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STATISCHER NACHWEIS

Bauvorhaben: Pavillon Rondo VP Ø 3,94 m
Pavillon Rondo VP Ø 3,31 m

Bauherr: Hoklartherm GmbH
An der Süderbäke 2
26689 Apen

Gegenstand: Nachweis der Konstruktion

Datum: 24. November 2011

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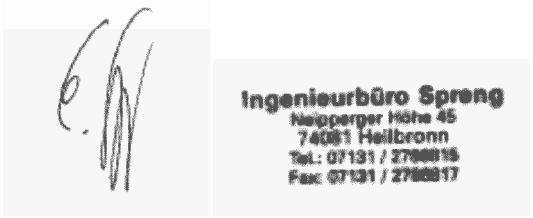

Ersteller: Dipl.Ing. Egbert Spreng

Seiten: 01 bis 101

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Inhaltsverzeichnis

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1.0 Berechnungsgrundlagen

Vorschriften

- DIN EN 1991-1-3:2010-12 Teil 1-3 : Schneelasten
- DIN EN 1991-1-3/NA:2010-12 nationaler Anhang

- DIN EN 1991-1-4:2010-12 Teil 1-4 : Windlasten
- DIN EN 1991-1-4/NA:2010-12 nationaler Anhang

- DIN EN 1999-1-1/A1 Eurocode 9 : Bemessung und Konstruktion von Aluminiumtragwerken
  Teil 1-1 : Allgemeine Bemessungsregeln

- DIN EN 1993 Bemessung und Konstruktion von Stahlbauten

- DIN 1025 Walzprofile

- DIN 18008 Glas im Bauwesen
  Bemessungs- und Konstruktionsregeln

Werkstoffe

- DIN EN 10025-2 : Unlegierte Baustähle
  S235JR , S355JR

- EN AW-6063 T6 : Aluminiumknetlegierung für tragende Bauteile
  EN AW – Al Mg0,7Si

- Verbindungsmittel : Edelstahl : Werkstoff A2-50/70
  Stahl : Festigkeitsklassen 8.8 , 10.9

Literatur / Hilfsmittel

- Schnittkraftermittlung und Bemessung mit Unterstützung der Software von Friedrich und Lochner GmbH , Stuttgart
- Glasdickenberechnung mit der Software von Sommer Informatik
- Spannungs- und Verformungsnachweise von Bauteilen aus Glas mit dem Finite Elemente Programm von SJ Software
- Dübelbemessung mit Unterstützung der Software von HILTI oder Fischer
- Wendehorst und Schneider, Bautechnische Zahlentafeln bzw. Bautabellen
- Stahl im Hochbau

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2.0 Vorbemerkung

Nachgewiesen wird die Aluminiumkonstruktion des Pavillon Rondo VP Ø 3,94.

Der Pavillon Rondo Ø 3,31 wird konstruktiv mit denselben Profilen ausgeführt hat aber eine kleinere Abmessung und somit weniger Belastung.

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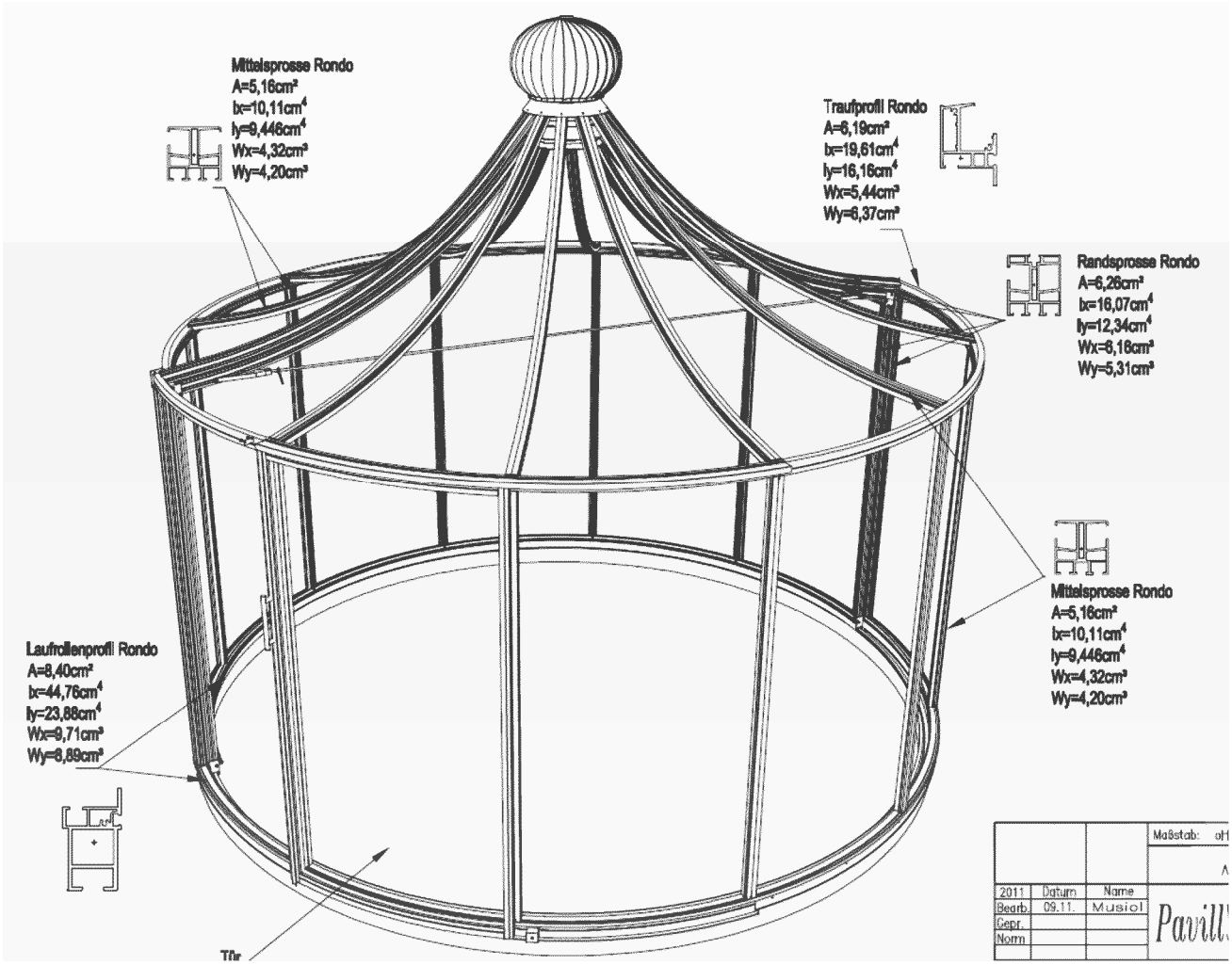
3.0 Bemessung

3.1 Zeichnungen



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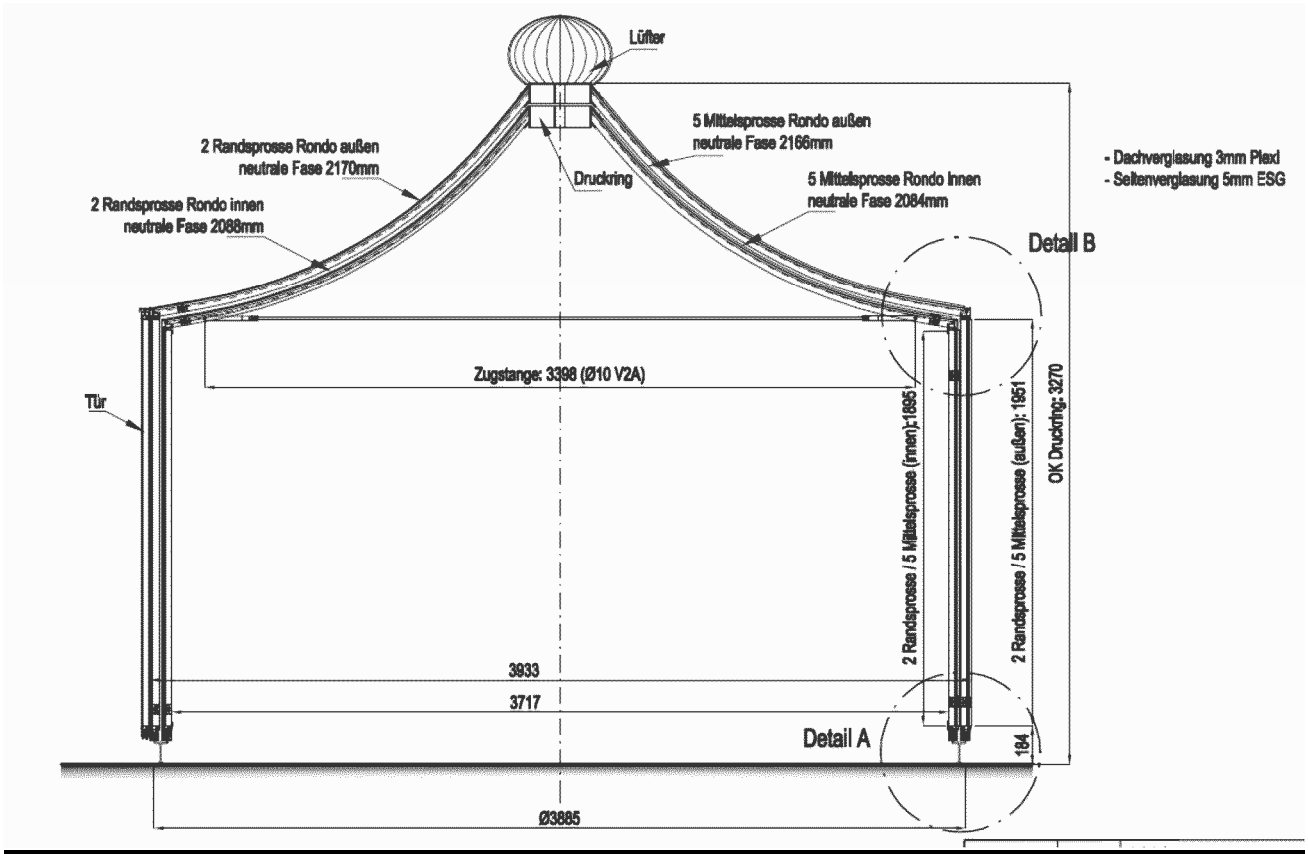

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3.2 Belastung , Querschnitte , Werkstoffe

3.2.1 Belastung

Eigengewicht der Profile

wird vom Berechnungsprogramm berücksichtigt

Eigengewicht Verglasung

g^{Glas} = 0,13 kN/m² 5 mm ESG-Verglasung

g^{Plexi} = 0,06 kN/m² 5 mm Plexiglas

äussere Lasten

Geländerhöhe 450 müNN
Geländekategorie Küste

Windzone 2 q_{ref} = 0,39 kN/m²
Winddruck q = 0,69 kN/m²
Referenzhöhe z_e = 3,30 m

Windlastverteilung siehe Seite 8

Schneelastzone 2 s_K = 1,40 kN/m²
Dachschneelast s_i = 1,12 kN/m²

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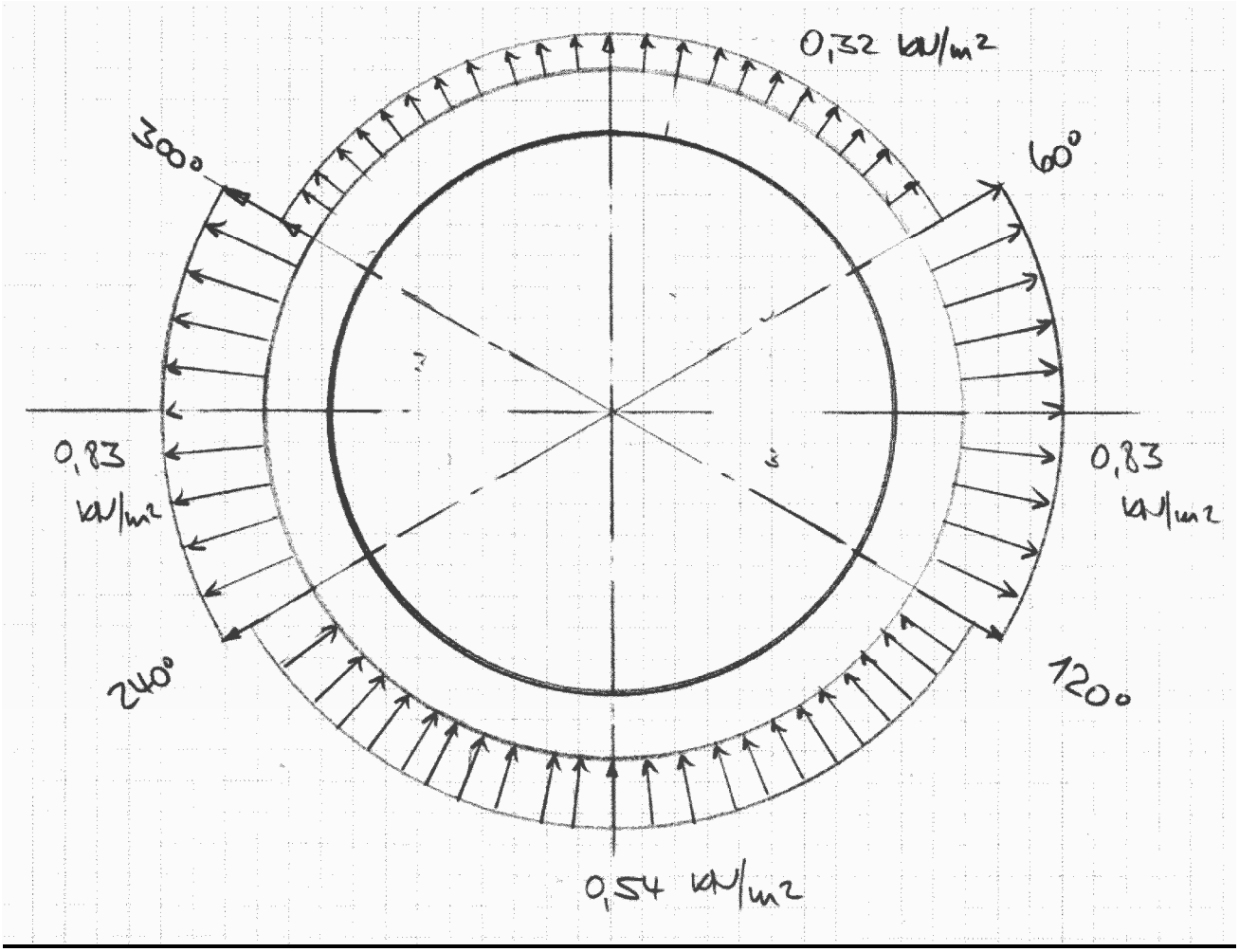

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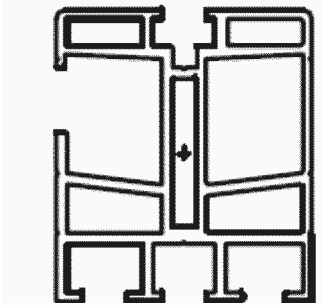
3.2.2 Profile



Randsprosse Rondo

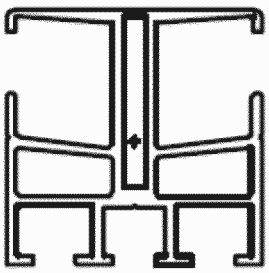
$A=6,26cm^2$

$Ix=16,07cm^4$

$Iy=12,34cm^4$

$Wx=6,16cm^3$

$Wy=5,31cm^3$



Mittelsprosse Rondo

$A=5,16cm^2$

$Ix=10,11cm^4$

$Iy=9,446cm^4$

$Wx=4,32cm^3$

$Wy=4,20cm^3$

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Traufprofil Rondo

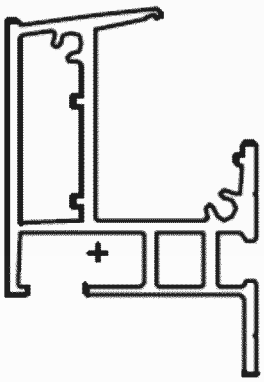
$A=6,19cm^2$

$Ix=19,61cm^4$

$Iy=16,16cm^4$

$Wx=5,44cm^3$

$Wy=6,37cm^3$



Laufrollenprofil Rondo

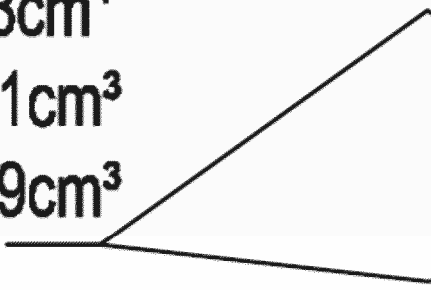
$A=8,40cm^2$

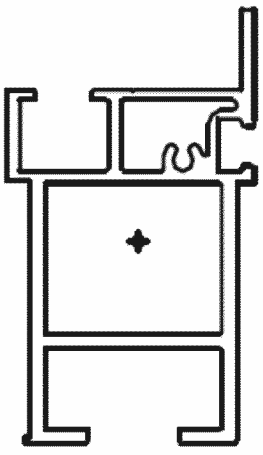
$Ix=44,76cm^4$

$Iy=23,88cm^4$

$Wx=9,71cm^3$

$Wy=8,89cm^3$





3.2.3 Werkstoffe

Aluminium

Für die Berechnung und Ausführung des Bauwerkes wird eine Aluminiumknetlegierung für tragende Bauteile verwendet und eingesetzt.

Werkstoffart : EN AW-6063 T66

0,2% Dehngrenze : f_o = 178 N/mm²

Teilsicherheitsbeiwert : γ_{Mi} = 1,1

Bemessungswerte : σ_{ED} = 180/1,1 = 161 N/mm²

τ_{ED} = 161/√3 = 93 N/mm²

Stahl

Werkstoffart : S235JR , 1.0038

0,2% Dehngrenze : $f_{y,k}$ = 240 N/mm²

Teilsicherheitsbeiwert : γ_M = 1,1

Bemessungswerte : $\sigma_{R,d}$ = 240/1,1 = 218 N/mm²

$\tau_{R,d}$ = 218/√3 = 125 N/mm²

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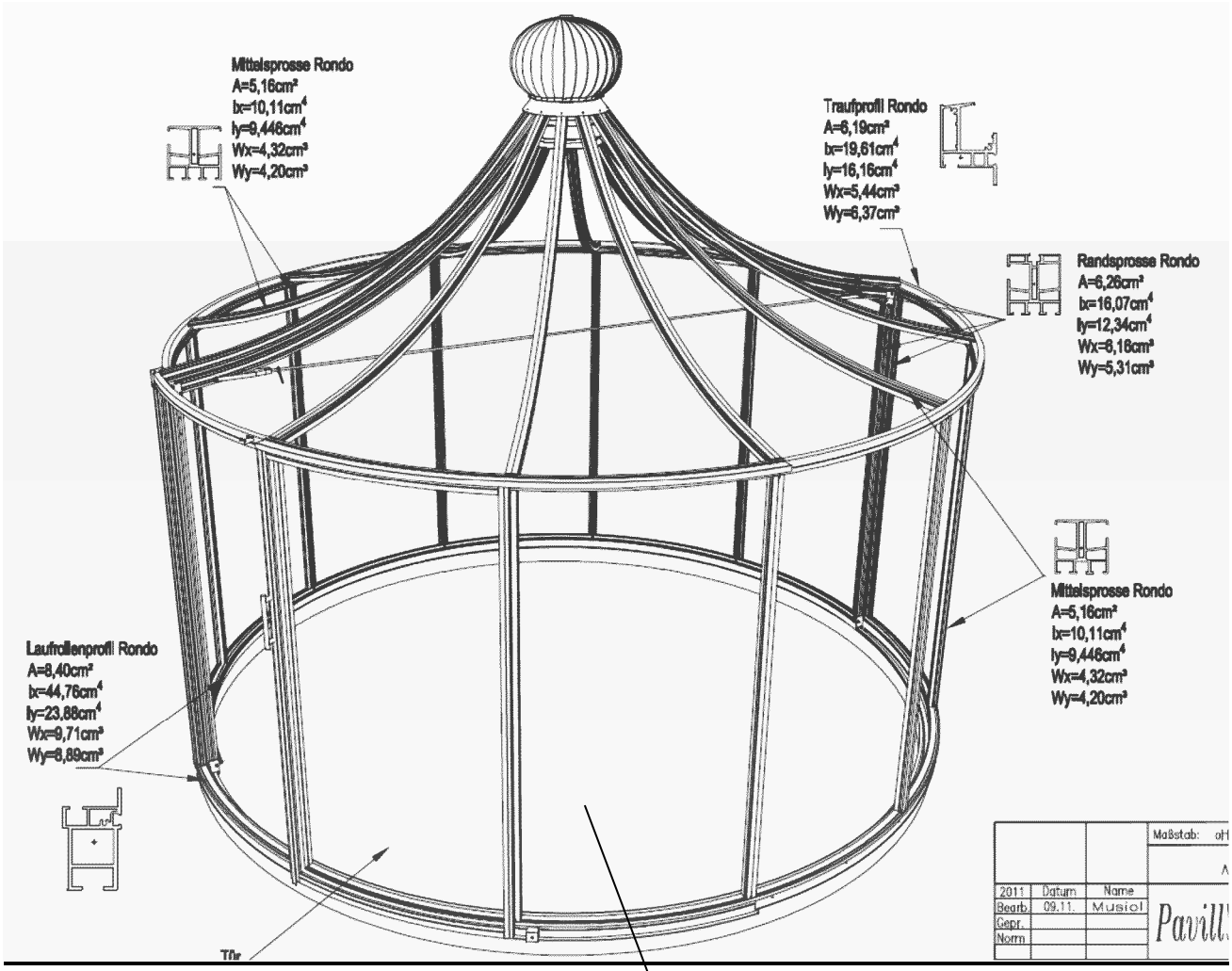
3.3 Nachweis Verglasung



Verglasung
5 mm ESG
Abm.: 1,15 m x 1,95 m

Vertikalverglasung

Verglasung

Projektdaten
Datum: 24.11.2011
Firma:
Bearbeiter:
Objekt: Pavillon Rondo 3,94 m

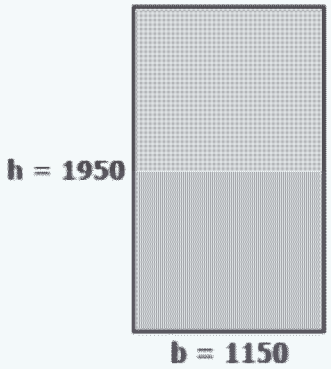
Kundendaten
Ingenieurbüro Spreng
Neipperger Höhe 45
74081 Heilbronn

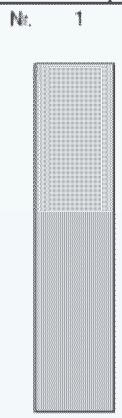
Geometrie

Einbauwinkel	90,0 °	**Breite b**	1150 mm
Form	Rechteck	**Höhe h**	1950 mm
Lagerung	Allseitig		

Aufbau

Nr.	Bauteil	Hersteller	Produktname	Glasart	Gas	Dicke (mm)
1	Scheibe außen	Saint Gobain	SECURIT	ESG (Float)		5





Eigengewicht Gesamtgewicht 28,03 kg

cos(90,0°) = 0,00

	oben / aussen	mitte	unten / innen
Eigengewicht	0,12 kN/m²	-	-
wirksam	**0,00 kN/m²**	-	-

Windlast: **manuelle Eingabe**

Windlastzone: **Höhe ü. NN:**
Geländekategorie:

	Last aussen	Last innen
Lastfall: Druck	**0,54 kN/m²**	**0,00 kN/m²**
Lastfall: Sog	**-0,83 kN/m²**	**0,00 kN/m²**

Streckenlast Last auf Innenscheibe (+ Druck - Zug)

Last 0,00 kN/m **Angriffshöhe** 1000 mm

Nachweis OK

ständige Lasten (Gewicht, Einbau): Angabe = Gamma, Psi = 1
vorübergehende Lasten: Angabe = Psi, Gamma = 1,5
* Durchbiegung an der Stelle des Lastangriffes der Strecken- bzw. Einzellast. In Klammern Werte für Scheibenmitte.

Ergebnis

	Gebrauchstauglichkeit (Durchbiegung mm)			Tragfähigkeit (Spannung N/mm²)			
	f	zul f	res.SZR	Sd	Rd	Ausnutzung	
Nr. 1: Gewicht (1,35), Streckenlast (1,00)							
Scheibe aussen	0,00	*	OK	0,00	80,00	0 %	OK
Nr. 2: Gewicht (1,00), Windsog (1,00)							
Scheibe aussen	-16,62	*	OK	-35,15	80,00	44 %	OK

Nr. 3: Gewicht (1,35), Winddruck (1,00)							
Scheibe aussen	10,82	*	OK	22,87	80,00	29 %	OK
Nr. 4: Gewicht (1,35)							
Scheibe aussen	0,00	*	OK	0,00	80,00	0 %	OK
Nr. 5: Gewicht (1,00), Windsog (0,60), Streckenlast (1,00)							
Scheibe aussen	-9,97	*	OK	-21,09	80,00	26 %	OK
Nr. 6: Gewicht (1,00), Windsog (1,00), Streckenlast (0,70)							
Scheibe aussen	-16,62	*	OK	-35,15	80,00	44 %	OK
Nr. 7: Gewicht (1,35), Winddruck (0,60), Streckenlast (1,00)							
Scheibe aussen	6,49	*	OK	13,72	80,00	17 %	OK
Nr. 8: Gewicht (1,35), Winddruck (1,00), Streckenlast (0,70)							
Scheibe aussen	10,82	*	OK	22,87	80,00	29 %	OK

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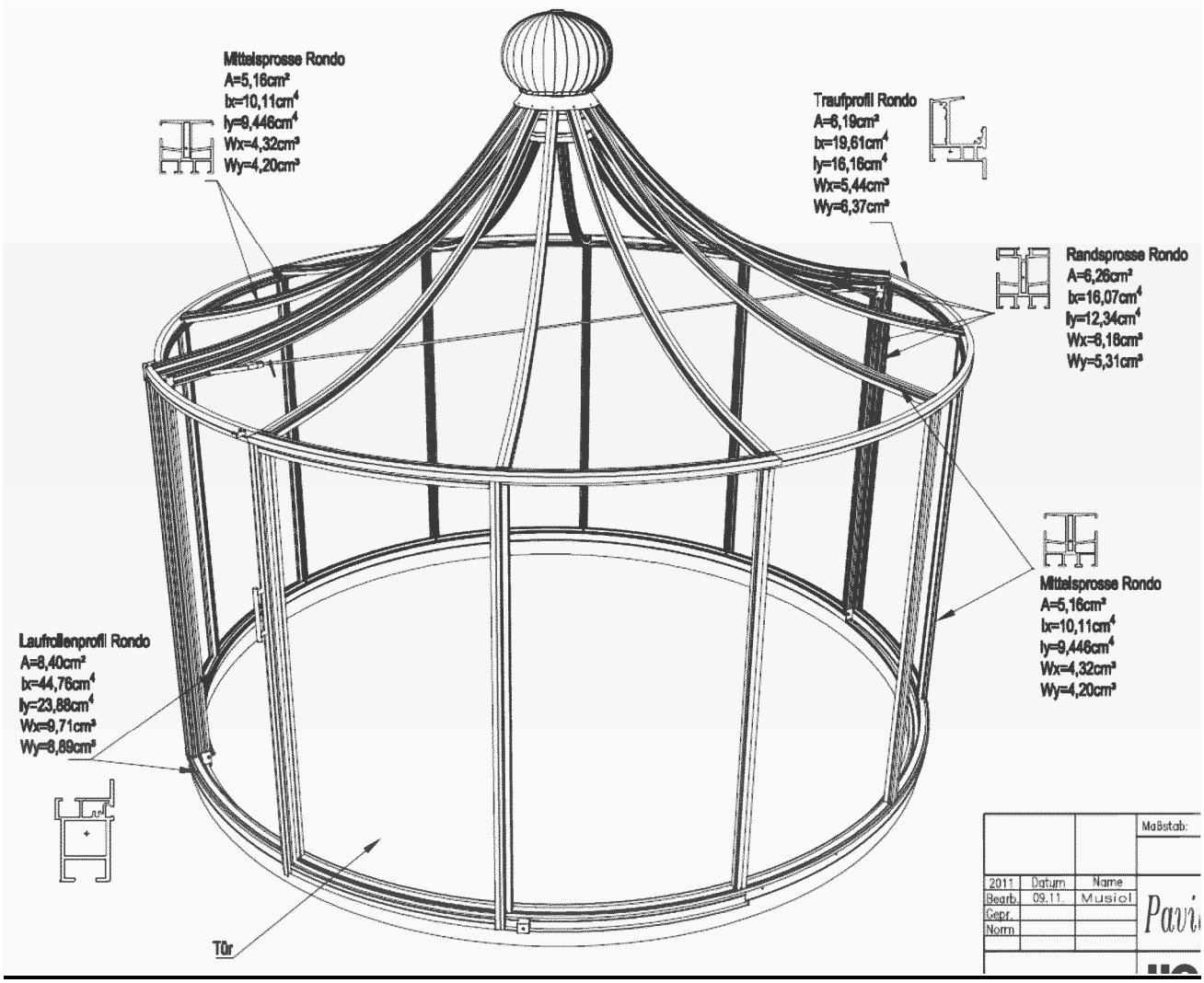
3.3 Nachweis Konstruktion



Die nachfolgende statische Berechnung hat eine ausreichende Tragfähigkeit nachgewiesen.
Der Nachweis hat erbracht , dass der Pavillon in folgenen Zonen eingesetzt werden kann :

- Windlastzone 2 , Küstenregion
- Schneelastzone 2
- Geländehöhe 450 müNN

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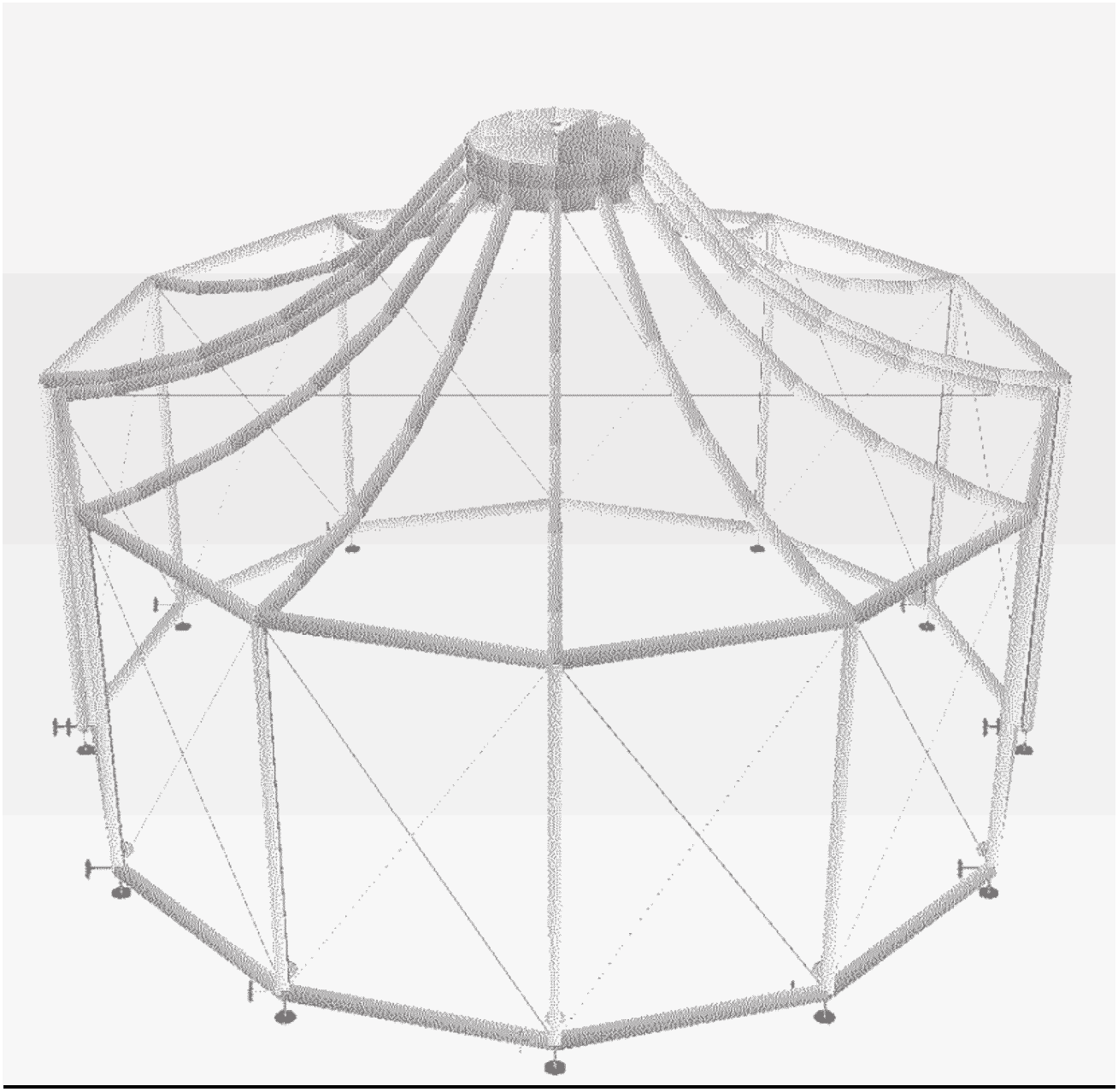

