

12L zweiachsige Stb-Durchlaufstütze

Leistungsumfang

- Zug- oder Druckstab mit beliebig abgestuftem Rechteckquerschnitt
- Mehrere horizontale Stützungen mit und ohne Feder (Dreh- und Wegfeder)
- Automatische Ermittlung der Zwischenschnitte unter Berücksichtigung der Unstetigkeitsstellen
- Möglichkeit der Lastfallbeschreibung
- max. 9 Lastfälle, wahlweise in Gebrauchs- oder Bruchzustand
- Knotenbelastung (M, H, N) und gleichmäßige Streckenlast in beliebiger Höhe
- Schnittkraftermittlung nach Theorie I. und II. Ordnung (Zug und Druck)
- Bemessung (mittiger Zug bis mittiger Druck) für Theorie I. und II. Ordnung
- Zusammenfassung der Extremalwerte der Bemessung nach Theorie I. und II. Ordnung
- Randdehnung und -stauchung an allen Schnitten und für alle Lastfälle
- Krümmung und Steifigkeit aller Teilstäbe für jeden Lastfall
- Abstufung der Bewehrung in max. acht Abschnitte mit konstantem Verlauf
- Wiederholung der Schnittkraftermittlung unter Berücksichtigung der Steifigkeit aus der vorhandenen Bewehrung
- Ausgabe aller Zwischenwerte oder nur Teile davon über Drucker oder Bildschirm

System

Der Systemverlauf und -stützung kann in jeder Richtung unterschiedlich sein.

Um elastischen Verformungen von Rahmentragwerken und Fundamentverdrehungen gerecht zu werden, sind überall Dreh- und Wegfedern vorgesehen.

Es stehen im Textformular insgesamt 2*20 Zeilen für die Systemeingabe zur Verfügung. Diese Zeilen können beliebig für Querschnittsabmessung und Systemstützungen verwendet werden. Es stehen acht End- und acht Mittelaflagerarten zur Auswahl (siehe Seite 3). Hier können auch durch Querschnittseingabewiederholungen Schnitte definiert werden, um die Schnittkräfte mit Bemessung an den entsprechenden Stellen sicherzustellen.

Die automatische Schnittführung wird außer an vorhandenen Unstetigkeitsstellen in Abständen von $h = d - d_1 \geq 20 \text{ cm}$ (Nutzhöhe) durchgeführt.

Belastung

Es sind maximal 9 Lastfälle wahlweise im Gebrauchs- oder Bruchzustand vorgesehen. Jede Last kann verschiedenen Lastfällen zugeordnet werden.

Im Block Lastfallbeschreibung wird die Lastfallfolge und deren Anzahl festgelegt. Jeder Lastfall wird mit einer Textzeile beschrieben.

Es gibt für jede Richtung 2 Lastblöcke. Der erste Block hat 18 Zeilen und ist Einzellasten (M, N, H) vorbehalten. Die Normalkraft N ist als Druckkraft positiv und als Zugkraft (abhebende Auflagerkraft) negativ bei der Eingabe definiert, die aber für die spätere Berechnung intern das normale in der Statik übliche Vorzeichen erhält und dementsprechend ausgegeben wird. Bei der Eingabe der Normalkraft wird auch die Exzentrizität (zur Mittelachse der Unterkante-Stütze) abgefragt.

Hier ist es möglich die Imperfektion (die ungewollte Ausmitte und die Schiefstellung) sowie die eventuelle spätere Lotabweichung zu berücksichtigen. Die Imperfektion für die andere Richtung kann ersatzweise als Moment eingegeben werden.

Schnittkräfte

Die Schnittkraftermittlung erfolgt für jeden Lastfall nach Theorie I. und II. Ordnung für alle Schnitte und Unstetigkeiten in y- und z-Richtung getrennt. Die Schnittkräfte werden wie folgt mindestens in zwei, besser aber in drei Durchläufen bestimmt (1. und 2. Durchlauf automatisch, 3. und weiterer Durchlauf mit der Steifigkeit aus der vorhandenen bzw. gewählten Bewehrung).

1. Durchlauf der Schnittkraftermittlung erfolgt mit der Steifigkeit aus dem vollen Querschnitt (vorschätzen).
2. Durchlauf erfolgt mit der Steifigkeit aus der maximalen statisch erforderlichen Bewehrung, aber nicht kleiner als

Mindestbewehrung nach DIN 1045 Tabelle 32, für jeden Teilabschnitt.

3. Durchlauf der Schnittkraftermittlung wird nach der Wahl der Bewehrung durch den Anwender bestimmt. Die Ersatzsteifigkeit wird aus der Krümmung mit der tatsächlich vorhandenen Bewehrung ermittelt. Bei den meisten Stützen ist das Ende der Berechnung nach dem 2. bzw. 3. Iterationsschritt erreicht. Falls die Differenz zwischen der Bewehrung aus der Bemessung und der M-K-Beziehung größer als 3.14 cm^2 je Seite ist, wird die Berechnung automatisch wiederholt. Weitere Durchläufe sind manuell möglich.

Durch die feine Unterteilung der Stütze, den Einsatz der vorhandenen Bewehrung zur Stabauslenkung und die Berücksichtigung der elastischen Federsteifigkeit der anschließenden Bauteile ist es möglich, sehr genau den Schnittkraftverlauf für die Theorie I. und II. Ordnung zu ermitteln.

Ein weiterer Punkt, der zur Genauigkeit der Schnittkräfte beiträgt, ist die exakte Erfassung der Momenten-Krümmungs-Beziehung in jedem Schnitt sowohl für den Druck- als auch für den Zugstab (keine Linearisierung).

Das Biegemoment aus der Kriechverformung wird nach Heft 240 ermittelt und vorzeichengleich dem resultierenden Moment nach Theorie I. und II. Ordnung zugezählt.

Bemessung

Die Bemessung als Doppelbiegung kann für alle handelsüblichen Beton- und Stahlgüten erfolgen.

Grundlage der Bemessung für symmetrische Bewehrung ist DIN 1045 Abschn. 17.2. und 17.4.8. Die Bemessung erfolgt für Theorie I. und II. Ordnung getrennt und über alle Lastfälle in jedem Schnitt.

Der maßgebende Lastfall für die Bemessung wird, mit zugehöriger LF-Nr. des jeweiligen Schnittes, getrennt nach Theorie I. oder II. Ordnung, für den jeweiligen Teilabschnitt mit der konstanten Bewehrung, ausgegeben.

Die Gesamtsteifigkeit eines Teilabschnittes aus der Knickrichtung wird nach beiden Richtungen, unter Berücksichtigung einer Reststeifigkeit, aufgeteilt.

Bewehrung

Die Stahlbetonstütze kann mit zwei verschiedenen Stabstählen (Haupt- und Zusatzbewehrung) bewehrt werden.

Die Bewehrung kann bis zu 8-mal gestaffelt werden. Diese Staffelung wird bei der Momenten-Krümmungs-Beziehung berücksichtigt.

Für jeden Teilabschnitt mit konstanter Bewehrung wird nur die Stelle ausgegeben, welche die maximale Bewehrung erzeugt.

Verformung

Die Verformungen werden vollständigshalber durch M/K-Beziehung für alle Lastfälle ermittelt und können als Zwischen Ausdruck ausgegeben werden. Für Kragstützen werden die Verschiebungen am Kragarmende für jeden Lastfall im Formular ausgegeben.

