

## 1. COLONNA-09

### Resistenza della colonna (flessione deviata)

(EC2 EN1992-1-1:2004, UNI EN1990-1-1:2004, )

$D = 0.500 \text{ m}$

$A_s = 4\emptyset 20 + 8\emptyset 18 \text{ (32.88 cm}^2\text{)}$

Classe del CA : C25/30-B450C (EC2 §

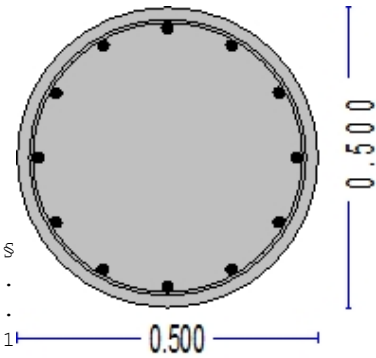
Classe di esposizione ambientale : XC1 (EC2 §4.4.

Copriferro :  $C_{nom} = 20 \text{ mm}$  (EC2 §4.4.

$\gamma_c = 1.50$ ,  $\gamma_s = 1.15$  (EC2 Tabella 2.1

$f_{cd} = \alpha_{cc} \cdot f_{ck} / \gamma_c = 0.85 \times 25 / 1.50 = 14.17 \text{ MPa}$  (EC2 §3.1.

$f_{yd} = f_{yk} / \gamma_s = 450 / 1.15 = 391 \text{ MPa}$  (EC2 §3.2.7)



### Dimensioni e carichi

Colonna circolare con diametro  $D = 0.500 \text{ m}$

Armatura  $4\emptyset 20 + 8\emptyset 18 \text{ (32.88 cm}^2\text{)}$   $A_{stot} / A_c = 1.67\%$

Spessore efficace della sezione  $d = h - d_1$ ,  $d_1 = d_2 = C_{nom} + \emptyset_s + \emptyset / 2 = 20 + 8 + 20 / 2 = 38 \text{ mm}$ ,  $d = 462 \text{ mm}$

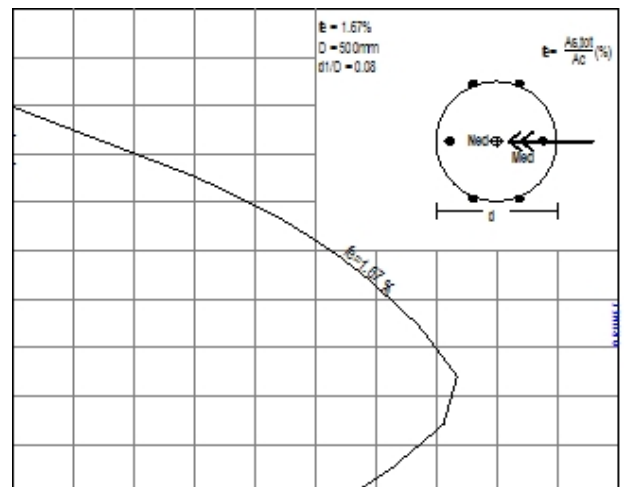
### 1.1. Portata della sezione della colonna (flessione deviata)

(EC2 EN1992-1-1:2004, §6.1)

Abaco di calcolo per la portata della colonna ottenuto dall'integrazione numerica delle tensioni  $D = 0.500 \text{ m}$ ,  $d_1 / D = 0.08$ ,  $4\emptyset 20 + 8\emptyset 18 \text{ } A_{stot} = (32.88 \text{ cm}^2)$ ,  $A_{stot} / A_c = 1.67\%$