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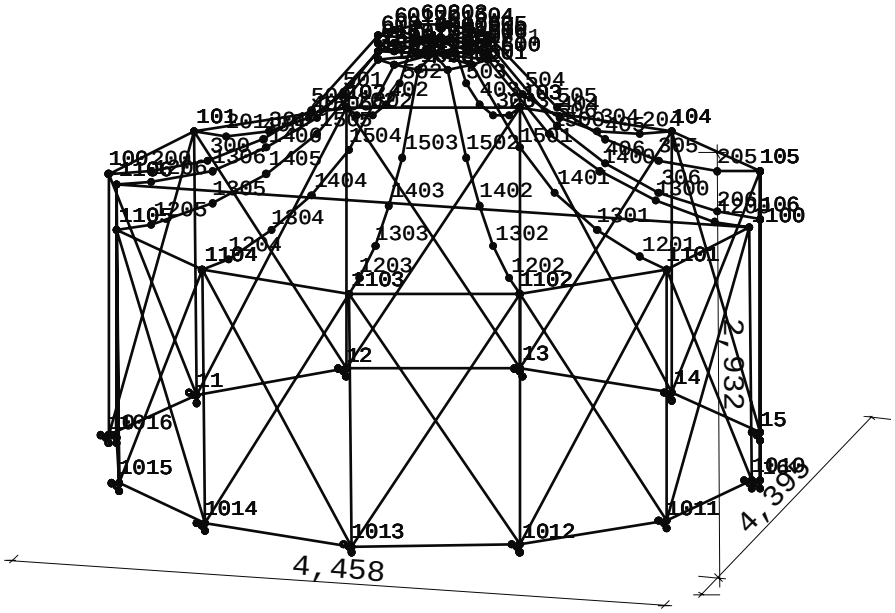
System M 1 : 50



BAUSTOFFE		E-Modul	G-Modul	spez. Gewicht	γM
Nr.	Name	kN/cm2	kN/cm2	(kg/dm3)	
1	EN AW-6063 T66	7000	2700	2.70	1.00
2	StE690	21000	8100	7.85	1.10
3	S235	21000	8100	7.85	1.10

QUERSCHNITTSWERTE : für die Schnittgrössenermittlung
J = Trägheitsmoment (cm4) A = Fläche (cm2)

Querschnitt		B i e g u n g		Torsion	normal
Nr.	Mat.	J-I	J-II	J-T	A
1	1 Randspross	16.1	12.3	22.1	6.26
2	1 Mittelspro	10.1	9.45	22.1	5.16
3	1 Traufprofi	19.6	16.2	22.1	6.19
4	1 Laufrollen	44.8	23.9	22.1	8.40
5	1 FL5x100(sd	41.7	0.104	0.404	5.00
6	1 RO50x5(sd)	18.1	18.1	36.2	7.07
7	2 o40(sd)	12.6	12.6	25.1	12.6
8	3 o10(sd)	4.909E-2	4.909E-2	9.817E-2	0.785

Querschnitt 1 : Randsprosse
Querschnitt 2 : Mittelsprosse
Querschnitt 3 : Traufprofil
Querschnitt 4 : Laufrollenprofil
Querschnitt 5 : FL5x100(sd)

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QUERSCHNITTSWERTE : Weitere Werte für die Spannungsermittlung
W = Widerstandsmoment (cm3) A = Fläche (cm2)

Querschnitt Nr.	Mat	Biegung W-I	Biegung W-II	Torsion W-T	normal A	Schub Aq-I	Schub Aq-II
1	1 Randsprosse	6.16	5.31	9.22	6.26	1.71	1.71
2	1 Mittelspross	4.32	5.31	9.22	5.16	1.71	1.71
3	1 Traufprofil	5.44	6.37	9.22	6.19	1.71	1.71
4	1 Laufrollenpr	9.71	8.89	9.22	8.40	1.71	1.71
5	1 FL5x100(sd)	8.33	0.417	***	5.00	3.33	3.33
6	1 RO50x5(sd)	7.25	7.25	14.5	7.07	**	**
7	2 o40(sd)	6.28	6.28	***	12.6	9.42	9.42
8	3 o10(sd)	.817E-2	9.817E-2	***	0.785	0.589	0.589

** Die Schubspannung wird aus Tau=Q*S/(J*t) gerechnet.
*** W-T wird bei der Spannungsermittlung lokal gerechnet.

PLASTISCHE SCHNITTGRÖßEN

Nr	Mat	NPl (kN)	Mply (kNm)	Qplz (kN)	Mplz (kNm)	Qply (kN)
5	1	90.0	2.2	26.0	0.1	26.0
6	1	127.2	1.8	46.8	1.8	46.8
7	2	867.1	7.4	318.9	7.4	318.9
8	3	18.8	0.0	6.9	0.0	6.9

Querschnittsabmessungen : mit Profilhöhe = h , a oder D

Quersch. Nr.	Mat	Profil	Aussenmasse h (mm)	b (mm)	Wanddicken s (mm)	t (mm)	Radius r (mm)
5	1	Rechteck	100	5			
6	1	Rundrohr	50		5.0		
7	2	Rundstahl	40				
8	3	Rundstahl	10				

SYSTEM : P r o j e k t i o n e n Querschnitt K n o t e n

Stab	Lx (m)	Ly (m)	Lz (m)	Q1	Q2	Ende 1	Ende 2
1	0.049	0.185	0.000	5	5	600	601
2	0.135	0.135	0.000	5	5	601	602
3	0.185	0.049	0.000	5	5	602	603
4	0.185	-0.049	0.000	5	5	603	604
5	0.135	-0.135	0.000	5	5	604	605
6	0.049	-0.185	0.000	5	5	605	606
7	-0.049	-0.185	0.000	5	5	606	607
8	-0.135	-0.135	0.000	5	5	607	608

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SYSTEM : P r o j e k t i o n e n Querschnitt K n o t e n

Stab	Lx (m)	Ly (m)	Lz (m)	Q1	Q2	Ende 1	Ende 2
10	-0.185	0.049	0.000	5	5	609	610
11	-0.135	0.135	0.000	5	5	610	611
12	-0.049	0.185	0.000	5	5	611	600
20	0.000	0.000	-0.050	6	6	701	700
21	0.000	0.000	-0.050	6	6	700	702
30	0.369	0.000	0.000	5	5	600	700
31	0.320	-0.185	0.000	5	5	601	700
32	0.185	-0.320	0.000	5	5	602	700
33	0.000	-0.369	0.000	5	5	603	700
34	-0.185	-0.320	0.000	5	5	604	700
35	-0.320	-0.185	0.000	5	5	605	700
36	-0.369	0.000	0.000	5	5	606	700
37	-0.320	0.185	0.000	5	5	607	700
38	-0.185	0.320	0.000	5	5	608	700
39	0.000	0.369	0.000	5	5	609	700
40	0.185	0.320	0.000	5	5	610	700
41	0.320	0.185	0.000	5	5	611	700
100	-0.468	0.000	-0.534	1	1	600	500
101	-0.335	0.000	-0.234	1	1	500	400
102	-0.370	0.000	-0.173	1	1	400	300
103	-0.395	0.000	-0.105	1	1	300	200
104	-0.292	0.000	-0.029	1	1	200	100
105	0.405	0.234	-0.534	2	2	605	505
106	0.290	0.167	-0.234	2	2	505	405
107	0.320	0.185	-0.173	2	2	405	305
108	0.342	0.198	-0.105	2	2	305	205
109	0.253	0.146	-0.029	2	2	205	105
110	-0.405	0.234	-0.534	2	2	601	501
111	-0.275	0.167	-0.234	2	2	501	401
112	-0.335	0.185	-0.173	2	2	401	301
113	-0.342	0.198	-0.105	2	2	301	201
114	-0.253	0.146	-0.029	2	2	201	101
115	-0.234	0.405	-0.534	2	2	602	502
116	-0.167	0.290	-0.234	2	2	502	402
117	-0.185	0.320	-0.173	2	2	402	302
118	-0.198	0.342	-0.105	2	2	302	202
119	-0.146	0.253	-0.029	2	2	202	102
120	0.000	0.468	-0.534	2	2	603	503
121	0.000	0.335	-0.234	2	2	503	403
122	0.000	0.370	-0.173	2	2	403	303
123	0.000	0.395	-0.105	2	2	303	203
124	0.000	0.292	-0.029	2	2	203	103
125	0.234	0.405	-0.534	2	2	604	504
126	0.167	0.290	-0.234	2	2	504	404
127	0.185	0.320	-0.173	2	2	404	304
128	0.198	0.342	-0.105	2	2	304	204
129	0.146	0.253	-0.029	2	2	204	104
130	0.468	0.000	-0.534	1	1	606	506
131	0.335	0.000	-0.234	1	1	506	406
132	0.370	0.000	-0.173	1	1	406	306
133	0.395	0.000	-0.105	1	1	306	206

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SYSTEM : P r o j e k t i o n e n Querschnitt K n o t e n

Stab	Lx (m)	Ly (m)	Lz (m)	Q1	Q2	Ende 1	Ende 2
134	0.292	0.000	-0.029	1	1	206	106
150	0.299	1.115	0.000	3	3	100	101
151	0.815	0.815	0.000	3	3	101	102
152	1.115	0.299	0.000	3	3	102	103
153	1.115	-0.299	0.000	3	3	103	104
154	0.815	-0.815	0.000	3	3	104	105
155	0.299	-1.115	0.000	3	3	105	106
160	0.000	0.000	-1.807	1	1	100	10
161	0.000	0.000	-1.807	1	1	101	11
162	0.000	0.000	-1.807	1	1	102	12
163	0.000	0.000	-1.807	1	1	103	13
164	0.000	0.000	-1.807	1	1	104	14
165	0.000	0.000	-1.807	1	1	105	15
166	0.000	0.000	-1.807	1	1	106	16
170	0.299	1.115	0.000	4	4	10	11
171	0.815	0.815	0.000	4	4	11	12
172	1.115	0.299	0.000	4	4	12	13
173	1.115	-0.299	0.000	4	4	13	14
174	0.815	-0.815	0.000	4	4	14	15
175	0.299	-1.115	0.000	4	4	15	16
500	0.000	0.000	0.050	7	7	1701	1700
501	0.000	0.000	0.050	7	7	1700	1702
502	0.000	0.000	0.100	7	7	1702	701
503	0.000	0.000	-0.050	7	7	701	700
504	0.000	0.000	-0.050	7	7	700	702
1001	-0.049	-0.185	0.000	5	5	1600	1601
1002	-0.135	-0.135	0.000	5	5	1601	1602
1003	-0.185	-0.049	0.000	5	5	1602	1603
1004	-0.185	0.049	0.000	5	5	1603	1604
1005	-0.135	0.135	0.000	5	5	1604	1605
1006	-0.049	0.185	0.000	5	5	1605	1606
1007	0.049	0.185	0.000	5	5	1606	1607
1008	0.135	0.135	0.000	5	5	1607	1608
1009	0.185	0.049	0.000	5	5	1608	1609
1010	0.185	-0.049	0.000	5	5	1609	1610
1011	0.184	-0.320	0.000	5	5	1610	1600
1020	0.000	0.000	0.050	6	6	1701	1700
1021	0.000	0.000	0.050	6	6	1700	1702
1030	-0.369	0.000	0.000	5	5	1600	1700
1031	-0.320	0.185	0.000	5	5	1601	1700
1032	-0.185	0.320	0.000	5	5	1602	1700
1033	0.000	0.369	0.000	5	5	1603	1700
1034	0.185	0.320	0.000	5	5	1604	1700
1035	0.320	0.185	0.000	5	5	1605	1700
1036	0.369	0.000	0.000	5	5	1606	1700
1037	0.320	-0.185	0.000	5	5	1607	1700
1038	0.185	-0.320	0.000	5	5	1608	1700
1039	0.000	-0.369	0.000	5	5	1609	1700
1040	-0.185	-0.320	0.000	5	5	1610	1700
1041	-0.320	-0.185	0.000	5	5	1611	1700
1100	0.426	0.000	-0.484	1	1	1600	1500

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SYSTEM : P r o j e k t i o n e n Querschnitt K n o t e n

Stab	Lx (m)	Ly (m)	Lz (m)	Q1	Q2	Ende 1	Ende 2
1101	0.344	0.000	-0.241	1	1	1500	1400
1102	0.381	0.000	-0.178	1	1	1400	1300
1103	0.406	0.000	-0.108	1	1	1300	1200
1104	0.240	0.000	-0.031	1	1	1200	1100
1105	0.368	-0.213	-0.484	2	2	1601	1501
1106	0.298	-0.172	-0.241	2	2	1501	1401
1107	0.330	-0.190	-0.178	2	2	1401	1301
1108	0.352	-0.203	-0.108	2	2	1301	1201
1109	0.208	-0.120	-0.031	2	2	1201	1101
1110	0.213	-0.368	-0.484	2	2	1602	1502
1111	0.172	-0.298	-0.241	2	2	1502	1402
1112	0.190	-0.330	-0.178	2	2	1402	1302
1113	0.203	-0.352	-0.108	2	2	1302	1202
1114	0.120	-0.208	-0.031	2	2	1202	1102
1115	0.000	-0.426	-0.484	2	2	1603	1503
1116	0.000	-0.344	-0.241	2	2	1503	1403
1117	0.000	-0.381	-0.178	2	2	1403	1303
1118	0.000	-0.406	-0.108	2	2	1303	1203
1119	0.000	-0.240	-0.031	2	2	1203	1103
1120	-0.213	-0.368	-0.484	2	2	1604	1504
1121	-0.172	-0.298	-0.241	2	2	1504	1404
1122	-0.190	-0.330	-0.178	2	2	1404	1304
1123	-0.203	-0.352	-0.108	2	2	1304	1204
1124	-0.120	-0.208	-0.031	2	2	1204	1104
1125	-0.368	-0.213	-0.484	2	2	1605	1505
1126	-0.298	-0.172	-0.241	2	2	1505	1405
1127	-0.330	-0.190	-0.178	2	2	1405	1305
1128	-0.352	-0.203	-0.108	2	2	1305	1205
1129	-0.205	-0.120	-0.031	2	2	1205	1105
1130	-0.426	0.000	-0.484	1	1	1606	1506
1131	-0.344	0.000	-0.241	1	1	1506	1406
1132	-0.381	0.000	-0.178	1	1	1406	1306
1133	-0.406	0.000	-0.108	1	1	1306	1206
1134	-0.240	0.000	-0.031	1	1	1206	1106
1150	-0.290	-1.083	0.000	3	3	1100	1101
1151	-0.793	-0.793	0.000	3	3	1101	1102
1152	-1.083	-0.290	0.000	3	3	1102	1103
1153	-1.083	0.290	0.000	3	3	1103	1104
1154	-0.790	0.793	0.000	3	3	1104	1105
1155	-0.293	1.083	0.000	3	3	1105	1106
1160	0.000	0.000	1.740	1	1	1010	1100
1161	0.000	0.000	1.740	2	2	1011	1101
1162	0.000	0.000	1.740	2	2	1012	1102
1163	0.000	0.000	1.740	2	2	1013	1103
1164	0.000	0.000	1.740	2	2	1014	1104
1165	0.003	0.000	1.740	2	2	1015	1105
1166	0.000	0.000	1.740	1	1	1016	1106
1170	-0.290	-1.083	0.000	4	4	1010	1011
1171	-0.793	-0.793	0.000	4	4	1011	1012
1172	-1.083	-0.290	0.000	4	4	1012	1013
1173	-1.083	0.290	0.000	4	4	1013	1014

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SYSTEM : P r o j e k t i o n e n Querschnitt K n o t e n

Stab	Lx (m)	Ly (m)	Lz (m)	Q1	Q2	Ende 1	Ende 2
1174	-0.793	0.793	0.000	4	4	1014	1015
1175	-0.290	1.083	0.000	4	4	1015	1016
2000	-4.332	0.000	0.000	8	8	1100	1106

Fachwerkstäbe: Stäbe, deren Nummer mit * gekennzeichnet sind.

AUFLAGER : -1 = starr , 0 = frei , > 0 = elastisch (kN/cm , kNcm)

Knoten	i n R i c h t u n g			u m A c h s e		
Nr.	x	y	z	x	y	z
10	-1	-1	-1	0	0	0
11	-1	-1	-1	0	0	0
12	-1	-1	-1	0	0	0
13	-1	-1	-1	0	0	0
14	-1	-1	-1	0	0	0
15	-1	-1	-1	0	0	0
16	-1	-1	-1	0	0	0
1010	-1	-1	-1	0	0	0
1011	-1	-1	-1	0	0	0
1012	-1	-1	-1	0	0	0
1013	-1	-1	-1	0	0	0
1014	-1	-1	-1	0	0	0
1015	-1	-1	-1	0	0	0
1016	-1	-1	-1	0	0	0

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Knoten - Koordinaten des Systems

Knoten Nr.	Koordinaten x	y	z	Differenzen dx	dy	dz
10	-2.229	0.000	0.200			
11	-1.930	1.115	0.200			
12	-1.115	1.930	0.200			
13	0.000	2.229	0.200			
14	1.115	1.930	0.200			
15	1.930	1.115	0.200			
16	2.229	0.000	0.200			
100	-2.229	0.000	2.007			
101	-1.930	1.115	2.007			
102	-1.115	1.930	2.007			
103	0.000	2.229	2.007			
104	1.115	1.930	2.007			
105	1.930	1.115	2.007			
106	2.229	0.000	2.007			
200	-1.937	0.000	2.036			
201	-1.677	0.969	2.036			
202	-0.969	1.677	2.036			
203	0.000	1.937	2.036			
204	0.969	1.677	2.036			
205	1.677	0.969	2.036			
206	1.937	0.000	2.036			
300	-1.542	0.000	2.141			
301	-1.335	0.771	2.141			
302	-0.771	1.335	2.141			
303	0.000	1.542	2.141			
304	0.771	1.335	2.141			
305	1.335	0.771	2.141			
306	1.542	0.000	2.141			
400	-1.172	0.000	2.314			
401	-1.000	0.586	2.314			
402	-0.586	1.015	2.314			
403	0.000	1.172	2.314			
404	0.586	1.015	2.314			
405	1.015	0.586	2.314			
406	1.172	0.000	2.314			
500	-0.837	0.000	2.548			
501	-0.725	0.419	2.548			
502	-0.419	0.725	2.548			
503	0.000	0.837	2.548			
504	0.419	0.725	2.548			
505	0.725	0.419	2.548			
506	0.837	0.000	2.548			
600	-0.369	0.000	3.082			
601	-0.320	0.185	3.082			
602	-0.185	0.320	3.082			
603	0.000	0.369	3.082			
604	0.185	0.320	3.082			
605	0.320	0.185	3.082			
606	0.369	0.000	3.082			
607	0.320	-0.185	3.082			

Knoten - Koordinaten des Systems

Knoten Nr.	Koordinaten x	y	z	Differenzen dx	dy	dz
608	0.185	-0.320	3.082			
609	0.000	-0.369	3.082			
610	-0.185	-0.320	3.082			
611	-0.320	-0.185	3.082			
700	0.000	0.000	3.082			
701	0.000	0.000	3.132			
702	0.000	0.000	3.032			
1010	2.166	0.000	0.200			
1011	1.876	-1.083	0.200			
1012	1.083	-1.876	0.200			
1013	0.000	-2.166	0.200			
1014	-1.083	-1.876	0.200			
1015	-1.876	-1.083	0.200			
1016	-2.166	0.000	0.200			
1100	2.166	0.000	1.940			
1101	1.876	-1.083	1.940			
1102	1.083	-1.876	1.940			
1103	0.000	-2.166	1.940			
1104	-1.083	-1.876	1.940			
1105	-1.873	-1.083	1.940			
1106	-2.166	0.000	1.940			
1200	1.926	0.000	1.971			
1201	1.668	-0.963	1.971			
1202	0.963	-1.668	1.971			
1203	0.000	-1.926	1.971			
1204	-0.963	-1.668	1.971			
1205	-1.668	-0.963	1.971			
1206	-1.926	0.000	1.971			
1300	1.520	0.000	2.079			
1301	1.316	-0.760	2.079			
1302	0.760	-1.316	2.079			
1303	0.000	-1.520	2.079			
1304	-0.760	-1.316	2.079			
1305	-1.316	-0.760	2.079			
1306	-1.520	0.000	2.079			
1400	1.139	0.000	2.257			
1401	0.986	-0.570	2.257			
1402	0.570	-0.986	2.257			
1403	0.000	-1.139	2.257			
1404	-0.570	-0.986	2.257			
1405	-0.986	-0.570	2.257			
1406	-1.139	0.000	2.257			
1500	0.795	0.000	2.498			
1501	0.688	-0.398	2.498			
1502	0.398	-0.688	2.498			
1503	0.000	-0.795	2.498			
1504	-0.398	-0.688	2.498			
1505	-0.688	-0.398	2.498			
1506	-0.795	0.000	2.498			
1600	0.369	0.000	2.982			

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Knoten - Koordinaten des Systems

Knoten Nr.	Koordinaten x	y	z	Differenzen dx	dy	dz
1601	0.320	-0.185	2.982			
1602	0.185	-0.320	2.982			
1603	0.000	-0.369	2.982			
1604	-0.185	-0.320	2.982			
1605	-0.320	-0.185	2.982			
1606	-0.369	0.000	2.982			
1607	-0.320	0.185	2.982			
1608	-0.185	0.320	2.982			
1609	0.000	0.369	2.982			
1610	0.185	0.320	2.982			
1611	0.320	0.185	2.982			
1700	0.000	0.000	2.982			
1701	0.000	0.000	2.932			
1702	0.000	0.000	3.032			

Baustoff EN AW-6063 T66
Gewicht der Konstruktion G = 157 kg

Baustoff StE690
Gewicht der Konstruktion G = 3 kg

Baustoff S235
Gewicht der Konstruktion G = 10 kg

Belastung Nr. 1 Lastfall: EG Glas etc

Stablasten
Art : 1=Einzellast (kN) 2=Einzelmoment(kNm)
3=Voll-Trapezlast (kN/m) 4=Teil-Tapezlast(kN/m)
5=Streckentorsion(kNm/m)
Richtung : 1,7=x , 2,8=y , 3,9=z , 4=laengs , 5=quer I , 6=quer II
1 ... 6 Lastordinaten bezogen auf Stabachse
7 ... 9 Lastordinaten bezogen auf Projektion
Richtung 3 : positiv in Richtung positiver z-Achse

Stab	Art	Richtung	p1	p2	Abstand a	Länge b
170	3	3	-0.250	-0.250		
171	3	3	-0.250	-0.250		
172	3	3	-0.250	-0.250		
173	3	3	-0.250	-0.250		
174	3	3	-0.250	-0.250		
175	3	3	-0.250	-0.250		
1170	3	3	-0.250	-0.250		
1171	3	3	-0.250	-0.250		
1172	3	3	-0.250	-0.250		
1173	3	3	-0.250	-0.250		
1174	3	3	-0.250	-0.250		
1175	3	3	-0.250	-0.250		
100	3	3	-0.020	-0.040		
101	3	3	-0.040	-0.060		
102	3	3	-0.060	-0.080		
103	3	3	-0.080	-0.100		
104	3	3	-0.100	-0.120		
105	3	3	-0.020	-0.040		
106	3	3	-0.040	-0.060		
107	3	3	-0.060	-0.080		
108	3	3	-0.080	-0.100		
109	3	3	-0.100	-0.120		
110	3	3	-0.020	-0.040		
111	3	3	-0.040	-0.060		
112	3	3	-0.060	-0.080		
113	3	3	-0.080	-0.100		
114	3	3	-0.100	-0.120		
115	3	3	-0.020	-0.040		
116	3	3	-0.040	-0.060		
117	3	3	-0.060	-0.080		
118	3	3	-0.080	-0.100		
119	3	3	-0.100	-0.120		
120	3	3	-0.020	-0.040		
121	3	3	-0.040	-0.060		
122	3	3	-0.060	-0.080		
123	3	3	-0.080	-0.100		
124	3	3	-0.100	-0.120		
125	3	3	-0.020	-0.040		
126	3	3	-0.040	-0.060		
127	3	3	-0.060	-0.080		
128	3	3	-0.080	-0.100		
129	3	3	-0.100	-0.120		

Stablasten

Art : 1=Einzellast (kN) 2=Einzelmoment(kNm)
3=Voll-Trapezlast (kN/m) 4=Teil-Tapezlast(kN/m)
5=Streckentorsion(kNm/m)

Richtung : 1,7=x , 2,8=y , 3,9=z , 4=laengs , 5=quer I , 6=quer II
1 ... 6 Lastordinaten bezogen auf Stabachse
7 ... 9 Lastordinaten bezogen auf Projektion
Richtung 3 : positiv in Richtung positiver z-Achse

Stab	Art	Richtung	p1	p2	Abstand a	Länge b
130	3	3	-0.020	-0.040		
131	3	3	-0.040	-0.060		
132	3	3	-0.060	-0.080		
133	3	3	-0.080	-0.100		
134	3	3	-0.100	-0.120		
1105	3	3	-0.020	-0.040		
1106	3	3	-0.040	-0.060		
1107	3	3	-0.060	-0.080		
1108	3	3	-0.080	-0.100		
1109	3	3	-0.100	-0.120		
1110	3	3	-0.020	-0.040		
1111	3	3	-0.040	-0.060		
1112	3	3	-0.060	-0.080		
1113	3	3	-0.080	-0.100		
1114	3	3	-0.100	-0.120		
1115	3	3	-0.020	-0.040		
1116	3	3	-0.040	-0.060		
1117	3	3	-0.060	-0.080		
1118	3	3	-0.080	-0.100		
1119	3	3	-0.100	-0.120		
1120	3	3	-0.020	-0.040		
1121	3	3	-0.040	-0.060		
1122	3	3	-0.060	-0.080		
1123	3	3	-0.080	-0.100		
1124	3	3	-0.100	-0.120		
1125	3	3	-0.020	-0.040		
1126	3	3	-0.040	-0.060		
1127	3	3	-0.060	-0.080		
1128	3	3	-0.080	-0.100		
1129	3	3	-0.100	-0.120		
1130	3	3	-0.020	-0.040		
1131	3	3	-0.040	-0.060		
1132	3	3	-0.060	-0.080		
1133	3	3	-0.080	-0.100		
1134	3	3	-0.100	-0.120		
1100	3	3	-0.020	-0.040		
1101	3	3	-0.040	-0.060		
1102	3	3	-0.060	-0.080		
1103	3	3	-0.080	-0.100		
1104	3	3	-0.100	-0.120		

Eigenlastfaktor in z-Richtung Fak_g_z = -1.00

Summe aller äußeren Lasten(kN)

Gesamt	Fx	Fy	Fz
	0.000	0.000	-7.032

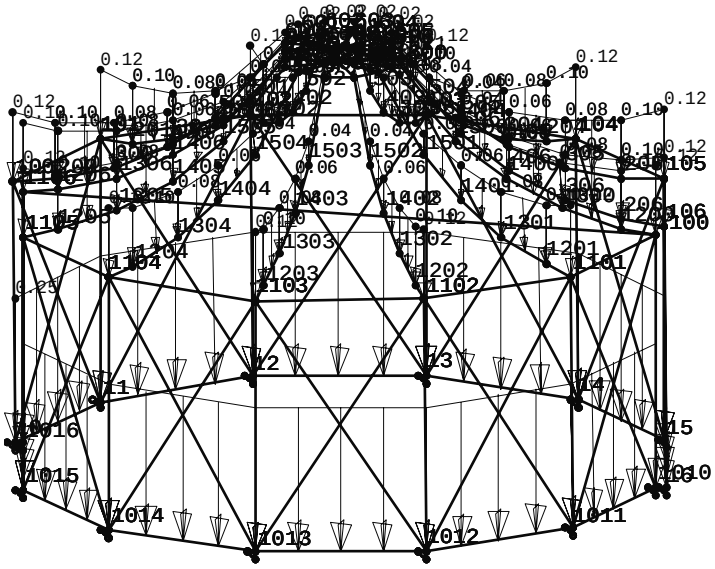
Für Stäbe mit 4*EI/L < 3000 werden Querlasten nur als Knotenlasten angesetzt. Für Stäbe mit d0 <> 0 gilt dies nur für L1 / d0 > 100.