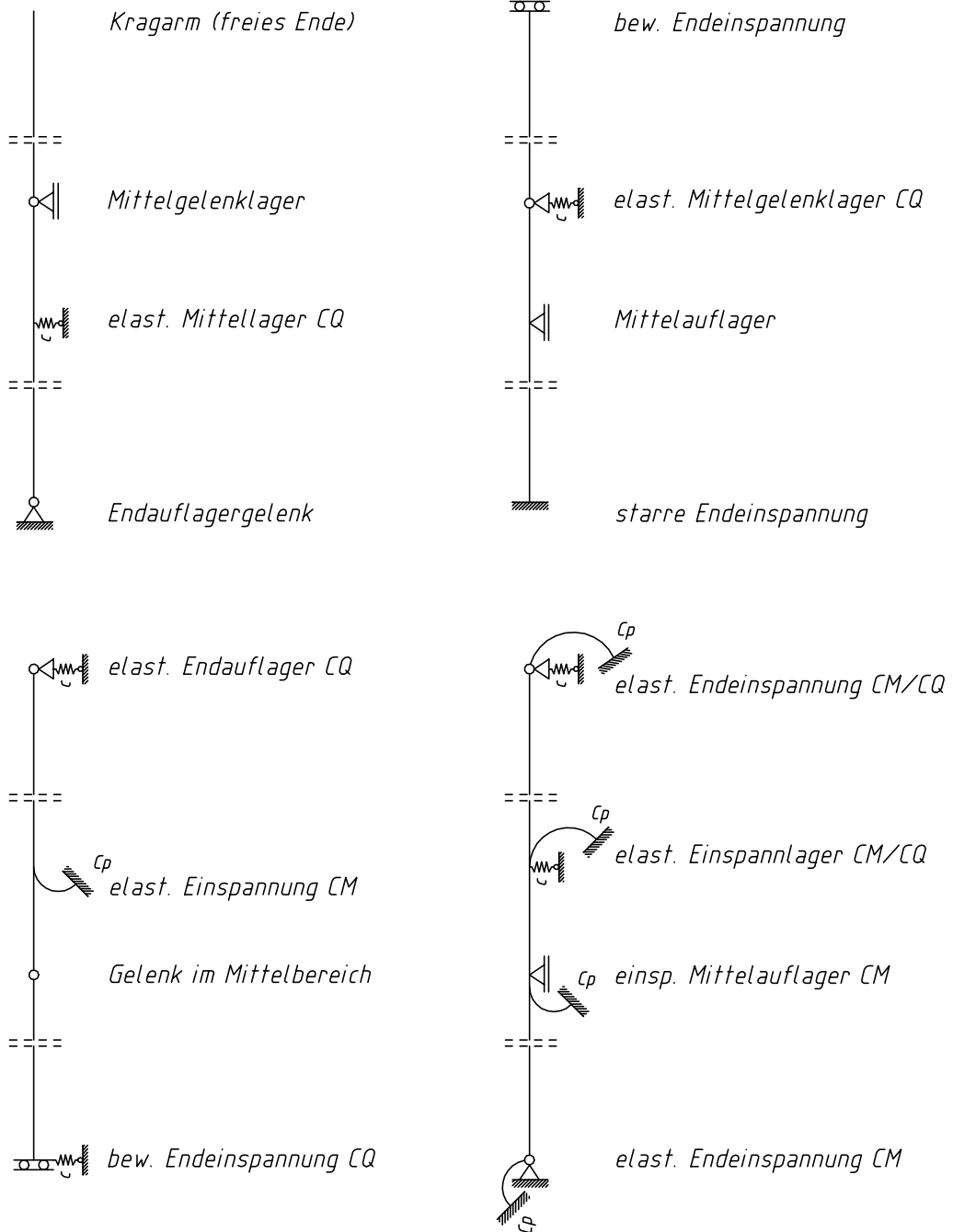
Die DIN 1045 macht (im Gegensatz zu EC2) keine Aussagen über den Sicherheitsbeiwert für die Ermittlung der Verformung. Es ist im Programm jedoch möglich, die ständigen Lasten zusätzlich im Bruchzustand mit der Bewehrung des Gebrauchszustands zu rechnen, um kleinere Verformungswerte zu erzielen. Die tatsächliche Verformung liegt zwischen den Werten des Gebrauchs- und des Bruchzustands.

Berechnungsgrundlage

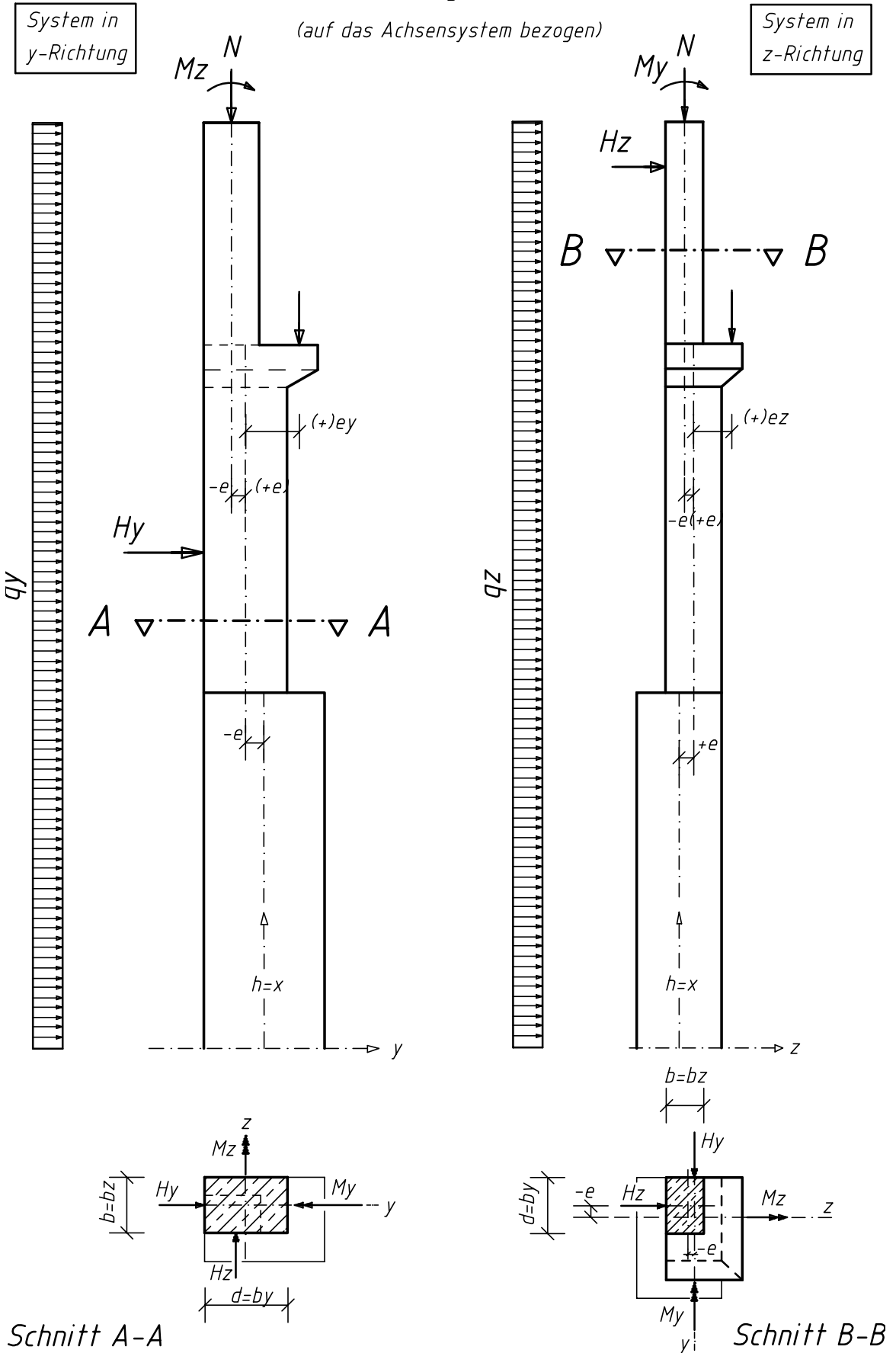
Die Ermittlung der Schnittkräfte erfolgt nach dem Übertragungsverfahren. Die Bemessung und Momenten-Krümmungs-Beziehung sind auf der Grundlage der DIN 1045 Ausgabe Juli 1988 programmiert.