### 1.2. Carico massimo assiale, e momento flettente massimo $M_{ed}$

$N = 4068 \text{ kN}$ ,  $M = 0 \text{ kNm}$ ,  $(\epsilon_c / \epsilon_{s1} = -3.50 / -3.47)$   
 $N = 4069 \text{ kN}$ ,  $M = 0 \text{ kNm}$ ,  $(\epsilon_c / \epsilon_{s1} = -3.50 / -3.44)$   
 $N = 4069 \text{ kN}$ ,  $M = 0 \text{ kNm}$ ,  $(\epsilon_c / \epsilon_{s1} = -3.50 / -3.38)$   
 $N = 4069 \text{ kN}$ ,  $M = 0 \text{ kNm}$ ,  $(\epsilon_c / \epsilon_{s1} = -3.50 / -3.20)$   
 $N = 4069 \text{ kN}$ ,  $M = 0 \text{ kNm}$ ,  $(\epsilon_c / \epsilon_{s1} = -3.50 / -2.91)$   
 $N = 4069 \text{ kN}$ ,  $M = 0 \text{ kNm}$ ,  $(\epsilon_c / \epsilon_{s1} = -3.50 / -2.51)$   
 $N = 3362 \text{ kN}$ ,  $M = 116 \text{ kNm}$ ,  $(\epsilon_c / \epsilon_{s1} = -3.50 / -0.53)$   
 $N = 3220 \text{ kN}$ ,  $M = 136 \text{ kNm}$ ,  $(\epsilon_c / \epsilon_{s1} = -3.50 / -0.38)$   
 $N = 3055 \text{ kN}$ ,  $M = 157 \text{ kNm}$ ,  $(\epsilon_c / \epsilon_{s1} = -3.50 / -0.20)$   
 $N = 2876 \text{ kN}$ ,  $M = 178 \text{ kNm}$ ,  $(\epsilon_c / \epsilon_{s1} = -3.50 / -0.01)$   
 $N = 2682 \text{ kN}$ ,  $M = 198 \text{ kNm}$ ,  $(\epsilon_c / \epsilon_{s1} = -3.50 / 0.21)$   
 $N = 2476 \text{ kN}$ ,  $M = 217 \text{ kNm}$ ,  $(\epsilon_c / \epsilon_{s1} = -3.50 / 0.46)$   
 $N = 2255 \text{ kN}$ ,  $M = 235 \text{ kNm}$ ,  $(\epsilon_c / \epsilon_{s1} = -3.50 / 0.74)$   
 $N = 1766 \text{ kN}$ ,  $M = 268 \text{ kNm}$ ,  $(\epsilon_c / \epsilon_{s1} = -3.50 / 1.45)$   
 $N = 1228 \text{ kN}$ ,  $M = 294 \text{ kNm}$ ,  $(\epsilon_c / \epsilon_{s1} = -3.50 / 2.44)$   
 $N = 727 \text{ kN}$ ,  $M = 285 \text{ kNm}$ ,  $(\epsilon_c / \epsilon_{s1} = -3.50 / 3.92)$   
 $N = 266 \text{ kN}$ ,  $M = 251 \text{ kNm}$ ,  $(\epsilon_c / \epsilon_{s1} = -3.50 / 6.39)$   
 $N = 36 \text{ kN}$ ,  $M = 229 \text{ kNm}$ ,  $(\epsilon_c / \epsilon_{s1} = -3.50 / 8.37)$



N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.85$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.99$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.42$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.64$ )
N= 3711	Myy= 202	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-0.27$ )	N= 4444	Myy= 75	Mzz= 13	( $\epsilon c2/\epsilon s1=-3.50/-0.93$ )
N= 3502	Myy= 237	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-0.10$ )	N= 4348	Myy= 92	Mzz= 15	( $\epsilon c2/\epsilon s1=-3.50/-0.80$ )
N= 3319	Myy= 263	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/ 0.09$ )	N= 4230	Myy= 112	Mzz= 17	( $\epsilon c2/\epsilon s1=-3.50/-0.65$ )
N= 3095	Myy= 293	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/ 0.30$ )	N= 4082	Myy= 137	Mzz= 20	( $\epsilon c2/\epsilon s1=-3.50/-0.48$ )
N= 2898	Myy= 316	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/ 0.54$ )	N= 3897	Myy= 168	Mzz= 23	( $\epsilon c2/\epsilon s1=-3.50/-0.29$ )
N= 2643	Myy= 342	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/ 0.81$ )	N= 3660	Myy= 207	Mzz= 28	( $\epsilon c2/\epsilon s1=-3.50/-0.08$ )
N= 2417	Myy= 362	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/ 1.12$ )	N= 3384	Myy= 247	Mzz= 30	( $\epsilon c2/\epsilon s1=-3.50/ 0.17$ )
N= 1872	Myy= 405	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/ 1.89$ )	N= 2786	Myy= 319	Mzz= 35	( $\epsilon c2/\epsilon s1=-3.50/ 0.78$ )
N= 1445	Myy= 406	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/ 2.97$ )	N= 2104	Myy= 375	Mzz= 39	( $\epsilon c2/\epsilon s1=-3.50/ 1.63$ )
N= 984	Myy= 391	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/ 4.59$ )	N= 1407	Myy= 400	Mzz= 35	( $\epsilon c2/\epsilon s1=-3.50/ 2.91$ )
N= 590	Myy= 354	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/ 7.28$ )	N= 788	Myy= 370	Mzz= 33	( $\epsilon c2/\epsilon s1=-3.50/ 5.05$ )
N= 296	Myy= 321	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/ 9.44$ )	N= 475	Myy= 336	Mzz= 37	( $\epsilon c2/\epsilon s1=-3.50/ 6.76$ )
N= 81	Myy= 289	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/14.98$ )	N= -50	Myy= 259	Mzz= 39	( $\epsilon c2/\epsilon s1=-3.50/11.16$ )
(Ned [kN], Med [kNm], $\epsilon c2$ $\epsilon s1$ [o/oo])							

