131	256283521	345.28	0.48
39	550515	376789	7140437409	115108	3050793409	256283521	345.28	0.48
40	558803	378024	7515480036	115102	3165604916	256283521	345.28	0.49
41	567229	379279	7891426116	115097	3280273442	256283521	345.28	0.50
42	575794	380556	8268285426	115091	3394796888	256283521	345.28	0.50
43	584497	381853	8646068058	115085	3509173188	256283521	345.28	0.51
44	625197	383181	9025120519	115084	3623528639	256283521	345.28	0.51
45	634177	384519	9405092566	115078	3737722929	256283521	345.28	0.52
46	643518	385870	9783504499	115072	3851011487	256283521	345.28	0.52
47	653002	387213	10162819161	115066	3964137211	256283521	345.28	0.52
48	662630	388578	10543044747	115060	4077097166	256283521	345.28	0.52
49	672402	389963	10924192466	115054	4189889559	256283521	345.28	0.52
50	682318	391369	11306273623	115048	4302512580	256283521	345.28	0.53
51	692378	392796	11689299615	115042	4414964412	256283521	345.28	0.53
52	702581	394243	12073281910	115037	4527243223	256283521	345.28	0.53
53	712929	395711	12458232037	115031	4639347168	256283521	345.28	0.53
54	723420	397200	12844161571	115025	4751274386	256283521	345.28	0.53
55	734056	398710	13231082120	115019	4863022998	256283521	345.28	0.53
56	744835	400241	13619005315	115014	4974591108	256283521	345.28	0.53
57	755758	401792	14007942803	115008	5085976801	256283521	345.28	0.53
58	766825	403364	14397906237	115003	5197178143	256283521	345.28	0.53



## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 20 " PDT - 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]
<b>1.00</b>	53.55	0.00	9960.00	6000.00	0.00
<b>2.00</b>	43.82	0.00	49770.00	54500.00	4.75
---	---	---	Ft = 9788	Fp = 67317	---
---	---	Pa = 6246	Ta = 2306	La = 7174	---
---	---	Pb = -6246	Tb = 47464	Lb = 47326	---
<b>3.00</b>	43.82	0.00	58800.00	0.00	-4.75
---	---	---	Ft = 7812	Fp = -63342	---
---	---	Pa = 6588	Ta = -4199	La = 0	---
---	---	Pb = -6588	Tb = 62999	Lb = 0	---
<b>4.00</b>	37.02	0.00	49770.00	54500.00	4.75
---	---	---	Ft = 9788	Fp = 67317	---
---	---	Pa = 6246	Ta = 2306	La = 7174	---
---	---	Pb = -6246	Tb = 47464	Lb = 47326	---
<b>5.00</b>	37.02	0.00	58800.00	0.00	-4.75
---	---	---	Ft = 7812	Fp = -63342	---
---	---	Pa = 6588	Ta = -4199	La = 0	---
---	---	Pb = -6588	Tb = 62999	Lb = 0	---
<b>6.00</b>	30.22	0.00	58800.00	0.00	4.75
---	---	---	Ft = -7812	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 58800	Lb = 0	---
<b>7.00</b>	30.22	0.00	58800.00	0.00	-4.75
---	---	---	Ft = 7812	Fp = -63342	---
---	---	Pa = 6588	Ta = -4199	La = 0	---
---	---	Pb = -6588	Tb = 62999	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Uso
2	710	10246	11257499	6000	6619918	0	345.28	0.03
3	1543	10591	21014950	6000	12141314	0	345.28	0.04
4	2499	10994	31172486	6000	17675686	0	345.28	0.04
5	3577	11457	41787616	6000	23224520	-0	345.28	0.05
6	4778	11978	52917843	6001	28789306	-0	345.28	0.05
7	6102	12558	64620671	6001	34371541	-0	345.28	0.05
8	16353	10262	74156396	12473	44973484	0	345.28	0.06
9	26641	11941	85959568	13177	57346864	20787581	345.28	0.07
10	28050	12602	98126909	13178	69541107	20787581	345.28	0.07
11	26232	14379	111509136	13587	81956773	20787581	345.28	0.08
12	21299	124439	229070405	60502	138635548	51540074	345.28	0.14
13	23672	125194	348405240	60503	196259285	51540074	345.28	0.13
14	26108	125959	468531837	60503	253909855	51540074	345.28	0.16
15	37523	124308	587996351	62802	313274827	51540074	345.28	0.20
16	49000	125661	708350771	67679	378992803	73002244	345.28	0.22
17	51623	126486	829701059	67680	443736421	73002244	345.28	0.25
18	54307	127331	951902780	67680	508497840	73002244	345.28	0.27
19	50638	229794	1158604681	111014	608846686	73002244	345.28	0.32
20	47030	239540	1389444789	115004	719495402	109018058	345.28	0.36
21	49902	240444	1618571226	115004	828983389	109018058	345.28	0.40
22	66451	215631	1831715664	115006	938627689	109018058	345.28	0.43
23	75241	238117	2050632782	115006	1048333648	109018058	345.28	0.48
24	79238	239005	2261063619	115006	1149427782	109018058	345.28	0.35
25	83311	239898	2472312038	115006	1250530549	109018058	345.28	0.37
26	84167	309048	2729154956	115006	1351616169	109018058	345.28	0.39
27	85099	363532	3060970887	115006	1452684215	109018058	345.28	0.42
28	89402	364476	3380931325	115006	1553759977	109018058	345.28	0.45
29	108026	365439	3702040561	115007	1654947751	109018058	345.28	0.47
30	112482	366416	4024013057	115007	1756133949	109018058	345.28	0.49
31	118308	367473	4367544652	115007	1863782694	109018058	345.28	0.43
32	124241	368532	4712078744	115007	1971433489	109018058	345.28	0.45
33	130280	369609	5057631347	115007	2079086292	109018058	345.28	0.47
34	136426	370705	5404211461	115007	2186738084	109018058	345.28	0.48
35	142678	371821	5751827978	115007	2294385833	109018058	345.28	0.49
36	170581	372958	6100831328	115008	2402150085	109018058	345.28	0.50
37	177046	374112	6450871907	115008	2509897628	109018058	345.28	0.51
38	185056	375340	6818639255	115008	2622728134	109018058	345.28	0.46
39	193205	376565	7187564104	115008	2735542056	109018058	345.28	0.47
40	201493	377812	7557664317	115008	2848339001	109018058	345.28	0.48
41	209919	379079	7928949426	115007	2961115385	109018058	345.28	0.48
42	218484	380368	8301428907	115007	3073867624	109018058	345.28	0.49
43	227187	381677	8675112174	115007	3186592130	109018058	345.28	0.49
44	267887	383010	9050337833	115008	3299400823	109018058	345.28	0.50
45	276867	384361	9426761859	115007	3412165825	109018058	345.28	0.50
46	286208	385723	9801923374	115007	3524149045	109018058	345.28	0.50
47	295692	387080	10178260804	115006	3636082661	109018058	345.28	0.51
48	305320	388456	10555781797	115006	3747962732	109018058	345.28	0.51
49	315092	389854	10934495215	115005	3859785766	109018058	345.28	0.51
50	325008	391272	11314409900	115005	3971548277	109018058	345.28	0.51
51	335068	392710	11695534672	115004	4083246782	109018058	345.28	0.52
52	345271	394170	12077878335	115004	4194877806	109018058	345.28	0.52
53	355619	395649	12461449674	115003	4306437878	109018058	345.28	0.52
54	366110	397150	12846257458	115003	4417923533	109018058	345.28	0.52
55	376746	398671	13232310439	115002	4529331311	109018058	345.28	0.52
56	387525	400213	13619617354	115002	4640657760	109018058	345.28	0.52
57	398448	401776	14008186924	115001	4751899431	109018058	345.28	0.52
58	409515	403359	14398027857	115000	4863052884	109018058	345.28	0.52

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 21 " PDT - 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]
<b>1.00</b>	53.55	3960.00	4770.00	27500.00	0.00
<b>2.00</b>	43.82	59440.00	57240.00	0.00	4.75
---	---	---	Ft = 67915	Fp = 20851	---
---	---	Pa = 57271	Ta = 36502	La = 0	---
---	---	Pb = 2169	Tb = 20738	Lb = 0	---
<b>3.00</b>	43.82	59440.00	57240.00	0.00	-4.75
---	---	---	Ft = 83125	Fp = -102473	---
---	---	Pa = 70098	Ta = -44677	La = 0	---
---	---	Pb = -10658	Tb = 101917	Lb = 0	---
<b>4.00</b>	37.02	59440.00	57240.00	0.00	4.75
---	---	---	Ft = 67915	Fp = 20851	---
---	---	Pa = 57271	Ta = 36502	La = 0	---
---	---	Pb = 2169	Tb = 20738	Lb = 0	---
<b>5.00</b>	37.02	59440.00	57240.00	0.00	-4.75
---	---	---	Ft = 83125	Fp = -102473	---
---	---	Pa = 70098	Ta = -44677	La = 0	---
---	---	Pb = -10658	Tb = 101917	Lb = 0	---
<b>6.00</b>	30.22	51370.00	48470.00	52000.00	4.75
---	---	---	Ft = 69347	Fp = 25734	---
---	---	Pa = 51262	Ta = 26655	La = 38351	---
---	---	Pb = 108	Tb = 21815	Lb = 13649	---
<b>7.00</b>	30.22	59440.00	57240.00	0.00	-4.75
---	---	---	Ft = 83125	Fp = -102473	---
---	---	Pa = 70098	Ta = -44677	La = 0	---
---	---	Pb = -10658	Tb = 101917	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Usa
2	4670	5063	5664811	27502	30359754	0	345.28	0.07
3	5503	5409	10788851	27502	55640935	-0	345.28	0.09
4	6459	5813	16312129	27503	80931509	-0	345.28	0.10
5	7537	6277	22292248	27503	106232241	-0	345.28	0.11
6	8738	6800	28786823	27504	131543999	-0	345.28	0.11
7	10062	7381	35853467	27504	156867677	-0	345.28	0.11
8	77581	-44851	-15976789	27533	182409195	-0	345.28	0.13
9	145137	679	653514	27562	208643393	-0	345.28	0.14
10	146546	1340	6135014	27562	234844701	0	345.28	0.15
11	146900	8398	16105391	27561	260999324	0	345.28	0.16
12	144139	125361	150421491	27558	287075297	0	345.28	0.18
13	146512	126114	274358188	27558	314548063	0	345.28	0.15
14	148948	126878	399049964	27557	341992894	0	345.28	0.17
15	217631	56519	474879312	27582	370020329	0	345.28	0.19
16	286376	120465	600148592	27605	398592109	-0	345.28	0.22
17	288998	121283	723464899	27603	427105662	-0	345.28	0.24
18	291683	122120	847518770	27600	455560108	-0	345.28	0.26
19	290186	252233	1087585723	27596	483920952	-0	345.28	0.31
20	288750	246495	1327328936	27592	512190068	-0	345.28	0.35
21	291622	247389	1569525283	27589	540400912	-0	345.28	0.38
22	365557	174164	1764620390	31566	571656769	-0	345.28	0.41
23	431733	231350	1969481952	65970	641639480	118719857	345.28	0.45
24	435730	232220	2182046685	65965	701763417	118719857	345.28	0.34
25	439803	233098	2395190147	65960	761817395	118719857	345.28	0.36
26	438678	314386	2662103771	71596	825408502	118719857	345.28	0.38
27	437629	358633	2996001175	79600	898839193	130344409	345.28	0.41
28	441932	359563	3318798537	79597	970567240	130344409	345.28	0.43
29	460556	360522	3642509287	79596	1042301745	130344409	345.28	0.46
30	465012	361485	3966832485	79592	1113964402	130344409	345.28	0.48
31	470838	362529	4312580798	79588	1190125073	130344409	345.28	0.42
32	476771	363573	4659050663	79585	1266210404	130344409	345.28	0.44
33	482810	364638	5006273865	79581	1342225722	130344409	345.28	0.45
34	488956	365722	5354254438	79578	1418168583	130344409	345.28	0.47
35	495208	366825	5702997427	79574	1494036748	130344409	345.28	0.48
36	523111	367958	6052856457	79574	1569912744	130344409	345.28	0.49
37	529576	369099	6403472952	79570	1645705507	130344409	345.28	0.50
38	537586	370313	6771542160	79567	1724997329	130344409	345.28	0.45
39	545735	371526	7140474703	79563	1804203502	130344409	345.28	0.46
40	554023	372761	7510304724	79560	1883328415	130344409	345.28	0.47
41	562449	374017	7881041782	79557	1962370123	130344409	345.28	0.47
42	571014	375293	8252695921	79553	2041326783	130344409	345.28	0.48
43	579717	376591	8625277483	79550	2120196602	130344409	345.28	0.48
44	620417	377919	8999131528	79549	2199057281	130344409	345.28	0.49
45	629397	379257	9373909777	79546	2277821619	130344409	345.28	0.49
46	638738	380608	9747166573	79542	2355975520	130344409	345.28	0.49
47	648222	381952	10121331071	79539	2434031121	130344409	345.28	0.50
48	657850	383316	10496411676	79535	2511986200	130344409	345.28	0.50
49	667622	384702	10872419766	79532	2589839248	130344409	345.28	0.50
50	677538	386108	11249366803	79528	2667588763	130344409	345.28	0.50
51	687598	387535	11627264331	79525	2745233253	130344409	345.28	0.51
52	697801	388982	12006123962	79522	2822771235	130344409	345.28	0.51
53	708149	390450	12385957356	79518	2900201230	130344409	345.28	0.51
54	718640	391940	12766776215	79515	2977521762	130344409	345.28	0.51
55	729276	393450	13148592267	79511	3054731357	130344409	345.28	0.51
56	740055	394980	13531417260	79508	3131828540	130344409	345.28	0.51
57	750978	396532	13915262952	79505	3208811834	130344409	345.28	0.51
58	762045	398104	14300141101	79502	3285679760	130344409	345.28	0.51

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 22 " PDT - 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]
<b>1.00</b>	53.55	0.00	4770.00	27500.00	0.00
<b>2.00</b>	43.82	0.00	57240.00	0.00	4.75
---	---	---	Ft = -7605	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 57240	Lb = 0	---
<b>3.00</b>	43.82	0.00	57240.00	0.00	-4.75
---	---	---	Ft = 7605	Fp = -61662	---
---	---	Pa = 6413	Ta = -4088	La = 0	---
---	---	Pb = -6413	Tb = 61328	Lb = 0	---
<b>4.00</b>	37.02	0.00	57240.00	0.00	4.75
---	---	---	Ft = -7605	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 57240	Lb = 0	---
<b>5.00</b>	37.02	0.00	57240.00	0.00	-4.75
---	---	---	Ft = 7605	Fp = -61662	---
---	---	Pa = 6413	Ta = -4088	La = 0	---
---	---	Pb = -6413	Tb = 61328	Lb = 0	---
<b>6.00</b>	30.22	0.00	48470.00	52000.00	4.75
---	---	---	Ft = 9015	Fp = 65126	---
---	---	Pa = 5789	Ta = 2178	La = 6558	---
---	---	Pb = -5789	Tb = 46292	Lb = 45442	---
<b>7.00</b>	30.22	0.00	57240.00	0.00	-4.75
---	---	---	Ft = 7605	Fp = -61662	---
---	---	Pa = 6413	Ta = -4088	La = 0	---
---	---	Pb = -6413	Tb = 61328	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Usa
2	710	5056	5538597	27500	30304789	0	345.28	0.07
3	1543	5401	10535958	27500	55531888	0	345.28	0.09
4	2499	5804	15932039	27500	80769354	0	345.28	0.10
5	3577	6267	21784323	27500	106017702	0	345.28	0.10
6	4778	6788	28150290	27500	131277472	-0	345.28	0.11
7	6102	7368	35087413	27500	156549228	-0	345.28	0.11
8	13143	-18484	11964702	27501	181373883	-0	345.28	0.11
9	20221	4553	22538353	27501	206262246	0	345.28	0.12
10	21630	5215	27854939	27502	231157183	0	345.28	0.13
11	23022	9581	36057233	27502	256057352	0	345.28	0.14
12	21299	125159	160356409	27501	280934881	0	345.28	0.17
13	23672	125914	280354117	27502	307189914	0	345.28	0.13
14	26108	126679	401143553	27502	333457430	0	345.28	0.16
15	34313	91849	497066041	27502	359784214	0	345.28	0.18
16	42580	124184	617305628	27503	386166404	0	345.28	0.20
17	45202	125009	737041520	27503	412557123	0	345.28	0.22
18	47887	125854	857633605	27503	438955517	-0	345.28	0.24
19	47428	243762	1079820408	27503	465338236	-0	345.28	0.28
20	47030	246169	1314865763	27503	491706070	-0	345.28	0.32
21	49902	247073	1550254848	27503	518080636	-0	345.28	0.36
22	69258	245405	1785254007	28181	545007801	-0	345.28	0.39
23	80855	247037	2020321193	34062	578549468	20301861	345.28	0.43
24	84852	247925	2238644274	34062	608728481	20301861	345.28	0.32
25	88926	248818	2457780752	34062	638913182	20301861	345.28	0.34
26	86974	295898	2707382602	52841	681143298	20301861	345.28	0.36
27	85099	358272	3034620676	79504	756406263	59002400	345.28	0.39
28	89402	359215	3349968087	79504	826216501	59002400	345.28	0.41
29	108026	360178	3666460438	79504	896096154	59002400	345.28	0.44
30	112482	361155	3983815765	79504	965976978	59002400	345.28	0.46
31	118308	362213	4322435004	79504	1040322829	59002400	345.28	0.41
32	124241	363271	4662056352	79504	1114671963	59002400	345.28	0.42
33	130280	364348	5002695863	79504	1189024100	59002400	345.28	0.44
34	136426	365445	5344362655	79504	1263377295	59002400	345.28	0.45
35	142678	366560	5687065735	79504	1337729586	59002400	345.28	0.46
36	170581	367698	6031151439	79505	1412155325	59002400	345.28	0.48
37	177046	368851	6376274692	79505	1486572338	59002400	345.28	0.49
38	185056	370079	6738892323	79505	1564502585	59002400	345.28	0.44
39	193205	371305	7102667798	79505	1642424005	59002400	345.28	0.44
40	201493	372551	7467619024	79505	1720336151	59002400	345.28	0.45
41	209919	373819	7833755678	79504	1798236670	59002400	345.28	0.46
42	218484	375107	8201087381	79504	1876123204	59002400	345.28	0.46
43	227187	376417	8569623692	79504	1953993392	59002400	345.28	0.47
44	267887	377749	8939699228	79505	2031917451	59002400	345.28	0.48
45	276867	379100	9310974542	79504	2109815019	59002400	345.28	0.48
46	286208	380463	9681022461	79504	2187176216	59002400	345.28	0.48
47	295692	381819	10052247962	79504	2264506920	59002400	345.28	0.48
48	305320	383196	10424658858	79504	2341804515	59002400	345.28	0.49
49	315092	384593	10798264159	79503	2419066668	59002400	345.28	0.49
50	325008	386011	11173072853	79503	2496291042	59002400	345.28	0.49
51	335068	387450	11549093908	79503	2573475309	59002400	345.28	0.49
52	345271	388909	11926336274	79502	2650617138	59002400	345.28	0.50
53	355619	390389	12304808885	79502	2727714206	59002400	345.28	0.50
54	366110	391890	12684520656	79502	2804764190	59002400	345.28	0.50
55	376746	393411	13065480485	79501	2881764770	59002400	345.28	0.50
56	387525	394953	13447697257	79501	2958713633	59002400	345.28	0.50
57	398448	396515	13831179838	79501	3035608464	59002400	345.28	0.50
58	409515	398099	14215937083	79500	3112446957	59002400	345.28	0.50

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 23 " PDT - 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]
<b>1.00</b>	53.55	3960.00	4770.00	27500.00	0.00
<b>2.00</b>	43.82	59440.00	57240.00	0.00	4.75
---	---	---	Ft = 67915	Fp = 20851	---
---	---	Pa = 57271	Ta = 36502	La = 0	---
---	---	Pb = 2169	Tb = 20738	Lb = 0	---
<b>3.00</b>	43.82	59440.00	57240.00	0.00	-4.75
---	---	---	Ft = 83125	Fp = -102473	---
---	---	Pa = 70098	Ta = -44677	La = 0	---
---	---	Pb = -10658	Tb = 101917	Lb = 0	---
<b>4.00</b>	37.02	51370.00	48470.00	52000.00	4.75
---	---	---	Ft = 69347	Fp = 25734	---
---	---	Pa = 51262	Ta = 26655	La = 38351	---
---	---	Pb = 108	Tb = 21815	Lb = 13649	---
<b>5.00</b>	37.02	59440.00	57240.00	0.00	-4.75
---	---	---	Ft = 83125	Fp = -102473	---
---	---	Pa = 70098	Ta = -44677	La = 0	---
---	---	Pb = -10658	Tb = 101917	Lb = 0	---
<b>6.00</b>	30.22	59440.00	57240.00	0.00	4.75
---	---	---	Ft = 67915	Fp = 20851	---
---	---	Pa = 57271	Ta = 36502	La = 0	---
---	---	Pb = 2169	Tb = 20738	Lb = 0	---
<b>7.00</b>	30.22	59440.00	57240.00	0.00	-4.75
---	---	---	Ft = 83125	Fp = -102473	---
---	---	Pa = 70098	Ta = -44677	La = 0	---
---	---	Pb = -10658	Tb = 101917	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	4670	5063	5662223	27502	30370633	0	345.28	0.07
3	5503	5408	10783215	27503	55664631	-0	345.28	0.09
4	6459	5813	16302915	27503	80970245	-0	345.28	0.10
5	7537	6277	22278860	27504	106288526	-0	345.28	0.11
6	8738	6799	28768597	27505	131620623	-0	345.28	0.11
7	10062	7381	35829671	27505	156967718	-0	345.28	0.11
8	77581	-44853	-16042647	27541	182686071	0	345.28	0.13
9	145137	674	509001	27576	209250944	0	345.28	0.14
10	146546	1335	5911150	27575	235785857	0	345.28	0.15
11	146900	8393	15802082	27574	262274488	0	345.28	0.16
12	144139	125357	150040349	27571	288677693	0	345.28	0.18
13	146512	126110	273893744	27571	316500690	0	345.28	0.15
14	148948	126873	398500988	27570	344300931	0	345.28	0.17
15	214626	21210	448575315	39881	381221336	0	345.28	0.19
16	280367	110602	564602602	65976	452045881	114726375	345.28	0.22
17	282989	111420	678259894	65973	517495656	114726375	345.28	0.25
18	285674	112257	792664724	65970	582877266	114726375	345.28	0.27
19	283146	240632	1020180944	78463	658412036	114726375	345.28	0.31
20	280680	237708	1252059435	79609	736803473	125113882	345.28	0.35
21	283552	238603	1485613775	79605	814772523	125113882	345.28	0.39
22	360491	189480	1688290988	79627	893316929	125113882	345.28	0.42
23	429672	232416	1902537567	79644	972302642	125113882	345.28	0.47
24	433669	233287	2115883212	79638	1044950634	125113882	345.28	0.35
25	437743	234166	2329816892	79633	1117489899	125113882	345.28	0.36
26	437648	320611	2601170546	79627	1189910390	125113882	345.28	0.39
27	437629	358626	2934248061	79622	1262211733	125113882	345.28	0.41
28	441932	359557	3256960750	79617	1334421033	125113882	345.28	0.44
29	460556	360515	3580589223	79616	1406623163	125113882	345.28	0.46
30	465012	361479	3904835073	79612	1478725420	125113882	345.28	0.48
31	470838	362523	4250506114	79607	1555325232	125113882	345.28	0.43
32	476771	363568	4596903344	79602	1631823377	125113882	345.28	0.44
33	482810	364633	4944057957	79598	1708228491	125113882	345.28	0.46
34	488956	365717	5291973848	79594	1784538930	125113882	345.28	0.47
35	495208	366820	5640655933	79590	1860753212	125113882	345.28	0.48
36	523111	367954	5990455248	79589	1936968545	125113882	345.28	0.50
37	529576	369094	6341015750	79585	2013079502	125113882	345.28	0.51
38	537586	370309	6709030045	79580	2092683368	125113882	345.28	0.45
39	545735	371522	7077911187	79576	2172181637	125113882	345.28	0.46
40	554023	372757	7447692980	79572	2251580602	125113882	345.28	0.47
41	562449	374013	7818384900	79568	2330878807	125113882	345.28	0.47
42	571014	375290	8189996909	79564	2410074863	125113882	345.28	0.48
43	579717	376587	8562539276	79560	2489167401	125113882	345.28	0.49
44	620417	377916	8936355024	79559	2568245692	125113882	345.28	0.49
45	629397	379254	9311097957	79555	2647210700	125113882	345.28	0.50
46	638738	380605	9684322541	79551	2725547635	125113882	345.28	0.49
47	648222	381949	10058457647	79547	2803770249	125113882	345.28	0.50
48	657850	383314	10433511640	79542	2881876541	125113882	345.28	0.50
49	667622	384700	10809495845	79538	2959865304	125113882	345.28	0.50
50	677538	386106	11186421675	79534	3037735322	125113882	345.28	0.50
51	687598	387533	11564300627	79530	3115485366	125113882	345.28	0.51
52	697801	388981	11943144269	79526	3193114196	125113882	345.28	0.51
53	708149	390449	12322964223	79522	3270620558	125113882	345.28	0.51
54	718640	391939	12703772154	79518	3348003185	125113882	345.28	0.51
55	729276	393449	13085579755	79514	3425260796	125113882	345.28	0.51
56	740055	394980	13468398744	79510	3502392096	125113882	345.28	0.51
57	750978	396531	13852240848	79506	3579395773	125113882	345.28	0.51
58	762045	398104	14237117801	79502	3656270501	125113882	345.28	0.51



## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 24 " PDT - 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]
<b>1.00</b>	53.55	0.00	4770.00	27500.00	0.00
<b>2.00</b>	43.82	0.00	57240.00	0.00	4.75
---	---	---	Ft = -7605	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 57240	Lb = 0	---
<b>3.00</b>	43.82	0.00	57240.00	0.00	-4.75
---	---	---	Ft = 7605	Fp = -61662	---
---	---	Pa = 6413	Ta = -4088	La = 0	---
---	---	Pb = -6413	Tb = 61328	Lb = 0	---
<b>4.00</b>	37.02	0.00	48470.00	52000.00	4.75
---	---	---	Ft = 9015	Fp = 65126	---
---	---	Pa = 5789	Ta = 2178	La = 6558	---
---	---	Pb = -5789	Tb = 46292	Lb = 45442	---
<b>5.00</b>	37.02	0.00	57240.00	0.00	-4.75
---	---	---	Ft = 7605	Fp = -61662	---
---	---	Pa = 6413	Ta = -4088	La = 0	---
---	---	Pb = -6413	Tb = 61328	Lb = 0	---
<b>6.00</b>	30.22	0.00	57240.00	0.00	4.75
---	---	---	Ft = -7605	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 57240	Lb = 0	---
<b>7.00</b>	30.22	0.00	57240.00	0.00	-4.75
---	---	---	Ft = 7605	Fp = -61662	---
---	---	Pa = 6413	Ta = -4088	La = 0	---
---	---	Pb = -6413	Tb = 61328	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Uso
2	710	5056	5538455	27500	30306068	0	345.28	0.07
3	1543	5401	10535509	27500	55535946	0	345.28	0.09
4	2499	5804	15931091	27500	80777911	0	345.28	0.10
5	3577	6267	21782663	27500	106032701	0	345.28	0.10
6	4778	6788	28147678	27500	131301073	0	345.28	0.11
7	6102	7368	35083585	27501	156583815	-0	345.28	0.11
8	13143	-18484	11958309	27501	181431646	0	345.28	0.11
9	20221	4553	22528013	27502	206355665	0	345.28	0.12
10	21630	5215	27840378	27502	231288734	0	345.28	0.13
11	23022	9581	36038181	27502	256229481	0	345.28	0.14
12	21299	125159	160333203	27502	281144541	0	345.28	0.17
13	23672	125914	280326043	27502	307443563	0	345.28	0.13
14	26108	126679	401110110	27502	333759580	0	345.28	0.16
15	37207	123515	520113694	29603	361616803	0	345.28	0.19
16	48369	126364	641156029	34062	395254918	19618950	345.28	0.21
17	50991	127189	763113121	34062	427995915	19618950	345.28	0.23
18	53676	128033	885922151	34062	460747487	19618950	345.28	0.25
19	50322	228266	1091609397	75671	527682771	19618950	345.28	0.29
20	47030	237399	1320215399	79503	604521073	54201114	345.28	0.33
21	49902	238303	1547283005	79503	680240120	54201114	345.28	0.37
22	66363	214173	1758816053	79504	756072894	54201114	345.28	0.40
23	75066	236088	1975992010	79505	831948766	54201114	345.28	0.44
24	79063	236976	2184609110	79505	901867111	54201114	345.28	0.33
25	83137	237869	2394043791	79505	971790518	54201114	345.28	0.35
26	84080	305208	2647886715	79505	1041700870	54201114	345.28	0.37
27	85099	358272	2974737186	79504	1111597930	54201114	345.28	0.40
28	89402	359215	3290069203	79504	1181499750	54201114	345.28	0.42
29	108026	360178	3606544227	79505	1251482482	54201114	345.28	0.44
30	112482	361155	3923882771	79505	1321463145	54201114	345.28	0.46
31	118308	362213	4262484609	79505	1395912505	54201114	345.28	0.41
32	124241	363271	4602089007	79505	1470362473	54201114	345.28	0.43
33	130280	364348	4942711958	79505	1544813128	54201114	345.28	0.44
34	136426	365445	5284362613	79505	1619262323	54201114	345.28	0.45
35	142678	366560	5627050011	79505	1693707902	54201114	345.28	0.47
36	170581	367697	5971118325	79506	1768237096	54201114	345.28	0.48
37	177046	368851	6316224867	79506	1842753514	54201114	345.28	0.49
38	185056	370079	6678825634	79506	1920784084	54201114	345.28	0.44
39	193205	371305	7042584881	79506	1998802045	54201114	345.28	0.45
40	201493	372551	7407520471	79506	2076807203	54201114	345.28	0.45
41	209919	373819	7773642114	79505	2154797024	54201114	345.28	0.46
42	218484	375107	8140959458	79505	2232768979	54201114	345.28	0.47
43	227187	376417	8509482090	79505	2310720537	54201114	345.28	0.47
44	267887	377749	8879542906	79506	2388732170	54201114	345.28	0.48
45	276867	379100	9250804394	79505	2466711990	54201114	345.28	0.48
46	286208	380463	9620839468	79505	2544149592	54201114	345.28	0.48
47	295692	381819	9992053042	79505	2621551255	54201114	345.28	0.48
48	305320	383196	10364452952	79504	2698914206	54201114	345.28	0.49
49	315092	384593	10738048227	79504	2776235999	54201114	345.28	0.49
50	325008	386011	11112847874	79504	2853514189	54201114	345.28	0.49
51	335068	387450	11488860881	79503	2930746337	54201114	345.28	0.49
52	345271	388909	11866096214	79503	3007930007	54201114	345.28	0.50
53	355619	390389	12244562825	79502	3085062768	54201114	345.28	0.50
54	366110	391890	12624269647	79502	3162142193	54201114	345.28	0.50
55	376746	393411	13005225595	79502	3239165858	54201114	345.28	0.50
56	387525	394953	13387439572	79501	3316131346	54201114	345.28	0.50
57	398448	396515	13770920462	79501	3393036242	54201114	345.28	0.50
58	409515	398099	14155677135	79500	3469878136	54201114	345.28	0.50

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 25 " PDT - 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]
<b>1.00</b>	53.55	7910.00	9540.00	5000.00	0.00
<b>2.00</b>	43.82	51370.00	48470.00	52000.00	4.75
---	---	---	Ft = 69347	Fp = 25734	---
---	---	Pa = 51262	Ta = 26655	La = 38351	---
---	---	Pb = 108	Tb = 21815	Lb = 13649	---
<b>3.00</b>	43.82	59440.00	57240.00	0.00	-4.75
---	---	---	Ft = 83125	Fp = -102473	---
---	---	Pa = 70098	Ta = -44677	La = 0	---
---	---	Pb = -10658	Tb = 101917	Lb = 0	---
<b>4.00</b>	37.02	51370.00	48470.00	52000.00	4.75
---	---	---	Ft = 69347	Fp = 25734	---
---	---	Pa = 51262	Ta = 26655	La = 38351	---
---	---	Pb = 108	Tb = 21815	Lb = 13649	---
<b>5.00</b>	37.02	59440.00	57240.00	0.00	-4.75
---	---	---	Ft = 83125	Fp = -102473	---
---	---	Pa = 70098	Ta = -44677	La = 0	---
---	---	Pb = -10658	Tb = 101917	Lb = 0	---
<b>6.00</b>	30.22	59440.00	57240.00	0.00	4.75
---	---	---	Ft = 67915	Fp = 20851	---
---	---	Pa = 57271	Ta = 36502	La = 0	---
---	---	Pb = 2169	Tb = 20738	Lb = 0	---
<b>7.00</b>	30.22	59440.00	57240.00	0.00	-4.75
---	---	---	Ft = 83125	Fp = -102473	---
---	---	Pa = 70098	Ta = -44677	La = 0	---
---	---	Pb = -10658	Tb = 101917	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Usa
2	8620	9838	11037624	5006	5650807	0	345.28	0.03
3	9453	10184	20650209	5006	10389570	0	345.28	0.04
4	10409	10589	30659788	5007	15143039	-0	345.28	0.04
5	11487	11052	41123729	5008	19913085	0	345.28	0.05
6	12688	11575	52099456	5009	24701615	0	345.28	0.05
7	14012	12157	63644403	5009	29510540	-0	345.28	0.05
8	78526	-70323	-16920925	39642	61957109	0	345.28	0.05
9	143078	-4412	260437	43446	104159778	111120350	345.28	0.10
10	144486	-3751	934269	43446	145317774	111120350	345.28	0.12
11	143810	2460	5554125	43562	186505474	111120350	345.28	0.13
12	140019	121345	134070530	57089	240383859	119989836	345.28	0.17
13	142392	122098	253900816	57088	296575428	119989836	345.28	0.15
14	144828	122862	374487569	57087	352756805	119989836	345.28	0.17
15	210506	17197	420499817	69406	418277599	119989836	345.28	0.19
16	276247	106586	532426569	95509	517915092	234716210	345.28	0.23
17	278869	107405	641989589	95506	612174466	234716210	345.28	0.26
18	281554	108242	752307024	95502	706358029	234716210	345.28	0.28
19	279026	236618	975746479	107994	810666826	234716210	345.28	0.33
20	276560	233695	1203559231	109138	917801933	245103718	345.28	0.37
21	279432	234590	1433056281	109134	1024497897	245103718	345.28	0.41
22	356371	185465	1631646220	109163	1131959587	245103718	345.28	0.44
23	425552	228400	1841783841	109185	1240012741	245103718	345.28	0.48
24	429549	229272	2051354882	109177	1339411519	245103718	345.28	0.36
25	433623	230151	2261523516	109170	1438673856	245103718	345.28	0.38
26	433528	316597	2529121766	109163	1537784729	245103718	345.28	0.40
27	433509	354612	2858453618	109156	1636743121	245103718	345.28	0.43
28	437812	355544	3177428927	109151	1735584480	245103718	345.28	0.45
29	456436	356502	3497323525	109150	1834421042	245103718	345.28	0.47
30	460892	357466	3817844403	109143	1933129535	245103718	345.28	0.50
31	466718	358511	4159562264	109137	2038004139	245103718	345.28	0.44
32	472651	359556	4502015619	109132	2142747858	245103718	345.28	0.45
33	478690	360622	4845234930	109126	2247371534	245103718	345.28	0.47
34	484836	361707	5189224216	109121	2351872698	245103718	345.28	0.48
35	491088	362810	5533988490	109116	2456249111	245103718	345.28	0.49
36	518991	363944	5879873307	109115	2560630135	245103718	345.28	0.50
37	525456	365085	6226528587	109109	2664875035	245103718	345.28	0.51
38	533466	366301	6590462616	109104	2773910909	245103718	345.28	0.46
39	541615	367514	6955272966	109098	2882808702	245103718	345.28	0.47
40	549903	368750	7320992867	109093	2991576441	245103718	345.28	0.48
41	558329	370006	7687631852	109088	3100211984	245103718	345.28	0.48
42	566894	371283	8055199937	109083	3208713290	245103718	345.28	0.49
43	575597	372581	8423707433	109078	3317078351	245103718	345.28	0.49
44	616297	373909	8793492348	109076	3425426462	245103718	345.28	0.50
45	625277	375249	9164213985	109071	3533624974	245103718	345.28	0.50
46	634618	376600	9533452953	109066	3640968328	245103718	345.28	0.50
47	644102	377945	9903611932	109060	3748160369	245103718	345.28	0.50
48	653730	379310	10274699373	109055	3855198282	245103718	345.28	0.51
49	663502	380696	10646726624	109049	3962080315	245103718	345.28	0.51
50	673418	382102	11019705117	109044	4068804703	245103718	345.28	0.51
51	683478	383530	11393646374	109039	4175369673	245103718	345.28	0.51
52	693681	384978	11768561983	109033	4281773440	245103718	345.28	0.51
53	704029	386447	12144463589	109028	4388014208	245103718	345.28	0.52
54	714520	387937	12521362878	109023	4494090163	245103718	345.28	0.52
55	725156	389447	12899271570	109018	4599999481	245103718	345.28	0.52
56	735935	390979	13278201404	109013	4705740319	245103718	345.28	0.52
57	746858	392531	13658164134	109008	4811310816	245103718	345.28	0.52
58	757925	394104	14039171519	109003	4916709096	245103718	345.28	0.52

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 26 " PDT - 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]
<b>1.00</b>	53.55	0.00	9540.00	5000.00	0.00
<b>2.00</b>	43.82	0.00	48470.00	52000.00	4.75
---	---	---	Ft = 9015	Fp = 65126	---
---	---	Pa = 5789	Ta = 2178	La = 6558	---
---	---	Pb = -5789	Tb = 46292	Lb = 45442	---
<b>3.00</b>	43.82	0.00	57240.00	0.00	-4.75
---	---	---	Ft = 7605	Fp = -61662	---
---	---	Pa = 6413	Ta = -4088	La = 0	---
---	---	Pb = -6413	Tb = 61328	Lb = 0	---
<b>4.00</b>	37.02	0.00	48470.00	52000.00	4.75
---	---	---	Ft = 9015	Fp = 65126	---
---	---	Pa = 5789	Ta = 2178	La = 6558	---
---	---	Pb = -5789	Tb = 46292	Lb = 45442	---
<b>5.00</b>	37.02	0.00	57240.00	0.00	-4.75
---	---	---	Ft = 7605	Fp = -61662	---
---	---	Pa = 6413	Ta = -4088	La = 0	---
---	---	Pb = -6413	Tb = 61328	Lb = 0	---
<b>6.00</b>	30.22	0.00	57240.00	0.00	4.75
---	---	---	Ft = -7605	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 57240	Lb = 0	---
<b>7.00</b>	30.22	0.00	57240.00	0.00	-4.75
---	---	---	Ft = 7605	Fp = -61662	---
---	---	Pa = 6413	Ta = -4088	La = 0	---
---	---	Pb = -6413	Tb = 61328	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	710	9826	10794173	5000	5517581	0	345.28	0.03
3	1543	10171	20165274	5000	10120881	-0	345.28	0.04
4	2499	10574	29935645	5000	14736316	-0	345.28	0.04
5	3577	11037	40162700	5000	19365295	-0	345.28	0.04
6	4778	11558	50903851	5001	24009229	-0	345.28	0.04
7	6102	12138	62216509	5001	28669536	-0	345.28	0.05
8	16037	8825	70116956	10917	37926628	-0	345.28	0.05
9	26010	11503	81750422	11561	48802353	19002296	345.28	0.06
10	27418	12165	93483847	11561	59514952	19002296	345.28	0.07
11	25916	14034	106499353	11954	70444830	19002296	345.28	0.07
12	21299	121159	221240437	57002	123881309	48530652	345.28	0.13
13	23672	121914	337448557	57002	178170645	48530652	345.28	0.13
14	26108	122679	454446724	57003	232485370	48530652	345.28	0.16
15	37207	119515	569664175	59104	288367308	48530652	345.28	0.19
16	48369	122364	686919485	63563	350056779	68149602	345.28	0.22
17	50991	123189	805088053	63563	410856482	68149602	345.28	0.24
18	53676	124034	924107144	63563	471673339	68149602	345.28	0.26
19	50322	224266	1126003352	105172	566666025	68149602	345.28	0.30
20	47030	233399	1350817540	109004	671553322	102731766	345.28	0.35
21	49902	234304	1574092364	109004	775326005	102731766	345.28	0.39
22	66363	210173	1781830541	109005	879245345	102731766	345.28	0.42
23	75066	232088	1995210069	109006	983222211	102731766	345.28	0.46
24	79063	232976	2200328029	109006	1079037181	102731766	345.28	0.34
25	83137	233869	2406262771	109006	1174860483	102731766	345.28	0.36
26	84080	301208	2656605408	109006	1270668447	102731766	345.28	0.38
27	85099	354272	2979955314	109006	1366460611	102731766	345.28	0.41
28	89402	355215	3291786194	109006	1462260145	102731766	345.28	0.43
29	108026	356178	3604758012	109007	1558165506	102731766	345.28	0.46
30	112482	357155	3918592890	109007	1654069470	102731766	345.28	0.48
31	118308	358213	4253466861	109007	1756098696	102731766	345.28	0.42
32	124241	359271	4589342895	109007	1858129943	102731766	345.28	0.44
33	130280	360348	4926237045	109007	1960163163	102731766	345.28	0.45
34	136426	361445	5264158533	109007	2062195499	102731766	345.28	0.46
35	142678	362560	5603116476	109007	2164224082	102731766	345.28	0.48
36	170581	363698	5943452896	109008	2266362790	102731766	345.28	0.49
37	177046	364851	6284827482	109007	2368485780	102731766	345.28	0.50
38	185056	366079	6643519641	109007	2475426508	102731766	345.28	0.45
39	193205	367305	7003370255	109007	2582351629	102731766	345.28	0.46
40	201493	368551	7364397244	109007	2689260764	102731766	345.28	0.46
41	209919	369819	7726610410	109007	2796150520	102731766	345.28	0.47
42	218484	371107	8090019501	109007	2903017505	102731766	345.28	0.47
43	227187	372417	8454634202	109007	3009858325	102731766	345.28	0.48
44	267887	373749	8820785143	109007	3116778755	102731766	345.28	0.49
45	276867	375100	9188137432	109007	3223657931	102731766	345.28	0.49
46	286208	376463	9554289570	109006	3329796288	102731766	345.28	0.49
47	295692	377819	9921621068	109006	3435887789	102731766	345.28	0.49
48	305320	379196	10290139876	109006	3541928705	102731766	345.28	0.50
49	315092	380593	10659855125	109005	3647915729	102731766	345.28	0.50
50	325008	382011	11030775926	109005	3753845559	102731766	345.28	0.50
51	335068	383450	11402911370	109004	3859714899	102731766	345.28	0.50
52	345271	384909	11776270529	109004	3965520458	102731766	345.28	0.50
53	355619	386389	12150862458	109003	4071258948	102731766	345.28	0.50
54	366110	387890	12526696192	109003	4176927088	102731766	345.28	0.51
55	376746	389411	12903780754	109002	4282521604	102731766	345.28	0.51
56	387525	390953	13282125146	109001	4388039224	102731766	345.28	0.51
57	398448	392515	13661738359	109001	4493476685	102731766	345.28	0.51
58	409515	394099	14042629365	109000	4598830726	102731766	345.28	0.51

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 27 " PDT - 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]
<b>1.00</b>	53.55	6330.00	4900.00	36000.00	0.00
<b>2.00</b>	43.82	79360.00	49660.00	0.00	4.75
---	---	---	Ft = 94231	Fp = -991	---
---	---	Pa = 79463	Ta = 50646	La = 0	---
---	---	Pb = -103	Tb = -986	Lb = 0	---
<b>3.00</b>	43.82	79360.00	49660.00	0.00	-4.75
---	---	---	Ft = 107427	Fp = -107984	---
---	---	Pa = 90591	Ta = -57738	La = 0	---
---	---	Pb = -11231	Tb = 107398	Lb = 0	---
<b>4.00</b>	37.02	79360.00	49660.00	0.00	4.75
---	---	---	Ft = 94231	Fp = -991	---
---	---	Pa = 79463	Ta = 50646	La = 0	---
---	---	Pb = -103	Tb = -986	Lb = 0	---
<b>5.00</b>	37.02	79360.00	49660.00	0.00	-4.75
---	---	---	Ft = 107427	Fp = -107984	---
---	---	Pa = 90591	Ta = -57738	La = 0	---
---	---	Pb = -11231	Tb = 107398	Lb = 0	---
<b>6.00</b>	30.22	67970.00	41580.00	63000.00	4.75
---	---	---	Ft = 95050	Fp = 10003	---
---	---	Pa = 68142	Ta = 33415	La = 57224	---
---	---	Pb = -172	Tb = 8165	Lb = 5776	---
<b>7.00</b>	30.22	79360.00	49660.00	0.00	-4.75
---	---	---	Ft = 107427	Fp = -107984	---
---	---	Pa = 90591	Ta = -57738	La = 0	---
---	---	Pb = -11231	Tb = 107398	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Uso
2	7040	4983	5650972	36005	39787717	0	345.28	0.09
3	7873	5070	10495666	36006	72925899	-0	345.28	0.12
4	8829	5172	15457018	36007	106075011	-0	345.28	0.13
5	9907	5289	20551562	36007	139236174	-0	345.28	0.14
6	11108	5421	25795860	36008	172410705	-0	345.28	0.14
7	12432	5568	31206474	36009	205599959	-0	345.28	0.14
8	101293	-40078	-14326224	36075	239396203	-0	345.28	0.16
9	190192	-919	-334837	36139	274404349	-0	345.28	0.19
10	191601	-755	3614767	36138	309349700	0	345.28	0.20
11	190532	4944	11043484	36135	344193922	-0	345.28	0.21
12	186349	105982	125927246	36129	378894915	0	345.28	0.23
13	188722	106167	231263106	36127	415432442	0	345.28	0.17
14	191158	106355	336792289	36126	451913144	0	345.28	0.19
15	281183	44877	399951341	36181	489409806	0	345.28	0.21
16	371271	99903	505997615	36232	527855004	0	345.28	0.23
17	373893	100098	609832562	36227	566189910	-0	345.28	0.25
18	376578	100296	713775107	36220	604413123	-0	345.28	0.26
19	373658	212636	917789086	36211	642463711	-0	345.28	0.30
20	370800	207102	1120927215	36201	680345296	-0	345.28	0.33
21	373672	207312	1325612199	36193	718117453	-0	345.28	0.36
22	466293	118885	1472868830	42139	760502830	-0	345.28	0.38
23	551156	183610	1627897134	93483	860743794	177145989	345.28	0.42
24	555153	183806	1798700704	93471	946571914	177145989	345.28	0.31
25	559227	184007	1969462370	93461	1032268123	177145989	345.28	0.32
26	557675	262026	2191764375	95837	1119344454	177145989	345.28	0.34
27	556199	299981	2473838082	99216	1210465968	182064957	345.28	0.37
28	560502	300198	2745226705	99208	1300775178	182064957	345.28	0.39
29	579126	300430	3016816763	99204	1391056841	182064957	345.28	0.41
30	583582	300654	3288346020	99195	1481207947	182064957	345.28	0.43
31	589408	300897	3577153521	99187	1576973662	182064957	345.28	0.38
32	595341	301142	3865906182	99178	1672602329	182064957	345.28	0.39
33	601380	301393	4154624853	99170	1768104161	182064957	345.28	0.40
34	607526	301648	4443301127	99163	1863476192	182064957	345.28	0.41
35	613778	301908	4731927868	99155	1958715820	182064957	345.28	0.42
36	641681	302185	5020787598	99152	2053931036	182064957	345.28	0.43
37	648146	302454	5309571704	99144	2149003377	182064957	345.28	0.44
38	656156	302742	5611954157	99136	2248424226	182064957	345.28	0.40
39	664305	303029	5914274771	99129	2347698504	182064957	345.28	0.40
40	672593	303323	6216555185	99122	2446834458	182064957	345.28	0.41
41	681019	303623	6518791822	99115	2545830068	182064957	345.28	0.41
42	689584	303927	6820981734	99108	2644683486	182064957	345.28	0.42
43	698287	304237	7123122345	99101	2743392941	182064957	345.28	0.42
44	738987	304563	7425487781	99098	2842059757	182064957	345.28	0.43
45	747967	304882	7727779173	99091	2940571356	182064957	345.28	0.43
46	757308	305205	8028023885	99084	3038285615	182064957	345.28	0.43
47	766792	305526	8328185518	99077	3135843512	182064957	345.28	0.43
48	776420	305853	8628260202	99069	3233242592	182064957	345.28	0.43
49	786192	306185	8928247049	99062	3330481496	182064957	345.28	0.43
50	796108	306522	9228145286	99056	3427558868	182064957	345.28	0.43
51	806168	306864	9527954253	99049	3524473365	182064957	345.28	0.43
52	816371	307212	9827673382	99042	3621223643	182064957	345.28	0.44
53	826719	307565	10127302181	99035	3717808361	182064957	345.28	0.44
54	837210	307923	10426840221	99029	3814226175	182064957	345.28	0.44
55	847846	308287	10726287122	99022	3910475734	182064957	345.28	0.44
56	858625	308656	11025642541	99016	4006555680	182064957	345.28	0.44
57	869548	309031	11324906162	99009	4102464648	182064957	345.28	0.44
58	880615	309411	11624077688	99003	4198201258	182064957	345.28	0.44



## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 28 " PDT - 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]
<b>1.00</b>	53.55	0.00	4900.00	36000.00	0.00
<b>2.00</b>	43.82	0.00	49660.00	0.00	4.75
---	---	---	Ft = -6598	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 49660	Lb = 0	---
<b>3.00</b>	43.82	0.00	49660.00	0.00	-4.75
---	---	---	Ft = 6598	Fp = -53496	---
---	---	Pa = 5564	Ta = -3546	La = 0	---
---	---	Pb = -5564	Tb = 53206	Lb = 0	---
<b>4.00</b>	37.02	0.00	49660.00	0.00	4.75
---	---	---	Ft = -6598	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 49660	Lb = 0	---
<b>5.00</b>	37.02	0.00	49660.00	0.00	-4.75
---	---	---	Ft = 6598	Fp = -53496	---
---	---	Pa = 5564	Ta = -3546	La = 0	---
---	---	Pb = -5564	Tb = 53206	Lb = 0	---
<b>6.00</b>	30.22	0.00	41580.00	63000.00	4.75
---	---	---	Ft = 17071	Fp = 63670	---
---	---	Pa = 9804	Ta = 2420	La = 13764	---
---	---	Pb = -9804	Tb = 39160	Lb = 49236	---
<b>7.00</b>	30.22	0.00	49660.00	0.00	-4.75
---	---	---	Ft = 6598	Fp = -53496	---
---	---	Pa = 5564	Ta = -3546	La = 0	---
---	---	Pb = -5564	Tb = 53206	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Uso
2	710	4971	5481532	36000	39671638	0	345.28	0.09
3	1543	5057	10156372	36000	72696020	-0	345.28	0.12
4	2499	5158	14947406	36000	105733856	-0	345.28	0.13
5	3577	5274	19871010	36000	138785810	-0	345.28	0.14
6	4778	5404	24943558	36000	171852571	-0	345.28	0.14
7	6102	5549	30181429	36001	204934864	-0	345.28	0.14
8	12718	-17267	8989959	36001	237425615	-0	345.28	0.15
9	19372	2322	16656635	36002	269993836	0	345.28	0.16
10	20780	2487	19393670	36002	302570853	0	345.28	0.17
11	22597	5855	24266059	36002	335159831	0	345.28	0.18
12	21299	105696	129486736	36002	367724280	0	345.28	0.20
13	23672	105885	230387564	36002	402091579	0	345.28	0.15
14	26108	106076	331524783	36002	436474921	0	345.28	0.17
15	33888	75373	410608522	36003	470930408	0	345.28	0.18
16	41730	102929	510298479	36003	505453274	0	345.28	0.20
17	44353	103135	609066601	36003	539987278	-0	345.28	0.22
18	47038	103345	708081190	36004	574531296	-0	345.28	0.23
19	47003	205106	894742547	36003	609058993	-0	345.28	0.26
20	47030	206647	1092053370	36003	643571106	-0	345.28	0.29
21	49902	206873	1289131069	36003	678091684	0	345.28	0.32
22	70840	223276	1497701440	37426	713696698	-0	345.28	0.35
23	84020	206217	1699866152	49769	763152491	42607858	345.28	0.39
24	88018	206439	1881705707	49769	807191532	42607858	345.28	0.29
25	92091	206661	2063765363	49769	851236535	42607858	345.28	0.30
26	88557	233534	2262412980	70116	908316718	42607858	345.28	0.32
27	85099	299483	2537615271	99005	1001172779	84539902	345.28	0.34
28	89402	299719	2800717372	99005	1088121569	84539902	345.28	0.36
29	108026	299960	3064281286	99005	1175158721	84539902	345.28	0.38
30	112482	300204	3328065431	99005	1262196789	84539902	345.28	0.40
31	118308	300467	3608951646	99006	1354795693	84539902	345.28	0.35
32	124241	300731	3890098013	99006	1447398238	84539902	345.28	0.37
33	130280	301000	4171507569	99006	1540004136	84539902	345.28	0.38
34	136426	301273	4453177572	99006	1632610931	84539902	345.28	0.39
35	142678	301551	4735105203	99006	1725216148	84539902	345.28	0.40
36	170581	301836	5017565381	99006	1817914526	84539902	345.28	0.41
37	177046	302124	5300263651	99006	1910601361	84539902	345.28	0.42
38	185056	302430	5596609884	99006	2007663320	84539902	345.28	0.38
39	193205	302735	5893223766	99006	2104713656	84539902	345.28	0.38
40	201493	303046	6190108420	99006	2201751853	84539902	345.28	0.39
41	209919	303361	6487260149	99006	2298774953	84539902	345.28	0.39
42	218484	303682	6784675229	99006	2395779990	84539902	345.28	0.40
43	227187	304008	7082349901	99005	2492763995	84539902	345.28	0.40
44	267887	304342	7380546861	99006	2589816120	84539902	345.28	0.41
45	276867	304678	7678976178	99006	2686834368	84539902	345.28	0.41
46	286208	305017	7975685223	99005	2783183707	84539902	345.28	0.41
47	295692	305354	8272610588	99005	2879494163	84539902	345.28	0.41
48	305320	305697	8569747409	99005	2975762456	84539902	345.28	0.41
49	315092	306045	8867091825	99004	3071985657	84539902	345.28	0.42
50	325008	306397	9164639975	99004	3168160842	84539902	345.28	0.42
51	335068	306755	9462388001	99004	3264285091	84539902	345.28	0.42
52	345271	307118	9760332045	99003	3360355485	84539902	345.28	0.42
53	355619	307486	10058468253	99003	3456369112	84539902	345.28	0.42
54	366110	307860	10356792774	99002	3552323063	84539902	345.28	0.42
55	376746	308238	10655301761	99002	3648214432	84539902	345.28	0.42
56	387525	308621	10953991370	99001	3744040318	84539902	345.28	0.42
57	398448	309010	11252857764	99001	3839797826	84539902	345.28	0.42
58	409515	309404	11551897109	99000	3935484064	84539902	345.28	0.42