Die Entwicklung der schnellen Iteration für die Ermittlung der Momenten-Krümmungs-Beziehung ist unter Anwendung der Methode von Tschebyscheff im eigenen Hause erfolgt.

Auflagerarten und deren Bezeichnungen



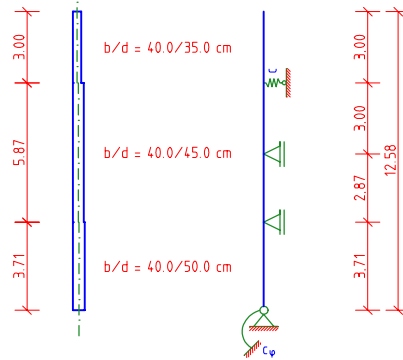
Erläuterung der Eingabewerte und Systembezeichnungen
für das Programm '12L'



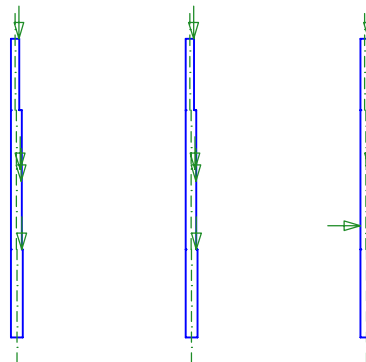
POS . 30 STB-STÜTZE (MY, MZ) '12L'

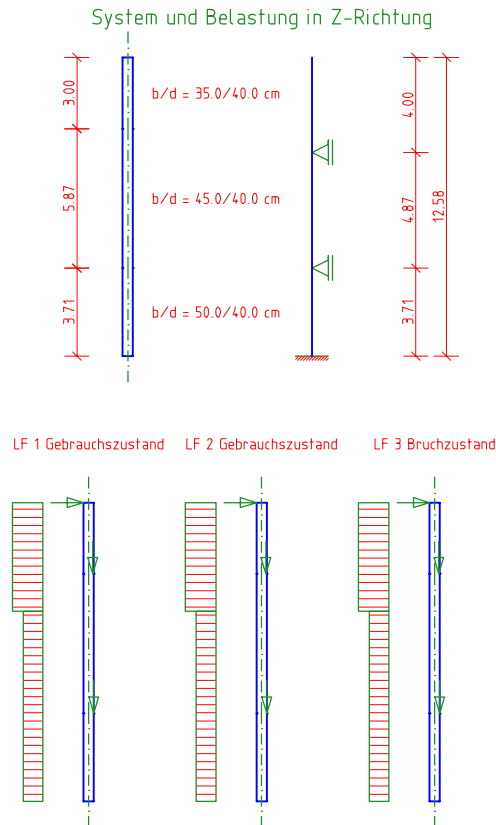
Stahlbeton - Mehrfeldstütze mit Doppelbiegung

System und Belastung in Y-Richtung



LF 1 Gebrauchszustand LF 2 Gebrauchszustand LF 3 Bruchzustand





Erläuterung der Abkürzungen für das System:

CM, CQ (kNm, kN/m) = Dreh- bzw. Wegfedersteifigkeit

H, H1, H2 (m) = Höhe, b, d (cm) = Querschnittsabmessungen
 e (cm) = Achsenversatz zur Mittelachse der UK-Stütze

S Y S T E M in Y - Richtung:

.H1 bis H2	Bezeichnung	(-- Zahlenwerte --)		
12.58- 9.58	Querschnitt	b/d/e =	40.0/ 35.0/	-5.0
9.58- 3.71	Querschnitt	b/d/e =	40.0/ 45.0/	-2.5
3.71- 0.00	Querschnitt	b/d/e =	40.0/ 50.0/	0.0
12.58- 9.58	Kragarmlänge(freies Ende)			
9.58- 9.58	elast. Mittellauger	CQ =	3500.00	
6.58- 6.58	Mittellauger			
3.71- 3.71	Mittellauger			
0.00- 0.00	elast. Endeinspan.	CM =	22550.00	

S Y S T E M in Z-Richtung:

.H1 bis H2	Bezeichnung	(-- Zahlenwerte --)		
12.58- 8.58	Kragarmlänge(freies Ende)			
8.58- 8.58	Mittellauger			
3.71- 3.71	Mittellauger			
0.00- 0.00	starre Endeinspannung			

Baustoffe Beton: B 25, Betonstahl: BSt 500 S

Betondeckung $c = 3.0$ cm, $h' = 5.0$ cm, zul. Mü = 8.00%

mit Kriechanteil LF 1-2 ohne Kriechanteil LF 3
 $\Phi = 2.7$, und $ev = sk/300$ (ev nur für Kriechverformung).

Gebrauchszustand für LF 1-2 Bruchzustand für LF 3

Ungewollte Ausmitte der N-Lasten: $evy/evz = 5.0/5.0$ cm

S C H N I T T K R Ä F T E u n d B E M E S S U N G

Diese Schnittkräfte sind in den Abschnitten mit konstantem Bewehrungsverlauf maßgebend für die Bewehrung.

H (m)	LF (-)	N (kN)	Mr (kNm)	Th. (-)	b (cm)	d (cm)	h (cm)	Mü (%)	ges.As (cm ²)
9.71	1	232.30	75.28	II	40.0	35.0	30.0	0.88	12.32
9.58	1	232.80	75.85	II	40.0	35.0	30.0	0.88	12.32
3.71	1	925.30	144.76	I	45.0	40.0	35.0	1.18	21.24
3.60	1	2225.90	88.84	I	50.0	40.0	35.0	2.44	48.80

B E W E H R U N G

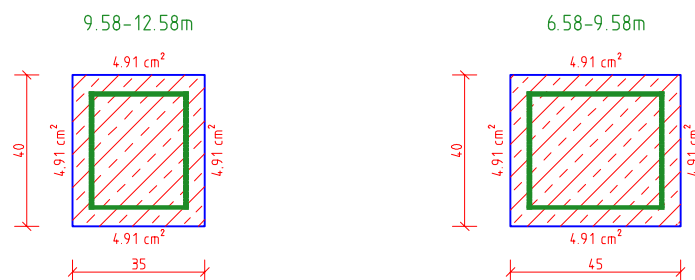
D_s (mm) = Stabdurchmesser, a (cm) = Bügelabstand

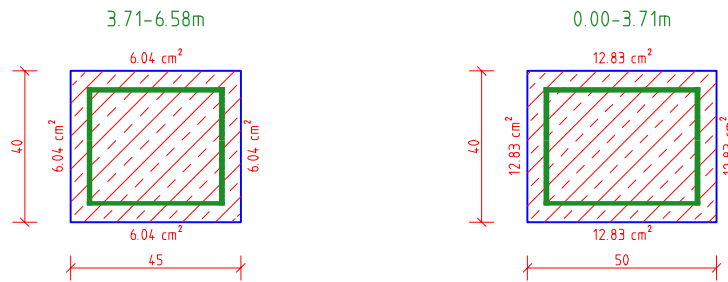
M/K - As = Bewehrung der Momente - Krümmungs - Beziehung bei der Stabverformung (Auslenkung) angesetzt

Durchgehende Längsbewehrung je Ecke 1 D_s 25 = 4.91 cm²

H1 bis H2 (m)	erf. M/K As (cm ²)	Zusatzbewehrung (je Seite) vorhAs (mm)	Haupt Bügel Ds / a	Zwischen Bügel Ds / a.
12.58- 9.58	19.64	- - - = 19.64	8.0/30.0	- / -
9.58- 6.58	19.64	- - - = 19.64	8.0/30.0	- / -
6.58- 3.71	24.16	1 D_s 12 = 24.16	8.0/14.0	- / -
3.71- 0.00	51.32	7 D_s 12 = 51.32	8.0/14.0	8.0/28.0