pendenza dell'asse neutro  $\theta=10.00^\circ$ 

N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.47$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.45$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.39$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.24$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.97$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.62$ )
N= 4410	Myy= 80	Mzz= 17	( $\epsilon c2/\epsilon s1=-3.50/-0.85$ )
N= 4308	Myy= 98	Mzz= 20	( $\epsilon c2/\epsilon s1=-3.50/-0.71$ )
N= 4182	Myy= 119	Mzz= 23	( $\epsilon c2/\epsilon s1=-3.50/-0.56$ )
N= 4025	Myy= 146	Mzz= 27	( $\epsilon c2/\epsilon s1=-3.50/-0.38$ )
N= 3825	Myy= 178	Mzz= 33	( $\epsilon c2/\epsilon s1=-3.50/-0.19$ )
N= 3577	Myy= 216	Mzz= 39	( $\epsilon c2/\epsilon s1=-3.50/ 0.03$ )
N= 3297	Myy= 256	Mzz= 42	( $\epsilon c2/\epsilon s1=-3.50/ 0.28$ )
N= 2695	Myy= 324	Mzz= 47	( $\epsilon c2/\epsilon s1=-3.50/ 0.92$ )
N= 2000	Myy= 378	Mzz= 52	( $\epsilon c2/\epsilon s1=-3.50/ 1.80$ )
N= 1316	Myy= 395	Mzz= 47	( $\epsilon c2/\epsilon s1=-3.50/ 3.12$ )
N= 682	Myy= 355	Mzz= 46	( $\epsilon c2/\epsilon s1=-3.50/ 5.33$ )
N= 349	Myy= 316	Mzz= 52	( $\epsilon c2/\epsilon s1=-3.50/ 7.10$ )
(Ned [kN], Med [kNm], $\epsilon c2$ $\epsilon s1$ [o/oo])			

pendenza dell'asse neutro  $\theta=15.00^\circ$ 

N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.47$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.44$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.39$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.22$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.94$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.57$ )
N= 4345	Myy= 90	Mzz= 28	( $\epsilon c2/\epsilon s1=-3.50/-0.70$ )
N= 4232	Myy= 109	Mzz= 32	( $\epsilon c2/\epsilon s1=-3.50/-0.55$ )
N= 4088	Myy= 132	Mzz= 38	( $\epsilon c2/\epsilon s1=-3.50/-0.39$ )
N= 3908	Myy= 160	Mzz= 46	( $\epsilon c2/\epsilon s1=-3.50/-0.21$ )
N= 3687	Myy= 194	Mzz= 54	( $\epsilon c2/\epsilon s1=-3.50/ 0.00$ )
N= 3431	Myy= 230	Mzz= 61	( $\epsilon c2/\epsilon s1=-3.50/ 0.23$ )
N= 3147	Myy= 267	Mzz= 64	( $\epsilon c2/\epsilon s1=-3.50/ 0.50$ )
N= 2527	Myy= 330	Mzz= 71	( $\epsilon c2/\epsilon s1=-3.50/ 1.17$ )
N= 1824	Myy= 377	Mzz= 77	( $\epsilon c2/\epsilon s1=-3.50/ 2.10$ )
N= 1119	Myy= 377	Mzz= 75	( $\epsilon c2/\epsilon s1=-3.50/ 3.50$ )
N= 456	Myy= 320	Mzz= 76	( $\epsilon c2/\epsilon s1=-3.50/ 5.84$ )
N= 112	Myy= 273	Mzz= 80	( $\epsilon c2/\epsilon s1=-3.50/ 7.70$ )