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 29 " PDT - 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]
<b>1.00</b>	53.55	6330.00	4900.00	36000.00	0.00
<b>2.00</b>	43.82	79360.00	49660.00	0.00	4.75
---	---	---	Ft = 94231	Fp = -991	---
---	---	Pa = 79463	Ta = 50646	La = 0	---
---	---	Pb = -103	Tb = -986	Lb = 0	---
<b>3.00</b>	43.82	79360.00	49660.00	0.00	-4.75
---	---	---	Ft = 107427	Fp = -107984	---
---	---	Pa = 90591	Ta = -57738	La = 0	---
---	---	Pb = -11231	Tb = 107398	Lb = 0	---
<b>4.00</b>	37.02	67970.00	41580.00	63000.00	4.75
---	---	---	Ft = 95050	Fp = 10003	---
---	---	Pa = 68142	Ta = 33415	La = 57224	---
---	---	Pb = -172	Tb = 8165	Lb = 5776	---
<b>5.00</b>	37.02	79360.00	49660.00	0.00	-4.75
---	---	---	Ft = 107427	Fp = -107984	---
---	---	Pa = 90591	Ta = -57738	La = 0	---
---	---	Pb = -11231	Tb = 107398	Lb = 0	---
<b>6.00</b>	30.22	79360.00	49660.00	0.00	4.75
---	---	---	Ft = 94231	Fp = -991	---
---	---	Pa = 79463	Ta = 50646	La = 0	---
---	---	Pb = -103	Tb = -986	Lb = 0	---
<b>7.00</b>	30.22	79360.00	49660.00	0.00	-4.75
---	---	---	Ft = 107427	Fp = -107984	---
---	---	Pa = 90591	Ta = -57738	La = 0	---
---	---	Pb = -11231	Tb = 107398	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Us0
2	7040	4983	5645949	36006	39809018	0	345.28	0.09
3	7873	5070	10485025	36007	72971018	-0	345.28	0.12
4	8829	5172	15440080	36008	106146829	0	345.28	0.13
5	9907	5289	20527561	36009	139337946	0	345.28	0.14
6	11108	5420	25763940	36010	172546052	0	345.28	0.14
7	12432	5567	31165695	36011	205772872	-0	345.28	0.14
8	101293	-40083	-14437697	36090	239868877	0	345.28	0.16
9	190192	-929	-578971	36169	275439540	0	345.28	0.19
10	191601	-765	3237140	36168	310950948	0	345.28	0.20
11	190532	4935	10533320	36164	346357176	0	345.28	0.21
12	186349	105973	125287715	36157	381606738	0	345.28	0.23
13	188722	106158	230485707	36154	418728901	0	345.28	0.17
14	191158	106346	335875575	36152	455800382	0	345.28	0.19
15	275523	-21222	350860241	54541	506625741	0	345.28	0.20
16	359950	82641	441026513	93497	608175680	171187176	345.28	0.24
17	362572	82837	528016092	93490	701677975	171187176	345.28	0.26
18	365257	83036	615135762	93483	795048174	171187176	345.28	0.28
19	362303	203665	809123529	98760	892549226	171187176	345.28	0.32
20	359410	198995	1004416657	99235	991090232	175582685	345.28	0.35
21	362282	199207	1201031899	99226	1089330810	175582685	345.28	0.38
22	460564	156051	1370680292	99274	1188528175	175582685	345.28	0.41
23	551087	192745	1550156146	99312	1288480024	175582685	345.28	0.45
24	555084	192942	1728806919	99297	1380339016	175582685	345.28	0.33
25	559158	193144	1907427188	99285	1472000016	175582685	345.28	0.35
26	557640	267570	2135297918	99273	1563446225	175582685	345.28	0.37
27	556199	299969	2416141810	99260	1654678235	175582685	345.28	0.39
28	560502	300186	2687426587	99250	1745744465	175582685	345.28	0.41
29	579126	300419	2958916564	99245	1836755664	175582685	345.28	0.43
30	583582	300643	3230351889	99235	1927591456	175582685	345.28	0.44
31	589408	300887	3519065754	99224	2024039639	175582685	345.28	0.39
32	595341	301132	3807730595	99214	2120308423	175582685	345.28	0.40
33	601380	301384	4096366521	99204	2216413326	175582685	345.28	0.41
34	607526	301639	4384964939	99195	2312352773	175582685	345.28	0.42
35	613778	301900	4673518534	99186	2408125485	175582685	345.28	0.43
36	641681	302177	4962307272	99182	2503858056	175582685	345.28	0.44
37	648146	302447	5251024947	99173	2599414512	175582685	345.28	0.45
38	656156	302735	5553342414	99163	2699308911	175582685	345.28	0.40
39	664305	303023	5855602356	99154	2799025329	175582685	345.28	0.41
40	672593	303317	6157825985	99145	2898575067	175582685	345.28	0.41
41	681019	303617	6460009609	99137	2997956977	175582685	345.28	0.42
42	689584	303922	6762150164	99128	3097170041	175582685	345.28	0.42
43	698287	304232	7064244969	99120	3196213258	175582685	345.28	0.43
44	738987	304558	7366566143	99117	3295202581	175582685	345.28	0.43
45	747967	304878	7668816810	99108	3394010920	175582685	345.28	0.43
46	757308	305201	7969024458	99100	3491995233	175582685	345.28	0.43
47	766792	305523	8269152347	99091	3589799000	175582685	345.28	0.43
48	776420	305850	8569196546	99083	3687420196	175582685	345.28	0.44
49	786192	306182	8869156091	99074	3784858019	175582685	345.28	0.44
50	796108	306519	9169030139	99066	3882111632	175582685	345.28	0.44
51	806168	306862	9468817963	99058	3979180174	175582685	345.28	0.44
52	816371	307210	9768518934	99050	4076062754	175582685	345.28	0.44
53	826719	307563	10068132501	99042	4172758452	175582685	345.28	0.44
54	837210	307922	10367658181	99034	4269266318	175582685	345.28	0.44
55	847846	308286	10667095544	99026	4365585370	175582685	345.28	0.44
56	858625	308655	10966444200	99019	4461714594	175582685	345.28	0.44
57	869548	309030	11265703788	99011	4557652942	175582685	345.28	0.44
58	880615	309410	11564873972	99004	4653399337	175582685	345.28	0.44

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 30 " PDT - 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]
<b>1.00</b>	53.55	0.00	4900.00	36000.00	0.00
<b>2.00</b>	43.82	0.00	49660.00	0.00	4.75
---	---	---	Ft = -6598	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 49660	Lb = 0	---
<b>3.00</b>	43.82	0.00	49660.00	0.00	-4.75
---	---	---	Ft = 6598	Fp = -53496	---
---	---	Pa = 5564	Ta = -3546	La = 0	---
---	---	Pb = -5564	Tb = 53206	Lb = 0	---
<b>4.00</b>	37.02	0.00	41580.00	63000.00	4.75
---	---	---	Ft = 17071	Fp = 63670	---
---	---	Pa = 9804	Ta = 2420	La = 13764	---
---	---	Pb = -9804	Tb = 39160	Lb = 49236	---
<b>5.00</b>	37.02	0.00	49660.00	0.00	-4.75
---	---	---	Ft = 6598	Fp = -53496	---
---	---	Pa = 5564	Ta = -3546	La = 0	---
---	---	Pb = -5564	Tb = 53206	Lb = 0	---
<b>6.00</b>	30.22	0.00	49660.00	0.00	4.75
---	---	---	Ft = -6598	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 49660	Lb = 0	---
<b>7.00</b>	30.22	0.00	49660.00	0.00	-4.75
---	---	---	Ft = 6598	Fp = -53496	---
---	---	Pa = 5564	Ta = -3546	La = 0	---
---	---	Pb = -5564	Tb = 53206	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Usa
2	710	4971	5481439	36000	39673239	0	345.28	0.09
3	1543	5057	10156077	36000	72701100	-0	345.28	0.12
4	2499	5158	14946784	36000	105744570	0	345.28	0.13
5	3577	5274	19869920	36000	138804589	-0	345.28	0.14
6	4778	5404	24941843	36001	171882121	0	345.28	0.14
7	6102	5549	30178915	36001	204978168	0	345.28	0.14
8	12718	-17267	8985815	36001	237496999	0	345.28	0.15
9	19372	2322	16650008	36002	270107986	0	345.28	0.16
10	20780	2487	19384381	36002	302730872	0	345.28	0.17
11	22597	5855	24253875	36002	335369718	0	345.28	0.18
12	21299	105696	129471824	36002	367981157	0	345.28	0.20
13	23672	105885	230369455	36002	402403534	0	345.28	0.15
14	26108	106076	331503148	36003	436847602	0	345.28	0.17
15	38790	128593	449379653	40412	474462379	0	345.28	0.19
16	51534	105351	549011461	49769	524148819	41174621	345.28	0.21
17	54157	105557	650300629	49769	571941384	41174621	345.28	0.23
18	56842	105767	751830453	49769	619745618	41174621	345.28	0.25
19	51905	184956	915390997	94853	704559152	41174621	345.28	0.28
20	47030	198567	1108421658	99004	800075509	78644405	345.28	0.31
21	49902	198793	1297832564	99004	894380207	78644405	345.28	0.35
22	65939	177286	1473199506	99005	988825035	78644405	345.28	0.37
23	74217	195716	1652893332	99006	1083320099	78644405	345.28	0.41
24	78214	195937	1825366257	99006	1170395454	78644405	345.28	0.30
25	82287	196160	1998065177	99006	1257476985	78644405	345.28	0.32
26	83655	254019	2208809343	99006	1344545063	78644405	345.28	0.33
27	85099	299483	2482401348	99006	1431599185	78644405	345.28	0.36
28	89402	299719	2745489275	99006	1518658981	78644405	345.28	0.38
29	108026	299960	3009037236	99007	1605821074	78644405	345.28	0.40
30	112482	300204	3272805929	99007	1692980156	78644405	345.28	0.41
31	118308	300467	3553676124	99007	1785704522	78644405	345.28	0.36
32	124241	300731	3834806884	99007	1878429286	78644405	345.28	0.38
33	130280	301000	4116201193	99007	1971154597	78644405	345.28	0.39
34	136426	301273	4397856338	99007	2063877753	78644405	345.28	0.40
35	142678	301551	4679769531	99007	2156596043	78644405	345.28	0.41
36	170581	301836	4962213697	99008	2249419817	78644405	345.28	0.42
37	177046	302124	5244896582	99007	2342227139	78644405	345.28	0.43
38	185056	302430	5541227289	99007	2439410699	78644405	345.28	0.38
39	193205	302735	5837826229	99007	2536578051	78644405	345.28	0.39
40	201493	303046	6134696487	99007	2633728987	78644405	345.28	0.39
41	209919	303361	6431834396	99007	2730860329	78644405	345.28	0.40
42	218484	303682	6729236255	99007	2827968903	78644405	345.28	0.40
43	227187	304008	7026898333	99006	2925051537	78644405	345.28	0.41
44	267887	304341	7325081740	99007	3022209809	78644405	345.28	0.41
45	276867	304678	7623498326	99007	3119327754	78644405	345.28	0.42
46	286208	305017	7920195546	99006	3215769702	78644405	345.28	0.41
47	295692	305354	8217109929	99006	3312166167	78644405	345.28	0.42
48	305320	305697	8514236635	99006	3408513676	78644405	345.28	0.42
49	315092	306045	8811571820	99005	3504809167	78644405	345.28	0.42
50	325008	306397	9109111641	99005	3601049581	78644405	345.28	0.42
51	335068	306755	9406852256	99004	3697231867	78644405	345.28	0.42
52	345271	307118	9704789825	99004	3793352976	78644405	345.28	0.42
53	355619	307486	10002920508	99003	3889409866	78644405	345.28	0.42
54	366110	307860	10301240473	99003	3985399501	78644405	345.28	0.42
55	376746	308238	10599745887	99002	4081318851	78644405	345.28	0.42
56	387525	308621	10898432923	99001	4177164889	78644405	345.28	0.43
57	398448	309010	11197297760	99001	4272934596	78644405	345.28	0.43
58	409515	309404	11496336578	99000	4368624957	78644405	345.28	0.43

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 31 " PDT - 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]
<b>1.00</b>	53.55	12660.00	9800.00	8000.00	0.00
<b>2.00</b>	43.82	67970.00	41580.00	63000.00	4.75
---	---	---	Ft = 95050	Fp = 10003	---
---	---	Pa = 68142	Ta = 33415	La = 57224	---
---	---	Pb = -172	Tb = 8165	Lb = 5776	---
<b>3.00</b>	43.82	79360.00	49660.00	0.00	-4.75
---	---	---	Ft = 107427	Fp = -107984	---
---	---	Pa = 90591	Ta = -57738	La = 0	---
---	---	Pb = -11231	Tb = 107398	Lb = 0	---
<b>4.00</b>	37.02	67970.00	41580.00	63000.00	4.75
---	---	---	Ft = 95050	Fp = 10003	---
---	---	Pa = 68142	Ta = 33415	La = 57224	---
---	---	Pb = -172	Tb = 8165	Lb = 5776	---
<b>5.00</b>	37.02	79360.00	49660.00	0.00	-4.75
---	---	---	Ft = 107427	Fp = -107984	---
---	---	Pa = 90591	Ta = -57738	La = 0	---
---	---	Pb = -11231	Tb = 107398	Lb = 0	---
<b>6.00</b>	30.22	79360.00	49660.00	0.00	4.75
---	---	---	Ft = 94231	Fp = -991	---
---	---	Pa = 79463	Ta = 50646	La = 0	---
---	---	Pb = -103	Tb = -986	Lb = 0	---
<b>7.00</b>	30.22	79360.00	49660.00	0.00	-4.75
---	---	---	Ft = 107427	Fp = -107984	---
---	---	Pa = 90591	Ta = -57738	La = 0	---
---	---	Pb = -11231	Tb = 107398	Lb = 0	---

**TABELLA DESCRITTIVA DELLE AZIONI INTERNE.**

<b>Nodo</b>	<b>Carico verticale [N]</b>	<b>T<sub>x</sub> [N]</b>	<b>My [Nmm]</b>	<b>T<sub>y</sub> [N]</b>	<b>Mx [Nmm]</b>	<b>Mt [Nmm]</b>	<b>σ<sub>amm.</sub> [N/mm<sup>2</sup>]</b>	<b>% Usa</b>
2	13370	9892	11196365	8016	9110182	0	345.28	0.04
3	14203	9979	20676873	8017	16756880	0	345.28	0.05
4	15159	10081	30270366	8018	24422277	0	345.28	0.05
5	16237	10198	39993089	8019	32108885	-0	345.28	0.05
6	17438	10330	49861393	8020	39819306	-0	345.28	0.05
7	18762	10476	59891638	8022	47556150	0	345.28	0.05
8	101963	-90964	-42580074	59728	96752118	0	345.28	0.08
9	185201	-13278	-30028825	65434	160729079	165806502	345.28	0.15
10	186609	-13114	-37641860	65433	223131290	165806502	345.28	0.17
11	185507	-7364	-41732856	65478	285478665	165806502	345.28	0.20
12	181289	102775	70174541	71195	353078023	169559655	345.28	0.22
13	183662	102960	172026330	71192	424076396	169559655	345.28	0.18
14	186098	103148	274080553	71189	495035552	169559655	345.28	0.19
15	270463	-24424	285656907	89595	580109020	169559655	345.28	0.21
16	354890	79434	372350338	128568	716253572	340746831	345.28	0.26
17	357512	79630	455883553	128560	844335634	340746831	345.28	0.29
18	360197	79830	539563393	128551	972264567	340746831	345.28	0.31
19	357243	200461	730132470	133825	1104275176	340746831	345.28	0.35
20	354350	195792	922027748	134297	1237273220	345142340	345.28	0.38
21	357222	196004	1115261646	134286	1369936981	345142340	345.28	0.42
22	455504	152845	1281481966	134348	1503861864	345142340	345.28	0.45
23	546027	189537	1457496041	134397	1638786898	345142340	345.28	0.49
24	550024	189735	1632978044	134379	1762810947	345142340	345.28	0.36
25	554098	189938	1808446589	134363	1886586264	345142340	345.28	0.38
26	552580	264365	2033182220	134347	2010088301	345142340	345.28	0.39
27	551139	296765	2310907391	134331	2133317074	345142340	345.28	0.42
28	555442	296984	2579087103	134318	2256335461	345142340	345.28	0.43
29	574066	297217	2847479789	134313	2379288445	345142340	345.28	0.45
30	578522	297442	3115831783	134300	2502017419	345142340	345.28	0.47
31	584348	297687	3401280333	134286	2632342791	345142340	345.28	0.41
32	590281	297933	3686694041	134273	2762438279	345142340	345.28	0.42
33	596320	298185	3972091702	134261	2892323367	345142340	345.28	0.44
34	602466	298442	4257464678	134249	3021995577	345142340	345.28	0.45
35	608718	298704	4542805593	134237	3151452836	345142340	345.28	0.46
36	636621	298982	4828388042	134233	3280861848	345142340	345.28	0.46
37	643086	299252	5113912444	134221	3410042910	345142340	345.28	0.47
38	651096	299541	5412899084	134209	3545098674	345142340	345.28	0.42
39	659245	299830	5711841237	134197	3679923560	345142340	345.28	0.43
40	667533	300125	6010759188	134186	3814531947	345142340	345.28	0.43
41	675959	300425	6309649179	134175	3948922043	345142340	345.28	0.44
42	684524	300731	6608508073	134165	4083092232	345142340	345.28	0.44
43	693227	301042	6907333120	134154	4217040941	345142340	345.28	0.45
44	733927	301368	7206390838	134150	4350921437	345142340	345.28	0.45
45	742907	301689	7505390270	134139	4484565290	345142340	345.28	0.45
46	752248	302013	7802379887	134128	4617102450	345142340	345.28	0.45
47	761732	302335	8099301687	134117	4749403092	345142340	345.28	0.45
48	771360	302663	8396151743	134106	4881464345	345142340	345.28	0.45
49	781132	302995	8692929017	134095	5013284953	345142340	345.28	0.45
50	791048	303334	8989632598	134085	5144863625	345142340	345.28	0.46
51	801108	303677	9286261692	134074	5276199042	345142340	345.28	0.46
52	811311	304026	9582815609	134064	5407289855	345142340	345.28	0.46
53	821659	304380	9879293741	134054	5538134682	345142340	345.28	0.46
54	832150	304739	10175695550	134044	5668732110	345142340	345.28	0.46
55	842786	305104	10472020554	134034	5799080687	345142340	345.28	0.46
56	853565	305474	10768268315	134024	5929178924	345142340	345.28	0.46
57	864488	305849	11064438431	134014	6059025297	345142340	345.28	0.46
58	875555	306230	11360530523	134005	6188618242	345142340	345.28	0.46



## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 32 " PDT - 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]
<b>1.00</b>	53.55	0.00	9800.00	8000.00	0.00
<b>2.00</b>	43.82	0.00	41580.00	63000.00	4.75
---	---	---	Ft = 17071	Fp = 63670	---
---	---	Pa = 9804	Ta = 2420	La = 13764	---
---	---	Pb = -9804	Tb = 39160	Lb = 49236	---
<b>3.00</b>	43.82	0.00	49660.00	0.00	-4.75
---	---	---	Ft = 6598	Fp = -53496	---
---	---	Pa = 5564	Ta = -3546	La = 0	---
---	---	Pb = -5564	Tb = 53206	Lb = 0	---
<b>4.00</b>	37.02	0.00	41580.00	63000.00	4.75
---	---	---	Ft = 17071	Fp = 63670	---
---	---	Pa = 9804	Ta = 2420	La = 13764	---
---	---	Pb = -9804	Tb = 39160	Lb = 49236	---
<b>5.00</b>	37.02	0.00	49660.00	0.00	-4.75
---	---	---	Ft = 6598	Fp = -53496	---
---	---	Pa = 5564	Ta = -3546	La = 0	---
---	---	Pb = -5564	Tb = 53206	Lb = 0	---
<b>6.00</b>	30.22	0.00	49660.00	0.00	4.75
---	---	---	Ft = -6598	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 49660	Lb = 0	---
<b>7.00</b>	30.22	0.00	49660.00	0.00	-4.75
---	---	---	Ft = 6598	Fp = -53496	---
---	---	Pa = 5564	Ta = -3546	La = 0	---
---	---	Pb = -5564	Tb = 53206	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Usa
2	710	9871	10880626	8000	8825398	0	345.28	0.03
3	1543	9957	20049024	8000	16184744	-0	345.28	0.04
4	2499	10058	29334565	8000	23559831	-0	345.28	0.05
5	3577	10174	38753599	8001	30952442	-0	345.28	0.05
6	4778	10304	48322484	8001	38364365	-0	345.28	0.05
7	6102	10449	58057581	8001	45797395	-0	345.28	0.05
8	17620	24660	85644911	20416	62852591	-0	345.28	0.07
9	29175	9644	91034825	21768	83231699	39880440	345.28	0.08
10	30584	9810	100602892	21768	103254971	39880440	345.28	0.09
11	27499	9020	109657313	22194	123483413	39880440	345.28	0.09
12	21299	102517	202277390	71003	189730553	71874420	345.28	0.15
13	23672	102705	300172683	71003	257364037	71874420	345.28	0.13
14	26108	102896	398303072	71003	325029165	71874420	345.28	0.16
15	38790	125413	513178580	75413	395900735	71874420	345.28	0.19
16	51534	102171	609810669	84770	478880515	113049041	345.28	0.22
17	54157	102377	708098485	84770	559975129	113049041	345.28	0.24
18	56842	102588	806625391	84771	641089128	113049041	345.28	0.26
19	51905	181776	967180496	129854	759198267	113049041	345.28	0.30
20	47030	195387	1157203710	134005	887995542	150518825	345.28	0.34
21	49902	195613	1343606192	134005	1015586593	150518825	345.28	0.37
22	65939	174107	1515964487	134007	1143356254	150518825	345.28	0.40
23	74217	192536	1692648667	134007	1271192319	150518825	345.28	0.44
24	78214	192757	1862347315	134007	1388993202	150518825	345.28	0.33
25	82287	192980	2032271112	134007	1506804120	150518825	345.28	0.34
26	83655	250840	2240239483	134007	1624599687	150518825	345.28	0.36
27	85099	296304	2511055087	134007	1742379091	150518825	345.28	0.38
28	89402	296539	2771366028	134007	1860167219	150518825	345.28	0.40
29	108026	296780	3032136162	134008	1978087483	150518825	345.28	0.42
30	112482	297024	3293126435	134008	2096005454	150518825	345.28	0.44
31	118308	297288	3571040227	134008	2221454215	150518825	345.28	0.39
32	124241	297552	3849214003	134008	2346904988	150518825	345.28	0.40
33	130280	297820	4127650817	134009	2472357774	150518825	345.28	0.41
34	136426	298094	4406348001	134009	2597809028	150518825	345.28	0.42
35	142678	298372	4685302813	134008	2723255189	150518825	345.28	0.43
36	170581	298657	4964787372	134010	2848838532	150518825	345.28	0.44
37	177046	298944	5244510316	134009	2974401836	150518825	345.28	0.45
38	185056	299250	5537740708	134009	3105888026	150518825	345.28	0.40
39	193205	299555	5831239049	134009	3237354360	150518825	345.28	0.41
40	201493	299866	6125008485	134009	3368800415	150518825	345.28	0.41
41	209919	300182	6419045412	134009	3500221990	150518825	345.28	0.42
42	218484	300502	6713346195	134009	3631614884	150518825	345.28	0.42
43	227187	300828	7007907169	134008	3762974893	150518825	345.28	0.43
44	267887	301162	7302988361	134009	3894433871	150518825	345.28	0.43
45	276867	301498	7598302896	134009	4025841191	150518825	345.28	0.43
46	286208	301837	7891918535	134008	4156336742	150518825	345.28	0.43
47	295692	302174	8185751640	134008	4286773727	150518825	345.28	0.43
48	305320	302517	8479797448	134007	4417147532	150518825	345.28	0.44
49	315092	302865	8774052191	134007	4547454071	150518825	345.28	0.44
50	325008	303217	9068512100	134006	4677689268	150518825	345.28	0.44
51	335068	303575	9363173408	134005	4807849049	150518825	345.28	0.44
52	345271	303938	9658032349	134005	4937929349	150518825	345.28	0.44
53	355619	304306	9953085161	134004	5067926109	150518825	345.28	0.44
54	366110	304680	10248328084	134003	5197835277	150518825	345.28	0.44
55	376746	305058	10543757362	134003	5327652808	150518825	345.28	0.44
56	387525	305441	10839369244	134002	5457374662	150518825	345.28	0.44
57	398448	305830	11135159982	134001	5586996809	150518825	345.28	0.44
58	409515	306224	11431125834	134000	5716515224	150518825	345.28	0.44

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 33 " PDT - MSA - ZONA A - ECCAZIONALE - 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]
<b>1.00</b>	53.55	4160.00	-4980.00	29500.00	0.00
<b>2.00</b>	43.82	60940.00	-58800.00	0.00	4.75
---	---	---	Ft = 85238	Fp = -105183	---
---	---	Pa = 71880	Ta = 45813	La = 0	---
---	---	Pb = -10940	Tb = -104613	Lb = 0	---
<b>3.00</b>	43.82	60940.00	-58800.00	0.00	-4.75
---	---	---	Ft = 69613	Fp = 21502	---
---	---	Pa = 58704	Ta = -37415	La = 0	---
---	---	Pb = 2236	Tb = -21385	Lb = 0	---
<b>4.00</b>	37.02	60940.00	-58800.00	0.00	4.75
---	---	---	Ft = 85238	Fp = -105183	---
---	---	Pa = 71880	Ta = 45813	La = 0	---
---	---	Pb = -10940	Tb = -104613	Lb = 0	---
<b>5.00</b>	37.02	60940.00	-58800.00	0.00	-4.75
---	---	---	Ft = 69613	Fp = 21502	---
---	---	Pa = 58704	Ta = -37415	La = 0	---
---	---	Pb = 2236	Tb = -21385	Lb = 0	---
<b>6.00</b>	30.22	52620.00	-49770.00	54500.00	4.75
---	---	---	Ft = 114139	Fp = -55764	---
---	---	Pa = 25062	Ta = -43383	La = 102555	---
---	---	Pb = 27558	Tb = -6387	Lb = -48055	---
<b>7.00</b>	30.22	60940.00	-58800.00	0.00	-4.75
---	---	---	Ft = 69613	Fp = 21502	---
---	---	Pa = 58704	Ta = -37415	La = 0	---
---	---	Pb = 2236	Tb = -21385	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Uso
2	4870	-5274	-5917763	29503	32574888	0	345.28	0.08
3	5703	-5620	-11258475	29503	59702474	0	345.28	0.10
4	6659	-6025	-17001364	29503	86840853	0	345.28	0.11
5	7737	-6489	-23204409	29504	113990959	0	345.28	0.11
6	8938	-7012	-29925604	29505	141153836	-0	345.28	0.11
7	10262	-7593	-37222940	29505	168330564	-0	345.28	0.11
8	79388	46068	15794385	29540	195817979	0	345.28	0.13
9	148551	-695	-1702220	29575	224124594	0	345.28	0.15
10	149960	-1357	-7732623	29575	252395776	0	345.28	0.16
11	150207	-8588	-18354123	29574	280614483	0	345.28	0.17
12	147339	-128719	-156682519	29571	308743785	0	345.28	0.20
13	149712	-129471	-284352330	29570	338380500	0	345.28	0.15
14	152148	-130235	-412781798	29569	367987892	0	345.28	0.18
15	222438	-57947	-491208679	29599	398296676	0	345.28	0.20
16	292790	-123622	-620611775	29627	429264559	0	345.28	0.23
17	295413	-124439	-747988721	29624	460169653	0	345.28	0.25
18	298097	-125274	-876102467	29621	491010992	-0	345.28	0.27
19	296493	-258908	-1123356150	29616	521746848	-0	345.28	0.32
20	294950	-252988	-1370241439	29611	552379324	-0	345.28	0.36
21	297822	-253880	-1619622991	29607	582949037	-0	345.28	0.40
22	352959	-392425	-1963453893	40211	620844531	-0	345.28	0.45
23	400338	-336629	-2344588739	132186	761636702	317475369	345.28	0.53
24	404335	-337499	-2649321016	132180	879842083	317475369	345.28	0.41
25	408409	-338377	-2954606549	132176	997967470	317475369	345.28	0.44
26	427456	-281939	-3220256303	112317	1103360528	317475369	345.28	0.46
27	446579	-367989	-3562411658	84121	1173814548	276548989	345.28	0.48
28	450882	-368918	-3894426637	84116	1249955359	276548989	345.28	0.51
29	469506	-369876	-4227331551	84116	1326092376	276548989	345.28	0.53
30	473962	-370837	-4560797728	84111	1402133958	276548989	345.28	0.55
31	479788	-371879	-4916219364	84106	1482928684	276548989	345.28	0.48
32	485721	-372922	-5272312313	84102	1563625177	276548989	345.28	0.50
33	491760	-373985	-5629113646	84098	1644231283	276548989	345.28	0.51
34	497906	-375068	-5986628016	84093	1724744914	276548989	345.28	0.52
35	504158	-376169	-6344861081	84089	1805164174	276548989	345.28	0.54
36	532061	-377302	-6704194794	84089	1885585338	276548989	345.28	0.55
37	538526	-378440	-7064241542	84084	1965903328	276548989	345.28	0.56
38	546536	-379653	-7442141644	84080	2049914151	276548989	345.28	0.50
39	554685	-380865	-7820861512	84076	2133819926	276548989	345.28	0.50
40	562973	-382098	-8200438691	84072	2217626613	276548989	345.28	0.51
41	571399	-383352	-8580883144	84068	2301332479	276548989	345.28	0.52
42	579964	-384627	-8962205310	84064	2384935884	276548989	345.28	0.52
43	588667	-385923	-9344415897	84060	2468435218	276548989	345.28	0.53
44	629367	-387250	-9727883902	84059	2551919761	276548989	345.28	0.53
45	638347	-388587	-10112235751	84055	2635290085	276548989	345.28	0.53
46	647688	-389936	-10494964217	84050	2718002460	276548989	345.28	0.53
47	657172	-391279	-10878561150	84046	2800599185	276548989	345.28	0.53
48	666800	-392642	-11263035003	84042	2883078070	276548989	345.28	0.54
49	676572	-394025	-11648397443	84038	2965437735	276548989	345.28	0.54
50	686488	-395430	-12034660196	84034	3047676801	276548989	345.28	0.54
51	696548	-396855	-12421835049	84030	3129793883	276548989	345.28	0.54
52	706751	-398301	-12809933832	84026	3211787594	276548989	345.28	0.54
53	717099	-399768	-13198968406	84022	3293656541	276548989	345.28	0.54
54	727590	-401256	-13588950650	84018	3375399322	276548989	345.28	0.54
55	738226	-402764	-13979892456	84014	3457014528	276548989	345.28	0.54
56	749005	-404294	-14371805712	84010	3538500740	276548989	345.28	0.54
57	759928	-405844	-14764702302	84006	3619856530	276548989	345.28	0.54
58	770995	-407415	-15158594095	84002	3701080456	276548989	345.28	0.54

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 34 " PDT - MSA - ZONA A - ECCAZIONALE - 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]
<b>1.00</b>	53.55	0.00	-4980.00	29500.00	0.00
<b>2.00</b>	43.82	0.00	-58800.00	0.00	4.75
---	---	---	Ft = 7812	Fp = -63342	---
---	---	Pa = 6588	Ta = 4199	La = 0	---
---	---	Pb = -6588	Tb = -62999	Lb = 0	---
<b>3.00</b>	43.82	0.00	-58800.00	0.00	-4.75
---	---	---	Ft = -7812	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -58800	Lb = 0	---
<b>4.00</b>	37.02	0.00	-58800.00	0.00	4.75
---	---	---	Ft = 7812	Fp = -63342	---
---	---	Pa = 6588	Ta = 4199	La = 0	---
---	---	Pb = -6588	Tb = -62999	Lb = 0	---
<b>5.00</b>	37.02	0.00	-58800.00	0.00	-4.75
---	---	---	Ft = -7812	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -58800	Lb = 0	---
<b>6.00</b>	30.22	0.00	-49770.00	54500.00	4.75
---	---	---	Ft = 72766	Fp = 1653	---
---	---	Pa = 1140	Ta = -49484	La = 53338	---
---	---	Pb = -1140	Tb = -286	Lb = 1162	---
<b>7.00</b>	30.22	0.00	-58800.00	0.00	-4.75
---	---	---	Ft = -7812	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -58800	Lb = 0	---

**TABELLA DESCRITTIVA DELLE AZIONI INTERNE.**

<b>Nodo</b>	<b>Carico verticale [N]</b>	<b>T<sub>x</sub> [N]</b>	<b>My [Nmm]</b>	<b>T<sub>y</sub> [N]</b>	<b>Mx [Nmm]</b>	<b>Mt [Nmm]</b>	<b>σ<sub>amm.</sub> [N/mm<sup>2</sup>]</b>	<b>% Usa</b>
2	710	-5266	-5771005	29500	32509188	0	345.28	0.07
3	1543	-5611	-10963160	29500	59571886	-0	345.28	0.10
4	2499	-6014	-16555445	29500	86646262	-0	345.28	0.11
5	3577	-6477	-22605520	29500	113732941	-0	345.28	0.11
6	4778	-6998	-29171037	29500	140832573	-0	345.28	0.11
7	6102	-7578	-36309646	29501	167945835	-0	345.28	0.11
8	13230	18996	-12560787	29501	194584405	-0	345.28	0.12
9	20396	-4652	-23418071	29502	221296279	0	345.28	0.13
10	21804	-5314	-28859706	29502	248015947	0	345.28	0.14
11	23109	-9780	-37247231	29502	274741072	0	345.28	0.15
12	21299	-128489	-164874843	29502	301440038	0	345.28	0.18
13	23672	-129244	-288062610	29502	329618782	0	345.28	0.14
14	26108	-130009	-412045557	29502	357812379	0	345.28	0.17
15	34400	-94209	-510471814	29502	386075296	0	345.28	0.19
16	42755	-127403	-633865334	29503	414403376	0	345.28	0.21
17	45377	-128228	-756721819	29503	442742124	0	345.28	0.23
18	48062	-129073	-880437744	29503	471090660	0	345.28	0.25
19	47515	-250171	-1108491904	29503	499421333	-0	345.28	0.29
20	47030	-252619	-1349729373	29503	527735077	0	345.28	0.33
21	49902	-253524	-1591298531	29503	556057754	-0	345.28	0.37
22	63727	-255179	-1834500203	35012	588079529	-0	345.28	0.41
23	69793	-304879	-2129760414	82841	673495266	165114506	345.28	0.46
24	73790	-305767	-2398409732	82842	746260456	165114506	345.28	0.35
25	77864	-306660	-2667881085	82842	819033953	165114506	345.28	0.37
26	81443	-335087	-2956031918	83322	892122093	165114506	345.28	0.40
27	85099	-367582	-3285505664	84004	966060281	166104452	345.28	0.43
28	89402	-368526	-3609069865	84004	1039864963	166104452	345.28	0.45
29	108026	-369489	-3933792348	84005	1113748378	166104452	345.28	0.47
30	112482	-370466	-4259376476	84005	1187631512	166104452	345.28	0.50
31	118308	-371523	-4606749063	84005	1266234130	166104452	345.28	0.44
32	124241	-372582	-4955122933	84005	1344838963	166104452	345.28	0.45
33	130280	-373659	-5304514267	84005	1423445884	166104452	345.28	0.47
34	136426	-374755	-5654931864	84005	1502052743	166104452	345.28	0.48
35	142678	-375871	-6006384413	84005	1580657375	166104452	345.28	0.49
36	170581	-377008	-6359232798	84006	1659344378	166104452	345.28	0.50
37	177046	-378162	-6713115872	84005	1738020262	166104452	345.28	0.52
38	185056	-379390	-7084905166	84005	1820408673	166104452	345.28	0.46
39	193205	-380615	-7457849555	84005	1902785986	166104452	345.28	0.47
40	201493	-381862	-7831967009	84005	1985151845	166104452	345.28	0.48
41	209919	-383130	-8207266847	84005	2067503680	166104452	345.28	0.48
42	218484	-384418	-8583758336	84005	2149838920	166104452	345.28	0.49
43	227187	-385727	-8961450682	84005	2232154990	166104452	345.28	0.49
44	267887	-387060	-9340691375	84005	2314530888	166104452	345.28	0.50
45	276867	-388411	-9721126331	84005	2396876301	166104452	345.28	0.50
46	286208	-389774	-10100268426	84005	2478652243	166104452	345.28	0.50
47	295692	-391130	-10480582064	84004	2560393412	166104452	345.28	0.51
48	305320	-392506	-10862074679	84004	2642096974	166104452	345.28	0.51
49	315092	-393904	-11244754957	84004	2723760407	166104452	345.28	0.51
50	325008	-395322	-11628631562	84003	2805381194	166104452	345.28	0.51
51	335068	-396760	-12013713141	84003	2886956822	166104452	345.28	0.51
52	345271	-398220	-12400008322	84003	2968484779	166104452	345.28	0.52
53	355619	-399699	-12787525718	84002	3049962560	166104452	345.28	0.52
54	366110	-401200	-13176273925	84002	3131387662	166104452	345.28	0.52
55	376746	-402721	-13566261523	84002	3212757585	166104452	345.28	0.52
56	387525	-404263	-13957497077	84001	3294069835	166104452	345.28	0.52
57	398448	-405826	-14349989139	84001	3375321921	166104452	345.28	0.52
58	409515	-407409	-14743746246	84000	3456511357	166104452	345.28	0.52

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 35 " PDT - MSA - ZONA A - ECCAZIONALE - 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]
<b>1.00</b>	53.55	4160.00	-4980.00	29500.00	0.00
<b>2.00</b>	43.82	60940.00	-58800.00	0.00	4.75
---	---	---	Ft = 85238	Fp = -105183	---
---	---	Pa = 71880	Ta = 45813	La = 0	---
---	---	Pb = -10940	Tb = -104613	Lb = 0	---
<b>3.00</b>	43.82	60940.00	-58800.00	0.00	-4.75
---	---	---	Ft = 69613	Fp = 21502	---
---	---	Pa = 58704	Ta = -37415	La = 0	---
---	---	Pb = 2236	Tb = -21385	Lb = 0	---
<b>4.00</b>	37.02	52620.00	-49770.00	54500.00	4.75
---	---	---	Ft = 114139	Fp = -55764	---
---	---	Pa = 25062	Ta = -43383	La = 102555	---
---	---	Pb = 27558	Tb = -6387	Lb = -48055	---
<b>5.00</b>	37.02	60940.00	-58800.00	0.00	-4.75
---	---	---	Ft = 69613	Fp = 21502	---
---	---	Pa = 58704	Ta = -37415	La = 0	---
---	---	Pb = 2236	Tb = -21385	Lb = 0	---
<b>6.00</b>	30.22	60940.00	-58800.00	0.00	4.75
---	---	---	Ft = 85238	Fp = -105183	---
---	---	Pa = 71880	Ta = 45813	La = 0	---
---	---	Pb = -10940	Tb = -104613	Lb = 0	---
<b>7.00</b>	30.22	60940.00	-58800.00	0.00	-4.75
---	---	---	Ft = 69613	Fp = 21502	---
---	---	Pa = 58704	Ta = -37415	La = 0	---
---	---	Pb = 2236	Tb = -21385	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	4870	-5274	-5923890	29503	32590557	0	345.28	0.08
3	5703	-5620	-11271777	29504	59736489	-0	345.28	0.10
4	6659	-6025	-17023040	29504	86896283	-0	345.28	0.11
5	7737	-6488	-23235815	29505	114071268	-0	345.28	0.11
6	8938	-7011	-29968247	29506	141262881	-0	345.28	0.11
7	10262	-7593	-37278481	29506	168472592	-0	345.28	0.11
8	79388	46069	15641111	29549	196209925	-0	345.28	0.13
9	148551	-693	-2038294	29591	224983977	0	345.28	0.15
10	149960	-1354	-8253075	29591	253726625	0	345.28	0.16
11	150207	-8585	-19059035	29589	282416994	0	345.28	0.17
12	147339	-128716	-157568094	29586	311008235	0	345.28	0.20
13	149712	-129468	-285431199	29585	341139161	0	345.28	0.16
14	152148	-130231	-414056752	29584	371247880	0	345.28	0.18
15	199029	-336919	-693653937	62451	424449417	0	345.28	0.25
16	245972	-212743	-904657208	132184	567091607	306796175	345.28	0.32
17	248594	-213562	-1115196482	132182	695460730	306796175	345.28	0.37
18	251279	-214399	-1326441303	132179	823750911	306796175	345.28	0.41
19	268924	-207242	-1514372801	88180	915934733	306796175	345.28	0.45
20	286630	-243942	-1764394961	84130	997668202	270225036	345.28	0.49
21	289502	-244836	-2004982989	84126	1080474970	270225036	345.28	0.52
22	368048	-194356	-2213996101	84153	1163962043	270225036	345.28	0.55
23	438836	-238442	-2434986012	84173	1247964078	270225036	345.28	0.59
24	442833	-239311	-2654878124	84166	1325189624	270225036	345.28	0.43
25	446907	-240188	-2875290136	84159	1402271158	270225036	345.28	0.45
26	446705	-328962	-3154606066	84153	1479200106	270225036	345.28	0.47
27	446579	-367986	-3497249293	84146	1555977377	270225036	345.28	0.49
28	450882	-368915	-3829177000	84141	1632636493	270225036	345.28	0.52
29	469506	-369873	-4161997178	84139	1709276747	270225036	345.28	0.54
30	473962	-370834	-4495383711	84134	1785791331	270225036	345.28	0.56
31	479788	-371876	-4850725804	84128	1867058470	270225036	345.28	0.49
32	485721	-372920	-5206743993	84122	1948198957	270225036	345.28	0.50
33	491760	-373983	-5563474751	84117	2029224213	270225036	345.28	0.52
34	497906	-375065	-5920922583	84112	2110133021	270225036	345.28	0.53
35	504158	-376167	-6279093008	84107	2190924307	270225036	345.28	0.54
36	532061	-377300	-6638365366	84106	2271709870	270225036	345.28	0.55
37	538526	-378438	-6998354593	84101	2352369489	270225036	345.28	0.56
38	546536	-379651	-7376198299	84096	2436715261	270225036	345.28	0.50
39	554685	-380863	-7754865388	84091	2520934497	270225036	345.28	0.51
40	562973	-382096	-8134393060	84086	2605035216	270225036	345.28	0.51
41	571399	-383350	-8514791189	84081	2689016216	270225036	345.28	0.52
42	579964	-384625	-8896070129	84076	2772876353	270225036	345.28	0.52
43	588667	-385921	-9278240510	84071	2856614482	270225036	345.28	0.53
44	629367	-387249	-9661669270	84070	2940332113	270225036	345.28	0.53
45	638347	-388586	-10045984937	84065	3023917334	270225036	345.28	0.54
46	647688	-389935	-10428680407	84060	3106825682	270225036	345.28	0.53
47	657172	-391277	-10812247238	84055	3189601193	270225036	345.28	0.54
48	666800	-392641	-11196693842	84050	3272241915	270225036	345.28	0.54
49	676572	-394025	-11582031830	84045	3354746806	270225036	345.28	0.54
50	686488	-395429	-11968272877	84040	3437114794	270225036	345.28	0.54
51	696548	-396855	-12355428721	84035	3519344783	270225036	345.28	0.54
52	706751	-398301	-12743511145	84031	3601435653	270225036	345.28	0.54
53	717099	-399768	-13132531970	84026	3683386256	270225036	345.28	0.54
54	727590	-401256	-13522503038	84021	3765195421	270225036	345.28	0.54
55	738226	-402764	-13913436202	84016	3846861951	270225036	345.28	0.55
56	749005	-404294	-14305343319	84012	3928384625	270225036	345.28	0.55
57	759928	-405844	-14698236242	84007	4009762193	270225036	345.28	0.55
58	770995	-407415	-15092126812	84002	4090993386	270225036	345.28	0.55



## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 36 " PDT - MSA - ZONA A - ECCAZIONALE - 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]
<b>1.00</b>	53.55	0.00	-4980.00	29500.00	0.00
<b>2.00</b>	43.82	0.00	-58800.00	0.00	4.75
---	---	---	Ft = 7812	Fp = -63342	---
---	---	Pa = 6588	Ta = 4199	La = 0	---
---	---	Pb = -6588	Tb = -62999	Lb = 0	---
<b>3.00</b>	43.82	0.00	-58800.00	0.00	-4.75
---	---	---	Ft = -7812	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -58800	Lb = 0	---
<b>4.00</b>	37.02	0.00	-49770.00	54500.00	4.75
---	---	---	Ft = 72766	Fp = 1653	---
---	---	Pa = 1140	Ta = -49484	La = 53338	---
---	---	Pb = -1140	Tb = -286	Lb = 1162	---
<b>5.00</b>	37.02	0.00	-58800.00	0.00	-4.75
---	---	---	Ft = -7812	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -58800	Lb = 0	---
<b>6.00</b>	30.22	0.00	-58800.00	0.00	4.75
---	---	---	Ft = 7812	Fp = -63342	---
---	---	Pa = 6588	Ta = 4199	La = 0	---
---	---	Pb = -6588	Tb = -62999	Lb = 0	---
<b>7.00</b>	30.22	0.00	-58800.00	0.00	-4.75
---	---	---	Ft = -7812	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -58800	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	710	-5266	-5771294	29500	32510928	0	345.28	0.07
3	1543	-5611	-10964076	29500	59577407	-0	345.28	0.10
4	2499	-6014	-16557376	29500	86657905	0	345.28	0.11
5	3577	-6477	-22608903	29500	113753348	-0	345.28	0.11
6	4778	-6998	-29176361	29500	140864685	-0	345.28	0.11
7	6102	-7578	-36317447	29501	167992893	-0	345.28	0.11
8	13230	18996	-12573851	29501	194663207	-0	345.28	0.12
9	20396	-4652	-23439248	29502	221424011	0	345.28	0.13
10	21804	-5314	-28889553	29502	248195980	0	345.28	0.14
11	23109	-9780	-37286266	29502	274976525	0	345.28	0.15
12	21299	-128489	-164922343	29502	301726554	0	345.28	0.18
13	23672	-129244	-288120034	29502	329965149	0	345.28	0.14
14	26108	-130009	-412113920	29502	358224736	0	345.28	0.17
15	31676	-140542	-543433999	46585	398237608	0	345.28	0.20
16	37307	-181084	-723339155	82841	484525795	159560407	345.28	0.24
17	39929	-181909	-896892863	82841	563440838	159560407	345.28	0.28
18	42614	-182754	-1071305779	82841	642370566	159560407	345.28	0.32
19	44791	-239229	-1293126881	83905	722182305	159560407	345.28	0.36
20	47030	-243589	-1526281131	84004	802253022	160445006	345.28	0.40
21	49902	-244494	-1759293595	84004	882302986	160445006	345.28	0.43
22	66451	-219681	-1976336055	84005	962483524	160445006	345.28	0.46
23	75241	-242167	-2199154495	84005	1042711944	160445006	345.28	0.50
24	79238	-243055	-2413178986	84005	1116638919	160445006	345.28	0.37
25	83311	-243948	-2628020390	84005	1190569743	160445006	345.28	0.39
26	84167	-313098	-2888453872	84005	1264483454	160445006	345.28	0.41
27	85099	-367582	-3223858030	84005	1338379991	160445006	345.28	0.43
28	89402	-368526	-3547406382	84005	1412280686	160445006	345.28	0.46
29	108026	-369489	-3872111026	84006	1486272165	160445006	345.28	0.48
30	112482	-370466	-4197677875	84006	1560259967	160445006	345.28	0.50
31	118308	-371523	-4545032550	84006	1638971101	160445006	345.28	0.44
32	124241	-372582	-4893388969	84006	1717681644	160445006	345.28	0.46
33	130280	-373659	-5242763255	84006	1796391848	160445006	345.28	0.47
34	136426	-374755	-5593164238	84006	1875099350	160445006	345.28	0.48
35	142678	-375871	-5944600643	84006	1953801782	160445006	345.28	0.50
36	170581	-377008	-6297431124	84007	2032597243	160445006	345.28	0.51
37	177046	-378161	-6651296995	84006	2111377340	160445006	345.28	0.52
38	185056	-379390	-7023068928	84006	2193870927	160445006	345.28	0.46
39	193205	-380615	-7395996610	84006	2276349450	160445006	345.28	0.47
40	201493	-381862	-7770097966	84006	2358812819	160445006	345.28	0.48
41	209919	-383129	-8145382350	84006	2441258276	160445006	345.28	0.49
42	218484	-384418	-8521859056	84006	2523683068	160445006	345.28	0.49
43	227187	-385727	-8899537321	84006	2606084445	160445006	345.28	0.50
44	267887	-387060	-9278762858	84006	2688552152	160445006	345.28	0.50
45	276867	-388411	-9659183580	84006	2770983796	160445006	345.28	0.51
46	286208	-389773	-10038312453	84006	2852839837	160445006	345.28	0.50
47	295692	-391130	-10418613811	84005	2934655398	160445006	345.28	0.51
48	305320	-392506	-10800095116	84005	3016427476	160445006	345.28	0.51
49	315092	-393904	-11182765072	84004	3098153434	160445006	345.28	0.51
50	325008	-395322	-11566632364	84004	3179830640	160445006	345.28	0.51
51	335068	-396760	-11951705656	84004	3261456465	160445006	345.28	0.52
52	345271	-398220	-12337993596	84003	3343028287	160445006	345.28	0.52
53	355619	-399699	-12725504815	84003	3424543487	160445006	345.28	0.52
54	366110	-401200	-13114247927	84002	3505999454	160445006	345.28	0.52
55	376746	-402721	-13504231530	84002	3587393578	160445006	345.28	0.52
56	387525	-404263	-13895464208	84001	3668723258	160445006	345.28	0.52
57	398448	-405826	-14287954528	84001	3749985895	160445006	345.28	0.52
58	409515	-407409	-14681711046	84000	3831178897	160445006	345.28	0.52

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 37 " PDT - MSA - ZONA A - ECCAZIONALE - 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]
<b>1.00</b>	53.55	8310.00	-9960.00	6000.00	0.00
<b>2.00</b>	43.82	52620.00	-49770.00	54500.00	4.75
---	---	---	Ft = 114139	Fp = -55764	---
---	---	Pa = 25062	Ta = -43383	La = 102555	---
---	---	Pb = 27558	Tb = -6387	Lb = -48055	---
<b>3.00</b>	43.82	60940.00	-58800.00	0.00	-4.75
---	---	---	Ft = 69613	Fp = 21502	---
---	---	Pa = 58704	Ta = -37415	La = 0	---
---	---	Pb = 2236	Tb = -21385	Lb = 0	---
<b>4.00</b>	37.02	52620.00	-49770.00	54500.00	4.75
---	---	---	Ft = 114139	Fp = -55764	---
---	---	Pa = 25062	Ta = -43383	La = 102555	---
---	---	Pb = 27558	Tb = -6387	Lb = -48055	---
<b>5.00</b>	37.02	60940.00	-58800.00	0.00	-4.75
---	---	---	Ft = 69613	Fp = 21502	---
---	---	Pa = 58704	Ta = -37415	La = 0	---
---	---	Pb = 2236	Tb = -21385	Lb = 0	---
<b>6.00</b>	30.22	60940.00	-58800.00	0.00	4.75
---	---	---	Ft = 85238	Fp = -105183	---
---	---	Pa = 71880	Ta = 45813	La = 0	---
---	---	Pb = -10940	Tb = -104613	Lb = 0	---
<b>7.00</b>	30.22	60940.00	-58800.00	0.00	-4.75
---	---	---	Ft = 69613	Fp = 21502	---
---	---	Pa = 58704	Ta = -37415	La = 0	---
---	---	Pb = 2236	Tb = -21385	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usò
2	9020	-10262	-11631505	6008	6814501	0	345.28	0.03
3	9853	-10608	-21771071	6008	12536863	0	345.28	0.04
4	10809	-11012	-32319998	6009	18279522	0	345.28	0.05
5	11887	-11476	-43337248	6010	24045074	0	345.28	0.05
6	13088	-11999	-54881852	6011	29836155	-0	345.28	0.05
7	14412	-12581	-67012847	6012	35655410	-0	345.28	0.05
8	60129	-205724	-283716392	98545	113805282	0	345.28	0.20
9	105883	-94805	-343796473	108641	216343008	297153104	345.28	0.30
10	107292	-95467	-433763522	108641	316086698	297153104	345.28	0.35
11	126788	-85916	-518827194	108239	415931186	297153104	345.28	0.40
12	143169	-124669	-613468924	60610	471021072	265926441	345.28	0.43
13	145542	-125422	-738021869	60609	531315424	265926441	345.28	0.32
14	147978	-126185	-863277770	60608	591573135	265926441	345.28	0.34
15	194859	-332876	-1139632817	93483	675157487	265926441	345.28	0.40
16	241802	-208703	-1347495775	163224	848397741	572722616	345.28	0.48
17	244424	-209521	-1554832566	163221	1007332854	572722616	345.28	0.52
18	247109	-210359	-1762817382	163217	1166154897	572722616	345.28	0.56
19	264754	-203201	-1947474893	119220	1288905087	572722616	345.28	0.59
20	282460	-239903	-2194205693	115171	1401231491	536151477	345.28	0.62
21	285332	-240796	-2431449599	115166	1514585719	536151477	345.28	0.65
22	363878	-190320	-2637218592	115202	1628882803	536151477	345.28	0.68
23	434666	-234409	-2855024451	115230	1743893200	536151477	345.28	0.72
24	438663	-235277	-3071923059	115220	1849623548	536151477	345.28	0.52
25	442737	-236153	-3289295897	115212	1955155249	536151477	345.28	0.53
26	442535	-324926	-3565532044	115203	2060476547	536151477	345.28	0.55
27	442409	-363949	-3905057718	115194	2165588890	536151477	345.28	0.57
28	446712	-364878	-4233837467	115187	2270538754	536151477	345.28	0.59
29	465336	-365836	-4563495248	115186	2375463430	536151477	345.28	0.61
30	469792	-366797	-4893691243	115178	2480215443	536151477	345.28	0.63
31	475618	-367838	-5245611031	115171	2591473431	536151477	345.28	0.55
32	481551	-368881	-5598181463	115163	2702557650	536151477	345.28	0.56
33	487590	-369944	-5951442666	115157	2813483854	536151477	345.28	0.57
34	493736	-371025	-6305400338	115150	2924250433	536151477	345.28	0.58
35	499988	-372126	-6660061108	115143	3034855967	536151477	345.28	0.59
36	527891	-373259	-7015818311	115142	3145454751	536151477	345.28	0.60
37	534356	-374397	-7372273803	115135	3255880948	536151477	345.28	0.61
38	542366	-375610	-7746398385	115128	3371353556	536151477	345.28	0.54
39	550515	-376821	-8121329565	115121	3486652896	536151477	345.28	0.55
40	558803	-378054	-8497106493	115115	3601789986	536151477	345.28	0.55
41	567229	-379307	-8873739745	115108	3716763199	536151477	345.28	0.56
42	575794	-380582	-9251240336	115102	3831570984	536151477	345.28	0.56
43	584497	-381878	-9629619504	115096	3946211783	536151477	345.28	0.57
44	625197	-383205	-10009254509	115094	4060825529	536151477	345.28	0.57
45	634177	-384542	-10389763687	115087	4175257979	536151477	345.28	0.57
46	643518	-385890	-10768665495	115081	4288763743	536151477	345.28	0.57
47	653002	-387232	-11148427107	115074	4402087640	536151477	345.28	0.57
48	662630	-388595	-11529057312	115067	4515227000	536151477	345.28	0.57
49	672402	-389979	-11910568148	115061	4628180395	536151477	345.28	0.57
50	682318	-391383	-12292971688	115054	4740946358	536151477	345.28	0.57
51	692378	-392808	-12676280038	115048	4853523385	536151477	345.28	0.57
52	702581	-394254	-13060505327	115041	4965909937	536151477	345.28	0.57
53	712929	-395720	-13445659697	115035	5078104441	536151477	345.28	0.57
54	723420	-397207	-13831755287	115028	5190105286	536151477	345.28	0.57
55	734056	-398716	-14218804230	115022	5301910828	536151477	345.28	0.57
56	744835	-400245	-14606818645	115016	5413519384	536151477	345.28	0.57
57	755758	-401794	-14995810627	115009	5524929239	536151477	345.28	0.57
58	766825	-403365	-15385792244	115003	5636138643	536151477	345.28	0.57

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 38 " PDT - MSA - ZONA A - ECCAZIONALE - 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]
<b>1.00</b>	53.55	0.00	-9960.00	6000.00	0.00
<b>2.00</b>	43.82	0.00	-49770.00	54500.00	4.75
---	---	---	Ft = 72766	Fp = 1653	---
---	---	Pa = 1140	Ta = -49484	La = 53338	---
---	---	Pb = -1140	Tb = -286	Lb = 1162	---
<b>3.00</b>	43.82	0.00	-58800.00	0.00	-4.75
---	---	---	Ft = -7812	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -58800	Lb = 0	---
<b>4.00</b>	37.02	0.00	-49770.00	54500.00	4.75
---	---	---	Ft = 72766	Fp = 1653	---
---	---	Pa = 1140	Ta = -49484	La = 53338	---
---	---	Pb = -1140	Tb = -286	Lb = 1162	---
<b>5.00</b>	37.02	0.00	-58800.00	0.00	-4.75
---	---	---	Ft = -7812	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -58800	Lb = 0	---
<b>6.00</b>	30.22	0.00	-58800.00	0.00	4.75
---	---	---	Ft = 7812	Fp = -63342	---
---	---	Pa = 6588	Ta = 4199	La = 0	---
---	---	Pb = -6588	Tb = -62999	Lb = 0	---
<b>7.00</b>	30.22	0.00	-58800.00	0.00	-4.75
---	---	---	Ft = -7812	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -58800	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Uso
2	710	-10246	-11260287	6000	6622478	0	345.28	0.03
3	1543	-10591	-21023798	6000	12149439	-0	345.28	0.04
4	2499	-10994	-31191145	6000	17692819	-0	345.28	0.04
5	3577	-11457	-41820319	6000	23254549	-0	345.28	0.05
6	4778	-11978	-52969303	6001	28836559	-0	345.28	0.05
7	6102	-12558	-64696084	6001	34440788	-0	345.28	0.05
8	10506	-53762	-106428281	54107	77170378	0	345.28	0.08
9	14948	-63313	-166208109	59339	132152399	154545180	345.28	0.15
10	16357	-63975	-224213689	59340	185704525	154545180	345.28	0.18
11	20386	-65640	-283557027	59350	239323050	154545180	345.28	0.21
12	21299	-124439	-399687772	60503	294038207	155300505	345.28	0.26
13	23672	-125194	-519098741	60503	351731689	155300505	345.28	0.21
14	26108	-125959	-639304528	60503	409454812	155300505	345.28	0.24
15	31676	-136492	-766841125	77585	478950858	155300505	345.28	0.27
16	37307	-177035	-942966105	113842	594740934	314860911	345.28	0.32
17	39929	-177860	-1112737626	113842	703164458	314860911	345.28	0.35
18	42614	-178704	-1283366184	113842	811608509	314860911	345.28	0.39
19	44791	-235180	-1501399992	114906	920937697	314860911	345.28	0.43
20	47030	-239539	-1730764019	115005	1030528308	315745510	345.28	0.47
21	49902	-240444	-1959983839	115005	1140101729	315745510	345.28	0.50
22	66451	-215631	-2173241772	115006	1249849864	315745510	345.28	0.53
23	75241	-238117	-2392275875	115007	1359662850	315745510	345.28	0.57
24	79238	-239006	-2602810121	115007	1460851590	315745510	345.28	0.42
25	83311	-239898	-2814158937	115007	1562046206	315745510	345.28	0.43
26	84167	-309048	-3071096622	115007	1663218526	315745510	345.28	0.45
27	85099	-363533	-3403001998	115006	1764368404	315745510	345.28	0.48
28	89402	-364476	-3723050070	115007	1865524339	315745510	345.28	0.50
29	108026	-365439	-4044257938	115008	1966802350	315745510	345.28	0.52
30	112482	-366416	-4366325967	115008	2068075949	315745510	345.28	0.54
31	118308	-367474	-4709956606	115008	2175815308	315745510	345.28	0.47
32	124241	-368532	-5054587183	115008	2283554374	315745510	345.28	0.49
33	130280	-369609	-5400234056	115008	2391293422	315745510	345.28	0.50
34	136426	-370706	-5746906030	115008	2499029254	315745510	345.28	0.51
35	142678	-371821	-6094611811	115008	2606758668	315745510	345.28	0.53
36	170581	-372958	-6443714153	115009	2714613486	315745510	345.28	0.54
37	177046	-374112	-6793849849	115009	2822448049	315745510	345.28	0.55
38	185056	-375340	-7161713193	115008	2935366380	315745510	345.28	0.49
39	193205	-376566	-7530730420	115008	3048264816	315745510	345.28	0.50
40	201493	-377812	-7900919633	115008	3161143185	315745510	345.28	0.50
41	209919	-379080	-8272290193	115008	3273997746	315745510	345.28	0.51
42	218484	-380368	-8644851410	115008	3386824764	315745510	345.28	0.51
43	227187	-381677	-9018612538	115007	3499620503	315745510	345.28	0.52
44	267887	-383010	-9393921994	115008	3612505859	315745510	345.28	0.52
45	276867	-384361	-9770424725	115008	3725342866	315745510	345.28	0.53
46	286208	-385724	-10145659349	115007	3837392972	315745510	345.28	0.52
47	295692	-387080	-10522064678	115007	3949388708	315745510	345.28	0.53
48	305320	-388457	-10899648207	115006	4061325992	315745510	345.28	0.53
49	315092	-389854	-11278418694	115006	4173201236	315745510	345.28	0.53
50	325008	-391272	-11658384873	115005	4285010858	315745510	345.28	0.53
51	335068	-392710	-12039555462	115005	4396751279	315745510	345.28	0.53
52	345271	-394170	-12421939161	115004	4508418931	315745510	345.28	0.53
53	355619	-395650	-12805544654	115004	4620010250	315745510	345.28	0.54
54	366110	-397150	-13190380609	115003	4731521677	315745510	345.28	0.54
55	376746	-398671	-13576455679	115002	4842949665	315745510	345.28	0.54
56	387525	-400213	-13963778502	115002	4954290667	315745510	345.28	0.54
57	398448	-401776	-14352357702	115001	5065541149	315745510	345.28	0.54
58	409515	-403359	-14742201890	115000	5176697580	315745510	345.28	0.54