Maximale Verschiebung im Stab 1117 bei x = 0.00 * L Max_f = 0.30 cm

AUFLAGERKRÄFTE Th. 1.Ord. Lastfall 1 : EG Glas etc

Knoten Nr.	A Fx (kN)	A Fy (kN)	A Fz (kN)	A Mx (kNm)	A My (kNm)	A Mz (kNm)
10	-0.008	0.067	-0.075			
11	0.003	0.104	-0.737			
12	0.002	0.049	-0.597			
13	0.000	0.039	-0.585			
14	-0.001	0.048	-0.596			
15	-0.003	0.105	-0.744			
16	0.008	0.068	-0.071			
1010	0.020	-0.062	-0.235			
1011	-0.007	-0.108	-0.699			
1012	-0.006	-0.051	-0.595			
1013	0.000	-0.037	-0.568			
1014	0.006	-0.051	-0.595			
1015	0.006	-0.108	-0.704			
1016	-0.019	-0.063	-0.232			
Summe :	0.000	0.000	-7.032			

Belastung Lastfall Nr. 1 M 1 : 50



mit Eigengewicht

Belastung Nr. 2 Lastfall: Schneelast

Stablasten
Art : 1=Einzellast (kN) 2=Einzelmoment(kNm)
3=Voll-Trapezlast (kN/m) 4=Teil-Tapezlast(kN/m)
5=Streckentorsion(kNm/m)
Richtung : 1,7=x , 2,8=y , 3,9=z , 4=laengs , 5=quer I , 6=quer II
1 ... 6 Lastordinaten bezogen auf Stabachse
7 ... 9 Lastordinaten bezogen auf Projektion
Richtung 3 : positiv in Richtung positiver z-Achse

Stab	Art	Richtung	p1	p2	Abstand a	Länge b
100	3	3	-0.213	-0.427		
101	3	3	-0.427	-0.640		
102	3	3	-0.640	-0.854		
103	3	3	-0.854	-1.067		
104	3	3	-1.067	-1.280		
105	3	3	-0.213	-0.427		
106	3	3	-0.427	-0.640		
107	3	3	-0.640	-0.854		
108	3	3	-0.854	-1.067		
109	3	3	-1.067	-1.280		
110	3	3	-0.213	-0.427		
111	3	3	-0.427	-0.640		
112	3	3	-0.640	-0.854		
113	3	3	-0.854	-1.067		
114	3	3	-1.067	-1.280		
115	3	3	-0.213	-0.427		
116	3	3	-0.427	-0.640		
117	3	3	-0.640	-0.854		
118	3	3	-0.854	-1.067		
119	3	3	-1.067	-1.280		
120	3	3	-0.213	-0.427		
121	3	3	-0.427	-0.640		
122	3	3	-0.640	-0.854		
123	3	3	-0.854	-1.067		
124	3	3	-1.067	-1.280		
125	3	3	-0.213	-0.427		
126	3	3	-0.427	-0.640		
127	3	3	-0.640	-0.854		
128	3	3	-0.854	-1.067		
129	3	3	-1.067	-1.280		
130	3	3	-0.213	-0.427		
131	3	3	-0.427	-0.640		
132	3	3	-0.640	-0.854		
133	3	3	-0.854	-1.067		
134	3	3	-1.067	-1.280		
1105	3	3	-0.213	-0.427		
1106	3	3	-0.427	-0.640		
1107	3	3	-0.640	-0.854		
1108	3	3	-0.854	-1.067		
1109	3	3	-1.067	-1.280		
1110	3	3	-0.213	-0.427		
1111	3	3	-0.427	-0.640		

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Stablasten

Art : 1=Einzellast (kN) 2=Einzelmoment(kNm)
3=Voll-Trapezlast (kN/m) 4=Teil-Tapezlast(kN/m)
5=Streckentorsion(kNm/m)

Richtung : 1,7=x , 2,8=y , 3,9=z , 4=laengs , 5=quer I , 6=quer II
1 ... 6 Lastordinaten bezogen auf Stabachse
7 ... 9 Lastordinaten bezogen auf Projektion
Richtung 3 : positiv in Richtung positiver z-Achse

Stab	Art	Richtung	p1	p2	Abstand a	Länge b
1112	3	3	-0.640	-0.854		
1113	3	3	-0.854	-1.067		
1114	3	3	-1.067	-1.280		
1115	3	3	-0.213	-0.427		
1116	3	3	-0.427	-0.640		
1117	3	3	-0.640	-0.854		
1118	3	3	-0.854	-1.067		
1119	3	3	-1.067	-1.280		
1120	3	3	-0.213	-0.427		
1121	3	3	-0.427	-0.640		
1122	3	3	-0.640	-0.854		
1123	3	3	-0.854	-1.067		
1124	3	3	-1.067	-1.280		
1125	3	3	-0.213	-0.427		
1126	3	3	-0.427	-0.640		
1127	3	3	-0.640	-0.854		
1128	3	3	-0.854	-1.067		
1129	3	3	-1.067	-1.280		
1130	3	3	-0.213	-0.427		
1131	3	3	-0.427	-0.640		
1132	3	3	-0.640	-0.854		
1133	3	3	-0.854	-1.067		
1134	3	3	-1.067	-1.280		
1100	3	3	-0.213	-0.427		
1101	3	3	-0.427	-0.640		
1102	3	3	-0.640	-0.854		
1103	3	3	-0.854	-1.067		
1104	3	3	-1.067	-1.280		

Summe aller äußeren Lasten(kN)

Gesamt	Fx	Fy	Fz
	0.000	0.000	-20.435

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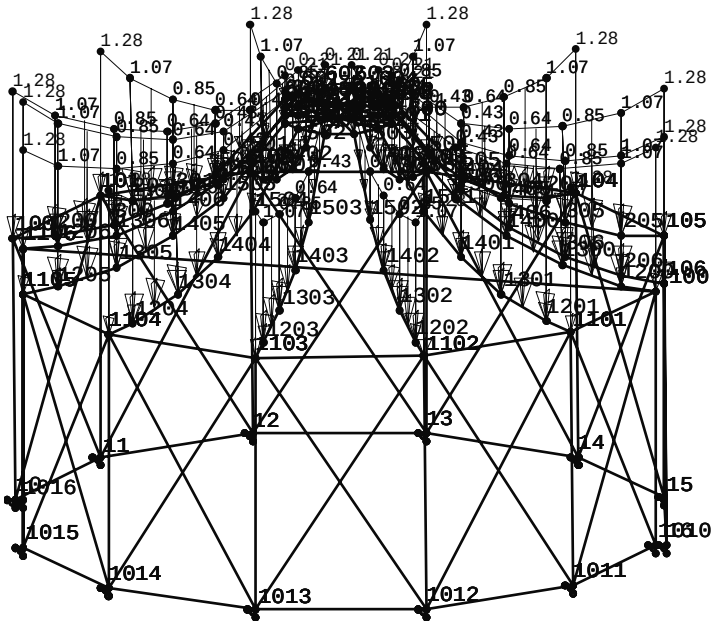
Für Stäbe mit 4*EI/L < 3000 werden Querlasten nur als Knotenlasten angesetzt. Für Stäbe mit d0 <> 0 gilt dies nur für L1 / d0 > 100.

Maximale Verschiebung im Stab 1117 bei x = 0.00 * L Max_f = 2.28 cm

AUFLAGERKRÄFTE Th. 1.Ord. Lastfall 2 : Schneelast

Knoten Nr.	A Fx (kN)	A Fy (kN)	A Fz (kN)	A Mx (kNm)	A My (kNm)	A Mz (kNm)
10	-0.073	0.448	0.403			
11	0.029	0.644	-2.471			
12	0.013	0.295	-1.730			
13	0.003	0.235	-1.621			
14	-0.007	0.291	-1.719			
15	-0.026	0.649	-2.523			
16	0.070	0.456	0.432			
1010	0.153	-0.419	-0.655			
1011	-0.048	-0.670	-2.351			
1012	-0.037	-0.306	-1.802			
1013	-0.003	-0.220	-1.576			
1014	0.032	-0.303	-1.799			
1015	0.045	-0.675	-2.393			
1016	-0.150	-0.426	-0.630			
Summe :	0.000	0.000	-20.435			

Belastung Lastfall Nr. 2 M 1 : 50



Belastung Nr. 3 Lastfall: Windbelastung

Stablasten
Art : 1=Einzellast (kN) 2=Einzelmoment(kNm)
3=Voll-Trapezlast (kN/m) 4=Teil-Tapezlast(kN/m)
5=Streckentorsion(kNm/m)
Richtung : 1,7=x , 2,8=y , 3,9=z , 4=laengs , 5=quer I , 6=quer II
1 ... 6 Lastordinaten bezogen auf Stabachse
7 ... 9 Lastordinaten bezogen auf Projektion
Richtung 3 : positiv in Richtung positiver z-Achse

Stab	Art	Richtung	p1	p2	Abstand a	Länge b
1162	3	2	0.619	0.619		
1163	3	2	0.619	0.619		
1164	3	2	0.619	0.619		
162	3	2	0.370	0.370		
163	3	2	0.370	0.370		
164	3	2	0.370	0.370		
160	3	1	-0.959	-0.959		
161	3	1	-0.959	-0.959		
1165	3	1	-0.959	-0.959		
165	3	1	0.959	0.959		
166	3	1	0.959	0.959		
1161	3	1	0.959	0.959		
100	3	1	-0.160	-0.320		
101	3	1	-0.320	-0.480		
102	3	1	-0.480	-0.639		
103	3	1	-0.639	-0.799		
104	3	1	-0.799	-0.959		
105	3	1	-0.160	-0.320		
106	3	1	-0.320	-0.480		
107	3	1	-0.480	-0.639		
108	3	1	-0.639	-0.799		
109	3	1	-0.799	-0.959		
1125	3	1	-0.160	-0.320		
1126	3	1	-0.320	-0.480		
1127	3	1	-0.480	-0.639		
1128	3	1	-0.639	-0.799		
1129	3	1	-0.799	-0.959		
125	3	1	0.160	0.320		
126	3	1	0.320	0.480		
127	3	1	0.480	0.639		
128	3	1	0.639	0.799		
129	3	1	0.799	0.959		
130	3	1	0.160	0.320		
131	3	1	0.320	0.480		
132	3	1	0.480	0.639		
133	3	1	0.639	0.799		
134	3	1	0.799	0.959		
1105	3	1	0.160	0.320		
1106	3	1	0.320	0.480		
1107	3	1	0.480	0.639		
1108	3	1	0.639	0.799		
1109	3	1	0.799	0.959		

Stablasten

Art : 1=Einzellast (kN) 2=Einzelmoment(kNm)
3=Voll-Trapezlast (kN/m) 4=Teil-Tapezlast(kN/m)
5=Streckentorsion(kNm/m)

Richtung : 1,7=x , 2,8=y , 3,9=z , 4=laengs , 5=quer I , 6=quer II
1 ... 6 Lastordinaten bezogen auf Stabachse
7 ... 9 Lastordinaten bezogen auf Projektion
Richtung 3 : positiv in Richtung positiver z-Achse

Stab	Art	Richtung	p1	p2	Abstand a	Länge b
1110	3	2	0.100	0.200		
1111	3	2	0.200	0.300		
1112	3	2	0.300	0.400		
1113	3	2	0.400	0.599		
1114	3	2	0.500	0.619		
1115	3	2	0.100	0.200		
1116	3	2	0.200	0.300		
1117	3	2	0.300	0.400		
1118	3	2	0.400	0.500		
1119	3	2	0.500	0.619		
1120	3	2	0.100	0.200		
1121	3	2	0.200	0.300		
1122	3	2	0.300	0.400		
1123	3	2	0.400	0.500		
1124	3	2	0.500	0.619		
110	3	2	0.060	0.110		
111	3	2	0.110	0.160		
112	3	2	0.160	0.210		
113	3	2	0.210	0.260		
114	3	2	0.260	3.197		
115	3	2	0.060	0.110		
116	3	2	0.110	0.160		
117	3	2	0.160	0.210		
118	3	2	0.210	0.260		
119	3	2	0.260	0.320		
120	3	2	0.060	0.110		
121	3	2	0.110	0.160		
122	3	2	0.160	0.210		
123	3	2	0.210	0.260		
124	3	2	0.260	0.320		

Summe aller äußeren Lasten(kN)

Gesamt	Fx	Fy	Fz
	0.002	8.815	0.000

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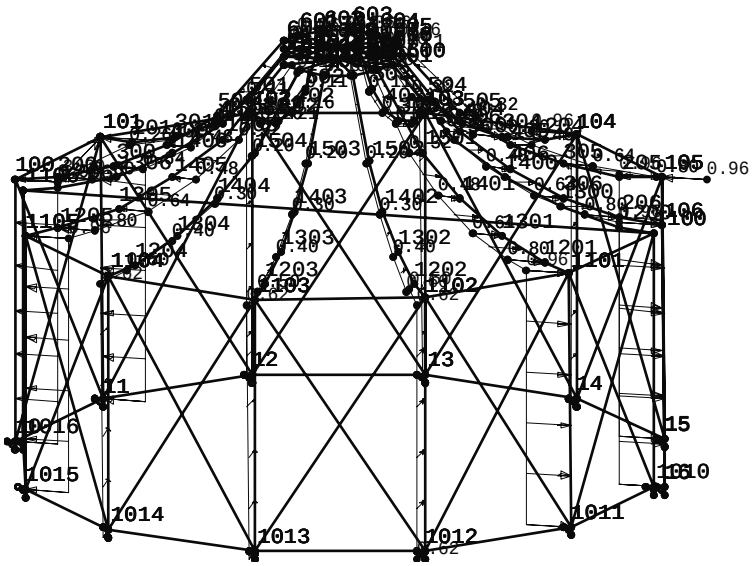
Für Stäbe mit 4*EI/L < 3000 werden Querlasten nur als Knotenlasten angesetzt. Für Stäbe mit d0 <> 0 gilt dies nur für L1 / d0 > 100.

Maximale Verschiebung im Stab 160 bei x = 0.50 * L Max_f = 0.90 cm

AUFLAGERKRÄFTE Th. 1.Ord. Lastfall 3 : Windbelastung

Knoten Nr.	A Fx (kN)	A Fy (kN)	A Fz (kN)	A Mx (kNm)	A My (kNm)	A Mz (kNm)
10	-0.452	1.027	4.286			
11	-0.367	1.139	-2.347			
12	0.291	0.600	-0.904			
13	-0.006	0.403	-0.907			
14	-0.371	0.677	-1.198			
15	0.438	0.645	-0.097			
16	0.617	0.433	2.301			
1010	0.011	-0.041	-0.126			
1011	1.425	0.528	-2.686			
1012	0.928	1.188	1.433			
1013	-0.077	0.695	1.985			
1014	-1.021	1.218	1.205			
1015	-1.421	0.444	-3.128			
1016	0.008	-0.142	0.184			
Summe :	0.002	8.815	0.000			

Belastung Lastfall Nr. 3 M 1 : 50



Lastfall-Überlagerung Nr. 1

ÜBERLAGERUNG Nr. 1 : EG+So+0,5W,k

Lastfall Nr.	1 :	*	1.00	EG Glas etc
Nr.	2 :	*	1.00	Schneelast
Nr.	3 :	*	0.50	Windbelastung

Für Stäbe mit 4*EI/L < 3000 werden Querlasten nur als Knotenlasten angesetzt. Für Stäbe mit d0 <> 0 gilt dies nur für L1 / d0 > 100.

Maximale Verschiebung im Stab 1117 bei x = 0.00 * L Max_f = 2.96 cm

AUFLAGERKRÄFTE : Th. 1.Ord. ÜBERLAGERUNG Nr. 1 : EG+So+0,5W,k

Knoten Nr.	A Fx (kN)	A Fy (kN)	A Fz (kN)	A Mx (kNm)	A My (kNm)	A Mz (kNm)
10	-0.308	1.028	2.472			
11	-0.151	1.318	-4.382			
12	0.160	0.644	-2.779			
13	0.000	0.476	-2.660			
14	-0.193	0.678	-2.913			
15	0.189	1.077	-3.315			
16	0.387	0.740	1.511			
1010	0.179	-0.502	-0.953			
1011	0.657	-0.514	-4.394			
1012	0.420	0.238	-1.681			
1013	-0.041	0.090	-1.151			
1014	-0.473	0.256	-1.792			
1015	-0.660	-0.561	-4.662			
1016	-0.165	-0.559	-0.770			
Summe :	0.001	4.408	-27.467			

VERSCHIEBUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 1 : EG+So+0,5W,k

Knoten Nr.	fx (cm)	fy (cm)	fz (cm)	Phix	Phiy	Phiz
10	0.000	0.000	0.000	-0.00379	-0.01816	-0.00028
11	0.000	0.000	0.000	-0.00561	-0.01139	-0.00002
12	0.000	0.000	0.000	-0.01001	-0.00527	-0.00001
13	0.000	0.000	0.000	-0.01085	0.00001	-0.00002
14	0.000	0.000	0.000	-0.00995	0.00524	0.00007
15	0.000	0.000	0.000	-0.00549	0.01118	-0.00005
16	0.000	0.000	0.000	-0.00366	0.01781	0.00036
100	-0.801	0.420	0.003	0.00053	0.01517	-0.00528
101	-0.185	0.258	-0.010	0.00930	0.01876	-0.00307
102	-0.016	0.099	-0.008	0.02162	0.01178	-0.00052
103	0.000	0.067	-0.008	0.02563	-0.00004	-0.00011
104	0.021	0.118	-0.009	0.02141	-0.01141	0.00178
105	0.085	0.174	-0.008	0.00999	-0.01984	0.00191
106	0.731	0.345	0.001	0.00073	-0.01574	0.00616
200	-0.753	0.285	-0.479	-0.00035	0.01712	-0.00403

VERSCHIEBUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 1 : EG+So+0,5W,k

Knoten Nr.	fx (cm)	fy (cm)	fz (cm)	Phix	Phiy	Phiz
201	-0.144	0.179	-0.768	0.01264	0.02580	-0.00093
202	0.028	0.022	-0.909	0.02957	0.01695	0.00045
203	0.000	-0.024	-0.936	0.03498	0.00007	0.00008
204	0.070	-0.009	-0.890	0.02932	-0.01580	0.00465
205	0.024	0.120	-0.815	0.01388	-0.02730	-0.00015
206	0.682	0.184	-0.497	-0.00013	-0.01759	0.00483
300	-0.583	0.163	-1.117	-0.00137	0.01453	-0.00269
301	0.102	0.048	-1.820	0.00897	0.02042	-0.00005
302	0.216	-0.247	-2.147	0.02188	0.01308	0.00072
303	0.008	-0.359	-2.201	0.02593	0.00018	0.00023
304	0.077	-0.382	-2.099	0.02175	-0.01216	0.00405
305	-0.251	0.002	-1.937	0.01033	-0.02118	-0.00037
306	0.508	0.032	-1.148	-0.00113	-0.01473	0.00329
400	-0.370	0.112	-1.572	-0.00213	0.01002	-0.00177
401	0.339	-0.048	-2.386	0.00126	0.00715	-0.00054
402	0.379	-0.473	-2.743	0.00500	0.00361	0.00029
403	0.021	-0.638	-2.803	0.00597	0.00025	0.00025
404	0.019	-0.664	-2.687	0.00496	-0.00405	0.00098
405	-0.492	-0.115	-2.510	0.00240	-0.00661	0.00080
406	0.295	-0.040	-1.604	-0.00188	-0.00989	0.00204
500	-0.183	0.119	-1.837	-0.00259	0.00605	-0.00121
501	0.351	-0.028	-2.386	-0.00477	-0.00385	-0.00135
502	0.357	-0.404	-2.644	-0.00968	-0.00472	-0.00036
503	0.034	-0.557	-2.689	-0.01139	0.00025	0.00017
504	-0.008	-0.583	-2.608	-0.00968	0.00287	-0.00228
505	-0.460	-0.125	-2.478	-0.00457	0.00622	0.00204
506	0.114	-0.040	-1.861	-0.00237	-0.00567	0.00104
600	-0.025	0.214	-1.974	-0.00258	-0.00024	-0.00097
601	0.009	0.205	-2.026	-0.00356	-0.00145	-0.00212
602	0.034	0.180	-2.063	-0.00461	-0.00116	-0.00121
603	0.043	0.146	-2.076	-0.00500	0.00005	-0.00021
604	0.034	0.112	-2.064	-0.00451	0.00117	-0.00480
605	0.009	0.088	-2.031	-0.00358	0.00183	0.00231
606	-0.023	0.079	-1.980	-0.00257	0.00047	-0.00025
607	-0.058	0.089	-1.935	-0.00206	0.00038	-0.00225
608	-0.083	0.113	-1.905	-0.00188	0.00013	-0.00181
609	-0.092	0.147	-1.895	-0.00186	0.00007	-0.00190
610	-0.083	0.181	-1.903	-0.00188	0.00003	-0.00184
611	-0.058	0.206	-1.930	-0.00205	-0.00020	-0.00203
700	-0.024	0.147	-1.957	-0.00134	0.00005	-0.00116
701	-0.024	0.150	-1.957	0.00029	0.00004	-0.00114
702	-0.025	0.141	-1.957	-0.00134	0.00005	-0.00116
1010	0.000	0.000	0.000	0.00249	0.01295	0.00013
1011	0.000	0.000	0.000	0.00500	0.00974	-0.00005
1012	0.000	0.000	0.000	0.00521	0.00267	-0.00005
1013	0.000	0.000	0.000	0.00434	0.00000	0.00000
1014	0.000	0.000	0.000	0.00532	-0.00273	0.00006
1015	0.000	0.000	0.000	0.00510	-0.00992	0.00005
1016	0.000	0.000	0.000	0.00257	-0.01329	-0.00011
1100	0.013	-0.105	-0.007	-0.00301	-0.02675	0.00186

VERSCHIEBUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 1 : EG+So+0,5W,k

Knoten Nr.	fx (cm)	fy (cm)	fz (cm)	Phix	Phiy	Phiz
1101	0.224	-0.164	-0.011	-0.01061	-0.02036	-0.00131
1102	0.018	0.037	-0.007	-0.02032	-0.01179	-0.00239
1103	-0.004	0.107	-0.006	-0.02437	-0.00002	0.00003
1104	-0.028	0.030	-0.008	-0.02045	0.01189	0.00247
1105	-0.245	-0.181	-0.011	-0.01074	0.02055	0.00153
1106	-0.062	-0.129	-0.007	-0.00296	0.02661	-0.00156
1200	-0.082	-0.121	-0.751	-0.00250	-0.03346	0.00019
1201	0.184	-0.073	-0.638	-0.01318	-0.02462	-0.00357
1202	0.031	0.148	-0.707	-0.02831	-0.01663	-0.00309
1203	-0.005	0.200	-0.739	-0.03457	-0.00004	0.00006
1204	-0.043	0.143	-0.713	-0.02856	0.01677	0.00320
1205	-0.207	-0.085	-0.638	-0.01339	0.02492	0.00380
1206	0.032	-0.137	-0.748	-0.00244	0.03334	0.00016
1300	-0.415	-0.058	-2.017	-0.00136	-0.02558	-0.00210
1301	0.022	0.209	-1.698	-0.00981	-0.01970	-0.00454
1302	-0.039	0.504	-2.005	-0.02329	-0.01452	-0.00270
1303	-0.009	0.563	-2.108	-0.02894	-0.00006	0.00009
1304	0.023	0.505	-2.022	-0.02350	0.01458	0.00290
1305	-0.047	0.208	-1.714	-0.00997	0.01999	0.00481
1306	0.365	-0.060	-2.010	-0.00124	0.02550	0.00249
1400	-0.698	0.066	-2.631	0.00016	-0.00588	-0.00369
1401	-0.152	0.453	-2.283	-0.00208	-0.00854	-0.00350
1402	-0.156	0.815	-2.711	-0.00658	-0.00598	-0.00141
1403	-0.014	0.905	-2.845	-0.00867	-0.00008	0.00011
1404	0.132	0.823	-2.731	-0.00659	0.00588	0.00166
1405	0.125	0.462	-2.306	-0.00202	0.00854	0.00378
1406	0.647	0.076	-2.621	0.00036	0.00584	0.00406
1500	-0.612	0.185	-2.514	0.00209	0.01132	-0.00460
1501	-0.188	0.494	-2.358	0.00488	0.00085	-0.00194
1502	-0.173	0.784	-2.687	0.00906	0.00203	-0.00013
1503	-0.020	0.866	-2.792	0.01047	-0.00008	0.00010
1504	0.138	0.793	-2.702	0.00927	-0.00225	0.00039
1505	0.153	0.507	-2.374	0.00516	-0.00112	0.00220
1506	0.560	0.200	-2.503	0.00238	-0.01131	0.00490
1600	-0.027	0.201	-2.004	0.00598	0.00365	-0.00479
1601	-0.026	0.201	-2.106	0.00649	0.00163	-0.00041
1602	-0.027	0.203	-2.183	0.00772	0.00108	0.00067
1603	-0.027	0.204	-2.213	0.00819	-0.00007	0.00007
1604	-0.027	0.206	-2.185	0.00782	-0.00117	-0.00048
1605	-0.026	0.206	-2.106	0.00675	-0.00160	0.00060
1606	-0.022	0.207	-1.997	0.00647	-0.00349	0.00489
1607	-0.023	0.207	-1.863	0.00678	-0.00101	-0.00095
1608	-0.022	0.205	-1.763	0.00660	-0.00044	0.00020
1609	-0.022	0.203	-1.726	0.00656	0.00002	-0.00017
1610	-0.022	0.203	-1.763	0.00667	0.00046	0.00068
1611	-0.004	0.168	-1.849	0.00583	0.00000	-0.00109
1700	-0.024	0.203	-1.957	0.00583	0.00000	-0.00109
1701	-0.024	0.232	-1.957	0.00583	0.00000	-0.00109
1702	-0.024	0.177	-1.957	0.00473	0.00000	-0.00110

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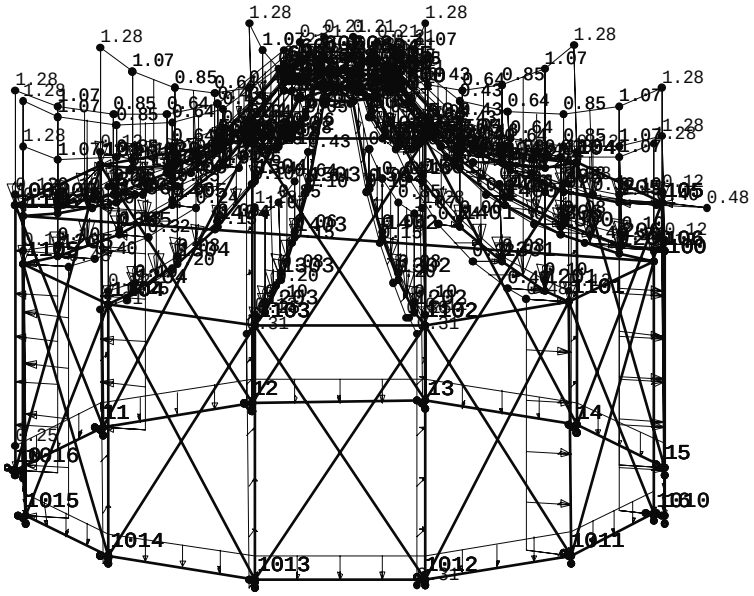
Belastung Überlagerung Nr. 1 M 1 : 50



mit Eigengewicht

Lastfall-Überlagerung Nr. 2

ÜBERLAGERUNG Nr. 2 : EG+0,5So+W,k

Lastfall Nr. 1 : * 1.00 EG Glas etc
Nr. 2 : * 0.50 Schneelast
Nr. 3 : * 1.00 Windbelastung

Für Stäbe mit 4*EI/L < 3000 werden Querlasten nur als Knotenlasten angesetzt. Für Stäbe mit d0 <> 0 gilt dies nur für L1 / d0 > 100.

Maximale Verschiebung im Stab 1116 bei x = 0.625 * L Max_f = 2.20 cm

AUFLAGERKRÄFTE : Th. 1.Ord. ÜBERLAGERUNG Nr. 2 : EG+0,5So+W,k

Knoten Nr.	A Fx (kN)	A Fy (kN)	A Fz (kN)	A Mx (kNm)	A My (kNm)	A Mz (kNm)
10	-0.497	1.317	4.413			
11	-0.349	1.566	-4.319			
12	0.299	0.796	-2.366			
13	-0.004	0.560	-2.302			
14	-0.376	0.871	-2.653			
15	0.422	1.074	-2.102			
16	0.660	0.728	2.446			
1010	0.108	-0.313	-0.688			
1011	1.394	0.085	-4.561			
1012	0.903	0.985	-0.063			
1013	-0.079	0.548	0.629			
1014	-1.000	1.016	-0.290			
1015	-1.393	-0.001	-5.029			
1016	-0.086	-0.418	-0.363			
Summe :	0.002	8.815	-17.249			

VERSCHIEBUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 2 : EG+0,5So+W,k

Knoten Nr.	fx (cm)	fy (cm)	fz (cm)	Phix	Phiy	Phiz
10	0.000	0.000	0.000	-0.00437	-0.02083	-0.00031
11	0.000	0.000	0.000	-0.00630	-0.01329	-0.00001
12	0.000	0.000	0.000	-0.01047	-0.00514	-0.00001
13	0.000	0.000	0.000	-0.01079	0.00001	-0.00003
14	0.000	0.000	0.000	-0.01036	0.00507	0.00012
15	0.000	0.000	0.000	-0.00605	0.01284	-0.00013
16	0.000	0.000	0.000	-0.00412	0.02018	0.00047
100	-0.916	0.505	0.009	-0.00009	0.00850	-0.00574
101	-0.232	0.325	-0.009	0.00623	0.01515	-0.00298
102	-0.019	0.124	-0.007	0.01723	0.00893	-0.00056
103	0.000	0.084	-0.006	0.02020	-0.00007	-0.00020
104	0.031	0.166	-0.008	0.01682	-0.00821	0.00301
105	0.025	0.152	-0.004	0.00759	-0.01729	0.00065
106	0.781	0.353	0.005	0.00031	-0.00968	0.00763
200	-0.895	0.365	-0.191	-0.00089	0.00562	-0.00396

VERSCHIEBUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 2 : EG+0,5So+W,k

Knoten Nr.	fx (cm)	fy (cm)	fz (cm)	Phix	Phiy	Phiz
201	-0.196	0.286	-0.529	0.00665	0.01723	0.00070
202	0.026	0.074	-0.679	0.02142	0.01222	0.00140
203	0.000	0.016	-0.705	0.02562	0.00014	0.00017
204	0.168	0.015	-0.644	0.02096	-0.00992	0.00877
205	-0.053	0.164	-0.620	0.00900	-0.02023	-0.00289
206	0.758	0.160	-0.228	-0.00046	-0.00664	0.00565
300	-0.841	0.262	-0.390	-0.00172	0.00518	-0.00210
301	-0.004	0.279	-1.168	0.00388	0.01284	0.00172
302	0.207	-0.087	-1.552	0.01487	0.00915	0.00196
303	0.016	-0.222	-1.609	0.01802	0.00037	0.00046
304	0.377	-0.355	-1.459	0.01466	-0.00729	0.00757
305	-0.305	0.187	-1.398	0.00641	-0.01452	-0.00267
306	0.696	-0.007	-0.458	-0.00125	-0.00564	0.00332
400	-0.729	0.243	-0.626	-0.00217	0.00797	-0.00089
401	0.173	0.286	-1.504	0.00000	0.00500	0.00040
402	0.357	-0.209	-1.942	0.00251	0.00217	0.00110
403	0.042	-0.406	-2.007	0.00309	0.00052	0.00050
404	0.439	-0.591	-1.834	0.00247	-0.00301	0.00144
405	-0.488	0.158	-1.769	0.00173	-0.00355	0.00023
406	0.581	-0.067	-0.698	-0.00170	-0.00774	0.00142
500	-0.503	0.277	-0.948	-0.00220	0.01099	-0.00027
501	0.204	0.304	-1.527	-0.00254	-0.00111	-0.00147
502	0.343	-0.127	-1.833	-0.00787	-0.00393	-0.00022
503	0.069	-0.317	-1.882	-0.00957	0.00053	0.00033
504	0.356	-0.485	-1.764	-0.00785	0.00031	-0.00504
505	-0.422	0.117	-1.717	-0.00225	0.00587	0.00314
506	0.367	-0.046	-1.002	-0.00179	-0.01020	-0.00012
600	-0.048	0.361	-1.342	-0.00105	0.00153	-0.00041
601	0.022	0.343	-1.373	-0.00185	-0.00024	-0.00358
602	0.072	0.293	-1.398	-0.00272	-0.00046	-0.00206
603	0.089	0.225	-1.409	-0.00301	0.00014	-0.00043
604	0.072	0.158	-1.403	-0.00252	0.00059	-0.00994
605	0.022	0.108	-1.385	-0.00189	0.00110	0.00416
606	-0.044	0.091	-1.358	-0.00104	-0.00099	-0.00210
607	-0.113	0.109	-1.347	-0.00045	0.00001	-0.00416
608	-0.163	0.159	-1.342	-0.00037	0.00004	-0.00366
609	-0.181	0.227	-1.338	-0.00037	0.00019	-0.00380
610	-0.163	0.294	-1.335	-0.00037	0.00037	-0.00362
611	-0.113	0.344	-1.334	-0.00044	0.00044	-0.00438
700	-0.046	0.227	-1.351	-0.00025	0.00015	-0.00238
701	-0.045	0.225	-1.351	0.00074	0.00012	-0.00236
702	-0.046	0.225	-1.351	-0.00025	0.00015	-0.00238
1010	0.000	0.000	0.000	0.00165	0.00919	0.00025
1011	0.000	0.000	0.000	0.00472	0.00937	-0.00010
1012	0.000	0.000	0.000	0.00059	-0.00016	-0.00008
1013	0.000	0.000	0.000	-0.00235	0.00001	0.00000
1014	0.000	0.000	0.000	0.00079	0.00006	0.00008
1015	0.000	0.000	0.000	0.00490	-0.00970	0.00011
1016	0.000	0.000	0.000	0.00181	-0.00985	-0.00022
1100	-0.016	-0.062	-0.005	-0.00246	-0.01820	0.00375