pendenza dell'asse neutro  $\theta=22.50^\circ$ 

N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.47$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.44$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.38$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.20$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.90$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.50$ )
N= 4255	Myy= 101	Mzz= 46	( $\epsilon c2/\epsilon s1=-3.50/-0.51$ )
N= 4121	Myy= 121	Mzz= 54	( $\epsilon c2/\epsilon s1=-3.50/-0.35$ )
N= 3957	Myy= 146	Mzz= 64	( $\epsilon c2/\epsilon s1=-3.50/-0.18$ )
N= 3757	Myy= 175	Mzz= 74	( $\epsilon c2/\epsilon s1=-3.50/ 0.02$ )
N= 3525	Myy= 207	Mzz= 84	( $\epsilon c2/\epsilon s1=-3.50/ 0.23$ )
N= 3261	Myy= 240	Mzz= 93	( $\epsilon c2/\epsilon s1=-3.50/ 0.48$ )
N= 2971	Myy= 273	Mzz= 99	( $\epsilon c2/\epsilon s1=-3.50/ 0.77$ )
N= 2313	Myy= 327	Mzz= 111	( $\epsilon c2/\epsilon s1=-3.50/ 1.48$ )
N= 1578	Myy= 358	Mzz= 119	( $\epsilon c2/\epsilon s1=-3.50/ 2.48$ )
N= 846	Myy= 339	Mzz= 116	( $\epsilon c2/\epsilon s1=-3.50/ 3.97$ )
N= 154	Myy= 264	Mzz= 115	( $\epsilon c2/\epsilon s1=-3.50/ 6.46$ )
(Ned [kN], Med [kNm], $\epsilon c2$ $\epsilon s1$ [o/oo])			

pendenza dell'asse neutro  $\theta=30.00^\circ$ 

N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.47$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.44$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.38$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.19$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.88$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.46$ )
N= 4182	Myy= 106	Mzz= 64	( $\epsilon c2/\epsilon s1=-3.50/-0.38$ )
N= 4040	Myy= 127	Mzz= 76	( $\epsilon c2/\epsilon s1=-3.50/-0.21$ )
N= 3863	Myy= 151	Mzz= 89	( $\epsilon c2/\epsilon s1=-3.50/-0.03$ )
N= 3655	Myy= 179	Mzz= 102	( $\epsilon c2/\epsilon s1=-3.50/ 0.18$ )
N= 3412	Myy= 207	Mzz= 115	( $\epsilon c2/\epsilon s1=-3.50/ 0.40$ )
N= 3137	Myy= 236	Mzz= 127	( $\epsilon c2/\epsilon s1=-3.50/ 0.67$ )
N= 2833	Myy= 263	Mzz= 137	( $\epsilon c2/\epsilon s1=-3.50/ 0.96$ )
N= 2140	Myy= 310	Mzz= 154	( $\epsilon c2/\epsilon s1=-3.50/ 1.71$ )
N= 1377	Myy= 325	Mzz= 163	( $\epsilon c2/\epsilon s1=-3.50/ 2.75$ )
N= 639	Myy= 294	Mzz= 157	( $\epsilon c2/\epsilon s1=-3.50/ 4.31$ )
N= -35	Myy= 220	Mzz= 137	( $\epsilon c2/\epsilon s1=-3.50/ 6.91$ )