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 39 " PDT - 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]
<b>1.00</b>	53.55	3960.00	-4770.00	27500.00	0.00
<b>2.00</b>	43.82	59440.00	-57240.00	0.00	4.75
---	---	---	Ft = 83125	Fp = -102473	---
---	---	Pa = 70098	Ta = 44677	La = 0	---
---	---	Pb = -10658	Tb = -101917	Lb = 0	---
<b>3.00</b>	43.82	59440.00	-57240.00	0.00	-4.75
---	---	---	Ft = 67915	Fp = 20851	---
---	---	Pa = 57271	Ta = -36502	La = 0	---
---	---	Pb = 2169	Tb = -20738	Lb = 0	---
<b>4.00</b>	37.02	59440.00	-57240.00	0.00	4.75
---	---	---	Ft = 83125	Fp = -102473	---
---	---	Pa = 70098	Ta = 44677	La = 0	---
---	---	Pb = -10658	Tb = -101917	Lb = 0	---
<b>5.00</b>	37.02	59440.00	-57240.00	0.00	-4.75
---	---	---	Ft = 67915	Fp = 20851	---
---	---	Pa = 57271	Ta = -36502	La = 0	---
---	---	Pb = 2169	Tb = -20738	Lb = 0	---
<b>6.00</b>	30.22	51370.00	-48470.00	52000.00	4.75
---	---	---	Ft = 110629	Fp = -54967	---
---	---	Pa = 24128	Ta = -42288	La = 99339	---
---	---	Pb = 27242	Tb = -6182	Lb = -47339	---
<b>7.00</b>	30.22	59440.00	-57240.00	0.00	-4.75
---	---	---	Ft = 67915	Fp = 20851	---
---	---	Pa = 57271	Ta = -36502	La = 0	---
---	---	Pb = 2169	Tb = -20738	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	4670	-5063	-5675027	27502	30363913	0	345.28	0.07
3	5503	-5409	-10811104	27503	55649993	-0	345.28	0.09
4	6459	-5814	-16348506	27503	80946315	-0	345.28	0.10
5	7537	-6278	-22345104	27504	106253755	-0	345.28	0.11
6	8738	-6800	-28858780	27504	131573287	-0	345.28	0.11
7	10062	-7382	-35947415	27505	156905916	-0	345.28	0.11
8	77581	44844	15716774	27536	182515026	-0	345.28	0.13
9	145137	-691	-1224065	27567	208875618	0	345.28	0.14
10	146546	-1352	-7018853	27567	235204439	0	345.28	0.15
11	146900	-8410	-17302899	27566	261486730	0	345.28	0.16
12	144139	-125373	-151926304	27564	287687781	0	345.28	0.18
13	146512	-126126	-276191905	27563	315294416	0	345.28	0.15
14	148948	-126889	-401217449	27562	342875094	0	345.28	0.17
15	217631	-56535	-477533728	27589	371100716	0	345.28	0.19
16	286376	-120486	-603442610	27614	399932820	-0	345.28	0.22
17	288998	-121303	-727403051	27612	428708540	-0	345.28	0.24
18	291683	-122139	-852105564	27609	457426987	-0	345.28	0.26
19	290186	-252251	-1092816236	27604	486049827	-0	345.28	0.31
20	288750	-246512	-1333198301	27600	514578956	-0	345.28	0.35
21	291622	-247406	-1576038070	27596	543051673	-0	345.28	0.38
22	345576	-383825	-1911840085	37867	578603850	-0	345.28	0.44
23	391772	-328141	-2283557159	126957	713812630	307518761	345.28	0.52
24	395769	-329013	-2580412782	126952	827240272	307518761	345.28	0.40
25	399842	-329892	-2877834644	126948	940595081	307518761	345.28	0.42
26	418698	-273777	-3135862052	107385	1041407053	307518761	345.28	0.44
27	437629	-358651	-3469230253	79609	1107801111	267202438	345.28	0.47
28	441932	-359581	-3792646475	79605	1179803030	267202438	345.28	0.49
29	460556	-360540	-4116958554	79605	1251803649	267202438	345.28	0.52
30	465012	-361502	-4441847039	79600	1323716470	267202438	345.28	0.54
31	470838	-362545	-4788160038	79596	1400127040	267202438	345.28	0.47
32	476771	-363589	-5135160744	79592	1476447291	267202438	345.28	0.48
33	482810	-364653	-5482885177	79589	1552684427	267202438	345.28	0.50
34	488956	-365737	-5831338410	79585	1628836462	267202438	345.28	0.51
35	495208	-366839	-6180526461	79581	1704901586	267202438	345.28	0.52
36	523111	-367972	-6530821828	79581	1780970683	267202438	345.28	0.53
37	529576	-369112	-6881847474	79577	1856944514	267202438	345.28	0.54
38	537586	-370326	-7250317921	79573	1936413903	267202438	345.28	0.48
39	545735	-371538	-7619626054	79569	2015786294	267202438	345.28	0.49
40	554023	-372772	-7989808463	79565	2095067154	267202438	345.28	0.50
41	562449	-374027	-8360875331	79562	2174254820	267202438	345.28	0.50
42	571014	-375303	-8732837292	79558	2253347706	267202438	345.28	0.51
43	579717	-376600	-9105705231	79554	2332344261	267202438	345.28	0.51
44	620417	-377928	-9479839085	79554	2411328769	267202438	345.28	0.52
45	629397	-379266	-9854875357	79550	2490207295	267202438	345.28	0.52
46	638738	-380616	-10228367500	79546	2568465349	267202438	345.28	0.52
47	648222	-381959	-10602746746	79542	2646615986	267202438	345.28	0.52
48	657850	-383323	-10978021780	79538	2724657110	267202438	345.28	0.52
49	667622	-384708	-11354204374	79535	2802587385	267202438	345.28	0.52
50	677538	-386113	-11731306355	79531	2880405470	267202438	345.28	0.53
51	687598	-387539	-12109339605	79527	2958110024	267202438	345.28	0.53
52	697801	-388986	-12488316047	79523	3035699701	267202438	345.28	0.53
53	708149	-390454	-12868247633	79520	3113173151	267202438	345.28	0.53
54	718640	-391942	-13249146334	79516	3190529017	267202438	345.28	0.53
55	729276	-393452	-13631024125	79512	3267765935	267202438	345.28	0.53
56	740055	-394982	-14013892987	79509	3344882531	267202438	345.28	0.53
57	750978	-396533	-14397764887	79505	3421877424	267202438	345.28	0.53
58	762045	-398104	-14782651783	79502	3498749221	267202438	345.28	0.53



## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 40 " PDT - 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]
<b>1.00</b>	53.55	0.00	-4770.00	27500.00	0.00
<b>2.00</b>	43.82	0.00	-57240.00	0.00	4.75
---	---	---	Ft = 7605	Fp = -61662	---
---	---	Pa = 6413	Ta = 4088	La = 0	---
---	---	Pb = -6413	Tb = -61328	Lb = 0	---
<b>3.00</b>	43.82	0.00	-57240.00	0.00	-4.75
---	---	---	Ft = -7605	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -57240	Lb = 0	---
<b>4.00</b>	37.02	0.00	-57240.00	0.00	4.75
---	---	---	Ft = 7605	Fp = -61662	---
---	---	Pa = 6413	Ta = 4088	La = 0	---
---	---	Pb = -6413	Tb = -61328	Lb = 0	---
<b>5.00</b>	37.02	0.00	-57240.00	0.00	-4.75
---	---	---	Ft = -7605	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -57240	Lb = 0	---
<b>6.00</b>	30.22	0.00	-48470.00	52000.00	4.75
---	---	---	Ft = 70348	Fp = 1178	---
---	---	Pa = 817	Ta = -48259	La = 51178	---
---	---	Pb = -817	Tb = -211	Lb = 822	---
<b>7.00</b>	30.22	0.00	-57240.00	0.00	-4.75
---	---	---	Ft = -7605	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -57240	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Uso
2	710	-5056	-5539076	27500	30305221	0	345.28	0.07
3	1543	-5401	-10537480	27500	55533259	0	345.28	0.09
4	2499	-5804	-15935247	27500	80772245	-0	345.28	0.10
5	3577	-6267	-21789946	27500	106022770	0	345.28	0.10
6	4778	-6788	-28159138	27500	131285446	0	345.28	0.11
7	6102	-7368	-35100379	27500	156560913	0	345.28	0.11
8	13143	18484	-11986357	27501	181393399	0	345.28	0.11
9	20221	-4553	-22573374	27502	206293809	0	345.28	0.12
10	21630	-5215	-27904255	27502	231201630	0	345.28	0.13
11	23022	-9581	-36121762	27502	256115508	0	345.28	0.14
12	21299	-125159	-160435008	27502	281005718	0	345.28	0.17
13	23672	-125914	-280449207	27502	307275614	0	345.28	0.13
14	26108	-126679	-401256825	27502	333559516	0	345.28	0.16
15	34313	-91849	-497203204	27502	359907831	0	345.28	0.18
16	42580	-124184	-617472429	27503	386316733	-0	345.28	0.20
17	45202	-125009	-737239773	27503	412735799	0	345.28	0.22
18	47887	-125854	-857865167	27503	439164213	-0	345.28	0.24
19	47428	-243762	-1080084947	27503	465576652	-0	345.28	0.28
20	47030	-246169	-1315162989	27503	491973945	-0	345.28	0.32
21	49902	-247073	-1550586741	27503	518379754	-0	345.28	0.36
22	63565	-249844	-1788380089	32788	548332300	-0	345.28	0.39
23	69470	-297204	-2076562898	78682	629515560	158429054	345.28	0.45
24	73467	-298092	-2338461836	78682	698621375	158429054	345.28	0.34
25	77541	-298985	-2601181967	78682	767735179	158429054	345.28	0.36
26	81282	-325857	-2881537680	79021	837073905	158429054	345.28	0.39
27	85099	-358272	-3202736197	79504	907015781	159129122	345.28	0.41
28	89402	-359215	-3518126641	79504	976864753	159129122	345.28	0.44
29	108026	-360178	-3834667426	79505	1046788004	159129122	345.28	0.46
30	112482	-361155	-4152069665	79505	1116711055	159129122	345.28	0.48
31	118308	-362213	-4490737539	79505	1191100685	159129122	345.28	0.43
32	124241	-363271	-4830406266	79505	1265492467	159129122	345.28	0.44
33	130280	-364349	-5171092069	79505	1339886272	159129122	345.28	0.45
34	136426	-365445	-5512803969	79505	1414280070	159129122	345.28	0.47
35	142678	-366560	-5855550883	79505	1488671817	159129122	345.28	0.48
36	170581	-367698	-6199685198	79505	1563141313	159129122	345.28	0.49
37	177046	-368851	-6544855157	79505	1637600369	159129122	345.28	0.50
38	185056	-370079	-6907519928	79505	1715573047	159129122	345.28	0.45
39	193205	-371305	-7271340766	79505	1793535300	159129122	345.28	0.46
40	201493	-372552	-7636335695	79505	1871486785	159129122	345.28	0.46
41	209919	-373819	-8002514310	79505	1949425074	159129122	345.28	0.47
42	218484	-375107	-8369886150	79505	2027347737	159129122	345.28	0.48
43	227187	-376417	-8738460695	79504	2105252341	159129122	345.28	0.48
44	267887	-377749	-9108577380	79505	2183213439	159129122	345.28	0.49
45	276867	-379100	-9479891343	79505	2261145796	159129122	345.28	0.49
46	286208	-380463	-9849975161	79504	2338539308	159129122	345.28	0.49
47	295692	-381819	-10221234005	79504	2415900024	159129122	345.28	0.49
48	305320	-383196	-10593675610	79504	2493225262	159129122	345.28	0.50
49	315092	-384593	-10967308934	79504	2570512639	159129122	345.28	0.50
50	325008	-386011	-11342142914	79503	2647759775	159129122	345.28	0.50
51	335068	-387450	-11718186468	79503	2724964293	159129122	345.28	0.50
52	345271	-388909	-12095448494	79503	2802123819	159129122	345.28	0.50
53	355619	-390389	-12473937877	79502	2879235983	159129122	345.28	0.50
54	366110	-391890	-12853663481	79502	2956298419	159129122	345.28	0.51
55	376746	-393411	-13234634157	79501	3033308763	159129122	345.28	0.51
56	387525	-394953	-13616858741	79501	3110264657	159129122	345.28	0.51
57	398448	-396515	-14000346051	79501	3187163746	159129122	345.28	0.51
58	409515	-398099	-14385104895	79500	3264003677	159129122	345.28	0.51

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 41 " PDT - 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]
<b>1.00</b>	53.55	3960.00	-4770.00	27500.00	0.00
<b>2.00</b>	43.82	59440.00	-57240.00	0.00	4.75
---	---	---	Ft = 83125	Fp = -102473	---
---	---	Pa = 70098	Ta = 44677	La = 0	---
---	---	Pb = -10658	Tb = -101917	Lb = 0	---
<b>3.00</b>	43.82	59440.00	-57240.00	0.00	-4.75
---	---	---	Ft = 67915	Fp = 20851	---
---	---	Pa = 57271	Ta = -36502	La = 0	---
---	---	Pb = 2169	Tb = -20738	Lb = 0	---
<b>4.00</b>	37.02	51370.00	-48470.00	52000.00	4.75
---	---	---	Ft = 110629	Fp = -54967	---
---	---	Pa = 24128	Ta = -42288	La = 99339	---
---	---	Pb = 27242	Tb = -6182	Lb = -47339	---
<b>5.00</b>	37.02	59440.00	-57240.00	0.00	-4.75
---	---	---	Ft = 67915	Fp = 20851	---
---	---	Pa = 57271	Ta = -36502	La = 0	---
---	---	Pb = 2169	Tb = -20738	Lb = 0	---
<b>6.00</b>	30.22	59440.00	-57240.00	0.00	4.75
---	---	---	Ft = 83125	Fp = -102473	---
---	---	Pa = 70098	Ta = 44677	La = 0	---
---	---	Pb = -10658	Tb = -101917	Lb = 0	---
<b>7.00</b>	30.22	59440.00	-57240.00	0.00	-4.75
---	---	---	Ft = 67915	Fp = 20851	---
---	---	Pa = 57271	Ta = -36502	La = 0	---
---	---	Pb = 2169	Tb = -20738	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Uso
2	4670	-5063	-5680780	27503	30378318	0	345.28	0.07
3	5503	-5409	-10823634	27503	55681369	-0	345.28	0.09
4	6459	-5814	-16368989	27504	80997606	-0	345.28	0.10
5	7537	-6278	-22374866	27504	106328282	-0	345.28	0.11
6	8738	-6800	-28899298	27505	131674746	-0	345.28	0.11
7	10062	-7382	-36000315	27506	157038382	-0	345.28	0.11
8	77581	44845	15570367	27544	182881642	0	345.28	0.13
9	145137	-689	-1545331	27582	209680089	0	345.28	0.15
10	146546	-1350	-7516531	27582	236450645	0	345.28	0.15
11	146900	-8407	-17977207	27581	263175207	0	345.28	0.16
12	144139	-125370	-152773665	27578	289809558	0	345.28	0.19
13	146512	-126123	-277224491	27577	317879949	0	345.28	0.15
14	148948	-126886	-402438008	27576	345931245	0	345.28	0.17
15	194646	-330260	-676161022	59411	396322718	0	345.28	0.24
16	240406	-207381	-881559444	126955	533323330	297174486	345.28	0.31
17	243028	-208201	-1086628969	126953	656502637	297174486	345.28	0.36
18	245713	-209039	-1292410635	126950	779609952	297174486	345.28	0.40
19	263165	-201428	-1474670829	83607	867145935	297174486	345.28	0.43
20	280680	-237728	-1718287354	79618	944385295	261148484	345.28	0.47
21	283552	-238622	-1952593885	79614	1022689635	261148484	345.28	0.50
22	360491	-189504	-2156145679	79638	1101623889	261148484	345.28	0.53
23	429672	-232443	-2371343067	79657	1181033428	261148484	345.28	0.57
24	433669	-233313	-2585495659	79650	1254041119	261148484	345.28	0.42
25	437743	-234191	-2800182566	79644	1326916138	261148484	345.28	0.43
26	437648	-320635	-3072240675	79638	1399650642	261148484	345.28	0.45
27	437629	-358649	-3405976502	79632	1472245431	261148484	345.28	0.48
28	441932	-359579	-3729309791	79627	1544731367	261148484	345.28	0.50
29	460556	-360537	-4053541286	79626	1617202299	261148484	345.28	0.52
30	465012	-361500	-4378354017	79621	1689557245	261148484	345.28	0.54
31	470838	-362543	-4724591341	79616	1766409482	261148484	345.28	0.47
32	476771	-363587	-5071520908	79611	1843144920	261148484	345.28	0.49
33	482810	-364651	-5419178171	79607	1919774093	261148484	345.28	0.50
34	488956	-365735	-5767568061	79602	1996295821	261148484	345.28	0.51
35	495208	-366837	-6116696468	79597	2072709055	261148484	345.28	0.52
36	523111	-367970	-6466933361	79597	2149119442	261148484	345.28	0.54
37	529576	-369110	-6817904175	79592	2225413299	261148484	345.28	0.54
38	537586	-370324	-7186320851	79587	2305196530	261148484	345.28	0.49
39	545735	-371536	-7555578650	79582	2384862697	261148484	345.28	0.49
40	554023	-372771	-7925713834	79578	2464419189	261148484	345.28	0.50
41	562449	-374026	-8296736503	79574	2543864828	261148484	345.28	0.50
42	571014	-375302	-8668657212	79569	2623198490	261148484	345.28	0.51
43	579717	-376599	-9041486772	79565	2702419047	261148484	345.28	0.51
44	620417	-377926	-9415583127	79564	2781622422	261148484	345.28	0.52
45	629397	-379264	-9790584820	79560	2860702773	261148484	345.28	0.52
46	638738	-380614	-10164045423	79555	2939144916	261148484	345.28	0.52
47	648222	-381958	-10538395889	79550	3017463530	261148484	345.28	0.52
48	657850	-383322	-10913644867	79546	3095656737	261148484	345.28	0.52
49	667622	-384707	-11289804075	79541	3173723510	261148484	345.28	0.53
50	677538	-386112	-11666885291	79537	3251662794	261148484	345.28	0.53
51	687598	-387538	-12044900352	79532	3329473510	261148484	345.28	0.53
52	697801	-388986	-12423861140	79528	3407154558	261148484	345.28	0.53
53	708149	-390453	-12803779567	79524	3484704815	261148484	345.28	0.53
54	718640	-391942	-13184667567	79519	3562123134	261148484	345.28	0.53
55	729276	-393451	-13566537085	79515	3639408345	261148484	345.28	0.53
56	740055	-394982	-13949400067	79511	3716559256	261148484	345.28	0.53
57	750978	-396533	-14333268455	79506	3793574649	261148484	345.28	0.53
58	762045	-398104	-14718154179	79502	3870453287	261148484	345.28	0.53

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 42 " PDT - 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]
<b>1.00</b>	53.55	0.00	-4770.00	27500.00	0.00
<b>2.00</b>	43.82	0.00	-57240.00	0.00	4.75
---	---	---	Ft = 7605	Fp = -61662	---
---	---	Pa = 6413	Ta = 4088	La = 0	---
---	---	Pb = -6413	Tb = -61328	Lb = 0	---
<b>3.00</b>	43.82	0.00	-57240.00	0.00	-4.75
---	---	---	Ft = -7605	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -57240	Lb = 0	---
<b>4.00</b>	37.02	0.00	-48470.00	52000.00	4.75
---	---	---	Ft = 70348	Fp = 1178	---
---	---	Pa = 817	Ta = -48259	La = 51178	---
---	---	Pb = -817	Tb = -211	Lb = 822	---
<b>5.00</b>	37.02	0.00	-57240.00	0.00	-4.75
---	---	---	Ft = -7605	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -57240	Lb = 0	---
<b>6.00</b>	30.22	0.00	-57240.00	0.00	4.75
---	---	---	Ft = 7605	Fp = -61662	---
---	---	Pa = 6413	Ta = 4088	La = 0	---
---	---	Pb = -6413	Tb = -61328	Lb = 0	---
<b>7.00</b>	30.22	0.00	-57240.00	0.00	-4.75
---	---	---	Ft = -7605	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -57240	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Us0
2	710	-5056	-5539360	27500	30306884	0	345.28	0.07
3	1543	-5401	-10538381	27500	55538535	0	345.28	0.09
4	2499	-5804	-15937147	27500	80783370	-0	345.28	0.10
5	3577	-6267	-21793277	27500	106042269	0	345.28	0.10
6	4778	-6788	-28164380	27500	131316129	-0	345.28	0.11
7	6102	-7368	-35108061	27501	156605878	-0	345.28	0.11
8	13143	18484	-11999186	27501	181468495	0	345.28	0.11
9	20221	-4553	-22594122	27502	206415258	0	345.28	0.12
10	21630	-5215	-27933472	27502	231372653	0	345.28	0.13
11	23022	-9581	-36159990	27502	256339286	0	345.28	0.14
12	21299	-125159	-160481572	27502	281278287	0	345.28	0.17
13	23672	-125913	-280505541	27502	307605371	0	345.28	0.13
14	26108	-126679	-401323930	27502	333952328	0	345.28	0.16
15	31515	-138549	-530448504	43893	371573998	0	345.28	0.19
16	36984	-176530	-705734019	78681	453594782	153099838	345.28	0.24
17	39606	-177355	-874932581	78681	528540876	153099838	345.28	0.27
18	42291	-178199	-1044989043	78681	603501010	153099838	345.28	0.31
19	44629	-232750	-1260645804	79434	679088183	153099838	345.28	0.35
20	47030	-237399	-1487981774	79503	754861230	153725408	345.28	0.38
21	49902	-238303	-1715095234	79503	830621578	153725408	345.28	0.42
22	66363	-214173	-1926683940	79504	906504484	153725408	345.28	0.45
23	75066	-236088	-2143917207	79505	982431975	153725408	345.28	0.49
24	79063	-236976	-2352584973	79505	1052395955	153725408	345.28	0.36
25	83137	-237869	-2562068850	79505	1122363672	153725408	345.28	0.38
26	84080	-305208	-2815958259	79505	1192315893	153725408	345.28	0.40
27	85099	-358272	-3142852652	79505	1262252513	153725408	345.28	0.42
28	89402	-359215	-3458227699	79505	1332193091	153725408	345.28	0.45
29	108026	-360178	-3774751155	79505	1402219447	153725408	345.28	0.47
30	112482	-361155	-4092136610	79505	1472242362	153725408	345.28	0.49
31	118308	-362213	-4430787083	79505	1546735527	153725408	345.28	0.43
32	124241	-363271	-4770438859	79505	1621228168	153725408	345.28	0.44
33	130280	-364348	-5111108100	79505	1695720517	153725408	345.28	0.46
34	136426	-365445	-5452803861	79505	1770210339	153725408	345.28	0.47
35	142678	-366560	-5795535091	79505	1844695398	153725408	345.28	0.48
36	170581	-367698	-6139652014	79506	1919268374	153725408	345.28	0.49
37	177046	-368851	-6484805262	79506	1993826860	153725408	345.28	0.50
38	185056	-370079	-6847453167	79506	2071899887	153725408	345.28	0.45
39	193205	-371305	-7211257775	79506	2149958705	153725408	345.28	0.46
40	201493	-372551	-7576237068	79506	2228003225	153725408	345.28	0.47
41	209919	-373819	-7942400670	79506	2306030840	153725408	345.28	0.47
42	218484	-375107	-8309758150	79506	2384038945	153725408	345.28	0.48
43	227187	-376417	-8678319015	79505	2462024940	153725408	345.28	0.48
44	267887	-377749	-9048420977	79506	2540073634	153725408	345.28	0.49
45	276867	-379100	-9419721113	79506	2618088264	153725408	345.28	0.49
46	286208	-380463	-9789792087	79505	2695558200	153725408	345.28	0.49
47	295692	-381819	-10161039001	79505	2772989893	153725408	345.28	0.49
48	305320	-383196	-10533469619	79505	2850380503	153725408	345.28	0.50
49	315092	-384593	-10907092917	79504	2927727536	153725408	345.28	0.50
50	325008	-386011	-11281917850	79504	3005028501	153725408	345.28	0.50
51	335068	-387450	-11657953354	79503	3082280912	153725408	345.28	0.50
52	345271	-388909	-12035208346	79503	3159482290	153725408	345.28	0.50
53	355619	-390389	-12413691728	79503	3236630156	153725408	345.28	0.51
54	366110	-391890	-12793412383	79502	3313722040	153725408	345.28	0.51
55	376746	-393411	-13174379178	79502	3390755475	153725408	345.28	0.51
56	387525	-394953	-13556600967	79501	3467727999	153725408	345.28	0.51
57	398448	-396515	-13940086585	79501	3544637154	153725408	345.28	0.51
58	409515	-398099	-14324844857	79500	3621480488	153725408	345.28	0.51

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 43 " PDT - 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]
<b>1.00</b>	53.55	7910.00	-9540.00	5000.00	0.00
<b>2.00</b>	43.82	51370.00	-48470.00	52000.00	4.75
---	---	---	Ft = 110629	Fp = -54967	---
---	---	Pa = 24128	Ta = -42288	La = 99339	---
---	---	Pb = 27242	Tb = -6182	Lb = -47339	---
<b>3.00</b>	43.82	59440.00	-57240.00	0.00	-4.75
---	---	---	Ft = 67915	Fp = 20851	---
---	---	Pa = 57271	Ta = -36502	La = 0	---
---	---	Pb = 2169	Tb = -20738	Lb = 0	---
<b>4.00</b>	37.02	51370.00	-48470.00	52000.00	4.75
---	---	---	Ft = 110629	Fp = -54967	---
---	---	Pa = 24128	Ta = -42288	La = 99339	---
---	---	Pb = 27242	Tb = -6182	Lb = -47339	---
<b>5.00</b>	37.02	59440.00	-57240.00	0.00	-4.75
---	---	---	Ft = 67915	Fp = 20851	---
---	---	Pa = 57271	Ta = -36502	La = 0	---
---	---	Pb = 2169	Tb = -20738	Lb = 0	---
<b>6.00</b>	30.22	59440.00	-57240.00	0.00	4.75
---	---	---	Ft = 83125	Fp = -102473	---
---	---	Pa = 70098	Ta = 44677	La = 0	---
---	---	Pb = -10658	Tb = -101917	Lb = 0	---
<b>7.00</b>	30.22	59440.00	-57240.00	0.00	-4.75
---	---	---	Ft = 67915	Fp = 20851	---
---	---	Pa = 57271	Ta = -36502	La = 0	---
---	---	Pb = 2169	Tb = -20738	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	8620	-9840	-11140920	5007	5693062	0	345.28	0.03
3	9453	-10186	-20866753	5007	10478152	0	345.28	0.04
4	10409	-10591	-31000987	5008	15282614	-0	345.28	0.04
5	11487	-11055	-41602450	5009	20108917	-0	345.28	0.05
6	12688	-11577	-52730031	5010	24959566	-0	345.28	0.05
7	14012	-12159	-64442623	5011	29837070	-0	345.28	0.05
8	58546	-201714	-277074289	94639	104747861	0	345.28	0.19
9	103117	-92364	-335156943	104416	203238603	287833839	345.28	0.29
10	104525	-93026	-422716004	104416	299024295	287833839	345.28	0.33
11	123830	-83569	-505404719	104019	394894031	287833839	345.28	0.38
12	140019	-121372	-597025363	57100	446664810	257072648	345.28	0.41
13	142392	-122125	-718186031	57099	503429076	257072648	345.28	0.31
14	144828	-122889	-840052887	57098	560160484	257072648	345.28	0.33
15	190526	-326266	-1110549718	88940	639450043	257072648	345.28	0.39
16	236286	-203390	-1312818090	156492	805549239	554247134	345.28	0.46
17	238908	-204209	-1514698615	156489	957796961	554247134	345.28	0.50
18	241593	-205047	-1717236739	156486	1109940647	554247134	345.28	0.54
19	259045	-197437	-1896240539	113144	1226545848	554247134	345.28	0.57
20	276560	-233738	-2136584512	109156	1332879779	518221132	345.28	0.60
21	279432	-234632	-2367568388	109151	1440236024	518221132	345.28	0.63
22	356371	-185516	-2567892492	109184	1548467832	518221132	345.28	0.66
23	425552	-228457	-2779918892	109209	1657359763	518221132	345.28	0.70
24	429549	-229327	-2991093035	109200	1757470455	518221132	345.28	0.51
25	433623	-230204	-3202758157	109193	1857397361	518221132	345.28	0.52
26	433528	-316648	-3471755983	109185	1957129762	518221132	345.28	0.53
27	433509	-354661	-3802395726	109177	2056668964	518221132	345.28	0.56
28	437812	-355590	-4122604100	109170	2156057906	518221132	345.28	0.58
29	456436	-356549	-4443697284	109169	2255426737	518221132	345.28	0.60
30	460892	-357511	-4765344998	109162	2354635637	518221132	345.28	0.61
31	466718	-358553	-5108188624	109155	2460010170	518221132	345.28	0.53
32	472651	-359597	-5451700363	109149	2565223898	518221132	345.28	0.54
33	478690	-360661	-5795919139	109143	2670291415	518221132	345.28	0.56
34	484836	-361744	-6140851016	109137	2775211164	518221132	345.28	0.57
35	491088	-362846	-6486502935	109131	2879981761	518221132	345.28	0.58
36	518991	-363979	-6833258388	109130	2984749415	518221132	345.28	0.58
37	525456	-365118	-7180730132	109123	3089356890	518221132	345.28	0.59
38	533466	-366332	-7545464931	109117	3198748367	518221132	345.28	0.53
39	541615	-367544	-7911024941	109111	3307979068	518221132	345.28	0.53
40	549903	-368778	-8277448272	109105	3417059184	518221132	345.28	0.54
41	558329	-370032	-8644745693	109099	3525987123	518221132	345.28	0.54
42	566894	-371308	-9012928382	109093	3634761361	518221132	345.28	0.55
43	575597	-372604	-9382007728	109088	3743380367	518221132	345.28	0.55
44	616297	-373932	-9752351639	109086	3851976714	518221132	345.28	0.55
45	625277	-375270	-10123588797	109080	3960404157	518221132	345.28	0.56
46	634618	-376620	-10493298024	109074	4067956341	518221132	345.28	0.55
47	644102	-377962	-10863886141	109068	4175338953	518221132	345.28	0.55
48	653730	-379326	-11235362155	109062	4282549421	518221132	345.28	0.55
49	663502	-380710	-11607738188	109056	4389586340	518221132	345.28	0.56
50	673418	-382116	-11981026398	109050	4496448266	518221132	345.28	0.56
51	683478	-383541	-12355238970	109044	4603133721	518221132	345.28	0.56
52	693681	-384988	-12730388114	109038	4709641195	518221132	345.28	0.56
53	704029	-386456	-13106486047	109032	4815969146	518221132	345.28	0.56
54	714520	-387944	-13483544986	109026	4922115998	518221132	345.28	0.56
55	725156	-389453	-13861577141	109020	5028080144	518221132	345.28	0.56
56	735935	-390983	-14240594707	109014	5133859940	518221132	345.28	0.56
57	746858	-392533	-14620609857	109009	5239453716	518221132	345.28	0.56
58	757925	-394105	-15001634735	109003	5344859765	518221132	345.28	0.56



## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 44 " PDT - 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]
<b>1.00</b>	53.55	0.00	-9540.00	5000.00	0.00
<b>2.00</b>	43.82	0.00	-48470.00	52000.00	4.75
---	---	---	Ft = 70348	Fp = 1178	---
---	---	Pa = 817	Ta = -48259	La = 51178	---
---	---	Pb = -817	Tb = -211	Lb = 822	---
<b>3.00</b>	43.82	0.00	-57240.00	0.00	-4.75
---	---	---	Ft = -7605	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -57240	Lb = 0	---
<b>4.00</b>	37.02	0.00	-48470.00	52000.00	4.75
---	---	---	Ft = 70348	Fp = 1178	---
---	---	Pa = 817	Ta = -48259	La = 51178	---
---	---	Pb = -817	Tb = -211	Lb = 822	---
<b>5.00</b>	37.02	0.00	-57240.00	0.00	-4.75
---	---	---	Ft = -7605	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -57240	Lb = 0	---
<b>6.00</b>	30.22	0.00	-57240.00	0.00	4.75
---	---	---	Ft = 7605	Fp = -61662	---
---	---	Pa = 6413	Ta = 4088	La = 0	---
---	---	Pb = -6413	Tb = -61328	Lb = 0	---
<b>7.00</b>	30.22	0.00	-57240.00	0.00	-4.75
---	---	---	Ft = -7605	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -57240	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	710	-9826	-10796927	5000	5520057	0	345.28	0.03
3	1543	-10171	-20174011	5000	10128736	-0	345.28	0.04
4	2499	-10574	-29954070	5000	14752882	0	345.28	0.04
5	3577	-11037	-40194992	5000	19394329	-0	345.28	0.04
6	4778	-11558	-50954666	5001	24054916	-0	345.28	0.04
7	6102	-12138	-62290976	5001	28736487	-0	345.28	0.05
8	10345	-53386	-104181413	51159	69050690	0	345.28	0.08
9	14625	-61669	-162124801	56180	121117626	148287677	345.28	0.14
10	16033	-62330	-218628760	56180	171812391	148287677	345.28	0.17
11	20224	-63847	-276382639	56187	222571006	148287677	345.28	0.20
12	21299	-121159	-389171750	57002	274109540	148821827	345.28	0.25
13	23672	-121914	-505454907	57003	328466310	148821827	345.28	0.20
14	26108	-122679	-622531128	57003	382851184	148821827	345.28	0.23
15	31515	-134549	-747917732	73393	448528889	148821827	345.28	0.26
16	36984	-172530	-919468254	108182	558622968	301921665	345.28	0.31
17	39606	-173355	-1084929899	108182	661648651	301921665	345.28	0.34
18	42291	-174200	-1251247361	108182	764693960	301921665	345.28	0.37
19	44629	-228750	-1463162469	108935	868369835	301921665	345.28	0.41
20	47030	-233399	-1686754099	109004	972234432	302547235	345.28	0.45
21	49902	-234304	-1910120857	109004	1076089718	302547235	345.28	0.48
22	66363	-210173	-2117970620	109006	1180109321	302547235	345.28	0.51
23	75066	-232088	-2331465049	109006	1284189427	302547235	345.28	0.55
24	79063	-232976	-2536684588	109006	1380095667	302547235	345.28	0.41
25	83137	-233869	-2742717960	109006	1476007589	302547235	345.28	0.42
26	84080	-301208	-2993153795	109006	1571899292	302547235	345.28	0.44
27	85099	-354272	-3316591758	109006	1667770578	302547235	345.28	0.46
28	89402	-355216	-3628508910	109006	1763647628	302547235	345.28	0.49
29	108026	-356178	-3941577829	109007	1859640236	302547235	345.28	0.51
30	112482	-357155	-4255506757	109007	1955628705	302547235	345.28	0.53
31	118308	-358213	-4590478234	109007	2057745541	302547235	345.28	0.46
32	124241	-359271	-4926449254	109007	2159862136	302547235	345.28	0.47
33	130280	-360349	-5263436210	109007	2261978742	302547235	345.28	0.49
34	136426	-361445	-5601448131	109007	2364092334	302547235	345.28	0.50
35	142678	-362561	-5940493952	109007	2466199877	302547235	345.28	0.51
36	170581	-363698	-6280927827	109008	2568426149	302547235	345.28	0.52
37	177046	-364851	-6622396054	109008	2670633277	302547235	345.28	0.53
38	185056	-366079	-6981182718	109008	2777658920	302547235	345.28	0.47
39	193205	-367305	-7341124275	109008	2884665754	302547235	345.28	0.48
40	201493	-368552	-7702238882	109008	2991653615	302547235	345.28	0.49
41	209919	-369819	-8064536172	109007	3098618958	302547235	345.28	0.49
42	218484	-371108	-8428025730	109007	3205558244	302547235	345.28	0.50
43	227187	-372417	-8792717084	109007	3312467937	302547235	345.28	0.50
44	267887	-373749	-9158950520	109008	3419462490	302547235	345.28	0.51
45	276867	-375100	-9526380291	109007	3526411285	302547235	345.28	0.51
46	286208	-376463	-9892604403	109007	3632614311	302547235	345.28	0.51
47	295692	-377819	-10260002746	109007	3738765874	302547235	345.28	0.51
48	305320	-379196	-10628583119	109006	3844862107	302547235	345.28	0.51
49	315092	-380593	-10998354550	109006	3950899611	302547235	345.28	0.52
50	325008	-382011	-11369326046	109005	4056874991	302547235	345.28	0.52
51	335068	-383450	-11741506595	109005	4162784859	302547235	345.28	0.52
52	345271	-384909	-12114905168	109004	4268625832	302547235	345.28	0.52
53	355619	-386389	-12489530720	109003	4374394533	302547235	345.28	0.52
54	366110	-387890	-12865392189	109003	4480087593	302547235	345.28	0.52
55	376746	-389411	-13242498496	109002	4585701647	302547235	345.28	0.52
56	387525	-390953	-13620858550	109002	4691233340	302547235	345.28	0.52
57	398448	-392516	-14000481243	109001	4796679318	302547235	345.28	0.52
58	409515	-394099	-14381375454	109000	4902036239	302547235	345.28	0.52

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 45 " PDT - 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]
<b>1.00</b>	53.55	6330.00	-4900.00	36000.00	0.00
<b>2.00</b>	43.82	79360.00	-49660.00	0.00	4.75
---	---	---	Ft = 107427	Fp = -107984	---
---	---	Pa = 90591	Ta = 57738	La = 0	---
---	---	Pb = -11231	Tb = -107398	Lb = 0	---
<b>3.00</b>	43.82	79360.00	-49660.00	0.00	-4.75
---	---	---	Ft = 94231	Fp = -991	---
---	---	Pa = 79463	Ta = -50646	La = 0	---
---	---	Pb = -103	Tb = 986	Lb = 0	---
<b>4.00</b>	37.02	79360.00	-49660.00	0.00	4.75
---	---	---	Ft = 107427	Fp = -107984	---
---	---	Pa = 90591	Ta = 57738	La = 0	---
---	---	Pb = -11231	Tb = -107398	Lb = 0	---
<b>5.00</b>	37.02	79360.00	-49660.00	0.00	-4.75
---	---	---	Ft = 94231	Fp = -991	---
---	---	Pa = 79463	Ta = -50646	La = 0	---
---	---	Pb = -103	Tb = 986	Lb = 0	---
<b>6.00</b>	30.22	67970.00	-41580.00	63000.00	4.75
---	---	---	Ft = 127717	Fp = -61521	---
---	---	Pa = 45744	Ta = -22502	La = 117101	---
---	---	Pb = 22226	Tb = -19078	Lb = -54101	---
<b>7.00</b>	30.22	79360.00	-49660.00	0.00	-4.75
---	---	---	Ft = 94231	Fp = -991	---
---	---	Pa = 79463	Ta = -50646	La = 0	---
---	---	Pb = -103	Tb = 986	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Uso
2	7040	-4984	-5667654	36006	39794039	0	345.28	0.09
3	7873	-5071	-10530998	36006	72939290	0	345.28	0.12
4	8829	-5173	-15513259	36007	106096326	-0	345.28	0.13
5	9907	-5290	-20631260	36008	139266380	-0	345.28	0.14
6	11108	-5422	-25901851	36009	172450876	-0	345.28	0.14
7	12432	-5569	-31341883	36010	205651279	-0	345.28	0.14
8	101293	40064	13956070	36080	239536490	-0	345.28	0.16
9	190192	895	-475827	36149	274711589	-0	345.28	0.19
10	191601	731	-4868712	36148	309824942	-0	345.28	0.20
11	190532	-4968	-12737537	36145	344835964	-0	345.28	0.21
12	186349	-106005	-128050881	36138	379699768	-0	345.28	0.23
13	188722	-106190	-233844567	36136	416410809	-0	345.28	0.17
14	191158	-106378	-339836383	36134	453066847	0	345.28	0.19
15	281183	-44909	-403674587	36193	490820904	0	345.28	0.21
16	371271	-99945	-510615511	36248	529605171	-0	345.28	0.23
17	373893	-100139	-615349004	36242	568280622	-0	345.28	0.25
18	376578	-100336	-720193860	36236	606845805	-0	345.28	0.26
19	373658	-212674	-925100260	36225	645234615	-0	345.28	0.30
20	370800	-207138	-1129120939	36214	683450682	-0	345.28	0.33
21	373672	-207347	-1334692097	36207	721558692	-0	345.28	0.36
22	449530	-344726	-1633957130	48329	768242305	-0	345.28	0.41
23	517630	-281087	-1962337218	153360	932602418	362503124	345.28	0.48
24	521627	-281283	-2218589709	153349	1070836089	362503124	345.28	0.37
25	525701	-281484	-2474761609	153339	1208931622	362503124	345.28	0.39
26	540912	-228490	-2693617211	130978	1332628008	362503124	345.28	0.41
27	556199	-300019	-2974608363	99231	1416924974	316428090	345.28	0.43
28	560502	-300234	-3246840920	99222	1507581463	316428090	345.28	0.45
29	579126	-300466	-3519244264	99218	1598197792	316428090	345.28	0.47
30	583582	-300688	-3791536802	99209	1688662988	316428090	345.28	0.49
31	589408	-300930	-4081105098	99200	1784741768	316428090	345.28	0.43
32	595341	-301173	-4370571350	99191	1880664076	316428090	345.28	0.44
33	601380	-301423	-4659962302	99182	1976442550	316428090	345.28	0.45
34	607526	-301677	-4949271107	99174	2072074865	316428090	345.28	0.46
35	613778	-301936	-5238492102	99166	2167559026	316428090	345.28	0.47
36	641681	-302212	-5527928549	99163	2263011558	316428090	345.28	0.48
37	648146	-302480	-5817252315	99154	2358305967	316428090	345.28	0.48
38	656156	-302766	-6120162645	99146	2457944035	316428090	345.28	0.43
39	664305	-303052	-6422976128	99138	2557421126	316428090	345.28	0.44
40	672593	-303345	-6725717794	99130	2656746882	316428090	345.28	0.44
41	681019	-303643	-7028385046	99123	2755919688	316428090	345.28	0.44
42	689584	-303946	-7330975859	99115	2854938074	316428090	345.28	0.45
43	698287	-304255	-7633488517	99108	2953800624	316428090	345.28	0.45
44	738987	-304580	-7936213451	99105	3052615371	316428090	345.28	0.45
45	747967	-304898	-8238835620	99097	3151263082	316428090	345.28	0.46
46	757308	-305220	-8539381360	99089	3249101212	316428090	345.28	0.45
47	766792	-305540	-8839817063	99082	3346771888	316428090	345.28	0.45
48	776420	-305865	-9140139339	99074	3444272850	316428090	345.28	0.46
49	786192	-306195	-9440347919	99067	3541602994	316428090	345.28	0.46
50	796108	-306531	-9740442610	99059	3638761206	316428090	345.28	0.46
51	806168	-306873	-10040423289	99052	3735746361	316428090	345.28	0.46
52	816371	-307219	-10340289893	99045	3832557324	316428090	345.28	0.46
53	826719	-307571	-10640042401	99038	3929192948	316428090	345.28	0.46
54	837210	-307928	-10939680822	99031	4025652067	316428090	345.28	0.46
55	847846	-308291	-11239205186	99024	4121933501	316428090	345.28	0.46
56	858625	-308659	-11538615533	99017	4218036050	316428090	345.28	0.46
57	869548	-309032	-11837911904	99010	4313958495	316428090	345.28	0.46
58	880615	-309411	-12137094338	99003	4409699593	316428090	345.28	0.46

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 46 " PDT - 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]
<b>1.00</b>	53.55	0.00	-4900.00	36000.00	0.00
<b>2.00</b>	43.82	0.00	-49660.00	0.00	4.75
---	---	---	Ft = 6598	Fp = -53496	---
---	---	Pa = 5564	Ta = 3546	La = 0	---
---	---	Pb = -5564	Tb = -53206	Lb = 0	---
<b>3.00</b>	43.82	0.00	-49660.00	0.00	-4.75
---	---	---	Ft = -6598	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -49660	Lb = 0	---
<b>4.00</b>	37.02	0.00	-49660.00	0.00	4.75
---	---	---	Ft = 6598	Fp = -53496	---
---	---	Pa = 5564	Ta = 3546	La = 0	---
---	---	Pb = -5564	Tb = -53206	Lb = 0	---
<b>5.00</b>	37.02	0.00	-49660.00	0.00	-4.75
---	---	---	Ft = -6598	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -49660	Lb = 0	---
<b>6.00</b>	30.22	0.00	-41580.00	63000.00	4.75
---	---	---	Ft = 69685	Fp = 8812	---
---	---	Pa = 5539	Ta = -40848	La = 56186	---
---	---	Pb = -5539	Tb = -732	Lb = 6814	---
<b>7.00</b>	30.22	0.00	-49660.00	0.00	-4.75
---	---	---	Ft = -6598	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -49660	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Uso
2	710	-4971	-5481848	36000	39672049	0	345.28	0.09
3	1543	-5057	-10157376	36000	72697322	-0	345.28	0.12
4	2499	-5158	-14949523	36000	105736603	-0	345.28	0.13
5	3577	-5274	-19874720	36000	138790625	-0	345.28	0.14
6	4778	-5404	-24949397	36000	171860148	-0	345.28	0.14
7	6102	-5549	-30189985	36001	204945968	-0	345.28	0.14
8	12718	17267	-9004064	36001	237443919	0	345.28	0.15
9	19372	-2322	-16679190	36002	270023107	0	345.28	0.16
10	20780	-2487	-19425289	36002	302611885	0	345.28	0.17
11	22597	-5855	-24307531	36002	335213650	0	345.28	0.18
12	21299	-105696	-129537493	36002	367790148	0	345.28	0.20
13	23672	-105885	-230449205	36002	402171570	0	345.28	0.15
14	26108	-106076	-331598422	36002	436570484	0	345.28	0.17
15	33888	-75373	-410697733	36003	471046177	0	345.28	0.18
16	41730	-102929	-510406859	36003	505593918	0	345.28	0.20
17	44353	-103135	-609195347	36004	540154353	-0	345.28	0.22
18	47038	-103345	-708231529	36004	574726392	-0	345.28	0.23
19	47003	-205106	-894914454	36004	609282077	-0	345.28	0.26
20	47030	-206647	-1092246848	36003	643822184	-0	345.28	0.29
21	49902	-206873	-1289347427	36004	678372452	-0	345.28	0.32
22	65926	-190048	-1475486672	41807	716849429	-0	345.28	0.35
23	74191	-248189	-1710343538	92191	811591909	173931519	345.28	0.39
24	78189	-248411	-1928668101	92191	892633127	173931519	345.28	0.30
25	82262	-248634	-2147218861	92191	973682776	173931519	345.28	0.32
26	83643	-284740	-2389829076	95007	1056532923	173931519	345.28	0.34
27	85099	-299483	-2657169944	99005	1144329970	179734827	345.28	0.36
28	89402	-299719	-2920302642	99005	1231315570	179734827	345.28	0.38
29	108026	-299960	-3183900994	99006	1318394152	179734827	345.28	0.40
30	112482	-300204	-3447718494	99006	1405472348	179734827	345.28	0.42
31	118308	-300468	-3728639291	99006	1498112855	179734827	345.28	0.37
32	124241	-300731	-4009819345	99006	1590755928	179734827	345.28	0.38
33	130280	-301000	-4291261815	99006	1683401423	179734827	345.28	0.39
34	136426	-301273	-4572963891	99006	1776046803	179734827	345.28	0.40
35	142678	-301551	-4854922689	99006	1868689515	179734827	345.28	0.41
36	170581	-301836	-5137417430	99007	1961429474	179734827	345.28	0.42
37	177046	-302124	-5420148910	99006	2054156263	179734827	345.28	0.43
38	185056	-302430	-5716528661	99006	2151258544	179734827	345.28	0.39
39	193205	-302735	-6013174797	99006	2248347683	179734827	345.28	0.39
40	201493	-303046	-6310090525	99006	2345423264	179734827	345.28	0.40
41	209919	-303361	-6607272090	99006	2442482257	179734827	345.28	0.40
42	218484	-303682	-6904715708	99006	2539521627	179734827	345.28	0.41
43	227187	-304008	-7202417565	99006	2636538337	179734827	345.28	0.41
44	267887	-304342	-7500643783	99006	2733625661	179734827	345.28	0.42
45	276867	-304678	-7799100579	99006	2830676968	179734827	345.28	0.42
46	286208	-305017	-8095835150	99006	2927057015	179734827	345.28	0.42
47	295692	-305354	-8392784222	99005	3023395992	179734827	345.28	0.42
48	305320	-305697	-8689942878	99005	3119690553	179734827	345.28	0.42
49	315092	-306045	-8987307219	99004	3215937725	179734827	345.28	0.42
50	325008	-306397	-9284873349	99004	3312134541	179734827	345.28	0.42
51	335068	-306755	-9582637371	99004	3408278034	179734827	345.28	0.42
52	345271	-307118	-9880595394	99003	3504365245	179734827	345.28	0.43
53	355619	-307486	-10178743527	99003	3600393219	179734827	345.28	0.43
54	366110	-307860	-10477077884	99002	3696359002	179734827	345.28	0.43
55	376746	-308238	-10775594583	99002	3792259650	179734827	345.28	0.43
56	387525	-308621	-11074289747	99001	3888092218	179734827	345.28	0.43
57	398448	-309010	-11373159503	99001	3983853772	179734827	345.28	0.43
58	409515	-309404	-11672199985	99000	4079541377	179734827	345.28	0.43

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 47 " PDT - 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]
<b>1.00</b>	53.55	6330.00	-4900.00	36000.00	0.00
<b>2.00</b>	43.82	79360.00	-49660.00	0.00	4.75
---	---	---	Ft = 107427	Fp = -107984	---
---	---	Pa = 90591	Ta = 57738	La = 0	---
---	---	Pb = -11231	Tb = -107398	Lb = 0	---
<b>3.00</b>	43.82	79360.00	-49660.00	0.00	-4.75
---	---	---	Ft = 94231	Fp = -991	---
---	---	Pa = 79463	Ta = -50646	La = 0	---
---	---	Pb = -103	Tb = 986	Lb = 0	---
<b>4.00</b>	37.02	67970.00	-41580.00	63000.00	4.75
---	---	---	Ft = 127717	Fp = -61521	---
---	---	Pa = 45744	Ta = -22502	La = 117101	---
---	---	Pb = 22226	Tb = -19078	Lb = -54101	---
<b>5.00</b>	37.02	79360.00	-49660.00	0.00	-4.75
---	---	---	Ft = 94231	Fp = -991	---
---	---	Pa = 79463	Ta = -50646	La = 0	---
---	---	Pb = -103	Tb = 986	Lb = 0	---
<b>6.00</b>	30.22	79360.00	-49660.00	0.00	4.75
---	---	---	Ft = 107427	Fp = -107984	---
---	---	Pa = 90591	Ta = 57738	La = 0	---
---	---	Pb = -11231	Tb = -107398	Lb = 0	---
<b>7.00</b>	30.22	79360.00	-49660.00	0.00	-4.75
---	---	---	Ft = 94231	Fp = -991	---
---	---	Pa = 79463	Ta = -50646	La = 0	---
---	---	Pb = -103	Tb = 986	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	7040	-4984	-5676044	36007	39820626	0	345.28	0.09
3	7873	-5071	-10548770	36008	72995604	-0	345.28	0.12
4	8829	-5173	-15541548	36009	106185965	-0	345.28	0.13
5	9907	-5290	-20671348	36010	139393404	-0	345.28	0.14
6	11108	-5422	-25955163	36011	172619806	-0	345.28	0.14
7	12432	-5569	-31409993	36012	205867097	-0	345.28	0.14
8	101293	40065	13769880	36097	240126452	-0	345.28	0.16
9	190192	896	-883601	36181	276003651	0	345.28	0.19
10	191601	732	-5499472	36180	311823524	0	345.28	0.20
11	190532	-4966	-13589697	36175	347536015	0	345.28	0.21
12	186349	-106003	-129119160	36168	383084519	0	345.28	0.23
13	188722	-106188	-235143188	36165	420525285	0	345.28	0.17
14	191158	-106375	-341367783	36163	457918721	0	345.28	0.19
15	258760	-310469	-596963998	73717	522053773	0	345.28	0.25
16	326424	-180112	-776765193	153365	688666397	350309292	345.28	0.32
17	329047	-180307	-956558680	153359	838935890	350309292	345.28	0.37
18	331731	-180507	-1136414127	153352	989064081	350309292	345.28	0.41
19	345540	-167783	-1290187456	103814	1098444890	350309292	345.28	0.44
20	359410	-199039	-1496596645	99251	1195963028	309137401	345.28	0.47
21	362282	-199249	-1694246025	99242	1294632316	309137401	345.28	0.49
22	460564	-156102	-1865097651	99293	1394328486	309137401	345.28	0.52
23	551087	-192802	-2045887614	99333	1494825101	309137401	345.28	0.56
24	555084	-192997	-2225652091	99318	1587145783	309137401	345.28	0.41
25	559158	-193196	-2405310337	99305	1679237079	309137401	345.28	0.42
26	557640	-267620	-2634149830	99292	1771084886	309137401	345.28	0.43
27	556199	-300016	-2915897079	99278	1862691378	309137401	345.28	0.45
28	560502	-300231	-3188032000	99267	1954110030	309137401	345.28	0.47
29	579126	-300463	-3460341254	99262	2045460854	309137401	345.28	0.49
30	583582	-300685	-3732545489	99251	2136615391	309137401	345.28	0.50
31	589408	-300928	-4022025770	99239	2233381282	309137401	345.28	0.44
32	595341	-301171	-4311409467	99228	2329948061	309137401	345.28	0.45
33	601380	-301420	-4600722645	99218	2426333710	309137401	345.28	0.46
34	607526	-301674	-4889958275	99208	2522537304	309137401	345.28	0.47
35	613778	-301933	-5179110524	99198	2618558179	309137401	345.28	0.48
36	641681	-302210	-5468480253	99195	2714531591	309137401	345.28	0.49
37	648146	-302477	-5757741589	99184	2810313412	309137401	345.28	0.49
38	656156	-302764	-6060590852	99174	2910428258	309137401	345.28	0.44
39	664305	-303050	-6363347318	99164	3010350502	309137401	345.28	0.44
40	672593	-303343	-6666035625	99155	3110092863	309137401	345.28	0.45
41	681019	-303641	-6968653062	99146	3209654603	309137401	345.28	0.45
42	689584	-303945	-7271197498	99137	3309035087	309137401	345.28	0.45
43	698287	-304253	-7573667117	99128	3408233675	309137401	345.28	0.46
44	738987	-304578	-7876350464	99125	3507373130	309137401	345.28	0.46
45	747967	-304897	-8178934368	99115	3606319604	309137401	345.28	0.46
46	757308	-305218	-8479445285	99106	3704429631	309137401	345.28	0.46
47	766792	-305539	-8779849284	99097	3802347854	309137401	345.28	0.46
48	776420	-305864	-9080142917	99088	3900072448	309137401	345.28	0.46
49	786192	-306195	-9380325847	99079	3997602869	309137401	345.28	0.46
50	796108	-306531	-9680397812	99071	4094938524	309137401	345.28	0.46
51	806168	-306872	-9980358628	99062	4192078775	309137401	345.28	0.46
52	816371	-307219	-10280208172	99053	4289022943	309137401	345.28	0.46
53	826719	-307571	-10579946369	99045	4385770304	309137401	345.28	0.46
54	837210	-307928	-10879573178	99036	4482320091	309137401	345.28	0.46
55	847846	-308291	-11179088581	99028	4578671493	309137401	345.28	0.46
56	858625	-308659	-11478492574	99020	4674823655	309137401	345.28	0.46
57	869548	-309032	-11777785157	99012	4770775680	309137401	345.28	0.46
58	880615	-309411	-12076966329	99004	4866526630	309137401	345.28	0.46



## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 48 " PDT - 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]
<b>1.00</b>	53.55	0.00	-4900.00	36000.00	0.00
<b>2.00</b>	43.82	0.00	-49660.00	0.00	4.75
---	---	---	Ft = 6598	Fp = -53496	---
---	---	Pa = 5564	Ta = 3546	La = 0	---
---	---	Pb = -5564	Tb = -53206	Lb = 0	---
<b>3.00</b>	43.82	0.00	-49660.00	0.00	-4.75
---	---	---	Ft = -6598	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -49660	Lb = 0	---
<b>4.00</b>	37.02	0.00	-41580.00	63000.00	4.75
---	---	---	Ft = 69685	Fp = 8812	---
---	---	Pa = 5539	Ta = -40848	La = 56186	---
---	---	Pb = -5539	Tb = -732	Lb = 6814	---
<b>5.00</b>	37.02	0.00	-49660.00	0.00	-4.75
---	---	---	Ft = -6598	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -49660	Lb = 0	---
<b>6.00</b>	30.22	0.00	-49660.00	0.00	4.75
---	---	---	Ft = 6598	Fp = -53496	---
---	---	Pa = 5564	Ta = 3546	La = 0	---
---	---	Pb = -5564	Tb = -53206	Lb = 0	---
<b>7.00</b>	30.22	0.00	-49660.00	0.00	-4.75
---	---	---	Ft = -6598	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -49660	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Uso
2	710	-4971	-5482044	36000	39674015	0	345.28	0.09
3	1543	-5057	-10157997	36000	72703560	-0	345.28	0.12
4	2499	-5158	-14950833	36000	105749757	-0	345.28	0.13
5	3577	-5274	-19877015	36000	138813678	-0	345.28	0.14
6	4778	-5404	-24953008	36001	171896424	-0	345.28	0.14
7	6102	-5549	-30195276	36001	204999129	-0	345.28	0.14
8	12718	17267	-9012787	36001	237531552	0	345.28	0.15
9	19372	-2322	-16693139	36002	270163240	0	345.28	0.16
10	20780	-2487	-19444842	36002	302808328	0	345.28	0.17
11	22597	-5855	-24333178	36003	335471313	0	345.28	0.18
12	21299	-105696	-129568882	36002	368105498	0	345.28	0.20
13	23672	-105885	-230487323	36003	402554534	0	345.28	0.15
14	26108	-106076	-331643961	36003	437027997	0	345.28	0.17
15	33875	-89726	-420585157	53997	483919889	0	345.28	0.19
16	41705	-147323	-568501370	92190	579593651	168080834	345.28	0.23
17	44328	-147529	-709352607	92190	667500665	168080834	345.28	0.26
18	47013	-147739	-850449204	92190	755422985	168080834	345.28	0.29
19	46990	-201417	-1039618727	98430	848456650	168080834	345.28	0.32
20	47030	-198567	-1228004195	99004	942960193	173266574	345.28	0.36
21	49902	-198793	-1417447784	99004	1037304128	173266574	345.28	0.39
22	65939	-177286	-1592854142	99005	1131796279	173266574	345.28	0.41
23	74217	-195716	-1772588354	99006	1226339830	173266574	345.28	0.45
24	78214	-195937	-1945097004	99006	1313458074	173266574	345.28	0.33
25	82287	-196160	-2117830629	99006	1400581271	173266574	345.28	0.34
26	83655	-254019	-2328607761	99006	1487688927	173266574	345.28	0.36
27	85099	-299483	-2602231072	99006	1574780633	173266574	345.28	0.38
28	89402	-299719	-2865349669	99006	1661877251	173266574	345.28	0.40
29	108026	-299960	-3128932150	99007	1749080788	173266574	345.28	0.42
30	112482	-300204	-3392734278	99007	1836280012	173266574	345.28	0.43
31	118308	-300467	-3673639138	99007	1929045995	173266574	345.28	0.38
32	124241	-300731	-3954803667	99007	2021811300	173266574	345.28	0.39
33	130280	-301000	-4236230969	99007	2114576222	173266574	345.28	0.40
34	136426	-301273	-4517918264	99007	2207337976	173266574	345.28	0.41
35	142678	-301551	-4799862699	99007	2300093773	173266574	345.28	0.42
36	170581	-301836	-5082341511	99008	2392959143	173266574	345.28	0.43
37	177046	-302124	-5365057686	99008	2485806432	173266574	345.28	0.44
38	185056	-302430	-5661421990	99008	2583030328	173266574	345.28	0.39
39	193205	-302735	-5958053261	99007	2680236496	173266574	345.28	0.40
40	201493	-303046	-6254954669	99007	2777424829	173266574	345.28	0.40
41	209919	-303361	-6552122484	99007	2874592076	173266574	345.28	0.41
42	218484	-303682	-6849552950	99007	2971734995	173266574	345.28	0.41
43	227187	-304008	-7147242279	99007	3068850344	173266574	345.28	0.42
44	267887	-304342	-7445455013	99007	3166043827	173266574	345.28	0.42
45	276867	-304678	-7743899145	99007	3263194842	173266574	345.28	0.42
46	286208	-305017	-8040621953	99007	3359667509	173266574	345.28	0.42
47	295692	-305354	-8337560100	99006	3456092505	173266574	345.28	0.42
48	305320	-305697	-8634708692	99006	3552466291	173266574	345.28	0.43
49	315092	-306045	-8932063851	99005	3648785761	173266574	345.28	0.43
50	325008	-306397	-9229621695	99005	3745047813	173266574	345.28	0.43
51	335068	-306755	-9527378345	99004	3841249349	173266574	345.28	0.43
52	345271	-307118	-9825329926	99004	3937387281	173266574	345.28	0.43
53	355619	-307486	-10123472563	99003	4033458522	173266574	345.28	0.43
54	366110	-307860	-10421802387	99003	4129459995	173266574	345.28	0.43
55	376746	-308238	-10720315532	99002	4225388626	173266574	345.28	0.43
56	387525	-308621	-11019008136	99002	4321241348	173266574	345.28	0.43
57	398448	-309010	-11317876343	99001	4417015102	173266574	345.28	0.43
58	409515	-309404	-11616916301	99000	4512706831	173266574	345.28	0.43

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 49 " PDT - 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]
<b>1.00</b>	53.55	12660.00	-9800.00	8000.00	0.00
<b>2.00</b>	43.82	67970.00	-41580.00	63000.00	4.75
---	---	---	Ft = 127717	Fp = -61521	---
---	---	Pa = 45744	Ta = -22502	La = 117101	---
---	---	Pb = 22226	Tb = -19078	Lb = -54101	---
<b>3.00</b>	43.82	79360.00	-49660.00	0.00	-4.75
---	---	---	Ft = 94231	Fp = -991	---
---	---	Pa = 79463	Ta = -50646	La = 0	---
---	---	Pb = -103	Tb = 986	Lb = 0	---
<b>4.00</b>	37.02	67970.00	-41580.00	63000.00	4.75
---	---	---	Ft = 127717	Fp = -61521	---
---	---	Pa = 45744	Ta = -22502	La = 117101	---
---	---	Pb = 22226	Tb = -19078	Lb = -54101	---
<b>5.00</b>	37.02	79360.00	-49660.00	0.00	-4.75
---	---	---	Ft = 94231	Fp = -991	---
---	---	Pa = 79463	Ta = -50646	La = 0	---
---	---	Pb = -103	Tb = 986	Lb = 0	---
<b>6.00</b>	30.22	79360.00	-49660.00	0.00	4.75
---	---	---	Ft = 107427	Fp = -107984	---
---	---	Pa = 90591	Ta = 57738	La = 0	---
---	---	Pb = -11231	Tb = -107398	Lb = 0	---
<b>7.00</b>	30.22	79360.00	-49660.00	0.00	-4.75
---	---	---	Ft = 94231	Fp = -991	---
---	---	Pa = 79463	Ta = -50646	La = 0	---
---	---	Pb = -103	Tb = 986	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Uso
2	13370	-9897	-11367596	8017	9175565	0	345.28	0.04
3	14203	-9985	-21029930	8018	16891691	-0	345.28	0.05
4	15159	-10087	-30817384	8020	24631148	0	345.28	0.05
5	16237	-10204	-40747760	8021	32397046	-0	345.28	0.05
6	17438	-10336	-50838970	8022	40192581	-0	345.28	0.05
7	18762	-10483	-61108937	8024	48020961	-0	345.28	0.05
8	85200	-196576	-271040417	113722	138995068	0	345.28	0.20
9	151675	-84197	-322217837	125290	258384226	339298538	345.28	0.32
10	153084	-84362	-403087143	125290	374563343	339298538	345.28	0.37
11	168744	-75453	-479027380	124837	490758675	339298538	345.28	0.42
12	181289	-102838	-556843781	71215	556466022	304143473	345.28	0.44
13	183662	-103022	-660532989	71212	628202010	304143473	345.28	0.33
14	186098	-103209	-764349265	71210	699867181	304143473	345.28	0.34
15	253700	-307309	-1017727678	108782	798663598	304143473	345.28	0.40
16	321364	-176959	-1195465175	188445	1000297281	654452765	345.28	0.48
17	323987	-177154	-1373113215	188438	1185535372	654452765	345.28	0.52
18	326671	-177353	-1550747449	188429	1370576661	654452765	345.28	0.56
19	340480	-164629	-1702258027	138892	1514872057	654452765	345.28	0.58
20	354350	-195885	-1906362679	134329	1647298669	613280874	345.28	0.61
21	357222	-196093	-2101641715	134318	1780808576	613280874	345.28	0.64
22	455504	-152953	-2270248726	134386	1915720895	613280874	345.28	0.66
23	546027	-189659	-2448874113	134440	2051726288	613280874	345.28	0.70
24	550024	-189851	-2626569274	134420	2176665976	613280874	345.28	0.51
25	554098	-190049	-2804100591	134403	2301294710	613280874	345.28	0.51
26	552580	-264471	-3030761381	134385	2425593213	613280874	345.28	0.53
27	551139	-296865	-3310281665	134367	2549564648	613280874	345.28	0.55
28	555442	-297079	-3580150849	134353	2673281985	613280874	345.28	0.56
29	574066	-297311	-3850172126	134347	2796908729	613280874	345.28	0.58
30	578522	-297531	-4120052672	134332	2920270072	613280874	345.28	0.59
31	584348	-297772	-4407024937	134317	3051225806	613280874	345.28	0.51
32	590281	-298014	-4693867909	134302	3181912585	613280874	345.28	0.52
33	596320	-298262	-4980612221	134289	3312354781	613280874	345.28	0.53
34	602466	-298515	-5267252331	134276	3442551201	613280874	345.28	0.53
35	608718	-298773	-5553783799	134263	3572500987	613280874	345.28	0.54
36	636621	-299050	-5840522086	134258	3702388162	613280874	345.28	0.55
37	643086	-299316	-6127128138	134244	3832016695	613280874	345.28	0.55
38	651096	-299601	-6427172920	134231	3967510201	613280874	345.28	0.49
39	659245	-299886	-6727103118	134218	4102743833	613280874	345.28	0.49
40	667533	-300178	-7026945827	134206	4237734782	613280874	345.28	0.50
41	675959	-300476	-7326699231	134194	4372482061	613280874	345.28	0.50
42	684524	-300778	-7626362035	134182	4506984818	613280874	345.28	0.50
43	693227	-301086	-7925933200	134170	4641242186	613280874	345.28	0.50
44	733927	-301411	-8225712163	134165	4775421049	613280874	345.28	0.51
45	742907	-301728	-8525375267	134153	4909339453	613280874	345.28	0.51
46	752248	-302049	-8822968922	134141	5042126494	613280874	345.28	0.50
47	761732	-302368	-9120440710	134129	5174654657	613280874	345.28	0.50
48	771360	-302693	-9417787659	134117	5306921466	613280874	345.28	0.50
49	781132	-303022	-9715009968	134105	5438926178	613280874	345.28	0.50
50	791048	-303357	-10012107876	134094	5570667976	613280874	345.28	0.50
51	801108	-303698	-10309081665	134082	5702145986	613280874	345.28	0.50
52	811311	-304044	-10605931646	134071	5833359275	613280874	345.28	0.50
53	821659	-304395	-10902658148	134060	5964306849	613280874	345.28	0.50
54	832150	-304751	-11199261506	134048	6094987655	613280874	345.28	0.50
55	842786	-305113	-11495742057	134037	6225400578	613280874	345.28	0.50
56	853565	-305481	-11792100122	134027	6355544446	613280874	345.28	0.50
57	864488	-305853	-12088336011	134016	6485418028	613280874	345.28	0.50
58	875555	-306231	-12384450009	134005	6615020035	613280874	345.28	0.49

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 50 " PDT - 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]
<b>1.00</b>	53.55	0.00	-9800.00	8000.00	0.00
<b>2.00</b>	43.82	0.00	-41580.00	63000.00	4.75
---	---	---	Ft = 69685	Fp = 8812	---
---	---	Pa = 5539	Ta = -40848	La = 56186	---
---	---	Pb = -5539	Tb = -732	Lb = 6814	---
<b>3.00</b>	43.82	0.00	-49660.00	0.00	-4.75
---	---	---	Ft = -6598	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -49660	Lb = 0	---
<b>4.00</b>	37.02	0.00	-41580.00	63000.00	4.75
---	---	---	Ft = 69685	Fp = 8812	---
---	---	Pa = 5539	Ta = -40848	La = 56186	---
---	---	Pb = -5539	Tb = -732	Lb = 6814	---
<b>5.00</b>	37.02	0.00	-49660.00	0.00	-4.75
---	---	---	Ft = -6598	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -49660	Lb = 0	---
<b>6.00</b>	30.22	0.00	-49660.00	0.00	4.75
---	---	---	Ft = 6598	Fp = -53496	---
---	---	Pa = 5564	Ta = 3546	La = 0	---
---	---	Pb = -5564	Tb = -53206	Lb = 0	---
<b>7.00</b>	30.22	0.00	-49660.00	0.00	-4.75
---	---	---	Ft = -6598	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -49660	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Uso
2	710	-9871	-10882450	8000	8827751	0	345.28	0.03
3	1543	-9957	-20054813	8000	16192209	-0	345.28	0.04
4	2499	-10058	-29346771	8000	23575574	-0	345.28	0.05
5	3577	-10174	-38774993	8001	30980034	-0	345.28	0.05
6	4778	-10304	-48356148	8001	38407783	-0	345.28	0.05
7	6102	-10449	-58106915	8001	45861023	-0	345.28	0.05
8	12706	-27762	-72402195	58677	92439593	0	345.28	0.07
9	19346	-51616	-125579814	64189	151973131	162797798	345.28	0.15
10	20755	-51781	-172645854	64189	210001291	162797798	345.28	0.17
11	22585	-54684	-221567267	64248	268092611	162797798	345.28	0.20
12	21299	-102516	-321659245	71003	332535266	167225698	345.28	0.25
13	23672	-102705	-419606573	71003	400232836	167225698	345.28	0.20
14	26108	-102896	-517791006	71004	467964630	167225698	345.28	0.22
15	33875	-86547	-603766932	88998	548144896	167225698	345.28	0.24
16	41705	-144143	-748723137	127191	677135991	335306532	345.28	0.29
17	44328	-144349	-886612206	127191	798367620	335306532	345.28	0.32
18	47013	-144560	-1024744387	127192	919620945	335306532	345.28	0.35
19	46990	-198237	-1210944631	133431	1045980964	335306532	345.28	0.39
20	47030	-195387	-1396356414	134005	1173805878	340492272	345.28	0.42
21	49902	-195613	-1582824348	134006	1301475427	340492272	345.28	0.45
22	65939	-174107	-1755261579	134007	1429339761	340492272	345.28	0.48
23	74217	-192536	-1932026637	134008	1557272826	340492272	345.28	0.51
24	78214	-192757	-2101796828	134008	1675159513	340492272	345.28	0.38
25	82287	-192980	-2271790127	134008	1793053787	340492272	345.28	0.39
26	83655	-250840	-2479824515	134008	1910928532	340492272	345.28	0.41
27	85099	-296304	-2750702812	134008	2028783126	340492272	345.28	0.43
28	89402	-296539	-3011075173	134008	2146644918	340492272	345.28	0.45
29	108026	-296781	-3271914438	134009	2264648095	340492272	345.28	0.46
30	112482	-297024	-3532971670	134009	2382646373	340492272	345.28	0.48
31	118308	-297288	-3810954882	134009	2508178392	340492272	345.28	0.42
32	124241	-297552	-4089196283	134009	2633710270	340492272	345.28	0.43
33	130280	-297820	-4367699170	134009	2759242300	340492272	345.28	0.44
34	136426	-298094	-4646460738	134009	2884770773	340492272	345.28	0.45
35	142678	-298372	-4925478114	134009	3010291970	340492272	345.28	0.46
36	170581	-298657	-5205032057	134010	3135958528	340492272	345.28	0.47
37	177046	-298944	-5484821668	134010	3261601789	340492272	345.28	0.48
38	185056	-299250	-5778119343	134010	3393168675	340492272	345.28	0.42
39	193205	-299555	-6071682431	134010	3524712662	340492272	345.28	0.43
40	201493	-299866	-6365514247	134010	3656233532	340492272	345.28	0.43
41	209919	-300182	-6659611065	134009	3787726938	340492272	345.28	0.44
42	218484	-300503	-6953969137	134009	3919188540	340492272	345.28	0.44
43	227187	-300829	-7248584683	134009	4050614001	340492272	345.28	0.44
44	267887	-301162	-7543724607	134010	4182143420	340492272	345.28	0.45
45	276867	-301498	-7839094306	134009	4313616900	340492272	345.28	0.45
46	286208	-301837	-8132761187	134009	4444173907	340492272	345.28	0.45
47	295692	-302175	-8426641882	134008	4574667969	340492272	345.28	0.45
48	305320	-302517	-8720731521	134008	4705094343	340492272	345.28	0.45
49	315092	-302865	-9015026263	134007	4835448854	340492272	345.28	0.45
50	325008	-303218	-9309522264	134006	4965727337	340492272	345.28	0.45
51	335068	-303575	-9604215684	134006	5095925633	340492272	345.28	0.45
52	345271	-303938	-9899102687	134005	5226039587	340492272	345.28	0.45
53	355619	-304306	-10194179437	134004	5356065058	340492272	345.28	0.45
54	366110	-304680	-10489442105	134004	5485997907	340492272	345.28	0.45
55	376746	-305058	-10784886865	134003	5615834006	340492272	345.28	0.45
56	387525	-305441	-11080509897	134002	5745569233	340492272	345.28	0.45
57	398448	-305830	-11376307385	134001	5875199475	340492272	345.28	0.45
58	409515	-306224	-11672275518	134000	6004720627	340492272	345.28	0.45

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 51 " PDT - 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]
<b>1.00</b>	53.55	4310.00	5140.00	31000.00	0.00
<b>2.00</b>	43.82	62420.00	55630.00	0.00	4.75
---	---	---	Ft = 71915	Fp = 17071	---
---	---	Pa = 60645	Ta = 38652	La = 0	---
---	---	Pb = 1775	Tb = 16978	Lb = 0	---
<b>3.00</b>	43.82	62420.00	55630.00	0.00	-4.75
---	---	---	Ft = 86697	Fp = -102784	---
---	---	Pa = 73110	Ta = -46597	La = 0	---
---	---	Pb = -10690	Tb = 102227	Lb = 0	---
<b>4.00</b>	37.02	62420.00	55630.00	0.00	4.75
---	---	---	Ft = 71915	Fp = 17071	---
---	---	Pa = 60645	Ta = 38652	La = 0	---
---	---	Pb = 1775	Tb = 16978	Lb = 0	---
<b>5.00</b>	37.02	62420.00	55630.00	0.00	-4.75
---	---	---	Ft = 86697	Fp = -102784	---
---	---	Pa = 73110	Ta = -46597	La = 0	---
---	---	Pb = -10690	Tb = 102227	Lb = 0	---
<b>6.00</b>	30.22	49570.00	42870.00	81000.00	4.75
---	---	---	Ft = 81152	Fp = 32088	---
---	---	Pa = 52337	Ta = 19936	La = 58728	---
---	---	Pb = -2767	Tb = 22934	Lb = 22272	---
<b>7.00</b>	30.22	62420.00	55630.00	0.00	-4.75
---	---	---	Ft = 86697	Fp = -102784	---
---	---	Pa = 73110	Ta = -46597	La = 0	---
---	---	Pb = -10690	Tb = 102227	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Uso
2	5020	5433	6079144	31003	34235087	0	345.28	0.08
3	5853	5779	11548275	31003	62746046	-0	345.28	0.10
4	6809	6184	17415720	31004	91268526	-0	345.28	0.12
5	7887	6648	23738967	31005	119803548	-0	345.28	0.12
6	9088	7170	30575513	31005	148352252	0	345.28	0.12
7	10412	7752	37982857	31006	176915814	0	345.28	0.12
8	81124	-42985	-11752705	31046	205845855	0	345.28	0.14
9	151872	1290	5154580	31086	235675720	0	345.28	0.16
10	153281	1952	11242045	31086	265467432	0	345.28	0.17
11	153423	8829	21701496	31085	295201366	0	345.28	0.18
12	150449	122522	153018777	31081	324837884	0	345.28	0.20
13	152822	123274	274308255	31080	356061794	0	345.28	0.16
14	155258	124038	396348354	31080	387254192	0	345.28	0.18
15	227134	55687	471008172	31114	419220462	0	345.28	0.20
16	299071	117864	593821697	31146	451914990	-0	345.28	0.23
17	301694	118682	714750848	31143	484541910	-0	345.28	0.25
18	304379	119517	836410228	31140	517100184	-0	345.28	0.27
19	302668	245994	1070827213	31134	549543672	-0	345.28	0.31
20	301020	240441	1304936868	31128	581874665	-0	345.28	0.35
21	303892	241334	1541442859	31124	614138131	-0	345.28	0.38
22	379870	159777	1725250242	37212	650984159	-0	345.28	0.41
23	448090	216660	1912787490	89894	747079962	181800979	345.28	0.45
24	452087	217529	2112531568	89887	828977153	181800979	345.28	0.34
25	456161	218407	2312849077	89881	910789948	181800979	345.28	0.35
26	453582	292556	2561898830	99078	998396996	181800979	345.28	0.37
27	451079	345365	2885156568	112139	1102082113	200769012	345.28	0.40
28	455382	346295	3196312539	112134	1203012891	200769012	345.28	0.43
29	474006	347253	3508370408	112133	1303955615	200769012	345.28	0.45
30	478462	348216	3821039866	112128	1404806246	200769012	345.28	0.47
31	484288	349259	4154389134	112122	1511995732	200769012	345.28	0.42
32	490221	350303	4488458711	112117	1619087084	200769012	345.28	0.43
33	496260	351367	4823280497	112113	1726086566	200769012	345.28	0.45
34	502406	352451	5158858826	112108	1832990328	200769012	345.28	0.46
35	508658	353553	5495199056	112103	1939794845	200769012	345.28	0.48
36	536561	354686	5832643049	112102	2046609866	200769012	345.28	0.49
37	543026	355825	6170845219	112097	2153313432	200769012	345.28	0.50
38	551036	357040	6525913248	112092	2264948573	200769012	345.28	0.45
39	559185	358252	6881845313	112087	2376468166	200769012	345.28	0.45
40	567473	359487	7238675688	112083	2487877764	200769012	345.28	0.46
41	575899	360742	7596414304	112078	2599174427	200769012	345.28	0.47
42	584464	362018	7955071591	112074	2710355374	200769012	345.28	0.47
43	593167	363315	8314658273	112069	2821417913	200769012	345.28	0.48
44	633867	364643	8675508211	112068	2932466433	200769012	345.28	0.48
45	642847	365981	9037285951	112063	3043383334	200769012	345.28	0.49
46	652188	367331	9397630933	112058	3153444450	200769012	345.28	0.49
47	661672	368675	9758887880	112054	3263370870	200769012	345.28	0.49
48	671300	370039	10121065619	112049	3373159385	200769012	345.28	0.49
49	681072	371424	10484175912	112044	3482807773	200769012	345.28	0.50
50	690988	372830	10848230605	112039	3592313834	200769012	345.28	0.50
51	701048	374256	11213241625	112034	3701675393	200769012	345.28	0.50
52	711251	375704	11579220967	112030	3810890295	200769012	345.28	0.50
53	721599	377172	11946180674	112025	3919956398	200769012	345.28	0.50
54	732090	378661	12314132830	112020	4028871575	200769012	345.28	0.50
55	742726	380170	12683089545	112016	4137633707	200769012	345.28	0.51
56	753505	381701	13053062947	112011	4246240681	200769012	345.28	0.51
57	764428	383252	13424065176	112007	4354690388	200769012	345.28	0.51
58	775495	384824	13796108371	112002	4462980721	200769012	345.28	0.51



## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 52 " PDT - 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]
<b>1.00</b>	53.55	0.00	5140.00	31000.00	0.00
<b>2.00</b>	43.82	0.00	55630.00	0.00	4.75
---	---	---	Ft = -7391	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 55630	Lb = 0	---
<b>3.00</b>	43.82	0.00	55630.00	0.00	-4.75
---	---	---	Ft = 7391	Fp = -59928	---
---	---	Pa = 6233	Ta = -3973	La = 0	---
---	---	Pb = -6233	Tb = 59603	Lb = 0	---
<b>4.00</b>	37.02	0.00	55630.00	0.00	4.75
---	---	---	Ft = -7391	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 55630	Lb = 0	---
<b>5.00</b>	37.02	0.00	55630.00	0.00	-4.75
---	---	---	Ft = 7391	Fp = -59928	---
---	---	Pa = 6233	Ta = -3973	La = 0	---
---	---	Pb = -6233	Tb = 59603	Lb = 0	---
<b>6.00</b>	30.22	0.00	42870.00	81000.00	4.75
---	---	---	Ft = 26315	Fp = 72925	---
---	---	Pa = 14051	Ta = 2169	La = 22144	---
---	---	Pb = -14051	Tb = 40701	Lb = 58856	---
<b>7.00</b>	30.22	0.00	55630.00	0.00	-4.75
---	---	---	Ft = 7391	Fp = -59928	---
---	---	Pa = 6233	Ta = -3973	La = 0	---
---	---	Pb = -6233	Tb = 59603	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Usa
2	710	5426	5945753	31000	34162503	0	345.28	0.08
3	1543	5771	11281271	31000	62601933	0	345.28	0.10
4	2499	6174	17014866	31000	91054045	0	345.28	0.11
5	3577	6636	23203929	31000	119519550	0	345.28	0.12
6	4778	7158	29905846	31000	147999182	0	345.28	0.12
7	6102	7738	37177998	31001	176493705	-0	345.28	0.12
8	13053	-17370	15239326	31001	204490188	0	345.28	0.13
9	20040	5038	26063920	31002	232564681	0	345.28	0.14
10	21449	5700	31796112	31002	260648084	0	345.28	0.15
11	22932	9962	40352664	31002	288739867	0	345.28	0.16
12	21299	122309	161760426	31002	316805362	0	345.28	0.18
13	23672	123063	279041145	31002	346427422	0	345.28	0.14
14	26108	123829	397111849	31002	376066166	0	345.28	0.17
15	34223	90001	491034163	31003	405779622	0	345.28	0.19
16	42399	121449	608609230	31003	435563554	0	345.28	0.21
17	45022	122274	725716855	31004	465359957	0	345.28	0.23
18	47707	123119	843679190	31004	495167935	0	345.28	0.25
19	47337	237735	1060403954	31004	524958592	0	345.28	0.28
20	47030	240099	1289651327	31003	554732833	0	345.28	0.32
21	49902	241003	1519256820	31004	584517722	-0	345.28	0.36
22	73298	271776	1770324656	33292	615977869	-0	345.28	0.40
23	88936	241074	2010241574	53149	669696360	68548519	345.28	0.44
24	92934	241962	2223487227	53149	716731021	68548519	345.28	0.33
25	97007	242855	2437538945	53149	763773579	68548519	345.28	0.34
26	91015	263964	2664029394	77471	826390459	68548519	345.28	0.36
27	85099	344992	2981208210	112005	931765891	118673681	345.28	0.39
28	89402	345935	3284913257	112005	1030080390	118673681	345.28	0.41
29	108026	346898	3589754036	112006	1128488349	118673681	345.28	0.44
30	112482	347875	3895456922	112006	1226899178	118673681	345.28	0.46
31	118308	348933	4221678626	112006	1331598978	118673681	345.28	0.41
32	124241	349991	4548901335	112006	1436304411	118673681	345.28	0.42
33	130280	351068	4877141225	112006	1541014946	118673681	345.28	0.44
34	136426	352165	5206407696	112006	1645727921	118673681	345.28	0.45
35	142678	353280	5536710043	112006	1750440645	118673681	345.28	0.46
36	170581	354417	5868384856	112007	1855253011	118673681	345.28	0.47
37	177046	355571	6201097834	112006	1960054611	118673681	345.28	0.48
38	185056	356799	6550718518	112006	2069805325	118673681	345.28	0.43
39	193205	358024	6901497733	112006	2179545030	118673681	345.28	0.44
40	201493	359271	7253453516	112006	2289272999	118673681	345.28	0.45
41	209919	360539	7606595899	112006	2398985986	118673681	345.28	0.46
42	218484	361827	7960934861	112006	2508680735	118673681	345.28	0.46
43	227187	363136	8316480320	112006	2618353981	118673681	345.28	0.47
44	267887	364469	8673557294	112006	2728100784	118673681	345.28	0.47
45	276867	365820	9031837367	112006	2837812270	118673681	345.28	0.48
46	286208	367183	9388978426	112006	2946770319	118673681	345.28	0.48
47	295692	368539	9747301031	112005	3055687461	118673681	345.28	0.48
48	305320	369916	10106813398	112005	3164560072	118673681	345.28	0.48
49	315092	371313	10467524903	112005	3273384903	118673681	345.28	0.48
50	325008	372731	10829444902	112004	3382158710	118673681	345.28	0.49
51	335068	374170	11192582730	112004	3490878247	118673681	345.28	0.49
52	345271	375629	11556947704	112003	3599540276	118673681	345.28	0.49
53	355619	377109	11922549122	112003	3708141561	118673681	345.28	0.49
54	366110	378610	12289396267	112002	3816678870	118673681	345.28	0.49
55	376746	380131	12657498404	112002	3925148976	118673681	345.28	0.49
56	387525	381673	13026864780	112001	4033548654	118673681	345.28	0.50
57	398448	383235	13397504630	112001	4141874687	118673681	345.28	0.50
58	409515	384819	13769427170	112000	4250123860	118673681	345.28	0.50

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 53 " PDT - 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]
<b>1.00</b>	53.55	4310.00	5140.00	31000.00	0.00
<b>2.00</b>	43.82	62420.00	55630.00	0.00	4.75
---	---	---	Ft = 71915	Fp = 17071	---
---	---	Pa = 60645	Ta = 38652	La = 0	---
---	---	Pb = 1775	Tb = 16978	Lb = 0	---
<b>3.00</b>	43.82	62420.00	55630.00	0.00	-4.75
---	---	---	Ft = 86697	Fp = -102784	---
---	---	Pa = 73110	Ta = -46597	La = 0	---
---	---	Pb = -10690	Tb = 102227	Lb = 0	---
<b>4.00</b>	37.02	49570.00	42870.00	81000.00	4.75
---	---	---	Ft = 81152	Fp = 32088	---
---	---	Pa = 52337	Ta = 19936	La = 58728	---
---	---	Pb = -2767	Tb = 22934	Lb = 22272	---
<b>5.00</b>	37.02	62420.00	55630.00	0.00	-4.75
---	---	---	Ft = 86697	Fp = -102784	---
---	---	Pa = 73110	Ta = -46597	La = 0	---
---	---	Pb = -10690	Tb = 102227	Lb = 0	---
<b>6.00</b>	30.22	62420.00	55630.00	0.00	4.75
---	---	---	Ft = 71915	Fp = 17071	---
---	---	Pa = 60645	Ta = 38652	La = 0	---
---	---	Pb = 1775	Tb = 16978	Lb = 0	---
<b>7.00</b>	30.22	62420.00	55630.00	0.00	-4.75
---	---	---	Ft = 86697	Fp = -102784	---
---	---	Pa = 73110	Ta = -46597	La = 0	---
---	---	Pb = -10690	Tb = 102227	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Usa
2	5020	5433	6074801	31004	34253282	0	345.28	0.08
3	5853	5779	11538869	31004	62785452	0	345.28	0.10
4	6809	6183	17400427	31005	91332601	0	345.28	0.12
5	7887	6647	23716854	31006	119896194	-0	345.28	0.12
6	9088	7170	30545544	31007	148477812	0	345.28	0.12
7	10412	7752	37943890	31008	177079074	0	345.28	0.12
8	81124	-42989	-11860339	31059	206296806	0	345.28	0.14
9	151872	1283	4918455	31109	236665013	0	345.28	0.16
10	153281	1944	10876352	31109	266999583	0	345.28	0.17
11	153423	8822	21206281	31107	297276190	0	345.28	0.18
12	150449	122514	152396754	31103	327444015	0	345.28	0.20
13	152822	123267	273550617	31102	359236140	-0	345.28	0.16
14	155258	124030	395453203	31101	391004719	0	345.28	0.18
15	222980	5239	433364136	49950	436626568	-0	345.28	0.20
16	290764	99124	537832435	89908	534067275	175685582	345.28	0.24
17	293387	99942	640548201	89904	623298407	175685582	345.28	0.26
18	296071	100779	744010339	89900	712446173	175685582	345.28	0.28
19	292090	226704	956526429	110285	818185522	175685582	345.28	0.32
20	288170	227655	1179842146	112155	928610851	192635104	345.28	0.36
21	291042	228549	1403743393	112149	1038376023	192635104	345.28	0.40
22	371174	180838	1597716469	112182	1148958828	192635104	345.28	0.44
23	443548	222596	1803014617	112207	1260177488	192635104	345.28	0.48
24	447545	223467	2007684461	112198	1362481332	192635104	345.28	0.36
25	451618	224345	2212943827	112190	1464638759	192635104	345.28	0.37
26	451311	308383	2474023338	112182	1566633255	192635104	345.28	0.40
27	451079	345354	2795105975	112174	1668463748	192635104	345.28	0.42
28	455382	346285	3106134093	112168	1770168439	192635104	345.28	0.45
29	474006	347242	3418067869	112166	1871862290	192635104	345.28	0.47
30	478462	348206	3730620697	112160	1973418866	192635104	345.28	0.49
31	484288	349249	4063853486	112153	2081313338	192635104	345.28	0.43
32	490221	350294	4397813605	112146	2189067203	192635104	345.28	0.45
33	496260	351359	4732532065	112140	2296692060	192635104	345.28	0.46
34	502406	352442	5068012985	112134	2404185366	192635104	345.28	0.47
35	508658	353545	5404261521	112128	2511544832	192635104	345.28	0.49
36	536561	354678	5741615739	112127	2618903175	192635104	345.28	0.50
37	543026	355818	6079733750	112121	2726116065	192635104	345.28	0.51
38	551036	357033	6434719273	112115	2838250512	192635104	345.28	0.45
39	559185	358246	6790574137	112108	2950237326	192635104	345.28	0.46
40	567473	359481	7147332099	112103	3062085137	192635104	345.28	0.47
41	575899	360736	7505002966	112097	3173791799	192635104	345.28	0.47
42	584464	362013	7863597040	112091	3285355282	192635104	345.28	0.48
43	593167	363310	8223124932	112086	3396773589	192635104	345.28	0.49
44	633867	364638	8583917512	112084	3508169207	192635104	345.28	0.49
45	642847	365976	8945642375	112078	3619406086	192635104	345.28	0.49
46	652188	367327	9305939142	112072	3729758974	192635104	345.28	0.49
47	661672	368671	9667152105	112066	3839951548	192635104	345.28	0.50
48	671300	370036	10029290034	112060	3949980967	192635104	345.28	0.50
49	681072	371421	10392364606	112054	4059845509	192635104	345.28	0.50
50	690988	372827	10756387592	112048	4169543441	192635104	345.28	0.50
51	701048	374254	11121370846	112042	4279073020	192635104	345.28	0.50
52	711251	375702	11487326297	112037	4388432492	192635104	345.28	0.51
53	721599	377170	11854265926	112031	4497620088	192635104	345.28	0.51
54	732090	378659	12222201761	112025	4606634026	192635104	345.28	0.51
55	742726	380169	12591145858	112019	4715472508	192635104	345.28	0.51
56	753505	381700	12961110299	112014	4824133716	192635104	345.28	0.51
57	764428	383252	13332107175	112008	4932615816	192635104	345.28	0.51
58	775495	384824	13704148584	112003	5040916956	192635104	345.28	0.51

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 54 " PDT - 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]
<b>1.00</b>	53.55	0.00	5140.00	31000.00	0.00
<b>2.00</b>	43.82	0.00	55630.00	0.00	4.75
---	---	---	Ft = -7391	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 55630	Lb = 0	---
<b>3.00</b>	43.82	0.00	55630.00	0.00	-4.75
---	---	---	Ft = 7391	Fp = -59928	---
---	---	Pa = 6233	Ta = -3973	La = 0	---
---	---	Pb = -6233	Tb = 59603	Lb = 0	---
<b>4.00</b>	37.02	0.00	42870.00	81000.00	4.75
---	---	---	Ft = 26315	Fp = 72925	---
---	---	Pa = 14051	Ta = 2169	La = 22144	---
---	---	Pb = -14051	Tb = 40701	Lb = 58856	---
<b>5.00</b>	37.02	0.00	55630.00	0.00	-4.75
---	---	---	Ft = 7391	Fp = -59928	---
---	---	Pa = 6233	Ta = -3973	La = 0	---
---	---	Pb = -6233	Tb = 59603	Lb = 0	---
<b>6.00</b>	30.22	0.00	55630.00	0.00	4.75
---	---	---	Ft = -7391	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 55630	Lb = 0	---
<b>7.00</b>	30.22	0.00	55630.00	0.00	-4.75
---	---	---	Ft = 7391	Fp = -59928	---
---	---	Pa = 6233	Ta = -3973	La = 0	---
---	---	Pb = -6233	Tb = 59603	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Uso
2	710	5426	5945582	31000	34164601	0	345.28	0.08
3	1543	5771	11280729	31000	62608591	0	345.28	0.10
4	2499	6174	17013723	31000	91068086	-0	345.28	0.11
5	3577	6637	23201926	31000	119544159	-0	345.28	0.12
6	4778	7158	29902694	31001	148037905	-0	345.28	0.12
7	6102	7738	37173379	31001	176550452	-0	345.28	0.12
8	13053	-17370	15231634	31002	204584702	0	345.28	0.13
9	20040	5038	26051508	31002	232717173	0	345.28	0.14
10	21449	5700	31778651	31003	260862619	0	345.28	0.15
11	22932	9962	40329805	31003	289020720	0	345.28	0.16
12	21299	122309	161732555	31002	317147794	0	345.28	0.18
13	23672	123064	279007400	31003	346842028	0	345.28	0.14
14	26108	123829	397071627	31003	376560350	0	345.28	0.17
15	41248	165860	546335770	38096	411326256	0	345.28	0.20
16	56450	123621	662473727	53150	465464437	66242693	345.28	0.23
17	59073	124446	782019648	53150	516549614	66242693	345.28	0.25
18	61758	125291	902410677	53150	567648271	66242693	345.28	0.27
19	54363	207667	1084912114	107042	662970266	66242693	345.28	0.31
20	47030	227339	1306908452	112004	771069488	111033712	345.28	0.35
21	49902	228243	1524406184	112005	877720734	111033712	345.28	0.39
22	66273	204818	1726827083	112006	984526502	111033712	345.28	0.42
23	74886	226143	1934754006	112006	1091391299	111033712	345.28	0.46
24	78883	227031	2134630734	112006	1189866530	111033712	345.28	0.34
25	82956	227924	2335323476	112006	1288349664	111033712	345.28	0.36
26	83990	293394	2579199419	112006	1386816528	111033712	345.28	0.38
27	85099	344992	2894053819	112006	1485266662	111033712	345.28	0.41
28	89402	345935	3197736492	112006	1583723932	111033712	345.28	0.43
29	108026	346898	3502552090	112007	1682292584	111033712	345.28	0.45
30	112482	347875	3808230585	112007	1780859056	111033712	345.28	0.47
31	118308	348932	4134427002	112007	1885720219	111033712	345.28	0.42
32	124241	349991	4461625077	112007	1990582845	111033712	345.28	0.43
33	130280	351068	4789840900	112007	2095446964	111033712	345.28	0.44
34	136426	352164	5119083918	112007	2200309597	111033712	345.28	0.46
35	142678	353280	5449363475	112007	2305167750	111033712	345.28	0.47
36	170581	354417	5781013015	112008	2410141396	111033712	345.28	0.48
37	177046	355570	6113701708	112008	2515097960	111033712	345.28	0.49
38	185056	356799	6463297883	112008	2625005073	111033712	345.28	0.44
39	193205	358024	6814053514	112008	2734895279	111033712	345.28	0.45
40	201493	359271	7165986574	112008	2844768247	111033712	345.28	0.45
41	209919	360538	7519107140	112007	2954620451	111033712	345.28	0.46
42	218484	361827	7873425234	112007	3064448364	111033712	345.28	0.47
43	227187	363136	8228950815	112007	3174248462	111033712	345.28	0.47
44	267887	364469	8586006395	112008	3284131786	111033712	345.28	0.48
45	276867	365820	8944266373	112007	3393971499	111033712	345.28	0.48
46	286208	367182	9301388767	112007	3503048657	111033712	345.28	0.48
47	295692	368539	9659694037	112006	3612076419	111033712	345.28	0.48
48	305320	369915	10019190437	112006	3721050916	111033712	345.28	0.49
49	315092	371313	10379887372	112006	3829968723	111033712	345.28	0.49
50	325008	372731	10741794224	112005	3938826424	111033712	345.28	0.49
51	335068	374170	11104920355	112005	4047620605	111033712	345.28	0.49
52	345271	375629	11469275107	112004	4156347861	111033712	345.28	0.49
53	355619	377109	11834867806	112003	4265004789	111033712	345.28	0.50
54	366110	378610	12201707759	112003	4373587995	111033712	345.28	0.50
55	376746	380131	12569804256	112002	4482094088	111033712	345.28	0.50
56	387525	381673	12939166570	112002	4590519685	111033712	345.28	0.50
57	398448	383235	13309803961	112001	4698861407	111033712	345.28	0.50
58	409515	384819	13681725670	112000	4807115883	111033712	345.28	0.50

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 55 " PDT - 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

<b>Livello</b>	<b>H [m]</b>	<b>Verticali [N]</b>	<b>Trasversali [N]</b>	<b>Longitudinali [N]</b>	<b>Eccentricità del conduttore [m]</b>
<b>1.00</b>	53.55	8610.00	10280.00	6000.00	0.00
<b>2.00</b>	43.82	49570.00	42870.00	81000.00	4.75
---	---	---	Ft = 81152	Fp = 32088	---
---	---	Pa = 52337	Ta = 19936	La = 58728	---
---	---	Pb = -2767	Tb = 22934	Lb = 22272	---
<b>3.00</b>	43.82	62420.00	55630.00	0.00	-4.75
---	---	---	Ft = 86697	Fp = -102784	---
---	---	Pa = 73110	Ta = -46597	La = 0	---
---	---	Pb = -10690	Tb = 102227	Lb = 0	---
<b>4.00</b>	37.02	49570.00	42870.00	81000.00	4.75
---	---	---	Ft = 81152	Fp = 32088	---
---	---	Pa = 52337	Ta = 19936	La = 58728	---
---	---	Pb = -2767	Tb = 22934	Lb = 22272	---
<b>5.00</b>	37.02	62420.00	55630.00	0.00	-4.75
---	---	---	Ft = 86697	Fp = -102784	---
---	---	Pa = 73110	Ta = -46597	La = 0	---
---	---	Pb = -10690	Tb = 102227	Lb = 0	---
<b>6.00</b>	30.22	62420.00	55630.00	0.00	4.75
---	---	---	Ft = 71915	Fp = 17071	---
---	---	Pa = 60645	Ta = 38652	La = 0	---
---	---	Pb = 1775	Tb = 16978	Lb = 0	---
<b>7.00</b>	30.22	62420.00	55630.00	0.00	-4.75
---	---	---	Ft = 86697	Fp = -102784	---
---	---	Pa = 73110	Ta = -46597	La = 0	---
---	---	Pb = -10690	Tb = 102227	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	9320	10579	11852806	6010	6842955	0	345.28	0.03
3	10153	10924	22141498	6011	12595667	-0	345.28	0.04
4	11109	11329	32824671	6012	18370848	-0	345.28	0.05
5	12187	11792	43959390	6013	24171377	-0	345.28	0.05
6	13388	12315	55602793	6014	30000178	-0	345.28	0.05
7	14712	12897	67812025	6016	35860183	-0	345.28	0.05
8	81270	-84261	-26628103	59053	84112140	-0	345.28	0.07
9	147865	-12313	-15164072	64882	147344223	170163517	345.28	0.14
10	149274	-11652	-21785966	64882	208977864	170163517	345.28	0.16
11	147144	-6609	-25203050	65070	270631752	170163517	345.28	0.18
12	141899	114869	94611460	87141	352971442	184636050	345.28	0.22
13	144272	115622	208040001	87139	438782450	184636050	345.28	0.18
14	146708	116385	322226265	87138	524579069	184636050	345.28	0.21
15	214430	-2412	352323753	106006	624721756	184636050	345.28	0.23
16	282214	91468	448890211	145981	777152310	360321632	345.28	0.28
17	284837	92287	543721422	145976	921346604	360321632	345.28	0.31
18	287521	93125	639317177	145970	1065423818	360321632	345.28	0.34
19	283540	219051	843994976	166352	1226007299	360321632	345.28	0.38
20	279620	220004	1059500678	168218	1391189188	377271154	345.28	0.43
21	282492	220899	1275612089	168211	1555664195	377271154	345.28	0.46
22	362624	173184	1461726977	168259	1721369986	377271154	345.28	0.50
23	434998	214939	1659117770	168295	1888034774	377271154	345.28	0.55
24	438995	215812	1856528552	168282	2041347214	377271154	345.28	0.41
25	443068	216691	2054551057	168272	2194445959	377271154	345.28	0.42
26	442761	300731	2308415854	168261	2347305449	377271154	345.28	0.44
27	442529	337703	2622305955	168249	2499924132	377271154	345.28	0.47
28	446832	338635	2926160225	168240	2652359229	377271154	345.28	0.49
29	465456	339593	3230928466	168238	2804782877	377271154	345.28	0.51
30	469912	340558	3536335561	168229	2957005783	377271154	345.28	0.53
31	475738	341602	3861987656	168219	3118734030	377271154	345.28	0.47
32	481671	342648	4188387560	168210	3280256798	377271154	345.28	0.48
33	487710	343714	4515564577	168201	3441591026	377271154	345.28	0.50
34	493856	344799	4843523001	168193	3602732876	377271154	345.28	0.51
35	500108	345903	5172268116	168184	3763678879	377271154	345.28	0.52
36	528011	347037	5502126324	168183	3924627724	377271154	345.28	0.53
37	534476	348178	5832768298	168174	4085363240	377271154	345.28	0.54
38	542486	349394	6179944935	168165	4253482247	377271154	345.28	0.48
39	550635	350608	6528011183	168156	4421384735	377271154	345.28	0.49
40	558923	351843	6876999512	168148	4589083298	377271154	345.28	0.50
41	567349	353100	7226919798	168140	4756574659	377271154	345.28	0.50
42	575914	354377	7577782400	168131	4923855709	377271154	345.28	0.51
43	584617	355676	7929597975	168123	5090923387	377271154	345.28	0.51
44	625317	357004	8282686867	168121	5257961068	377271154	345.28	0.52
45	634297	358344	8636728131	168113	5424764929	377271154	345.28	0.52
46	643638	359695	8989411278	168104	5590247315	377271154	345.28	0.52
47	653122	361040	9343030527	168095	5755493347	377271154	345.28	0.52
48	662750	362406	9697594791	168087	5920498718	377271154	345.28	0.52
49	672522	363792	10053115758	168078	6085260777	377271154	345.28	0.53
50	682438	365199	10409605208	168070	6249776856	377271154	345.28	0.53
51	692498	366627	10767075011	168061	6414044272	377271154	345.28	0.53
52	702701	368076	11125537109	168053	6578060326	377271154	345.28	0.53
53	713049	369545	11485003501	168045	6741822302	377271154	345.28	0.53
54	723540	371035	11845486235	168036	6905327460	377271154	345.28	0.53
55	734176	372546	12206997390	168028	7068573038	377271154	345.28	0.53
56	744955	374078	12569549071	168020	7231556249	377271154	345.28	0.53
57	755878	375630	12933153398	168012	7394274278	377271154	345.28	0.53
58	766945	377204	13297822501	168004	7556724287	377271154	345.28	0.53



## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 56 " PDT - 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]
<b>1.00</b>	53.55	0.00	10280.00	6000.00	0.00
<b>2.00</b>	43.82	0.00	42870.00	81000.00	4.75
---	---	---	Ft = 26315	Fp = 72925	---
---	---	Pa = 14051	Ta = 2169	La = 22144	---
---	---	Pb = -14051	Tb = 40701	Lb = 58856	---
<b>3.00</b>	43.82	0.00	55630.00	0.00	-4.75
---	---	---	Ft = 7391	Fp = -59928	---
---	---	Pa = 6233	Ta = -3973	La = 0	---
---	---	Pb = -6233	Tb = 59603	Lb = 0	---
<b>4.00</b>	37.02	0.00	42870.00	81000.00	4.75
---	---	---	Ft = 26315	Fp = 72925	---
---	---	Pa = 14051	Ta = 2169	La = 22144	---
---	---	Pb = -14051	Tb = 40701	Lb = 58856	---
<b>5.00</b>	37.02	0.00	55630.00	0.00	-4.75
---	---	---	Ft = 7391	Fp = -59928	---
---	---	Pa = 6233	Ta = -3973	La = 0	---
---	---	Pb = -6233	Tb = 59603	Lb = 0	---
<b>6.00</b>	30.22	0.00	55630.00	0.00	4.75
---	---	---	Ft = -7391	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 55630	Lb = 0	---
<b>7.00</b>	30.22	0.00	55630.00	0.00	-4.75
---	---	---	Ft = 7391	Fp = -59928	---
---	---	Pa = 6233	Ta = -3973	La = 0	---
---	---	Pb = -6233	Tb = 59603	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	710	10566	11608941	6000	6624600	0	345.28	0.03
3	1543	10911	21657346	6000	12156172	-0	345.28	0.04
4	2499	11314	32104349	6000	17707018	-0	345.28	0.05
5	3577	11777	43007256	6001	23279435	-0	345.28	0.05
6	4778	12298	54423374	6001	28875719	-0	345.28	0.05
7	6102	12878	66410005	6001	34498175	0	345.28	0.05
8	20078	39666	111803136	25975	55709408	0	345.28	0.08
9	34091	12351	116511793	28150	82248656	64160584	345.28	0.09
10	35500	13013	129215533	28150	108208881	64160584	345.28	0.10
11	29957	11317	140919117	28659	134365046	64160584	345.28	0.11
12	21299	114689	241507824	87004	215480674	102405881	345.28	0.17
13	23672	115444	351563283	87004	298361128	102405881	345.28	0.16
14	26108	116209	462405912	87004	381281403	102405881	345.28	0.19
15	41248	158240	604444321	94098	469338776	102405881	345.28	0.23
16	56450	116002	713351314	109153	576855969	168648574	345.28	0.26
17	59073	116827	825663579	109153	681331029	168648574	345.28	0.29
18	61758	117671	938818494	109153	785828627	168648574	345.28	0.31
19	54363	200047	1114084751	163045	934500392	168648574	345.28	0.35
20	47030	219719	1328847411	168007	1095901500	213439594	345.28	0.40
21	49902	220624	1539109928	168007	1255861786	213439594	345.28	0.44
22	66273	197198	1734289529	168009	1416050335	213439594	345.28	0.47
23	74886	218523	1934971861	168009	1576326854	213439594	345.28	0.52
24	78883	219411	2128171772	168009	1724021417	213439594	345.28	0.38
25	82956	220304	2322186493	168010	1871728366	213439594	345.28	0.40
26	83990	285775	2559384316	168009	2019411866	213439594	345.28	0.42
27	85099	337372	2867560589	168009	2167071182	213439594	345.28	0.45
28	89402	338315	3164564244	168009	2314741524	213439594	345.28	0.47
29	108026	339278	3462695705	168011	2462576988	213439594	345.28	0.49
30	112482	340255	3761689519	168011	2610409729	213439594	345.28	0.51
31	118308	341313	4080773776	168011	2767683885	213439594	345.28	0.45
32	124241	342371	4400859019	168011	2924960688	213439594	345.28	0.47
33	130280	343448	4721961413	168011	3082240125	213439594	345.28	0.48
34	136426	344545	5044090565	168011	3239517761	213439594	345.28	0.49
35	142678	345660	5367255980	168011	3396789139	213439594	345.28	0.50
36	170581	346797	5691785696	168012	3554232027	213439594	345.28	0.52
37	177046	347951	6017354861	168012	3711649982	213439594	345.28	0.53
38	185056	349179	6359494889	168012	3876493602	213439594	345.28	0.47
39	193205	350404	6702794714	168012	4041312506	213439594	345.28	0.48
40	201493	351651	7047272387	168011	4206106152	213439594	345.28	0.48
41	209919	352919	7392938185	168011	4370869283	213439594	345.28	0.49
42	218484	354207	7739802333	168011	4535596638	213439594	345.28	0.50
43	227187	355516	8087874993	168010	4700282956	213439594	345.28	0.50
44	267887	356849	8437473318	168011	4865093061	213439594	345.28	0.51
45	276867	358200	8788277870	168011	5029838653	213439594	345.28	0.51
46	286208	359562	9137995467	168010	5193441407	213439594	345.28	0.51
47	295692	360919	9488898136	168010	5356970992	213439594	345.28	0.51
48	305320	362295	9840994360	168009	5520421630	213439594	345.28	0.51
49	315092	363693	10194293754	168008	5683788206	213439594	345.28	0.52
50	325008	365111	10548805907	168008	5847065612	213439594	345.28	0.52
51	335068	366550	10904540392	168007	6010248748	213439594	345.28	0.52
52	345271	368009	11261506758	168006	6173332522	213439594	345.28	0.52
53	355619	369489	11619714542	168005	6336311849	213439594	345.28	0.52
54	366110	370990	11979173257	168004	6499181655	213439594	345.28	0.52
55	376746	372511	12339892403	168003	6661936871	213439594	345.28	0.52
56	387525	374053	12701881461	168002	6824572441	213439594	345.28	0.52
57	398448	375615	13065149898	168001	6987083314	213439594	345.28	0.52
58	409515	377199	13429707165	168000	7149464450	213439594	345.28	0.52

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 57 " PDT - 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]
<b>1.00</b>	53.55	4230.00	5060.00	30200.00	0.00
<b>2.00</b>	43.82	61220.00	54380.00	0.00	4.75
---	---	---	Ft = 70556	Fp = 16548	---
---	---	Pa = 59499	Ta = 37922	La = 0	---
---	---	Pb = 1721	Tb = 16458	Lb = 0	---
<b>3.00</b>	43.82	61220.00	54380.00	0.00	-4.75
---	---	---	Ft = 85007	Fp = -100614	---
---	---	Pa = 71685	Ta = -45688	La = 0	---
---	---	Pb = -10465	Tb = 100068	Lb = 0	---
<b>4.00</b>	37.02	61220.00	54380.00	0.00	4.75
---	---	---	Ft = 70556	Fp = 16548	---
---	---	Pa = 59499	Ta = 37922	La = 0	---
---	---	Pb = 1721	Tb = 16458	Lb = 0	---
<b>5.00</b>	37.02	61220.00	54380.00	0.00	-4.75
---	---	---	Ft = 85007	Fp = -100614	---
---	---	Pa = 71685	Ta = -45688	La = 0	---
---	---	Pb = -10465	Tb = 100068	Lb = 0	---
<b>6.00</b>	30.22	48670.00	41940.00	78000.00	4.75
---	---	---	Ft = 79002	Fp = 30760	---
---	---	Pa = 51221	Ta = 19807	La = 56792	---
---	---	Pb = -2551	Tb = 22133	Lb = 21208	---
<b>7.00</b>	30.22	61220.00	54380.00	0.00	-4.75
---	---	---	Ft = 85007	Fp = -100614	---
---	---	Pa = 71685	Ta = -45688	La = 0	---
---	---	Pb = -10465	Tb = 100068	Lb = 0	---