M=1:20





Schnittkräfte am Stützenfuß

LF Nr.	maxN (kN)	Hy (kN)	Hx (kN)	MzI (kNm)	MzII (kNm)	MyI (kNm)	MyII (kNm)
1	2243.9	-20.36	-21.36	-11.59	-12.44	-28.55	-27.65
2	2007.0	-21.46	-19.21	-11.97	-12.42	-25.86	-26.02
3	2243.9	-30.20	-22.67	-10.58	-10.79	-30.11	-29.35

Stützenkopfverschiebung + Fundamentdrehung

LF Nr.	wyI (cm)	wzI (cm)	wyzI (cm)	Phi yI (Rad*1E2)	Phi zI (Rad*1E2)	Phi yzI (Rad*1e2)
1	3.3495	3.6802	4.9762	-0.05140	0.00000	-0.05140
2	2.5917	2.1706	3.3806	-0.05306	0.00000	-0.05306
3	1.9284	2.0332	2.8023	-0.04691	0.00000	-0.04691

LASTFALL 1, x (m)	S C H N I T T M li. (kNm)	T T K R Ä F T E M re. (kNm)	nach Th. H li. (kN)	I. O. / y-Ri. H re. (kN)	Phi li. Rad E2	Phi re. Rad E2	w (cm)
12.58	-46.7	0.0	0.0	0.0	1.706	0.000	3.349
12.38	-46.7	-46.7	0.0	0.0	1.604	1.604	3.018
12.03	-46.7	-46.7	0.0	0.0	1.427	1.427	2.488
11.68	-46.7	-46.7	0.0	0.0	1.248	1.248	2.019
11.33	-46.7	-46.7	0.0	0.0	1.072	1.072	1.613
10.98	-46.7	-46.7	0.0	0.0	0.897	0.897	1.269
10.63	-46.7	-46.7	0.0	0.0	0.721	0.721	0.985
10.28	-46.7	-46.7	0.0	0.0	0.545	0.545	0.764
9.93	-46.7	-46.7	0.0	0.0	0.369	0.369	0.603
9.71	-46.7	-46.7	0.0	0.0	0.258	0.258	0.534
9.58	-33.3	-46.7	-17.6	0.0	0.232	0.232	0.502
9.31	-28.6	-28.6	-17.6	-17.6	0.210	0.210	0.443
9.08	-24.5	-24.5	-17.6	-17.6	0.195	0.195	0.396
8.91	-21.5	-21.5	-17.6	-17.6	0.185	0.185	0.364
8.58	-15.7	-15.7	-17.6	-17.6	0.169	0.169	0.305
8.51	-14.5	-14.5	-17.6	-17.6	0.166	0.166	0.294
8.11	-7.5	-7.5	-17.6	-17.6	0.155	0.155	0.230
8.00	-5.5	-5.5	-17.6	-17.6	0.153	0.153	0.213
7.71	-0.4	-0.4	-17.6	-17.6	0.151	0.151	0.168
7.31	6.6	6.6	-17.6	-17.6	0.154	0.154	0.107
7.08	-28.0	10.6	-17.6	-17.6	0.159	0.159	0.071
6.91	-25.0	-25.0	-17.6	-17.6	0.147	0.147	0.045
6.58	-99.3	-19.2	-76.2	-17.6	0.128	0.128	0.000
6.51	-94.0	-94.0	-76.2	-76.2	0.105	0.105	-0.008
6.15	-66.2	-66.2	-76.2	-76.2	0.006	0.006	-0.027
6.11	-63.5	-63.5	-76.2	-76.2	-0.000	-0.000	-0.028
5.71	-33.0	-33.0	-76.2	-76.2	-0.054	-0.054	-0.015
5.31	-2.6	-2.6	-76.2	-76.2	-0.074	-0.074	0.012
5.15	10.0	10.0	-76.2	-76.2	-0.073	-0.073	0.024
4.91	27.9	27.9	-76.2	-76.2	-0.060	-0.060	0.040
4.71	43.2	43.2	-76.2	-76.2	-0.040	-0.040	0.050
4.51	58.4	58.4	-76.2	-76.2	-0.011	-0.011	0.056
4.11	88.9	88.9	-76.2	-76.2	0.074	0.074	0.044
3.71	-62.6	119.4	-20.0	-76.2	0.149	0.149	0.000
3.60	-60.4	-60.4	-20.0	-20.0	0.134	0.134	-0.016
3.20	-52.4	-52.4	-20.0	-20.0	0.086	0.086	-0.060
2.80	-44.4	-44.4	-20.0	-20.0	0.045	0.045	-0.086
2.40	-36.4	-36.4	-20.0	-20.0	0.011	0.011	-0.097
2.00	-28.4	-28.4	-20.0	-20.0	-0.016	-0.016	-0.096
1.60	-20.4	-20.4	-20.0	-20.0	-0.036	-0.036	-0.085
1.20	-12.4	-12.4	-20.0	-20.0	-0.050	-0.050	-0.067
0.80	-4.4	-4.4	-20.0	-20.0	-0.057	-0.057	-0.045
0.40	3.6	3.6	-20.0	-20.0	-0.057	-0.057	-0.022
0.00	0.0	11.6	0.0	-20.0	0.000	-0.051	0.000

LASTFALL 1, x (m)	S C H N I T T M li. (kNm)	T T K R Ä F T E M re. (kNm)	H li. (kN)	H re. (kN)	nach Th. II. O. Phi li. Rad E2	Phi re. Rad E2	/ y-Ri. w (cm)
12.58	-46.7	0.0	0.0	0.0	2.077	0.000	4.163
12.38	-47.6	-47.6	0.0	0.0	1.971	1.971	3.758
12.03	-49.1	-49.1	0.0	0.0	1.777	1.777	3.102
11.68	-50.4	-50.4	0.0	0.0	1.574	1.574	2.515
11.33	-51.5	-51.5	0.0	0.0	1.365	1.365	2.000
10.98	-52.5	-52.5	0.0	0.0	1.149	1.149	1.560
10.63	-53.4	-53.4	0.0	0.0	0.927	0.927	1.196
10.28	-54.0	-54.0	0.0	0.0	0.701	0.701	0.911
9.93	-54.5	-54.5	0.0	0.0	0.472	0.472	0.706
9.71	-54.7	-54.7	0.0	0.0	0.327	0.327	0.618
9.58	-41.5	-54.9	-20.2	0.0	0.291	0.291	0.577
9.31	-36.3	-36.3	-20.2	-20.2	0.257	0.257	0.503
9.08	-31.9	-31.9	-20.2	-20.2	0.233	0.233	0.447
8.91	-28.6	-28.6	-20.2	-20.2	0.220	0.220	0.408
8.58	-22.1	-22.1	-20.2	-20.2	0.199	0.199	0.339
8.51	-20.8	-20.8	-20.2	-20.2	0.195	0.195	0.325
8.11	-13.0	-13.0	-20.2	-20.2	0.178	0.178	0.251
8.00	-10.8	-10.8	-20.2	-20.2	0.174	0.174	0.231
7.71	-5.1	-5.1	-20.2	-20.2	0.168	0.168	0.182
7.31	2.7	2.7	-20.2	-20.2	0.167	0.167	0.115
7.08	-31.5	7.1	-20.2	-20.2	0.170	0.170	0.076
6.91	-28.2	-28.2	-20.2	-20.2	0.156	0.156	0.048
6.58	-102.1	-22.0	-77.2	-20.2	0.135	0.135	0.000
6.51	-96.8	-96.8	-77.2	-77.2	0.110	0.110	-0.009
6.15	-68.8	-68.8	-77.2	-77.2	0.007	0.007	-0.029
6.11	-66.1	-66.1	-77.2	-77.2	0.001	0.001	-0.029
5.71	-35.1	-35.1	-77.2	-77.2	-0.056	-0.056	-0.017
5.31	-4.0	-4.0	-77.2	-77.2	-0.078	-0.078	0.011
5.15	8.9	8.9	-77.2	-77.2	-0.077	-0.077	0.024
4.91	27.1	27.1	-77.2	-77.2	-0.065	-0.065	0.041
4.71	42.7	42.7	-77.2	-77.2	-0.045	-0.045	0.052
4.51	58.2	58.2	-77.2	-77.2	-0.016	-0.016	0.058
4.11	88.9	88.9	-77.2	-77.2	0.081	0.081	0.047
3.71	-63.1	118.8	-20.4	-77.2	0.155	0.155	0.000
3.60	-61.3	-61.3	-20.4	-20.4	0.141	0.141	-0.016
3.20	-54.1	-54.1	-20.4	-20.4	0.091	0.091	-0.063
2.80	-46.6	-46.6	-20.4	-20.4	0.048	0.048	-0.091
2.40	-38.7	-38.7	-20.4	-20.4	0.012	0.012	-0.103
2.00	-30.6	-30.6	-20.4	-20.4	-0.016	-0.016	-0.102
1.60	-22.2	-22.2	-20.4	-20.4	-0.038	-0.038	-0.091
1.20	-13.6	-13.6	-20.4	-20.4	-0.053	-0.053	-0.072
0.80	-4.9	-4.9	-20.4	-20.4	-0.061	-0.061	-0.049
0.40	3.8	3.8	-20.4	-20.4	-0.061	-0.061	-0.024
0.00	0.0	12.4	0.0	-20.4	0.000	-0.055	0.000