pendenza dell'asse neutro $\theta=37.50^\circ$				pendenza dell'asse neutro $\theta=45.00^\circ$			
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.47$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.47$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.44$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.44$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.37$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.37$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.18$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.18$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.86$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.85$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.43$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.42$ )
N= 4140	Myy= 105	Mzz= 80	( $\epsilon c2/\epsilon s1=-3.50/-0.29$ )	N= 4122	Myy= 95	Mzz= 95	( $\epsilon c2/\epsilon s1=-3.50/-0.27$ )
N= 3987	Myy= 124	Mzz= 96	( $\epsilon c2/\epsilon s1=-3.50/-0.12$ )	N= 3965	Myy= 113	Mzz= 113	( $\epsilon c2/\epsilon s1=-3.50/-0.10$ )
N= 3804	Myy= 146	Mzz= 113	( $\epsilon c2/\epsilon s1=-3.50/ 0.06$ )	N= 3780	Myy= 133	Mzz= 133	( $\epsilon c2/\epsilon s1=-3.50/ 0.09$ )
N= 3587	Myy= 170	Mzz= 130	( $\epsilon c2/\epsilon s1=-3.50/ 0.27$ )	N= 3565	Myy= 153	Mzz= 153	( $\epsilon c2/\epsilon s1=-3.50/ 0.30$ )
N= 3340	Myy= 195	Mzz= 146	( $\epsilon c2/\epsilon s1=-3.50/ 0.51$ )	N= 3318	Myy= 174	Mzz= 174	( $\epsilon c2/\epsilon s1=-3.50/ 0.54$ )
N= 3062	Myy= 219	Mzz= 161	( $\epsilon c2/\epsilon s1=-3.50/ 0.78$ )	N= 3031	Myy= 194	Mzz= 194	( $\epsilon c2/\epsilon s1=-3.50/ 0.81$ )
N= 2749	Myy= 242	Mzz= 175	( $\epsilon c2/\epsilon s1=-3.50/ 1.08$ )	N= 2713	Myy= 212	Mzz= 212	( $\epsilon c2/\epsilon s1=-3.50/ 1.12$ )
N= 2024	Myy= 279	Mzz= 198	( $\epsilon c2/\epsilon s1=-3.50/ 1.84$ )	N= 1978	Myy= 241	Mzz= 241	( $\epsilon c2/\epsilon s1=-3.50/ 1.89$ )
N= 1240	Myy= 288	Mzz= 207	( $\epsilon c2/\epsilon s1=-3.50/ 2.91$ )	N= 1180	Myy= 250	Mzz= 250	( $\epsilon c2/\epsilon s1=-3.50/ 2.97$ )
N= 499	Myy= 254	Mzz= 192	( $\epsilon c2/\epsilon s1=-3.50/ 4.52$ )	N= 440	Myy= 221	Mzz= 221	( $\epsilon c2/\epsilon s1=-3.50/ 4.58$ )
(Ned [kN], Med [kNm], $\epsilon c2$ $\epsilon s1$ [o/oo])							

pendenza dell'asse neutro $\theta=52.50^\circ$				pendenza dell'asse neutro $\theta=60.00^\circ$			
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.47$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.47$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.44$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.44$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.37$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.38$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.18$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.19$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.86$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.88$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.43$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.46$ )
N= 4140	Myy= 80	Mzz= 105	( $\epsilon c2/\epsilon s1=-3.50/-0.29$ )	N= 4182	Myy= 64	Mzz= 106	( $\epsilon c2/\epsilon s1=-3.50/-0.38$ )
N= 3987	Myy= 96	Mzz= 124	( $\epsilon c2/\epsilon s1=-3.50/-0.12$ )	N= 4040	Myy= 76	Mzz= 127	( $\epsilon c2/\epsilon s1=-3.50/-0.21$ )
N= 3804	Myy= 113	Mzz= 146	( $\epsilon c2/\epsilon s1=-3.50/ 0.06$ )	N= 3863	Myy= 89	Mzz= 151	( $\epsilon c2/\epsilon s1=-3.50/-0.03$ )
N= 3587	Myy= 130	Mzz= 170	( $\epsilon c2/\epsilon s1=-3.50/ 0.27$ )	N= 3655	Myy= 102	Mzz= 179	( $\epsilon c2/\epsilon s1=-3.50/ 0.18$ )
N= 3340	Myy= 146	Mzz= 195	( $\epsilon c2/\epsilon s1=-3.50/ 0.51$ )	N= 3412	Myy= 115	Mzz= 207	( $\epsilon c2/\epsilon s1=-3.50/ 0.40$ )
N= 3062	Myy= 161	Mzz= 219	( $\epsilon c2/\epsilon s1=-3.50/ 0.78$ )	N= 3137	Myy= 127	Mzz= 236	( $\epsilon c2/\epsilon s1=-3.50/ 0.67$ )
N= 2749	Myy= 175	Mzz= 242	( $\epsilon c2/\epsilon s1=-3.50/ 1.08$ )	N= 2833	Myy= 137	Mzz= 263	( $\epsilon c2/\epsilon s1=-3.50/ 0.96$ )
N= 2024	Myy= 198	Mzz= 279	( $\epsilon c2/\epsilon s1=-3.50/ 1.84$ )	N= 2140	Myy= 154	Mzz= 310	( $\epsilon c2/\epsilon s1=-3.50/ 1.71$ )
N= 1240	Myy= 207	Mzz= 288	( $\epsilon c2/\epsilon s1=-3.50/ 2.91$ )	N= 1377	Myy= 163	Mzz= 325	( $\epsilon c2/\epsilon s1=-3.50/ 2.75$ )
N= 499	Myy= 192	Mzz= 254	( $\epsilon c2/\epsilon s1=-3.50/ 4.52$ )	N= 639	Myy= 157	Mzz= 294	( $\epsilon c2/\epsilon s1=-3.50/ 4.31$ )
(Ned [kN], Med [kNm], $\epsilon c2$ $\epsilon s1$ [o/oo])							