**TABELLA DESCRITTIVA DELLE AZIONI INTERNE.**

<b>Nodo</b>	<b>Carico verticale [N]</b>	<b>Tx [N]</b>	<b>My [Nmm]</b>	<b>Ty [N]</b>	<b>Mx [Nmm]</b>	<b>Mt [Nmm]</b>	<b><math>\sigma_{amm.}</math> [N/mm<sup>2</sup>]</b>	<b>% Usa</b>
2	4940	5353	5985262	30203	33350003	0	345.28	0.08
3	5773	5699	11374773	30203	61123586	-0	345.28	0.10
4	6729	6103	17161985	30204	88908380	0	345.28	0.11
5	7807	6567	23404305	30204	116705367	-0	345.28	0.12
6	9008	7090	30159154	30205	144515649	-0	345.28	0.12
7	10332	7671	37483950	30206	172340357	-0	345.28	0.12
8	79758	-41915	-11074906	30243	200501144	0	345.28	0.14
9	149221	1376	5488893	30281	229518438	0	345.28	0.16
10	150630	2038	11489352	30280	258499470	0	345.28	0.17
11	150857	8776	21779780	30279	287426289	0	345.28	0.17
12	147969	119930	150229012	30276	316260445	0	345.28	0.20
13	150342	120683	268896924	30275	346639989	0	345.28	0.15
14	152778	121446	388315643	30275	376989717	0	345.28	0.18
15	223368	54646	461399707	30307	408075579	-0	345.28	0.20
16	294020	115441	581537943	30337	439854024	0	345.28	0.22
17	296643	116259	699853859	30334	471568194	-0	345.28	0.24
18	299327	117096	818903994	30331	503217095	-0	345.28	0.26
19	297703	240750	1048201459	30325	534756887	-0	345.28	0.30
20	296140	235342	1277222628	30320	566189742	-0	345.28	0.34
21	299012	236236	1508608951	30316	597558360	-0	345.28	0.37
22	373720	155946	1688081340	36203	633348913	-0	345.28	0.40
23	440669	212334	1871586703	87147	726426855	175807324	345.28	0.44
24	444666	213205	2067190135	87141	805764088	175807324	345.28	0.33
25	448739	214083	2263376428	87135	885021123	175807324	345.28	0.34
26	446381	286983	2507505842	95893	969796664	175807324	345.28	0.37
27	444099	338085	2823728465	108330	1069883273	193869333	345.28	0.39
28	448402	339016	3128210651	108326	1167347282	193869333	345.28	0.42
29	467026	339974	3433598056	108325	1264824304	193869333	345.28	0.44
30	471482	340937	3739607125	108320	1362213750	193869333	345.28	0.46
31	477308	341981	4065881983	108315	1465726061	193869333	345.28	0.41
32	483241	343026	4392888253	108310	1569145161	193869333	345.28	0.42
33	489280	344091	4720657209	108306	1672477020	193869333	345.28	0.44
34	495426	345175	5049193558	108301	1775717951	193869333	345.28	0.45
35	501678	346278	5378502984	108297	1878864574	193869333	345.28	0.46
36	529581	347412	5708920468	108296	1982023052	193869333	345.28	0.48
37	536046	348552	6040108226	108291	2085075450	193869333	345.28	0.49
38	544056	349767	6387842835	108287	2192892367	193869333	345.28	0.44
39	552205	350980	6736454155	108282	2300599342	193869333	345.28	0.44
40	560493	352215	7085975829	108278	2408201649	193869333	345.28	0.45
41	568919	353471	7436417996	108274	2515696446	193869333	345.28	0.46
42	577484	354748	7787791268	108269	2623081040	193869333	345.28	0.46
43	586187	356046	8140106537	108265	2730352823	193869333	345.28	0.47
44	626887	357374	8493690989	108264	2837612723	193869333	345.28	0.47
45	635867	358712	8848216659	108260	2944747022	193869333	345.28	0.48
46	645208	360063	9201370268	108255	3051056222	193869333	345.28	0.48
47	654692	361408	9555449368	108250	3157236809	193869333	345.28	0.48
48	664320	362772	9910462987	108246	3263285678	193869333	345.28	0.48
49	674092	364158	10266422991	108241	3369200662	193869333	345.28	0.49
50	684008	365565	10623341326	108237	3474979620	193869333	345.28	0.49
51	694068	366992	10981230016	108232	3580620432	193869333	345.28	0.49
52	704271	368440	11340101146	108228	3686120995	193869333	345.28	0.49
53	714619	369908	11699966850	108224	3791479223	193869333	345.28	0.49
54	725110	371398	12060839299	108219	3896693039	193869333	345.28	0.49
55	735746	372908	12422730688	108215	4001760377	193869333	345.28	0.49
56	746525	374439	12785653232	108211	4106679173	193869333	345.28	0.50
57	757448	375991	13149619150	108206	4211447372	193869333	345.28	0.50
58	768515	377564	13514640666	108202	4316062915	193869333	345.28	0.50

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 58 " PDT - 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]
<b>1.00</b>	53.55	0.00	5060.00	30200.00	0.00
<b>2.00</b>	43.82	0.00	54380.00	0.00	4.75
---	---	---	Ft = -7225	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 54380	Lb = 0	---
<b>3.00</b>	43.82	0.00	54380.00	0.00	-4.75
---	---	---	Ft = 7225	Fp = -58581	---
---	---	Pa = 6093	Ta = -3883	La = 0	---
---	---	Pb = -6093	Tb = 58263	Lb = 0	---
<b>4.00</b>	37.02	0.00	54380.00	0.00	4.75
---	---	---	Ft = -7225	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 54380	Lb = 0	---
<b>5.00</b>	37.02	0.00	54380.00	0.00	-4.75
---	---	---	Ft = 7225	Fp = -58581	---
---	---	Pa = 6093	Ta = -3883	La = 0	---
---	---	Pb = -6093	Tb = 58263	Lb = 0	---
<b>6.00</b>	30.22	0.00	41940.00	78000.00	4.75
---	---	---	Ft = 25057	Fp = 70769	---
---	---	Pa = 13448	Ta = 2167	La = 21031	---
---	---	Pb = -13448	Tb = 39773	Lb = 56969	---
<b>7.00</b>	30.22	0.00	54380.00	0.00	-4.75
---	---	---	Ft = 7225	Fp = -58581	---
---	---	Pa = 6093	Ta = -3883	La = 0	---
---	---	Pb = -6093	Tb = 58263	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Usa
2	710	5346	5857186	30200	33280860	0	345.28	0.08
3	1543	5691	11118432	30200	60986305	0	345.28	0.10
4	2499	6094	16777177	30200	88704064	-0	345.28	0.11
5	3577	6556	22890741	30200	116434826	0	345.28	0.12
6	4778	7078	29516437	30200	144179298	-0	345.28	0.12
7	6102	7658	36711575	30201	171938223	-0	345.28	0.12
8	12983	-16872	15361545	30201	199210855	-0	345.28	0.13
9	19900	5047	26050002	30202	226558418	-0	345.28	0.14
10	21309	5709	31773898	30202	253914652	-0	345.28	0.15
11	22862	9891	40274444	30202	281279793	0	345.28	0.15
12	21299	119729	159106371	30202	308620144	-0	345.28	0.18
13	23672	120483	273928504	30202	337476740	-0	345.28	0.14
14	26108	121249	389539258	30202	366349485	0	345.28	0.16
15	34153	88199	481559339	30203	395293974	0	345.28	0.18
16	42259	118958	596716260	30203	424306117	0	345.28	0.20
17	44882	119783	711433938	30203	453330339	-0	345.28	0.22
18	47567	120628	827005238	30204	482365763	-0	345.28	0.24
19	47267	232688	1039140069	30203	511384979	-0	345.28	0.28
20	47030	235019	1263536766	30203	540388827	-0	345.28	0.32
21	49902	235923	1488302846	30203	569402927	-0	345.28	0.35
22	72927	264928	1733324181	32377	600008463	-0	345.28	0.39
23	88194	236081	1967891794	51236	651752788	65103387	345.28	0.43
24	92191	236969	2176720764	51236	697092378	65103387	345.28	0.32
25	96264	237862	2386355745	51236	742439687	65103387	345.28	0.34
26	90644	259291	2608715608	74778	802864370	65103387	345.28	0.35
27	85099	337731	2919114520	108205	904678943	113621395	345.28	0.38
28	89402	338675	3216446228	108205	999658933	113621395	345.28	0.41
29	108026	339638	3514907553	108205	1094729357	113621395	345.28	0.43
30	112482	340615	3814230815	108205	1189802513	113621395	345.28	0.45
31	118308	341672	4133665217	108206	1290951311	113621395	345.28	0.40
32	124241	342730	4454100271	108206	1392105516	113621395	345.28	0.41
33	130280	343808	4775552188	108206	1493264622	113621395	345.28	0.43
34	136426	344904	5098030540	108206	1594426052	113621395	345.28	0.44
35	142678	346020	5421544798	108206	1695587206	113621395	345.28	0.45
36	170581	347157	5746425013	108206	1796844750	113621395	345.28	0.46
37	177046	348310	6072344110	108206	1898091841	113621395	345.28	0.47
38	185056	349538	6414850099	108206	2004120142	113621395	345.28	0.42
39	193205	350764	6758515353	108206	2110137760	113621395	345.28	0.43
40	201493	352011	7103357953	108206	2216143995	113621395	345.28	0.44
41	209919	353278	7449388142	108206	2322135709	113621395	345.28	0.45
42	218484	354567	7796616111	108206	2428109755	113621395	345.28	0.45
43	227187	355876	8145051992	108205	2534062976	113621395	345.28	0.46
44	267887	357208	8495014588	108206	2640087337	113621395	345.28	0.46
45	276867	358559	8846182599	108206	2746077512	113621395	345.28	0.47
46	286208	359922	9196260464	108205	2851339739	113621395	345.28	0.47
47	295692	361278	9547522554	108205	2956562377	113621395	345.28	0.47
48	305320	362655	9899977320	108205	3061741925	113621395	345.28	0.47
49	315092	364053	10253634349	108204	3166875241	113621395	345.28	0.47
50	325008	365471	10608503209	108204	3271959190	113621395	345.28	0.48
51	335068	366909	10964593444	108204	3376990636	113621395	345.28	0.48
52	345271	368369	11321914583	108203	3481966448	113621395	345.28	0.48
53	355619	369849	11680476135	108203	3586883499	113621395	345.28	0.48
54	366110	371349	12040287591	108202	3691738666	113621395	345.28	0.48
55	376746	372871	12401358426	108202	3796528828	113621395	345.28	0.48
56	387525	374413	12763698099	108201	3901250871	113621395	345.28	0.48
57	398448	375975	13127316050	108201	4005901684	113621395	345.28	0.49
58	409515	377559	13492221707	108200	4110478160	113621395	345.28	0.49

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 59 " PDT - 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]
<b>1.00</b>	53.55	4230.00	5060.00	30200.00	0.00
<b>2.00</b>	43.82	61220.00	54380.00	0.00	4.75
---	---	---	Ft = 70556	Fp = 16548	---
---	---	Pa = 59499	Ta = 37922	La = 0	---
---	---	Pb = 1721	Tb = 16458	Lb = 0	---
<b>3.00</b>	43.82	61220.00	54380.00	0.00	-4.75
---	---	---	Ft = 85007	Fp = -100614	---
---	---	Pa = 71685	Ta = -45688	La = 0	---
---	---	Pb = -10465	Tb = 100068	Lb = 0	---
<b>4.00</b>	37.02	48670.00	41940.00	78000.00	4.75
---	---	---	Ft = 79002	Fp = 30760	---
---	---	Pa = 51221	Ta = 19807	La = 56792	---
---	---	Pb = -2551	Tb = 22133	Lb = 21208	---
<b>5.00</b>	37.02	61220.00	54380.00	0.00	-4.75
---	---	---	Ft = 85007	Fp = -100614	---
---	---	Pa = 71685	Ta = -45688	La = 0	---
---	---	Pb = -10465	Tb = 100068	Lb = 0	---
<b>6.00</b>	30.22	61220.00	54380.00	0.00	4.75
---	---	---	Ft = 70556	Fp = 16548	---
---	---	Pa = 59499	Ta = 37922	La = 0	---
---	---	Pb = 1721	Tb = 16458	Lb = 0	---
<b>7.00</b>	30.22	61220.00	54380.00	0.00	-4.75
---	---	---	Ft = 85007	Fp = -100614	---
---	---	Pa = 71685	Ta = -45688	La = 0	---
---	---	Pb = -10465	Tb = 100068	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	4940	5353	5981102	30203	33367237	0	345.28	0.08
3	5773	5698	11365752	30204	61160957	0	345.28	0.10
4	6729	6103	17147300	30205	88969215	-0	345.28	0.11
5	7807	6567	23383050	30205	116793423	-0	345.28	0.12
6	9008	7089	30130319	30206	144635105	-0	345.28	0.12
7	10332	7671	37446423	30207	172495820	-0	345.28	0.12
8	79758	-41919	-11178151	30255	200928850	0	345.28	0.14
9	149221	1369	5262754	30302	230455257	0	345.28	0.16
10	150630	2030	11139266	30302	259949765	0	345.28	0.17
11	150857	8769	21305715	30300	289390197	0	345.28	0.18
12	147969	119923	149633534	30296	318727344	0	345.28	0.20
13	150342	120676	268171562	30295	349644977	0	345.28	0.15
14	152778	121439	387458541	30294	380540496	0	345.28	0.18
15	219229	4551	424053372	48520	424814824	0	345.28	0.19
16	285742	97303	526506769	87160	519182572	169893541	345.28	0.23
17	288365	98121	627194949	87156	605612805	169893541	345.28	0.25
18	291050	98959	728632905	87152	691963991	169893541	345.28	0.28
19	287289	222162	936891847	106564	794116145	169893541	345.28	0.32
20	283590	222877	1155338843	108345	900732286	186033455	345.28	0.36
21	286462	223772	1374446449	108340	1006720114	186033455	345.28	0.39
22	365308	177152	1564290635	108370	1113485336	186033455	345.28	0.43
23	436396	217992	1765199998	108393	1220853567	186033455	345.28	0.47
24	440393	218863	1965499915	108385	1319618497	186033455	345.28	0.35
25	444467	219742	2166397913	108378	1418244555	186033455	345.28	0.37
26	444245	301913	2421885066	108371	1516716195	186033455	345.28	0.39
27	444099	338074	2736050826	108363	1615032379	186033455	345.28	0.41
28	448402	339006	3040410617	108357	1713229292	186033455	345.28	0.44
29	467026	339964	3345679158	108356	1811418061	186033455	345.28	0.46
30	471482	340928	3651576496	108350	1909476522	186033455	345.28	0.48
31	477308	341972	3977739752	108343	2013657046	186033455	345.28	0.42
32	483241	343018	4304641131	108337	2117704202	186033455	345.28	0.44
33	489280	344083	4632311054	108332	2221629006	186033455	345.28	0.45
34	495426	345168	4960754027	108326	2325429000	186033455	345.28	0.46
35	501678	346271	5289975541	108320	2429101964	186033455	345.28	0.47
36	529581	347404	5620306892	108320	2532776122	186033455	345.28	0.49
37	536046	348545	5951413894	108314	2636312002	186033455	345.28	0.50
38	544056	349761	6299069318	108308	2744602977	186033455	345.28	0.44
39	552205	350974	6647606530	108302	2852753627	186033455	345.28	0.45
40	560493	352210	6997058683	108297	2960772135	186033455	345.28	0.46
41	568919	353466	7347435794	108291	3068656405	186033455	345.28	0.46
42	577484	354743	7698748355	108286	3176404446	186033455	345.28	0.47
43	586187	356041	8051007151	108280	3284014304	186033455	345.28	0.47
44	626887	357369	8404536464	108279	3391604288	186033455	345.28	0.48
45	635867	358708	8759011295	108273	3499042927	186033455	345.28	0.48
46	645208	360059	9112118540	108268	3605629681	186033455	345.28	0.48
47	654692	361404	9466155339	108262	3712063493	186033455	345.28	0.49
48	664320	362769	9821130665	108257	3818341596	186033455	345.28	0.49
49	674092	364155	10177056305	108251	3924462294	186033455	345.28	0.49
50	684008	365562	10533944132	108246	4030423882	186033455	345.28	0.49
51	694068	366990	10891806102	108240	4136224645	186033455	345.28	0.49
52	704271	368438	11250654237	108235	4241862855	186033455	345.28	0.49
53	714619	369907	11610500615	108229	4347336774	186033455	345.28	0.50
54	725110	371397	11971357351	108224	4452644648	186033455	345.28	0.50
55	735746	372907	12333236593	108218	4557784709	186033455	345.28	0.50
56	746525	374439	12696150505	108213	4662755171	186033455	345.28	0.50
57	757448	375991	13060111268	108208	4767554233	186033455	345.28	0.50
58	768515	377564	13425131064	108203	4872180074	186033455	345.28	0.50



## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 60 " PDT - 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]
<b>1.00</b>	53.55	0.00	5060.00	30200.00	0.00
<b>2.00</b>	43.82	0.00	54380.00	0.00	4.75
---	---	---	Ft = -7225	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 54380	Lb = 0	---
<b>3.00</b>	43.82	0.00	54380.00	0.00	-4.75
---	---	---	Ft = 7225	Fp = -58581	---
---	---	Pa = 6093	Ta = -3883	La = 0	---
---	---	Pb = -6093	Tb = 58263	Lb = 0	---
<b>4.00</b>	37.02	0.00	41940.00	78000.00	4.75
---	---	---	Ft = 25057	Fp = 70769	---
---	---	Pa = 13448	Ta = 2167	La = 21031	---
---	---	Pb = -13448	Tb = 39773	Lb = 56969	---
<b>5.00</b>	37.02	0.00	54380.00	0.00	-4.75
---	---	---	Ft = 7225	Fp = -58581	---
---	---	Pa = 6093	Ta = -3883	La = 0	---
---	---	Pb = -6093	Tb = 58263	Lb = 0	---
<b>6.00</b>	30.22	0.00	54380.00	0.00	4.75
---	---	---	Ft = -7225	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 54380	Lb = 0	---
<b>7.00</b>	30.22	0.00	54380.00	0.00	-4.75
---	---	---	Ft = 7225	Fp = -58581	---
---	---	Pa = 6093	Ta = -3883	La = 0	---
---	---	Pb = -6093	Tb = 58263	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	710	5346	5857018	30200	33282878	0	345.28	0.08
3	1543	5691	11117899	30200	60992708	-0	345.28	0.10
4	2499	6094	16776051	30200	88717566	-0	345.28	0.11
5	3577	6556	22888768	30200	116458490	-0	345.28	0.12
6	4778	7078	29513333	30201	144216536	-0	345.28	0.12
7	6102	7658	36707027	30201	171992794	-0	345.28	0.12
8	12983	-16871	15353986	30202	199301548	0	345.28	0.13
9	19900	5047	26037828	30202	226704475	0	345.28	0.14
10	21309	5709	31756784	30202	254119983	0	345.28	0.15
11	22862	9891	40252030	30203	281548702	0	345.28	0.15
12	21299	119729	159079021	30202	308948270	0	345.28	0.18
13	23672	120483	273895369	30203	337874272	0	345.28	0.14
14	26108	121249	389499745	30203	366823543	0	345.28	0.16
15	40877	160833	534503709	36940	400565432	0	345.28	0.20
16	55707	121128	648375730	51236	452704713	62913448	345.28	0.22
17	58330	121953	765505202	51236	501944845	62913448	345.28	0.24
18	61015	122798	883479230	51237	551198182	62913448	345.28	0.26
19	53991	203709	1062700953	103401	643261428	62913448	345.28	0.30
20	47030	222579	1279934076	108204	747696503	106268341	345.28	0.34
21	49902	223483	1492896049	108204	850729981	106268341	345.28	0.38
22	66203	200605	1691138613	108206	953912170	106268341	345.28	0.41
23	74746	221472	1894782254	108206	1057150746	106268341	345.28	0.45
24	78743	222360	2090543629	108206	1152284457	106268341	345.28	0.33
25	82816	223253	2287120353	108206	1247425827	106268341	345.28	0.35
26	83920	287273	2525929247	108206	1342552045	106268341	345.28	0.37
27	85099	337731	2834141266	108206	1437662630	106268341	345.28	0.40
28	89402	338675	3131451157	108206	1532780094	106268341	345.28	0.42
29	108026	339637	3429887927	108207	1628005251	106268341	345.28	0.44
30	112482	340615	3729187406	108207	1723228276	106268341	345.28	0.46
31	118308	341672	4048597150	108207	1824532450	106268341	345.28	0.41
32	124241	342730	4369008185	108207	1925838017	106268341	345.28	0.42
33	130280	343808	4690436633	108207	2027145008	106268341	345.28	0.43
34	136426	344904	5012892117	108207	2128450545	106268341	345.28	0.45
35	142678	346020	5336384152	108207	2229751733	106268341	345.28	0.46
36	170581	347157	5661239722	108208	2331164573	106268341	345.28	0.47
37	177046	348310	5987135139	108208	2432560880	106268341	345.28	0.48
38	185056	349538	6329617230	108208	2538739777	106268341	345.28	0.43
39	193205	350764	6673259486	108207	2644902312	106268341	345.28	0.44
40	201493	352011	7018079929	108207	2751048167	106268341	345.28	0.44
41	209919	353278	7364088845	108207	2857173934	106268341	345.28	0.45
42	218484	354566	7711296465	108207	2963276204	106268341	345.28	0.46
43	227187	355876	8059712962	108207	3069351571	106268341	345.28	0.46
44	267887	357208	8409654698	108207	3175507388	106268341	345.28	0.47
45	276867	358559	8760803115	108207	3281621033	106268341	345.28	0.47
46	286208	359922	9110862779	108207	3386997950	106268341	345.28	0.47
47	295692	361278	9462107965	108206	3492327105	106268341	345.28	0.47
48	305320	362655	9814547162	108206	3597604758	106268341	345.28	0.48
49	315092	364053	10168189984	108205	3702827601	106268341	345.28	0.48
50	325008	365471	10523046024	108205	3807992332	106268341	345.28	0.48
51	335068	366909	10879124853	108204	3913095653	106268341	345.28	0.48
52	345271	368369	11236436025	108204	4018134272	106268341	345.28	0.48
53	355619	369849	11594989075	108203	4123104902	106268341	345.28	0.49
54	366110	371349	11954793517	108203	4228004262	106268341	345.28	0.49
55	376746	372871	12315858853	108202	4332829077	106268341	345.28	0.49
56	387525	374413	12678194565	108202	4437576077	106268341	345.28	0.49
57	398448	375975	13041810119	108201	4542241997	106268341	345.28	0.49
58	409515	377559	13406714966	108200	4646823580	106268341	345.28	0.49

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 61 " PDT - 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]
<b>1.00</b>	53.55	8460.00	10110.00	6000.00	0.00
<b>2.00</b>	43.82	48670.00	41940.00	78000.00	4.75
---	---	---	Ft = 79002	Fp = 30760	---
---	---	Pa = 51221	Ta = 19807	La = 56792	---
---	---	Pb = -2551	Tb = 22133	Lb = 21208	---
<b>3.00</b>	43.82	61220.00	54380.00	0.00	-4.75
---	---	---	Ft = 85007	Fp = -100614	---
---	---	Pa = 71685	Ta = -45688	La = 0	---
---	---	Pb = -10465	Tb = 100068	Lb = 0	---
<b>4.00</b>	37.02	48670.00	41940.00	78000.00	4.75
---	---	---	Ft = 79002	Fp = 30760	---
---	---	Pa = 51221	Ta = 19807	La = 56792	---
---	---	Pb = -2551	Tb = 22133	Lb = 21208	---
<b>5.00</b>	37.02	61220.00	54380.00	0.00	-4.75
---	---	---	Ft = 85007	Fp = -100614	---
---	---	Pa = 71685	Ta = -45688	La = 0	---
---	---	Pb = -10465	Tb = 100068	Lb = 0	---
<b>6.00</b>	30.22	61220.00	54380.00	0.00	4.75
---	---	---	Ft = 70556	Fp = 16548	---
---	---	Pa = 59499	Ta = 37922	La = 0	---
---	---	Pb = 1721	Tb = 16458	Lb = 0	---
<b>7.00</b>	30.22	61220.00	54380.00	0.00	-4.75
---	---	---	Ft = 85007	Fp = -100614	---
---	---	Pa = 71685	Ta = -45688	La = 0	---
---	---	Pb = -10465	Tb = 100068	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	9170	10408	11655843	6009	6831417	0	345.28	0.03
3	10003	10754	21778589	6010	12571902	-0	345.28	0.04
4	10959	11158	32295324	6011	18334067	-0	345.28	0.05
5	12037	11622	43263047	6012	24120688	-0	345.28	0.05
6	13238	12144	54738824	6013	29934583	-0	345.28	0.05
7	14562	12726	66779730	6015	35778578	-0	345.28	0.05
8	79849	-82633	-26007416	57301	82581218	0	345.28	0.07
9	145174	-11715	-14419299	62936	143838126	164553528	345.28	0.14
10	146582	-11054	-20649021	62935	203549573	164553528	345.28	0.16
11	144673	-6040	-23685082	63115	263284471	164553528	345.28	0.18
12	139649	112509	93740478	84131	342720284	178334769	345.28	0.21
13	142022	113262	204795345	84130	425518613	178334769	345.28	0.18
14	144458	114026	316607668	84129	508303839	178334769	345.28	0.20
15	210909	-2868	345635701	102372	604931604	178334769	345.28	0.22
16	277422	89880	440438436	141028	752094159	348228310	345.28	0.28
17	280045	90699	533492326	141023	891294432	348228310	345.28	0.30
18	282730	91537	627313207	141018	1030384246	348228310	345.28	0.33
19	278969	214741	827981590	160426	1185195629	348228310	345.28	0.37
20	275270	215458	1038864737	162204	1344389398	364368223	345.28	0.41
21	278142	216354	1250427649	162197	1502911048	364368223	345.28	0.45
22	356988	169730	1432662092	162242	1662600028	364368223	345.28	0.49
23	428076	210567	1625915050	162276	1823196330	364368223	345.28	0.53
24	432073	211440	1819185770	162264	1970930984	364368223	345.28	0.40
25	436147	212321	2013075645	162254	2118463579	364368223	345.28	0.41
26	435925	294493	2261575688	162244	2265770072	364368223	345.28	0.43
27	435779	330655	2568775387	162233	2412848947	364368223	345.28	0.46
28	440082	331588	2866186860	162225	2559754257	364368223	345.28	0.48
29	458706	332547	3164514787	162223	2706651982	364368223	345.28	0.50
30	463162	333512	3463490330	162214	2853359656	364368223	345.28	0.52
31	468988	334557	3782310065	162205	3009232048	364368223	345.28	0.46
32	474921	335604	4101887380	162196	3164910040	364368223	345.28	0.47
33	480960	336670	4422251076	162188	3320409671	364368223	345.28	0.48
34	487106	337756	4743405829	162180	3475727233	364368223	345.28	0.50
35	493358	338860	5065357257	162172	3630859362	364368223	345.28	0.51
36	521261	339994	5388425375	162171	3785997572	364368223	345.28	0.52
37	527726	341136	5712288155	162163	3940933447	364368223	345.28	0.53
38	535736	342353	6052376467	162154	4102989908	364368223	345.28	0.47
39	543885	343567	6393365861	162146	4264841038	364368223	345.28	0.48
40	552173	344803	6735288265	162139	4426498743	364368223	345.28	0.48
41	560599	346060	7078153772	162131	4587959828	364368223	345.28	0.49
42	569164	347339	7421972932	162123	4749221251	364368223	345.28	0.50
43	577867	348638	7766756580	162116	4910280019	364368223	345.28	0.50
44	618567	349966	8112818817	162114	5071312853	364368223	345.28	0.51
45	627547	351306	8459845739	162106	5232123230	364368223	345.28	0.51
46	636888	352658	8805572609	162098	5391662499	364368223	345.28	0.51
47	646372	354004	9152248036	162090	5550976753	364368223	345.28	0.51
48	656000	355370	9499881135	162082	5710061806	364368223	345.28	0.51
49	665772	356757	9848483707	162074	5868915055	364368223	345.28	0.51
50	675688	358165	10198067642	162066	6027533878	364368223	345.28	0.52
51	685748	359593	10548644914	162058	6185915641	364368223	345.28	0.52
52	695951	361042	10900227566	162050	6344057696	364368223	345.28	0.52
53	706299	362512	11252827695	162042	6501957374	364368223	345.28	0.52
54	716790	364003	11606457443	162034	6659611989	364368223	345.28	0.52
55	727426	365514	11961128981	162026	6817018831	364368223	345.28	0.52
56	738205	367047	12316854506	162019	6974175167	364368223	345.28	0.52
57	749128	368600	12673646229	162011	7131078241	364368223	345.28	0.52
58	760195	370173	13031516366	162004	7287725268	364368223	345.28	0.52

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 62 " PDT - 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]
<b>1.00</b>	53.55	0.00	10110.00	6000.00	0.00
<b>2.00</b>	43.82	0.00	41940.00	78000.00	4.75
---	---	---	Ft = 25057	Fp = 70769	---
---	---	Pa = 13448	Ta = 2167	La = 21031	---
---	---	Pb = -13448	Tb = 39773	Lb = 56969	---
<b>3.00</b>	43.82	0.00	54380.00	0.00	-4.75
---	---	---	Ft = 7225	Fp = -58581	---
---	---	Pa = 6093	Ta = -3883	La = 0	---
---	---	Pb = -6093	Tb = 58263	Lb = 0	---
<b>4.00</b>	37.02	0.00	41940.00	78000.00	4.75
---	---	---	Ft = 25057	Fp = 70769	---
---	---	Pa = 13448	Ta = 2167	La = 21031	---
---	---	Pb = -13448	Tb = 39773	Lb = 56969	---
<b>5.00</b>	37.02	0.00	54380.00	0.00	-4.75
---	---	---	Ft = 7225	Fp = -58581	---
---	---	Pa = 6093	Ta = -3883	La = 0	---
---	---	Pb = -6093	Tb = 58263	Lb = 0	---
<b>6.00</b>	30.22	0.00	54380.00	0.00	4.75
---	---	---	Ft = -7225	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 54380	Lb = 0	---
<b>7.00</b>	30.22	0.00	54380.00	0.00	-4.75
---	---	---	Ft = 7225	Fp = -58581	---
---	---	Pa = 6093	Ta = -3883	La = 0	---
---	---	Pb = -6093	Tb = 58263	Lb = 0	---

**TABELLA DESCRITTIVA DELLE AZIONI INTERNE.**

<b>Nodo</b>	<b>Carico verticale [N]</b>	<b>T<sub>x</sub> [N]</b>	<b>My [Nmm]</b>	<b>T<sub>y</sub> [N]</b>	<b>Mx [Nmm]</b>	<b>Mt [Nmm]</b>	<b>σ<sub>amm.</sub> [N/mm<sup>2</sup>]</b>	<b>% Usa</b>
2	710	10396	11421210	6000	6624103	0	345.28	0.03
3	1543	10741	21312814	6000	12154592	0	345.28	0.04
4	2499	11144	31602424	6000	17703687	-0	345.28	0.05
5	3577	11607	42347277	6001	23273595	-0	345.28	0.05
6	4778	12128	53604606	6001	28866530	-0	345.28	0.05
7	6102	12708	65431645	6001	34484709	-0	345.28	0.05
8	19707	37930	108702098	24971	54899657	0	345.28	0.08
9	33349	12268	113730303	27037	80371957	60935983	345.28	0.09
10	34757	12930	126317678	27037	105294719	60935983	345.28	0.10
11	29586	11406	138023540	27529	130414449	60935983	345.28	0.11
12	21299	112339	236828386	84004	208738893	97955028	345.28	0.17
13	23672	113094	344643346	84004	288760973	97955028	345.28	0.15
14	26108	113859	453244188	84004	368821438	97955028	345.28	0.18
15	40877	153443	591240714	90742	453758105	97955028	345.28	0.22
16	55707	113739	698100354	105039	557173936	160868476	345.28	0.25
17	58330	114563	808214854	105039	657701162	160868476	345.28	0.28
18	61015	115408	919171541	105040	758250415	160868476	345.28	0.30
19	53991	196319	1091376705	157203	901564633	160868476	345.28	0.34
20	47030	215189	1301594587	162006	1057206849	204223369	345.28	0.39
21	49902	216093	1507539826	162007	1211454361	204223369	345.28	0.43
22	66203	193215	1698759800	162008	1365920937	204223369	345.28	0.46
23	74746	214082	1895377685	162009	1520471365	204223369	345.28	0.50
24	78743	214970	2084663924	162009	1662889419	204223369	345.28	0.37
25	82816	215863	2274764340	162009	1805319482	204223369	345.28	0.39
26	83920	279883	2507096802	162009	1947727827	204223369	345.28	0.41
27	85099	330342	2808832356	162009	2090113685	204223369	345.28	0.44
28	89402	331285	3099664916	162009	2232510173	204223369	345.28	0.46
29	108026	332248	3391619403	162010	2375065897	204223369	345.28	0.48
30	112482	333225	3684436067	162010	2517618993	204223369	345.28	0.50
31	118308	334282	3996948424	162010	2669276313	204223369	345.28	0.44
32	124241	335340	4310461416	162010	2820936183	204223369	345.28	0.45
33	130280	336418	4624991242	162010	2972598591	204223369	345.28	0.47
34	136426	337514	4940547675	162010	3124259260	204223369	345.28	0.48
35	142678	338630	5257140391	162010	3275913892	204223369	345.28	0.49
36	170581	339767	5575091141	162012	3427733918	204223369	345.28	0.50
37	177046	340920	5894082020	162012	3579529898	204223369	345.28	0.51
38	185056	342148	6229333117	162011	3738486341	204223369	345.28	0.46
39	193205	343374	6565744706	162011	3897418947	204223369	345.28	0.47
40	201493	344621	6903334884	162011	4056327196	204223369	345.28	0.47
41	209919	345888	7242114131	162011	4215206013	204223369	345.28	0.48
42	218484	347177	7582092877	162010	4374050330	204223369	345.28	0.48
43	227187	348486	7923281490	162010	4532855072	204223369	345.28	0.49
44	267887	349818	8265991143	162011	4691779185	204223369	345.28	0.49
45	276867	351169	8609909247	162010	4850641083	204223369	345.28	0.50
46	286208	352532	8952787693	162010	5008400955	204223369	345.28	0.50
47	295692	353888	9296853785	162009	5166090265	204223369	345.28	0.50
48	305320	355265	9642116235	162009	5323703443	204223369	345.28	0.50
49	315092	356663	9988584859	162008	5481235555	204223369	345.28	0.50
50	325008	358081	10336269452	162007	5638681677	204223369	345.28	0.50
51	335068	359519	10685179790	162006	5796036889	204223369	345.28	0.51
52	345271	360979	11035325626	162006	5953296282	204223369	345.28	0.51
53	355619	362459	11386716699	162005	6110454953	204223369	345.28	0.51
54	366110	363959	11739362726	162004	6267508008	204223369	345.28	0.51
55	376746	365481	12093273410	162003	6424450560	204223369	345.28	0.51
56	387525	367023	12448458434	162002	6581277732	204223369	345.28	0.51
57	398448	368585	12804927467	162001	6737984655	204223369	345.28	0.51
58	409515	370169	13162690160	162000	6894566468	204223369	345.28	0.51

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 63 " PDT - 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]
<b>1.00</b>	53.55	6630.00	5210.00	39000.00	0.00
<b>2.00</b>	43.82	79140.00	48260.00	0.00	4.75
---	---	---	Ft = 94137	Fp = -2348	---
---	---	Pa = 79384	Ta = 50596	La = 0	---
---	---	Pb = -244	Tb = -2336	Lb = 0	---
<b>3.00</b>	43.82	79140.00	48260.00	0.00	-4.75
---	---	---	Ft = 106961	Fp = -106325	---
---	---	Pa = 90199	Ta = -57488	La = 0	---
---	---	Pb = -11059	Tb = 105748	Lb = 0	---
<b>4.00</b>	37.02	79140.00	48260.00	0.00	4.75
---	---	---	Ft = 94137	Fp = -2348	---
---	---	Pa = 79384	Ta = 50596	La = 0	---
---	---	Pb = -244	Tb = -2336	Lb = 0	---
<b>5.00</b>	37.02	79140.00	48260.00	0.00	-4.75
---	---	---	Ft = 106961	Fp = -106325	---
---	---	Pa = 90199	Ta = -57488	La = 0	---
---	---	Pb = -11059	Tb = 105748	Lb = 0	---
<b>6.00</b>	30.22	62110.00	36480.00	96000.00	4.75
---	---	---	Ft = 104826	Fp = 22354	---
---	---	Pa = 64643	Ta = 21395	La = 79699	---
---	---	Pb = -2533	Tb = 15085	Lb = 16301	---
<b>7.00</b>	30.22	79140.00	48260.00	0.00	-4.75
---	---	---	Ft = 106961	Fp = -106325	---
---	---	Pa = 90199	Ta = -57488	La = 0	---
---	---	Pb = -11059	Tb = 105748	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Uso
2	7340	5293	5993106	39007	43119788	0	345.28	0.10
3	8173	5380	11121678	39007	79036913	0	345.28	0.13
4	9129	5482	16365863	39008	114967027	0	345.28	0.14
5	10207	5599	21742063	39009	150911536	-0	345.28	0.15
6	11408	5731	27266711	39010	186872060	-0	345.28	0.15
7	12732	5877	32956243	39011	222850264	0	345.28	0.15
8	101358	-38480	-10897887	39091	259605999	0	345.28	0.18
9	190020	-424	3065468	39169	297795152	0	345.28	0.20
10	191429	-260	7272914	39168	335918009	0	345.28	0.22
11	190377	5283	14865401	39164	373929703	0	345.28	0.23
12	186209	103478	126888691	39157	411780167	0	345.28	0.24
13	188582	103663	229657202	39155	451637238	0	345.28	0.18
14	191018	103851	332616969	39153	491435714	0	345.28	0.20
15	280808	44109	394368865	39220	532462381	0	345.28	0.21
16	370659	97587	497766305	39283	574643768	-0	345.28	0.24
17	373282	97783	599018208	39276	616708267	-0	345.28	0.25
18	375967	97981	700378295	39269	658654285	-0	345.28	0.27
19	373062	207161	898994806	39257	700407759	-0	345.28	0.30
20	370220	201789	1096766540	39245	741972616	-0	345.28	0.33
21	373092	202000	1296045680	39236	783421348	-0	345.28	0.36
22	463768	100420	1428967463	47511	831174493	-0	345.28	0.38
23	546685	166516	1561971863	119014	959417440	246721388	345.28	0.41
24	550682	166713	1717312927	119000	1068528407	246721388	345.28	0.31
25	554755	166915	1872625129	118988	1177495036	246721388	345.28	0.32
26	552109	240225	2076073463	125711	1290604456	246721388	345.28	0.34
27	549539	288160	2348666742	135262	1415381031	260603786	345.28	0.36
28	553842	288378	2609218743	135252	1538065199	260603786	345.28	0.39
29	572466	288611	2869977821	135249	1660728588	260603786	345.28	0.41
30	576922	288835	3130693510	135238	1783240123	260603786	345.28	0.43
31	582748	289080	3408016198	135227	1913408031	260603786	345.28	0.38
32	588681	289326	3685302838	135217	2043414119	260603786	345.28	0.39
33	594720	289578	3962573065	135208	2173269313	260603786	345.28	0.40
34	600866	289835	4239818973	135199	2302968850	260603786	345.28	0.41
35	607118	290096	4517033861	135189	2432508495	260603786	345.28	0.42
36	635021	290373	4794488142	135186	2562025510	260603786	345.28	0.43
37	641486	290643	5071886704	135177	2691367786	260603786	345.28	0.44
38	649496	290932	5362365971	135167	2826645940	260603786	345.28	0.40
39	657645	291221	5652804055	135158	2961743428	260603786	345.28	0.40
40	665933	291516	5943221491	135149	3096669713	260603786	345.28	0.41
41	674359	291816	6233614984	135141	3231421565	260603786	345.28	0.41
42	682924	292122	6523981829	135132	3365996005	260603786	345.28	0.42
43	691627	292433	6814319681	135124	3500390186	260603786	345.28	0.42
44	732327	292759	7104891109	135120	3634734384	260603786	345.28	0.43
45	741307	293079	7395410108	135111	3768882877	260603786	345.28	0.43
46	750648	293403	7683980750	135103	3901960667	260603786	345.28	0.43
47	760132	293726	7972490036	135094	4034840281	260603786	345.28	0.43
48	769760	294053	8260934391	135085	4167518127	260603786	345.28	0.43
49	779532	294386	8549313072	135077	4299992024	260603786	345.28	0.43
50	789448	294724	8837625446	135068	4432259822	260603786	345.28	0.44
51	799508	295067	9125870986	135060	4564319398	260603786	345.28	0.44
52	809711	295416	9414049258	135052	4696168652	260603786	345.28	0.44
53	820059	295770	9702159900	135043	4827805500	260603786	345.28	0.44
54	830550	296129	9990202610	135035	4959227867	260603786	345.28	0.44
55	841186	296494	10278177135	135027	5090433688	260603786	345.28	0.44
56	851965	296864	10566083258	135019	5221420898	260603786	345.28	0.44
57	862888	297239	10853920789	135012	5352187432	260603786	345.28	0.44
58	873955	297620	11141689557	135004	5482731222	260603786	345.28	0.44



## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 64 " PDT - 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]
<b>1.00</b>	53.55	0.00	5210.00	39000.00	0.00
<b>2.00</b>	43.82	0.00	48260.00	0.00	4.75
---	---	---	Ft = -6412	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 48260	Lb = 0	---
<b>3.00</b>	43.82	0.00	48260.00	0.00	-4.75
---	---	---	Ft = 6412	Fp = -51988	---
---	---	Pa = 5407	Ta = -3446	La = 0	---
---	---	Pb = -5407	Tb = 51706	Lb = 0	---
<b>4.00</b>	37.02	0.00	48260.00	0.00	4.75
---	---	---	Ft = -6412	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 48260	Lb = 0	---
<b>5.00</b>	37.02	0.00	48260.00	0.00	-4.75
---	---	---	Ft = 6412	Fp = -51988	---
---	---	Pa = 5407	Ta = -3446	La = 0	---
---	---	Pb = -5407	Tb = 51706	Lb = 0	---
<b>6.00</b>	30.22	0.00	36480.00	96000.00	4.75
---	---	---	Ft = 37737	Fp = 74875	---
---	---	Pa = 18178	Ta = 210	La = 33069	---
---	---	Pb = -18178	Tb = 36270	Lb = 62931	---
<b>7.00</b>	30.22	0.00	48260.00	0.00	-4.75
---	---	---	Ft = 6412	Fp = -51988	---
---	---	Pa = 5407	Ta = -3446	La = 0	---
---	---	Pb = -5407	Tb = 51706	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Uso
2	710	5281	5822628	39000	42978525	0	345.28	0.10
3	1543	5367	10780713	39000	78756931	-0	345.28	0.13
4	2499	5468	15854407	39000	114551147	-0	345.28	0.14
5	3577	5584	21060001	39000	150362049	-0	345.28	0.15
6	4778	5714	26413787	39001	186190542	-0	345.28	0.15
7	6102	5859	31932058	39001	222037570	-0	345.28	0.15
8	12640	-16310	11759948	39001	257250779	0	345.28	0.16
9	19215	2732	19635065	39002	292555206	0	345.28	0.17
10	20623	2897	22723694	39002	327871009	0	345.28	0.19
11	22519	6174	27893641	39003	363203215	0	345.28	0.20
12	21299	103206	130588944	39002	398508281	0	345.28	0.21
13	23672	103395	229115402	39003	435771067	0	345.28	0.16
14	26108	103586	327876671	39003	473054468	0	345.28	0.18
15	33810	73754	405209752	39003	510425389	0	345.28	0.19
16	41574	100539	502571806	39004	547878801	0	345.28	0.21
17	44196	100744	599043466	39004	585347812	0	345.28	0.22
18	46881	100955	695760218	39004	622831283	0	345.28	0.24
19	46924	199853	877660230	39004	660297933	0	345.28	0.26
20	47030	201357	1069916954	39004	697748588	0	345.28	0.29
21	49902	201583	1261952995	39004	735212202	-0	345.28	0.32
22	74949	250539	1487396832	42421	775149260	-0	345.28	0.35
23	92238	198818	1692862362	72077	848315937	102370412	345.28	0.39
24	96235	199039	1868344909	72077	912052236	102370412	345.28	0.29
25	100309	199262	2044041168	72077	975796708	102370412	345.28	0.31
26	92666	201131	2218922284	98082	1056169317	102370412	345.28	0.32
27	85099	287693	2485747707	135006	1182237338	155965518	345.28	0.34
28	89402	287929	2738512549	135006	1300756686	155965518	345.28	0.37
29	108026	288170	2991730885	135007	1419390603	155965518	345.28	0.39
30	112482	288414	3245168721	135007	1538027439	155965518	345.28	0.40
31	118308	288677	3515047085	135007	1664245343	155965518	345.28	0.36
32	124241	288941	3785184655	135007	1790469591	155965518	345.28	0.37
33	130280	289210	4055584571	135007	1916699603	155965518	345.28	0.38
34	136426	289483	4326244344	135007	2042932136	155965518	345.28	0.39
35	142678	289761	4597161415	135007	2169163915	155965518	345.28	0.40
36	170581	290046	4868601885	135008	2295517492	155965518	345.28	0.41
37	177046	290333	5140281046	135008	2421857417	155965518	345.28	0.42
38	185056	290639	5425087309	135008	2554162946	155965518	345.28	0.38
39	193205	290945	5710161880	135008	2686454574	155965518	345.28	0.39
40	201493	291255	5995507992	135008	2818731468	155965518	345.28	0.39
41	209919	291571	6281122267	135007	2950989685	155965518	345.28	0.40
42	218484	291892	6567001299	135007	3083225271	155965518	345.28	0.40
43	227187	292218	6853141652	135007	3215434264	155965518	345.28	0.41
44	267887	292551	7139797370	135008	3347732953	155965518	345.28	0.41
45	276867	292887	7426688458	135007	3479988186	155965518	345.28	0.41
46	286208	293227	7711937815	135007	3611334284	155965518	345.28	0.41
47	295692	293564	7997407080	135006	3742630165	155965518	345.28	0.42
48	305320	293907	8283091747	135006	3873871438	155965518	345.28	0.42
49	315092	294254	8568988284	135006	4005054166	155965518	345.28	0.42
50	325008	294607	8855093158	135005	4136174420	155965518	345.28	0.42
51	335068	294965	9141402836	135005	4267228272	155965518	345.28	0.42
52	345271	295328	9427913788	135004	4398211798	155965518	345.28	0.42
53	355619	295696	9714622486	135003	4529121082	155965518	345.28	0.42
54	366110	296069	10001525406	135003	4659952210	155965518	345.28	0.42
55	376746	296448	10288619027	135002	4790701274	155965518	345.28	0.42
56	387525	296831	10575899831	135002	4921364372	155965518	345.28	0.42
57	398448	297220	10863364305	135001	5051937607	155965518	345.28	0.42
58	409515	297614	11151008941	135000	5182417088	155965518	345.28	0.42

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 65 " MDT - 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]
<b>1.00</b>	53.55	6630.00	5210.00	39000.00	0.00
<b>2.00</b>	43.82	79140.00	48260.00	0.00	4.75
---	---	---	Ft = 94137	Fp = -2348	---
---	---	Pa = 79384	Ta = 50596	La = 0	---
---	---	Pb = -244	Tb = -2336	Lb = 0	---
<b>3.00</b>	43.82	79140.00	48260.00	0.00	-4.75
---	---	---	Ft = 106961	Fp = -106325	---
---	---	Pa = 90199	Ta = -57488	La = 0	---
---	---	Pb = -11059	Tb = 105748	Lb = 0	---
<b>4.00</b>	37.02	62110.00	36480.00	96000.00	4.75
---	---	---	Ft = 104826	Fp = 22354	---
---	---	Pa = 64643	Ta = 21395	La = 79699	---
---	---	Pb = -2533	Tb = 15085	Lb = 16301	---
<b>5.00</b>	37.02	79140.00	48260.00	0.00	-4.75
---	---	---	Ft = 106961	Fp = -106325	---
---	---	Pa = 90199	Ta = -57488	La = 0	---
---	---	Pb = -11059	Tb = 105748	Lb = 0	---
<b>6.00</b>	30.22	79140.00	48260.00	0.00	4.75
---	---	---	Ft = 94137	Fp = -2348	---
---	---	Pa = 79384	Ta = 50596	La = 0	---
---	---	Pb = -244	Tb = -2336	Lb = 0	---
<b>7.00</b>	30.22	79140.00	48260.00	0.00	-4.75
---	---	---	Ft = 106961	Fp = -106325	---
---	---	Pa = 90199	Ta = -57488	La = 0	---
---	---	Pb = -11059	Tb = 105748	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Uso
2	7340	5292	5985230	39008	43152871	0	345.28	0.10
3	8173	5379	11105034	39009	79106825	0	345.28	0.13
4	9129	5481	16339429	39010	115078063	0	345.28	0.14
5	10207	5598	21704686	39012	151068539	-0	345.28	0.15
6	11408	5730	27217106	39013	187080424	-0	345.28	0.15
7	12732	5876	32892995	39014	223115934	-0	345.28	0.15
8	101358	-38487	-11067499	39114	260318453	-0	345.28	0.18
9	190020	-437	2696567	39213	299344725	-0	345.28	0.20
10	191429	-273	6703470	39212	338309970	0	345.28	0.22
11	190377	5270	14096837	39207	377158086	-0	345.28	0.23
12	186209	103466	125925759	39198	415825023	-0	345.28	0.25
13	188582	103651	228487125	39195	456552255	-0	345.28	0.18
14	191018	103839	331237573	39192	497230041	-0	345.28	0.20
15	273437	-44123	328749613	64793	556880983	0	345.28	0.21
16	355919	68345	404092505	119040	687016885	238422207	345.28	0.25
17	358541	68541	476971758	119032	805982085	238422207	345.28	0.28
18	361226	68741	549991299	119023	924801559	238422207	345.28	0.30
19	357177	190847	729298324	133934	1055621744	238422207	345.28	0.34
20	353190	189971	916550748	135293	1189725242	250827289	345.28	0.37
21	356062	190184	1104068869	135282	1323242069	250827289	345.28	0.40
22	454108	148248	1265342370	135343	1458006746	250827289	345.28	0.44
23	544395	183912	1436139160	135391	1593763473	250827289	345.28	0.48
24	548393	184111	1606441366	135373	1718563789	250827289	345.28	0.35
25	552466	184314	1776733757	135358	1843123064	250827289	345.28	0.37
26	550965	256649	1994908205	135342	1967415895	250827289	345.28	0.39
27	549539	288142	2264582538	135326	2091441861	250827289	345.28	0.41
28	553842	288361	2524985064	135314	2215262714	250827289	345.28	0.43
29	572466	288594	2785600033	135309	2339021924	250827289	345.28	0.44
30	576922	288820	3046180458	135295	2462561982	250827289	345.28	0.46
31	582748	289066	3323368296	135282	2593755179	250827289	345.28	0.40
32	588681	289312	3600528448	135269	2724723027	250827289	345.28	0.42
33	594720	289565	3877679486	135258	2855484409	250827289	345.28	0.43
34	600866	289822	4154813235	135246	2986036645	250827289	345.28	0.44
35	607118	290084	4431922739	135234	3116377473	250827289	345.28	0.45
36	635021	290362	4709274692	135230	3246672397	250827289	345.28	0.46
37	641486	290633	4986577491	135218	3376742668	250827289	345.28	0.46
38	649496	290922	5276963068	135206	3512733012	250827289	345.28	0.41
39	657645	291212	5567313669	135194	3648495532	250827289	345.28	0.42
40	665933	291507	5857649220	135184	3784044269	250827289	345.28	0.42
41	674359	291808	6147966255	135173	3919377298	250827289	345.28	0.43
42	682924	292114	6438261909	135162	4054492875	250827289	345.28	0.43
43	691627	292426	6728533684	135152	4189389307	250827289	345.28	0.44
44	732327	292752	7019041229	135148	4324219072	250827289	345.28	0.44
45	741307	293073	7309501443	135137	4458814386	250827289	345.28	0.44
46	750648	293397	7598018579	135126	4592298857	250827289	345.28	0.44
47	760132	293720	7886479146	135115	4725548771	250827289	345.28	0.44
48	769760	294048	8174879484	135105	4858561177	250827289	345.28	0.44
49	779532	294381	8463218739	135094	4991334725	250827289	345.28	0.45
50	789448	294720	8751496179	135084	5123868039	250827289	345.28	0.45
51	799508	295064	9039711181	135074	5256159717	250827289	345.28	0.45
52	809711	295413	9327863223	135063	5388208332	250827289	345.28	0.45
53	820059	295768	9615951859	135053	5520012429	250827289	345.28	0.45
54	830550	296127	9903976712	135043	5651570521	250827289	345.28	0.45
55	841186	296492	10191937455	135033	5782881089	250827289	345.28	0.45
56	851965	296863	10479833805	135024	5913942582	250827289	345.28	0.45
57	862888	297239	10767665508	135014	6044753412	250827289	345.28	0.45
58	873955	297620	11055432336	135005	6175311955	250827289	345.28	0.45

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 66 " MDT - 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]
<b>1.00</b>	53.55	0.00	5210.00	39000.00	0.00
<b>2.00</b>	43.82	0.00	48260.00	0.00	4.75
---	---	---	Ft = -6412	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 48260	Lb = 0	---
<b>3.00</b>	43.82	0.00	48260.00	0.00	-4.75
---	---	---	Ft = 6412	Fp = -51988	---
---	---	Pa = 5407	Ta = -3446	La = 0	---
---	---	Pb = -5407	Tb = 51706	Lb = 0	---
<b>4.00</b>	37.02	0.00	36480.00	96000.00	4.75
---	---	---	Ft = 37737	Fp = 74875	---
---	---	Pa = 18178	Ta = 210	La = 33069	---
---	---	Pb = -18178	Tb = 36270	Lb = 62931	---
<b>5.00</b>	37.02	0.00	48260.00	0.00	-4.75
---	---	---	Ft = 6412	Fp = -51988	---
---	---	Pa = 5407	Ta = -3446	La = 0	---
---	---	Pb = -5407	Tb = 51706	Lb = 0	---
<b>6.00</b>	30.22	0.00	48260.00	0.00	4.75
---	---	---	Ft = -6412	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 48260	Lb = 0	---
<b>7.00</b>	30.22	0.00	48260.00	0.00	-4.75
---	---	---	Ft = 6412	Fp = -51988	---
---	---	Pa = 5407	Ta = -3446	La = 0	---
---	---	Pb = -5407	Tb = 51706	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	710	5281	5822493	39000	42981073	0	345.28	0.10
3	1543	5367	10780285	39000	78765016	-0	345.28	0.13
4	2499	5468	15853506	39000	114568196	-0	345.28	0.14
5	3577	5584	21058422	39001	150391930	-0	345.28	0.15
6	4778	5714	26411302	39001	186237563	-0	345.28	0.15
7	6102	5859	31928417	39001	222106477	-0	345.28	0.15
8	12640	-16310	11753959	39002	257364093	-0	345.28	0.16
9	19215	2732	19625509	39003	292736019	0	345.28	0.17
10	20623	2897	22710309	39003	328124259	0	345.28	0.19
11	22519	6174	27876077	39003	363535543	0	345.28	0.20
12	21299	103206	130567429	39003	398915383	0	345.28	0.21
13	23672	103395	229089254	39003	436265810	0	345.28	0.16
14	26108	103586	327845416	39004	473645843	0	345.28	0.18
15	42899	171065	476165869	49596	518541300	0	345.28	0.21
16	59752	100752	568764465	72077	592345348	98926890	345.28	0.23
17	62374	100958	665847782	72077	661584134	98926890	345.28	0.25
18	65059	101169	763165686	72077	730837242	98926890	345.28	0.27
19	56014	165062	903810321	129700	847330500	98926890	345.28	0.30
20	47030	189577	1091353383	135005	977443420	146818594	345.28	0.34
21	49902	189803	1272210990	135006	1106009535	146818594	345.28	0.37
22	65860	168909	1439422752	135007	1234759276	146818594	345.28	0.40
23	74060	186825	1610842828	135008	1363575649	146818594	345.28	0.44
24	78057	187047	1775502480	135008	1482278922	146818594	345.28	0.32
25	82131	187270	1940386752	135008	1600991658	146818594	345.28	0.34
26	83577	243504	2142250540	135008	1719688578	146818594	345.28	0.36
27	85099	287693	2405197287	135008	1838368859	146818594	345.28	0.38
28	89402	287928	2657941464	135008	1957057484	146818594	345.28	0.40
29	108026	288170	2911136541	135009	2075881929	146818594	345.28	0.42
30	112482	288413	3164551848	135009	2194703304	146818594	345.28	0.43
31	118308	288677	3434406857	135009	2321112529	146818594	345.28	0.38
32	124241	288941	3704521674	135009	2447523153	146818594	345.28	0.39
33	130280	289210	3974899360	135009	2573935262	146818594	345.28	0.40
34	136426	289483	4245537471	135009	2700345238	146818594	345.28	0.41
35	142678	289761	4516433492	135009	2826749446	146818594	345.28	0.42
36	170581	290046	4787850618	135010	2953294245	146818594	345.28	0.43
37	177046	290333	5059507349	135010	3079817905	146818594	345.28	0.44
38	185056	290639	5344290975	135010	3212308867	146818594	345.28	0.39
39	193205	290945	5629343762	135010	3344778938	146818594	345.28	0.40
40	201493	291255	5914668886	135009	3477227751	146818594	345.28	0.41
41	209919	291571	6200263011	135009	3609651031	146818594	345.28	0.41
42	218484	291892	6486122768	135009	3742044505	146818594	345.28	0.41
43	227187	292218	6772244760	135009	3874403900	146818594	345.28	0.42
44	267887	292551	7058880718	135009	4006864456	146818594	345.28	0.42
45	276867	292887	7345753246	135009	4139271721	146818594	345.28	0.43
46	286208	293227	7630985364	135008	4270759041	146818594	345.28	0.42
47	295692	293564	7916438617	135008	4402186081	146818594	345.28	0.43
48	305320	293907	8202108537	135007	4533548154	146818594	345.28	0.43
49	315092	294254	8487991616	135007	4664841120	146818594	345.28	0.43
50	325008	294607	8774084347	135006	4796060844	146818594	345.28	0.43
51	335068	294965	9060383220	135006	4927203198	146818594	345.28	0.43
52	345271	295328	9346884731	135005	5058264061	146818594	345.28	0.43
53	355619	295696	9633585376	135004	5189239318	146818594	345.28	0.43
54	366110	296069	9920481653	135003	5320124863	146818594	345.28	0.43
55	376746	296448	10207570064	135003	5450916596	146818594	345.28	0.43
56	387525	296831	10494847117	135002	5581610424	146818594	345.28	0.43
57	398448	297220	10782309320	135001	5712202261	146818594	345.28	0.43
58	409515	297614	11069953188	135000	5842688030	146818594	345.28	0.43