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VERSCHIEBUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 2 : EG+0,5So+W,k

Knoten Nr.	fx (cm)	fy (cm)	fz (cm)	Phix	Phiy	Phiz
1101	0.339	-0.158	-0.009	-0.00609	-0.01294	-0.00215
1102	0.016	0.162	-0.003	-0.01180	-0.00706	-0.00365
1103	-0.008	0.249	-0.001	-0.01464	-0.00003	0.00009
1104	-0.036	0.148	-0.004	-0.01206	0.00720	0.00380
1105	-0.377	-0.188	-0.009	-0.00628	0.01326	0.00254
1106	-0.076	-0.106	-0.004	-0.00234	0.01800	-0.00320
1200	-0.080	-0.119	-0.511	-0.00242	-0.02275	0.00170
1201	0.348	-0.054	-0.351	-0.00628	-0.01245	-0.00546
1202	0.078	0.263	-0.445	-0.01857	-0.01113	-0.00475
1203	-0.011	0.311	-0.484	-0.02394	-0.00006	0.00016
1204	-0.100	0.252	-0.455	-0.01902	0.01131	0.00498
1205	-0.389	-0.077	-0.361	-0.00664	0.01301	0.00588
1206	-0.013	-0.150	-0.506	-0.00230	0.02263	-0.00113
1300	-0.307	-0.103	-1.374	-0.00199	-0.01750	-0.00112
1301	0.353	0.220	-0.853	-0.00421	-0.00969	-0.00592
1302	0.109	0.553	-1.338	-0.01635	-0.01082	-0.00364
1303	-0.020	0.573	-1.475	-0.02165	-0.00010	0.00024
1304	-0.142	0.554	-1.366	-0.01672	0.01085	0.00408
1305	-0.397	0.217	-0.889	-0.00449	0.01009	0.00641
1306	0.214	-0.112	-1.366	-0.00188	0.01746	0.00169
1400	-0.502	0.008	-1.796	-0.00109	-0.00409	-0.00310
1401	0.291	0.420	-1.180	-0.00113	-0.00729	-0.00307
1402	0.037	0.790	-1.857	-0.00465	-0.00556	-0.00097
1403	-0.031	0.832	-2.034	-0.00664	-0.00012	0.00027
1404	-0.089	0.804	-1.890	-0.00464	0.00532	0.00151
1405	-0.342	0.436	-1.223	-0.00107	0.00712	0.00355
1406	0.408	0.018	-1.788	-0.00095	0.00408	0.00360
1500	-0.444	0.148	-1.717	0.00034	0.00775	-0.00429
1501	0.158	0.456	-1.369	0.00149	-0.00578	0.00018
1502	-0.035	0.746	-1.856	0.00706	0.00002	0.00145
1503	-0.043	0.796	-1.986	0.00860	-0.00011	0.00025
1504	-0.042	0.764	-1.877	0.00744	-0.00045	-0.00091
1505	-0.227	0.479	-1.395	0.00188	0.00514	0.00026
1506	0.350	0.169	-1.709	0.00052	-0.00774	0.00467
1600	-0.048	0.256	-1.373	0.00371	0.00211	-0.00474
1601	-0.050	0.256	-1.438	0.00396	-0.00001	0.00228
1602	-0.055	0.261	-1.499	0.00537	0.00034	0.00251
1603	-0.056	0.267	-1.523	0.00581	-0.00003	0.00015
1604	-0.054	0.271	-1.499	0.00547	-0.00039	-0.00218
1605	-0.052	0.274	-1.437	0.00416	0.00001	-0.00204
1606	-0.044	0.276	-1.367	0.00402	-0.00199	0.00482
1607	-0.041	0.275	-1.284	0.00430	-0.00040	-0.00110
1608	-0.037	0.271	-1.222	0.00423	-0.00016	0.00009
1609	-0.036	0.265	-1.201	0.00422	0.00003	-0.00029
1610	-0.038	0.261	-1.224	0.00427	0.00022	0.00056
1611	-0.004	0.193	-1.280	0.00390	0.00004	-0.00225
1700	-0.046	0.265	-1.351	0.00391	0.00004	-0.00225
1701	-0.046	0.285	-1.351	0.00391	0.00004	-0.00225
1702	-0.046	0.247	-1.351	0.00335	0.00005	-0.00228

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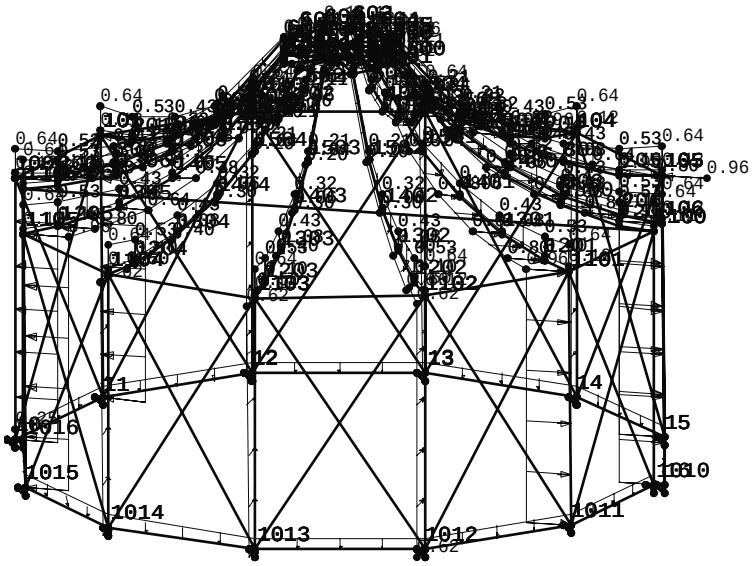
Belastung Überlagerung Nr. 2 M 1 : 50



mit Eigengewicht

Lastfall-Überlagerung Nr. 3

ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

Lastfall Nr. 1 : * 1.35 EG Glas etc
Nr. 2 : * 0.75 Schneelast
Nr. 3 : * 1.50 Windbelastung

Für Stäbe mit 4*EI/L < 3000 werden Querlasten nur als Knotenlasten angesetzt. Für Stäbe mit d0 <> 0 gilt dies nur für L1 / d0 > 100.

Maximale Verschiebung im Stab 1116 bei x = 0.625 * L Max_f = 3.25 cm

AUFLAGERKRÄFTE : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

Knoten Nr.	A Fx (kN)	A Fy (kN)	A Fz (kN)	A Mx (kNm)	A My (kNm)	A Mz (kNm)
10	-0.745	1.966	6.631			
11	-0.524	2.333	-6.368			
12	0.448	1.187	-3.460			
13	-0.006	0.834	-3.366			
14	-0.564	1.299	-3.891			
15	0.633	1.596	-3.041			
16	0.989	1.082	3.679			
1010	0.158	-0.460	-0.997			
1011	2.092	0.144	-6.736			
1012	1.355	1.485	-0.005			
1013	-0.118	0.827	1.029			
1014	-1.500	1.532	-0.346			
1015	-2.090	0.014	-7.438			
1016	-0.127	-0.617	-0.509			
Summe :	0.003	13.223	-24.819			

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
1	5	600	.10	.00	-.09	.08	-.06	.01
		.50	.10	.00	-.09	.07	-.06	.00
	5	601	.10	.00	-.09	.06	-.06	.00
2	5	601	.01	.00	.20	.08	-.03	.00
		.50	.01	.00	.20	.10	-.03	.00
	5	602	.01	.00	.20	.12	-.03	.00
3	5	602	.00	.00	.09	.14	-.09	.01
		.50	.00	.00	.09	.15	-.09	.00
	5	603	.00	.00	.09	.16	-.09	-.01
4	5	603	.05	.00	-.23	.15	.06	.00

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	.05	.00	-.23	.12	.06	.01
	5	604	.05	.00	-.23	.10	.06	.01
5	5	604	-.43	.00	-.59	.24	-.03	-.01
		.50	-.43	.00	-.59	.18	-.03	-.01
	5	605	-.43	.00	-.59	.13	-.03	-.01
6	5	605	-.06	.00	.25	.04	-.16	.02
		.50	-.06	.00	.26	.06	-.16	.00
	5	606	-.06	.00	.26	.09	-.16	-.01
7	5	606	-.04	.00	-.35	.10	-.02	.00
		.50	-.04	.00	-.35	.07	-.02	.00
	5	607	-.04	.00	-.35	.04	-.02	.00
8	5	607	-.03	.00	-.31	.04	.01	.00
		.50	-.03	.00	-.30	.01	.01	.00
	5	608	-.03	.00	-.30	-.02	.01	.00
9	5	608	-.03	.00	-.14	-.02	.00	.00
		.50	-.03	.00	-.14	-.03	.00	.00
	5	609	-.03	.00	-.13	-.05	.00	.00
10	5	609	-.03	.00	.08	-.05	.00	.00
		.50	-.03	.00	.08	-.04	.00	.00
	5	610	-.03	.00	.08	-.03	.00	.00
11	5	610	-.02	.00	.31	-.03	.01	.00
		.50	-.02	.00	.31	.00	.01	.00
	5	611	-.02	.00	.31	.03	.01	.00
12	5	611	-.01	.00	.45	.03	-.04	.00
		.50	-.01	.00	.46	.07	-.04	.00
	5	600	-.01	.00	.46	.11	-.04	-.01
20	6	701	.44	.01	-.08	.01	-1.62	.41
		.50	.44	.01	-.08	.01	-1.62	.37
	6	700	.44	.01	-.08	.01	-1.62	.33
21	6	700	.00	.00	.00	.00	.00	.00
		.50	.00	.00	.00	.00	.00	.00
	6	702	.00	.00	.00	.00	.00	.00
30	5	600	2.73	.00	2.31	-.59	-.02	.00
		.50	2.73	.00	2.32	-.17	-.02	.00
	5	700	2.73	.00	2.32	.26	-.02	.00
31	5	601	-.31	.00	.04	.12	-.01	.00

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	-.31	.00	.04	.13	-.01	.00
	5	700	-.31	.00	.04	.14	-.01	.00
32	5	602	-1.72	.00	-.35	.35	-.01	.00
		.50	-1.72	.00	-.35	.29	-.01	.00
	5	700	-1.72	.00	-.34	.22	-.01	.00
33	5	603	-1.67	.00	-.22	.36	-.02	.00
		.50	-1.67	.00	-.22	.32	-.02	.00
	5	700	-1.67	.00	-.22	.28	-.02	.00
34	5	604	-1.29	.00	.03	.25	.02	-.01
		.50	-1.29	.00	.04	.25	.02	.00
	5	700	-1.29	.00	.04	.26	.02	.00
35	5	605	-1.00	.00	-.62	.31	-.04	.01
		.50	-1.00	.00	-.62	.19	-.04	.00
	5	700	-1.00	.00	-.61	.08	-.04	-.01
36	5	606	2.79	.00	2.31	-.56	-.01	.00
		.50	2.79	.00	2.31	-.14	-.01	.00
	5	700	2.79	.00	2.31	.29	-.01	.00
37	5	607	.05	.00	-.04	-.02	.00	.00
		.50	.05	.00	-.04	-.03	.00	.00
	5	700	.05	.00	-.03	-.03	.00	.00
38	5	608	.01	.00	-.17	.01	-.01	.00
		.50	.01	.00	-.16	-.02	-.01	.00
	5	700	.01	.00	-.16	-.05	-.01	.00
39	5	609	.01	.00	-.21	.02	-.01	.00
		.50	.01	.00	-.21	-.01	-.01	.00
	5	700	.01	.00	-.20	-.05	-.01	.00
40	5	610	.02	.00	-.23	.02	-.01	.00
		.50	.02	.00	-.22	-.02	-.01	.00
	5	700	.02	.00	-.22	-.07	-.01	.00
41	5	611	-.04	.00	-.15	-.01	.00	.00
		.50	-.04	.00	-.14	-.04	.00	.00
	5	700	-.04	.00	-.14	-.07	.00	.00
100	1	600	3.16	.01	.92	-.55	.06	-.04
		.50	3.02	.01	.90	-.22	.06	-.02
	1	500	2.83	.01	.87	.09	.06	.00
101	1	500	2.95	.01	.17	.09	.06	.00

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	2.81	.01	.18	.13	.06	.02
	1	400	2.64	.01	.19	.17	.06	.03
102	1	400	2.63	.00	-.26	.17	.06	.03
		.50	2.43	.00	-.21	.12	.06	.04
	1	300	2.20	.00	-.16	.08	.06	.05
103	1	300	2.14	-.01	-.54	.08	.06	.05
		.50	1.90	-.01	-.44	-.02	.06	.06
	1	200	1.62	-.01	-.32	-.10	.06	.08
104	1	200	1.55	-.02	-.57	-.10	.06	.07
		.50	1.35	-.02	-.44	-.17	.06	.08
	1	100	1.14	-.02	-.30	-.23	.06	.09
105	2	605	-.49	.03	-.89	.35	.26	-.09
		.50	-.50	.03	-.76	.05	.21	-.01
	2	505	-.51	.03	-.59	-.19	.13	.05
106	2	505	-.63	.01	-.45	-.19	.13	.06
		.50	-.60	.01	-.32	-.26	.07	.08
	2	405	-.57	.01	-.16	-.31	.01	.09
107	2	405	-.59	.00	-.06	-.31	.01	.09
		.50	-.52	.00	.11	-.31	-.07	.08
	2	305	-.44	.00	.31	-.27	-.16	.06
108	2	305	-.38	-.01	.38	-.27	-.16	.06
		.50	-.25	-.01	.59	-.17	-.27	.01
	2	205	-.10	-.01	.82	-.02	-.38	-.05
109	2	205	.04	.00	.83	-.02	-.38	-.05
		.50	.18	.00	.99	.11	-.48	-.12
	2	105	.34	.00	1.17	.27	-.58	-.19
110	2	601	.04	-.02	-.45	.16	-.11	.01
		.50	-.04	-.02	-.40	.01	-.08	-.02
	2	501	-.15	-.02	-.34	-.12	-.03	-.04
111	2	501	-.22	-.01	-.30	-.12	-.04	-.05
		.50	-.29	-.01	-.24	-.17	-.01	-.05
	2	401	-.37	-.01	-.17	-.21	.03	-.05
112	2	401	-.40	.00	-.09	-.21	.04	-.05
		.50	-.47	.00	.02	-.22	.09	-.03
	2	301	-.56	.00	.15	-.20	.15	-.01
113	2	301	-.54	.00	.24	-.20	.14	-.01

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	-.61	.00	.39	-.14	.20	.02
	2	201	-.70	.00	.56	-.04	.26	.07
114	2	201	-.60	-.01	.66	-.04	.26	.07
		.50	-.72	-.01	.80	.07	.45	.12
	2	101	-1.01	-.01	.93	.19	.92	.22
115	2	602	-1.44	-.02	-.94	.42	-.06	.00
		.50	-1.53	-.02	-.91	.09	-.04	-.01
	2	502	-1.66	-.02	-.86	-.23	-.01	-.02
116	2	502	-1.81	-.01	-.44	-.23	-.01	-.03
		.50	-1.89	-.01	-.39	-.31	.00	-.03
	2	402	-1.99	-.01	-.32	-.38	.03	-.03
117	2	402	-2.01	-.01	.03	-.38	.03	-.03
		.50	-2.11	-.01	.12	-.37	.06	-.02
	2	302	-2.22	-.01	.23	-.33	.09	.00
118	2	302	-2.14	-.01	.62	-.33	.09	-.01
		.50	-2.24	-.01	.77	-.19	.12	.02
	2	202	-2.35	-.01	.93	-.02	.16	.04
119	2	202	-2.17	-.02	1.29	-.02	.16	.04
		.50	-2.24	-.02	1.44	.18	.19	.07
	2	102	-2.31	-.02	1.59	.41	.22	.10
120	2	603	-1.59	.00	-.99	.44	.02	-.02
		.50	-1.69	.00	-.96	.10	.02	-.01
	2	503	-1.81	.00	-.92	-.24	.02	-.01
121	2	503	-1.98	.00	-.46	-.24	.02	-.01
		.50	-2.06	.00	-.40	-.33	.02	.00
	2	403	-2.16	.00	-.34	-.40	.02	.00
122	2	403	-2.19	.00	.03	-.40	.02	.00
		.50	-2.29	.00	.13	-.39	.02	.00
	2	303	-2.41	.00	.24	-.35	.02	.01
123	2	303	-2.33	.00	.66	-.35	.02	.01
		.50	-2.44	.00	.80	-.20	.02	.01
	2	203	-2.56	.00	.96	-.02	.02	.01
124	2	203	-2.37	-.01	1.36	-.02	.02	.01
		.50	-2.44	-.01	1.50	.19	.02	.01
	2	103	-2.53	-.01	1.65	.42	.02	.02
125	2	604	-1.11	-.07	-.77	.34	-.43	.12

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	-1.21	-.07	-.75	.06	-.34	-.02
	2	504	-1.35	-.07	-.73	-.20	-.21	-.12
126	2	504	-1.49	-.04	-.38	-.20	-.20	-.13
		.50	-1.58	-.04	-.34	-.27	-.11	-.16
	2	404	-1.70	-.04	-.29	-.34	.01	-.17
127	2	404	-1.73	-.01	.00	-.34	.01	-.18
		.50	-1.85	-.01	.09	-.33	.14	-.16
	2	304	-2.00	-.01	.18	-.30	.30	-.12
128	2	304	-1.93	.01	.53	-.30	.30	-.12
		.50	-2.08	.01	.67	-.18	.48	-.04
	2	204	-2.24	.01	.82	-.03	.68	.08
129	2	204	-2.08	.00	1.16	-.03	.69	.08
		.50	-2.18	.00	1.30	.15	.85	.19
	2	104	-2.30	.00	1.45	.36	1.02	.33
130	1	606	3.01	-.02	.86	-.52	-.04	.00
		.50	2.87	-.02	.84	-.22	-.04	-.01
	1	506	2.68	-.02	.81	.07	-.04	-.03
131	1	506	2.79	-.02	.14	.07	-.04	-.03
		.50	2.65	-.02	.15	.10	-.04	-.04
	1	406	2.48	-.02	.17	.14	-.04	-.05
132	1	406	2.47	-.01	-.26	.14	-.04	-.05
		.50	2.27	-.01	-.21	.09	-.04	-.06
	1	306	2.04	-.01	-.16	.05	-.04	-.07
133	1	306	1.98	.00	-.51	.05	-.04	-.07
		.50	1.74	.00	-.41	-.04	-.04	-.08
	1	206	1.46	.00	-.29	-.11	-.04	-.09
134	1	206	1.40	.02	-.52	-.11	-.04	-.08
		.50	1.20	.02	-.39	-.18	-.04	-.09
	1	106	.99	.02	-.25	-.23	-.04	-.10
150	3	100	2.00	.06	-.02	-.07	-.27	.11
		.50	2.00	.06	-.01	-.08	-.27	-.04
	3	101	2.00	.06	.00	-.08	-.27	-.19
151	3	101	4.48	.03	.03	-.24	-.12	.03
		.50	4.48	.03	.04	-.22	-.12	-.04
	3	102	4.48	.03	.06	-.19	-.12	-.10
152	3	102	4.74	.00	-.12	-.10	.00	-.01

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	4.74	.00	-.10	-.17	.00	-.01
	3	103	4.74	.00	-.09	-.22	.00	.00
153	3	103	4.75	-.01	.13	-.23	-.10	.01
		.50	4.75	-.01	.14	-.16	-.10	-.05
	3	104	4.75	-.01	.16	-.07	-.10	-.11
154	3	104	3.15	.00	-.08	-.19	-.30	.21
		.50	3.15	.00	-.07	-.23	-.30	.04
	3	105	3.15	.00	-.05	-.27	-.30	-.14
155	3	105	1.14	-.07	.06	-.13	.40	-.33
		.50	1.14	-.07	.07	-.09	.40	-.10
	3	106	1.14	-.07	.09	-.04	.40	.13
160	1	100	3.43	-.03	-1.37	.18	-.03	.05
		.50	3.43	-.03	-.07	-.47	-.03	.03
	1	10	3.43	-.03	1.23	.06	-.03	.01
161	1	101	-3.12	-.01	-1.17	.01	-.08	.16
		.50	-3.12	-.01	.13	-.46	-.08	.09
	1	11	-3.12	-.01	1.43	.25	-.08	.02
162	1	102	-2.51	.00	.12	-.24	.31	.22
		.50	-2.51	.00	.12	-.13	-.19	.27
	1	12	-2.51	.00	.12	-.02	-.69	-.12
163	1	103	-2.03	.00	.00	.00	.26	.29
		.50	-2.03	.00	.00	.00	-.24	.30
	1	13	-2.03	.00	.00	.00	-.74	-.15
164	1	104	-2.70	.01	-.10	.22	.31	.22
		.50	-2.70	.01	-.10	.12	-.19	.27
	1	14	-2.70	.01	-.10	.03	-.69	-.13
165	1	105	-1.51	.00	1.16	.02	-.07	.16
		.50	-1.51	.00	-.14	.48	-.07	.10
	1	15	-1.51	.00	-1.44	-.24	-.07	.03
166	1	106	1.92	.04	1.36	-.17	.00	.03
		.50	1.92	.04	.06	.47	.00	.03
	1	16	1.92	.04	-1.24	-.06	.00	.03
170	4	10	.00	.05	.09	.02	.04	-.03
		.50	.00	.05	.31	.14	.04	-.01
	4	11	.00	.05	.52	.37	.04	.01
171	4	11	.00	.02	-.46	.54	.00	.00

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	.00	.02	-.25	.33	.00	.00
	4	12	.00	.02	-.03	.25	.00	.00
172	4	12	.00	.01	-.09	.18	.00	.00
		.50	.00	.01	.12	.18	.00	.00
	4	13	.00	.01	.33	.31	.00	.00
173	4	13	.00	-.01	-.33	.31	-.01	.00
		.50	.00	-.01	-.12	.18	-.01	.00
	4	14	.00	-.01	.09	.17	-.01	-.01
174	4	14	.00	-.02	.01	.26	.00	.01
		.50	.00	-.02	.22	.33	.00	.01
	4	15	.00	-.02	.44	.52	.00	.01
175	4	15	.00	-.05	-.48	.35	-.04	.01
		.50	.00	-.05	-.26	.13	-.04	-.01
	4	16	.00	-.05	-.05	.04	-.04	-.04
500	7	1701	.00	.00	.00	.00	.00	.00
		.50	.00	.00	.00	.00	.00	.00
	7	1700	.01	.00	.00	.00	.00	.00
501	7	1700	-2.38	-.02	.16	.00	-3.37	-.35
		.50	-2.38	-.02	.16	.01	-3.37	-.43
	7	1702	-2.38	-.02	.16	.01	-3.37	-.52
502	7	1702	-2.82	-.02	.23	.02	-4.98	-.76
		.50	-2.82	-.02	.23	.03	-4.98	-1.01
	7	701	-2.81	-.02	.23	.04	-4.98	-1.26
503	7	701	2.37	.02	-.16	.03	-3.37	.85
		.50	2.36	.02	-.16	.02	-3.37	.77
	7	700	2.36	.02	-.16	.02	-3.37	.68
504	7	700	.01	.00	.00	.00	.00	.00
		.50	.00	.00	.00	.00	.00	.00
	7	702	.00	.00	.00	.00	.00	.00
1001	5	1600	-.83	.00	.56	.12	.04	-.01
		.50	-.83	.00	.57	.18	.04	.00
	5	1601	-.83	.00	.57	.23	.04	.00
1002	5	1601	-.58	.00	-.05	.17	-.10	.01
		.50	-.58	.00	-.05	.17	-.10	.00
	5	1602	-.58	.00	-.05	.16	-.10	-.01
1003	5	1602	-.35	.00	-.03	.11	-.06	.01

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	-.35	.00	-.03	.10	-.06	.00
	5	1603	-.35	.00	-.03	.10	-.06	.00
1004	5	1603	-.35	.00	-.02	.10	.03	.00
		.50	-.35	.00	-.02	.10	.03	.00
	5	1604	-.35	.00	-.02	.09	.03	.00
1005	5	1604	-.57	.00	.00	.15	.07	-.01
		.50	-.57	.00	.00	.14	.07	.00
	5	1605	-.57	.00	.00	.14	.07	.01
1006	5	1605	-.82	.00	-.57	.20	-.06	.00
		.50	-.82	.00	-.56	.15	-.06	.00
	5	1606	-.82	.00	-.56	.09	-.06	-.01
1007	5	1606	-.68	.00	.22	.01	-.07	.01
		.50	-.68	.00	.22	.03	-.07	.00
	5	1607	-.68	.00	.22	.05	-.07	.00
1008	5	1607	-.68	.00	-.03	.05	.01	.00
		.50	-.68	.00	-.03	.05	.01	.00
	5	1608	-.68	.00	-.03	.05	.01	.00
1009	5	1608	-.69	.00	-.04	.05	-.01	.00
		.50	-.69	.00	-.04	.04	-.01	.00
	5	1609	-.69	.00	-.04	.04	-.01	.00
1010	5	1609	-.69	.00	.05	.04	-.01	.00
		.50	-.69	.00	.06	.04	-.01	.00
	5	1610	-.69	.00	.06	.05	-.01	.00
1011	5	1610	-.78	.00	-.01	.05	.02	.00
		.50	-.78	.00	-.01	.05	.02	.00
	5	1600	-.78	.00	.00	.05	.02	.00
1020	6	1701	.00	.00	.00	.00	.00	.00
		.50	.00	.00	.00	.00	.00	.00
	6	1700	.00	.00	.00	.00	.00	.00
1021	6	1700	-.45	-.01	.08	.00	-1.62	-.17
		.50	-.45	-.01	.08	.00	-1.62	-.21
	6	1702	-.45	-.01	.08	.01	-1.62	-.25
1030	5	1600	-2.66	.00	-1.88	.59	.03	-.01
		.50	-2.66	.00	-1.88	.24	.03	.00
	5	1700	-2.66	.00	-1.88	-.11	.03	.00
1031	5	1601	1.13	.00	1.38	-.26	.00	.00

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	1.13	.00	1.38	.00	.00	.00
	5	1700	1.13	.00	1.39	.25	.00	.00
1032	5	1602	-1.44	.00	-.47	.25	.00	.00
		.50	-1.44	.00	-.47	.16	.00	.00
	5	1700	-1.44	.00	-.46	.08	.00	.00
1033	5	1603	-2.04	.00	-.78	.37	.01	.00
		.50	-2.04	.00	-.77	.22	.01	.00
	5	1700	-2.04	.00	-.77	.08	.01	.00
1034	5	1604	-1.56	.00	-.53	.28	.02	.00
		.50	-1.56	.00	-.53	.18	.02	.00
	5	1700	-1.56	.00	-.53	.09	.02	.00
1035	5	1605	.96	.00	1.23	-.21	.02	.00
		.50	.96	.00	1.23	.02	.02	.00
	5	1700	.96	.00	1.24	.24	.02	.00
1036	5	1606	-2.93	.00	-2.11	.62	-.01	.00
		.50	-2.93	.00	-2.10	.24	-.01	.00
	5	1700	-2.93	.00	-2.10	-.15	-.01	.00
1037	5	1607	.43	.00	.25	-.03	.01	.00
		.50	.43	.00	.26	.02	.01	.00
	5	1700	.43	.00	.26	.07	.01	.00
1038	5	1608	.34	.00	.01	-.02	.01	.00
		.50	.34	.00	.02	-.02	.01	.00
	5	1700	.34	.00	.02	-.02	.01	.00
1039	5	1609	.35	.00	-.09	-.02	.01	.00
		.50	.35	.00	-.09	-.04	.01	.00
	5	1700	.35	.00	-.09	-.05	.01	.00
1040	5	1610	.60	.00	.07	-.04	.01	.00
		.50	.60	.00	.07	-.03	.01	.00
	5	1700	.60	.00	.08	-.01	.01	.00
1041	5	1611	.00	.00	.00	.00	.00	.00
		.50	.00	.00	.00	.00	.00	.00
	5	1700	.00	.00	.01	.00	.00	.00
1100	1	1600	-3.16	-.04	-1.60	.65	-.08	.07
		.50	-3.22	-.04	-1.54	.14	-.08	.04
	1	1500	-3.30	-.04	-1.47	-.34	-.08	.02
1101	1	1500	-3.56	-.04	-.65	-.34	-.08	.01

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	-3.61	-.04	-.57	-.47	-.08	-.01
	1	1400	-3.67	-.04	-.48	-.58	-.08	-.02
1102	1	1400	-3.70	-.03	.17	-.58	-.08	-.03
		.50	-3.76	-.03	.29	-.53	-.08	-.04
	1	1300	-3.82	-.03	.42	-.46	-.08	-.06
1103	1	1300	-3.69	-.02	1.09	-.46	-.08	-.06
		.50	-3.73	-.02	1.26	-.21	-.08	-.08
	1	1200	-3.78	-.02	1.44	.07	-.08	-.10
1104	1	1200	-3.56	-.01	1.93	.07	-.08	-.10
		.50	-3.57	-.01	2.05	.31	-.08	-.11
	1	1100	-3.59	-.01	2.18	.56	-.08	-.12
1105	2	1601	1.16	.03	.17	-.16	.23	-.05
		.50	1.04	.03	.17	-.10	.18	.02
	2	1501	.88	.03	.15	-.05	.11	.06
1106	2	1501	.89	.01	-.06	-.05	.11	.07
		.50	.76	.01	-.04	-.06	.05	.09
	2	1401	.60	.01	-.02	-.07	-.02	.09
1107	2	1401	.59	.00	-.12	-.07	-.02	.09
		.50	.40	.00	-.06	-.09	-.10	.08
	2	1301	.19	.00	.00	-.10	-.19	.05
1108	2	1301	.19	-.01	-.03	-.10	-.19	.05
		.50	-.04	-.01	.09	-.09	-.30	.00
	2	1201	-.29	-.01	.22	-.06	-.42	-.08
1109	2	1201	-.26	.00	.25	-.06	-.42	-.08
		.50	-.40	.00	.36	-.02	-.49	-.13
	2	1101	-.56	.00	.47	.03	-.58	-.20
1110	2	1602	-1.48	.02	-1.00	.32	.18	-.05
		.50	-1.51	.02	-.90	.02	.15	.00
	2	1502	-1.54	.02	-.78	-.26	.10	.04
1111	2	1502	-1.68	.01	-.39	-.26	.10	.04
		.50	-1.68	.01	-.28	-.33	.07	.06
	2	1402	-1.69	.01	-.14	-.37	.02	.07
1112	2	1402	-1.69	.00	.15	-.37	.02	.07
		.50	-1.66	.00	.31	-.32	-.03	.07
	2	1302	-1.63	.00	.49	-.24	-.09	.06
1113	2	1302	-1.52	-.01	.77	-.24	-.09	.06