LASTFALL 1, x (m)	S C H N I T T M li. (kNm)	T T K R Ä F T E M re. (kNm)	nach Th. H li. (kN)	I. O. / z-Ri. H re. (kN)	Phi li. Rad E2	Phi re. Rad E2	w (cm)
12.58	11.1	0.0	12.5	0.0	1.042	0.000	3.680
12.38	8.6	8.6	13.1	13.1	1.049	1.049	3.471
12.03	3.8	3.8	14.0	14.0	1.058	1.058	3.102
11.68	-1.3	-1.3	15.0	15.0	1.059	1.059	2.731
11.33	-6.7	-6.7	16.0	16.0	1.054	1.054	2.361
10.98	-12.5	-12.5	17.0	17.0	1.041	1.041	1.994
10.63	-18.6	-18.6	18.0	18.0	1.020	1.020	1.632
10.28	-25.0	-25.0	18.9	18.9	0.982	0.982	1.281
9.93	-31.8	-31.8	19.9	19.9	0.927	0.927	0.947
9.71	-36.3	-36.3	20.5	20.5	0.881	0.881	0.748
9.58	-59.9	-39.0	20.9	20.9	0.853	0.853	0.635
9.31	-65.7	-65.7	21.7	21.7	0.748	0.748	0.419
9.08	-70.7	-70.7	22.3	22.3	0.645	0.645	0.258
8.91	-74.6	-74.6	22.8	22.8	0.562	0.562	0.155
8.58	-82.2	-82.2	-42.4	23.7	0.376	0.376	0.000
8.51	-79.3	-79.3	-42.2	-42.2	0.335	0.335	-0.025
8.11	-62.6	-62.6	-41.1	-41.1	0.136	0.136	-0.118
8.00	-58.1	-58.1	-40.8	-40.8	0.096	0.096	-0.131
7.71	-46.3	-46.3	-40.3	-40.3	0.012	0.012	-0.146
7.31	-30.3	-30.3	-39.6	-39.6	-0.057	-0.057	-0.136
7.08	-23.8	-21.3	-39.2	-39.2	-0.077	-0.077	-0.120
6.91	-17.2	-17.2	-38.9	-38.9	-0.089	-0.089	-0.106
6.58	-20.5	-4.5	-38.3	-38.3	-0.100	-0.100	-0.074
6.51	-17.8	-17.8	-38.1	-38.1	-0.105	-0.105	-0.067
6.15	-4.0	-4.0	-37.5	-37.5	-0.120	-0.120	-0.025
6.11	-2.7	-2.7	-37.4	-37.4	-0.120	-0.120	-0.021
5.71	12.1	12.1	-36.7	-36.7	-0.113	-0.113	0.026
5.31	26.7	26.7	-36.0	-36.0	-0.085	-0.085	0.067
5.15	32.6	32.6	-35.7	-35.7	-0.068	-0.068	0.080
4.91	40.9	40.9	-35.3	-35.3	-0.036	-0.036	0.092
4.71	47.9	47.9	-34.9	-34.9	-0.004	-0.004	0.096
4.51	54.9	54.9	-34.5	-34.5	0.032	0.032	0.094
4.11	68.5	68.5	-33.8	-33.8	0.122	0.122	0.064
3.71	-63.1	81.9	-28.0	-33.1	0.198	0.198	0.000
3.60	-60.0	-60.0	-27.8	-27.8	0.174	0.174	-0.020
3.20	-49.0	-49.0	-27.1	-27.1	0.097	0.097	-0.074
2.80	-38.3	-38.3	-26.4	-26.4	0.036	0.036	-0.100
2.40	-27.9	-27.9	-25.7	-25.7	-0.009	-0.009	-0.105
2.00	-17.8	-17.8	-25.0	-25.0	-0.041	-0.041	-0.094
1.60	-7.9	-7.9	-24.2	-24.2	-0.058	-0.058	-0.074
1.20	1.6	1.6	-23.5	-23.5	-0.063	-0.063	-0.049
0.80	10.9	10.9	-22.8	-22.8	-0.054	-0.054	-0.025
0.40	19.9	19.9	-22.1	-22.1	-0.033	-0.033	-0.007
0.00	0.0	28.6	0.0	-21.4	0.000	0.000	0.000

LASTFALL 1, x (m)	S C H N I T T M li. (kNm)	T T K R Ä F T E M re. (kNm)	H li. (kN)	H re. (kN)	nach Th. II. O. Phi li. Rad E2	Phi re. Rad E2	/ z-Ri. w (cm)
12.58	11.1	0.0	12.5	0.0	1.559	0.000	5.392
12.38	7.9	7.9	13.1	13.1	1.566	1.566	5.079
12.03	1.9	1.9	14.0	14.0	1.573	1.573	4.529
11.68	-4.4	-4.4	15.0	15.0	1.571	1.571	3.979
11.33	-11.1	-11.1	16.0	16.0	1.561	1.561	3.430
10.98	-18.1	-18.1	17.0	17.0	1.537	1.537	2.888
10.63	-25.4	-25.4	18.0	18.0	1.496	1.496	2.356
10.28	-33.1	-33.1	18.9	18.9	1.430	1.430	1.844
9.93	-41.0	-41.0	19.9	19.9	1.336	1.336	1.359
9.71	-46.1	-46.1	20.5	20.5	1.263	1.263	1.073
9.58	-70.3	-49.4	20.9	20.9	1.218	1.218	0.911
9.31	-77.2	-77.2	21.7	21.7	1.067	1.067	0.602
9.08	-83.0	-83.0	22.3	22.3	0.922	0.922	0.373
8.91	-87.4	-87.4	22.8	22.8	0.805	0.805	0.226
8.58	-95.9	-95.9	-46.1	23.7	0.561	0.561	0.000
8.51	-92.8	-92.8	-45.9	-45.9	0.507	0.507	-0.037
8.11	-75.2	-75.2	-44.8	-44.8	0.241	0.241	-0.185
8.00	-70.3	-70.3	-44.5	-44.5	0.184	0.184	-0.209
7.71	-57.6	-57.6	-44.0	-44.0	0.060	0.060	-0.244
7.31	-40.2	-40.2	-43.3	-43.3	-0.053	-0.053	-0.244
7.08	-32.7	-30.2	-42.8	-42.8	-0.089	-0.089	-0.227
6.91	-25.4	-25.4	-42.5	-42.5	-0.106	-0.106	-0.210
6.58	-27.1	-11.1	-41.9	-41.9	-0.126	-0.126	-0.171
6.51	-24.1	-24.1	-41.8	-41.8	-0.132	-0.132	-0.162
6.15	-8.5	-8.5	-41.2	-41.2	-0.153	-0.153	-0.109
6.11	-7.0	-7.0	-41.1	-41.1	-0.154	-0.154	-0.104
5.71	9.9	9.9	-40.4	-40.4	-0.152	-0.152	-0.042
5.31	26.4	26.4	-39.7	-39.7	-0.126	-0.126	0.015
5.15	33.1	33.1	-39.4	-39.4	-0.108	-0.108	0.034
4.91	42.5	42.5	-38.9	-38.9	-0.076	-0.076	0.056
4.71	50.4	50.4	-38.6	-38.6	-0.043	-0.043	0.068
4.51	58.1	58.1	-38.2	-38.2	-0.004	-0.004	0.073
4.11	73.1	73.1	-37.5	-37.5	0.093	0.093	0.056
3.71	-58.3	86.7	-26.5	-36.8	0.188	0.188	0.000
3.60	-55.8	-55.8	-26.3	-26.3	0.166	0.166	-0.019
3.20	-46.6	-46.6	-25.6	-25.6	0.094	0.094	-0.071
2.80	-37.1	-37.1	-24.9	-24.9	0.035	0.035	-0.097
2.40	-27.4	-27.4	-24.1	-24.1	-0.008	-0.008	-0.102
2.00	-17.6	-17.6	-23.4	-23.4	-0.039	-0.039	-0.092
1.60	-8.0	-8.0	-22.7	-22.7	-0.057	-0.057	-0.072
1.20	1.5	1.5	-22.0	-22.0	-0.061	-0.061	-0.048
0.80	10.7	10.7	-21.3	-21.3	-0.053	-0.053	-0.024
0.40	19.4	19.4	-20.5	-20.5	-0.032	-0.032	-0.007
0.00	0.0	27.6	0.0	-19.8	0.000	0.000	0.000