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 67 " PDT - 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]
<b>1.00</b>	53.55	13260.00	10420.00	8000.00	0.00
<b>2.00</b>	43.82	62110.00	36480.00	96000.00	4.75
---	---	---	Ft = 104826	Fp = 22354	---
---	---	Pa = 64643	Ta = 21395	La = 79699	---
---	---	Pb = -2533	Tb = 15085	Lb = 16301	---
<b>3.00</b>	43.82	79140.00	48260.00	0.00	-4.75
---	---	---	Ft = 106961	Fp = -106325	---
---	---	Pa = 90199	Ta = -57488	La = 0	---
---	---	Pb = -11059	Tb = 105748	Lb = 0	---
<b>4.00</b>	37.02	62110.00	36480.00	96000.00	4.75
---	---	---	Ft = 104826	Fp = 22354	---
---	---	Pa = 64643	Ta = 21395	La = 79699	---
---	---	Pb = -2533	Tb = 15085	Lb = 16301	---
<b>5.00</b>	37.02	79140.00	48260.00	0.00	-4.75
---	---	---	Ft = 106961	Fp = -106325	---
---	---	Pa = 90199	Ta = -57488	La = 0	---
---	---	Pb = -11059	Tb = 105748	Lb = 0	---
<b>6.00</b>	30.22	79140.00	48260.00	0.00	4.75
---	---	---	Ft = 94137	Fp = -2348	---
---	---	Pa = 79384	Ta = 50596	La = 0	---
---	---	Pb = -244	Tb = -2336	Lb = 0	---
<b>7.00</b>	30.22	79140.00	48260.00	0.00	-4.75
---	---	---	Ft = 106961	Fp = -106325	---
---	---	Pa = 90199	Ta = -57488	La = 0	---
---	---	Pb = -11059	Tb = 105748	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usò
2	13970	10511	11856011	8023	9252426	0	345.28	0.04
3	14803	10598	21878934	8025	17048906	-0	345.28	0.05
4	15759	10699	32011926	8026	24872719	-0	345.28	0.05
5	16837	10816	42270889	8028	32727505	-0	345.28	0.05
6	18038	10947	52671840	8029	40616998	-0	345.28	0.05
7	19362	11094	63230811	8031	48544944	0	345.28	0.06
8	100617	-112018	-60676021	80045	114280271	0	345.28	0.10
9	181910	-24465	-56121072	87991	200615177	230928234	345.28	0.19
10	183318	-24301	-74313972	87990	284765663	230928234	345.28	0.22
11	181121	-19557	-89605679	88122	368858537	230928234	345.28	0.25
12	175809	96858	14273698	104267	467973599	241520447	345.28	0.28
13	178182	97044	109954639	104264	571724363	241520447	345.28	0.23
14	180618	97232	205845501	104260	675430261	241520447	345.28	0.24
15	263037	-50740	196352554	129895	798831277	241520447	345.28	0.27
16	345519	61720	264561212	184173	993402345	479942655	345.28	0.33
17	348141	61918	330338725	184163	1176754612	479942655	345.28	0.36
18	350826	62119	396289071	184150	1359903427	479942655	345.28	0.39
19	346777	184228	568570614	199055	1554931662	479942655	345.28	0.43
20	342790	183354	748840431	200407	1753118559	492347736	345.28	0.47
21	345662	183569	929408169	200393	1950643153	492347736	345.28	0.50
22	443708	141626	1083634388	200481	2150019953	492347736	345.28	0.54
23	533995	177284	1247313613	200551	2350872237	492347736	345.28	0.59
24	537993	177486	1411099113	200526	2535526343	492347736	345.28	0.43
25	542066	177692	1574908546	200505	2719833691	492347736	345.28	0.45
26	540565	250030	1786633112	200483	2903755337	492347736	345.28	0.47
27	539139	281525	2049890139	200460	3087290684	492347736	345.28	0.49
28	543442	281746	2303902396	200443	3270530854	492347736	345.28	0.50
29	562066	281980	2558142093	200436	3453687606	492347736	345.28	0.52
30	566522	282208	2812374926	200417	3636528401	492347736	345.28	0.54
31	572348	282456	3082839381	200398	3830705045	492347736	345.28	0.47
32	578281	282704	3353304265	200380	4024556894	492347736	345.28	0.48
33	584320	282958	3623785540	200364	4218111115	492347736	345.28	0.49
34	590466	283218	3894274960	200348	4411363673	492347736	345.28	0.50
35	596718	283481	4164765456	200331	4604311130	492347736	345.28	0.51
36	624621	283760	4435510686	200326	4797197785	492347736	345.28	0.52
37	631086	284032	4706232638	200309	4989759584	492347736	345.28	0.53
38	639096	284324	4989752897	200292	5191093854	492347736	345.28	0.47
39	647245	284615	5273264104	200276	5392098649	492347736	345.28	0.47
40	655533	284912	5556784343	200260	5592794177	492347736	345.28	0.48
41	663959	285214	5840310034	200245	5793177474	492347736	345.28	0.48
42	672524	285522	6123838179	200230	5993245842	492347736	345.28	0.49
43	681227	285835	6407366152	200215	6192996651	492347736	345.28	0.49
44	721927	286162	6691142138	200210	6392655020	492347736	345.28	0.49
45	730907	286485	6974895187	200194	6591972980	492347736	345.28	0.49
46	740248	286810	7256772864	200179	6789652523	492347736	345.28	0.49
47	749732	287135	7538617831	200164	6986991206	492347736	345.28	0.49
48	759360	287464	7820426446	200149	7183984577	492347736	345.28	0.49
49	769132	287799	8102197723	200134	7380630520	492347736	345.28	0.49
50	779048	288139	8383930799	200119	7576926876	492347736	345.28	0.50
51	789108	288484	8665624937	200105	7772871455	492347736	345.28	0.50
52	799311	288835	8947279499	200090	7968462030	492347736	345.28	0.50
53	809659	289191	9228893937	200076	8163696334	492347736	345.28	0.50
54	820150	289552	9510467773	200062	8358572057	492347736	345.28	0.50
55	830786	289918	9792000591	200048	8553086842	492347736	345.28	0.49
56	841565	290290	10073492023	200034	8747238286	492347736	345.28	0.49
57	852488	290667	10354941738	200020	8941023935	492347736	345.28	0.49
58	863555	291049	10636349437	200007	9134441285	492347736	345.28	0.49



## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 68 " PDT - 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]
<b>1.00</b>	53.55	0.00	10420.00	8000.00	0.00
<b>2.00</b>	43.82	0.00	36480.00	96000.00	4.75
---	---	---	Ft = 37737	Fp = 74875	---
---	---	Pa = 18178	Ta = 210	La = 33069	---
---	---	Pb = -18178	Tb = 36270	Lb = 62931	---
<b>3.00</b>	43.82	0.00	48260.00	0.00	-4.75
---	---	---	Ft = 6412	Fp = -51988	---
---	---	Pa = 5407	Ta = -3446	La = 0	---
---	---	Pb = -5407	Tb = 51706	Lb = 0	---
<b>4.00</b>	37.02	0.00	36480.00	96000.00	4.75
---	---	---	Ft = 37737	Fp = 74875	---
---	---	Pa = 18178	Ta = 210	La = 33069	---
---	---	Pb = -18178	Tb = 36270	Lb = 62931	---
<b>5.00</b>	37.02	0.00	48260.00	0.00	-4.75
---	---	---	Ft = 6412	Fp = -51988	---
---	---	Pa = 5407	Ta = -3446	La = 0	---
---	---	Pb = -5407	Tb = 51706	Lb = 0	---
<b>6.00</b>	30.22	0.00	48260.00	0.00	4.75
---	---	---	Ft = -6412	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = 48260	Lb = 0	---
<b>7.00</b>	30.22	0.00	48260.00	0.00	-4.75
---	---	---	Ft = 6412	Fp = -51988	---
---	---	Pa = 5407	Ta = -3446	La = 0	---
---	---	Pb = -5407	Tb = 51706	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	710	10491	11563151	8000	8831271	0	345.28	0.03
3	1543	10577	21298763	8000	16203375	-0	345.28	0.04
4	2499	10678	31150795	8001	23599122	0	345.28	0.05
5	3577	10794	41135488	8001	31021305	0	345.28	0.05
6	4778	10924	51269089	8001	38472727	0	345.28	0.05
7	6102	11069	61567849	8001	45956195	0	345.28	0.05
8	21729	53698	125362869	37831	76704942	0	345.28	0.09
9	37393	8156	121547683	41078	115376629	95817467	345.28	0.12
10	38802	8321	129949218	41078	153176055	95817467	345.28	0.13
11	31608	3955	135567013	41621	191127299	95817467	345.28	0.14
12	21299	96637	214608275	104005	287777072	136710317	345.28	0.19
13	23672	96825	306909606	104005	386863432	136710317	345.28	0.17
14	26108	97016	399443349	104005	485997654	136710317	345.28	0.20
15	42899	164495	541539653	114599	592763537	136710317	345.28	0.24
16	59752	94183	627910947	137081	728551630	235637207	345.28	0.27
17	62374	94388	718764224	137081	859786637	235637207	345.28	0.30
18	65059	94599	809849575	137081	991045929	235637207	345.28	0.33
19	56014	158492	944261315	194703	1169476415	235637207	345.28	0.37
20	47030	183007	1125571892	200008	1361459691	283528911	345.28	0.41
21	49902	183233	1300195560	200008	1551904403	283528911	345.28	0.45
22	65860	162340	1461169141	200011	1742616325	283528911	345.28	0.48
23	74060	180256	1626348447	200011	1933426288	283528911	345.28	0.52
24	78057	180477	1785256234	200012	2109257237	283528911	345.28	0.39
25	82131	180700	1944387470	200012	2285102938	283528911	345.28	0.40
26	83577	236935	2140497796	200011	2460926438	283528911	345.28	0.42
27	85099	281123	2397690747	200011	2636726466	283528911	345.28	0.44
28	89402	281359	2644680276	200011	2812539314	283528911	345.28	0.46
29	108026	281600	2892116798	200013	2988550595	283528911	345.28	0.48
30	112482	281844	3139772938	200013	3164558112	283528911	345.28	0.50
31	118308	282107	3403500367	200013	3351806001	283528911	345.28	0.44
32	124241	282371	3667486906	200013	3539056609	283528911	345.28	0.45
33	130280	282640	3931735699	200013	3726309978	283528911	345.28	0.46
34	136426	282913	4196244429	200013	3913560795	283528911	345.28	0.47
35	142678	283191	4461010710	200013	4100803723	283528911	345.28	0.48
36	170581	283476	4726293647	200015	4288252476	283528911	345.28	0.49
37	177046	283763	4991816263	200015	4475670890	283528911	345.28	0.50
38	185056	284069	5270175583	200014	4671929531	283528911	345.28	0.45
39	193205	284375	5548804190	200014	4868158135	283528911	345.28	0.45
40	201493	284685	5827705340	200014	5064356101	283528911	345.28	0.46
41	209919	285001	6106875860	200014	5260517137	283528911	345.28	0.46
42	218484	285322	6386312552	200013	5456634955	283528911	345.28	0.46
43	227187	285648	6666012184	200013	5652703265	283528911	345.28	0.47
44	267887	285981	6946222317	200014	5848919944	283528911	345.28	0.47
45	276867	286317	7226670364	200013	6045058959	283528911	345.28	0.47
46	286208	286657	7505521395	200012	6239836507	283528911	345.28	0.47
47	295692	286994	7784595215	200012	6434526069	283528911	345.28	0.47
48	305320	287337	8063887546	200011	6629120739	283528911	345.28	0.48
49	315092	287684	8343395057	200010	6823614410	283528911	345.28	0.48
50	325008	288037	8623114413	200009	7018000984	283528911	345.28	0.48
51	335068	288395	8903042283	200008	7212274371	283528911	345.28	0.48
52	345271	288758	9183175335	200007	7406428491	283528911	345.28	0.48
53	355619	289126	9463510242	200006	7600457276	283528911	345.28	0.48
54	366110	289499	9744043678	200005	7794354666	283528911	345.28	0.48
55	376746	289878	10024772319	200004	7988114613	283528911	345.28	0.48
56	387525	290261	10305692847	200003	8181731077	283528911	345.28	0.48
57	398448	290650	10586801947	200002	8375198031	283528911	345.28	0.48
58	409515	291044	10868096308	200001	8568509457	283528911	345.28	0.48

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 69 " PDT - 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]
<b>1.00</b>	53.55	4310.00	-5140.00	31000.00	0.00
<b>2.00</b>	43.82	62420.00	-55630.00	0.00	4.75
---	---	---	Ft = 86697	Fp = -102784	---
---	---	Pa = 73110	Ta = 46597	La = 0	---
---	---	Pb = -10690	Tb = -102227	Lb = 0	---
<b>3.00</b>	43.82	62420.00	-55630.00	0.00	-4.75
---	---	---	Ft = 71915	Fp = 17071	---
---	---	Pa = 60645	Ta = -38652	La = 0	---
---	---	Pb = 1775	Tb = -16978	Lb = 0	---
<b>4.00</b>	37.02	62420.00	-55630.00	0.00	4.75
---	---	---	Ft = 86697	Fp = -102784	---
---	---	Pa = 73110	Ta = 46597	La = 0	---
---	---	Pb = -10690	Tb = -102227	Lb = 0	---
<b>5.00</b>	37.02	62420.00	-55630.00	0.00	-4.75
---	---	---	Ft = 71915	Fp = 17071	---
---	---	Pa = 60645	Ta = -38652	La = 0	---
---	---	Pb = 1775	Tb = -16978	Lb = 0	---
<b>6.00</b>	30.22	49570.00	-42870.00	81000.00	4.75
---	---	---	Ft = 122430	Fp = -35307	---
---	---	Pa = 34125	Ta = -35879	La = 111970	---
---	---	Pb = 15445	Tb = -6991	Lb = -30970	---
<b>7.00</b>	30.22	62420.00	-55630.00	0.00	-4.75
---	---	---	Ft = 71915	Fp = 17071	---
---	---	Pa = 60645	Ta = -38652	La = 0	---
---	---	Pb = 1775	Tb = -16978	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	5020	-5434	-6090520	31003	34238999	0	345.28	0.08
3	5853	-5780	-11572912	31004	62754520	0	345.28	0.10
4	6809	-6185	-17455780	31004	91282304	0	345.28	0.12
5	7887	-6648	-23796888	31005	119823470	0	345.28	0.12
6	9088	-7171	-30654011	31006	148379252	-0	345.28	0.12
7	10412	-7753	-38084926	31006	176950920	0	345.28	0.12
8	81124	42977	11470776	31049	205942825	0	345.28	0.14
9	151872	-1305	-5773074	31091	235888451	0	345.28	0.16
10	153281	-1967	-12199927	31091	265796896	0	345.28	0.17
11	153423	-8844	-22998652	31090	295647523	0	345.28	0.18
12	150449	-122536	-154648099	31086	325398289	0	345.28	0.20
13	152822	-123288	-276292818	31085	356744383	0	345.28	0.16
14	155258	-124052	-398693136	31084	388060679	0	345.28	0.18
15	227134	-55707	-473879094	31121	420207913	0	345.28	0.20
16	299071	-117889	-597384106	31155	453140277	0	345.28	0.23
17	301694	-118706	-719009308	31152	486006602	0	345.28	0.25
18	304379	-119541	-841369265	31148	518805838	-0	345.28	0.27
19	302668	-246017	-1076481090	31142	551488315	-0	345.28	0.31
20	301020	-240462	-1311279900	31136	584056340	-0	345.28	0.35
21	303892	-241355	-1548479608	31131	616558407	-0	345.28	0.38
22	364531	-351898	-1861424806	42713	657153271	-0	345.28	0.44
23	417412	-317845	-2215116685	143133	810176647	346619043	345.28	0.51
24	421409	-318715	-2503296640	143126	938594099	346619043	345.28	0.39
25	425483	-319593	-2792028781	143121	1066924141	346619043	345.28	0.42
26	438243	-293248	-3062026084	130321	1187021682	346619043	345.28	0.44
27	451079	-345388	-3380130608	112147	1284572089	320243623	345.28	0.47
28	455382	-346317	-3691956319	112142	1385749567	320243623	345.28	0.49
29	474006	-347275	-4004664205	112141	1486931723	320243623	345.28	0.51
30	478462	-348237	-4317944576	112135	1588007384	320243623	345.28	0.53
31	484288	-349279	-4651903920	112130	1695421590	320243623	345.28	0.47
32	490221	-350322	-4986546822	112124	1802724126	320243623	345.28	0.48
33	496260	-351386	-5321909787	112119	1909922951	320243623	345.28	0.49
34	502406	-352468	-5657998286	112114	2017014634	320243623	345.28	0.51
35	508658	-353570	-5994818748	112109	2123996043	320243623	345.28	0.52
36	536561	-354703	-6332732906	112108	2230984249	320243623	345.28	0.53
37	543026	-355841	-6671375820	112103	2337850162	320243623	345.28	0.54
38	551036	-357055	-7026875921	112098	2449644456	320243623	345.28	0.48
39	559185	-358267	-7383212297	112093	2561312975	320243623	345.28	0.49
40	567473	-359500	-7740421876	112088	2672862253	320243623	345.28	0.49
41	575899	-360755	-8098515281	112083	2784289602	320243623	345.28	0.50
42	584464	-362030	-8457503590	112078	2895592480	320243623	345.28	0.50
43	593167	-363326	-8817398132	112073	3006768417	320243623	345.28	0.51
44	633867	-364654	-9178548424	112072	3117927572	320243623	345.28	0.51
45	642847	-365991	-9540603050	112067	3228946464	320243623	345.28	0.52
46	652188	-367340	-9901200512	112062	3339100580	320243623	345.28	0.51
47	661672	-368683	-10262687770	112057	3449111834	320243623	345.28	0.52
48	671300	-370047	-10625073969	112052	3558977135	320243623	345.28	0.52
49	681072	-371431	-10988371306	112046	3668694420	320243623	345.28	0.52
50	690988	-372836	-11352592029	112041	3778261638	320243623	345.28	0.52
51	701048	-374262	-11717748442	112036	3887676752	320243623	345.28	0.52
52	711251	-375708	-12083852884	112031	3996937734	320243623	345.28	0.52
53	721599	-377176	-12450917722	112026	4106042562	320243623	345.28	0.52
54	732090	-378664	-12818955338	112022	4214989218	320243623	345.28	0.52
55	742726	-380173	-13187978119	112017	4323775686	320243623	345.28	0.52
56	753505	-381703	-13557998453	112012	4432399946	320243623	345.28	0.53
57	764428	-383253	-13929028713	112007	4540859978	320243623	345.28	0.53
58	775495	-384825	-14301081259	112002	4649153755	320243623	345.28	0.53

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 70 " PDT - 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]
<b>1.00</b>	53.55	0.00	-5140.00	31000.00	0.00
<b>2.00</b>	43.82	0.00	-55630.00	0.00	4.75
---	---	---	Ft = 7391	Fp = -59928	---
---	---	Pa = 6233	Ta = 3973	La = 0	---
---	---	Pb = -6233	Tb = -59603	Lb = 0	---
<b>3.00</b>	43.82	0.00	-55630.00	0.00	-4.75
---	---	---	Ft = -7391	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -55630	Lb = 0	---
<b>4.00</b>	37.02	0.00	-55630.00	0.00	4.75
---	---	---	Ft = 7391	Fp = -59928	---
---	---	Pa = 6233	Ta = 3973	La = 0	---
---	---	Pb = -6233	Tb = -59603	Lb = 0	---
<b>5.00</b>	37.02	0.00	-55630.00	0.00	-4.75
---	---	---	Ft = -7391	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -55630	Lb = 0	---
<b>6.00</b>	30.22	0.00	-42870.00	81000.00	4.75
---	---	---	Ft = 80562	Fp = 16366	---
---	---	Pa = 9653	Ta = -42441	La = 67792	---
---	---	Pb = -9653	Tb = -429	Lb = 13208	---
<b>7.00</b>	30.22	0.00	-55630.00	0.00	-4.75
---	---	---	Ft = -7391	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -55630	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Uso
2	710	-5426	-5946022	31000	34162944	0	345.28	0.08
3	1543	-5771	-11282124	31000	62603335	-0	345.28	0.10
4	2499	-6174	-17016665	31000	91057002	-0	345.28	0.11
5	3577	-6636	-23207082	31000	119524732	0	345.28	0.12
6	4778	-7158	-29910808	31000	148007336	-0	345.28	0.12
7	6102	-7738	-37185270	31001	176505655	-0	345.28	0.12
8	13053	17370	-15251437	31001	204510091	0	345.28	0.13
9	20040	-5038	-26083460	31002	232596793	0	345.28	0.14
10	21449	-5700	-31823603	31002	260693261	0	345.28	0.15
11	22932	-9962	-40388653	31002	288799009	0	345.28	0.16
12	21299	-122309	-161804306	31002	316877472	0	345.28	0.18
13	23672	-123063	-279094273	31002	346514730	0	345.28	0.14
14	26108	-123829	-397175175	31002	376170231	0	345.28	0.17
15	34223	-90001	-491110852	31003	405905648	0	345.28	0.19
16	42399	-121449	-608702471	31004	435716779	-0	345.28	0.21
17	45022	-122274	-725827666	31004	465542055	-0	345.28	0.23
18	47707	-123119	-843808611	31004	495380617	-0	345.28	0.25
19	47337	-237735	-1060551834	31004	525201608	-0	345.28	0.28
20	47030	-240099	-1289817539	31004	555005975	-0	345.28	0.32
21	49902	-241003	-1519442475	31004	584822815	-0	345.28	0.36
22	67983	-209232	-1728377480	38005	619374128	-0	345.28	0.39
23	78306	-285317	-1993932945	98797	721824442	209859252	345.28	0.44
24	82303	-286206	-2245593851	98797	808675865	209859252	345.28	0.34
25	86377	-287098	-2498068834	98797	895537461	209859252	345.28	0.36
26	85700	-337412	-2784451753	104255	985884037	209859252	345.28	0.38
27	85099	-344992	-3091251575	112005	1085815724	221108113	345.28	0.41
28	89402	-345935	-3394984712	112005	1184169835	221108113	345.28	0.43
29	108026	-346898	-3699857107	112006	1282622378	221108113	345.28	0.46
30	112482	-347875	-4005590616	112006	1381076390	221108113	345.28	0.48
31	118308	-348932	-4331844067	112006	1485820960	221108113	345.28	0.42
32	124241	-349991	-4659097704	112006	1590570006	221108113	345.28	0.43
33	130280	-351068	-4987367812	112006	1695323153	221108113	345.28	0.45
34	136426	-352165	-5316663728	112006	1800077650	221108113	345.28	0.46
35	142678	-353280	-5646994688	112006	1904830724	221108113	345.28	0.47
36	170581	-354417	-5978701233	112007	2009687837	221108113	345.28	0.48
37	177046	-355571	-6311444700	112007	2114532431	221108113	345.28	0.49
38	185056	-356799	-6661096155	112007	2224326538	221108113	345.28	0.44
39	193205	-358024	-7011904981	112007	2334107999	221108113	345.28	0.45
40	201493	-359271	-7363889293	112006	2443876198	221108113	345.28	0.46
41	209919	-360539	-7717059066	112006	2553627811	221108113	345.28	0.46
42	218484	-361827	-8071424228	112006	2663359506	221108113	345.28	0.47
43	227187	-363136	-8426994645	112006	2773067947	221108113	345.28	0.47
44	267887	-364469	-8784098480	112006	2882852628	221108113	345.28	0.48
45	276867	-365820	-9142403781	112006	2992599690	221108113	345.28	0.48
46	286208	-367183	-9499568274	112006	3101590786	221108113	345.28	0.48
47	295692	-368539	-9857912644	112005	3210538619	221108113	345.28	0.49
48	305320	-369916	-10217445057	112005	3319439498	221108113	345.28	0.49
49	315092	-371313	-10578174855	112005	3428290126	221108113	345.28	0.49
50	325008	-372731	-10940111360	112004	3537087209	221108113	345.28	0.49
51	335068	-374170	-11303263875	112004	3645827456	221108113	345.28	0.50
52	345271	-375629	-11667641682	112003	3754507582	221108113	345.28	0.50
53	355619	-377109	-12033254048	112003	3863124305	221108113	345.28	0.50
54	366110	-378610	-12400110223	112002	3971674348	221108113	345.28	0.50
55	376746	-380131	-12768219440	112002	4080154439	221108113	345.28	0.50
56	387525	-381673	-13137590916	112001	4188561308	221108113	345.28	0.50
57	398448	-383235	-13508233852	112001	4296891694	221108113	345.28	0.50
58	409515	-384819	-13880157436	112000	4405142338	221108113	345.28	0.50

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 71 " PDT - 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]
<b>1.00</b>	53.55	4310.00	-5140.00	31000.00	0.00
<b>2.00</b>	43.82	62420.00	-55630.00	0.00	4.75
---	---	---	Ft = 86697	Fp = -102784	---
---	---	Pa = 73110	Ta = 46597	La = 0	---
---	---	Pb = -10690	Tb = -102227	Lb = 0	---
<b>3.00</b>	43.82	62420.00	-55630.00	0.00	-4.75
---	---	---	Ft = 71915	Fp = 17071	---
---	---	Pa = 60645	Ta = -38652	La = 0	---
---	---	Pb = 1775	Tb = -16978	Lb = 0	---
<b>4.00</b>	37.02	49570.00	-42870.00	81000.00	4.75
---	---	---	Ft = 122430	Fp = -35307	---
---	---	Pa = 34125	Ta = -35879	La = 111970	---
---	---	Pb = 15445	Tb = -6991	Lb = -30970	---
<b>5.00</b>	37.02	62420.00	-55630.00	0.00	-4.75
---	---	---	Ft = 71915	Fp = 17071	---
---	---	Pa = 60645	Ta = -38652	La = 0	---
---	---	Pb = 1775	Tb = -16978	Lb = 0	---
<b>6.00</b>	30.22	62420.00	-55630.00	0.00	4.75
---	---	---	Ft = 86697	Fp = -102784	---
---	---	Pa = 73110	Ta = 46597	La = 0	---
---	---	Pb = -10690	Tb = -102227	Lb = 0	---
<b>7.00</b>	30.22	62420.00	-55630.00	0.00	-4.75
---	---	---	Ft = 71915	Fp = 17071	---
---	---	Pa = 60645	Ta = -38652	La = 0	---
---	---	Pb = 1775	Tb = -16978	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	5020	-5434	-6095449	31004	34260496	0	345.28	0.08
3	5853	-5780	-11583587	31005	62801077	0	345.28	0.10
4	6809	-6184	-17473138	31005	91358007	-0	345.28	0.12
5	7887	-6648	-23821986	31006	119932927	0	345.28	0.12
6	9088	-7171	-30688026	31007	148527596	0	345.28	0.12
7	10412	-7753	-38129154	31008	177143806	0	345.28	0.12
8	81124	42979	11348609	31062	206475606	0	345.28	0.14
9	151872	-1302	-6041087	31115	237057265	0	345.28	0.16
10	153281	-1963	-12615013	31115	267607079	0	345.28	0.17
11	153423	-8840	-23560767	31113	298098859	0	345.28	0.18
12	150449	-122532	-155354171	31109	328477351	0	345.28	0.20
13	152822	-123284	-277152856	31107	360494781	0	345.28	0.16
14	155258	-124047	-399709309	31106	392491826	0	345.28	0.18
15	207641	-290634	-644239231	66998	449860331	0	345.28	0.24
16	260086	-200303	-844664956	143139	605035453	334959518	345.28	0.32
17	262708	-201121	-1043370176	143136	744626866	334959518	345.28	0.36
18	265393	-201958	-1242777328	143132	884130829	334959518	345.28	0.41
19	276751	-206708	-1436682333	114774	1000332504	334959518	345.28	0.44
20	288170	-227680	-1666391410	112163	1109760557	311390877	345.28	0.48
21	291042	-228574	-1891102581	112157	1219826211	311390877	345.28	0.51
22	371174	-180868	-2086020406	112192	1330759513	311390877	345.28	0.55
23	443548	-222630	-2292348381	112218	1442360233	311390877	345.28	0.59
24	447545	-223500	-2497892041	112208	1544988260	311390877	345.28	0.43
25	451618	-224376	-2703966864	112201	1647448218	311390877	345.28	0.44
26	451311	-308413	-2965808718	112192	1749725538	311390877	345.28	0.46
27	451079	-345382	-3287603464	112184	1851820216	311390877	345.28	0.49
28	455382	-346312	-3599302729	112177	1953773896	311390877	345.28	0.51
29	474006	-347270	-3911887892	112176	2055709404	311390877	345.28	0.53
30	478462	-348232	-4225052921	112168	2157493100	311390877	345.28	0.55
31	484288	-349274	-4558897079	112161	2265614382	311390877	345.28	0.48
32	490221	-350317	-4893431736	112154	2373581393	311390877	345.28	0.49
33	496260	-351381	-5228692523	112148	2481407446	311390877	345.28	0.51
34	502406	-352464	-5564684699	112142	2589090420	311390877	345.28	0.52
35	508658	-353566	-5901414489	112135	2696628424	311390877	345.28	0.53
36	536561	-354699	-6239239876	112134	2804161563	311390877	345.28	0.54
37	543026	-355838	-6577799572	112127	2911538311	311390877	345.28	0.55
38	551036	-357051	-6933218093	112121	3023833392	311390877	345.28	0.49
39	559185	-358263	-7289478131	112114	3135970519	311390877	345.28	0.49
40	567473	-359497	-7646616111	112108	3247959309	311390877	345.28	0.50
41	575899	-360751	-8004642527	112102	3359797874	311390877	345.28	0.50
42	584464	-362027	-8363568335	112096	3471484424	311390877	345.28	0.51
43	593167	-363323	-8723404748	112090	3583017186	311390877	345.28	0.51
44	633867	-364651	-9084498329	112089	3694524469	311390877	345.28	0.52
45	642847	-365989	-9446500675	112082	3805864289	311390877	345.28	0.52
46	652188	-367338	-9807050464	112076	3916311043	311390877	345.28	0.52
47	661672	-368681	-10168494236	112070	4026589243	311390877	345.28	0.52
48	671300	-370045	-10530841075	112063	4136696163	311390877	345.28	0.52
49	681072	-371429	-10894103094	112057	4246630244	311390877	345.28	0.52
50	690988	-372835	-11258292468	112051	4356389902	311390877	345.28	0.53
51	701048	-374260	-11623421428	112045	4465973535	311390877	345.28	0.53
52	711251	-375707	-11989502249	112039	4575379516	311390877	345.28	0.53
53	721599	-377175	-12356547237	112033	4684606198	311390877	345.28	0.53
54	732090	-378663	-12724568716	112026	4793651909	311390877	345.28	0.53
55	742726	-380172	-13093579024	112021	4902514953	311390877	345.28	0.53
56	753505	-381702	-13463590495	112015	5011193609	311390877	345.28	0.53
57	764428	-383253	-13834615463	112009	5119686130	311390877	345.28	0.53
58	775495	-384825	-14206666244	112003	5227990747	311390877	345.28	0.53



## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 72 " PDT - 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]
<b>1.00</b>	53.55	0.00	-5140.00	31000.00	0.00
<b>2.00</b>	43.82	0.00	-55630.00	0.00	4.75
---	---	---	Ft = 7391	Fp = -59928	---
---	---	Pa = 6233	Ta = 3973	La = 0	---
---	---	Pb = -6233	Tb = -59603	Lb = 0	---
<b>3.00</b>	43.82	0.00	-55630.00	0.00	-4.75
---	---	---	Ft = -7391	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -55630	Lb = 0	---
<b>4.00</b>	37.02	0.00	-42870.00	81000.00	4.75
---	---	---	Ft = 80562	Fp = 16366	---
---	---	Pa = 9653	Ta = -42441	La = 67792	---
---	---	Pb = -9653	Tb = -429	Lb = 13208	---
<b>5.00</b>	37.02	0.00	-55630.00	0.00	-4.75
---	---	---	Ft = -7391	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -55630	Lb = 0	---
<b>6.00</b>	30.22	0.00	-55630.00	0.00	4.75
---	---	---	Ft = 7391	Fp = -59928	---
---	---	Pa = 6233	Ta = 3973	La = 0	---
---	---	Pb = -6233	Tb = -59603	Lb = 0	---
<b>7.00</b>	30.22	0.00	-55630.00	0.00	-4.75
---	---	---	Ft = -7391	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -55630	Lb = 0	---

**TABELLA DESCRITTIVA DELLE AZIONI INTERNE.**

<b>Nodo</b>	<b>Carico verticale [N]</b>	<b>T<sub>x</sub> [N]</b>	<b>My [Nmm]</b>	<b>T<sub>y</sub> [N]</b>	<b>Mx [Nmm]</b>	<b>Mt [Nmm]</b>	<b>σ<sub>amm.</sub> [N/mm<sup>2</sup>]</b>	<b>% Usa</b>
2	710	-5426	-5946103	31000	34165435	0	345.28	0.08
3	1543	-5771	-11282382	31000	62611238	0	345.28	0.10
4	2499	-6174	-17017208	31000	91073667	0	345.28	0.11
5	3577	-6636	-23208035	31000	119553940	0	345.28	0.12
6	4778	-7158	-29912308	31001	148053296	-0	345.28	0.12
7	6102	-7738	-37187467	31001	176573007	-0	345.28	0.12
8	13053	17370	-15255097	31002	204622267	0	345.28	0.13
9	20040	-5038	-26089365	31002	232777782	0	345.28	0.14
10	21449	-5700	-31831910	31003	260947888	0	345.28	0.15
11	22932	-9962	-40399528	31003	289132347	0	345.28	0.16
12	21299	-122309	-161817565	31003	317283896	0	345.28	0.18
13	23672	-123063	-279110328	31003	347006817	0	345.28	0.14
14	26108	-123829	-397194311	31003	376756768	0	345.28	0.17
15	35933	-86568	-488053412	52715	421505039	0	345.28	0.19
16	45820	-167864	-657167193	98797	525126797	202800035	345.28	0.24
17	48443	-168689	-818362356	98797	619375480	202800035	345.28	0.28
18	51127	-169533	-980408914	98797	713640940	202800035	345.28	0.31
19	49048	-234486	-1202728777	110891	817806761	202800035	345.28	0.35
20	47030	-227339	-1417159661	112005	924816142	212851832	345.28	0.39
21	49902	-228243	-1634687436	112005	1031509610	212851832	345.28	0.43
22	66273	-204818	-1837144751	112006	1138366555	212851832	345.28	0.46
23	74886	-226143	-2045109132	112006	1245283995	212851832	345.28	0.49
24	78883	-227031	-2245018980	112007	1343805769	212851832	345.28	0.37
25	82956	-227924	-2445743884	112007	1442334102	212851832	345.28	0.38
26	83990	-293394	-2689650251	112006	1540843721	212851832	345.28	0.40
27	85099	-344992	-3004533428	112006	1639334296	212851832	345.28	0.43
28	89402	-345935	-3308244294	112006	1737831187	212851832	345.28	0.45
29	108026	-346898	-3613091623	112007	1836444434	212851832	345.28	0.47
30	112482	-347875	-3918800854	112007	1935054099	212851832	345.28	0.49
31	118308	-348932	-4245029134	112007	2039960043	212851832	345.28	0.43
32	124241	-349991	-4572258251	112007	2144866291	212851832	345.28	0.45
33	130280	-351068	-4900504402	112007	2249773032	212851832	345.28	0.46
34	136426	-352164	-5229776973	112007	2354677197	212851832	345.28	0.47
35	142678	-353280	-5560085248	112007	2459575709	212851832	345.28	0.48
36	170581	-354417	-5891766635	112008	2564594112	212851832	345.28	0.49
37	177046	-355570	-6224485930	112008	2669593681	212851832	345.28	0.50
38	185056	-356799	-6574112988	112008	2779544196	212851832	345.28	0.45
39	193205	-358024	-6924898338	112008	2889476168	212851832	345.28	0.46
40	201493	-359271	-7276860031	112008	2999389375	212851832	345.28	0.46
41	209919	-360538	-7630008089	112008	3109280213	212851832	345.28	0.47
42	218484	-361827	-7984352479	112007	3219145082	212851832	345.28	0.48
43	227187	-363136	-8339903109	112007	3328980383	212851832	345.28	0.48
44	267887	-364469	-8696985648	112008	3438901594	212851832	345.28	0.49
45	276867	-365820	-9055270947	112008	3548776890	212851832	345.28	0.49
46	286208	-367182	-9412416861	112007	3657887103	212851832	345.28	0.49
47	295692	-368539	-9770743975	112007	3766945565	212851832	345.28	0.49
48	305320	-369915	-10130260495	112006	3875948335	212851832	345.28	0.49
49	315092	-371313	-10490975790	112006	3984891944	212851832	345.28	0.50
50	325008	-372731	-10852899209	112005	4093772927	212851832	345.28	0.50
51	335068	-374170	-11216040080	112005	4202587823	212851832	345.28	0.50
52	345271	-375629	-11580407712	112004	4311333180	212851832	345.28	0.50
53	355619	-377109	-11946011399	112004	4420005551	212851832	345.28	0.50
54	366110	-378610	-12312860415	112003	4528601493	212851832	345.28	0.50
55	376746	-380131	-12680964018	112002	4637117573	212851832	345.28	0.50
56	387525	-381673	-13050331451	112002	4745550362	212851832	345.28	0.50
57	398448	-383235	-13420971940	112001	4853896439	212851832	345.28	0.50
58	409515	-384819	-13792894697	112000	4962152386	212851832	345.28	0.51

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 73 " PDT - 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]
<b>1.00</b>	53.55	8610.00	-10280.00	6000.00	0.00
<b>2.00</b>	43.82	49570.00	-42870.00	81000.00	4.75
---	---	---	Ft = 122430	Fp = -35307	---
---	---	Pa = 34125	Ta = -35879	La = 111970	---
---	---	Pb = 15445	Tb = -6991	Lb = -30970	---
<b>3.00</b>	43.82	62420.00	-55630.00	0.00	-4.75
---	---	---	Ft = 71915	Fp = 17071	---
---	---	Pa = 60645	Ta = -38652	La = 0	---
---	---	Pb = 1775	Tb = -16978	Lb = 0	---
<b>4.00</b>	37.02	49570.00	-42870.00	81000.00	4.75
---	---	---	Ft = 122430	Fp = -35307	---
---	---	Pa = 34125	Ta = -35879	La = 111970	---
---	---	Pb = 15445	Tb = -6991	Lb = -30970	---
<b>5.00</b>	37.02	62420.00	-55630.00	0.00	-4.75
---	---	---	Ft = 71915	Fp = 17071	---
---	---	Pa = 60645	Ta = -38652	La = 0	---
---	---	Pb = 1775	Tb = -16978	Lb = 0	---
<b>6.00</b>	30.22	62420.00	-55630.00	0.00	4.75
---	---	---	Ft = 86697	Fp = -102784	---
---	---	Pa = 73110	Ta = 46597	La = 0	---
---	---	Pb = -10690	Tb = -102227	Lb = 0	---
<b>7.00</b>	30.22	62420.00	-55630.00	0.00	-4.75
---	---	---	Ft = 71915	Fp = 17071	---
---	---	Pa = 60645	Ta = -38652	La = 0	---
---	---	Pb = 1775	Tb = -16978	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	9320	-10581	-11967784	6011	6882670	0	345.28	0.03
3	10153	-10927	-22381695	6012	12678633	-0	345.28	0.04
4	11109	-11332	-33201822	6013	18501119	-0	345.28	0.05
5	12187	-11796	-44486736	6014	24353527	0	345.28	0.05
6	13388	-12319	-56295080	6015	30239300	-0	345.28	0.05
7	14712	-12900	-68685502	6016	36161890	-0	345.28	0.05
8	65931	-175083	-250430891	107061	121421518	0	345.28	0.18
9	117187	-88866	-311777858	118099	233663649	324431230	345.28	0.30
10	118595	-89528	-396511027	118099	342857489	324431230	345.28	0.35
11	131805	-84764	-478961515	117843	452185502	324431230	345.28	0.40
12	141899	-114903	-575260575	87149	532689761	304306891	345.28	0.44
13	144272	-115656	-690089759	87148	619005082	304306891	345.28	0.33
14	146708	-116420	-805623199	87147	705285940	304306891	345.28	0.35
15	199091	-283008	-1043242171	123054	817383996	304306891	345.28	0.41
16	251536	-192678	-1236843859	199209	1027702985	639266409	345.28	0.49
17	254158	-193497	-1428669223	199205	1222390302	639266409	345.28	0.53
18	256843	-194334	-1621146093	199200	1416937754	639266409	345.28	0.57
19	268201	-199084	-1808092024	170843	1588195107	639266409	345.28	0.61
20	279620	-220056	-2030814052	168232	1752681718	615697768	345.28	0.64
21	282492	-220950	-2248497664	168225	1917736920	615697768	345.28	0.67
22	362624	-173246	-2436458376	168276	2084123865	615697768	345.28	0.70
23	434998	-215010	-2635868862	168315	2251533962	615697768	345.28	0.75
24	438995	-215879	-2834993586	168302	2405478890	615697768	345.28	0.54
25	443068	-216756	-3034615789	168290	2559167963	615697768	345.28	0.55
26	442761	-300793	-3289976037	168278	2712579297	615697768	345.28	0.57
27	442529	-337762	-3605262998	168266	2865713439	615697768	345.28	0.59
28	446832	-338691	-3910433989	168257	3018634420	615697768	345.28	0.61
29	465456	-339649	-4216481114	168255	3171529986	615697768	345.28	0.63
30	469912	-340611	-4523090342	168244	3324196486	615697768	345.28	0.65
31	475738	-341653	-4849943174	168234	3486367808	615697768	345.28	0.56
32	481671	-342697	-5177471697	168224	3648307042	615697768	345.28	0.57
33	487710	-343761	-5505714277	168215	3810034463	615697768	345.28	0.58
34	493856	-344844	-5834677413	168206	3971547051	615697768	345.28	0.59
35	500108	-345945	-6164368470	168197	4132842104	615697768	345.28	0.60
36	528011	-347078	-6495153610	168195	4294132983	615697768	345.28	0.61
37	534476	-348217	-6826664670	168186	4455189186	615697768	345.28	0.62
38	542486	-349431	-7174693487	168176	4623622641	615697768	345.28	0.55
39	550635	-350643	-7523557330	168166	4791819437	615697768	345.28	0.55
40	558923	-351877	-7873293894	168158	4959794091	615697768	345.28	0.56
41	567349	-353131	-8223914393	168149	5127543824	615697768	345.28	0.56
42	575914	-354407	-8575430443	168140	5295065989	615697768	345.28	0.57
43	584617	-355703	-8927853870	168132	5462357958	615697768	345.28	0.57
44	625317	-357031	-9281536353	168129	5629614666	615697768	345.28	0.57
45	634297	-358369	-9636124930	168120	5796620479	615697768	345.28	0.57
46	643638	-359718	-9989307237	168111	5962287048	615697768	345.28	0.57
47	653122	-361061	-10343381908	168102	6127701124	615697768	345.28	0.57
48	662750	-362425	-10698358459	168093	6292858623	615697768	345.28	0.57
49	672522	-363809	-11054249424	168084	6457757206	615697768	345.28	0.57
50	682438	-365215	-11411067364	168074	6622394492	615697768	345.28	0.57
51	692498	-366641	-11768824875	168065	6786768068	615697768	345.28	0.57
52	702701	-368087	-12127534570	168056	6950875482	615697768	345.28	0.57
53	713049	-369555	-12487209073	168048	7114714247	615697768	345.28	0.57
54	723540	-371043	-12847861008	168039	7278281838	615697768	345.28	0.57
55	734176	-372552	-13209502989	168030	7441575689	615697768	345.28	0.57
56	744955	-374082	-13572147616	168021	7604593195	615697768	345.28	0.57
57	755878	-375633	-13935807468	168013	7767331713	615697768	345.28	0.57
58	766945	-377205	-14300495098	168004	7929788557	615697768	345.28	0.57

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 74 " PDT - 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]
<b>1.00</b>	53.55	0.00	-10280.00	6000.00	0.00
<b>2.00</b>	43.82	0.00	-42870.00	81000.00	4.75
---	---	---	Ft = 80562	Fp = 16366	---
---	---	Pa = 9653	Ta = -42441	La = 67792	---
---	---	Pb = -9653	Tb = -429	Lb = 13208	---
<b>3.00</b>	43.82	0.00	-55630.00	0.00	-4.75
---	---	---	Ft = -7391	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -55630	Lb = 0	---
<b>4.00</b>	37.02	0.00	-42870.00	81000.00	4.75
---	---	---	Ft = 80562	Fp = 16366	---
---	---	Pa = 9653	Ta = -42441	La = 67792	---
---	---	Pb = -9653	Tb = -429	Lb = 13208	---
<b>5.00</b>	37.02	0.00	-55630.00	0.00	-4.75
---	---	---	Ft = -7391	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -55630	Lb = 0	---
<b>6.00</b>	30.22	0.00	-55630.00	0.00	4.75
---	---	---	Ft = 7391	Fp = -59928	---
---	---	Pa = 6233	Ta = 3973	La = 0	---
---	---	Pb = -6233	Tb = -59603	Lb = 0	---
<b>7.00</b>	30.22	0.00	-55630.00	0.00	-4.75
---	---	---	Ft = -7391	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -55630	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	710	-10566	-11610498	6000	6627129	0	345.28	0.03
3	1543	-10911	-21662287	6000	12164195	0	345.28	0.04
4	2499	-11314	-32114769	6000	17723939	-0	345.28	0.05
5	3577	-11777	-43025519	6001	23309090	-0	345.28	0.05
6	4778	-12298	-54452111	6001	28922384	-0	345.28	0.05
7	6102	-12878	-66452119	6001	34566560	0	345.28	0.05
8	14763	-17476	-66709638	67145	87533545	0	345.28	0.07
9	23461	-56593	-128449256	73796	156178871	196425721	345.28	0.16
10	24870	-57255	-180632545	73796	223007736	196425721	345.28	0.19
11	24642	-62423	-236136801	73911	289892642	196425721	345.28	0.22
12	21299	-114689	-351383894	87004	369066479	205008557	345.28	0.27
13	23672	-115444	-461485963	87004	452015807	205008557	345.28	0.22
14	26108	-116209	-572376927	87005	535007729	205008557	345.28	0.25
15	35933	-78948	-656047489	108717	633066717	205008557	345.28	0.27
16	45820	-160244	-817975230	154799	790064536	407808592	345.28	0.33
17	48443	-161069	-971980871	154800	937699323	407808592	345.28	0.37
18	51127	-161914	-1126834504	154800	1085359317	407808592	345.28	0.40
19	49048	-226866	-1341956162	166894	1242894746	407808592	345.28	0.45
20	47030	-219719	-1549184398	168007	1403249434	417860389	345.28	0.49
21	49902	-220623	-1759507076	168007	1563294082	417860389	345.28	0.52
22	66273	-197198	-1954759598	168009	1723584889	417860389	345.28	0.55
23	74886	-218523	-2155516939	168010	1883966593	417860389	345.28	0.59
24	78883	-219411	-2348783171	168010	2031754157	417860389	345.28	0.44
25	82956	-220304	-2542862296	168010	2179551416	417860389	345.28	0.45
26	83990	-285775	-2780121041	168010	2327320348	417860389	345.28	0.47
27	85099	-337372	-3088354938	168010	2475060469	417860389	345.28	0.49
28	89402	-338315	-3385415049	168010	2622809978	417860389	345.28	0.52
29	108026	-339278	-3683610052	168011	2770734546	417860389	345.28	0.54
30	112482	-340255	-3982665412	168011	2918653592	417860389	345.28	0.55
31	118308	-341313	-4301813476	168011	3076017223	417860389	345.28	0.48
32	124241	-342371	-4621960878	168011	3233381190	417860389	345.28	0.50
33	130280	-343448	-4943124003	168011	3390745790	417860389	345.28	0.51
34	136426	-344545	-5265312334	168011	3548106412	417860389	345.28	0.52
35	142678	-345660	-5588535255	168011	3705458430	417860389	345.28	0.53
36	170581	-346797	-5913128745	168013	3862990748	417860389	345.28	0.54
37	177046	-347951	-6238759187	168013	4020494631	417860389	345.28	0.55
38	185056	-349179	-6580961059	168012	4185424974	417860389	345.28	0.49
39	193205	-350404	-6924320397	168012	4350327331	417860389	345.28	0.50
40	201493	-351651	-7268855406	168012	4515201380	417860389	345.28	0.50
41	209919	-352919	-7614576255	168012	4680041706	417860389	345.28	0.51
42	218484	-354207	-7961493059	168011	4844842901	417860389	345.28	0.51
43	227187	-355516	-8309615880	168011	5009599559	417860389	345.28	0.52
44	267887	-356849	-8659268189	168012	5174485366	417860389	345.28	0.52
45	276867	-358200	-9010123445	168011	5339302059	417860389	345.28	0.53
46	286208	-359563	-9359888141	168011	5502970859	417860389	345.28	0.52
47	295692	-360919	-9710834552	168010	5666561784	417860389	345.28	0.53
48	305320	-362296	-10062971065	168009	5830068918	417860389	345.28	0.53
49	315092	-363693	-10416307224	168009	5993487049	417860389	345.28	0.53
50	325008	-365111	-10770852551	168008	6156810975	417860389	345.28	0.53
51	335068	-366550	-11126616552	168007	6320035501	417860389	345.28	0.53
52	345271	-368009	-11483608711	168006	6483155443	417860389	345.28	0.53
53	355619	-369489	-11841838497	168005	6646165625	417860389	345.28	0.53
54	366110	-370990	-12201315361	168004	6809060880	417860389	345.28	0.54
55	376746	-372511	-12562048738	168003	6971836052	417860389	345.28	0.54
56	387525	-374053	-12924048045	168003	7134485993	417860389	345.28	0.54
57	398448	-375615	-13287322686	168002	7297005566	417860389	345.28	0.54
58	409515	-377199	-13651882050	168001	7459389643	417860389	345.28	0.54

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 75 " PDT - 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

<b>Livello</b>	<b>H [m]</b>	<b>Verticali [N]</b>	<b>Trasversali [N]</b>	<b>Longitudinali [N]</b>	<b>Eccentricità del conduttore [m]</b>
<b>1.00</b>	53.55	4230.00	-5060.00	30200.00	0.00
<b>2.00</b>	43.82	61220.00	-54380.00	0.00	4.75
---	---	---	Ft = 85007	Fp = -100614	---
---	---	Pa = 71685	Ta = 45688	La = 0	---
---	---	Pb = -10465	Tb = -100068	Lb = 0	---
<b>3.00</b>	43.82	61220.00	-54380.00	0.00	-4.75
---	---	---	Ft = 70556	Fp = 16548	---
---	---	Pa = 59499	Ta = -37922	La = 0	---
---	---	Pb = 1721	Tb = -16458	Lb = 0	---
<b>4.00</b>	37.02	61220.00	-54380.00	0.00	4.75
---	---	---	Ft = 85007	Fp = -100614	---
---	---	Pa = 71685	Ta = 45688	La = 0	---
---	---	Pb = -10465	Tb = -100068	Lb = 0	---
<b>5.00</b>	37.02	61220.00	-54380.00	0.00	-4.75
---	---	---	Ft = 70556	Fp = 16548	---
---	---	Pa = 59499	Ta = -37922	La = 0	---
---	---	Pb = 1721	Tb = -16458	Lb = 0	---
<b>6.00</b>	30.22	48670.00	-41940.00	78000.00	4.75
---	---	---	Ft = 119183	Fp = -35340	---
---	---	Pa = 33206	Ta = -34948	La = 108999	---
---	---	Pb = 15464	Tb = -6992	Lb = -30999	---
<b>7.00</b>	30.22	61220.00	-54380.00	0.00	-4.75
---	---	---	Ft = 70556	Fp = 16548	---
---	---	Pa = 59499	Ta = -37922	La = 0	---
---	---	Pb = 1721	Tb = -16458	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	4940	-5353	-5996211	30203	33353774	0	345.28	0.08
3	5773	-5699	-11398516	30203	61131763	-0	345.28	0.10
4	6729	-6104	-17200637	30204	88921690	-0	345.28	0.11
5	7807	-6568	-23460251	30205	116724633	-0	345.28	0.12
6	9008	-7091	-30235051	30205	144541785	-0	345.28	0.12
7	10332	-7672	-37582724	30206	172374371	0	345.28	0.12
8	79758	41907	10803164	30246	200594723	0	345.28	0.14
9	149221	-1390	-6084101	30286	229723408	0	345.28	0.16
10	150630	-2052	-12410797	30285	258816785	0	345.28	0.17
11	150857	-8790	-23027548	30284	287855979	0	345.28	0.18
12	147969	-119943	-151796354	30281	316800186	0	345.28	0.20
13	150342	-120696	-270806140	30280	347297459	0	345.28	0.15
14	152778	-121459	-390571625	30279	377766602	0	345.28	0.18
15	223368	-54665	-464161881	30313	409026779	0	345.28	0.20
16	294020	-115465	-584965197	30345	441034254	0	345.28	0.22
17	296643	-116282	-703950708	30342	472979009	-0	345.28	0.25
18	299327	-117118	-823674919	30339	504860038	-0	345.28	0.26
19	297703	-240772	-1053641100	30333	536630112	-0	345.28	0.30
20	296140	-235363	-1283325675	30327	568291420	-0	345.28	0.34
21	299012	-236256	-1515379934	30323	599890050	-0	345.28	0.38
22	358619	-345753	-1822425279	41596	639355698	-0	345.28	0.43
23	410468	-311080	-2168814915	139352	788256647	337421522	345.28	0.50
24	414465	-311951	-2450719357	139346	913211673	337421522	345.28	0.39
25	418538	-312829	-2733186203	139340	1038083578	337421522	345.28	0.41
26	431281	-286072	-2996646137	126529	1154716786	337421522	345.28	0.43
27	444099	-338107	-3308000539	108338	1248783771	311021500	345.28	0.46
28	448402	-339037	-3613127537	108333	1346485789	311021500	345.28	0.48
29	467026	-339995	-3919141137	108332	1444193946	311021500	345.28	0.50
30	471482	-340957	-4225738799	108327	1541800649	311021500	345.28	0.52
31	477308	-342000	-4552601539	108322	1645529954	311021500	345.28	0.46
32	483241	-343044	-4880160368	108317	1749153011	311021500	345.28	0.47
33	489280	-344109	-5208450984	108312	1852677420	311021500	345.28	0.48
34	495426	-345192	-5537479182	108307	1956099898	311021500	345.28	0.49
35	501678	-346294	-5867251667	108303	2059417442	311021500	345.28	0.51
36	529581	-347428	-6198122827	108302	2162743376	311021500	345.28	0.52
37	536046	-348567	-6529735936	108297	2265952776	311021500	345.28	0.53
38	544056	-349781	-6877887599	108292	2373923632	311021500	345.28	0.47
39	552205	-350994	-7226889247	108287	2481774682	311021500	345.28	0.48
40	560493	-352228	-7576777075	108283	2589512140	311021500	345.28	0.48
41	568919	-353483	-7927561881	108278	2697133408	311021500	345.28	0.49
42	577484	-354759	-8279254895	108274	2804636023	311021500	345.28	0.49
43	586187	-356056	-8631867584	108269	2912017587	311021500	345.28	0.50
44	626887	-357384	-8985742424	108268	3019384672	311021500	345.28	0.50
45	635867	-358722	-9340535836	108263	3126617796	311021500	345.28	0.50
46	645208	-360072	-9693933621	108258	3233017125	311021500	345.28	0.50
47	654692	-361416	-10048235492	108253	3339279939	311021500	345.28	0.50
48	664320	-362780	-10403450777	108249	3445403244	311021500	345.28	0.51
49	674092	-364165	-10759591755	108244	3551385028	311021500	345.28	0.51
50	684008	-365571	-11116670756	108239	3657223290	311021500	345.28	0.51
51	694068	-366997	-11474700161	108234	3762916041	311021500	345.28	0.51
52	704271	-368444	-11833692383	108230	3868461300	311021500	345.28	0.51
53	714619	-369912	-12193659865	108225	3973857095	311021500	345.28	0.51
54	725110	-371401	-12554615060	108220	4079101454	311021500	345.28	0.51
55	735746	-372911	-12916570427	108216	4184192406	311021500	345.28	0.51
56	746525	-374441	-13279538422	108211	4289127980	311021500	345.28	0.51
57	757448	-375992	-13643531493	108207	4393906200	311021500	345.28	0.51
58	768515	-377564	-14008562068	108202	4498525087	311021500	345.28	0.51



## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 76 " PDT - 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]
<b>1.00</b>	53.55	0.00	-5060.00	30200.00	0.00
<b>2.00</b>	43.82	0.00	-54380.00	0.00	4.75
---	---	---	Ft = 7225	Fp = -58581	---
---	---	Pa = 6093	Ta = 3883	La = 0	---
---	---	Pb = -6093	Tb = -58263	Lb = 0	---
<b>3.00</b>	43.82	0.00	-54380.00	0.00	-4.75
---	---	---	Ft = -7225	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -54380	Lb = 0	---
<b>4.00</b>	37.02	0.00	-54380.00	0.00	4.75
---	---	---	Ft = 7225	Fp = -58581	---
---	---	Pa = 6093	Ta = 3883	La = 0	---
---	---	Pb = -6093	Tb = -58263	Lb = 0	---
<b>5.00</b>	37.02	0.00	-54380.00	0.00	-4.75
---	---	---	Ft = -7225	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -54380	Lb = 0	---
<b>6.00</b>	30.22	0.00	-41940.00	78000.00	4.75
---	---	---	Ft = 78127	Fp = 15436	---
---	---	Pa = 9146	Ta = -41476	La = 65574	---
---	---	Pb = -9146	Tb = -464	Lb = 12426	---
<b>7.00</b>	30.22	0.00	-54380.00	0.00	-4.75
---	---	---	Ft = -7225	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -54380	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Us0
2	710	-5346	-5857454	30200	33281291	0	345.28	0.08
3	1543	-5691	-11119281	30200	60987673	0	345.28	0.10
4	2499	-6094	-16778967	30200	88706950	-0	345.28	0.11
5	3577	-6556	-22893878	30200	116439883	-0	345.28	0.12
6	4778	-7078	-29521374	30200	144187256	-0	345.28	0.12
7	6102	-7658	-36718810	30201	171949885	0	345.28	0.12
8	12983	16872	-15373569	30201	199230236	0	345.28	0.13
9	19900	-5047	-26069365	30202	226589630	0	345.28	0.14
10	21309	-5709	-31801120	30202	253958531	0	345.28	0.15
11	22862	-9891	-40310094	30202	281337258	0	345.28	0.15
12	21299	-119729	-159149872	30202	308690264	0	345.28	0.18
13	23672	-120483	-273981206	30202	337561692	0	345.28	0.14
14	26108	-121249	-389602105	30202	366450790	0	345.28	0.16
15	34153	-88199	-481635455	30203	395416666	0	345.28	0.18
16	42259	-118958	-596808788	30203	424455265	-0	345.28	0.20
17	44882	-119783	-711543891	30204	453507575	-0	345.28	0.22
18	47567	-120628	-827133653	30204	482572757	-0	345.28	0.24
19	47267	-232688	-1039286822	30204	511621533	-0	345.28	0.28
20	47030	-235019	-1263701757	30203	540654780	-0	345.28	0.32
21	49902	-235923	-1488487181	30204	569700060	-0	345.28	0.35
22	67730	-206000	-1693808935	36976	603322995	-0	345.28	0.38
23	77799	-279271	-1954088628	95779	702621413	202992985	345.28	0.43
24	81796	-280159	-2200423227	95779	786815650	202992985	345.28	0.33
25	85870	-281052	-2447571497	95779	871019785	202992985	345.28	0.35
26	85446	-329486	-2727351014	100914	958503717	202992985	345.28	0.37
27	85099	-337731	-3027779747	108205	1055006341	213575888	345.28	0.40
28	89402	-338675	-3325139201	108205	1150024987	213575888	345.28	0.42
29	108026	-339637	-3623631755	108206	1245138921	213575888	345.28	0.45
30	112482	-340615	-3922985265	108206	1340254218	213575888	345.28	0.47
31	118308	-341672	-4242451025	108206	1441446706	213575888	345.28	0.41
32	124241	-342730	-4562916629	108206	1542643473	213575888	345.28	0.43
33	130280	-343808	-4884398394	108206	1643844162	213575888	345.28	0.44
34	136426	-344904	-5206905830	108206	1745046114	213575888	345.28	0.45
35	142678	-346020	-5530448350	108206	1846246644	213575888	345.28	0.46
36	170581	-347157	-5855359908	108207	1947547855	213575888	345.28	0.47
37	177046	-348310	-6181309121	108207	2048836904	213575888	345.28	0.48
38	185056	-349538	-6523845504	108206	2154907551	213575888	345.28	0.43
39	193205	-350764	-6867540007	108206	2260965918	213575888	345.28	0.44
40	201493	-352011	-7212410785	108206	2367011413	213575888	345.28	0.45
41	209919	-353278	-7558468030	108206	2473040822	213575888	345.28	0.45
42	218484	-354567	-7905721878	108206	2579050923	213575888	345.28	0.46
43	227187	-355876	-8254182411	108206	2685038490	213575888	345.28	0.46
44	267887	-357208	-8604171539	108206	2791099815	213575888	345.28	0.47
45	276867	-358559	-8955364469	108206	2897124708	213575888	345.28	0.47
46	286208	-359922	-9305465482	108206	3002419185	213575888	345.28	0.47
47	295692	-361278	-9656749069	108205	3107671775	213575888	345.28	0.48
48	305320	-362655	-10009223635	108205	3212878908	213575888	345.28	0.48
49	315092	-364053	-10362898734	108205	3318037399	213575888	345.28	0.48
50	325008	-365471	-10717783897	108204	3423144063	213575888	345.28	0.48
51	335068	-366909	-11073888639	108204	3528195719	213575888	345.28	0.48
52	345271	-368369	-11431222454	108203	3633189192	213575888	345.28	0.49
53	355619	-369849	-11789794820	108203	3738121309	213575888	345.28	0.49
54	366110	-371349	-12149615196	108202	3842988902	213575888	345.28	0.49
55	376746	-372871	-12510693025	108202	3947788808	213575888	345.28	0.49
56	387525	-374413	-12873037734	108201	4052517869	213575888	345.28	0.49
57	398448	-375975	-13236658734	108201	4157172930	213575888	345.28	0.49
58	409515	-377559	-13601565422	108200	4261750842	213575888	345.28	0.49

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 77 " PDT - 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]
<b>1.00</b>	53.55	4230.00	-5060.00	30200.00	0.00
<b>2.00</b>	43.82	61220.00	-54380.00	0.00	4.75
---	---	---	Ft = 85007	Fp = -100614	---
---	---	Pa = 71685	Ta = 45688	La = 0	---
---	---	Pb = -10465	Tb = -100068	Lb = 0	---
<b>3.00</b>	43.82	61220.00	-54380.00	0.00	-4.75
---	---	---	Ft = 70556	Fp = 16548	---
---	---	Pa = 59499	Ta = -37922	La = 0	---
---	---	Pb = 1721	Tb = -16458	Lb = 0	---
<b>4.00</b>	37.02	48670.00	-41940.00	78000.00	4.75
---	---	---	Ft = 119183	Fp = -35340	---
---	---	Pa = 33206	Ta = -34948	La = 108999	---
---	---	Pb = 15464	Tb = -6992	Lb = -30999	---
<b>5.00</b>	37.02	61220.00	-54380.00	0.00	-4.75
---	---	---	Ft = 70556	Fp = 16548	---
---	---	Pa = 59499	Ta = -37922	La = 0	---
---	---	Pb = 1721	Tb = -16458	Lb = 0	---
<b>6.00</b>	30.22	61220.00	-54380.00	0.00	4.75
---	---	---	Ft = 85007	Fp = -100614	---
---	---	Pa = 71685	Ta = 45688	La = 0	---
---	---	Pb = -10465	Tb = -100068	Lb = 0	---
<b>7.00</b>	30.22	61220.00	-54380.00	0.00	-4.75
---	---	---	Ft = 70556	Fp = 16548	---
---	---	Pa = 59499	Ta = -37922	La = 0	---
---	---	Pb = 1721	Tb = -16458	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	4940	-5353	-600982	30204	33374193	0	345.28	0.08
3	5773	-5699	-11408860	30204	61176042	-0	345.28	0.10
4	6729	-6104	-17217476	30205	88993773	0	345.28	0.11
5	7807	-6568	-23484625	30206	116828968	0	345.28	0.12
6	9008	-7090	-30268117	30207	144683326	-0	345.28	0.12
7	10332	-7672	-37625758	30208	172558577	-0	345.28	0.12
8	79758	41909	10684771	30258	201101504	0	345.28	0.14
9	149221	-1387	-6343425	30308	230833430	0	345.28	0.16
10	150630	-2048	-12812263	30308	260535219	0	345.28	0.17
11	150857	-8787	-23571200	30306	290182987	0	345.28	0.18
12	147969	-119940	-152479258	30302	319723186	0	345.28	0.20
13	150342	-120692	-271638021	30301	350858042	0	345.28	0.15
14	152778	-121455	-391554624	30299	381973895	0	345.28	0.18
15	204129	-286292	-632127640	65237	437767895	0	345.28	0.24
16	255541	-196042	-828040662	139357	588754000	326071382	345.28	0.31
17	258164	-196861	-1022399892	139354	724571734	326071382	345.28	0.36
18	260849	-197698	-1217466180	139350	860306448	326071382	345.28	0.40
19	272188	-201876	-1406508023	110966	972717858	326071382	345.28	0.43
20	283590	-222901	-1631399357	108352	1078350875	302480757	345.28	0.47
21	286462	-223796	-1851286384	108348	1184628535	302480757	345.28	0.50
22	365308	-177180	-2042039639	108380	1291731794	302480757	345.28	0.53
23	436396	-218024	-2243939575	108404	1399468369	302480757	345.28	0.57
24	440393	-218894	-2445080092	108395	1498545878	302480757	345.28	0.42
25	444467	-219772	-2646762641	108388	1597463671	302480757	345.28	0.43
26	444245	-301941	-2902983361	108380	1696208085	302480757	345.28	0.45
27	444099	-338101	-3217834459	108372	1794779110	302480757	345.28	0.48
28	448402	-339032	-3522840251	108366	1893216235	302480757	345.28	0.50
29	467026	-339990	-3828736142	108365	1991638281	302480757	345.28	0.52
30	471482	-340952	-4135223163	108358	2089916011	302480757	345.28	0.54
31	477308	-341996	-4461975395	108351	2194315541	302480757	345.28	0.47
32	483241	-343040	-4789430355	108345	2298568543	302480757	345.28	0.48
33	489280	-344105	-5117622910	108339	2402687683	302480757	345.28	0.49
34	495426	-345188	-5446558650	108333	2506670907	302480757	345.28	0.50
35	501678	-346291	-5776244089	108327	2610516377	302480757	345.28	0.52
36	529581	-347424	-6107029966	108326	2714359545	302480757	345.28	0.53
37	536046	-348564	-6438563116	108320	2818053884	302480757	345.28	0.53
38	544056	-349778	-6786636379	108314	2926500227	302480757	345.28	0.48
39	552205	-350991	-7135564652	108307	3034796289	302480757	345.28	0.48
40	560493	-352225	-7485383648	108302	3142951203	302480757	345.28	0.49
41	568919	-353480	-7836104043	108296	3250963118	302480757	345.28	0.49
42	577484	-354757	-8187736950	108291	3358830276	302480757	345.28	0.50
43	586187	-356054	-8540293728	108285	3466550934	302480757	345.28	0.50
44	626887	-357382	-8894113978	108283	3574249099	302480757	345.28	0.51
45	635867	-358720	-9248857058	108277	3681787482	302480757	345.28	0.51
46	645208	-360070	-9602208941	108272	3788465202	302480757	345.28	0.51
47	654692	-361414	-9956468934	108266	3894982005	302480757	345.28	0.51
48	664320	-362778	-10311646307	108260	4001335236	302480757	345.28	0.51
49	674092	-364163	-10667753264	108254	4107523354	302480757	345.28	0.51
50	684008	-365569	-11024802062	108248	4213544797	302480757	345.28	0.51
51	694068	-366996	-11382805013	108242	4319397982	302480757	345.28	0.52
52	704271	-368443	-11741774472	108236	4425081304	302480757	345.28	0.52
53	714619	-369911	-12101722820	108231	4530593139	302480757	345.28	0.52
54	725110	-371400	-12462662459	108225	4635931840	302480757	345.28	0.52
55	735746	-372910	-12824605799	108219	4741095735	302480757	345.28	0.52
56	746525	-374441	-13187565250	108214	4846083130	302480757	345.28	0.52
57	757448	-375992	-13551553216	108208	4950892307	302480757	345.28	0.52
58	768515	-377564	-13916582089	108203	5055521523	302480757	345.28	0.52

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 78 " PDT - 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]
<b>1.00</b>	53.55	0.00	-5060.00	30200.00	0.00
<b>2.00</b>	43.82	0.00	-54380.00	0.00	4.75
---	---	---	Ft = 7225	Fp = -58581	---
---	---	Pa = 6093	Ta = 3883	La = 0	---
---	---	Pb = -6093	Tb = -58263	Lb = 0	---
<b>3.00</b>	43.82	0.00	-54380.00	0.00	-4.75
---	---	---	Ft = -7225	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -54380	Lb = 0	---
<b>4.00</b>	37.02	0.00	-41940.00	78000.00	4.75
---	---	---	Ft = 78127	Fp = 15436	---
---	---	Pa = 9146	Ta = -41476	La = 65574	---
---	---	Pb = -9146	Tb = -464	Lb = 12426	---
<b>5.00</b>	37.02	0.00	-54380.00	0.00	-4.75
---	---	---	Ft = -7225	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -54380	Lb = 0	---
<b>6.00</b>	30.22	0.00	-54380.00	0.00	4.75
---	---	---	Ft = 7225	Fp = -58581	---
---	---	Pa = 6093	Ta = 3883	La = 0	---
---	---	Pb = -6093	Tb = -58263	Lb = 0	---
<b>7.00</b>	30.22	0.00	-54380.00	0.00	-4.75
---	---	---	Ft = -7225	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -54380	Lb = 0	---

**TABELLA DESCRITTIVA DELLE AZIONI INTERNE.**

<b>Nodo</b>	<b>Carico verticale [N]</b>	<b>T<sub>x</sub> [N]</b>	<b>My [Nmm]</b>	<b>T<sub>y</sub> [N]</b>	<b>Mx [Nmm]</b>	<b>Mt [Nmm]</b>	<b>σ<sub>amm.</sub> [N/mm<sup>2</sup>]</b>	<b>% Usa</b>
2	710	-5346	-5857536	30200	33283692	0	345.28	0.08
3	1543	-5691	-11119541	30200	60995290	0	345.28	0.10
4	2499	-6094	-16779515	30200	88723013	0	345.28	0.11
5	3577	-6556	-22894839	30200	116468036	0	345.28	0.12
6	4778	-7078	-29522886	30201	144231557	-0	345.28	0.12
7	6102	-7658	-36721025	30201	172014806	-0	345.28	0.12
8	12983	16872	-15377251	30202	199338131	0	345.28	0.13
9	19900	-5047	-26075295	30202	226763390	0	345.28	0.14
10	21309	-5709	-31809456	30203	254202808	0	345.28	0.15
11	22862	-9891	-40321011	30203	281657173	0	345.28	0.15
12	21299	-119729	-159163193	30202	309080627	-0	345.28	0.18
13	23672	-120483	-273997345	30203	338034626	0	345.28	0.14
14	26108	-121249	-389621351	30203	367014765	0	345.28	0.16
15	35679	-86392	-479769106	51204	410499106	0	345.28	0.18
16	45313	-164318	-645196995	95778	510927406	196164734	345.28	0.23
17	47935	-165143	-802990192	95779	602289432	196164734	345.28	0.27
18	50620	-165987	-961633956	95779	693667822	196164734	345.28	0.30
19	48794	-229158	-1178735448	107157	794362421	196164734	345.28	0.34
20	47030	-222579	-1388789578	108204	897734048	205621442	345.28	0.38
21	49902	-223483	-1601781223	108205	1000808731	205621442	345.28	0.42
22	66203	-200605	-1800059716	108206	1104040815	205621442	345.28	0.45
23	74746	-221472	-2003740284	108206	1207330671	205621442	345.28	0.48
24	78743	-222360	-2199534312	108206	1302509727	205621442	345.28	0.36
25	82816	-223253	-2396142747	108206	1397695133	205621442	345.28	0.37
26	83920	-287273	-2634981665	108206	1492863045	205621442	345.28	0.39
27	85099	-337731	-2943222105	108206	1588013098	205621442	345.28	0.42
28	89402	-338675	-3240559841	108206	1683169230	205621442	345.28	0.44
29	108026	-339637	-3539027952	108207	1778437909	205621442	345.28	0.46
30	112482	-340614	-3838357786	108207	1873703088	205621442	345.28	0.48
31	118308	-341672	-4157799001	108207	1975050967	205621442	345.28	0.42
32	124241	-342730	-4478240694	108207	2076399107	205621442	345.28	0.44
33	130280	-343808	-4799699096	108207	2177747696	205621442	345.28	0.45
34	136426	-344904	-5122183767	108207	2279093766	205621442	345.28	0.46
35	142678	-346020	-5445704166	108207	2380434342	205621442	345.28	0.47
36	170581	-347157	-5770591191	108208	2481890863	205621442	345.28	0.48
37	177046	-348310	-6096516831	108208	2583329141	205621442	345.28	0.49
38	185056	-349538	-6439029425	108208	2689550397	205621442	345.28	0.44
39	193205	-350764	-6782701034	108208	2795753694	205621442	345.28	0.45
40	201493	-352010	-7127549756	108208	2901938821	205621442	345.28	0.45
41	209919	-353278	-7473585824	108207	3008102293	205621442	345.28	0.46
42	218484	-354566	-7820819416	108207	3114240630	205621442	345.28	0.47
43	227187	-355876	-8169260653	108207	3220350353	205621442	345.28	0.47
44	267887	-357208	-8519229014	108208	3326543146	205621442	345.28	0.47
45	276867	-358559	-8870402440	108207	3432691519	205621442	345.28	0.48
46	286208	-359922	-9220485334	108207	3538100696	205621442	345.28	0.48
47	295692	-361278	-9571752095	108206	3643459812	205621442	345.28	0.48
48	305320	-362655	-9924211163	108206	3748765060	205621442	345.28	0.48
49	315092	-364053	-10277872118	108206	3854013084	205621442	345.28	0.48
50	325008	-365471	-10632744520	108205	3959200537	205621442	345.28	0.49
51	335068	-366909	-10988837908	108205	4064324075	205621442	345.28	0.49
52	345271	-368369	-11346161801	108204	4169380360	205621442	345.28	0.49
53	355619	-369849	-11704725703	108203	4274366061	205621442	345.28	0.49
54	366110	-371349	-12064539097	108203	4379277852	205621442	345.28	0.49
55	376746	-372871	-12425611452	108202	4484112413	205621442	345.28	0.49
56	387525	-374413	-12787952218	108202	4588866433	205621442	345.28	0.49
57	398448	-375975	-13151570832	108201	4693536602	205621442	345.28	0.49
58	409515	-377559	-13516476714	108200	4798119621	205621442	345.28	0.49

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 79 " PDT - 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]
<b>1.00</b>	53.55	8460.00	-10110.00	6000.00	0.00
<b>2.00</b>	43.82	48670.00	-41940.00	78000.00	4.75
---	---	---	Ft = 119183	Fp = -35340	---
---	---	Pa = 33206	Ta = -34948	La = 108999	---
---	---	Pb = 15464	Tb = -6992	Lb = -30999	---
<b>3.00</b>	43.82	61220.00	-54380.00	0.00	-4.75
---	---	---	Ft = 70556	Fp = 16548	---
---	---	Pa = 59499	Ta = -37922	La = 0	---
---	---	Pb = 1721	Tb = -16458	Lb = 0	---
<b>4.00</b>	37.02	48670.00	-41940.00	78000.00	4.75
---	---	---	Ft = 119183	Fp = -35340	---
---	---	Pa = 33206	Ta = -34948	La = 108999	---
---	---	Pb = 15464	Tb = -6992	Lb = -30999	---
<b>5.00</b>	37.02	61220.00	-54380.00	0.00	-4.75
---	---	---	Ft = 70556	Fp = 16548	---
---	---	Pa = 59499	Ta = -37922	La = 0	---
---	---	Pb = 1721	Tb = -16458	Lb = 0	---
<b>6.00</b>	30.22	61220.00	-54380.00	0.00	4.75
---	---	---	Ft = 85007	Fp = -100614	---
---	---	Pa = 71685	Ta = 45688	La = 0	---
---	---	Pb = -10465	Tb = -100068	Lb = 0	---
<b>7.00</b>	30.22	61220.00	-54380.00	0.00	-4.75
---	---	---	Ft = 70556	Fp = 16548	---
---	---	Pa = 59499	Ta = -37922	La = 0	---
---	---	Pb = 1721	Tb = -16458	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	9170	-10410	-11766572	6010	6869731	0	345.28	0.03
3	10003	-10756	-22010073	6011	12651998	0	345.28	0.04
4	10959	-11161	-32659052	6012	18459922	0	345.28	0.05
5	12037	-11625	-43771980	6013	24296785	-0	345.28	0.05
6	13238	-12147	-55407395	6014	30165917	-0	345.28	0.05
7	14562	-12729	-67623848	6015	36070654	-0	345.28	0.05
8	64749	-172602	-246975235	104376	119167856	0	345.28	0.18
9	114972	-87025	-306666982	115119	228495346	315822462	345.28	0.29
10	116381	-87686	-389578596	115119	334855838	315822462	345.28	0.34
11	129573	-82887	-470177888	114862	441340728	315822462	345.28	0.39
12	139649	-112542	-564083471	84139	518968927	295679351	345.28	0.43
13	142022	-113295	-676487114	84138	602254000	295679351	345.28	0.33
14	144458	-114058	-789597063	84137	685506707	295679351	345.28	0.34
15	195809	-278897	-1023471379	119090	793857940	295679351	345.28	0.40
16	247221	-188648	-1212769485	193223	997791876	621750733	345.28	0.48
17	249844	-189467	-1400460046	193218	1186512105	621750733	345.28	0.52
18	252529	-190305	-1588809072	193214	1375099786	621750733	345.28	0.56
19	263868	-194483	-1771106196	164831	1540376757	621750733	345.28	0.59
20	275270	-215508	-1989226052	162217	1698879036	598160108	345.28	0.63
21	278142	-216403	-2202302413	162210	1857960664	598160108	345.28	0.66
22	356988	-169789	-2386313375	162258	2018306941	598160108	345.28	0.69
23	428076	-210634	-2581509387	162294	2179622153	598160108	345.28	0.73
24	432073	-211504	-2776429196	162282	2327966958	598160108	345.28	0.53
25	436147	-212382	-2971858420	162272	2476069102	598160108	345.28	0.54
26	435925	-294551	-3221797734	162261	2623908101	598160108	345.28	0.56
27	435779	-330711	-3530342038	162249	2771484456	598160108	345.28	0.58
28	440082	-331641	-3829021139	162240	2918858761	598160108	345.28	0.60
29	458706	-332600	-4128581001	162239	3066212274	598160108	345.28	0.61
30	463162	-333562	-4428714686	162229	3213348431	598160108	345.28	0.63
31	468988	-334605	-4748691404	162219	3369648873	598160108	345.28	0.55
32	474921	-335650	-5069356388	162210	3525729275	598160108	345.28	0.56
33	480960	-336714	-5390747152	162202	3681608890	598160108	345.28	0.57
34	487106	-337798	-5712870476	162193	3837284792	598160108	345.28	0.58
35	493358	-338900	-6035733967	162184	3992754355	598160108	345.28	0.59
36	521261	-340034	-6359696455	162183	4148223449	598160108	345.28	0.60
37	527726	-341173	-6684397914	162174	4303469606	598160108	345.28	0.60
38	535736	-342388	-7025308736	162165	4465830365	598160108	345.28	0.54
39	543885	-343601	-7367068094	162156	4627966353	598160108	345.28	0.54
40	552173	-344835	-7709712940	162148	4789891333	598160108	345.28	0.54
41	560599	-346090	-8053254638	162140	4951602582	598160108	345.28	0.55
42	569164	-347367	-8397704939	162132	5113097502	598160108	345.28	0.55
43	577867	-348664	-8743075789	162124	5274373510	598160108	345.28	0.55
44	618567	-349992	-9089711883	162122	5435618646	598160108	345.28	0.56
45	627547	-351330	-9437268004	162113	5596624803	598160108	345.28	0.56
46	636888	-352680	-9783477585	162104	5756342654	598160108	345.28	0.56
47	646372	-354024	-10130593492	162096	5915819867	598160108	345.28	0.56
48	656000	-355388	-10478625412	162087	6075052466	598160108	345.28	0.56
49	665772	-356774	-10827585949	162079	6234038146	598160108	345.28	0.56
50	675688	-358179	-11177487737	162070	6392774560	598160108	345.28	0.56
51	685748	-359606	-11528343440	162062	6551259330	598160108	345.28	0.56
52	695951	-361053	-11880165740	162053	6709490044	598160108	345.28	0.56
53	706299	-362522	-12232967326	162045	6867464252	598160108	345.28	0.56
54	716790	-364010	-12586760887	162037	7025179470	598160108	345.28	0.56
55	727426	-365520	-12941559104	162028	7182633177	598160108	345.28	0.56
56	738205	-367051	-13297374641	162020	7339822814	598160108	345.28	0.56
57	749128	-368602	-13654220142	162012	7496745783	598160108	345.28	0.56
58	760195	-370174	-14012108225	162004	7653399450	598160108	345.28	0.56



## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 80 " PDT - 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]
<b>1.00</b>	53.55	0.00	-10110.00	6000.00	0.00
<b>2.00</b>	43.82	0.00	-41940.00	78000.00	4.75
---	---	---	Ft = 78127	Fp = 15436	---
---	---	Pa = 9146	Ta = -41476	La = 65574	---
---	---	Pb = -9146	Tb = -464	Lb = 12426	---
<b>3.00</b>	43.82	0.00	-54380.00	0.00	-4.75
---	---	---	Ft = -7225	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -54380	Lb = 0	---
<b>4.00</b>	37.02	0.00	-41940.00	78000.00	4.75
---	---	---	Ft = 78127	Fp = 15436	---
---	---	Pa = 9146	Ta = -41476	La = 65574	---
---	---	Pb = -9146	Tb = -464	Lb = 12426	---
<b>5.00</b>	37.02	0.00	-54380.00	0.00	-4.75
---	---	---	Ft = -7225	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -54380	Lb = 0	---
<b>6.00</b>	30.22	0.00	-54380.00	0.00	4.75
---	---	---	Ft = 7225	Fp = -58581	---
---	---	Pa = 6093	Ta = 3883	La = 0	---
---	---	Pb = -6093	Tb = -58263	Lb = 0	---
<b>7.00</b>	30.22	0.00	-54380.00	0.00	-4.75
---	---	---	Ft = -7225	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -54380	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Uso
2	710	-10396	-11422759	6000	6626571	0	345.28	0.03
3	1543	-10741	-21317728	6000	12162423	0	345.28	0.04
4	2499	-11144	-31612787	6000	17720201	0	345.28	0.05
5	3577	-11607	-42365439	6001	23302539	0	345.28	0.05
6	4778	-12128	-53633185	6001	28912076	-0	345.28	0.05
7	6102	-12708	-65473526	6001	34551454	0	345.28	0.05
8	14509	-18237	-67090519	65145	85955849	0	345.28	0.07
9	22954	-55457	-127279210	71578	152519852	189998978	345.28	0.15
10	24362	-56119	-178411897	71578	217326866	189998978	345.28	0.19
11	24388	-61066	-232739477	71686	282191843	189998978	345.28	0.22
12	21299	-112339	-345329336	84004	358621522	198073690	345.28	0.27
13	23672	-113093	-453190439	84004	438710823	198073690	345.28	0.22
14	26108	-113859	-561839138	84004	518841217	198073690	345.28	0.24
15	35679	-79002	-645015884	105006	613540052	198073690	345.28	0.26
16	45313	-156928	-803475173	149581	765243900	394238424	345.28	0.32
17	47935	-157753	-954296423	149581	907891210	394238424	345.28	0.36
18	50620	-158598	-1105964962	149581	1050563085	394238424	345.28	0.39
19	48794	-221768	-1316086155	160959	1202528944	394238424	345.28	0.44
20	47030	-215189	-1519155693	162007	1357150094	403695132	345.28	0.47
21	49902	-216093	-1725160350	162007	1511479945	403695132	345.28	0.51
22	66203	-193215	-1916452270	162009	1666046222	403695132	345.28	0.54
23	74746	-214082	-2113144101	162009	1820699120	403695132	345.28	0.58
24	78743	-214970	-2302495726	162009	1963207784	403695132	345.28	0.43
25	82816	-215863	-2492659643	162010	2105725843	403695132	345.28	0.44
26	83920	-279883	-2725052226	162009	2248217501	403695132	345.28	0.46
27	85099	-330341	-3026844693	162009	2390682226	403695132	345.28	0.48
28	89402	-331285	-3317733012	162009	2533155984	403695132	345.28	0.50
29	108026	-332248	-3609750257	162011	2675798675	403695132	345.28	0.52
30	112482	-333225	-3902627707	162011	2818436006	403695132	345.28	0.54
31	118308	-334282	-4215203084	162011	2970180656	403695132	345.28	0.47
32	124241	-335340	-4528777468	162011	3121925600	403695132	345.28	0.49
33	130280	-336418	-4843367275	162011	3273671129	403695132	345.28	0.50
34	136426	-337514	-5158982158	162011	3425412794	403695132	345.28	0.51
35	142678	-338630	-5475631670	162011	3577146133	403695132	345.28	0.52
36	170581	-339767	-5793645407	162012	3729053444	403695132	345.28	0.53
37	177046	-340920	-6112696808	162012	3880933292	403695132	345.28	0.54
38	185056	-342148	-6448008986	162012	4039974378	403695132	345.28	0.48
39	193205	-343374	-6784479353	162012	4198988437	403695132	345.28	0.49
40	201493	-344621	-7122126159	162011	4357975159	403695132	345.28	0.49
41	209919	-345888	-7460959778	162011	4516929322	403695132	345.28	0.50
42	218484	-347177	-7800990531	162011	4675845708	403695132	345.28	0.50
43	227187	-348486	-8142228685	162011	4834719102	403695132	345.28	0.51
44	267887	-349818	-8484991657	162012	4993717102	403695132	345.28	0.51
45	276867	-351169	-8828959838	162011	5152648397	403695132	345.28	0.51
46	286208	-352532	-9171884803	162010	5310472731	403695132	345.28	0.51
47	295692	-353888	-9515994098	162010	5468221910	403695132	345.28	0.51
48	305320	-355265	-9861296339	162009	5625890229	403695132	345.28	0.52
49	315092	-356663	-10207801274	162008	5783472660	403695132	345.28	0.52
50	325008	-358081	-10555518633	162008	5940964186	403695132	345.28	0.52
51	335068	-359519	-10904458122	162007	6098359796	403695132	345.28	0.52
52	345271	-360979	-11254629433	162006	6255654490	403695132	345.28	0.52
53	355619	-362459	-11606042237	162005	6412843275	403695132	345.28	0.52
54	366110	-363959	-11958706189	162004	6569921169	403695132	345.28	0.52
55	376746	-365481	-12312630927	162003	6726883198	403695132	345.28	0.52
56	387525	-367023	-12667826074	162002	6883724398	403695132	345.28	0.52
57	398448	-368585	-13024301234	162001	7040439812	403695132	345.28	0.52
58	409515	-370169	-13382065999	162000	7197024495	403695132	345.28	0.52

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 81 " PDT - 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

<b>Livello</b>	<b>H [m]</b>	<b>Verticali [N]</b>	<b>Trasversali [N]</b>	<b>Longitudinali [N]</b>	<b>Eccentricità del conduttore [m]</b>
<b>1.00</b>	53.55	6630.00	-5210.00	39000.00	0.00
<b>2.00</b>	43.82	79140.00	-48260.00	0.00	4.75
---	---	---	Ft = 106961	Fp = -106325	---
---	---	Pa = 90199	Ta = 57488	La = 0	---
---	---	Pb = -11059	Tb = -105748	Lb = 0	---
<b>3.00</b>	43.82	79140.00	-48260.00	0.00	-4.75
---	---	---	Ft = 94137	Fp = -2348	---
---	---	Pa = 79384	Ta = -50596	La = 0	---
---	---	Pb = -244	Tb = 2336	Lb = 0	---
<b>4.00</b>	37.02	79140.00	-48260.00	0.00	4.75
---	---	---	Ft = 106961	Fp = -106325	---
---	---	Pa = 90199	Ta = 57488	La = 0	---
---	---	Pb = -11059	Tb = -105748	Lb = 0	---
<b>5.00</b>	37.02	79140.00	-48260.00	0.00	-4.75
---	---	---	Ft = 94137	Fp = -2348	---
---	---	Pa = 79384	Ta = -50596	La = 0	---
---	---	Pb = -244	Tb = 2336	Lb = 0	---
<b>6.00</b>	30.22	62110.00	-36480.00	96000.00	4.75
---	---	---	Ft = 138981	Fp = -35807	---
---	---	Pa = 48976	Ta = -25668	La = 127507	---
---	---	Pb = 13134	Tb = -10812	Lb = -31507	---
<b>7.00</b>	30.22	79140.00	-48260.00	0.00	-4.75
---	---	---	Ft = 94137	Fp = -2348	---
---	---	Pa = 79384	Ta = -50596	La = 0	---
---	---	Pb = -244	Tb = 2336	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	7340	-5294	-6012697	39007	43125035	0	345.28	0.10
3	8173	-5381	-11163080	39008	79048002	-0	345.28	0.13
4	9129	-5483	-16431617	39009	114984639	-0	345.28	0.14
5	10207	-5600	-21835039	39010	150936439	-0	345.28	0.15
6	11408	-5732	-27390103	39011	186905109	-0	345.28	0.15
7	12732	-5879	-33113571	39012	222892403	-0	345.28	0.15
8	101358	38464	10475978	39095	259719004	-0	345.28	0.18
9	190020	395	-3983112	39177	298040935	0	345.28	0.20
10	191429	231	-8689410	39176	336297406	0	345.28	0.22
11	190377	-5312	-16777213	39172	374441767	0	345.28	0.23
12	186209	-103505	-129284003	39164	412421733	0	345.28	0.24
13	188582	-103690	-232567804	39162	452416822	0	345.28	0.18
14	191018	-103878	-336048275	39160	492354765	0	345.28	0.20
15	280808	-44147	-398564105	39230	533586049	0	345.28	0.22
16	370659	-97636	-502967564	39295	576036894	-0	345.28	0.24
17	373282	-97831	-605229877	39289	618372029	-0	345.28	0.26
18	375967	-98028	-707604615	39281	660589820	-0	345.28	0.27
19	373062	-207205	-907224686	39268	702612098	-0	345.28	0.30
20	370220	-201832	-1105988907	39256	744442793	-0	345.28	0.33
21	373092	-202041	-1306264621	39247	786158460	-0	345.28	0.36
22	450527	-327026	-1591906700	52451	837315229	-0	345.28	0.41
23	520203	-278897	-1914255846	166819	1016699117	394717966	345.28	0.48
24	524200	-279093	-2168344500	166805	1167603656	394717966	345.28	0.37
25	528273	-279294	-2422356682	166794	1318359802	394717966	345.28	0.39
26	538868	-246649	-2653362593	153767	1460682127	394717966	345.28	0.42
27	549539	-288205	-2919853102	135274	1580005305	367884705	345.28	0.44
28	553842	-288421	-3181357568	135263	1702962628	367884705	345.28	0.46
29	572466	-288653	-3443034861	135259	1825889348	367884705	345.28	0.47
30	576922	-288876	-3704612370	135248	1948648039	367884705	345.28	0.49
31	582748	-289119	-3982794159	135237	2079062322	367884705	345.28	0.43
32	588681	-289363	-4260886672	135227	2209299522	367884705	345.28	0.44
33	594720	-289613	-4538916199	135217	2339372469	367884705	345.28	0.45
34	600866	-289868	-4816876584	135207	2469276905	367884705	345.28	0.46
35	607118	-290128	-5094762783	135198	2599009068	367884705	345.28	0.47
36	635021	-290405	-5372868868	135194	2728713006	367884705	345.28	0.48
37	641486	-290673	-5650877411	135184	2858230212	367884705	345.28	0.49
38	649496	-290960	-5941953410	135174	2993679494	367884705	345.28	0.43
39	657645	-291247	-6232948716	135165	3128936782	367884705	345.28	0.44
40	665933	-291541	-6523887693	135156	3264012633	367884705	345.28	0.44
41	674359	-291840	-6814768142	135147	3398904132	367884705	345.28	0.45
42	682924	-292144	-7105588394	135138	3533608598	367884705	345.28	0.45
43	691627	-292453	-7396347069	135129	3668123460	367884705	345.28	0.45
44	732327	-292779	-7687325340	135125	3802584331	367884705	345.28	0.46
45	741307	-293098	-7978218717	135116	3936840186	367884705	345.28	0.46
46	750648	-293420	-8267130105	135107	4070015693	367884705	345.28	0.46
47	760132	-293741	-8555949654	135098	4202984283	367884705	345.28	0.46
48	769760	-294067	-8844674326	135089	4335742515	367884705	345.28	0.46
49	779532	-294398	-9133304075	135080	4468288412	367884705	345.28	0.46
50	789448	-294735	-9421838915	135071	4600620007	367884705	345.28	0.46
51	799508	-295077	-9710278925	135063	4732735352	367884705	345.28	0.46
52	809711	-295424	-9998624234	135054	4864632508	367884705	345.28	0.46
53	820059	-295777	-10286875008	135045	4996309542	367884705	345.28	0.46
54	830550	-296135	-10575031438	135037	5127764521	367884705	345.28	0.46
55	841186	-296498	-10863093727	135028	5258995510	367884705	345.28	0.46
56	851965	-296867	-11151062089	135020	5390000569	367884705	345.28	0.46
57	862888	-297241	-11438936733	135012	5520777746	367884705	345.28	0.46
58	873955	-297621	-11726717863	135004	5651325081	367884705	345.28	0.46

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 82 " PDT - 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]
<b>1.00</b>	53.55	0.00	-5210.00	39000.00	0.00
<b>2.00</b>	43.82	0.00	-48260.00	0.00	4.75
---	---	---	Ft = 6412	Fp = -51988	---
---	---	Pa = 5407	Ta = 3446	La = 0	---
---	---	Pb = -5407	Tb = -51706	Lb = 0	---
<b>3.00</b>	43.82	0.00	-48260.00	0.00	-4.75
---	---	---	Ft = -6412	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -48260	Lb = 0	---
<b>4.00</b>	37.02	0.00	-48260.00	0.00	4.75
---	---	---	Ft = 6412	Fp = -51988	---
---	---	Pa = 5407	Ta = 3446	La = 0	---
---	---	Pb = -5407	Tb = -51706	Lb = 0	---
<b>5.00</b>	37.02	0.00	-48260.00	0.00	-4.75
---	---	---	Ft = -6412	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -48260	Lb = 0	---
<b>6.00</b>	30.22	0.00	-36480.00	96000.00	4.75
---	---	---	Ft = 83898	Fp = 26746	---
---	---	Pa = 14436	Ta = -37751	La = 73521	---
---	---	Pb = -14436	Tb = 1271	Lb = 22479	---
<b>7.00</b>	30.22	0.00	-48260.00	0.00	-4.75
---	---	---	Ft = -6412	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -48260	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	710	-5281	-5822780	39000	42978916	0	345.28	0.10
3	1543	-5367	-10781196	39000	78758172	0	345.28	0.13
4	2499	-5468	-15855426	39000	114553765	0	345.28	0.14
5	3577	-5584	-21061787	39000	150366638	-0	345.28	0.15
6	4778	-5714	-26416598	39001	186197762	-0	345.28	0.15
7	6102	-5859	-31936178	39001	222048151	-0	345.28	0.15
8	12640	16310	-11766722	39002	257268179	0	345.28	0.16
9	19215	-2732	-19645874	39002	292582971	0	345.28	0.17
10	20623	-2897	-22738833	39002	327909897	0	345.28	0.19
11	22519	-6174	-27913507	39003	363254246	0	345.28	0.20
12	21299	-103206	-130613280	39002	398570794	0	345.28	0.21
13	23672	-103395	-229144977	39003	435847038	0	345.28	0.16
14	26108	-103586	-327912022	39003	473145278	0	345.28	0.18
15	33810	-73754	-405252583	39004	510535409	-0	345.28	0.19
16	41574	-100539	-502623829	39004	548012437	-0	345.28	0.21
17	44196	-100744	-599105260	39004	585506545	-0	345.28	0.22
18	46881	-100955	-695832372	39005	623016628	-0	345.28	0.24
19	46924	-199853	-877742750	39004	660509905	-0	345.28	0.26
20	47030	-201357	-1070009858	39004	697987235	-0	345.28	0.29
21	49902	-201583	-1262056913	39004	735479142	-0	345.28	0.32
22	70375	-150261	-1420089348	46598	778149014	-0	345.28	0.34
23	83089	-239804	-1635856232	112528	894487572	227594354	345.28	0.39
24	87086	-240026	-1846969440	112528	993497013	227594354	345.28	0.30
25	91160	-240248	-2058303047	112528	1092517003	227594354	345.28	0.32
26	88091	-299131	-2309569289	121817	1197457426	227594354	345.28	0.34
27	85099	-287693	-2563561166	135006	1318701390	246738831	345.28	0.36
28	89402	-287928	-2816345862	135006	1437255816	246738831	345.28	0.38
29	108026	-288170	-3069586544	135007	1555929214	246738831	345.28	0.40
30	112482	-288413	-3323046024	135007	1674604289	246738831	345.28	0.42
31	118308	-288677	-3592946828	135007	1800861838	246738831	345.28	0.37
32	124241	-288941	-3863106257	135007	1927124707	246738831	345.28	0.38
33	130280	-289210	-4133527531	135007	2053392453	246738831	345.28	0.39
34	136426	-289483	-4404208117	135007	2179661755	246738831	345.28	0.40
35	142678	-289761	-4675145411	135007	2305929265	246738831	345.28	0.41
36	170581	-290046	-4946608309	135008	2432322466	246738831	345.28	0.42
37	177046	-290333	-5218309019	135008	2558700464	246738831	345.28	0.43
38	185056	-290639	-5503137032	135008	2691044418	246738831	345.28	0.39
39	193205	-290945	-5788232532	135008	2823373023	246738831	345.28	0.39
40	201493	-291255	-6073598807	135008	2955685542	246738831	345.28	0.40
41	209919	-291571	-6359232442	135008	3087977963	246738831	345.28	0.40
42	218484	-291892	-6645129993	135007	3220246267	246738831	345.28	0.41
43	227187	-292218	-6931287986	135007	3352486425	246738831	345.28	0.41
44	267887	-292551	-7217962688	135008	3484818656	246738831	345.28	0.42
45	276867	-292887	-7504871608	135007	3617105393	246738831	345.28	0.42
46	286208	-293227	-7790137529	135007	3748480754	246738831	345.28	0.42
47	295692	-293564	-8075622177	135007	3879803814	246738831	345.28	0.42
48	305320	-293907	-8361321013	135006	4011070119	246738831	345.28	0.42
49	315092	-294254	-8647230479	135006	4142275691	246738831	345.28	0.42
50	325008	-294607	-8933347020	135005	4273416557	246738831	345.28	0.43
51	335068	-294965	-9219667078	135005	4404488747	246738831	345.28	0.43
52	345271	-295328	-9506187100	135004	4535488300	246738831	345.28	0.43
53	355619	-295696	-9792903537	135004	4666411254	246738831	345.28	0.43
54	366110	-296069	-10079812839	135003	4797253658	246738831	345.28	0.43
55	376746	-296448	-10366911464	135002	4928011564	246738831	345.28	0.43
56	387525	-296831	-10654195872	135002	5058681030	246738831	345.28	0.43
57	398448	-297220	-10941662528	135001	5189258120	246738831	345.28	0.43
58	409515	-297614	-11229307902	135000	5319738903	246738831	345.28	0.43

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 83 " MDT - 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

<b>Livello</b>	<b>H [m]</b>	<b>Verticali [N]</b>	<b>Trasversali [N]</b>	<b>Longitudinali [N]</b>	<b>Eccentricità del conduttore [m]</b>
<b>1.00</b>	53.55	6630.00	-5210.00	39000.00	0.00
<b>2.00</b>	43.82	79140.00	-48260.00	0.00	4.75
---	---	---	Ft = 106961	Fp = -106325	---
---	---	Pa = 90199	Ta = 57488	La = 0	---
---	---	Pb = -11059	Tb = -105748	Lb = 0	---
<b>3.00</b>	43.82	79140.00	-48260.00	0.00	-4.75
---	---	---	Ft = 94137	Fp = -2348	---
---	---	Pa = 79384	Ta = -50596	La = 0	---
---	---	Pb = -244	Tb = 2336	Lb = 0	---
<b>4.00</b>	37.02	62110.00	-36480.00	96000.00	4.75
---	---	---	Ft = 138981	Fp = -35807	---
---	---	Pa = 48976	Ta = -25668	La = 127507	---
---	---	Pb = 13134	Tb = -10812	Lb = -31507	---
<b>5.00</b>	37.02	79140.00	-48260.00	0.00	-4.75
---	---	---	Ft = 94137	Fp = -2348	---
---	---	Pa = 79384	Ta = -50596	La = 0	---
---	---	Pb = -244	Tb = 2336	Lb = 0	---
<b>6.00</b>	30.22	79140.00	-48260.00	0.00	4.75
---	---	---	Ft = 106961	Fp = -106325	---
---	---	Pa = 90199	Ta = 57488	La = 0	---
---	---	Pb = -11059	Tb = -105748	Lb = 0	---
<b>7.00</b>	30.22	79140.00	-48260.00	0.00	-4.75
---	---	---	Ft = 94137	Fp = -2348	---
---	---	Pa = 79384	Ta = -50596	La = 0	---
---	---	Pb = -244	Tb = 2336	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	7340	-5294	-6020591	39009	43162482	0	345.28	0.10
3	8173	-5381	-11179760	39010	79127135	-0	345.28	0.13
4	9129	-5483	-16458110	39011	115110320	-0	345.28	0.14
5	10207	-5600	-21872499	39012	151114150	0	345.28	0.15
6	11408	-5732	-27439818	39013	187140957	-0	345.28	0.15
7	12732	-5879	-33176959	39015	223193115	-0	345.28	0.15
8	101358	38466	10305986	39119	260525430	-0	345.28	0.18
9	190020	398	-4352847	39221	299794898	0	345.28	0.21
10	191429	234	-9260151	39220	339004871	0	345.28	0.22
11	190377	-5308	-17547548	39215	378095985	0	345.28	0.23
12	186209	-103502	-130249184	39206	417000128	0	345.28	0.25
13	188582	-103687	-233740658	39203	457980168	0	345.28	0.18
14	191018	-103874	-337431003	39200	498913425	-0	345.28	0.20
15	260196	-291257	-578282923	80101	569140896	-0	345.28	0.26
16	329436	-180724	-759892749	166835	751127166	381440496	345.28	0.33
17	332059	-180920	-940077467	166828	915320644	381440496	345.28	0.38
18	334744	-181119	-1120323736	166819	1079362694	381440496	345.28	0.42
19	343936	-171412	-1283167708	137966	1219616894	381440496	345.28	0.45
20	353190	-190022	-1477031029	135304	1352895245	357462736	345.28	0.49
21	356062	-190233	-1665708762	135293	1486746590	357462736	345.28	0.52
22	454108	-148308	-1828335773	135357	1621901705	357462736	345.28	0.55
23	544395	-183980	-2000613555	135407	1758085639	357462736	345.28	0.58
24	548393	-184175	-2172170960	135388	1883248034	357462736	345.28	0.43
25	552466	-184376	-2343633275	135373	2008144787	357462736	345.28	0.44
26	550965	-256708	-2562899613	135356	2132752578	357462736	345.28	0.45
27	549539	-288198	-2833592093	135340	2257072230	357462736	345.28	0.47
28	553842	-288414	-3094952865	135327	2381169488	357462736	345.28	0.49
29	572466	-288647	-3356491631	135321	2505195162	357462736	345.28	0.51
30	576922	-288870	-3617939121	135307	2628985321	357462736	345.28	0.52
31	582748	-289113	-3895991301	135293	2760427828	357462736	345.28	0.45
32	588681	-289357	-4173962236	135280	2891629540	357462736	345.28	0.46
33	594720	-289608	-4451877210	135268	3022611271	357462736	345.28	0.47
34	600866	-289863	-4729729804	135256	3153370848	357462736	345.28	0.48
35	607118	-290123	-5007514725	135243	3283906491	357462736	345.28	0.49
36	635021	-290400	-5285522474	135239	3414390568	357462736	345.28	0.50
37	641486	-290669	-5563438991	135227	3544637856	357462736	345.28	0.51
38	649496	-290956	-5854424963	135214	3680801372	357462736	345.28	0.45
39	657645	-291243	-6145336203	135202	3816725597	357462736	345.28	0.45
40	665933	-291537	-6436196497	135191	3952425686	357462736	345.28	0.46
41	674359	-291836	-6727003480	135180	4087900029	357462736	345.28	0.46
42	682924	-292141	-7017755328	135169	4223147185	357462736	345.28	0.46
43	691627	-292450	-7308450514	135158	4358165739	357462736	345.28	0.47
44	732327	-292776	-7599367406	135154	4493113571	357462736	345.28	0.47
45	741307	-293095	-7890204302	135142	4627817529	357462736	345.28	0.47
46	750648	-293418	-8179064282	135131	4761400884	357462736	345.28	0.47
47	760132	-293739	-8467837023	135120	4894740837	357462736	345.28	0.47
48	769760	-294065	-8756519405	135109	5027834591	357462736	345.28	0.47
49	779532	-294397	-9045111275	135098	5160680999	357462736	345.28	0.47
50	789448	-294733	-9333612552	135087	5293278873	357462736	345.28	0.47
51	799508	-295076	-9622023223	135076	5425626986	357462736	345.28	0.47
52	809711	-295423	-9910343332	135066	5557724075	357462736	345.28	0.47
53	820059	-295776	-10198572965	135055	5689568838	357462736	345.28	0.47
54	830550	-296134	-10486712237	135045	5821159932	357462736	345.28	0.47
55	841186	-296498	-10774761286	135035	5952495970	357462736	345.28	0.47
56	851965	-296867	-11062720258	135025	6083575525	357462736	345.28	0.47
57	862888	-297241	-11350589303	135015	6214397124	357462736	345.28	0.47
58	873955	-297621	-11638368568	135005	6344959254	357462736	345.28	0.47



## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 84 " MDT - 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

<b>Livello</b>	<b>H [m]</b>	<b>Verticali [N]</b>	<b>Trasversali [N]</b>	<b>Longitudinali [N]</b>	<b>Eccentricità del conduttore [m]</b>
<b>1.00</b>	53.55	0.00	-5210.00	39000.00	0.00
<b>2.00</b>	43.82	0.00	-48260.00	0.00	4.75
---	---	---	Ft = 6412	Fp = -51988	---
---	---	Pa = 5407	Ta = 3446	La = 0	---
---	---	Pb = -5407	Tb = -51706	Lb = 0	---
<b>3.00</b>	43.82	0.00	-48260.00	0.00	-4.75
---	---	---	Ft = -6412	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -48260	Lb = 0	---
<b>4.00</b>	37.02	0.00	-36480.00	96000.00	4.75
---	---	---	Ft = 83898	Fp = 26746	---
---	---	Pa = 14436	Ta = -37751	La = 73521	---
---	---	Pb = -14436	Tb = 1271	Lb = 22479	---
<b>5.00</b>	37.02	0.00	-48260.00	0.00	-4.75
---	---	---	Ft = -6412	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -48260	Lb = 0	---
<b>6.00</b>	30.22	0.00	-48260.00	0.00	4.75
---	---	---	Ft = 6412	Fp = -51988	---
---	---	Pa = 5407	Ta = 3446	La = 0	---
---	---	Pb = -5407	Tb = -51706	Lb = 0	---
<b>7.00</b>	30.22	0.00	-48260.00	0.00	-4.75
---	---	---	Ft = -6412	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -48260	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	710	-5281	-5822802	39000	42981812	0	345.28	0.10
3	1543	-5367	-10781265	39000	78767358	0	345.28	0.13
4	2499	-5468	-15855572	39000	114573135	0	345.28	0.14
5	3577	-5584	-21062044	39001	150400587	-0	345.28	0.15
6	4778	-5714	-26417001	39001	186251185	0	345.28	0.15
7	6102	-5859	-31936768	39001	222126440	0	345.28	0.15
8	12640	16310	-11767693	39002	257396921	0	345.28	0.16
9	19215	-2732	-19647424	39003	292788403	0	345.28	0.17
10	20623	-2897	-22741004	39003	328197630	0	345.28	0.19
11	22519	-6174	-27916357	39003	363631824	0	345.28	0.20
12	21299	-103206	-130616772	39003	399033327	0	345.28	0.21
13	23672	-103395	-229149220	39003	436409145	0	345.28	0.16
14	26108	-103586	-327917094	39004	473817173	0	345.28	0.18
15	38324	-38649	-379272052	62551	527548633	0	345.28	0.19
16	50603	-141738	-524286596	112527	645183739	219938566	345.28	0.24
17	53225	-141944	-660010482	112528	752653526	219938566	345.28	0.27
18	55910	-142154	-795974508	112528	860141037	219938566	345.28	0.30
19	51439	-204474	-993304380	133111	984462391	219938566	345.28	0.34
20	47030	-189577	-1169732967	135006	1113609493	237045755	345.28	0.37
21	49902	-189803	-1350611928	135006	1242212979	237045755	345.28	0.41
22	65860	-168909	-1517849413	135007	1371007737	237045755	345.28	0.43
23	74060	-186825	-1689295820	135008	1499870191	237045755	345.28	0.47
24	78057	-187047	-1853978766	135008	1618614230	237045755	345.28	0.35
25	82131	-187269	-2018885671	135008	1737366573	237045755	345.28	0.36
26	83577	-243504	-2220770977	135008	1856101151	237045755	345.28	0.38
27	85099	-287693	-2483738178	135008	1974817227	237045755	345.28	0.40
28	89402	-287928	-2736502394	135008	2093540922	237045755	345.28	0.41
29	108026	-288170	-2989720025	135009	2212404838	237045755	345.28	0.43
30	112482	-288413	-3243157178	135009	2331264444	237045755	345.28	0.45
31	118308	-288677	-3513034835	135009	2457713305	237045755	345.28	0.39
32	124241	-288941	-3783171715	135009	2584162540	237045755	345.28	0.40
33	130280	-289210	-4053570958	135009	2710612375	237045755	345.28	0.42
34	136426	-289483	-4324230075	135009	2837059112	237045755	345.28	0.43
35	142678	-289761	-4595146508	135009	2963499042	237045755	345.28	0.43
36	170581	-290046	-4866586271	135010	3090083457	237045755	345.28	0.44
37	177046	-290333	-5138264752	135010	3216645181	237045755	345.28	0.45
38	185056	-290639	-5423070329	135010	3349174560	237045755	345.28	0.40
39	193205	-290945	-5708144240	135010	3481681599	237045755	345.28	0.41
40	201493	-291255	-5993489716	135010	3614166028	237045755	345.28	0.41
41	209919	-291571	-6279103380	135009	3746623504	237045755	345.28	0.42
42	218484	-291892	-6564981829	135009	3879049688	237045755	345.28	0.42
43	227187	-292218	-6851121625	135009	4011440242	237045755	345.28	0.43
44	267887	-292551	-7137776744	135010	4143934332	237045755	345.28	0.43
45	276867	-292887	-7424667270	135009	4276373094	237045755	345.28	0.43
46	286208	-293227	-7709916106	135009	4407889671	237045755	345.28	0.43
47	295692	-293564	-7995384885	135008	4539343883	237045755	345.28	0.43
48	305320	-293907	-8281069105	135008	4670730982	237045755	345.28	0.43
49	315092	-294254	-8566965235	135007	4802046786	237045755	345.28	0.43
50	325008	-294607	-8853069741	135006	4933287117	237045755	345.28	0.44
51	335068	-294965	-9139379091	135006	5064447806	237045755	345.28	0.44
52	345271	-295328	-9425889757	135005	5195524691	237045755	345.28	0.44
53	355619	-295696	-9712598211	135004	5326513616	237045755	345.28	0.44
54	366110	-296069	-9999500930	135004	5457410435	237045755	345.28	0.44
55	376746	-296448	-10286594393	135003	5588211008	237045755	345.28	0.44
56	387525	-296831	-10573875083	135002	5718911202	237045755	345.28	0.44
57	398448	-297220	-10861339488	135001	5849506893	237045755	345.28	0.44
58	409515	-297614	-11148984101	135000	5979993964	237045755	345.28	0.44