pendenza dell'asse neutro $\theta=67.50^\circ$				pendenza dell'asse neutro $\theta=75.00^\circ$			
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.47$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.47$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.44$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.44$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.38$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.39$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.20$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.22$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.90$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.94$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.50$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.57$ )
N= 4255	Myy= 46	Mzz= 101	( $\epsilon c2/\epsilon s1=-3.50/-0.51$ )	N= 4345	Myy= 28	Mzz= 90	( $\epsilon c2/\epsilon s1=-3.50/-0.70$ )
N= 4121	Myy= 54	Mzz= 121	( $\epsilon c2/\epsilon s1=-3.50/-0.35$ )	N= 4232	Myy= 32	Mzz= 109	( $\epsilon c2/\epsilon s1=-3.50/-0.55$ )
N= 3957	Myy= 64	Mzz= 146	( $\epsilon c2/\epsilon s1=-3.50/-0.18$ )	N= 4088	Myy= 38	Mzz= 132	( $\epsilon c2/\epsilon s1=-3.50/-0.39$ )
N= 3757	Myy= 74	Mzz= 175	( $\epsilon c2/\epsilon s1=-3.50/ 0.02$ )	N= 3908	Myy= 46	Mzz= 160	( $\epsilon c2/\epsilon s1=-3.50/-0.21$ )
N= 3525	Myy= 84	Mzz= 207	( $\epsilon c2/\epsilon s1=-3.50/ 0.23$ )	N= 3687	Myy= 54	Mzz= 194	( $\epsilon c2/\epsilon s1=-3.50/ 0.00$ )
N= 3261	Myy= 93	Mzz= 240	( $\epsilon c2/\epsilon s1=-3.50/ 0.48$ )	N= 3431	Myy= 61	Mzz= 230	( $\epsilon c2/\epsilon s1=-3.50/ 0.23$ )
N= 2971	Myy= 99	Mzz= 273	( $\epsilon c2/\epsilon s1=-3.50/ 0.77$ )	N= 3147	Myy= 64	Mzz= 267	( $\epsilon c2/\epsilon s1=-3.50/ 0.50$ )
N= 2313	Myy= 111	Mzz= 327	( $\epsilon c2/\epsilon s1=-3.50/ 1.48$ )	N= 2527	Myy= 71	Mzz= 330	( $\epsilon c2/\epsilon s1=-3.50/ 1.17$ )
N= 1578	Myy= 119	Mzz= 358	( $\epsilon c2/\epsilon s1=-3.50/ 2.48$ )	N= 1824	Myy= 77	Mzz= 377	( $\epsilon c2/\epsilon s1=-3.50/ 2.10$ )
N= 846	Myy= 116	Mzz= 339	( $\epsilon c2/\epsilon s1=-3.50/ 3.97$ )	N= 1119	Myy= 75	Mzz= 377	( $\epsilon c2/\epsilon s1=-3.50/ 3.50$ )
N= 154	Myy= 115	Mzz= 264	( $\epsilon c2/\epsilon s1=-3.50/ 6.46$ )	N= 456	Myy= 76	Mzz= 320	( $\epsilon c2/\epsilon s1=-3.50/ 5.84$ )
(Ned [kN], Med [kNm], $\epsilon c2$ $\epsilon s1$ [o/oo])							