LASTFALL 2, S C H N I T T K R Ä F T E nach Th. I. O. / y-Ri.							
x (m)	M li. (kNm)	M re. (kNm)	H li. (kN)	H re. (kN)	Phi li. Rad E2	Phi re. Rad E2	w (cm)
12.58	-35.9	0.0	0.0	0.0	1.296	0.000	2.592
12.38	-35.9	-35.9	0.0	0.0	1.220	1.220	2.340
12.03	-35.9	-35.9	0.0	0.0	1.086	1.086	1.936
11.68	-35.9	-35.9	0.0	0.0	0.952	0.952	1.579
11.33	-35.9	-35.9	0.0	0.0	0.818	0.818	1.269
10.98	-35.9	-35.9	0.0	0.0	0.687	0.687	1.006
10.63	-35.9	-35.9	0.0	0.0	0.556	0.556	0.788
10.28	-35.9	-35.9	0.0	0.0	0.424	0.424	0.617
9.93	-35.9	-35.9	0.0	0.0	0.292	0.292	0.491
9.71	-35.9	-35.9	0.0	0.0	0.209	0.209	0.436
9.58	-26.9	-35.9	-14.3	0.0	0.189	0.189	0.410
9.31	-23.0	-23.0	-14.3	-14.3	0.169	0.169	0.361
9.08	-19.7	-19.7	-14.3	-14.3	0.157	0.157	0.324
8.91	-17.2	-17.2	-14.3	-14.3	0.149	0.149	0.298
8.58	-12.5	-12.5	-14.3	-14.3	0.137	0.137	0.251
8.51	-11.5	-11.5	-14.3	-14.3	0.135	0.135	0.241
8.11	-5.8	-5.8	-14.3	-14.3	0.126	0.126	0.189
8.00	-4.2	-4.2	-14.3	-14.3	0.125	0.125	0.175
7.71	0.0	0.0	-14.3	-14.3	0.123	0.123	0.139
7.31	5.7	5.7	-14.3	-14.3	0.126	0.126	0.089
7.08	-19.0	9.0	-14.3	-14.3	0.130	0.130	0.060
6.91	-16.6	-16.6	-14.3	-14.3	0.122	0.122	0.038
6.58	-92.0	-11.8	-71.3	-14.3	0.110	0.110	0.000
6.51	-87.0	-87.0	-71.3	-71.3	0.089	0.089	-0.007
6.15	-60.9	-60.9	-71.3	-71.3	-0.000	-0.000	-0.022
6.11	-58.4	-58.4	-71.3	-71.3	-0.005	-0.005	-0.022
5.71	-29.9	-29.9	-71.3	-71.3	-0.053	-0.053	-0.009
5.31	-1.4	-1.4	-71.3	-71.3	-0.070	-0.070	0.017
5.15	10.4	10.4	-71.3	-71.3	-0.068	-0.068	0.028
4.91	27.1	27.1	-71.3	-71.3	-0.056	-0.056	0.043
4.71	41.4	41.4	-71.3	-71.3	-0.038	-0.038	0.053
4.51	55.6	55.6	-71.3	-71.3	-0.011	-0.011	0.058
4.11	84.2	84.2	-71.3	-71.3	0.079	0.079	0.045
3.71	-67.7	112.7	-21.5	-71.3	0.150	0.150	0.000
3.60	-65.3	-65.3	-21.5	-21.5	0.135	0.135	-0.016
3.20	-56.7	-56.7	-21.5	-21.5	0.087	0.087	-0.060
2.80	-48.1	-48.1	-21.5	-21.5	0.046	0.046	-0.087
2.40	-39.5	-39.5	-21.5	-21.5	0.011	0.011	-0.098
2.00	-31.0	-31.0	-21.5	-21.5	-0.016	-0.016	-0.097
1.60	-22.4	-22.4	-21.5	-21.5	-0.036	-0.036	-0.086
1.20	-13.8	-13.8	-21.5	-21.5	-0.050	-0.050	-0.068
0.80	-5.2	-5.2	-21.5	-21.5	-0.058	-0.058	-0.046
0.40	3.4	3.4	-21.5	-21.5	-0.059	-0.059	-0.023
0.00	0.0	12.0	0.0	-21.5	0.000	-0.053	0.000