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	-1.45	-.01	.97	-.06	-.16	.03
	2	1202	-1.35	-.01	1.19	.17	-.24	-.01
1114	2	1202	-1.18	-.01	1.36	.17	-.24	-.01
		.50	-1.12	-.01	1.49	.34	-.29	-.04
	2	1102	-1.04	-.01	1.63	.53	-.35	-.08
1115	2	1603	-2.10	.00	-1.22	.42	.00	.00
		.50	-2.12	.00	-1.12	.04	.00	.00
	2	1503	-2.15	.00	-.99	-.30	.00	.00
1116	2	1503	-2.32	.00	-.45	-.30	.00	.00
		.50	-2.32	.00	-.34	-.38	.00	.00
	2	1403	-2.31	.00	-.19	-.44	.00	.00
1117	2	1403	-2.31	.00	.21	-.44	.00	.00
		.50	-2.27	.00	.37	-.38	.00	.00
	2	1303	-2.23	.00	.56	-.28	.00	.00
1118	2	1303	-2.10	.00	.94	-.28	.00	.00
		.50	-2.01	.00	1.14	-.06	.00	.00
	2	1203	-1.91	.00	1.37	.20	.00	.00
1119	2	1203	-1.72	.00	1.60	.20	.00	.00
		.50	-1.64	.00	1.74	.40	.00	.00
	2	1103	-1.55	.00	1.88	.62	.00	.00
1120	2	1604	-1.60	-.02	-1.04	.34	-.17	.05
		.50	-1.63	-.02	-.95	.02	-.14	.00
	2	1504	-1.67	-.02	-.82	-.26	-.10	-.04
1121	2	1504	-1.81	-.01	-.40	-.26	-.09	-.05
		.50	-1.82	-.01	-.29	-.34	-.06	-.06
	2	1404	-1.82	-.01	-.16	-.38	-.02	-.07
1122	2	1404	-1.82	.00	.16	-.38	-.01	-.07
		.50	-1.79	.00	.32	-.34	.04	-.07
	2	1304	-1.76	.00	.50	-.25	.10	-.06
1123	2	1304	-1.65	.01	.80	-.25	.09	-.05
		.50	-1.58	.01	1.00	-.06	.16	-.03
	2	1204	-1.50	.01	1.21	.17	.24	.01
1124	2	1204	-1.33	.01	1.40	.17	.24	.02
		.50	-1.27	.01	1.53	.35	.28	.05
	2	1104	-1.19	.01	1.67	.54	.34	.08
1125	2	1605	.98	-.03	.11	-.13	-.22	.05

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	.87	-.03	.10	-.09	-.17	-.02
	2	1505	.70	-.03	.09	-.06	-.11	-.07
1126	2	1505	.71	-.01	-.08	-.06	-.11	-.07
		.50	.57	-.01	-.06	-.08	-.05	-.09
	2	1405	.41	-.01	-.04	-.09	.02	-.09
1127	2	1405	.40	.00	-.11	-.09	.02	-.09
		.50	.21	.00	-.05	-.11	.10	-.08
	2	1305	.00	.00	.02	-.11	.20	-.05
1128	2	1305	.00	.01	.02	-.11	.20	-.05
		.50	-.22	.01	.13	-.09	.30	.01
	2	1205	-.47	.01	.26	-.05	.42	.08
1129	2	1205	-.43	.00	.32	-.05	.42	.08
		.50	-.57	.00	.43	-.01	.50	.14
	2	1105	-.73	.00	.54	.05	.58	.20
1130	1	1606	-3.18	.03	-1.60	.65	.08	-.08
		.50	-3.24	.03	-1.55	.14	.08	-.05
	1	1506	-3.33	.03	-1.47	-.34	.08	-.02
1131	1	1506	-3.58	.04	-.65	-.34	.08	-.02
		.50	-3.63	.04	-.57	-.47	.08	.00
	1	1406	-3.70	.04	-.48	-.58	.08	.02
1132	1	1406	-3.72	.03	.17	-.58	.08	.02
		.50	-3.78	.03	.29	-.53	.08	.04
	1	1306	-3.84	.03	.43	-.46	.08	.06
1133	1	1306	-3.71	.02	1.10	-.46	.08	.06
		.50	-3.75	.02	1.26	-.21	.08	.08
	1	1206	-3.80	.02	1.45	.07	.08	.10
1134	1	1206	-3.58	.01	1.93	.07	.08	.10
		.50	-3.59	.01	2.06	.32	.08	.11
	1	1106	-3.61	.01	2.19	.57	.08	.12
1150	3	1100	.62	-.03	-.04	-.07	.40	-.14
		.50	.62	-.03	-.03	-.09	.40	.09
	3	1101	.62	-.03	-.01	-.10	.40	.31
1151	3	1101	1.21	.00	.14	-.23	-.19	.13
		.50	1.21	.00	.16	-.15	-.19	.02
	3	1102	1.21	.00	.17	-.06	-.19	-.08
1152	3	1102	.33	.01	-.01	-.14	.16	-.15

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	.33	.01	.01	-.14	.16	-.06
	3	1103	.33	.01	.02	-.13	.16	.03
1153	3	1103	.46	.00	-.02	-.13	-.16	.04
		.50	.46	.00	-.01	-.14	-.16	-.06
	3	1104	.46	.00	.01	-.14	-.16	-.15
1154	3	1104	1.51	.00	-.17	-.06	.18	-.08
		.50	1.51	.00	-.15	-.15	.18	.02
	3	1105	1.51	.00	-.14	-.23	.18	.12
1155	3	1105	.79	.03	.01	-.10	-.39	.31
		.50	.79	.03	.02	-.09	-.39	.09
	3	1106	.79	.03	.04	-.07	-.39	-.13
1160	1	1010	-1.75	.02	-.29	-.01	-.04	.00
		.50	-1.75	.02	-.29	-.26	-.04	-.03
	1	1100	-1.75	.02	-.29	-.51	-.04	-.06
1161	2	1011	-2.66	-.01	-1.40	.36	-.06	-.01
		.50	-2.66	-.01	-.15	-.32	-.06	-.06
	2	1101	-2.66	-.01	1.10	.10	-.06	-.11
1162	2	1012	-.89	-.02	-.15	.09	.63	-.15
		.50	-.89	-.02	-.15	-.04	-.18	.05
	2	1102	-.89	-.02	-.15	-.17	-.99	-.46
1163	2	1013	-.32	.00	.00	.00	.54	-.07
		.50	-.32	.00	.00	.00	-.27	.05
	2	1103	-.32	.00	.00	.00	-1.08	-.54
1164	2	1014	-1.08	.02	.16	-.10	.62	-.15
		.50	-1.08	.02	.16	.04	-.18	.05
	2	1104	-1.08	.02	.16	.18	-.99	-.47
1165	2	1015	-3.04	.01	1.41	-.37	-.07	.00
		.50	-3.04	.01	.16	.32	-.07	-.06
	2	1105	-3.03	.01	-1.09	-.08	-.07	-.12
1166	1	1016	-1.52	-.02	.30	.01	-.04	.01
		.50	-1.52	-.02	.30	.27	-.04	-.03
	1	1106	-1.52	-.02	.30	.52	-.04	-.07
1170	4	1010	.00	-.01	.09	-.01	-.02	.02
		.50	.00	-.01	.30	.10	-.02	.01
	4	1011	.00	-.01	.51	.33	-.02	.00
1171	4	1011	.00	.08	-.82	.54	.02	-.01

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	.00	.08	-.62	.14	.02	.00
	4	1012	.00	.08	-.41	-.15	.02	.01
1172	4	1012	.00	.02	-.27	.04	.01	-.01
		.50	.00	.02	-.07	-.06	.01	.00
	4	1013	.00	.02	.14	-.04	.01	.00
1173	4	1013	.00	-.02	-.13	-.04	-.01	.00
		.50	.00	-.02	.08	-.06	-.01	.00
	4	1014	.00	-.02	.28	.04	-.01	-.01
1174	4	1014	.00	-.08	.42	-.14	-.02	.01
		.50	.00	-.08	.62	.15	-.02	.00
	4	1015	.00	-.08	.83	.55	-.02	-.01
1175	4	1015	.00	.01	-.52	.34	.01	.00
		.50	.00	.01	-.32	.11	.01	.01
	4	1016	.00	.01	-.11	-.01	.01	.02

Spalte N mit #: Fachwerkstäbe mit N < 0.90 * NKi !!!

SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
1	600	28.6	-28.2	2.3	28.7	5	1 6 7 1	0.18*
0.500		13.1	-12.7	2.3	13.3	5	1 6 7 1	0.08
1	601	17.8	-17.4	2.3	18.0	5	3 4 7 3	0.11
2	601	15.1	-15.1	1.4	15.2	5	1 6 7 1	0.09
0.500		14.4	-14.4	1.4	14.4	5	3 4 7 3	0.09
2	602	23.9	-23.8	1.4	23.9	5	3 4 7 3	0.15*
3	602	34.2	-34.2	0.4	34.2	5	1 6 7 1	0.21
0.500		19.9	-19.9	0.4	19.9	5	3 4 7 3	0.12
3	603	40.6	-40.6	0.4	40.6	5	3 4 7 3	0.25*
4	603	18.0	-17.8	1.1	18.0	5	1 6 7 1	0.11
0.500		28.0	-27.8	1.1	28.0	5	1 6 7 1	0.17
4	604	37.9	-37.7	1.1	37.9	5	1 6 7 1	0.24*

SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
5	604	40.9	-42.6	1.9	42.6	5	3 4 9 4	0.26*
0.500		40.5	-42.2	1.8	42.2	5	3 4 9 4	0.26
5	605	40.2	-41.9	1.8	41.9	5	3 4 9 4	0.26
6	605	50.6	-50.9	3.1	51.0	5	1 6 7 6	0.32*
0.500		16.0	-16.2	3.1	16.5	5	1 6 7 6	0.10
6	606	39.1	-39.4	3.1	39.5	5	3 4 7 4	0.25
7	606	20.4	-20.6	2.2	20.7	5	1 6 7 6	0.13*
0.500		11.2	-11.4	2.2	11.5	5	1 6 7 6	0.07
7	607	6.8	-6.9	2.2	7.1	5	3 4 7 4	0.04
8	607	7.1	-7.3	1.0	7.3	5	3 4 7 4	0.05*
0.500		1.6	-1.7	1.0	1.9	5	3 4 7 7	0.01
8	608	3.9	-4.0	1.0	4.0	5	4 3 7 3	0.02
9	608	2.9	-3.0	0.5	3.0	5	6 1 7 1	0.02
0.500		4.2	-4.3	0.4	4.3	5	4 3 7 3	0.03
9	609	6.3	-6.5	0.4	6.5	5	4 3 7 3	0.04*
10	609	6.2	-6.3	0.3	6.3	5	6 1 7 1	0.04*
0.500		5.0	-5.1	0.3	5.1	5	6 1 7 1	0.03
10	610	4.0	-4.1	0.3	4.1	5	4 3 7 3	0.03
11	610	5.6	-5.7	1.0	5.7	5	6 1 7 1	0.04
0.500		1.4	-1.4	1.0	2.1	5	4 3 7 8	0.01
11	611	7.0	-7.1	1.0	7.1	5	1 6 7 6	0.04*
12	611	7.3	-7.3	2.7	7.5	5	1 6 7 6	0.05
0.500		13.8	-13.9	2.7	14.0	5	3 4 7 4	0.09
12	600	28.6	-28.7	2.7	28.7	5	3 4 7 4	0.18*
20	701	57.2	-56.0	5.1	57.2	6	1 9 5 1	0.36*
0.500		51.6	-50.4	5.1	51.6	6	1 9 5 1	0.32
20	700	46.0	-44.8	5.1	46.1	6	1 9 5 1	0.29
21	700	0.0	0.0	0.0	0.0	6	16 0 0	0.00
0.500		0.0	0.0	0.0	0.0	6	0 0 0 0	0.00
21	702	0.0	0.0	0.0	0.0	6	0 0 0 0	0.00
30	600	87.6	-76.7	7.4	87.6	5	4 3 7 4	0.54*
0.500		26.7	-15.8	7.4	26.7	5	4 3 7 4	0.17
30	700	45.2	-34.2	7.4	45.2	5	3 4 7 3	0.28
31	601	16.3	-17.5	0.8	17.6	5	1 6 7 6	0.11

SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
	0.500	16.1	-17.3	0.8	17.3	5	3 4 7 4	0.11
31	700	19.8	-21.0	0.8	21.1	5	3 4 7 4	0.13*
32	602	44.9	-51.8	1.4	51.8	5	1 6 7 6	0.32*
	0.500	31.1	-38.0	1.4	38.0	5	1 6 7 6	0.24
32	700	29.0	-35.9	1.4	35.9	5	3 4 7 4	0.22
33	603	51.3	-57.9	0.7	57.9	5	1 6 9 6	0.36*
	0.500	36.8	-43.5	0.7	43.5	5	1 6 9 6	0.27
33	700	38.8	-45.5	0.7	45.5	5	3 4 9 4	0.28
34	604	43.1	-48.3	0.5	48.3	5	3 4 7 4	0.30*
	0.500	33.3	-38.5	0.5	38.5	5	3 4 7 4	0.24
34	700	34.1	-39.2	0.5	39.2	5	1 6 7 6	0.24
35	605	58.8	-62.8	2.4	62.8	5	1 6 7 6	0.39*
	0.500	25.6	-29.6	2.4	29.6	5	1 6 7 6	0.18
35	700	22.1	-26.1	2.4	26.1	5	3 4 7 4	0.16
36	606	79.5	-68.3	7.4	79.5	5	4 3 7 4	0.49*
	0.500	22.2	-11.1	7.4	22.2	5	4 3 7 4	0.14
36	700	46.2	-35.1	7.4	46.2	5	3 4 7 3	0.29
37	607	2.9	-2.7	0.2	2.9	5	4 3 7 4	0.02
	0.500	4.7	-4.5	0.2	4.7	5	6 1 7 6	0.03
37	700	7.1	-6.9	0.2	7.1	5	6 1 7 6	0.04*
38	608	3.1	-3.1	0.5	3.1	5	1 6 7 1	0.02
	0.500	3.3	-3.2	0.5	3.3	5	6 1 7 6	0.02
38	700	9.5	-9.5	0.5	9.5	5	6 1 7 6	0.06*
39	609	4.3	-4.3	0.6	4.3	5	1 6 7 1	0.03
	0.500	2.7	-2.7	0.6	2.7	5	6 1 7 6	0.02
39	700	9.7	-9.6	0.6	9.7	5	6 1 7 6	0.06*
40	610	4.0	-3.9	0.7	4.0	5	1 6 7 1	0.02
	0.500	3.9	-3.8	0.7	3.9	5	6 1 7 6	0.02
40	700	11.6	-11.5	0.7	11.6	5	6 1 7 6	0.07*
41	611	1.9	-2.1	0.4	2.1	5	6 1 9 1	0.01
	0.500	6.3	-6.5	0.4	6.5	5	6 1 9 1	0.04
41	700	10.6	-10.8	0.4	10.8	5	6 1 9 1	0.07*
100	600	100.8	-90.7	6.6	101.4	1	6 1 1 6	0.63*
	0.500	44.2	-34.6	6.5	45.6	1	6 1 1 6	0.28

SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
100	500	20.0	-11.0	6.3	22.8	1	1 6 1 1	0.14
101	500	20.6	-11.1	2.1	20.9	1	1 6 1 1	0.13
0.500		28.3	-19.3	2.2	28.6	1	1 6 1 1	0.18
101	400	36.4	-28.0	2.3	36.6	1	1 6 1 1	0.23*
102	400	36.6	-28.2	2.1	36.6	1	1 6 3 1	0.23*
0.500		30.6	-22.8	1.8	30.6	1	1 6 3 1	0.19
102	300	26.2	-19.2	1.5	26.3	1	1 6 3 1	0.16
103	300	26.1	-19.2	4.3	26.8	1	1 6 3 1	0.17
0.500		18.4	-12.3	3.6	19.4	1	4 3 3 4	0.12
103	200	32.7	-27.5	2.9	33.0	1	4 3 3 4	0.21*
104	200	32.1	-27.2	5.7	33.6	1	4 3 3 4	0.21
0.500		45.5	-41.2	5.0	46.3	1	4 3 3 4	0.29
104	100	55.6	-52.0	4.1	56.1	1	4 3 3 4	0.35*
105	605	97.4	-99.3	9.7	100.7	2	3 4 3 4	0.63*
0.500		13.3	-15.3	8.6	21.3	2	3 4 3 4	0.13
105	505	51.9	-53.8	7.1	55.2	2	4 3 3 3	0.34
106	505	52.5	-54.9	4.9	55.6	2	4 3 3 3	0.35
0.500		74.8	-77.1	3.8	77.4	2	4 3 3 3	0.48
106	405	88.0	-90.2	2.5	90.3	2	4 3 3 3	0.56*
107	405	88.2	-90.5	0.6	90.5	2	4 3 3 3	0.56*
0.500		86.1	-88.2	1.2	88.2	2	4 3 3 3	0.55
107	305	72.0	-73.7	2.9	73.9	2	4 3 3 3	0.46
108	305	71.9	-73.3	4.5	73.7	2	4 3 3 3	0.46*
0.500		40.9	-41.8	6.3	43.3	2	4 3 3 3	0.27
108	205	15.4	-15.7	8.3	17.1	2	6 1 3 1	0.11
109	205	15.9	-15.7	7.4	16.7	2	6 1 3 6	0.10
0.500		47.8	-47.1	8.9	50.2	2	3 4 3 3	0.31
109	105	99.3	-98.0	10.6	101.0	2	3 4 3 3	0.63*
110	601	40.0	-39.8	5.3	41.0	2	1 6 1 1	0.25*
0.500		7.3	-7.4	4.8	10.1	2	3 4 1 4	0.06
110	501	35.6	-36.2	4.2	36.9	2	6 1 1 1	0.23
111	501	36.2	-37.1	2.7	37.4	2	6 1 1 1	0.23
0.500		49.4	-50.6	2.2	50.7	2	6 1 1 1	0.31
111	401	58.3	-59.8	1.8	59.8	2	6 1 3 1	0.37*

SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
112	401	57.8	-59.4	1.2	59.4	2	6 1 3 1	0.37*
0.500		56.6	-58.5	1.1	58.5	2	6 1 1 1	0.36
112	301	47.7	-49.9	2.1	50.0	2	6 1 1 1	0.31
113	301	48.0	-50.1	2.4	50.3	2	6 1 1 1	0.31*
0.500		35.3	-37.7	3.6	37.7	2	4 3 1 3	0.23
113	201	21.5	-24.2	5.0	24.4	2	4 3 1 3	0.15
114	201	21.6	-23.9	6.4	24.6	2	4 3 1 3	0.15
0.500		36.0	-38.8	8.4	41.4	2	1 6 1 6	0.26
114	101	83.3	-87.2	11.9	89.6	2	1 6 1 6	0.56*
115	602	94.7	-100.3	8.1	101.3	2	1 6 1 6	0.63*
0.500		20.3	-26.3	7.8	29.2	2	3 4 1 4	0.18
115	502	53.3	-59.7	7.4	61.1	2	6 1 1 1	0.38
116	502	53.8	-60.9	4.3	61.3	2	6 1 1 1	0.38
0.500		73.5	-80.9	3.9	81.1	2	6 1 3 1	0.50
116	402	89.5	-97.2	3.6	97.4	2	6 1 3 1	0.60*
117	402	89.8	-97.6	1.5	97.7	2	6 1 1 1	0.61*
0.500		84.6	-92.7	2.2	92.8	2	6 1 1 1	0.58
117	302	73.3	-81.9	3.0	82.1	2	6 1 1 1	0.51
118	302	73.8	-82.1	5.2	82.6	2	6 1 1 1	0.51*
0.500		42.7	-51.4	6.3	52.0	2	4 3 1 3	0.32
118	202	7.8	-16.9	7.5	19.5	2	4 3 1 3	0.12
119	202	7.7	-16.2	10.3	21.8	2	4 3 1 3	0.14
0.500		50.8	-59.5	11.3	62.6	2	1 6 1 6	0.39
119	102	107.7	-116.7	12.4	118.7	2	1 6 1 6	0.74*
120	603	102.1	-108.3	6.3	108.9	2	3 4 3 4	0.68*
0.500		20.8	-27.4	6.1	29.4	2	3 4 3 4	0.18
120	503	52.7	-59.7	5.9	60.5	2	6 1 3 1	0.38
121	503	52.5	-60.2	3.0	60.4	2	6 1 3 1	0.37
0.500		72.2	-80.2	2.7	80.3	2	6 1 3 1	0.50
121	403	89.1	-97.4	2.4	97.5	2	6 1 3 1	0.61*
122	403	89.1	-97.5	0.6	97.5	2	6 1 1 1	0.61*
0.500		85.4	-94.3	1.1	94.3	2	4 3 1 3	0.59
122	303	77.3	-86.6	1.7	86.6	2	4 3 1 3	0.54
123	303	77.3	-86.3	4.3	86.6	2	4 3 1 3	0.54*

SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
	0.500	43.3	-52.7	5.1	53.4	2	4 3 1 3	0.33
123	203	2.0	-11.9	6.1	15.7	2	4 3 1 3	0.10
124	203	2.3	-11.5	8.6	18.5	2	4 3 1 3	0.12
	0.500	41.2	-50.7	9.4	53.2	2	1 6 1 6	0.33
124	103	94.8	-104.6	10.3	106.1	2	1 6 1 6	0.66*
125	604	97.3	-101.6	14.7	104.7	2	1 6 1 6	0.65*
	0.500	16.6	-21.3	14.0	27.7	2	3 4 1 6	0.17
125	504	65.6	-70.8	13.1	74.4	2	6 1 1 1	0.46
126	504	67.8	-73.6	7.9	74.9	2	6 1 1 1	0.46
	0.500	90.9	-97.1	7.0	97.8	2	6 1 1 1	0.61
126	404	107.7	-114.3	6.2	114.8	2	6 1 3 1	0.71*
127	404	108.5	-115.2	1.1	115.2	2	6 1 1 1	0.72*
	0.500	103.4	-110.6	2.4	110.7	2	6 1 1 1	0.69
127	304	88.4	-96.1	3.9	96.3	2	6 1 1 1	0.60
128	304	88.4	-95.9	6.2	96.5	2	6 1 1 1	0.60*
	0.500	44.9	-52.9	8.0	54.7	2	6 1 1 1	0.34
128	204	16.8	-25.5	10.1	25.7	2	4 3 1 3	0.16
129	204	17.3	-25.4	10.9	25.8	2	4 3 1 3	0.16
	0.500	67.4	-75.8	12.6	78.9	2	1 6 1 6	0.49
129	104	139.7	-148.6	14.5	150.7	2	1 6 1 6	0.94*
130	606	89.0	-79.3	7.9	90.0	1	4 3 3 4	0.56*
	0.500	42.3	-33.1	7.8	44.2	1	6 1 3 6	0.27
130	506	21.7	-13.1	7.7	25.4	1	3 4 3 3	0.16
131	506	22.8	-13.9	3.0	23.4	1	3 4 3 3	0.15
	0.500	29.0	-20.6	3.0	29.5	1	3 4 3 3	0.18
131	406	35.6	-27.7	3.1	36.0	1	3 4 3 3	0.22*
132	406	36.0	-28.1	2.7	36.2	1	3 4 1 3	0.22*
	0.500	29.4	-22.1	2.4	29.6	1	3 4 1 3	0.18
132	306	24.4	-17.9	2.1	24.6	1	3 4 1 3	0.15
133	306	24.4	-18.1	3.6	25.0	1	3 4 1 3	0.16
	0.500	24.5	-18.9	3.0	25.0	1	6 1 1 6	0.16
133	206	37.2	-32.5	2.3	37.4	1	6 1 1 6	0.23*
134	206	36.7	-32.3	5.1	37.8	1	6 1 1 6	0.23
	0.500	48.3	-44.5	4.4	48.9	1	6 1 1 6	0.30

SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
134	106	56.7	-53.6	3.6	57.1	1	6 1 1 6	0.35*
150	100	33.8	-27.3	8.5	36.6	3	4 3 1 4	0.23
0.500		23.9	-17.5	8.4	28.0	3	6 1 1 6	0.17
150	101	48.6	-42.1	8.4	50.7	3	6 1 3 6	0.31*
151	101	56.2	-41.7	3.7	56.6	3	4 3 3 4	0.35
0.500		52.6	-38.2	3.8	52.9	3	6 1 3 6	0.33
151	102	58.0	-43.5	3.8	58.3	3	6 1 3 6	0.36*
152	102	27.8	-12.4	1.1	27.8	3	6 1 3 6	0.17
0.500		39.3	-24.0	1.1	39.4	3	6 1 3 6	0.24
152	103	49.5	-34.2	1.0	49.6	3	6 1 3 6	0.31*
153	103	52.5	-37.1	2.3	52.6	3	4 3 3 4	0.33*
0.500		43.6	-28.2	2.4	43.6	3	6 1 3 6	0.27
153	104	36.7	-21.4	2.5	36.8	3	6 1 3 6	0.23
154	104	72.1	-62.0	2.3	72.2	3	4 3 1 4	0.45
0.500		53.0	-42.8	2.2	53.0	3	4 3 1 4	0.33
154	105	75.4	-65.2	2.1	75.5	3	6 1 1 6	0.47*
155	105	78.1	-74.4	10.5	80.2	3	6 1 1 6	0.50*
0.500		34.5	-30.8	10.5	39.1	3	6 1 1 6	0.24
155	106	30.1	-26.4	10.6	34.4	3	4 3 1 4	0.21
160	100	45.8	-34.8	11.1	49.6	1	1 6 1 1	0.31
0.500		87.0	-76.0	3.5	87.2	1	4 3 1 4	0.54*
160	10	15.6	-4.6	10.2	23.2	1	1 6 3 1	0.14
161	101	26.9	-36.9	8.9	40.0	1	1 6 1 6	0.25
0.500		86.4	-96.4	2.8	96.5	1	4 3 3 3	0.60*
161	11	38.2	-48.1	10.4	50.9	1	1 6 3 6	0.32
162	102	75.8	-83.8	2.8	83.9	1	4 3 1 3	0.52*
0.500		68.4	-76.5	2.1	76.5	1	4 3 3 3	0.48
162	12	22.9	-30.9	5.0	31.5	1	6 1 3 1	0.20
163	103	51.3	-57.8	1.6	57.9	1	1 6 3 6	0.36
0.500		52.6	-59.1	1.5	59.1	1	1 6 1 6	0.37*
163	13	24.8	-31.3	4.4	32.3	1	6 1 1 1	0.20
164	104	71.9	-80.5	4.0	80.6	1	1 6 3 6	0.50*
0.500		66.2	-74.9	3.3	75.1	1	1 6 1 6	0.47
164	14	25.1	-33.7	6.2	34.8	1	3 4 1 4	0.22

SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
165	105	31.2	-36.1	7.6	37.9	1	1 6 3 6	0.24
	0.500	93.0	-97.9	1.7	97.9	1	1 6 1 6	0.61*
165	15	42.2	-47.0	9.3	49.2	1	4 3 1 3	0.31
166	106	37.1	-30.9	11.8	42.3	1	4 3 3 4	0.26
	0.500	85.6	-79.5	4.2	85.9	1	1 6 3 1	0.53*
166	16	18.2	-12.1	11.1	26.5	1	4 3 1 4	0.16
170	10	5.1	-5.1	6.4	11.5	4	3 4 1 3	0.07
	0.500	14.7	-14.7	7.6	19.3	4	3 4 1 3	0.12
170	11	40.1	-40.1	8.9	43.0	4	1 6 1 1	0.27*
171	11	55.4	-55.4	5.1	56.1	4	3 4 3 3	0.35*
	0.500	34.4	-34.4	3.8	35.0	4	3 4 3 3	0.22
171	12	26.1	-26.1	2.6	26.5	4	1 6 3 1	0.16
172	12	18.5	-18.5	1.4	18.7	4	3 4 3 3	0.12
	0.500	19.1	-19.1	1.6	19.3	4	1 6 1 1	0.12
172	13	32.7	-32.7	2.8	33.1	4	1 6 1 1	0.21*
173	13	32.6	-32.6	2.8	32.9	4	1 6 1 1	0.20*
	0.500	19.2	-19.2	1.5	19.3	4	3 4 1 3	0.12
173	14	18.9	-18.9	1.3	19.0	4	3 4 3 3	0.12
174	14	27.3	-27.3	2.1	27.6	4	1 6 1 1	0.17
	0.500	34.3	-34.3	3.4	34.8	4	1 6 1 1	0.22
174	15	53.9	-53.9	4.6	54.5	4	1 6 1 1	0.34*
175	15	36.8	-36.8	8.5	39.6	4	1 6 1 1	0.25*
	0.500	15.2	-15.2	7.2	19.2	4	3 4 1 3	0.12
175	16	8.4	-8.4	6.0	12.8	4	3 4 1 3	0.08
1001	1600	31.6	-35.0	3.8	35.1	5	3 4 7 4	0.22*
	0.500	29.3	-32.6	3.8	32.7	5	3 4 7 4	0.20
1001	1601	27.0	-30.3	3.8	30.4	5	3 4 7 4	0.19
1002	1601	42.1	-44.4	1.5	44.5	5	1 6 7 6	0.28*
	0.500	19.3	-21.6	1.5	21.7	5	3 4 7 4	0.13
1002	1602	41.5	-43.8	1.5	43.9	5	3 4 7 4	0.27
1003	1602	28.7	-30.1	0.5	30.2	5	1 6 7 6	0.19*
	0.500	15.1	-16.5	0.5	16.5	5	1 6 7 6	0.10
1003	1603	21.4	-22.8	0.5	22.8	5	3 4 7 4	0.14
1004	1603	14.2	-15.6	0.3	15.6	5	3 4 7 4	0.10

SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
	0.500	14.1	-15.5	0.3	15.5	5	1 6 7 6	0.10
1004	1604	20.1	-21.5	0.3	21.5	5	1 6 7 6	0.13*
1005	1604	32.4	-34.7	1.3	34.7	5	3 4 7 4	0.22*
	0.500	16.4	-18.7	1.3	18.7	5	3 4 7 4	0.12
1005	1605	32.0	-34.3	1.3	34.4	5	1 6 7 6	0.21
1006	1605	27.6	-30.9	3.7	31.0	5	1 6 7 6	0.19
	0.500	25.3	-28.5	3.7	28.6	5	3 4 7 4	0.18
1006	1606	33.4	-36.7	3.7	36.8	5	3 4 7 4	0.23*
1007	1606	24.4	-27.2	2.3	27.3	5	1 6 7 6	0.17*
	0.500	10.4	-13.1	2.3	13.3	5	1 6 7 6	0.08
1007	1607	13.2	-16.0	2.3	16.1	5	3 4 7 4	0.10
1008	1607	8.3	-11.0	0.2	11.0	5	3 4 7 4	0.07*
	0.500	6.1	-8.8	0.2	8.8	5	3 4 7 4	0.05
1008	1608	4.3	-7.0	0.2	7.0	5	1 6 7 6	0.04
1009	1608	6.0	-8.8	0.2	8.8	5	1 6 7 6	0.05*
	0.500	4.2	-6.9	0.2	6.9	5	1 6 7 6	0.04
1009	1609	4.1	-6.8	0.2	6.8	5	3 4 7 4	0.04
1010	1609	5.2	-8.0	0.2	8.0	5	1 6 7 6	0.05
	0.500	5.0	-7.8	0.2	7.8	5	3 4 7 4	0.05
1010	1610	8.8	-11.6	0.2	11.6	5	3 4 7 4	0.07*
1011	1610	8.7	-11.9	1.1	11.9	5	3 4 7 4	0.07
	0.500	8.5	-11.6	1.1	11.7	5	1 6 7 6	0.07
1011	1600	15.9	-19.0	1.0	19.1	5	1 6 7 6	0.12*
1020	1701	0.0	0.0	0.0	0.0	6	0 0 0 0	0.00
	0.500	0.0	0.0	0.0	0.0	6	0 0 0 0	0.00
1020	1700	0.0	0.0	0.0	0.0	6	1 0 0 1	0.00
1021	1700	22.5	-23.7	5.1	23.8	6	9 1 5 1	0.15
	0.500	28.0	-29.3	5.1	29.3	6	9 1 5 1	0.18
1021	1702	33.6	-34.9	5.1	34.9	6	9 1 5 1	0.22*
1030	1600	80.7	-91.4	5.8	91.4	5	3 4 7 4	0.57*
	0.500	25.3	-36.0	5.8	36.0	5	3 4 7 4	0.22
1030	1700	19.4	-30.0	5.7	30.0	5	4 3 7 3	0.19
1031	1601	37.9	-33.4	4.2	37.9	5	4 3 7 4	0.24*
	0.500	6.0	-1.5	4.2	9.1	5	4 3 7 7	0.06