pendenza dell'asse neutro $\theta=82.50^\circ$				pendenza dell'asse neutro $\theta=90.00^\circ$			
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.47$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.47$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.45$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.44$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.40$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.37$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.24$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-3.18$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.99$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.85$ )
N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.64$ )	N= 4828	Myy= 0	Mzz= 0	( $\epsilon c2/\epsilon s1=-3.50/-2.42$ )
N= 4444	Myy= 13	Mzz= 75	( $\epsilon c2/\epsilon s1=-3.50/-0.93$ )	N= 3711	Myy= 0	Mzz= 202	( $\epsilon c2/\epsilon s1=-3.50/-0.27$ )
N= 4348	Myy= 15	Mzz= 92	( $\epsilon c2/\epsilon s1=-3.50/-0.80$ )	N= 3502	Myy= 0	Mzz= 237	( $\epsilon c2/\epsilon s1=-3.50/-0.10$ )
N= 4230	Myy= 17	Mzz= 112	( $\epsilon c2/\epsilon s1=-3.50/-0.65$ )	N= 3319	Myy= 0	Mzz= 263	( $\epsilon c2/\epsilon s1=-3.50/ 0.09$ )
N= 4082	Myy= 20	Mzz= 137	( $\epsilon c2/\epsilon s1=-3.50/-0.48$ )	N= 3095	Myy= 0	Mzz= 293	( $\epsilon c2/\epsilon s1=-3.50/ 0.30$ )
N= 3897	Myy= 23	Mzz= 168	( $\epsilon c2/\epsilon s1=-3.50/-0.29$ )	N= 2898	Myy= 0	Mzz= 316	( $\epsilon c2/\epsilon s1=-3.50/ 0.54$ )
N= 3660	Myy= 28	Mzz= 207	( $\epsilon c2/\epsilon s1=-3.50/-0.08$ )	N= 2643	Myy= 0	Mzz= 342	( $\epsilon c2/\epsilon s1=-3.50/ 0.81$ )
N= 3384	Myy= 30	Mzz= 247	( $\epsilon c2/\epsilon s1=-3.50/ 0.17$ )	N= 2417	Myy= 0	Mzz= 362	( $\epsilon c2/\epsilon s1=-3.50/ 1.12$ )
N= 2786	Myy= 35	Mzz= 319	( $\epsilon c2/\epsilon s1=-3.50/ 0.78$ )	N= 1872	Myy= 0	Mzz= 405	( $\epsilon c2/\epsilon s1=-3.50/ 1.89$ )
N= 2104	Myy= 39	Mzz= 375	( $\epsilon c2/\epsilon s1=-3.50/ 1.63$ )	N= 1445	Myy= 0	Mzz= 406	( $\epsilon c2/\epsilon s1=-3.50/ 2.97$ )
N= 1407	Myy= 35	Mzz= 400	( $\epsilon c2/\epsilon s1=-3.50/ 2.91$ )	N= 984	Myy= 0	Mzz= 391	( $\epsilon c2/\epsilon s1=-3.50/ 4.59$ )
N= 788	Myy= 33	Mzz= 370	( $\epsilon c2/\epsilon s1=-3.50/ 5.05$ )	N= 590	Myy= 0	Mzz= 354	( $\epsilon c2/\epsilon s1=-3.50/ 7.28$ )
N= 475	Myy= 37	Mzz= 336	( $\epsilon c2/\epsilon s1=-3.50/ 6.76$ )	N= 296	Myy= 0	Mzz= 321	( $\epsilon c2/\epsilon s1=-3.50/ 9.44$ )
(Ned [kN], Med [kNm], $\epsilon c2$ $\epsilon s1$ [o/oo])							