LASTFALL 2, S C H N I T T K R Ä F T E nach Th. II. O. / y-Ri.							
x	M li.	M re.	H li.	H re.	Phi li.	Phi re.	w
(m)	(kNm)	(kNm)	(kN)	(kN)	Rad E2	Rad E2	(cm)
12.58	-35.9	0.0	0.0	0.0	1.497	0.000	3.025
12.38	-36.4	-36.4	0.0	0.0	1.418	1.418	2.733
12.03	-37.2	-37.2	0.0	0.0	1.275	1.275	2.262
11.68	-38.0	-38.0	0.0	0.0	1.127	1.127	1.841
11.33	-38.6	-38.6	0.0	0.0	0.974	0.974	1.473
10.98	-39.2	-39.2	0.0	0.0	0.819	0.819	1.159
10.63	-39.6	-39.6	0.0	0.0	0.664	0.664	0.899
10.28	-40.0	-40.0	0.0	0.0	0.505	0.505	0.695
9.93	-40.3	-40.3	0.0	0.0	0.345	0.345	0.546
9.71	-40.4	-40.4	0.0	0.0	0.245	0.245	0.481
9.58	-31.4	-40.5	-15.8	0.0	0.220	0.220	0.451
9.31	-27.3	-27.3	-15.8	-15.8	0.195	0.195	0.395
9.08	-23.8	-23.8	-15.8	-15.8	0.178	0.178	0.352
8.91	-21.2	-21.2	-15.8	-15.8	0.169	0.169	0.322
8.58	-16.1	-16.1	-15.8	-15.8	0.153	0.153	0.269
8.51	-15.0	-15.0	-15.8	-15.8	0.150	0.150	0.258
8.11	-8.9	-8.9	-15.8	-15.8	0.138	0.138	0.200
8.00	-7.2	-7.2	-15.8	-15.8	0.136	0.136	0.185
7.71	-2.7	-2.7	-15.8	-15.8	0.133	0.133	0.146
7.31	3.4	3.4	-15.8	-15.8	0.133	0.133	0.093
7.08	-21.1	6.9	-15.8	-15.8	0.136	0.136	0.062
6.91	-18.5	-18.5	-15.8	-15.8	0.127	0.127	0.040
6.58	-93.7	-13.6	-72.4	-15.8	0.114	0.114	0.000
6.51	-88.7	-88.7	-72.4	-72.4	0.092	0.092	-0.007
6.15	-62.4	-62.4	-72.4	-72.4	0.000	0.000	-0.023
6.11	-59.9	-59.9	-72.4	-72.4	-0.005	-0.005	-0.023
5.71	-30.8	-30.8	-72.4	-72.4	-0.054	-0.054	-0.010
5.31	-1.6	-1.6	-72.4	-72.4	-0.072	-0.072	0.016
5.15	10.4	10.4	-72.4	-72.4	-0.070	-0.070	0.028
4.91	27.6	27.6	-72.4	-72.4	-0.058	-0.058	0.043
4.71	42.1	42.1	-72.4	-72.4	-0.039	-0.039	0.053
4.51	56.7	56.7	-72.4	-72.4	-0.012	-0.012	0.059
4.11	85.5	85.5	-72.4	-72.4	0.081	0.081	0.046
3.71	-66.7	113.6	-21.3	-72.4	0.152	0.152	0.000
3.60	-64.7	-64.7	-21.3	-21.3	0.138	0.138	-0.016
3.20	-57.1	-57.1	-21.3	-21.3	0.090	0.090	-0.062
2.80	-49.1	-49.1	-21.3	-21.3	0.048	0.048	-0.089
2.40	-40.8	-40.8	-21.3	-21.3	0.012	0.012	-0.101
2.00	-32.2	-32.2	-21.3	-21.3	-0.015	-0.015	-0.100
1.60	-23.5	-23.5	-21.3	-21.3	-0.037	-0.037	-0.089
1.20	-14.6	-14.6	-21.3	-21.3	-0.052	-0.052	-0.071
0.80	-5.6	-5.6	-21.3	-21.3	-0.060	-0.060	-0.048
0.40	3.4	3.4	-21.3	-21.3	-0.061	-0.061	-0.023
0.00	0.0	12.4	0.0	-21.3	0.000	-0.055	0.000

LASTFALL 2, x (m)	S C H N I T T M li. (kNm)	T T K R Ä F T E M re. (kNm)	nach Th. H li. (kN)	I. O. / z-Ri. H re. (kN)	Phi li. Rad E2	Phi re. Rad E2	w (cm)
12.58	8.6	0.0	7.5	0.0	0.607	0.000	2.171
12.38	7.0	7.0	8.1	8.1	0.613	0.613	2.048
12.03	4.0	4.0	9.0	9.0	0.620	0.620	1.832
11.68	0.7	0.7	10.0	10.0	0.623	0.623	1.614
11.33	-3.0	-3.0	11.0	11.0	0.622	0.622	1.396
10.98	-7.0	-7.0	12.0	12.0	0.615	0.615	1.179
10.63	-11.4	-11.4	13.0	13.0	0.603	0.603	0.966
10.28	-16.1	-16.1	13.9	13.9	0.584	0.584	0.758
9.93	-21.2	-21.2	14.9	14.9	0.551	0.551	0.559
9.71	-24.5	-24.5	15.5	15.5	0.524	0.524	0.440
9.58	-40.2	-26.6	15.9	15.9	0.507	0.507	0.373
9.31	-44.5	-44.5	16.7	16.7	0.443	0.443	0.244
9.08	-48.5	-48.5	17.3	17.3	0.380	0.380	0.150
8.91	-51.4	-51.4	17.8	17.8	0.328	0.328	0.089
8.58	-57.5	-57.5	-32.8	18.7	0.210	0.210	0.000
8.51	-55.2	-55.2	-32.6	-32.6	0.184	0.184	-0.014
8.11	-42.3	-42.3	-31.5	-31.5	0.058	0.058	-0.061
8.00	-38.9	-38.9	-31.2	-31.2	0.035	0.035	-0.066
7.71	-29.9	-29.9	-30.6	-30.6	-0.013	-0.013	-0.069
7.31	-17.8	-17.8	-29.9	-29.9	-0.052	-0.052	-0.055
7.08	-11.0	-11.0	-29.5	-29.5	-0.062	-0.062	-0.042
6.91	-6.0	-6.0	-29.2	-29.2	-0.067	-0.067	-0.031
6.58	-12.5	3.5	-28.6	-28.6	-0.068	-0.068	-0.008
6.51	-10.5	-10.5	-28.5	-28.5	-0.071	-0.071	-0.003
6.15	-0.2	-0.2	-27.8	-27.8	-0.078	-0.078	0.024
6.11	0.8	0.8	-27.8	-27.8	-0.078	-0.078	0.027
5.71	11.7	11.7	-27.0	-27.0	-0.069	-0.069	0.057
5.31	22.4	22.4	-26.3	-26.3	-0.046	-0.046	0.081
5.15	26.7	26.7	-26.0	-26.0	-0.032	-0.032	0.087
4.91	32.8	32.8	-25.6	-25.6	-0.007	-0.007	0.092
4.71	37.9	37.9	-25.2	-25.2	0.016	0.016	0.091
4.51	42.9	42.9	-24.9	-24.9	0.044	0.044	0.085
4.11	52.7	52.7	-24.2	-24.2	0.110	0.110	0.055
3.71	-57.8	62.2	-25.9	-23.4	0.166	0.166	0.000
3.60	-55.0	-55.0	-25.7	-25.7	0.145	0.145	-0.017
3.20	-44.8	-44.8	-25.0	-25.0	0.081	0.081	-0.062
2.80	-35.0	-35.0	-24.3	-24.3	0.030	0.030	-0.084
2.40	-25.4	-25.4	-23.5	-23.5	-0.008	-0.008	-0.088
2.00	-16.2	-16.2	-22.8	-22.8	-0.034	-0.034	-0.079
1.60	-7.2	-7.2	-22.1	-22.1	-0.049	-0.049	-0.062
1.20	1.5	1.5	-21.4	-21.4	-0.052	-0.052	-0.041
0.80	9.9	9.9	-20.7	-20.7	-0.045	-0.045	-0.021
0.40	18.0	18.0	-19.9	-19.9	-0.027	-0.027	-0.006
0.00	0.0	25.9	0.0	-19.2	0.000	0.000	0.000