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SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
1031	1700	34.5	-29.9	4.2	34.5	5	1 6 7 1	0.21
1032	1602	32.4	-38.1	1.7	38.1	5	1 6 7 6	0.24*
	0.500	20.3	-26.1	1.7	26.1	5	1 6 7 6	0.16
1032	1700	8.3	-14.1	1.7	14.1	5	1 6 7 6	0.09
1033	1603	41.5	-49.7	2.4	49.7	5	3 4 7 4	0.31*
	0.500	24.5	-32.6	2.4	32.6	5	1 6 7 6	0.20
1033	1700	10.7	-18.9	2.3	18.9	5	1 6 7 6	0.12
1034	1604	38.8	-45.0	1.8	45.0	5	3 4 7 4	0.28*
	0.500	18.9	-25.1	1.8	25.1	5	1 6 7 6	0.16
1034	1700	15.4	-21.7	1.8	21.7	5	1 6 7 6	0.13
1035	1605	35.3	-31.5	3.8	35.3	5	6 1 7 6	0.22
	0.500	3.9	0.0	3.8	6.9	5	1 6 7 7	0.04
1035	1700	39.3	-35.5	3.8	39.3	5	1 6 7 1	0.24*
1036	1606	80.6	-92.4	6.4	92.4	5	1 6 7 6	0.57*
	0.500	27.4	-39.1	6.4	39.1	5	1 6 7 6	0.24
1036	1700	14.0	-25.7	6.4	25.7	5	6 1 7 1	0.16
1037	1607	9.0	-7.3	1.1	9.0	5	6 1 7 6	0.06
	0.500	4.2	-2.5	1.1	4.3	5	1 6 7 1	0.03
1037	1700	15.9	-14.1	1.1	15.9	5	1 6 7 1	0.10*
1038	1608	5.3	-3.9	0.2	5.3	5	6 1 7 6	0.03
	0.500	4.9	-3.5	0.2	4.9	5	4 3 7 4	0.03
1038	1700	7.9	-6.6	0.2	7.9	5	4 3 7 4	0.05*
1039	1609	5.9	-4.5	0.3	5.9	5	6 1 7 6	0.04
	0.500	6.4	-5.1	0.3	6.4	5	4 3 7 4	0.04
1039	1700	12.7	-11.3	0.3	12.7	5	4 3 7 4	0.08*
1040	1610	6.5	-4.0	0.4	6.5	5	6 1 7 6	0.04
	0.500	6.4	-3.9	0.4	6.4	5	4 3 7 4	0.04
1040	1700	7.3	-4.8	0.4	7.3	5	4 3 7 4	0.05*
1041	1611	0.0	0.0	0.0	0.0	5	0 0 0 0	0.00
	0.500	0.0	0.0	0.0	0.0	5	3 4 7 3	0.00
1041	1700	0.1	-0.1	0.0	0.1	5	3 4 7 3	0.00*
1100	1600	113.1	-123.2	13.6	125.4	1	1 6 1 6	0.78*
	0.500	26.2	-36.5	13.3	43.1	1	1 6 1 6	0.27
1100	1500	54.2	-64.8	12.9	68.0	1	4 3 1 3	0.42

SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
1101	1500	52.1	-63.5	8.5	64.8	1	4 3 1 3	0.40
	0.500	71.7	-83.2	8.0	84.4	1	6 1 1 1	0.52
1101	1400	92.5	-104.2	7.5	105.0	1	6 1 1 1	0.65*
1102	1400	93.7	-105.5	5.2	105.7	1	6 1 3 1	0.66*
	0.500	88.9	-100.9	5.9	101.3	1	6 1 3 1	0.63
1102	1300	79.7	-91.9	6.7	92.5	1	6 1 3 1	0.57
1103	1300	80.9	-92.7	9.4	93.9	1	6 1 3 1	0.58*
	0.500	43.9	-55.8	10.4	58.2	1	6 1 3 1	0.36
1103	1200	23.4	-35.4	11.5	40.6	1	3 4 3 4	0.25
1104	1200	24.2	-35.5	12.9	42.0	1	3 4 3 4	0.26
	0.500	64.9	-76.3	13.6	79.8	1	3 4 3 4	0.50
1104	1100	108.0	-119.5	14.4	122.1	1	3 4 3 4	0.76*
1105	1601	48.2	-43.7	5.5	49.1	2	6 1 1 6	0.31*
	0.500	28.6	-24.6	5.2	29.2	2	4 3 1 4	0.18
1105	1501	25.4	-22.0	4.7	26.1	2	4 3 1 4	0.16
1106	1501	26.4	-22.9	2.5	26.7	2	4 3 3 4	0.17
	0.500	32.0	-29.1	2.0	32.2	2	4 3 3 4	0.20
1106	1401	34.1	-31.7	1.7	34.2	2	4 3 1 4	0.21*
1107	1401	34.2	-31.9	1.1	34.2	2	4 3 1 4	0.21
	0.500	36.2	-34.7	1.2	36.3	2	4 3 1 4	0.23*
1107	1301	31.7	-30.9	1.4	31.7	2	4 3 3 4	0.20
1108	1301	31.4	-30.7	2.5	31.6	2	4 3 1 4	0.20*
	0.500	21.3	-21.5	3.4	21.9	2	6 1 3 1	0.14
1108	1201	27.6	-28.7	4.9	29.0	2	6 1 3 1	0.18
1109	1201	27.8	-28.8	4.0	28.8	2	6 1 3 1	0.18
	0.500	29.3	-30.9	5.0	30.9	2	6 1 3 1	0.19
1109	1101	43.4	-45.5	6.2	46.8	2	3 4 3 4	0.29*
1110	1602	81.7	-87.4	9.2	88.9	2	3 4 3 4	0.55*
	0.500	0.7	-6.6	8.5	16.1	2	3 4 3 4	0.10
1110	1502	63.8	-69.8	7.5	71.0	2	4 3 3 3	0.44
1111	1502	64.3	-70.8	4.1	71.2	2	4 3 3 3	0.44
	0.500	84.0	-90.5	3.3	90.7	2	4 3 3 3	0.56
1111	1402	96.1	-102.6	2.2	102.7	2	4 3 3 3	0.64*
1112	1402	96.3	-102.8	1.1	102.8	2	4 3 1 3	0.64*

SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
	0.500	85.2	-91.6	2.0	91.7	2	4 3 3 3	0.57
1112	1302	63.7	-70.0	3.4	70.3	2	4 3 3 3	0.44
1113	1302	63.7	-69.6	6.2	70.4	2	4 3 3 3	0.44*
	0.500	17.0	-22.6	7.8	26.3	2	4 3 3 3	0.16
1113	1202	37.7	-43.0	9.6	46.1	2	3 4 3 4	0.29
1114	1202	38.4	-43.0	10.4	46.7	2	3 4 3 4	0.29
	0.500	84.4	-88.8	11.5	91.0	2	3 4 3 4	0.56
1114	1102	135.4	-139.5	12.6	141.2	2	3 4 3 4	0.88*
1115	1603	93.3	-101.5	7.2	102.2	2	3 4 3 4	0.63*
	0.500	5.3	-13.5	6.6	17.7	2	3 4 3 4	0.11
1115	1503	65.9	-74.3	5.8	74.9	2	6 1 3 1	0.47
1116	1503	65.5	-74.5	2.7	74.7	2	6 1 3 1	0.46
	0.500	84.6	-93.6	2.0	93.7	2	6 1 3 1	0.58
1116	1403	97.6	-106.5	1.2	106.5	2	4 3 3 3	0.66*
1117	1403	97.6	-106.5	1.3	106.5	2	4 3 1 3	0.66*
	0.500	83.7	-92.5	2.2	92.6	2	4 3 1 3	0.57
1117	1303	61.3	-69.9	3.3	70.2	2	4 3 1 3	0.44
1118	1303	61.6	-69.7	5.6	70.4	2	4 3 1 3	0.44*
	0.500	11.3	-19.1	6.7	22.3	2	4 3 1 3	0.14
1118	1203	42.9	-50.3	8.0	52.2	2	1 6 1 6	0.32
1119	1203	43.3	-49.9	9.5	52.6	2	1 6 1 6	0.33
	0.500	90.3	-96.6	10.3	98.2	2	1 6 1 6	0.61
1119	1103	141.2	-147.2	11.1	148.4	2	1 6 1 6	0.92*
1120	1604	85.2	-91.4	9.5	92.9	2	1 6 1 6	0.58*
	0.500	2.8	-9.1	8.7	17.0	2	3 4 1 6	0.11
1120	1504	65.7	-72.1	7.7	73.4	2	6 1 1 1	0.46
1121	1504	66.2	-73.2	4.2	73.5	2	6 1 1 1	0.46
	0.500	86.2	-93.3	3.3	93.4	2	6 1 1 1	0.58
1121	1404	98.8	-105.8	2.3	105.9	2	6 1 1 1	0.66*
1122	1404	98.9	-106.0	1.1	106.0	2	6 1 3 1	0.66*
	0.500	87.1	-94.1	2.1	94.1	2	6 1 1 1	0.58
1122	1304	64.9	-71.8	3.5	72.0	2	6 1 1 1	0.45
1123	1304	64.9	-71.3	6.4	72.2	2	6 1 1 1	0.45*
	0.500	16.5	-22.6	7.9	26.4	2	6 1 1 1	0.16

SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
1123	1204	38.9	-44.7	9.6	47.7	2	1 6 1 6	0.30
1124	1204	39.6	-44.8	10.5	48.3	2	1 6 1 6	0.30
0.500		86.7	-91.6	11.5	93.7	2	1 6 1 6	0.58
1124	1104	138.7	-143.3	12.7	145.0	2	1 6 1 6	0.90*
1125	1605	39.5	-35.7	5.2	40.5	2	4 3 3 4	0.25*
0.500		26.5	-23.2	4.8	27.3	2	6 1 3 6	0.17
1125	1505	27.9	-25.2	4.3	28.5	2	6 1 3 6	0.18
1126	1505	28.9	-26.2	2.5	29.2	2	6 1 1 6	0.18
0.500		35.4	-33.1	2.1	35.6	2	6 1 1 6	0.22
1126	1405	38.3	-36.7	1.8	38.4	2	6 1 3 6	0.24*
1127	1405	38.4	-36.9	1.1	38.4	2	6 1 3 6	0.24
0.500		39.7	-38.9	1.2	39.7	2	6 1 3 6	0.25*
1127	1305	34.4	-34.4	1.5	34.5	2	6 1 1 1	0.21
1128	1305	34.2	-34.1	2.4	34.4	2	6 1 1 6	0.21*
0.500		22.4	-23.2	3.7	23.5	2	4 3 1 3	0.15
1128	1205	26.6	-28.4	5.2	28.6	2	4 3 1 3	0.18
1129	1205	26.8	-28.5	4.4	28.5	2	4 3 1 3	0.18
0.500		26.6	-28.8	5.4	28.8	2	4 3 1 3	0.18
1129	1105	48.4	-51.2	6.6	52.4	2	1 6 1 6	0.33*
1130	1606	115.3	-125.4	13.5	127.6	1	3 4 3 4	0.79*
0.500		27.8	-38.1	13.2	44.4	1	3 4 3 4	0.28
1130	1506	54.9	-65.5	12.7	68.6	1	6 1 3 1	0.43
1131	1506	52.8	-64.2	8.4	65.5	1	6 1 3 1	0.41
0.500		70.8	-82.4	8.0	83.5	1	4 3 3 3	0.52
1131	1406	91.8	-103.6	7.4	104.4	1	4 3 3 3	0.65*
1132	1406	93.0	-104.8	5.2	105.1	1	4 3 1 3	0.65*
0.500		88.3	-100.3	5.9	100.7	1	4 3 1 3	0.63
1132	1306	79.2	-91.4	6.7	92.0	1	4 3 1 3	0.57
1133	1306	80.4	-92.2	9.5	93.4	1	4 3 1 3	0.58*
0.500		43.3	-55.3	10.4	57.7	1	4 3 1 3	0.36
1133	1206	24.2	-36.3	11.5	41.5	1	1 6 1 6	0.26
1134	1206	25.0	-36.4	13.0	42.8	1	1 6 1 6	0.27
0.500		66.0	-77.5	13.7	81.0	1	1 6 1 6	0.50
1134	1106	109.4	-121.0	14.4	123.5	1	1 6 1 6	0.77*

SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
1150	1100	35.3	-33.3	6.1	36.7	3	6 1 3 6	0.23
0.500		31.3	-29.3	6.1	33.0	3	4 3 3 4	0.21
1150	1101	68.6	-66.6	6.0	69.4	3	4 3 3 4	0.43*
1151	1101	64.8	-60.9	2.0	64.9	3	4 3 3 4	0.40*
0.500		32.9	-29.0	2.1	33.1	3	4 3 3 4	0.21
1151	1102	25.3	-21.4	2.2	25.3	3	6 1 3 6	0.16
1152	1102	48.4	-47.3	1.8	48.5	3	6 1 3 6	0.30*
0.500		34.6	-33.5	1.8	34.7	3	6 1 1 6	0.22
1152	1103	29.6	-28.5	1.8	29.7	3	4 3 1 4	0.18
1153	1103	30.5	-29.0	1.6	30.6	3	4 3 1 4	0.19
0.500		35.1	-33.7	1.5	35.2	3	6 1 1 6	0.22
1153	1104	49.5	-48.0	1.5	49.5	3	6 1 3 6	0.31*
1154	1104	27.0	-22.1	2.2	27.0	3	6 1 3 6	0.17
0.500		33.5	-28.6	2.1	33.7	3	4 3 3 4	0.21
1154	1105	64.3	-59.4	2.1	64.4	3	4 3 3 4	0.40*
1155	1105	68.3	-65.8	5.4	68.9	3	4 3 3 4	0.43*
0.500		31.8	-29.2	5.5	33.1	3	4 3 3 4	0.21
1155	1106	36.2	-33.7	5.6	37.3	3	6 1 3 6	0.23
1160	1010	0.0	-5.1	3.9	7.8	1	0 3 1 3	0.05
0.500		45.4	-50.9	3.9	51.4	1	6 1 1 1	0.32
1160	1100	92.6	-98.2	3.9	98.5	1	6 1 1 1	0.61*
1161	1011	80.2	-90.5	9.7	91.8	2	3 4 1 4	0.57*
0.500		79.5	-89.8	2.4	89.9	2	6 1 1 1	0.56
1161	1101	38.2	-48.5	7.9	50.4	2	3 4 3 4	0.31
1162	1012	47.4	-50.8	6.6	52.1	2	3 4 3 4	0.32
0.500		16.9	-20.3	3.9	20.6	2	4 3 1 3	0.13
1162	1102	125.4	-128.8	8.7	129.7	2	6 1 1 1	0.81*
1163	1013	12.0	-13.2	3.2	14.3	2	6 1 1 1	0.09
0.500		8.6	-9.9	1.7	10.3	2	4 3 3 3	0.06
1163	1103	101.3	-102.6	6.4	103.2	2	3 4 3 4	0.64*
1164	1014	47.6	-51.7	6.6	53.0	2	6 1 1 1	0.33
0.500		16.3	-20.5	4.1	20.9	2	1 6 3 6	0.13
1164	1104	127.7	-131.9	8.8	132.8	2	3 4 3 4	0.82*
1165	1015	79.5	-91.3	10.0	92.6	2	6 1 3 1	0.58*

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SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 3 : EG+So+0,5W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
	0.500	80.1	-91.9	2.7	92.0	2	3 4 3 4	0.57
1165	1105	36.4	-48.1	8.1	50.1	2	6 1 1 1	0.31
1166	1016	0.6	-5.5	3.7	7.7	1	1 6 3 6	0.05
	0.500	46.5	-51.4	3.7	51.8	1	3 4 3 4	0.32
1166	1106	95.7	-100.6	3.7	100.8	1	3 4 3 4	0.63*
1170	1010	2.7	-2.7	1.6	3.8	4	4 3 3 3	0.02
	0.500	11.6	-11.6	2.8	12.4	4	1 6 3 1	0.08
1170	1011	34.2	-34.2	4.0	34.9	4	3 4 3 3	0.22*
1171	1011	57.4	-57.4	13.3	61.8	4	3 4 3 3	0.38*
	0.500	14.5	-14.5	12.1	25.5	4	3 4 3 3	0.16
1171	1012	16.5	-16.5	10.9	25.1	4	4 3 3 3	0.16
1172	1012	4.7	-4.7	4.1	8.5	4	3 4 3 3	0.05*
	0.500	6.2	-6.2	2.9	7.8	4	6 1 3 1	0.05
1172	1013	4.4	-4.4	3.3	7.0	4	4 3 1 3	0.04
1173	1013	4.6	-4.6	3.4	7.4	4	4 3 1 3	0.05
	0.500	6.0	-6.0	3.1	7.9	4	6 1 3 1	0.05
1173	1014	5.3	-5.3	4.3	9.2	4	3 4 3 3	0.06*
1174	1014	16.3	-16.3	11.1	25.1	4	4 3 3 3	0.16
	0.500	15.2	-15.2	12.3	26.2	4	3 4 3 3	0.16
1174	1015	58.6	-58.6	13.5	63.1	4	3 4 3 3	0.39*
1175	1015	35.4	-35.4	3.8	36.0	4	3 4 3 3	0.22*
	0.500	12.0	-12.0	2.6	12.7	4	1 6 3 1	0.08
1175	1016	2.8	-2.8	1.4	3.7	4	4 3 3 3	0.02

Lastfall-Überlagerung Nr. 4

ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

Lastfall Nr. 1 : * 1.35 EG Glas etc
Nr. 2 : * 1.50 Schneelast
Nr. 3 : * 0.75 Windbelastung

Für Stäbe mit 4*EI/L < 3000 werden Querlasten nur als Knotenlasten angesetzt. Für Stäbe mit d0 <> 0 gilt dies nur für L1 / d0 > 100.

Maximale Verschiebung im Stab 1117 bei x = 0.00 * L Max_f = 4.40 cm

AUFLAGERKRÄFTE : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

Knoten Nr.	A Fx (kN)	A Fy (kN)	A Fz (kN)	A Mx (kNm)	A My (kNm)	A Mz (kNm)
10	-0.460	1.532	3.719			
11	-0.226	1.962	-6.462			
12	0.240	0.959	-4.079			
13	0.000	0.708	-3.902			
14	-0.290	1.009	-4.281			
15	0.285	1.599	-4.861			
16	0.579	1.100	2.278			
1010	0.265	-0.743	-1.394			
1011	0.987	-0.755	-6.486			
1012	0.632	0.364	-2.432			
1013	-0.062	0.140	-1.642			
1014	-0.711	0.391	-2.598			
1015	-0.990	-0.825	-6.887			
1016	-0.245	-0.830	-1.120			
Summe :	0.002	6.611	-40.146			

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
1	5	600	-.25	.00	.18	.13	-.01	.00
	.50		-.25	.00	.18	.15	-.01	.00
	5	601	-.25	.00	.18	.16	-.01	.00
2	5	601	-.29	.00	.41	.18	-.01	.00
	.50		-.29	.00	.41	.21	-.01	.00
	5	602	-.29	.00	.41	.25	-.01	.00
3	5	602	-.30	.00	.18	.27	-.04	.00
	.50		-.30	.00	.18	.28	-.04	.00
	5	603	-.30	.00	.18	.30	-.04	.00
4	5	603	-.28	.00	-.25	.30	.02	.00

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	-.28	.00	-.25	.27	.02	.00
	5	604	-.28	.00	-.25	.25	.02	.00
5	5	604	-.51	.00	-.60	.31	-.02	.00
		.50	-.51	.00	-.60	.26	-.02	.00
	5	605	-.51	.00	-.60	.20	-.02	-.01
6	5	605	-.33	.00	-.10	.15	-.10	.01
		.50	-.33	.00	-.10	.14	-.10	.00
	5	606	-.33	.00	-.10	.13	-.10	-.01
7	5	606	-.31	.00	-.14	.13	-.02	.00
		.50	-.31	.00	-.14	.12	-.02	.00
	5	607	-.31	.00	-.14	.10	-.02	.00
8	5	607	-.30	.00	-.38	.10	.01	.00
		.50	-.30	.00	-.38	.07	.01	.00
	5	608	-.30	.00	-.38	.03	.01	.00
9	5	608	-.30	.00	-.19	.03	.00	.00
		.50	-.30	.00	-.19	.01	.00	.00
	5	609	-.30	.00	-.19	.00	.00	.00
10	5	609	-.30	.00	.16	.00	.00	.00
		.50	-.30	.00	.16	.01	.00	.00
	5	610	-.30	.00	.16	.03	.00	.00
11	5	610	-.30	.00	.38	.03	.00	.00
		.50	-.30	.00	.38	.06	.00	.00
	5	611	-.30	.00	.38	.10	.00	.00
12	5	611	-.29	.00	.20	.10	-.01	.00
		.50	-.29	.00	.20	.12	-.01	.00
	5	600	-.29	.00	.20	.14	-.01	.00
20	6	701	.45	.00	-.04	.01	-2.02	.67
		.50	.45	.00	-.04	.01	-2.02	.61
	6	700	.45	.00	-.04	.00	-2.02	.56
21	6	700	.00	.00	.00	.00	.00	.00
		.50	.00	.00	.00	.00	.00	.00
	6	702	.00	.00	.00	.00	.00	.00
30	5	600	1.23	.00	1.34	-.21	-.01	.00
		.50	1.23	.00	1.35	.03	-.01	.00
	5	700	1.23	.00	1.35	.28	-.01	.00
31	5	601	-.79	.00	.12	.26	.00	.00

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	-.79	.00	.13	.28	.00	.00
	5	700	-.79	.00	.13	.31	.00	.00
32	5	602	-1.77	.00	.04	.39	-.01	.00
		.50	-1.77	.00	.05	.40	-.01	.00
	5	700	-1.77	.00	.05	.41	-.01	.00
33	5	603	-1.76	.00	.20	.39	-.01	.00
		.50	-1.76	.00	.20	.43	-.01	.00
	5	700	-1.76	.00	.21	.47	-.01	.00
34	5	604	-1.55	.00	.24	.34	.01	.00
		.50	-1.55	.00	.24	.39	.01	.00
	5	700	-1.55	.00	.24	.43	.01	.00
35	5	605	-1.15	.00	-.21	.35	-.02	.01
		.50	-1.15	.00	-.21	.31	-.02	.00
	5	700	-1.15	.00	-.21	.27	-.02	.00
36	5	606	1.27	.00	1.34	-.20	-.01	.00
		.50	1.27	.00	1.34	.05	-.01	.00
	5	700	1.27	.00	1.34	.30	-.01	.00
37	5	607	.19	.00	.24	-.05	.00	.00
		.50	.19	.00	.24	-.01	.00	.00
	5	700	.19	.00	.25	.04	.00	.00
38	5	608	.15	.00	-.19	-.02	.00	.00
		.50	.15	.00	-.18	-.05	.00	.00
	5	700	.15	.00	-.18	-.08	.00	.00
39	5	609	.16	.00	-.35	.00	.00	.00
		.50	.16	.00	-.34	-.06	.00	.00
	5	700	.16	.00	-.34	-.12	.00	.00
40	5	610	.16	.00	-.22	-.01	.00	.00
		.50	.16	.00	-.21	-.05	.00	.00
	5	700	.16	.00	-.21	-.09	.00	.00
41	5	611	.14	.00	.19	-.05	.00	.00
		.50	.14	.00	.19	-.02	.00	.00
	5	700	.14	.00	.19	.02	.00	.00
100	1	600	1.72	.00	-.05	-.15	.04	-.01
		.50	1.56	.00	.02	-.15	.04	.00
	1	500	1.34	.00	.11	-.13	.04	.02
101	1	500	1.33	.00	-.21	-.13	.04	.02

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	1.19	.00	-.11	-.16	.04	.02
	1	400	1.02	.00	.02	-.17	.04	.03
102	1	400	1.01	-.01	-.16	-.17	.04	.03
		.50	.84	-.01	.02	-.19	.04	.04
	1	300	.64	-.01	.22	-.16	.04	.04
103	1	300	.67	-.01	.11	-.16	.04	.04
		.50	.49	-.01	.38	-.12	.04	.05
	1	200	.29	-.01	.68	-.01	.04	.06
104	1	200	.39	-.02	.62	-.01	.04	.05
		.50	.28	-.02	.88	.10	.04	.06
	1	100	.15	-.02	1.17	.25	.04	.06
105	2	605	-.64	.01	-1.16	.44	.13	-.05
		.50	-.73	.01	-1.02	.05	.10	-.01
	2	505	-.85	.01	-.83	-.28	.06	.02
106	2	505	-1.02	.01	-.60	-.28	.06	.02
		.50	-1.08	.01	-.44	-.38	.03	.03
	2	405	-1.15	.01	-.24	-.45	.00	.03
107	2	405	-1.17	.00	-.04	-.45	.00	.04
		.50	-1.21	.00	.20	-.44	-.04	.03
	2	305	-1.25	.00	.48	-.37	-.09	.02
108	2	305	-1.14	.00	.69	-.37	-.08	.02
		.50	-1.14	.00	1.01	-.19	-.14	.00
	2	205	-1.13	.00	1.37	.05	-.20	-.04
109	2	205	-.89	.00	1.53	.05	-.20	-.04
		.50	-.84	.00	1.81	.29	-.24	-.07
	2	105	-.78	.00	2.11	.58	-.29	-.11
110	2	601	-.35	-.01	-.93	.35	-.05	.01
		.50	-.48	-.01	-.83	.03	-.03	-.01
	2	501	-.65	-.01	-.70	-.24	-.01	-.02
111	2	501	-.79	.00	-.54	-.24	-.03	-.02
		.50	-.89	.00	-.41	-.33	-.02	-.02
	2	401	-1.01	.00	-.26	-.40	.00	-.03
112	2	401	-1.05	-.01	-.05	-.40	.04	-.02
		.50	-1.16	-.01	.16	-.39	.06	-.01
	2	301	-1.29	-.01	.41	-.33	.09	.01
113	2	301	-1.20	-.01	.61	-.33	.07	.00

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	-1.30	-.01	.90	-.18	.10	.02
	2	201	-1.40	-.01	1.23	.04	.13	.05
114	2	201	-1.19	-.01	1.44	.04	.14	.04
		.50	-1.27	-.01	1.70	.27	.23	.07
	2	101	-1.43	-.01	1.98	.54	.47	.12
115	2	602	-1.39	-.01	-1.30	.53	-.03	.01
		.50	-1.52	-.01	-1.21	.08	-.02	.00
	2	502	-1.70	-.01	-1.08	-.32	-.01	-.01
116	2	502	-1.91	-.01	-.64	-.32	-.01	-.01
		.50	-2.02	-.01	-.51	-.44	.00	-.01
	2	402	-2.15	-.01	-.36	-.53	.01	-.01
117	2	402	-2.18	-.01	.01	-.53	.01	-.01
		.50	-2.30	-.01	.21	-.51	.03	-.01
	2	302	-2.44	-.01	.45	-.44	.04	.00
118	2	302	-2.32	-.01	.87	-.44	.04	.00
		.50	-2.42	-.01	1.16	-.23	.06	.01
	2	202	-2.54	-.01	1.48	.04	.08	.02
119	2	202	-2.27	-.01	1.87	.04	.08	.02
		.50	-2.33	-.01	2.14	.33	.09	.03
	2	102	-2.39	-.01	2.43	.67	.11	.05
120	2	603	-1.48	.00	-1.33	.55	.01	-.01
		.50	-1.61	.00	-1.24	.09	.01	-.01
	2	503	-1.80	.00	-1.11	-.33	.01	.00
121	2	503	-2.01	.00	-.65	-.33	.01	.00
		.50	-2.12	.00	-.53	-.45	.01	.00
	2	403	-2.25	.00	-.38	-.54	.01	.00
122	2	403	-2.28	.00	.01	-.54	.01	.00
		.50	-2.41	.00	.22	-.52	.01	.00
	2	303	-2.55	.00	.45	-.45	.01	.00
123	2	303	-2.43	.00	.89	-.45	.01	.00
		.50	-2.54	.00	1.18	-.24	.01	.00
	2	203	-2.66	.00	1.50	.03	.01	.01
124	2	203	-2.39	.00	1.90	.03	.01	.01
		.50	-2.45	.00	2.17	.33	.01	.01
	2	103	-2.51	.00	2.46	.67	.01	.01
125	2	604	-1.22	-.03	-1.21	.49	-.21	.05

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	-1.36	-.03	-1.13	.07	-.17	-.01
	2	504	-1.55	-.03	-1.01	-.31	-.10	-.06
126	2	504	-1.75	-.02	-.61	-.31	-.10	-.07
		.50	-1.86	-.02	-.49	-.42	-.05	-.08
	2	404	-2.00	-.02	-.35	-.51	.01	-.09
127	2	404	-2.03	.00	.00	-.51	.00	-.09
		.50	-2.17	.00	.20	-.49	.07	-.08
	2	304	-2.32	.00	.42	-.42	.15	-.06
128	2	304	-2.21	.01	.83	-.42	.15	-.06
		.50	-2.34	.01	1.11	-.23	.24	-.02
	2	204	-2.49	.01	1.42	.03	.34	.04
129	2	204	-2.22	.00	1.80	.03	.34	.04
		.50	-2.30	.00	2.07	.32	.42	.10
	2	104	-2.38	.00	2.36	.64	.51	.16
130	1	606	1.65	-.01	-.08	-.13	-.03	-.01
		.50	1.49	-.01	-.01	-.15	-.03	-.02
	1	506	1.27	-.01	.08	-.14	-.03	-.03
131	1	506	1.26	.00	-.23	-.14	-.03	-.03
		.50	1.12	.00	-.12	-.17	-.03	-.03
	1	406	.95	.00	.00	-.19	-.03	-.04
132	1	406	.93	.00	-.16	-.19	-.03	-.04
		.50	.76	.00	.02	-.20	-.03	-.05
	1	306	.56	.00	.22	-.18	-.03	-.05
133	1	306	.59	.01	.12	-.18	-.03	-.05
		.50	.42	.01	.39	-.13	-.03	-.06
	1	206	.22	.01	.69	-.02	-.03	-.06
134	1	206	.32	.02	.65	-.02	-.03	-.06
		.50	.20	.02	.91	.10	-.03	-.06
	1	106	.07	.02	1.19	.25	-.03	-.07
150	3	100	1.66	.04	-.10	-.08	-.20	.09
		.50	1.66	.04	-.09	-.13	-.20	-.03
	3	101	1.66	.04	-.07	-.18	-.20	-.15
151	3	101	3.67	.03	-.03	-.23	-.03	-.02
		.50	3.67	.03	-.02	-.24	-.03	-.04
	3	102	3.67	.03	-.01	-.25	-.03	-.06
152	3	102	3.98	.01	-.09	-.17	.00	-.01