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 85 " PDT - 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]
<b>1.00</b>	53.55	13260.00	-10420.00	8000.00	0.00
<b>2.00</b>	43.82	62110.00	-36480.00	96000.00	4.75
---	---	---	Ft = 138981	Fp = -35807	---
---	---	Pa = 48976	Ta = -25668	La = 127507	---
---	---	Pb = 13134	Tb = -10812	Lb = -31507	---
<b>3.00</b>	43.82	79140.00	-48260.00	0.00	-4.75
---	---	---	Ft = 94137	Fp = -2348	---
---	---	Pa = 79384	Ta = -50596	La = 0	---
---	---	Pb = -244	Tb = 2336	Lb = 0	---
<b>4.00</b>	37.02	62110.00	-36480.00	96000.00	4.75
---	---	---	Ft = 138981	Fp = -35807	---
---	---	Pa = 48976	Ta = -25668	La = 127507	---
---	---	Pb = 13134	Tb = -10812	Lb = -31507	---
<b>5.00</b>	37.02	79140.00	-48260.00	0.00	-4.75
---	---	---	Ft = 94137	Fp = -2348	---
---	---	Pa = 79384	Ta = -50596	La = 0	---
---	---	Pb = -244	Tb = 2336	Lb = 0	---
<b>6.00</b>	30.22	79140.00	-48260.00	0.00	4.75
---	---	---	Ft = 106961	Fp = -106325	---
---	---	Pa = 90199	Ta = 57488	La = 0	---
---	---	Pb = -11059	Tb = -105748	Lb = 0	---
<b>7.00</b>	30.22	79140.00	-48260.00	0.00	-4.75
---	---	---	Ft = 94137	Fp = -2348	---
---	---	Pa = 79384	Ta = -50596	La = 0	---
---	---	Pb = -244	Tb = 2336	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Uso
2	13970	-10517	-12056758	8024	9306402	0	345.28	0.04
3	14803	-10604	-22292307	8026	17160054	-0	345.28	0.05
4	15759	-10707	-32651531	8027	25044696	-0	345.28	0.05
5	16837	-10824	-43152078	8029	32964439	-0	345.28	0.06
6	18038	-10955	-53811719	8031	40923489	-0	345.28	0.06
7	19362	-11102	-64648236	8033	48926062	-0	345.28	0.06
8	87376	-188237	-262910648	123148	147907221	-0	345.28	0.20
9	155428	-87925	-320572121	135767	278261598	369451240	345.28	0.33
10	156836	-88089	-404739238	135767	405127221	369451240	345.28	0.39
11	167880	-82799	-486006026	135507	532091437	369451240	345.28	0.44
12	175809	-96931	-566203505	104280	629671828	348977571	345.28	0.48
13	178182	-97115	-663901075	104276	733987655	348977571	345.28	0.36
14	180618	-97302	-761726143	104273	838234566	348977571	345.28	0.37
15	249796	-284690	-996884801	145204	972460890	348977571	345.28	0.43
16	319036	-174162	-1172937340	231966	1219084781	730418067	345.28	0.52
17	321659	-174358	-1347487025	231956	1447842316	730418067	345.28	0.57
18	324344	-174557	-1522027557	231945	1676368146	730418067	345.28	0.61
19	333536	-164849	-1679115739	203090	1881079384	730418067	345.28	0.64
20	342790	-183460	-1867176008	200428	2078777951	706440307	345.28	0.68
21	345662	-183670	-2049994445	200413	2276948593	706440307	345.28	0.71
22	443708	-141749	-2206864621	200506	2477084287	706440307	345.28	0.73
23	533995	-177424	-2373447909	200579	2678770109	706440307	345.28	0.78
24	537993	-177619	-2539694921	200553	2864130740	706440307	345.28	0.57
25	542066	-177819	-2705798866	200531	3049096673	706440307	345.28	0.57
26	540565	-250150	-2919664726	200508	3233632902	706440307	345.28	0.59
27	539139	-281639	-3184918272	200484	3417741269	706440307	345.28	0.61
28	543442	-281855	-3440809813	200466	3601520806	706440307	345.28	0.62
29	562066	-282087	-3696862314	200459	3785197837	706440307	345.28	0.64
30	566522	-282310	-3952796822	200439	3968527013	706440307	345.28	0.65
31	572348	-282552	-4224957878	200419	4163190569	706440307	345.28	0.56
32	578281	-282796	-4497014485	200400	4357499238	706440307	345.28	0.57
33	584320	-283046	-4768995761	200383	4551483946	706440307	345.28	0.58
34	590466	-283301	-5040896876	200366	4745141643	706440307	345.28	0.59
35	596718	-283560	-5312714000	200348	4938469823	706440307	345.28	0.59
36	624621	-283837	-5584748287	200343	5131726416	706440307	345.28	0.60
37	631086	-284105	-5856676769	200325	5324634467	706440307	345.28	0.60
38	639096	-284392	-6141377592	200307	5526307532	706440307	345.28	0.53
39	647245	-284679	-6425991395	200290	5727628751	706440307	345.28	0.54
40	655533	-284973	-6710543831	200274	5928620494	706440307	345.28	0.54
41	663959	-285272	-6995033456	200258	6129280416	706440307	345.28	0.54
42	672524	-285576	-7279459296	200242	6329606399	706440307	345.28	0.54
43	681227	-285885	-7563820610	200227	6529596353	706440307	345.28	0.55
44	721927	-286210	-7848402935	200221	6729486117	706440307	345.28	0.55
45	730907	-286529	-8132898103	200204	6929017042	706440307	345.28	0.55
46	740248	-286852	-8415451347	200188	7126890452	706440307	345.28	0.54
47	749732	-287172	-8697911551	200172	7324405689	706440307	345.28	0.54
48	759360	-287498	-8980276118	200157	7521558601	706440307	345.28	0.54
49	769132	-287830	-9262545420	200141	7718347460	706440307	345.28	0.54
50	779048	-288166	-9544719862	200125	7914770473	706440307	345.28	0.54
51	789108	-288508	-9826799884	200110	8110825787	706440307	345.28	0.54
52	799311	-288855	-10108785951	200095	8306511493	706440307	345.28	0.54
53	809659	-289208	-10390678543	200080	8501825617	706440307	345.28	0.54
54	820150	-289566	-10672478140	200065	8696766126	706440307	345.28	0.54
55	830786	-289929	-10954185221	200050	8891330919	706440307	345.28	0.54
56	841565	-290298	-11235800251	200036	9085517832	706440307	345.28	0.53
57	852488	-290671	-11517323680	200021	9279324634	706440307	345.28	0.53
58	863555	-291051	-11798755934	200007	9472749031	706440307	345.28	0.53

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 86 " PDT - 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]
<b>1.00</b>	53.55	0.00	-10420.00	8000.00	0.00
<b>2.00</b>	43.82	0.00	-36480.00	96000.00	4.75
---	---	---	Ft = 83898	Fp = 26746	---
---	---	Pa = 14436	Ta = -37751	La = 73521	---
---	---	Pb = -14436	Tb = 1271	Lb = 22479	---
<b>3.00</b>	43.82	0.00	-48260.00	0.00	-4.75
---	---	---	Ft = -6412	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -48260	Lb = 0	---
<b>4.00</b>	37.02	0.00	-36480.00	96000.00	4.75
---	---	---	Ft = 83898	Fp = 26746	---
---	---	Pa = 14436	Ta = -37751	La = 73521	---
---	---	Pb = -14436	Tb = 1271	Lb = 22479	---
<b>5.00</b>	37.02	0.00	-48260.00	0.00	-4.75
---	---	---	Ft = -6412	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -48260	Lb = 0	---
<b>6.00</b>	30.22	0.00	-48260.00	0.00	4.75
---	---	---	Ft = 6412	Fp = -51988	---
---	---	Pa = 5407	Ta = 3446	La = 0	---
---	---	Pb = -5407	Tb = -51706	Lb = 0	---
<b>7.00</b>	30.22	0.00	-48260.00	0.00	-4.75
---	---	---	Ft = -6412	Fp = 0	---
---	---	Pa = 0	Ta = 0	La = 0	---
---	---	Pb = 0	Tb = -48260	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	T <sub>x</sub> [N]	My [Nmm]	T <sub>y</sub> [N]	Mx [Nmm]	Mt [Nmm]	σ <sub>amm.</sub> [N/mm <sup>2</sup> ]	% Usa
2	710	-10491	-11564045	8000	8833509	0	345.28	0.03
3	1543	-10577	-21301599	8000	16210478	-0	345.28	0.04
4	2499	-10678	-31156777	8001	23614100	0	345.28	0.05
5	3577	-10794	-41145973	8001	31047558	-0	345.28	0.05
6	4778	-10924	-51285588	8001	38514037	-0	345.28	0.05
7	6102	-11069	-61592028	8001	46016733	-0	345.28	0.05
8	17154	6032	-35751267	74314	104895925	-0	345.28	0.07
9	28244	-49142	-95139741	81527	180859955	213025562	345.28	0.17
10	29653	-49307	-140169457	81528	254855113	213025562	345.28	0.20
11	27033	-55868	-189160318	81721	328888228	213025562	345.28	0.23
12	21299	-96637	-292216111	104005	423817206	227632720	345.28	0.28
13	23672	-96825	-384548335	104005	522964535	227632720	345.28	0.23
14	26108	-97016	-477113981	104006	622162179	227632720	345.28	0.25
15	38324	-32080	-522272147	127554	737780205	227632720	345.28	0.27
16	50603	-135168	-661093139	177531	917394567	447571286	345.28	0.33
17	53225	-135374	-790620037	177531	1086854749	447571286	345.28	0.37
18	55910	-135585	-920383759	177531	1256341821	447571286	345.28	0.40
19	51439	-197904	-1111507665	198114	1442616511	447571286	345.28	0.45
20	47030	-183007	-1281725692	200008	1633672408	464678475	345.28	0.48
21	49902	-183233	-1456391992	200009	1824191796	464678475	345.28	0.52
22	65860	-162339	-1617416927	200011	2014993671	464678475	345.28	0.55
23	74060	-180256	-1782648802	200012	2205895715	464678475	345.28	0.59
24	78057	-180477	-1941603096	200012	2381808125	464678475	345.28	0.44
25	82131	-180700	-2100779516	200012	2557732971	464678475	345.28	0.45
26	83577	-236935	-2296932802	200012	2733631722	464678475	345.28	0.46
27	85099	-281123	-2554166588	200011	2909503277	464678475	345.28	0.48
28	89402	-281359	-2801196124	200012	3085386202	464678475	345.28	0.50
29	108026	-281600	-3048677675	200013	3261476357	464678475	345.28	0.52
30	112482	-281844	-3296377429	200013	3437560269	464678475	345.28	0.54
31	118308	-282107	-3560150074	200014	3624887360	464678475	345.28	0.47
32	124241	-282371	-3824180662	200014	3812215124	464678475	345.28	0.48
33	130280	-282640	-4088472491	200014	3999543877	464678475	345.28	0.49
34	136426	-282913	-4353023158	200014	4186868152	464678475	345.28	0.50
35	142678	-283191	-4617830191	200014	4374182461	464678475	345.28	0.51
36	170581	-283476	-4883158320	200015	4561710375	464678475	345.28	0.51
37	177046	-283763	-5148724361	200015	4749204852	464678475	345.28	0.52
38	185056	-284069	-5427127505	200015	4945540258	464678475	345.28	0.46
39	193205	-284375	-5705798286	200015	5141842733	464678475	345.28	0.47
40	201493	-284685	-5984740067	200014	5338111870	464678475	345.28	0.47
41	209919	-285001	-6263949598	200014	5534341238	464678475	345.28	0.48
42	218484	-285322	-6543423605	200014	5730524418	464678475	345.28	0.48
43	227187	-285648	-6823158783	200013	5926654991	464678475	345.28	0.48
44	267887	-285981	-7103407172	200014	6122938679	464678475	345.28	0.49
45	276867	-286318	-7383891149	200014	6319140632	464678475	345.28	0.49
46	286208	-286657	-7662775557	200013	6513976644	464678475	345.28	0.49
47	295692	-286994	-7941880375	200012	6708720502	464678475	345.28	0.49
48	305320	-287337	-8221201256	200011	6903365181	464678475	345.28	0.49
49	315092	-287684	-8500734820	200010	7097904487	464678475	345.28	0.49
50	325008	-288037	-8780477685	200009	7292332239	464678475	345.28	0.49
51	335068	-288395	-9060426471	200008	7486642264	464678475	345.28	0.49
52	345271	-288758	-9340577801	200007	7680828401	464678475	345.28	0.49
53	355619	-289126	-9620928300	200006	7874884497	464678475	345.28	0.49
54	366110	-289499	-9901474597	200005	8068804415	464678475	345.28	0.49
55	376746	-289878	-10182213322	200004	8262582025	464678475	345.28	0.49
56	387525	-290261	-10463141113	200003	8456211211	464678475	345.28	0.49
57	398448	-290650	-10744254610	200002	8649685866	464678475	345.28	0.49
58	409515	-291044	-11025550456	200001	8842999895	464678475	345.28	0.49

## VERIFICA DEI TIRAFONDI/VITI

### TRONCO N° 7

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

La combinazione più sfavorevole per il calcolo dei tirafondi/viti è la n. 3

Numero dei tirafondi/viti = **48**

Cerchio dei tirafondi/viti = **2600.0** [mm]

Diametro dei tirafondi/viti = **52.0** [mm]

Sezione resistente del cerchio di tirafondi/viti = **84480.0** [mm<sup>2</sup>]

Modulo di resistenza del cerchio di tirafondi/viti = **54912000.0** [mm<sup>3</sup>]

Le barre per la realizzazione dei tirafondi/viti sono in acciaio tipo: CLASSE 8.8 ( EN 20898 ).  
La tensione ammissibile è pari a 320 [N/mm<sup>2</sup>]

Tensione normalizzata nei tirafondi/viti = **0.92**

### VERIFICA DELLA FLANGIA DI BASE/INTERMEDIA

Il dispositivo di fissaggio alla fondazione è costituito da un anello circolare saldato al palo ed opportunamente forato al fine di inserirvi i tirafondi/viti. La flangia è rinforzata da un gruppo di nervature saldate alla flangia e al palo.

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 tirafodi, 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 = **2760.0** [mm]

La combinazione più sfavorevole per il calcolo della flangia è la n. 3

Tensione normalizzata della flangia = **0.54**

N. 48 nervature spessore = **15** [mm]

Tensione ammissibile nella flangia = **215.8** [N/mm<sup>2</sup>]

## LINEA ELASTICA

Cond. n.	Tipo	H [mm]	Freccia trasversale [mm]	Freccia longitudinale [mm]	Freccia totale [mm]	Rotazione totale
1	N	53360	431	0	431	0.786°
2	N	53360	606	17	606	1.108°
3	N	53360	1150	45	1150	2.119°
4	N	53360	1133	44	1134	2.096°
5	N	53360	1119	38	1120	2.059°
6	N	53360	1104	37	1104	2.039°
7	N	53360	941	61	943	1.760°
8	N	53360	918	59	920	1.720°
9	N	53360	1100	45	1100	2.037°
10	N	53360	1082	44	1083	2.012°
11	N	53360	1076	45	1077	1.995°
12	N	53360	1060	44	1061	1.972°
13	N	53360	922	61	924	1.734°
14	N	53360	899	59	901	1.694°
15	E	53360	1086	333	1136	2.144°
16	E	53360	1085	308	1128	2.132°
17	E	53360	1072	401	1145	2.180°
18	E	53360	1077	367	1138	2.170°
19	E	53360	1052	501	1166	2.176°
20	E	53360	1083	431	1165	2.196°
21	E	53360	1058	312	1104	2.073°
22	E	53360	1058	289	1096	2.065°
23	E	53360	1045	378	1111	2.105°
24	E	53360	1050	345	1105	2.099°
25	E	53360	1025	473	1129	2.099°
26	E	53360	1055	405	1130	2.123°
27	E	53360	873	408	964	1.920°
28	E	53360	874	372	950	1.887°
29	E	53360	857	491	988	1.997°
30	E	53360	868	442	974	1.960°
31	E	53360	829	613	1031	1.985°
32	E	53360	880	515	1019	1.970°
33	E	53360	1158	363	1214	2.290°
34	E	53360	1109	329	1157	2.187°
35	E	53360	1176	446	1258	2.447°
36	E	53360	1112	399	1182	2.276°
37	E	53360	1303	608	1438	2.988°
38	E	53360	1168	508	1274	2.513°
39	E	53360	1129	342	1179	2.216°
40	E	53360	1081	309	1124	2.118°
41	E	53360	1146	421	1221	2.366°
42	E	53360	1085	376	1148	2.202°
43	E	53360	1269	577	1394	2.892°
44	E	53360	1139	480	1236	2.433°
45	E	53360	948	437	1044	2.066°
46	E	53360	890	392	972	1.930°
47	E	53360	965	534	1103	2.260°
48	E	53360	891	471	1008	2.044°
49	E	53360	1087	716	1301	2.780°
50	E	53360	937	586	1106	2.219°
51	E	53360	1023	397	1097	2.102°
52	E	53360	1031	368	1094	2.098°
53	E	53360	1002	499	1119	2.173°
54	E	53360	1020	459	1118	2.174°
55	E	53360	955	722	1197	2.274°
56	E	53360	1017	639	1201	2.306°



## LINEA ELASTICA

Cond. n.	Tipo	H [mm]	Freccia trasversale [mm]	Freccia longitudinale [mm]	Freccia totale [mm]	Rotazione totale
57	E	53360	1002	385	1073	2.055°
58	E	53360	1010	357	1071	2.052°
59	E	53360	981	483	1094	2.122°
60	E	53360	999	444	1093	2.124°
61	E	53360	935	697	1166	2.216°
62	E	53360	996	616	1171	2.250°
63	E	53360	837	497	974	1.982°
64	E	53360	849	456	964	1.953°
65	E	53360	813	622	1024	2.121°
66	E	53360	840	565	1013	2.088°
67	E	53360	753	887	1164	2.290°
68	E	53360	843	775	1145	2.253°
69	E	53360	1096	423	1174	2.244°
70	E	53360	1044	390	1115	2.137°
71	E	53360	1107	537	1231	2.430°
72	E	53360	1041	491	1151	2.252°
73	E	53360	1207	813	1455	3.030°
74	E	53360	1069	715	1286	2.547°
75	E	53360	1073	410	1148	2.194°
76	E	53360	1023	378	1091	2.090°
77	E	53360	1084	521	1202	2.373°
78	E	53360	1020	475	1125	2.201°
79	E	53360	1182	786	1419	2.958°
80	E	53360	1047	691	1255	2.486°
81	E	53360	921	520	1058	2.131°
82	E	53360	858	475	981	1.985°
83	E	53360	935	656	1142	2.381°
84	E	53360	854	594	1040	2.152°
85	E	53360	1044	970	1425	3.040°
86	E	53360	877	843	1216	2.449°
87	E	53360	867	61	869	1.599°
88	E	53360	873	61	875	1.615°

## 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	734015	148252	-0	148252	5677277206	-0	5677277206	-0
2	N	751015	215026	2200	215037	8019841198	121724651	8020764909	-0
3	N	783465	421425	6000	421468	15296133051	332860964	15299754336	-0
4	N	409515	421419	6000	421461	15097158673	323858775	15100631924	0
5	N	774065	411645	5000	411675	14909859367	277176653	14912435523	-0
6	N	409515	411639	5000	411669	14723369423	269880424	14725842680	0
7	N	898335	322392	8000	322491	12271392927	447951929	12279566169	-0
8	N	409515	322384	8000	322483	12035059785	431794001	12042803249	0
9	N	792645	402725	6000	402770	14598945704	333102559	14602745392	-0
10	N	409515	402719	6000	402763	14400941252	323854171	14404582273	0
11	N	785295	395055	6000	395100	14298967168	332911474	14302842099	-0
12	N	409515	395049	6000	395094	14110423834	323852355	14114139759	0
13	N	897615	314611	8000	314713	11984931615	447949004	11993299968	-0
14	N	409515	314604	8000	314705	11753433072	431791290	11761361856	0
15	E	770995	407415	84002	415984	14663428976	3482623440	15071324273	136308290
16	E	409515	407409	84000	415978	14571871669	3299725521	14940804277	62514163
17	E	770995	407414	84002	415984	14598405990	3871395393	15103018233	130828117
18	E	409515	407409	84000	415978	14509828379	3674354839	14967832277	57477984
19	E	766825	403364	115003	419438	14397906237	5197178143	15307199766	256283521
20	E	409515	403359	115000	419432	14398027857	4863052884	15197121093	109018058
21	E	762045	398104	79502	405965	14300141101	3285679760	14672754581	130344409
22	E	409515	398099	79500	405959	14215937083	3112446957	14552669625	59002400
23	E	762045	398104	79502	405965	14237117801	3656270501	14699110084	125113882
24	E	409515	398099	79500	405959	14155677135	3469878136	14574746977	54201114
25	E	757925	394104	109003	408900	14039171519	4916709096	14875226562	245103718
26	E	409515	394099	109000	408895	14042629365	4598830726	14776490907	102731766
27	E	880615	309411	99003	324864	11624077688	4198201258	12358967429	182064957
28	E	409515	309404	99000	324856	11551897109	3935484064	12203866668	84539902
29	E	880615	309410	99004	324864	11564873972	4653399337	12465971096	175582685
30	E	409515	309404	99000	324856	11496336578	4368624957	12298399844	78644405
31	E	875555	306230	134005	334267	11360530523	6188618242	12936794406	345142340
32	E	409515	306224	134000	334259	11431125834	5716515224	12780813125	150518825
33	E	770995	-407415	84002	415985	-15158594095	3701080456	15603876809	276548989
34	E	409515	-407409	84000	415978	-14743746246	3456511357	15143497751	166104452
35	E	770995	-407415	84002	415985	-15092126812	4090993386	15636768163	270225036
36	E	409515	-407409	84000	415978	-14681711046	3831178897	15173350684	160445006
37	E	766825	-403365	115003	419439	-15385792244	5636138643	16385623631	536151477
38	E	409515	-403359	115000	419432	-14742201890	5176697580	15624682857	315745510
39	E	762045	-398104	79502	405965	-14782651783	3498749221	15191051308	267202438
40	E	409515	-398099	79500	405959	-14385104895	3264003677	14750761432	159129122
41	E	762045	-398104	79502	405965	-14718154179	3870453287	15218556800	261148484
42	E	409515	-398099	79500	405959	-14324844857	3621480488	14775530484	153725408
43	E	757925	-394105	109003	408901	-15001634735	5344859765	15925343658	518221132
44	E	409515	-394099	109000	408895	-14381375454	4902036239	15193877689	302547235
45	E	880615	-309411	99003	324864	-12137094338	4409699593	12913346176	316428090
46	E	409515	-309404	99000	324856	-11672199985	4079541377	12364582902	179734827
47	E	880615	-309411	99004	324865	-12076966329	4866526630	13020606635	309137401
48	E	409515	-309404	99000	324856	-11616916301	4512706831	12462634845	173266574
49	E	875555	-306231	134005	334268	-12384450009	6615020035	14040409256	613280874
50	E	409515	-306224	134000	334259	-11672275518	6004720627	13126259390	340492272
51	E	775495	384824	112002	400792	13796108371	4462980721	14500027693	200769012
52	E	409515	384819	112000	400786	13769427170	4250123860	14410436406	118673681
53	E	775495	384824	112003	400792	13704148584	5040916956	14601867421	192635104
54	E	409515	384819	112000	400786	13681725670	4807115883	14501654403	111033712
55	E	766945	377204	168004	412926	13297822501	7556724287	15294971893	377271154
56	E	409515	377199	168000	412920	13429707165	7149464450	15214199830	213439594

## 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	409515	377199	168000	412920	13429707165	7149464450	15214199830	213439594
57	E	768515	377564	108202	392762	13514640666	4316062915	14187103701	193869333
58	E	409515	377559	108200	392757	13492221707	4110478160	14104470118	113621395
59	E	768515	377564	108203	392762	13425131064	4872180074	14281886527	186033455
60	E	409515	377559	108200	392757	13406714966	4646823580	14189185162	106268341
61	E	760195	370173	162004	404071	13031516366	7287725268	14930886054	364368223
62	E	409515	370169	162000	404066	13162690160	6894566468	14859053101	204223369
63	E	873955	297620	135004	326808	11141689557	5482731222	12417632135	260603786
64	E	409515	297614	135000	326801	11151008941	5182417088	12296440431	155965518
65	E	873955	297620	135005	326809	11055432336	6175311955	12663216885	250827289
66	E	409515	297614	135000	326801	11069953188	5842688030	12517222815	146818594
67	E	863555	291049	200007	353146	10636349437	9134441285	14020340471	492347736
68	E	409515	291044	200001	353138	10868096308	8568509457	13839612411	283528911
69	E	775495	-384825	112002	400792	-14301081259	4649153755	15037804222	320243623
70	E	409515	-384819	112000	400786	-13880157436	4405142338	14562419080	221108113
71	E	775495	-384825	112003	400792	-14206666244	5227990747	15138072962	311390877
72	E	409515	-384819	112000	400786	-13792894697	4962152386	14658338938	212851832
73	E	766945	-377205	168004	412927	-14300495098	7929788557	16351932810	615697768
74	E	409515	-377199	168001	412920	-13651882050	7459389643	15556875565	417860389
75	E	768515	-377564	108202	392763	-14008562068	4498525087	14713141717	311021500
76	E	409515	-377559	108200	392757	-13601565422	4261750842	14253599622	213575888
77	E	768515	-377564	108203	392763	-13916582089	5055521523	14806402497	302480757
78	E	409515	-377559	108200	392757	-13516476714	4798119621	14342841234	205621442
79	E	760195	-370174	162004	404072	-14012108225	7653399450	15966017038	598160108
80	E	409515	-370169	162000	404066	-13382065999	7197024495	15194632341	403695132
81	E	873955	-297621	135004	326809	-11726717863	5651325081	13017426283	367884705
82	E	409515	-297614	135000	326801	-11229307902	5319738903	12425658049	246738831
83	E	873955	-297621	135005	326809	-11638368568	6344959254	13255569805	357462736
84	E	409515	-297614	135000	326801	-11148984101	5979993964	12651489015	237045755
85	E	863555	-291051	200007	353148	-11798755934	9472749031	15130882849	706440307
86	E	409515	-291044	200001	353138	-11025550456	8842999895	14133697677	464678475
87	E	888445	364892	8000	364980	12030360716	447568961	12038683356	-0
88	E	884625	366131	8000	366218	12086284347	447453011	12094564214	-0

# SFORZI MASSIMI TRASMESSI ALLA FONDAZIONE

## CONDIZIONE NORMALE

### SFORZO ASSIALE MASSIMO

Condizione numero	Sforzo assiale [N]
7	898335

### SFORZO ASSIALE MINIMO

Condizione numero	Sforzo assiale [N]
4	409515

### TAGLIO TRASVERSALE MASSIMO

Condizione numero	Taglio [N]
3	421425

### TAGLIO LONGITUDINALE MASSIMO

Condizione numero	Taglio [N]
7	8000

### TAGLIO RISULTANTE MASSIMO

Condizione numero	Taglio [N]
3	421468

### MOMENTO TRASVERSALE MASSIMO

Condizione numero	Momento [Nmm]
3	15296133051

### MOMENTO LONGITUDINALE MASSIMO

Condizione numero	Momento [Nmm]
7	447951929

### MOMENTO RISULTANTE MASSIMO

Condizione numero	Momento [Nmm]
3	15299754336

## SFORZI MASSIMI TRASMESSI ALLA FONDAZIONE

### CONDIZIONE ECCEZIONALE

#### SFORZO ASSIALE MASSIMO

Condizione numero	Sforzo assiale [N]
88	884625

#### SFORZO ASSIALE MINIMO

Condizione numero	Sforzo assiale [N]
70	409515

#### TAGLIO TRASVERSALE MASSIMO

Condizione numero	Taglio [N]
33	407415

#### TAGLIO LONGITUDINALE MASSIMO

Condizione numero	Taglio [N]
85	200007

#### TAGLIO RISULTANTE MASSIMO

Condizione numero	Taglio [N]
37	419439

#### MOMENTO TRASVERSALE MASSIMO

Condizione numero	Momento [Nmm]
37	15385792244

#### MOMENTO LONGITUDINALE MASSIMO

Condizione numero	Momento [Nmm]
85	9472749031

#### MOMENTO RISULTANTE MASSIMO

Condizione numero	Momento [Nmm]
37	16385623631

## INDICE DELLE IPOTESI DI CARICO

N°	TITOLO	PAG.
1	PDT - EDS - ZONA A - NORMALE - FRECCIA - 0.5 %	9
2	PDT - CVS3 - ZONA A - NORMALE - FRECCIA - 1.0 %	11
3	PDT - MSA - ZONA A - NORMALE - RESISTENZA - 3 x 31.5	13
4	PDT - MSA - ZONA A - NORMALE - RESISTENZA - 3 x 31.5	15
5	PDT - MSA - ZONA B - NORMALE - RESISTENZA - 3 x 31.5	17
6	PDT - MSA - ZONA B - NORMALE - RESISTENZA - 3 x 31.5	19
7	PDT - MSB - ZONA B - NORMALE - RESISTENZA - 3 x 31.5	21
8	PDT - MSB - ZONA B - NORMALE - RESISTENZA - 3 x 31.5	23
9	PDT - MSA - ZONA A - NORMALE - RESISTENZA - 2 x 40.5	25
10	PDT - MSA - ZONA A - NORMALE - RESISTENZA - 2 x 40.5	27
11	PDT - MSA - ZONA B - NORMALE - RESISTENZA - 2 x 40.5	29
12	PDT - MSA - ZONA B - NORMALE - RESISTENZA - 2 x 40.5	31
13	PDT - MSB - ZONA B - NORMALE - RESISTENZA - 2 x 40.5	33
14	PDT - MSB - ZONA B - NORMALE - RESISTENZA - 2 x 40.5	35
15	PDT - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 3 x 31.5	37
16	PDT - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 3 x 31.5	39
17	PDT - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 3 x 31.5	41
18	PDT - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 3 x 31.5	43
19	PDT - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 3 x 31.5	45
20	PDT - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 3 x 31.5	47
21	PDT - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5	49
22	PDT - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5	51
23	PDT - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5	53
24	PDT - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5	55
25	PDT - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5	57
26	PDT - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5	59
27	PDT - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5	61
28	PDT - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5	63
29	PDT - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5	65
30	PDT - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5	67
31	PDT - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5	69
32	PDT - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5	71
33	PDT - MSA - ZONA A - ECCAZIONALE - RESISTENZA - 3 x 31.5 - (-)	73
34	PDT - MSA - ZONA A - ECCAZIONALE - RESISTENZA - 3 x 31.5 - (-)	75
35	PDT - MSA - ZONA A - ECCAZIONALE - RESISTENZA - 3 x 31.5 - (-)	77
36	PDT - MSA - ZONA A - ECCAZIONALE - RESISTENZA - 3 x 31.5 - (-)	79
37	PDT - MSA - ZONA A - ECCAZIONALE - RESISTENZA - 3 x 31.5 - (-)	81
38	PDT - MSA - ZONA A - ECCAZIONALE - RESISTENZA - 3 x 31.5 - (-)	83
39	PDT - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 - (-)	85
40	PDT - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 - (-)	87
41	PDT - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 - (-)	89
42	PDT - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 - (-)	91
43	PDT - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 - (-)	93
44	PDT - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 - (-)	95
45	PDT - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 - (-)	97

## INDICE DELLE IPOTESI DI CARICO

N°	TITOLO	PAG.
46	PDT - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 - (-)	99
47	PDT - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 - (-)	101
48	PDT - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 - (-)	103
49	PDT - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 - (-)	105
50	PDT - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 3 x 31.5 - (-)	107
51	PDT - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 2 x 40.5	109
52	PDT - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 2 x 40.5	111
53	PDT - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 2 x 40.5	113
54	PDT - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 2 x 40.5	115
55	PDT - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 2 x 40.5	117
56	PDT - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 2 x 40.5	119
57	PDT - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5	121
58	PDT - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5	123
59	PDT - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5	125
60	PDT - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5	127
61	PDT - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5	129
62	PDT - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5	131
63	PDT - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5	133
64	PDT - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5	135
65	MDT - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5	137
66	MDT - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5	139
67	PDT - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5	141
68	PDT - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5	143
69	PDT - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-)	145
70	PDT - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-)	147
71	PDT - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-)	149
72	PDT - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-)	151
73	PDT - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-)	153
74	PDT - MSA - ZONA A - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-)	155
75	PDT - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-)	157
76	PDT - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-)	159
77	PDT - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-)	161
78	PDT - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-)	163
79	PDT - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-)	165
80	PDT - MSA - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-)	167
81	PDT - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-)	169
82	PDT - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-)	171
83	MDT - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-)	173
84	MDT - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-)	175
85	PDT - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-)	177
86	PDT - MSB - ZONA B - ECCEZIONALE - RESISTENZA - 2 x 40.5 - (-)	179

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

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**SOSTEGNO TIPO PDT 30**  
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**VERIFICA SISMICA**  
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**ADDENDUM AL CALCOLO BASE**

- Altezza fuori terra del sostegno in opera = 53.36 m
- Dispositivo di attacco alla fondazione : con piastra di base e tirafondi
- Numero dei tronchi costituenti il sostegno = 7
- Sezione poligonale a 16 lati

3	-	-	-	-	-
2	-	-	-	-	-
0	MODIFICA CIMINO	01/01/2010	CHIUSSI	BOTTARELLI	CHIUSSI
0	Emissione	21/01/2000	CHIUSSI	BOTTARELLI	CHIUSSI
N°	DESCRIZIONE	DATA	ESEGUITO	CONTR.TO	APPROVATO
NTF = 1208-cei				<b>P045DP5600</b>	



## 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

## 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 e successivi aggiornamenti (D.M. 05/08/1998, DM 16/01/1991)
- 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.10011/97 : Costruzioni di acciaio: istruzioni per il calcolo l'esecuzione, il collaudo e la manutenzione.
- UNI ENV 1993-1-1 Eurocodice 3-Parte 1-1: Regole generali e regole per gli edifici, 05/04; Parte 1-8: progettazione dei collegamenti, 08/05.
- CEI EN50341-1: Linee elettriche aeree a tensione alternate maggiore di 45 kV. Parte prima: prescrizioni generali e specifiche comuni, 07/05.
- **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 le verifiche sismiche:**D.M. 9.1.1996:Norme tecniche per le costruzioni in zone sismiche; Ordinanza PCM 20/03/2003 n. 3274:Primi elementi in materia di criteri generali per la classificazione sismica del territorio nazionale e di normative tecniche per le costruzioni in zona sismica. - Ordinanza PCM 10/10/2003 n. 3316: Modifiche ed integrazioni all'ordinanza del PCM n. 3274 del 20/03/2003; - Ordinanza PCM 3/05/2005 n. 3431 Ulteriori modifiche ed integrazioni all'ordinanza del Presidente del Consiglio dei Ministri n. 3274 del 20 marzo 2003, recante: Primi elementi in materia di criteri generali per la classificazione sismica del territorio nazionale e di normative tecniche per le costruzioni in zona sismica; Decreto 14/09/2005 pubblicata sulla gazzetta ufficiale il 23/09/2005 come supplemento 159 alla serie generale 222, Norme tecniche per le costruzioni.
- **Per i carichi esterni sulla struttura:** Specifica TERNA S.p.A.

## 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	2	52443	6.00	532.3	542.7	917	97.52	97.52
1	3	51527	6.00	623.2	635.4	917	115.60	115.60
1	4	50610	6.00	714.1	728.0	917	133.68	133.68
1	5	49693	6.00	805.0	820.7	917	151.76	151.76
1	6	48777	6.00	895.9	913.4	917	169.84	169.84
1	7	47860	6.00	986.8	1006.1	917	187.93	184.22
2	8	46962	6.00	1015.0	1034.9	917	193.54	186.68
2	9	46064	6.00	1043.2	1063.6	917	199.15	189.00
2	10	45166	6.00	1071.4	1092.4	917	204.76	191.20
2	11	44268	6.00	1099.6	1121.2	917	210.37	193.28
2	12	43370	6.00	1127.8	1149.9	917	215.98	195.25
3	13	42423	9.00	1143.5	1165.9	917	214.93	214.93
3	14	41475	9.00	1173.3	1196.3	917	220.85	220.85
3	15	40528	9.00	1203.0	1226.6	917	226.77	226.77
3	16	39581	9.00	1232.8	1256.9	917	232.69	232.69
3	17	38634	9.00	1262.5	1287.3	917	238.60	238.60
3	18	37686	9.00	1292.3	1317.6	917	244.52	244.52
3	19	36739	9.00	1322.0	1347.9	917	250.44	250.44
3	20	35792	9.00	1351.8	1378.3	917	256.36	256.36
3	21	34845	9.00	1381.5	1408.6	917	262.27	262.27
3	22	33897	9.00	1411.3	1438.9	917	268.19	268.19
3	23	32950	9.00	1441.0	1469.3	917	274.11	272.71
4	24	32077	13.00	1448.5	1476.9	917	270.02	270.02
4	25	31204	13.00	1475.9	1504.8	917	275.47	275.47
4	26	30331	13.00	1503.3	1532.8	917	280.92	280.92
4	27	29459	13.00	1530.7	1560.7	917	286.38	286.38
4	28	28586	13.00	1558.1	1588.7	917	291.83	291.83
4	29	27713	13.00	1585.5	1616.6	917	297.28	297.28
4	30	26840	13.00	1613.0	1644.6	917	302.74	302.74
5	31	25911	16.00	1614.1	1645.7	917	298.79	298.79
5	32	24983	16.00	1643.3	1675.5	917	304.59	304.59
5	33	24054	16.00	1672.4	1705.2	917	310.39	310.39
5	34	23126	16.00	1701.6	1734.9	917	316.19	316.19
5	35	22197	16.00	1730.8	1764.7	917	321.99	321.99
5	36	21269	16.00	1759.9	1794.4	917	327.79	327.79
5	37	20340	16.00	1789.1	1824.1	917	333.59	333.59
6	38	19368	19.00	1785.7	1820.6	917	328.73	328.73
6	39	18395	19.00	1816.2	1851.8	917	334.81	334.81
6	40	17423	19.00	1846.7	1882.9	917	340.88	340.88
6	41	16450	19.00	1877.3	1914.1	917	346.96	346.96
6	42	15478	19.00	1907.8	1945.2	917	353.03	353.03
6	43	14505	19.00	1938.4	1976.3	917	359.11	359.11
6	44	13533	19.00	1968.9	2007.5	917	365.18	365.18
6	45	12560	19.00	1999.4	2038.6	917	371.26	371.26
7	46	11594	20.00	1989.8	2028.7	898	367.94	367.94
7	47	10628	20.00	2020.1	2059.7	898	373.98	373.98
7	48	9662	20.00	2050.4	2090.6	898	380.01	380.01
7	49	8695	20.00	2080.8	2121.6	898	386.05	386.05
7	50	7729	20.00	2111.1	2152.5	898	392.08	392.08
7	51	6763	20.00	2141.5	2183.4	898	398.12	398.12
7	52	5797	20.00	2171.8	2214.4	898	404.15	404.15
7	53	4831	20.00	2202.2	2245.3	898	410.19	410.19
7	54	3865	20.00	2232.5	2276.2	898	416.23	416.23
7	55	2898	20.00	2262.9	2307.2	898	422.26	422.26
7	56	1932	20.00	2293.2	2338.1	898	428.30	428.30
7	57	966	20.00	2323.5	2369.1	898	434.33	434.33
7	58	0	20.00	2353.9	2400.0	898	440.37	440.37

## GEOMETRIA DELLE MASSE

Tronco	Nodo	Sezione min [mm <sup>2</sup> ]	W min [mm <sup>3</sup> ]	Jt [mm <sup>4</sup> ]
1	2	10049	1299164	711722656
1	3	11785	1789656	1144106139
1	4	13521	2358549	1723510063
1	5	15257	3005841	2471449908
1	6	16993	3731535	3409441153
1	7	18372	4433319	4305011816
2	8	18609	4682358	4615541508
2	9	18832	4940023	4936345687
2	10	19042	5206775	5267424836
2	11	19242	5483089	5608779386
2	12	19431	5769457	5960409725
3	13	32497	9087772	10623731565
3	14	33349	9572548	11477006299
3	15	34201	10069922	12374788263
3	16	35053	10579892	13318208951
3	17	35906	11102461	14308399854
3	18	36758	11637627	15346492464
3	19	37610	12185390	16433618274
3	20	38462	12745751	17570908777
3	21	39314	13318709	18759495464
3	22	40167	13904264	20000509829
3	23	40818	14210346	20387665593
4	24	59391	20991334	31151679323
4	25	60525	21804349	32959635393
4	26	61659	22632813	34836223949
4	27	62794	23476725	36782723554
4	28	63928	24336086	38800412771
4	29	65062	25210897	40890570163
4	30	66196	26101155	43054474292
5	31	81378	31991681	53004848403
5	32	82863	33175669	55939915570
5	33	84348	34381173	58981379624
5	34	85833	35608194	62131134870
5	35	87318	36856731	65391075613
5	36	88803	38126785	68763096158
5	37	90288	39418356	72249090809
6	38	106829	46392521	85157483817
6	39	108675	48018875	89618258241
6	40	110522	49673252	94232150515
6	41	112369	51355653	99001744426
6	42	114216	53066077	103929623762
6	43	116062	54804525	109018372310
6	44	117909	56570996	114270573860
6	45	119756	58365491	119688812199
7	46	125379	60743339	124097888039
7	47	127310	62638607	129882232085
7	48	129242	64562995	135843581222
7	49	131173	66516502	141984603053
7	50	133105	68499130	148307965178
7	51	135036	70510878	154816335200
7	52	136968	72551745	161512380720
7	53	138899	74621733	168398769341
7	54	140831	76720840	175478168663
7	55	142762	78849068	182753246288
7	56	144693	81006415	190226669818
7	57	146625	83192882	197901106855
7	58	148556	85408470	205779225000

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 87 " PST - ZONA B - SISMA - 3 x 31.5 "

Pressione trasversale del vento = 0.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale. Tiro del conduttore alla condizione derivata -20°C con manicotto di ghiaccio da 12mm ed in assenza di vento: T=6050

### CARICHI CONCENTRATI

Livello	H [m]	Verticali [N]	Trasversali [N]	Longitudinali [N]	Eccentricità del conduttore [m]
<b>1.00</b>	53.55	11770.00	7276.52	8000.00	0.00
<b>2.00</b>	43.82	77860.00	38626.52	0.00	4.75
---	---	---	Ft = 93412	Fp = -8781	---
---	---	Pa = 78773	Ta = 50206	La = 0	---
---	---	Pb = -913	Tb = -8733	Lb = 0	---
<b>3.00</b>	43.82	77860.00	38626.52	0.00	-4.75
---	---	---	Ft = 104433	Fp = -98135	---
---	---	Pa = 88067	Ta = -56129	La = 0	---
---	---	Pb = -10207	Tb = 97603	Lb = 0	---
<b>4.00</b>	37.02	77860.00	38626.52	0.00	4.75
---	---	---	Ft = 93412	Fp = -8781	---
---	---	Pa = 78773	Ta = 50206	La = 0	---
---	---	Pb = -913	Tb = -8733	Lb = 0	---
<b>5.00</b>	37.02	77860.00	38626.52	0.00	-4.75
---	---	---	Ft = 104433	Fp = -98135	---
---	---	Pa = 88067	Ta = -56129	La = 0	---
---	---	Pb = -10207	Tb = 97603	Lb = 0	---
<b>6.00</b>	30.22	77860.00	38626.52	0.00	4.75
---	---	---	Ft = 93412	Fp = -8781	---
---	---	Pa = 78773	Ta = 50206	La = 0	---
---	---	Pb = -913	Tb = -8733	Lb = 0	---
<b>7.00</b>	30.22	77860.00	38626.52	0.00	-4.75
---	---	---	Ft = 104433	Fp = -98135	---
---	---	Pa = 88067	Ta = -56129	La = 0	---
---	---	Pb = -10207	Tb = 97603	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Usa
2	12480	7923	9004582	8001	8853974	0	345.28	0.03
3	13313	8153	16813613	8002	16228910	0	345.28	0.04
4	14269	8417	24886491	8002	23604728	0	345.28	0.05
5	15347	8715	33257143	8002	30981630	0	345.28	0.05
6	16548	9047	41959575	8002	38359893	0	345.28	0.05
7	17872	9412	51027802	8002	45739805	0	345.28	0.05
8	105126	-28450	17996376	8012	53182424	0	345.28	0.05
9	192418	4518	35211170	8021	60822565	-0	345.28	0.07
10	193826	4903	44257678	8021	68447561	-0	345.28	0.07
11	192865	10783	57202856	8021	76051075	-0	345.28	0.08
12	188789	95425	160096811	8020	83626141	-0	345.28	0.12
13	191162	96073	255860779	8019	91599968	-0	345.28	0.10
14	193598	96739	352263999	8019	99559285	-0	345.28	0.13
15	282016	45937	414073992	8027	107669798	-0	345.28	0.15
16	370496	92445	512494219	8034	115917088	-0	345.28	0.17
17	373119	93154	609572279	8033	124138582	-0	345.28	0.19
18	375804	93879	707255998	8032	132334017	-0	345.28	0.21
19	372991	188270	889022943	8031	140494524	-0	345.28	0.24
20	370240	184233	1070579582	8029	148620891	-0	345.28	0.27
21	373112	185006	1253978550	8028	156721744	-0	345.28	0.30
22	469787	151741	1417743569	8033	164921024	-0	345.28	0.33
23	558703	183023	1590528175	8038	173194363	-0	345.28	0.37
24	562700	184095	1761563316	8036	180783987	-0	345.28	0.27
25	566773	185192	1933339480	8034	188346436	-0	345.28	0.29
26	565363	248294	2147022364	8033	195881456	-0	345.28	0.30
27	564029	276315	2405735783	8031	203389625	-0	345.28	0.32
28	568332	277478	2657285156	8030	210876488	-0	345.28	0.34
29	586956	282585	2913292266	8029	218354182	-0	345.28	0.36
30	591412	283788	3170099575	8028	225810205	-0	345.28	0.38
31	597238	285368	3444493543	8026	233719450	-0	345.28	0.33
32	603171	286977	3720108283	8025	241607090	-0	345.28	0.35
33	609210	288618	3996987371	8024	249475262	-0	345.28	0.36
34	615356	290287	4275145598	8023	257324065	-0	345.28	0.37
35	621608	291986	4554598892	8022	265153612	-0	345.28	0.38
36	649511	299643	4841144766	8021	272977116	-0	345.28	0.39
37	655976	301399	5129005420	8020	280780791	-0	345.28	0.40
38	663986	303580	5432271473	8019	288933237	-0	345.28	0.36
39	672135	305799	5737363236	8018	297065994	-0	345.28	0.36
40	680423	308058	6044333200	8017	305180489	-0	345.28	0.37
41	688849	310355	6353209042	8016	313276772	-0	345.28	0.38
42	697414	312690	6664018984	8015	321354899	-0	345.28	0.38
43	706117	315063	6976791556	8014	329414919	-0	345.28	0.39
44	746817	326233	7300342031	8013	337468548	-0	345.28	0.39
45	755797	328681	7625892226	8012	345503198	-0	345.28	0.40
46	765138	331229	7951395382	8011	353466750	-0	345.28	0.40
47	774622	333816	8279005097	8011	361411624	-0	345.28	0.40
48	784250	336443	8608749106	8010	369337728	-0	345.28	0.40
49	794022	339109	8940658098	8009	377245093	-0	345.28	0.41
50	803938	341815	9274762847	8008	385133738	-0	345.28	0.41
51	813998	344561	9611094212	8007	393003676	-0	345.28	0.41
52	824201	347346	9949683114	8006	400854912	-0	345.28	0.41
53	834549	350171	10290560523	8005	408687442	-0	345.28	0.42
54	845040	353036	10633757440	8004	416501259	-0	345.28	0.42
55	855676	355940	10979304888	8003	424296345	-0	345.28	0.42
56	866455	358885	11327233899	8002	432072678	-0	345.28	0.42
57	877378	361868	11677575502	8001	439830228	-0	345.28	0.42
58	888445	364892	12030360716	8000	447568961	-0	345.28	0.43

## CONDIZIONI GENERALI DI CARICO

Condizione di carico n. 88 " PST - ZONA B - SISMA - 2 x 40.5 "

Pressione trasversale del vento = 0.0 N/mq

Pressione longitudinale del vento = 0.0 N/mq

Tipo di condizione di carico: accidentale. Tiro del conduttore alla condizione derivata -20°C con manicotto di ghiaccio da 12mm ed in assenza di vento: T=9100

### CARICHI CONCENTRATI

Livello	H [m]	Verticali [N]	Trasversali [N]	Longitudinali [N]	Eccentricità del conduttore [m]
<b>1.00</b>	53.55	12270.00	7796.13	8000.00	0.00
<b>2.00</b>	43.82	77140.00	38736.13	0.00	4.75
---	---	---	Ft = 92481	Fp = -8151	---
---	---	Pa = 77988	Ta = 49706	La = 0	---
---	---	Pb = -848	Tb = -8106	Lb = 0	---
<b>3.00</b>	43.82	77140.00	38736.13	0.00	-4.75
---	---	---	Ft = 103535	Fp = -97776	---
---	---	Pa = 87309	Ta = -55647	La = 0	---
---	---	Pb = -10169	Tb = 97246	Lb = 0	---
<b>4.00</b>	37.02	77140.00	38736.13	0.00	4.75
---	---	---	Ft = 92481	Fp = -8151	---
---	---	Pa = 77988	Ta = 49706	La = 0	---
---	---	Pb = -848	Tb = -8106	Lb = 0	---
<b>5.00</b>	37.02	77140.00	38736.13	0.00	-4.75
---	---	---	Ft = 103535	Fp = -97776	---
---	---	Pa = 87309	Ta = -55647	La = 0	---
---	---	Pb = -10169	Tb = 97246	Lb = 0	---
<b>6.00</b>	30.22	77140.00	38736.13	0.00	4.75
---	---	---	Ft = 92481	Fp = -8151	---
---	---	Pa = 77988	Ta = 49706	La = 0	---
---	---	Pb = -848	Tb = -8106	Lb = 0	---
<b>7.00</b>	30.22	77140.00	38736.13	0.00	-4.75
---	---	---	Ft = 103535	Fp = -97776	---
---	---	Pa = 87309	Ta = -55647	La = 0	---
---	---	Pb = -10169	Tb = 97246	Lb = 0	---

## TABELLA DESCRITTIVA DELLE AZIONI INTERNE.

Nodo	Carico verticale [N]	Tx [N]	My [Nmm]	Ty [N]	Mx [Nmm]	Mt [Nmm]	$\sigma_{amm.}$ [N/mm <sup>2</sup> ]	% Usa
2	12980	8468	9621461	8002	8855594	0	345.28	0.03
3	13813	8698	17946513	8002	16232083	0	345.28	0.04
4	14769	8962	26535288	8002	23609379	0	345.28	0.05
5	15847	9260	35421718	8002	30987687	0	345.28	0.05
6	17048	9591	44639823	8002	38367294	0	345.28	0.05
7	18372	9957	54223633	8002	45748492	0	345.28	0.05
8	104855	-28023	21560494	8012	53190349	0	345.28	0.05
9	191375	5042	39285659	8021	60827839	-0	345.28	0.07
10	192783	5427	48815526	8021	68450281	-0	345.28	0.08
11	191874	11320	62251858	8020	76051454	-0	345.28	0.08
12	187849	96218	165908494	8019	83624394	-0	345.28	0.12
13	190222	96866	262435097	8019	91596085	-0	345.28	0.11
14	192658	97531	359599945	8019	99553359	-0	345.28	0.13
15	280305	46571	422052011	8027	107660366	-0	345.28	0.15
16	368014	93216	521210614	8034	115902816	-0	345.28	0.18
17	370636	93925	619019906	8033	124119678	-0	345.28	0.19
18	373321	94650	717433682	8032	132310691	-0	345.28	0.21
19	370560	189325	900183860	8030	140467071	-0	345.28	0.25
20	367860	185272	1082721076	8029	148589597	-0	345.28	0.28
21	370732	186045	1267103486	8028	156686809	-0	345.28	0.30
22	466635	152667	1431770945	8033	164881552	-0	345.28	0.33
23	554780	184041	1605471191	8037	173149592	-0	345.28	0.37
24	558777	185113	1777383176	8035	180734617	-0	345.28	0.27
25	562851	186209	1950035627	8034	188292699	-0	345.28	0.29
26	561492	249499	2164719871	8032	195823600	-0	345.28	0.30
27	560209	277601	2424569236	8031	203327887	-0	345.28	0.33
28	564512	278763	2677230019	8029	210811052	-0	345.28	0.35
29	583136	283867	2934347572	8029	218285220	-0	345.28	0.36
30	587592	285070	3192265015	8027	225737895	-0	345.28	0.38
31	593418	286649	3467839605	8026	233643770	-0	345.28	0.34
32	599351	288258	3744634616	8025	241528220	-0	345.28	0.35
33	605390	289897	4022693627	8024	249393367	-0	345.28	0.36
34	611536	291566	4302031435	8023	257239305	-0	345.28	0.37
35	617788	293264	4582663961	8021	265066144	-0	345.28	0.38
36	645691	300916	4870387034	8021	272887086	-0	345.28	0.39
37	652156	302671	5159424441	8020	280688350	-0	345.28	0.40
38	660166	304851	5463922308	8019	288838430	-0	345.28	0.36
39	668315	307070	5770245241	8018	296968972	-0	345.28	0.37
40	676603	309327	6078445692	8017	305081390	-0	345.28	0.37
41	685029	311623	6388551298	8016	313175733	-0	345.28	0.38
42	693594	313957	6700590244	8015	321252053	-0	345.28	0.38
43	702297	316329	7014591015	8014	329310394	-0	345.28	0.39
44	742997	327493	7339365339	8013	337362465	-0	345.28	0.39
45	751977	329940	7666138387	8012	345395682	-0	345.28	0.40
46	761318	332486	7992855353	8011	353357930	-0	345.28	0.40
47	770802	335072	8321677769	8010	361301618	-0	345.28	0.40
48	780430	337697	8652633317	8009	369226653	-0	345.28	0.41
49	790202	340362	8985752634	8008	377133062	-0	345.28	0.41
50	800118	343066	9321066441	8008	385020861	-0	345.28	0.41
51	810178	345811	9658605541	8007	392890061	-0	345.28	0.41
52	820381	348594	9998400799	8006	400740664	-0	345.28	0.42
53	830729	351418	10340483129	8005	408572666	-0	345.28	0.42
54	841220	354281	10684883474	8004	416386055	-0	345.28	0.42
55	851856	357184	11031632798	8003	424180812	-0	345.28	0.42
56	862635	360127	11380762073	8002	431956912	-0	345.28	0.42
57	873558	363109	11732302270	8001	439714325	-0	345.28	0.43
58	884625	366131	12086284347	8000	447453011	-0	345.28	0.43



## DELUCIDAZIONI IN MERITO ALLE VERIFICHE SISMICHE

La Verifica sismica è inserita alla fine delle combinazioni di carico per le quali è stato verificato il sostegno per ogni sua altezza. Tale verifica è stata effettuata secondo l'OPCM 3274 e sue relative modifiche (OPCM 3431). Il criterio è allo stato limite ultimo ed esclude la concomitanza del vento, in quanto evento considerato poco probabile. I carichi trasmessi dai conduttori, sono stati calcolati con la condizione tipica di Zona B: -20°C con manicotto di ghiaccio  $s=12\text{mm}$ . Partendo dalla considerazione che la frequenza fondamentale del sostegno è di norma più elevata di quella dei conduttori (o della fune di guardia), i carichi dinamici dovuti agli stessi conduttori, non si sono considerati perché non significativi. Pertanto, si ipotizzano i conduttori e la fune di guardia in oscillazione con la stessa frequenza del primo modo di vibrare del sostegno. Il contributo dovuto ai conduttori durante l'evento sismico e che partecipa al moto sismico del sostegno, può quindi essere rappresentato come una massa puntuale relativa a una lunghezza di cavo pari a una lunghezza d'onda di una oscillazione del conduttore avente, come detto, la stessa frequenza del sostegno. Tale massa viene posizionata nel punto di attacco del conduttore.

Di seguito si riporta l'elenco dei coefficienti con i rispettivi valori, utilizzati nel calcolo dello spettro di risposta.

Accelerazione sismica ( $a_g$ ): 0.35 m/s

Categoria del terreno di sottosuolo : D

Fattore di struttura ( $q$ ) : 2

Fattore correttivo di smorzamento : 0.55

Lunghezza d'onda della porzione di conduttori coinvolti nel fenomeno sismico :

Fattore di importanza (FI) : 1.0

Combinazione n° : 87 - Lunghezza d'onda : 40 m

Fattore di importanza (FI) : 1.0

Combinazione n° : 88 - Lunghezza d'onda : 41 m

## VERIFICA DEI TIRAFONDI/VITI

### TRONCO N° 7

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

La combinazione più sfavorevole per il calcolo dei tirafondi/viti è la n. 3

Numero dei tirafondi/viti = **48**

Cerchio dei tirafondi/viti = **2600.0** [mm]

Diametro dei tirafondi/viti = **52.0** [mm]

Sezione resistente del cerchio di tirafondi/viti = **84480.0** [mm<sup>2</sup>]

Modulo di resistenza del cerchio di tirafondi/viti = **54912000.0** [mm<sup>3</sup>]

Le barre per la realizzazione dei tirafondi/viti sono in acciaio tipo: CLASSE 8.8 ( EN 20898 ).  
La tensione ammissibile è pari a 320 [N/mm<sup>2</sup>]

Tensione normalizzata nei tirafondi/viti = **0.46**

### VERIFICA DELLA FLANGIA DI BASE/INTERMEDIA

Il dispositivo di fissaggio alla fondazione è costituito da un anello circolare saldato al palo ed opportunamente forato al fine di inserirvi i tirafondi/viti. La flangia è rinforzata da un gruppo di nervature saldate alla flangia e al palo.

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 tirafodi, 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 = **2760.0** [mm]

Tensione normalizzata della flangia = **0.27**

N. 48 nervature spessore = **15** [mm]

Tensione ammissibile nella flangia = **215.8** [N/mm<sup>2</sup>]

## CARICHI SISMICI SULLA FONDAZIONE

Cond.	Tipo	Carico verticale [N]	Tx [N]	Ty [N]	Rt [N]	My [Nmm]	Mx [Nmm]	Rm [Nmm]	Mt [Nmm]
87	E	888445	364892	8000	364980	12030360716	447568961	12038683356	-0
88	E	884625	366131	8000	366218	12086284347	447453011	12094564214	-0