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	3.98	.01	-.08	-.22	.00	-.01
	3	103	3.98	.01	-.07	-.26	.00	.00
153	3	103	3.99	-.01	.09	-.27	-.05	.00
		.50	3.99	-.01	.10	-.21	-.05	-.03
	3	104	3.99	-.01	.11	-.15	-.05	-.06
154	3	104	3.02	-.02	.00	-.25	-.17	.10
		.50	3.02	-.02	.01	-.25	-.17	.00
	3	105	3.02	-.02	.02	-.24	-.17	-.10
155	3	105	1.24	-.05	.11	-.21	.27	-.22
		.50	1.24	-.05	.12	-.14	.27	-.06
	3	106	1.24	-.05	.13	-.07	.27	.09
160	1	100	1.24	-.02	-.47	-.27	-.03	.06
		.50	1.24	-.02	.18	-.41	-.03	.03
	1	10	1.24	-.02	.83	.05	-.03	.00
161	1	101	-3.64	-.02	-.36	-.34	-.15	.24
		.50	-3.64	-.02	.29	-.38	-.15	.11
	1	11	-3.64	-.02	.94	.18	-.15	-.03
162	1	102	-3.04	.00	.20	-.34	-.05	.42
		.50	-3.04	.00	.20	-.16	-.30	.26
	1	12	-3.04	.00	.20	.03	-.55	-.12
163	1	103	-2.71	.00	.00	.00	-.11	.51
		.50	-2.71	.00	.00	.00	-.36	.30
	1	13	-2.71	.00	.00	.00	-.62	-.15
164	1	104	-3.13	.01	-.20	.33	-.05	.42
		.50	-3.13	.01	-.20	.15	-.30	.26
	1	14	-3.13	.01	-.20	-.02	-.55	-.12
165	1	105	-2.87	.01	.36	.36	-.15	.25
		.50	-2.87	.01	-.29	.39	-.15	.11
	1	15	-2.87	.01	-.94	-.17	-.15	-.03
166	1	106	.50	.03	.47	.28	-.02	.05
		.50	.50	.03	-.18	.41	-.02	.03
	1	16	.50	.03	-.83	-.05	-.02	.01
170	4	10	.00	.05	.08	.01	.03	-.02
		.50	.00	.05	.30	.12	.03	-.01
	4	11	.00	.05	.51	.36	.03	.01
171	4	11	.00	.01	-.37	.43	.00	.00

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	.00	.01	-.16	.28	.00	.00
	4	12	.00	.01	.06	.25	.00	.00
172	4	12	.00	.00	-.15	.22	.00	.00
		.50	.00	.00	.07	.20	.00	.00
	4	13	.00	.00	.28	.30	.00	.00
173	4	13	.00	.00	-.28	.29	-.01	.00
		.50	.00	.00	-.07	.19	-.01	.00
	4	14	.00	.00	.14	.22	-.01	.00
174	4	14	.00	-.01	-.07	.26	.00	.00
		.50	.00	-.01	.15	.28	.00	.00
	4	15	.00	-.01	.36	.42	.00	.00
175	4	15	.00	-.05	-.49	.34	-.03	.01
		.50	.00	-.05	-.28	.12	-.03	-.01
	4	16	.00	-.05	-.06	.02	-.03	-.03
500	7	1701	.00	.00	.00	.00	.00	.00
		.50	.00	.00	.00	.00	.00	.00
	7	1700	.01	.00	.00	.00	.00	.00
501	7	1700	-2.42	-.01	.09	.00	-4.20	-.76
		.50	-2.41	-.01	.09	.00	-4.20	-.86
	7	1702	-2.41	-.01	.09	.01	-4.20	-.96
502	7	1702	-2.86	-.01	.13	.01	-6.21	-1.43
		.50	-2.85	-.01	.13	.01	-6.21	-1.74
	7	701	-2.85	-.01	.13	.02	-6.21	-2.05
503	7	701	2.40	.01	-.09	.01	-4.20	1.38
		.50	2.39	.01	-.09	.01	-4.20	1.28
	7	700	2.39	.01	-.09	.01	-4.20	1.17
504	7	700	.01	.00	.00	.00	.00	.00
		.50	.00	.00	.00	.00	.00	.00
	7	702	.00	.00	.00	.00	.00	.00
1001	5	1600	-1.04	.00	.52	.18	.09	-.01
		.50	-1.04	.00	.52	.23	.09	.00
	5	1601	-1.04	.00	.52	.28	.09	.01
1002	5	1601	-.98	.00	.10	.28	-.01	.00
		.50	-.98	.00	.10	.29	-.01	.00
	5	1602	-.98	.00	.10	.30	-.01	.00
1003	5	1602	-.89	.00	-.03	.28	-.02	.00

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	-.89	.00	-.03	.28	-.02	.00
	5	1603	-.89	.00	-.02	.28	-.02	.00
1004	5	1603	-.89	.00	-.13	.27	.00	.00
		.50	-.89	.00	-.13	.26	.00	.00
	5	1604	-.89	.00	-.13	.25	.00	.00
1005	5	1604	-.98	.00	-.23	.26	.00	.00
		.50	-.98	.00	-.23	.24	.00	.00
	5	1605	-.98	.00	-.23	.22	.00	.00
1006	5	1605	-1.04	.00	-.52	.22	-.11	.01
		.50	-1.04	.00	-.52	.17	-.11	.00
	5	1606	-1.04	.00	-.52	.12	-.11	-.01
1007	5	1606	-.90	.00	.51	.03	-.07	.01
		.50	-.90	.00	.51	.08	-.07	.00
	5	1607	-.90	.00	.51	.13	-.07	.00
1008	5	1607	-.90	.00	-.08	.13	.01	.00
		.50	-.90	.00	-.08	.12	.01	.00
	5	1608	-.90	.00	-.08	.11	.01	.00
1009	5	1608	-.90	.00	-.10	.11	.00	.00
		.50	-.90	.00	-.10	.10	.00	.00
	5	1609	-.90	.00	-.10	.09	.00	.00
1010	5	1609	-.90	.00	.12	.09	-.01	.00
		.50	-.90	.00	.12	.10	-.01	.00
	5	1610	-.90	.00	.12	.11	-.01	.00
1011	5	1610	-1.02	.00	-.07	.13	.02	.00
		.50	-1.02	.00	-.06	.12	.02	.00
	5	1600	-1.02	.00	-.06	.10	.02	.00
1020	6	1701	.00	.00	.00	.00	.00	.00
		.50	.00	.00	.00	.00	.00	.00
	6	1700	.00	.00	.00	.00	.00	.00
1021	6	1700	-.45	.00	.04	.00	-2.02	-.36
		.50	-.45	.00	.04	.00	-2.02	-.41
	6	1702	-.45	.00	.04	.00	-2.02	-.46
1030	5	1600	-3.56	.00	-2.11	.82	.03	-.01
		.50	-3.56	.00	-2.11	.43	.03	.00
	5	1700	-3.56	.00	-2.10	.04	.03	.00
1031	5	1601	-.06	.00	.90	.04	.01	.00

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	-.06	.00	.90	.20	.01	.00
	5	1700	-.06	.00	.91	.37	.01	.00
1032	5	1602	-1.41	.00	-.07	.27	.00	.00
		.50	-1.41	.00	-.06	.26	.00	.00
	5	1700	-1.41	.00	-.06	.24	.00	.00
1033	5	1603	-1.78	.00	-.30	.33	.00	.00
		.50	-1.78	.00	-.29	.28	.00	.00
	5	1700	-1.78	.00	-.29	.22	.00	.00
1034	5	1604	-1.47	.00	-.12	.29	.01	.00
		.50	-1.47	.00	-.12	.27	.01	.00
	5	1700	-1.47	.00	-.12	.25	.01	.00
1035	5	1605	-.15	.00	.71	.08	.00	.00
		.50	-.15	.00	.72	.21	.00	.00
	5	1700	-.15	.00	.72	.35	.00	.00
1036	5	1606	-3.88	.00	-2.56	.88	-.02	.01
		.50	-3.88	.00	-2.56	.41	-.02	.00
	5	1700	-3.88	.00	-2.56	-.06	-.02	.00
1037	5	1607	.54	.00	.59	-.06	.01	.00
		.50	.54	.00	.60	.05	.01	.00
	5	1700	.54	.00	.60	.16	.01	.00
1038	5	1608	.45	.00	.02	-.06	.00	.00
		.50	.45	.00	.03	-.05	.00	.00
	5	1700	.45	.00	.03	-.05	.00	.00
1039	5	1609	.45	.00	-.21	-.05	.01	.00
		.50	.45	.00	-.21	-.09	.01	.00
	5	1700	.45	.00	-.21	-.12	.01	.00
1040	5	1610	.77	.00	.19	-.09	.00	.00
		.50	.77	.00	.19	-.06	.00	.00
	5	1700	.77	.00	.19	-.02	.00	.00
1041	5	1611	.00	.00	.00	.00	.00	.00
		.50	.00	.00	.00	.00	.00	.00
	5	1700	.00	.00	.01	.00	.00	.00
1100	1	1600	-4.06	-.04	-2.30	.92	-.07	.08
		.50	-4.17	-.04	-2.20	.19	-.07	.06
	1	1500	-4.32	-.04	-2.06	-.50	-.07	.03
1101	1	1500	-4.69	-.04	-.99	-.50	-.07	.02

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	-4.78	-.04	-.85	-.69	-.07	.01
	1	1400	-4.90	-.04	-.68	-.85	-.07	.00
1102	1	1400	-4.95	-.04	.18	-.85	-.07	-.01
		.50	-5.05	-.04	.40	-.79	-.07	-.02
	1	1300	-5.17	-.04	.65	-.68	-.07	-.04
1103	1	1300	-4.97	-.04	1.55	-.68	-.07	-.05
		.50	-5.05	-.04	1.85	-.32	-.07	-.06
	1	1200	-5.14	-.04	2.19	.10	-.07	-.07
1104	1	1200	-4.81	-.03	2.85	.10	-.07	-.08
		.50	-4.84	-.03	3.07	.46	-.07	-.08
	1	1100	-4.87	-.03	3.31	.84	-.07	-.09
1105	2	1601	.04	.01	-.68	.18	.09	.00
		.50	-.10	.01	-.61	-.03	.07	.03
	2	1501	-.29	.01	-.52	-.21	.03	.04
1106	2	1501	-.41	.00	-.44	-.21	.03	.05
		.50	-.54	.00	-.33	-.29	.00	.05
	2	1401	-.71	.00	-.20	-.35	-.03	.05
1107	2	1401	-.73	-.01	-.07	-.35	-.03	.05
		.50	-.90	-.01	.12	-.34	-.07	.04
	2	1301	-1.09	-.01	.33	-.30	-.12	.02
1108	2	1301	-1.01	-.01	.52	-.30	-.12	.01
		.50	-1.18	-.01	.80	-.16	-.17	-.02
	2	1201	-1.37	-.01	1.11	.04	-.23	-.06
1109	2	1201	-1.22	-.01	1.28	.04	-.23	-.06
		.50	-1.31	-.01	1.50	.21	-.27	-.09
	2	1101	-1.41	-.01	1.73	.40	-.31	-.13
1110	2	1602	-1.39	.01	-1.29	.42	.08	-.01
		.50	-1.49	.01	-1.17	.02	.07	.01
	2	1502	-1.61	.01	-1.01	-.33	.05	.03
1111	2	1502	-1.81	.00	-.60	-.33	.04	.03
		.50	-1.88	.00	-.45	-.44	.03	.04
	2	1402	-1.96	.00	-.26	-.52	.00	.04
1112	2	1402	-1.98	-.01	.09	-.52	.00	.04
		.50	-2.04	-.01	.32	-.48	-.02	.04
	2	1302	-2.11	-.01	.60	-.38	-.05	.03
1113	2	1302	-1.97	-.01	.96	-.38	-.05	.03

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	-2.00	-.01	1.28	-.15	-.09	.01
	2	1202	-2.01	-.01	1.64	.16	-.13	-.01
1114	2	1202	-1.78	-.01	1.89	.16	-.13	-.01
		.50	-1.77	-.01	2.11	.40	-.15	-.03
	2	1102	-1.75	-.01	2.36	.67	-.18	-.05
1115	2	1603	-1.79	.00	-1.43	.47	.00	.00
		.50	-1.88	.00	-1.31	.03	.00	.00
	2	1503	-2.00	.00	-1.14	-.37	.00	.00
1116	2	1503	-2.22	.00	-.64	-.37	.00	.00
		.50	-2.28	.00	-.48	-.49	.00	.00
	2	1403	-2.37	.00	-.29	-.57	.00	.00
1117	2	1403	-2.38	.00	.12	-.57	.00	.00
		.50	-2.44	.00	.37	-.52	.00	.00
	2	1303	-2.50	.00	.64	-.41	.00	.00
1118	2	1303	-2.35	.00	1.07	-.41	.00	.00
		.50	-2.36	.00	1.39	-.15	.00	.00
	2	1203	-2.38	.00	1.75	.18	.00	.00
1119	2	1203	-2.13	.00	2.05	.18	.00	.00
		.50	-2.11	.00	2.27	.44	.00	.00
	2	1103	-2.09	.00	2.52	.73	.00	.00
1120	2	1604	-1.46	-.01	-1.31	.43	-.08	.01
		.50	-1.55	-.01	-1.20	.02	-.06	-.01
	2	1504	-1.68	-.01	-1.04	-.34	-.04	-.03
1121	2	1504	-1.88	.00	-.61	-.34	-.04	-.03
		.50	-1.95	.00	-.45	-.45	-.02	-.04
	2	1404	-2.04	.00	-.26	-.53	.00	-.04
1122	2	1404	-2.05	.01	.09	-.53	.00	-.04
		.50	-2.11	.01	.33	-.48	.03	-.04
	2	1304	-2.18	.01	.60	-.39	.05	-.03
1123	2	1304	-2.04	.01	.98	-.39	.05	-.03
		.50	-2.07	.01	1.30	-.15	.09	-.01
	2	1204	-2.10	.01	1.65	.16	.12	.01
1124	2	1204	-1.86	.01	1.91	.16	.12	.01
		.50	-1.85	.01	2.14	.41	.15	.03
	2	1104	-1.83	.01	2.39	.68	.18	.05
1125	2	1605	-.07	-.01	-.71	.20	-.09	-.01

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	-.21	-.01	-.65	-.02	-.06	-.03
	2	1505	-.40	-.01	-.56	-.22	-.03	-.05
1126	2	1505	-.52	.00	-.45	-.22	-.03	-.05
		.50	-.65	.00	-.34	-.30	.00	-.05
	2	1405	-.82	.00	-.21	-.36	.03	-.05
1127	2	1405	-.84	.01	-.06	-.36	.03	-.05
		.50	-1.01	.01	.13	-.35	.07	-.04
	2	1305	-1.20	.01	.34	-.30	.12	-.02
1128	2	1305	-1.12	.02	.55	-.30	.12	-.01
		.50	-1.29	.02	.83	-.16	.17	.02
	2	1205	-1.48	.02	1.14	.05	.23	.06
1129	2	1205	-1.32	.01	1.33	.05	.24	.06
		.50	-1.41	.01	1.54	.22	.28	.09
	2	1105	-1.52	.01	1.77	.42	.32	.13
1130	1	1606	-4.07	.04	-2.30	.92	.07	-.08
		.50	-4.18	.04	-2.20	.20	.07	-.06
	1	1506	-4.33	.04	-2.07	-.49	.07	-.04
1131	1	1506	-4.69	.05	-.99	-.49	.07	-.03
		.50	-4.79	.05	-.85	-.69	.07	-.01
	1	1406	-4.91	.05	-.68	-.85	.07	.00
1132	1	1406	-4.95	.04	.18	-.85	.07	.01
		.50	-5.06	.04	.40	-.79	.07	.02
	1	1306	-5.17	.04	.65	-.68	.07	.04
1133	1	1306	-4.98	.04	1.55	-.68	.07	.04
		.50	-5.06	.04	1.85	-.32	.07	.06
	1	1206	-5.15	.04	2.19	.10	.07	.07
1134	1	1206	-4.82	.03	2.85	.10	.07	.08
		.50	-4.85	.03	3.07	.46	.07	.09
	1	1106	-4.88	.03	3.31	.85	.07	.10
1150	3	1100	.99	-.03	-.11	-.11	.27	-.10
		.50	.99	-.03	-.10	-.16	.27	.05
	3	1101	.99	-.03	-.09	-.22	.27	.20
1151	3	1101	2.07	.01	.08	-.28	-.12	.08
		.50	2.07	.01	.09	-.24	-.12	.02
	3	1102	2.07	.01	.10	-.18	-.12	-.05
1152	3	1102	1.86	.01	-.02	-.22	.09	-.08

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	1.86	.01	-.01	-.23	.09	-.04
	3	1103	1.86	.01	.00	-.23	.09	.01
1153	3	1103	1.93	-.01	.00	-.23	-.09	.01
		.50	1.93	-.01	.01	-.23	-.09	-.04
	3	1104	1.93	-.01	.02	-.22	-.09	-.09
1154	3	1104	2.23	-.01	-.10	-.19	.11	-.05
		.50	2.23	-.01	-.08	-.24	.11	.01
	3	1105	2.23	-.01	-.07	-.28	.11	.08
1155	3	1105	1.08	.03	.08	-.22	-.27	.20
		.50	1.08	.03	.10	-.17	-.27	.05
	3	1106	1.08	.03	.11	-.11	-.27	-.11
1160	1	1010	-2.59	.01	-.46	.02	-.04	.00
		.50	-2.59	.01	-.46	-.38	-.04	-.04
	1	1100	-2.59	.01	-.46	-.78	-.04	-.08
1161	2	1011	-3.24	-.01	-.90	.24	-.14	.04
		.50	-3.24	-.01	-.27	-.27	-.14	-.09
	2	1101	-3.24	-.01	.35	-.24	-.14	-.21
1162	2	1012	-2.24	-.01	-.19	.08	.12	-.01
		.50	-2.24	-.01	-.19	-.09	-.28	-.09
	2	1102	-2.24	-.01	-.19	-.26	-.69	-.51
1163	2	1013	-1.80	.00	.00	.00	.04	.04
		.50	-1.80	.00	.00	.00	-.37	-.10
	2	1103	-1.80	.00	.00	.00	-.77	-.60
1164	2	1014	-2.33	.01	.20	-.08	.12	-.01
		.50	-2.33	.01	.20	.09	-.29	-.09
	2	1104	-2.33	.01	.20	.26	-.69	-.51
1165	2	1015	-3.47	.01	.90	-.24	-.15	.04
		.50	-3.47	.01	.28	.28	-.15	-.09
	2	1105	-3.46	.01	-.35	.25	-.15	-.22
1166	1	1016	-2.46	-.01	.46	-.02	-.05	.00
		.50	-2.46	-.01	.46	.38	-.05	-.04
	1	1106	-2.46	-.01	.46	.79	-.05	-.08
1170	4	1010	.00	.02	.09	.01	-.01	.01
		.50	.00	.02	.30	.12	-.01	.00
	4	1011	.00	.02	.51	.34	-.01	.00
1171	4	1011	.00	.04	-.55	.45	.01	-.01

SCHNITTGRÖSSEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

N=Normalkraft T=Torsionsmoment Q=Querkraft M=Biegemoment

Stab Nr.	Q Nr.	Knoten Nr.	N (kN)	T (kNm)	Q II (kN)	M I (kNm)	Q I (kN)	M II (kNm)
		.50	.00	.04	-.35	.20	.01	.00
	4	1012	.00	.04	-.14	.06	.01	.01
1172	4	1012	.00	.01	-.23	.15	.01	.00
		.50	.00	.01	-.03	.08	.01	.00
	4	1013	.00	.01	.18	.12	.01	.00
1173	4	1013	.00	-.01	-.18	.12	-.01	.00
		.50	.00	-.01	.03	.08	-.01	.00
	4	1014	.00	-.01	.24	.15	-.01	.00
1174	4	1014	.00	-.04	.15	.06	-.01	.01
		.50	.00	-.04	.35	.20	-.01	.00
	4	1015	.00	-.04	.56	.46	-.01	-.01
1175	4	1015	.00	-.02	-.52	.35	.01	.00
		.50	.00	-.02	-.31	.12	.01	.00
	4	1016	.00	-.02	-.10	.00	.01	.01
2000	8	1100	4.20	.00	.00	.00	.00	.00

Spalte N mit #: Fachwerkstäbe mit N < 0.90 * NKi !!!

Ingenieurbüro Spreng
Dipl.Ing. Egbert Spreng
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74081 Heilbronn
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SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
1	600	19.2	-20.2	2.0	20.3	5	1 6 7 6	0.13
0.500		18.5	-19.5	2.0	19.6	5	1 6 7 6	0.12
1	601	20.2	-21.2	2.0	21.2	5	3 4 7 4	0.13*
2	601	20.7	-21.9	1.8	21.9	5	1 6 7 6	0.14
0.500		26.4	-27.6	1.8	27.6	5	3 4 7 4	0.17
2	602	32.7	-33.8	1.8	33.8	5	3 4 7 4	0.21*
3	602	39.3	-40.5	0.6	40.5	5	1 6 7 6	0.25
0.500		34.9	-36.1	0.6	36.1	5	3 4 7 4	0.22
3	603	46.2	-47.4	0.6	47.4	5	3 4 7 4	0.29*
4	603	35.8	-36.9	1.0	36.9	5	1 6 7 6	0.23
0.500		38.5	-39.6	0.9	39.6	5	1 6 7 6	0.25
4	604	41.2	-42.4	0.9	42.4	5	1 6 7 6	0.26*

SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
5	604	41.5	-43.6	2.0	43.6	5	3 4 7 4	0.27*
0.500		39.4	-41.5	2.0	41.5	5	3 4 7 4	0.26
5	605	37.4	-39.4	2.0	39.4	5	3 4 7 4	0.24
6	605	43.9	-45.2	2.0	45.2	5	1 6 7 6	0.28*
0.500		19.8	-21.1	2.0	21.2	5	1 6 7 6	0.13
6	606	34.5	-35.8	1.9	35.8	5	3 4 7 4	0.22
7	606	23.1	-24.3	0.5	24.3	5	1 6 9 6	0.15*
0.500		16.3	-17.5	0.5	17.5	5	1 6 9 6	0.11
7	607	14.3	-15.6	0.5	15.6	5	3 4 9 4	0.10
8	607	14.1	-15.3	1.2	15.3	5	3 4 7 4	0.10*
0.500		8.1	-9.4	1.2	9.4	5	3 4 7 4	0.06
8	608	4.2	-5.4	1.2	5.4	5	1 6 7 6	0.03
9	608	3.2	-4.4	0.6	4.4	5	3 4 7 4	0.03*
0.500		1.1	-2.3	0.6	2.3	5	1 6 7 6	0.01
9	609	0.3	-1.5	0.6	1.5	5	4 3 7 3	0.01
10	609	0.4	-1.6	0.5	1.6	5	6 1 7 1	0.01
0.500		0.7	-1.9	0.5	1.9	5	3 4 7 4	0.01
10	610	2.8	-4.0	0.5	4.0	5	1 6 7 6	0.02*
11	610	3.2	-4.4	1.2	4.4	5	3 4 7 4	0.03
0.500		7.2	-8.4	1.2	8.4	5	1 6 7 6	0.05
11	611	12.5	-13.7	1.2	13.7	5	1 6 7 6	0.08*
12	611	12.2	-13.4	0.7	13.4	5	1 6 7 6	0.08
0.500		15.0	-16.2	0.7	16.2	5	3 4 7 4	0.10
12	600	19.6	-20.8	0.7	20.8	5	3 4 7 4	0.13*
20	701	92.4	-91.2	5.9	92.4	6	1 9 5 1	0.57*
0.500		85.5	-84.2	5.9	85.5	6	1 9 5 1	0.53
20	700	78.5	-77.3	5.9	78.5	6	1 9 5 1	0.49
21	700	0.0	0.0	0.0	0.0	6	8 0 0 8	0.00
0.500		0.0	0.0	0.0	0.0	6	0 0 0 0	0.00
21	702	0.0	0.0	0.0	0.0	6	0 0 0 0	0.00
30	600	31.5	-26.6	4.7	31.6	5	4 3 7 4	0.20
0.500		6.6	-1.7	4.7	8.6	5	1 6 7 7	0.05
30	700	39.4	-34.4	4.7	39.4	5	3 4 7 3	0.24*
31	601	29.5	-32.7	1.0	32.7	5	1 6 7 6	0.20

SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
	0.500	32.9	-36.1	1.0	36.1	5	3 4 7 4	0.22
31	700	36.5	-39.6	1.0	39.6	5	3 4 7 4	0.25*
32	602	46.4	-53.5	0.5	53.5	5	1 6 7 6	0.33
	0.500	44.8	-51.9	0.5	51.9	5	3 4 7 4	0.32
32	700	48.6	-55.7	0.5	55.7	5	3 4 7 4	0.35*
33	603	49.0	-56.1	0.6	56.1	5	1 6 7 6	0.35
	0.500	48.7	-55.7	0.6	55.7	5	1 6 7 6	0.35
33	700	56.8	-63.8	0.6	63.8	5	3 4 7 4	0.40*
34	604	45.4	-51.6	1.0	51.6	5	3 4 7 4	0.32
	0.500	45.9	-52.1	1.1	52.1	5	3 4 7 4	0.32
34	700	50.9	-57.1	1.1	57.1	5	1 6 7 6	0.35*
35	605	52.6	-57.2	1.2	57.2	5	1 6 7 6	0.36*
	0.500	37.5	-42.1	1.2	42.2	5	1 6 7 6	0.26
35	700	38.4	-43.0	1.2	43.0	5	3 4 7 4	0.27
36	606	31.9	-26.9	4.7	32.0	5	4 3 7 4	0.20
	0.500	8.9	-3.9	4.7	9.0	5	1 6 7 1	0.06
36	700	42.2	-37.2	4.7	42.3	5	3 4 7 3	0.26*
37	607	7.1	-6.4	1.1	7.1	5	6 1 7 6	0.04*
	0.500	2.3	-1.5	1.2	2.4	5	6 1 7 6	0.01
37	700	6.1	-5.3	1.2	6.1	5	3 4 7 3	0.04
38	608	3.3	-2.7	0.7	3.3	5	4 3 7 4	0.02
	0.500	6.8	-6.2	0.7	6.8	5	6 1 7 6	0.04
38	700	12.4	-11.8	0.7	12.4	5	6 1 7 6	0.08*
39	609	1.4	-0.7	1.1	2.1	5	1 6 7 7	0.01
	0.500	8.2	-7.6	1.0	8.2	5	6 1 7 6	0.05
39	700	17.0	-16.4	1.0	17.0	5	6 1 7 6	0.11*
40	610	2.8	-2.2	0.8	2.9	5	4 3 7 4	0.02
	0.500	7.2	-6.6	0.8	7.2	5	6 1 7 6	0.04
40	700	13.3	-12.7	0.8	13.3	5	6 1 7 6	0.08*
41	611	6.8	-6.3	1.0	6.9	5	4 3 7 4	0.04*
	0.500	2.9	-2.3	1.0	2.9	5	6 1 7 6	0.02
41	700	4.2	-3.6	1.0	4.2	5	3 4 7 3	0.03
100	600	28.6	-23.1	0.7	28.6	1	6 1 3 6	0.18*
	0.500	27.9	-22.9	0.6	27.9	1	4 3 1 4	0.17

SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
100	500	26.3	-22.0	1.1	26.3	1	4 3 1 4	0.16
101	500	26.3	-22.0	1.6	26.4	1	4 3 3 4	0.16
0.500		32.8	-29.0	1.0	32.9	1	4 3 3 4	0.20
101	400	35.5	-32.3	0.4	35.5	1	4 3 1 4	0.22*
102	400	35.4	-32.2	1.8	35.5	1	4 3 3 4	0.22
0.500		38.9	-36.2	1.0	38.9	1	4 3 1 4	0.24*
102	300	36.0	-33.9	2.2	36.1	1	4 3 1 4	0.22
103	300	35.7	-33.5	2.4	35.8	1	4 3 1 4	0.22*
0.500		28.7	-27.2	3.9	29.4	1	4 3 1 4	0.18
103	200	12.3	-11.4	5.7	15.4	1	4 3 1 4	0.10
104	200	12.0	-10.7	6.3	15.8	1	4 3 1 4	0.10
0.500		28.0	-27.1	7.8	31.1	1	1 6 1 1	0.19
104	100	53.1	-52.6	9.5	55.6	1	1 6 1 1	0.35*
105	605	110.6	-113.0	9.0	114.1	2	3 4 3 4	0.71*
0.500		12.9	-15.7	8.0	21.0	2	3 4 3 4	0.13
105	505	65.7	-69.0	6.7	70.0	2	4 3 3 3	0.43
106	505	65.8	-69.8	4.8	70.3	2	4 3 3 3	0.44
0.500		92.1	-96.3	3.7	96.5	2	4 3 3 3	0.60
106	405	108.7	-113.2	2.4	113.2	2	4 3 1 3	0.70*
107	405	108.9	-113.5	0.5	113.5	2	4 3 3 3	0.70*
0.500		104.5	-109.2	1.7	109.2	2	4 3 3 3	0.68
107	305	86.2	-91.0	3.6	91.2	2	4 3 3 3	0.57
108	305	86.4	-90.8	4.7	91.2	2	4 3 3 3	0.57*
0.500		43.3	-47.7	6.8	48.5	2	6 1 3 1	0.30
108	205	16.0	-20.4	9.3	26.0	2	3 4 3 4	0.16
109	205	16.4	-19.9	10.6	27.0	2	3 4 3 4	0.17
0.500		79.2	-82.5	12.5	85.3	2	3 4 3 4	0.53
109	105	153.3	-156.3	14.6	158.3	2	3 4 3 4	0.98*
110	601	81.4	-82.8	6.7	83.6	2	1 6 1 6	0.52*
0.500		7.9	-9.7	6.0	13.8	2	3 4 1 4	0.09
110	501	57.2	-59.8	5.1	60.4	2	6 1 1 1	0.38
111	501	57.8	-60.8	3.4	61.1	2	6 1 1 1	0.38
0.500		80.5	-84.0	2.6	84.1	2	6 1 1 1	0.52
111	401	96.3	-100.2	1.6	100.2	2	6 1 3 1	0.62*

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SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
112	401	94.9	-98.9	1.7	99.0	2	6 1 3 1	0.61*
0.500		90.0	-94.5	2.5	94.6	2	6 1 1 1	0.59
112	301	75.9	-80.9	4.1	81.1	2	4 3 1 3	0.50
113	301	75.5	-80.1	4.6	80.4	2	4 3 1 3	0.50*
0.500		42.8	-47.8	6.4	48.7	2	4 3 1 3	0.30
113	201	15.2	-20.7	8.5	25.4	2	1 6 1 6	0.16
114	201	15.4	-20.0	10.6	27.1	2	1 6 1 6	0.17
0.500		73.3	-78.2	12.7	81.3	2	1 6 1 6	0.50
114	101	145.0	-150.5	15.7	153.0	2	1 6 1 6	0.95*
115	602	121.2	-126.6	9.1	127.5	2	1 6 1 6	0.79*
0.500		17.2	-23.1	8.5	27.2	2	3 4 1 4	0.17
115	502	72.5	-79.1	7.7	80.2	2	6 1 1 1	0.50
116	502	72.6	-80.0	4.9	80.5	2	6 1 1 1	0.50
0.500		99.9	-107.7	4.1	107.9	2	6 1 1 1	0.67
116	402	120.2	-128.5	3.3	128.6	2	6 1 3 1	0.80*
117	402	120.4	-128.8	1.1	128.8	2	6 1 1 1	0.80*
0.500		114.1	-123.0	2.4	123.0	2	6 1 1 1	0.76
117	302	96.9	-106.4	3.8	106.6	2	6 1 1 1	0.66
118	302	97.4	-106.4	6.3	107.0	2	6 1 1 1	0.66*
0.500		50.6	-60.0	8.1	61.3	2	4 3 1 3	0.38
118	202	8.2	-18.1	10.1	25.2	2	1 6 1 6	0.16
119	202	8.4	-17.2	12.8	28.0	2	1 6 1 6	0.17
0.500		78.7	-87.7	14.4	91.2	2	1 6 1 6	0.57
119	102	158.9	-168.2	16.2	170.5	2	1 6 1 6	1.06*
120	603	125.0	-130.7	8.0	131.5	2	3 4 3 4	0.82*
0.500		18.4	-24.6	7.5	27.8	2	3 4 3 4	0.17
120	503	73.5	-80.5	6.8	81.3	2	6 1 3 1	0.50
121	503	73.2	-81.0	4.0	81.2	2	6 1 3 1	0.50
0.500		100.6	-108.9	3.3	109.0	2	6 1 3 1	0.68
121	403	121.6	-130.3	2.4	130.4	2	6 1 3 1	0.81*
122	403	121.5	-130.4	0.2	130.4	2	6 1 1 1	0.81*
0.500		116.2	-125.5	1.4	125.5	2	4 3 1 3	0.78
122	303	100.7	-110.6	2.8	110.7	2	4 3 1 3	0.69
123	303	100.9	-110.3	5.4	110.7	2	4 3 1 3	0.69*

SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
	0.500	52.2	-62.0	7.1	63.2	2	4 3 1 3	0.39
123	203	2.7	-13.1	9.0	20.3	2	1 6 1 6	0.13
124	203	3.1	-12.4	11.4	23.4	2	1 6 1 6	0.15
	0.500	72.2	-81.6	13.0	84.7	2	1 6 1 6	0.53
124	103	150.6	-160.4	14.7	162.4	2	1 6 1 6	1.01*
125	604	120.8	-125.5	11.9	127.2	2	1 6 1 6	0.79*
	0.500	17.0	-22.2	11.2	27.4	2	3 4 1 4	0.17
125	504	80.0	-86.0	10.1	87.7	2	6 1 1 1	0.54
126	504	80.7	-87.4	6.0	88.1	2	6 1 1 1	0.55
	0.500	109.5	-116.7	5.1	117.0	2	6 1 1 1	0.73
126	404	130.0	-137.8	4.0	137.9	2	6 1 3 1	0.86*
127	404	130.3	-138.2	0.1	138.2	2	6 1 1 1	0.86*
	0.500	124.1	-132.5	1.7	132.5	2	6 1 1 1	0.82
127	304	105.1	-114.1	3.5	114.2	2	6 1 1 1	0.71
128	304	105.1	-113.7	6.8	114.3	2	6 1 1 1	0.71*
	0.500	51.7	-60.8	9.0	62.8	2	6 1 1 1	0.39
128	204	9.8	-19.5	11.4	27.8	2	1 6 1 6	0.17
129	204	10.5	-19.1	13.0	29.5	2	1 6 1 6	0.18
	0.500	86.7	-95.6	15.0	99.1	2	1 6 1 6	0.62
129	104	174.7	-183.9	17.2	186.3	2	1 6 1 6	1.16*
130	606	25.9	-20.6	1.8	26.1	1	6 1 1 6	0.16
	0.500	30.1	-25.4	1.4	30.2	1	6 1 1 6	0.19*
130	506	29.7	-25.6	1.8	29.8	1	6 1 3 6	0.19
131	506	30.0	-26.0	1.9	30.2	1	6 1 1 6	0.19
	0.500	36.7	-33.1	1.3	36.8	1	6 1 1 6	0.23
131	406	39.5	-36.5	0.6	39.6	1	6 1 3 6	0.25*
132	406	39.5	-36.5	1.5	39.6	1	6 1 1 6	0.25
	0.500	42.7	-40.3	0.6	42.7	1	6 1 3 6	0.27*
132	306	39.5	-37.7	1.8	39.6	1	6 1 3 6	0.25
133	306	39.3	-37.4	2.2	39.4	1	6 1 3 6	0.24*
	0.500	31.6	-30.3	3.8	32.2	1	6 1 3 6	0.20
133	206	14.5	-13.8	5.5	17.1	1	6 1 3 6	0.11
134	206	14.2	-13.1	6.3	17.6	1	6 1 3 6	0.11
	0.500	27.6	-27.0	7.8	30.8	1	3 4 3 3	0.19

SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
134	106	53.1	-52.8	9.5	55.6	1	3 4 3 3	0.35*
150	100	31.0	-25.7	6.6	32.4	3	4 3 1 4	0.20
0.500		32.4	-27.0	6.5	34.3	3	6 1 1 6	0.21
150	101	59.3	-54.0	6.4	60.3	3	6 1 1 6	0.37*
151	101	50.4	-38.6	3.6	50.8	3	6 1 1 6	0.32
0.500		56.5	-44.6	3.5	56.8	3	6 1 1 6	0.35
151	102	61.2	-49.3	3.4	61.4	3	6 1 1 6	0.38*
152	102	38.9	-26.0	1.2	38.9	3	6 1 3 6	0.24
0.500		48.0	-35.2	1.2	48.1	3	6 1 3 6	0.30
152	103	55.8	-42.9	1.1	55.8	3	6 1 3 6	0.35*
153	103	56.5	-43.7	1.8	56.6	3	4 3 3 4	0.35*
0.500		50.3	-37.4	1.9	50.3	3	6 1 3 6	0.31
153	104	43.6	-30.7	1.9	43.7	3	6 1 3 6	0.27
154	104	66.3	-56.6	2.8	66.5	3	4 3 1 4	0.41*
0.500		51.1	-41.3	2.8	51.3	3	6 1 3 6	0.32
154	105	64.7	-55.0	2.9	64.9	3	6 1 3 6	0.40
155	105	73.8	-69.8	7.5	74.9	3	6 1 1 6	0.47*
0.500		37.6	-33.6	7.6	39.9	3	6 1 1 6	0.25
155	106	28.9	-24.9	7.7	30.8	3	4 3 1 4	0.19
160	100	57.9	-54.0	5.6	58.6	1	4 3 1 4	0.36
0.500		73.7	-69.8	3.9	74.1	1	4 3 3 4	0.46*
160	10	9.9	-5.9	7.7	16.5	1	1 6 3 3	0.10
161	101	96.1	-107.7	4.6	107.8	1	4 3 1 3	0.67*
0.500		75.5	-87.1	4.2	87.4	1	4 3 3 3	0.54
161	11	28.8	-40.4	8.0	42.8	1	3 4 3 4	0.27
162	102	129.7	-139.4	1.7	139.5	1	4 3 3 3	0.87*
0.500		70.3	-80.0	3.2	80.2	1	4 3 3 3	0.50
162	12	22.0	-31.7	4.7	32.7	1	3 4 3 4	0.20
163	103	92.6	-101.3	0.7	101.3	1	1 6 1 6	0.63*
0.500		51.8	-60.4	2.2	60.5	1	1 6 1 6	0.38
163	13	23.1	-31.7	3.7	32.3	1	6 1 1 1	0.20
164	104	127.7	-137.7	2.4	137.7	1	1 6 1 6	0.86*
0.500		69.2	-79.2	3.8	79.5	1	1 6 1 6	0.49
164	14	21.9	-31.9	5.3	33.1	1	6 1 1 1	0.21

SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
165	105	99.8	-108.9	4.0	109.0	1	1 6 3 6	0.68*
	0.500	78.8	-88.0	3.6	88.2	1	1 6 1 6	0.55
165	15	28.3	-37.5	7.4	39.6	1	6 1 1 1	0.25
166	106	55.8	-54.2	6.0	56.6	1	1 6 3 1	0.35
	0.500	73.0	-71.4	4.3	73.4	1	1 6 1 1	0.46*
166	16	11.2	-9.6	8.1	17.6	1	4 3 1 4	0.11
170	10	4.1	-4.1	5.7	10.1	4	3 4 1 3	0.06
	0.500	13.3	-13.3	7.0	17.5	4	3 4 1 3	0.11
170	11	38.1	-38.1	8.2	40.7	4	1 6 1 1	0.25*
171	11	44.8	-44.8	3.2	45.1	4	3 4 3 3	0.28*
	0.500	29.0	-29.0	2.0	29.2	4	3 4 3 3	0.18
171	12	26.2	-26.2	1.4	26.3	4	1 6 1 1	0.16
172	12	22.6	-22.6	1.3	22.7	4	3 4 3 3	0.14
	0.500	20.2	-20.2	0.9	20.2	4	1 6 1 1	0.13
172	13	30.6	-30.6	2.1	30.8	4	1 6 1 1	0.19*
173	13	30.5	-30.5	2.1	30.7	4	1 6 1 1	0.19*
	0.500	20.2	-20.2	0.8	20.2	4	3 4 1 3	0.13
173	14	22.8	-22.8	1.3	22.9	4	3 4 3 3	0.14
174	14	26.8	-26.8	1.3	26.9	4	1 6 1 1	0.17
	0.500	29.0	-29.0	1.7	29.1	4	1 6 3 1	0.18
174	15	43.8	-43.8	3.0	44.1	4	1 6 3 1	0.27*
175	15	36.6	-36.6	8.0	39.1	4	1 6 1 1	0.24*
	0.500	13.6	-13.6	6.7	17.5	4	3 4 1 3	0.11
175	16	5.7	-5.7	5.5	10.5	4	3 4 1 3	0.07
1001	1600	46.9	-51.1	3.5	51.1	5	3 4 7 4	0.32*
	0.500	31.4	-35.5	3.5	35.6	5	3 4 7 4	0.22
1001	1601	46.8	-51.0	3.5	51.0	5	1 6 7 6	0.32
1002	1601	31.9	-35.8	0.8	35.8	5	1 6 7 6	0.22
	0.500	33.8	-37.7	0.8	37.7	5	3 4 7 4	0.23
1002	1602	37.1	-41.0	0.8	41.0	5	3 4 7 4	0.25*
1003	1602	36.5	-40.0	0.3	40.0	5	1 6 7 6	0.25*
	0.500	32.4	-35.9	0.2	35.9	5	1 6 7 6	0.22
1003	1603	34.2	-37.7	0.2	37.8	5	3 4 7 4	0.23
1004	1603	31.5	-35.0	0.5	35.1	5	3 4 7 4	0.22*

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SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
	0.500	30.5	-34.0	0.5	34.0	5	1 6 7 6	0.21
1004	1604	30.1	-33.7	0.4	33.7	5	1 6 7 6	0.21
1005	1604	30.5	-34.4	1.2	34.4	5	3 4 7 4	0.21*
	0.500	28.5	-32.4	1.2	32.4	5	3 4 7 4	0.20
1005	1605	26.5	-30.4	1.2	30.4	5	3 4 7 4	0.19
1006	1605	42.5	-46.6	3.4	46.7	5	1 6 7 6	0.29*
	0.500	24.0	-28.2	3.4	28.3	5	3 4 7 4	0.18
1006	1606	42.1	-46.3	3.4	46.4	5	3 4 7 4	0.29
1007	1606	25.1	-28.8	4.1	28.9	5	1 6 7 6	0.18*
	0.500	15.5	-19.1	4.1	19.4	5	1 6 7 6	0.12
1007	1607	20.9	-24.5	4.1	24.8	5	3 4 7 4	0.15
1008	1607	17.2	-20.8	0.5	20.8	5	3 4 7 4	0.13*
	0.500	14.0	-17.6	0.5	17.6	5	3 4 7 4	0.11
1008	1608	12.3	-15.9	0.5	15.9	5	1 6 7 6	0.10
1009	1608	12.9	-16.5	0.4	16.5	5	1 6 7 6	0.10*
	0.500	10.9	-14.5	0.4	14.5	5	1 6 7 6	0.09
1009	1609	9.6	-13.2	0.4	13.2	5	3 4 7 4	0.08
1010	1609	10.7	-14.3	0.4	14.3	5	1 6 7 6	0.09
	0.500	11.8	-15.4	0.4	15.4	5	3 4 7 4	0.10
1010	1610	15.6	-19.3	0.4	19.3	5	3 4 7 4	0.12*
1011	1610	17.6	-21.6	1.9	21.8	5	3 4 7 4	0.14
	0.500	15.7	-19.8	1.9	19.9	5	1 6 7 6	0.12
1011	1600	22.5	-26.6	1.9	26.7	5	1 6 7 6	0.17*
1020	1701	0.0	0.0	0.0	0.0	6	0 0 0 0	0.00
	0.500	0.0	0.0	0.0	0.0	6	0 0 0 0	0.00
1020	1700	0.0	0.0	0.0	0.0	6	3 0 0 3	0.00
1021	1700	49.4	-50.7	5.9	50.7	6	9 1 5 1	0.32
	0.500	56.4	-57.7	5.9	57.7	6	9 1 5 1	0.36
1021	1702	63.3	-64.6	5.9	64.6	6	9 1 5 1	0.40*
1030	1600	105.8	-120.0	6.4	120.0	5	3 4 7 4	0.75*
	0.500	46.9	-61.1	6.4	61.1	5	3 4 7 4	0.38
1030	1700	7.3	-21.5	6.4	21.5	5	1 6 7 6	0.13
1031	1601	6.6	-6.9	2.8	6.9	5	3 4 7 4	0.04
	0.500	24.8	-25.0	2.8	25.0	5	1 6 7 6	0.16

SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
1031	1700	47.7	-47.9	2.8	47.9	5	1 6 7 6	0.30*
1032	1602	29.9	-35.6	0.2	35.6	5	1 6 7 6	0.22*
	0.500	29.1	-34.7	0.2	34.7	5	1 6 7 6	0.22
1032	1700	28.3	-33.9	0.2	33.9	5	1 6 7 6	0.21
1033	1603	37.2	-44.3	0.9	44.3	5	3 4 7 4	0.28*
	0.500	30.5	-37.6	0.9	37.6	5	1 6 7 6	0.23
1033	1700	25.9	-33.0	0.9	33.0	5	1 6 7 6	0.21
1034	1604	34.8	-40.7	0.4	40.7	5	3 4 7 4	0.25*
	0.500	30.0	-35.9	0.4	35.9	5	1 6 7 6	0.22
1034	1700	30.4	-36.3	0.4	36.3	5	1 6 7 6	0.23
1035	1605	10.1	-10.7	2.1	10.7	5	1 6 9 6	0.07
	0.500	26.7	-27.3	2.2	27.3	5	1 6 9 6	0.17
1035	1700	43.3	-43.9	2.2	43.9	5	1 6 9 6	0.27*
1036	1606	110.7	-126.2	8.0	126.2	5	1 6 7 6	0.78*
	0.500	45.5	-61.1	8.0	61.1	5	1 6 7 6	0.38
1036	1700	4.0	-19.6	8.0	19.6	5	6 1 7 1	0.12
1037	1607	12.6	-10.4	2.5	12.6	5	6 1 7 6	0.08
	0.500	6.7	-4.6	2.5	6.8	5	1 6 7 1	0.04
1037	1700	24.0	-21.8	2.5	24.0	5	1 6 7 1	0.15*
1038	1608	8.5	-6.6	0.5	8.5	5	6 1 7 6	0.05
	0.500	8.2	-6.4	0.5	8.2	5	4 3 7 4	0.05
1038	1700	9.1	-7.3	0.5	9.1	5	4 3 7 4	0.06*
1039	1609	8.3	-6.5	0.6	8.3	5	6 1 7 6	0.05
	0.500	11.9	-10.1	0.6	11.9	5	4 3 7 4	0.07
1039	1700	18.8	-17.0	0.6	18.8	5	4 3 7 4	0.12*
1040	1610	13.3	-10.2	1.0	13.3	5	4 3 7 4	0.08*
	0.500	9.8	-6.7	1.0	9.8	5	4 3 7 4	0.06
1040	1700	6.2	-3.1	1.0	6.2	5	4 3 7 4	0.04
1041	1611	0.0	0.0	0.0	0.0	5	0 0 0 0	0.00
	0.500	0.0	0.0	0.0	0.0	5	3 4 7 4	0.00
1041	1700	0.1	-0.1	0.0	0.1	5	3 4 7 4	0.00*
1100	1600	157.0	-169.9	17.9	172.7	1	1 6 1 6	1.07*
	0.500	35.0	-48.3	17.3	56.9	1	1 6 1 6	0.35
1100	1500	80.1	-93.9	16.5	97.8	1	4 3 1 3	0.61

SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
1101	1500	77.6	-92.6	11.0	94.3	1	4 3 1 3	0.59
	0.500	106.3	-121.6	10.2	122.6	1	4 3 1 3	0.76
1101	1400	130.8	-146.4	9.2	147.3	1	6 1 1 1	0.91*
1102	1400	132.1	-147.9	6.1	148.2	1	6 1 3 1	0.92*
	0.500	124.8	-141.0	7.4	141.4	1	6 1 3 1	0.88
1102	1300	109.5	-126.0	8.9	126.7	1	6 1 3 1	0.79
1103	1300	111.1	-127.0	13.3	128.9	1	6 1 3 1	0.80*
	0.500	55.7	-71.8	15.1	76.0	1	6 1 3 1	0.47
1103	1200	21.7	-38.1	17.1	48.2	1	3 4 3 4	0.30
1104	1200	23.0	-38.4	19.9	51.5	1	3 4 3 4	0.32
	0.500	82.5	-98.0	21.2	104.6	1	3 4 3 4	0.65
1104	1100	146.6	-162.2	22.6	166.8	1	3 4 3 4	1.04*
1105	1601	42.1	-42.0	5.2	42.7	2	1 6 3 1	0.27
	0.500	11.8	-12.2	4.7	14.7	2	4 3 3 3	0.09
1105	1501	56.9	-58.1	4.0	58.5	2	4 3 3 3	0.36*
1106	1501	56.8	-58.4	3.2	58.7	2	4 3 3 3	0.36
	0.500	76.1	-78.2	2.4	78.3	2	4 3 3 3	0.49
1106	1401	88.2	-90.9	1.8	91.0	2	4 3 1 3	0.56*
1107	1401	87.9	-90.7	1.9	90.8	2	4 3 1 3	0.56*
	0.500	84.6	-88.1	2.4	88.2	2	4 3 3 3	0.55
1107	1301	69.7	-73.9	4.0	74.3	2	4 3 3 3	0.46
1108	1301	69.4	-73.3	5.3	73.9	2	4 3 3 3	0.46*
	0.500	37.7	-42.3	7.3	43.3	2	6 1 3 1	0.27
1108	1201	18.0	-23.4	9.5	28.5	2	3 4 3 4	0.18
1109	1201	18.8	-23.5	9.6	28.8	2	3 4 3 4	0.18
	0.500	63.2	-68.2	11.1	70.9	2	3 4 3 4	0.44
1109	1101	114.7	-120.2	12.7	122.2	2	3 4 3 4	0.76*
1110	1602	96.4	-101.8	8.8	103.0	2	3 4 3 4	0.64*
	0.500	3.6	-9.4	8.0	15.7	2	1 6 3 6	0.10
1110	1502	79.6	-85.9	7.0	86.7	2	4 3 3 3	0.54
1111	1502	79.4	-86.4	3.8	86.7	2	4 3 3 3	0.54
	0.500	106.4	-113.6	2.8	113.7	2	4 3 3 3	0.71
1111	1402	124.1	-131.7	1.6	131.7	2	4 3 3 3	0.82*
1112	1402	123.9	-131.6	1.2	131.6	2	4 3 1 3	0.82*

SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
	0.500	113.7	-121.6	2.7	121.7	2	4 3 3 3	0.76
1112	1302	89.9	-98.1	4.5	98.4	2	4 3 3 3	0.61
1113	1302	89.8	-97.5	7.2	98.3	2	4 3 3 3	0.61*
	0.500	32.9	-40.6	9.3	43.7	2	4 3 3 3	0.27
1113	1202	34.3	-42.1	11.6	46.6	2	3 4 3 4	0.29
1114	1202	35.2	-42.1	12.9	47.7	2	3 4 3 4	0.30
	0.500	94.4	-101.2	14.4	104.2	2	3 4 3 4	0.65
1114	1102	160.8	-167.6	16.0	169.8	2	3 4 3 4	1.05*
1115	1603	106.0	-112.9	8.4	113.9	2	3 4 3 4	0.71*
	0.500	3.3	-10.6	7.7	17.0	2	3 4 3 4	0.11
1115	1503	81.1	-88.9	6.7	89.6	2	6 1 3 1	0.56
1116	1503	80.6	-89.2	3.8	89.5	2	6 1 3 1	0.56
	0.500	107.9	-116.7	2.8	116.8	2	4 3 3 3	0.73
1116	1403	126.6	-135.8	1.7	135.8	2	4 3 3 3	0.84*
1117	1403	126.6	-135.8	0.8	135.8	2	4 3 1 3	0.84*
	0.500	114.7	-124.2	2.2	124.2	2	4 3 1 3	0.77
1117	1303	90.3	-100.0	3.8	100.2	2	4 3 1 3	0.62
1118	1303	90.6	-99.7	6.3	100.3	2	4 3 1 3	0.62*
	0.500	30.9	-40.1	8.2	42.5	2	4 3 1 3	0.26
1118	1203	36.5	-45.7	10.3	49.1	2	1 6 1 6	0.30
1119	1203	37.0	-45.3	12.0	49.8	2	1 6 1 6	0.31
	0.500	97.6	-105.7	13.4	108.2	2	1 6 1 6	0.67
1119	1103	164.8	-172.9	14.8	174.8	2	1 6 1 6	1.09*
1120	1604	98.3	-103.9	8.9	105.1	2	1 6 1 6	0.65*
	0.500	4.4	-10.4	8.2	16.5	2	3 4 1 4	0.10
1120	1504	80.7	-87.2	7.1	88.1	2	6 1 1 1	0.55
1121	1504	80.5	-87.8	3.8	88.1	2	6 1 1 1	0.55
	0.500	107.7	-115.2	2.8	115.3	2	6 1 1 1	0.72
1121	1404	125.6	-133.5	1.6	133.5	2	6 1 1 1	0.83*
1122	1404	125.5	-133.4	1.2	133.4	2	6 1 3 1	0.83*
	0.500	114.8	-123.0	2.7	123.1	2	6 1 1 1	0.76
1122	1304	90.7	-99.1	4.5	99.4	2	6 1 1 1	0.62
1123	1304	90.6	-98.5	7.3	99.3	2	6 1 1 1	0.62*
	0.500	32.7	-40.7	9.3	43.8	2	6 1 1 1	0.27

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SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
1123	1204	34.9	-43.0	11.6	47.5	2	1 6 1 6	0.29
1124	1204	35.8	-43.0	13.0	48.5	2	1 6 1 6	0.30
0.500		95.6	-102.8	14.4	105.8	2	1 6 1 6	0.66
1124	1104	162.6	-169.7	16.0	172.0	2	1 6 1 6	1.07*
1125	1605	46.1	-46.4	5.4	47.0	2	3 4 1 4	0.29
0.500		11.0	-11.8	4.9	14.5	2	6 1 1 1	0.09
1125	1505	58.6	-60.2	4.2	60.6	2	6 1 1 1	0.38*
1126	1505	58.5	-60.5	3.3	60.8	2	6 1 1 1	0.38
0.500		78.2	-80.7	2.5	80.8	2	6 1 1 1	0.50
1126	1405	90.6	-93.8	1.9	93.9	2	6 1 3 1	0.58*
1127	1405	90.3	-93.6	2.0	93.6	2	6 1 3 1	0.58*
0.500		86.5	-90.4	2.6	90.6	2	6 1 1 1	0.56
1127	1305	71.1	-75.7	4.1	76.1	2	6 1 1 1	0.47
1128	1305	70.7	-75.1	5.6	75.7	2	6 1 1 1	0.47*
0.500		37.8	-42.9	7.6	43.9	2	4 3 1 3	0.27
1128	1205	19.2	-25.0	9.7	30.1	2	1 6 1 6	0.19
1129	1205	19.9	-25.1	10.0	30.5	2	1 6 1 6	0.19
0.500		65.3	-70.8	11.5	73.5	2	1 6 1 6	0.46
1129	1105	117.7	-123.6	13.1	125.6	2	1 6 1 6	0.78*
1130	1606	159.1	-172.1	17.9	174.9	1	3 4 3 4	1.09*
0.500		36.7	-50.0	17.3	58.3	1	3 4 3 4	0.36
1130	1506	80.5	-94.4	16.5	98.2	1	6 1 3 1	0.61
1131	1506	78.0	-93.0	11.1	94.7	1	6 1 3 1	0.59
0.500		106.6	-121.9	10.3	123.0	1	6 1 3 1	0.76
1131	1406	130.0	-145.7	9.3	146.6	1	4 3 3 3	0.91*
1132	1406	131.4	-147.2	6.3	147.5	1	4 3 1 3	0.92*
0.500		124.3	-140.5	7.6	140.9	1	4 3 1 3	0.88
1132	1306	109.1	-125.6	9.0	126.5	1	4 3 1 3	0.79
1133	1306	110.8	-126.7	13.5	128.6	1	4 3 1 3	0.80*
0.500		55.6	-71.7	15.3	76.0	1	4 3 1 3	0.47
1133	1206	22.2	-38.7	17.3	48.9	1	1 6 1 6	0.30
1134	1206	23.6	-39.0	20.0	52.2	1	1 6 1 6	0.32
0.500		83.3	-98.7	21.3	105.4	1	1 6 1 6	0.65
1134	1106	147.5	-163.1	22.7	167.7	1	1 6 1 6	1.04*

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SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
1150	1100	37.3	-34.1	5.9	38.1	3	6 1 3 6	0.24
	0.500	39.4	-36.2	5.8	40.6	3	4 3 3 4	0.25
1150	1101	72.9	-69.7	5.7	73.6	3	4 3 3 4	0.46*
1151	1101	68.1	-61.4	1.8	68.2	3	4 3 3 4	0.42*
	0.500	49.3	-42.6	1.9	49.4	3	4 3 3 4	0.31
1151	1102	44.4	-37.7	2.0	44.4	3	6 1 3 6	0.28
1152	1102	56.1	-50.1	1.4	56.1	3	6 1 3 6	0.35*
	0.500	50.4	-44.4	1.3	50.5	3	6 1 3 6	0.31
1152	1103	47.1	-41.0	1.3	47.1	3	4 3 1 4	0.29
1153	1103	47.4	-41.2	1.1	47.5	3	4 3 1 4	0.29
	0.500	50.9	-44.7	1.2	51.0	3	6 1 3 6	0.32
1153	1104	57.0	-50.8	1.2	57.0	3	6 1 3 6	0.35*
1154	1104	45.8	-38.6	1.8	45.9	3	6 1 3 6	0.28
	0.500	49.5	-42.3	1.8	49.6	3	4 3 3 4	0.31
1154	1105	67.6	-60.4	1.7	67.6	3	4 3 3 4	0.42*
1155	1105	72.7	-69.3	5.3	73.3	3	4 3 3 4	0.46*
	0.500	39.6	-36.1	5.4	40.7	3	4 3 3 4	0.25
1155	1106	38.3	-34.9	5.5	39.0	3	6 1 3 6	0.24
1160	1010	0.0	-7.7	3.9	9.8	1	0 4 1 6	0.06
	0.500	65.3	-73.6	3.9	73.9	1	6 1 1 1	0.46
1160	1100	137.7	-146.0	3.9	146.2	1	6 1 1 1	0.91*
1161	1011	55.8	-68.4	6.8	69.4	2	1 6 1 6	0.43
	0.500	73.5	-86.1	3.1	86.2	2	6 1 1 1	0.54
1161	1101	89.3	-101.9	3.6	102.0	2	6 1 3 1	0.63*
1162	1012	17.0	-25.7	3.1	26.3	2	3 4 3 4	0.16
	0.500	32.0	-40.7	4.1	41.3	2	6 1 1 1	0.26
1162	1102	150.8	-159.5	6.5	159.8	2	6 1 1 1	0.99*
1163	1013	3.9	-10.9	0.3	10.9	2	4 3 1 3	0.07
	0.500	16.0	-23.0	2.2	23.3	2	6 1 3 1	0.14
1163	1103	109.0	-116.0	4.5	116.3	2	3 4 3 4	0.72*
1164	1014	17.2	-26.3	3.2	26.8	2	6 1 1 1	0.17
	0.500	32.3	-41.3	4.2	42.0	2	3 4 3 4	0.26
1164	1104	152.1	-161.1	6.5	161.5	2	3 4 3 4	1.00*
1165	1015	56.4	-69.8	7.0	70.8	2	4 3 3 3	0.44

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SPANNUNGEN : Th. 1.Ord. ÜBERLAGERUNG Nr. 4 : EG+0,5So+W,d

Sigma Z,D= Zug-, Druckspannungen , Sigma V= SQR(Sigma^2+3*Tau^2)

Stab Nr.	Knot. Nr.	Sigma Z (N/mm2)	Sigma D (N/mm2)	Tau (N/mm2)	Sigma V (N/mm2)	Quer. Nr.	Stelle Nr.	max Ausnutz.
zulässig		161.0	161.0	93.0	161.0	EN AW-6063 T66		
	0.500	73.9	-87.3	3.3	87.5	2	3 4 3 4	0.54
1165	1105	91.5	-104.9	3.7	105.0	2	3 4 1 4	0.65*
1166	1016	0.0	-7.5	3.8	10.0	1	0 3 3 3	0.06
	0.500	65.9	-73.8	3.8	74.1	1	3 4 3 4	0.46
1166	1106	139.3	-147.1	3.8	147.3	1	3 4 3 4	0.91*
1170	1010	1.7	-1.7	2.6	4.7	4	1 6 3 1	0.03
	0.500	12.6	-12.6	3.9	14.2	4	1 6 3 1	0.09
1170	1011	35.5	-35.5	5.1	36.6	4	3 4 3 3	0.23*
1171	1011	47.0	-47.0	7.5	48.8	4	3 4 3 3	0.30*
	0.500	20.1	-20.1	6.3	22.9	4	3 4 3 3	0.14
1171	1012	6.8	-6.8	5.1	10.9	4	1 6 3 1	0.07
1172	1012	16.1	-16.1	2.7	16.8	4	3 4 3 3	0.10*
	0.500	8.3	-8.3	1.5	8.7	4	3 4 3 3	0.05
1172	1013	12.8	-12.8	2.4	13.5	4	1 6 1 1	0.08
1173	1013	12.8	-12.8	2.5	13.5	4	1 6 1 1	0.08
	0.500	8.4	-8.4	1.6	8.9	4	3 4 3 3	0.06
1173	1014	16.5	-16.5	2.8	17.2	4	3 4 3 3	0.11*
1174	1014	6.9	-6.9	5.2	11.2	4	1 6 3 1	0.07
	0.500	20.5	-20.5	6.4	23.4	4	1 6 3 3	0.15
1174	1015	47.7	-47.7	7.6	49.5	4	3 4 3 3	0.31*
1175	1015	36.2	-36.2	5.2	37.4	4	3 4 3 3	0.23*
	0.500	12.8	-12.8	4.0	14.5	4	1 6 3 1	0.09
1175	1016	1.2	-1.2	2.8	4.9	4	1 6 3 1	0.03