LASTFALL 2, x (m)	S C H N I T T M li. (kNm)	T T K R Ä F T E M re. (kNm)	H li. (kN)	H re. (kN)	nach Th. II. O. / Phi li. Phi re. Rad E2 Rad E2	z-Ri. w (cm)	
12.58	8.6	0.0	7.5	0.0	0.781	0.000	2.747
12.38	6.7	6.7	8.1	8.1	0.787	0.787	2.590
12.03	3.3	3.3	9.0	9.0	0.793	0.793	2.313
11.68	-0.6	-0.6	10.0	10.0	0.795	0.795	2.035
11.33	-4.7	-4.7	11.0	11.0	0.792	0.792	1.757
10.98	-9.2	-9.2	12.0	12.0	0.782	0.782	1.481
10.63	-14.1	-14.1	13.0	13.0	0.766	0.766	1.209
10.28	-19.3	-19.3	13.9	13.9	0.736	0.736	0.946
9.93	-24.8	-24.8	14.9	14.9	0.691	0.691	0.696
9.71	-28.4	-28.4	15.5	15.5	0.653	0.653	0.548
9.58	-44.3	-30.7	15.9	15.9	0.631	0.631	0.464
9.31	-49.1	-49.1	16.7	16.7	0.551	0.551	0.304
9.08	-53.3	-53.3	17.3	17.3	0.472	0.472	0.186
8.91	-56.5	-56.5	17.8	17.8	0.407	0.407	0.112
8.58	-62.8	-62.8	-34.4	18.7	0.266	0.266	0.000
8.51	-60.5	-60.5	-34.2	-34.2	0.235	0.235	-0.018
8.11	-47.2	-47.2	-33.1	-33.1	0.086	0.086	-0.081
8.00	-43.6	-43.6	-32.7	-32.7	0.057	0.057	-0.089
7.71	-34.2	-34.2	-32.2	-32.2	-0.003	-0.003	-0.096
7.31	-21.4	-21.4	-31.5	-31.5	-0.053	-0.053	-0.084
7.08	-14.1	-14.1	-31.1	-31.1	-0.066	-0.066	-0.070
6.91	-8.8	-8.8	-30.8	-30.8	-0.073	-0.073	-0.058
6.58	-14.6	1.4	-30.2	-30.2	-0.077	-0.077	-0.033
6.51	-12.4	-12.4	-30.1	-30.1	-0.080	-0.080	-0.027
6.15	-1.4	-1.4	-29.4	-29.4	-0.089	-0.089	0.004
6.11	-0.3	-0.3	-29.3	-29.3	-0.089	-0.089	0.007
5.71	11.6	11.6	-28.6	-28.6	-0.081	-0.081	0.042
5.31	23.1	23.1	-27.9	-27.9	-0.057	-0.057	0.070
5.15	27.7	27.7	-27.6	-27.6	-0.042	-0.042	0.078
4.91	34.2	34.2	-27.2	-27.2	-0.017	-0.017	0.085
4.71	39.6	39.6	-26.8	-26.8	0.007	0.007	0.086
4.51	44.9	44.9	-26.5	-26.5	0.037	0.037	0.082
4.11	55.2	55.2	-25.7	-25.7	0.106	0.106	0.054
3.71	-55.8	64.2	-25.4	-25.0	0.164	0.164	0.000
3.60	-53.3	-53.3	-25.2	-25.2	0.145	0.145	-0.017
3.20	-44.3	-44.3	-24.5	-24.5	0.082	0.082	-0.062
2.80	-35.1	-35.1	-23.7	-23.7	0.031	0.031	-0.084
2.40	-25.8	-25.8	-23.0	-23.0	-0.007	-0.007	-0.089
2.00	-16.6	-16.6	-22.3	-22.3	-0.034	-0.034	-0.080
1.60	-7.5	-7.5	-21.6	-21.6	-0.049	-0.049	-0.063
1.20	1.5	1.5	-20.9	-20.9	-0.053	-0.053	-0.042
0.80	10.1	10.1	-20.1	-20.1	-0.046	-0.046	-0.021
0.40	18.3	18.3	-19.4	-19.4	-0.028	-0.028	-0.006
0.00	0.0	26.0	0.0	-18.7	0.000	0.000	0.000

LASTFALL 3, S C H N I T T K R Ä F T E nach Th. I. O. / y-Ri.							
x	M li.	M re.	H li.	H re.	Phi li.	Phi re.	w
(m)	(kNm)	(kNm)	(kN)	(kN)	Rad E2	Rad E2	(cm)
12.58	-46.7	0.0	0.0	0.0	0.960	0.000	1.928
12.38	-46.7	-46.7	0.0	0.0	0.904	0.904	1.742
12.03	-46.7	-46.7	0.0	0.0	0.807	0.807	1.442
11.68	-46.7	-46.7	0.0	0.0	0.709	0.709	1.177
11.33	-46.7	-46.7	0.0	0.0	0.612	0.612	0.946
10.98	-46.7	-46.7	0.0	0.0	0.514	0.514	0.749
10.63	-46.7	-46.7	0.0	0.0	0.418	0.418	0.585
10.28	-46.7	-46.7	0.0	0.0	0.321	0.321	0.456
9.93	-46.7	-46.7	0.0	0.0	0.225	0.225	0.360
9.71	-46.7	-46.7	0.0	0.0	0.164	0.164	0.317
9.58	-33.3	-46.7	-10.4	0.0	0.149	0.149	0.297
9.31	-30.5	-30.5	-10.4	-10.4	0.137	0.137	0.258
9.08	-28.1	-28.1	-10.4	-10.4	0.128	0.128	0.228
8.91	-26.4	-26.4	-10.4	-10.4	0.121	0.121	0.206
8.58	-22.9	-22.9	-10.4	-10.4	0.110	0.110	0.168
8.51	-22.2	-22.2	-10.4	-10.4	0.107	0.107	0.161
8.11	-18.0	-18.0	-10.4	-10.4	0.096	0.096	0.120
8.00	-16.9	-16.9	-10.4	-10.4	0.093	0.093	0.109
7.71	-13.9	-13.9	-10.4	-10.4	0.087	0.087	0.083
7.31	-9.7	-9.7	-10.4	-10.4	0.080	0.080	0.049
7.08	-46.0	-7.3	-10.4	-10.4	0.078	0.078	0.031
6.91	-44.2	-44.2	-10.4	-10.4	0.066	0.066	0.019
6.58	-120.9	-40.8	-113.7	-10.4	0.047	0.047	0.000
6.51	-112.9	-112.9	-113.7	-113.7	0.032	0.032	-0.003
6.15	-71.4	-71.4	-113.7	-113.7	-0.029	-0.029	-0.003
6.11	-67.5	-67.5	-113.7	-113.7	-0.032	-0.032	-0.001
5.71	-22.0	-22.0	-113.7	-113.7	-0.058	-0.058	0.018
5.31	23.5	23.5	-113.7	-113.7	-0.058	-0.058	0.042
5.15	42.3	42.3	-113.7	-113.7	-0.050	-0.050	0.051
4.91	69.0	69.0	-113.7	-113.7	-0.031	-0.031	0.061
4.71	91.7	91.7	11.3	-113.7	-0.004	-0.004	0.064
4.51	89.5	89.5	11.3	11.3	0.026	0.026	0.062
4.11	85.0	85.0	11.3	11.3	0.085	0.085	0.040
3.71	-101.5	80.4	-30.2	11.3	0.112	0.112	0.000
3.60	-98.1	-98.1	-30.2	-30.2	0.102	0.102	-0.012
3.20	-86.1	-86.1	-30.2	-30.2	0.067	0.067	-0.046
2.80	-74.0	-74.0	-30.2	-30.2	0.036	0.036	-0.066
2.40	-61.9	-61.9	-30.2	-30.2	0.011	0.011	-0.076
2.00	-49.8	-49.8	-30.2	-30.2	-0.009	-0.009	-0.076
1.60	-37.7	-37.7	-30.2	-30.2	-0.026	-0.026	-0.068
1.20	-25.7	-25.7	-30.2	-30.2	-0.038	-0.038	-0.055
0.80	-13.6	-13.6	-30.2	-30.2	-0.045	-0.045	-0.038
0.40	-1.5	-1.5	-30.2	-30.2	-0.048	-0.048	-0.019
0.00	0.0	10.6	0.0	-30.2	0.000	-0.046	0.000

LASTFALL 3, S C H N I T T K R Ä F T E nach Th. II. O. / y-Ri.							
x (m)	M li. (kNm)	M re. (kNm)	H li. (kN)	H re. (kN)	Phi li. Rad E2	Phi re. Rad E2	w (cm)
12.58	-46.7	0.0	0.0	0.0	1.053	0.000	2.152
12.38	-47.1	-47.1	0.0	0.0	0.996	0.996	1.947
12.03	-47.9	-47.9	0.0	0.0	0.895	0.895	1.616
11.68	-48.5	-48.5	0.0	0.0	0.792	0.792	1.320
11.33	-49.1	-49.1	0.0	0.0	0.688	0.688	1.061
10.98	-49.6	-49.6	0.0	0.0	0.582	0.582	0.839
10.63	-50.1	-50.1	0.0	0.0	0.474	0.474	0.654
10.28	-50.4	-50.4	0.0	0.0	0.366	0.366	0.507
9.93	-50.7	-50.7	0.0	0.0	0.256	0.256	0.398
9.71	-50.8	-50.8	0.0	0.0	0.186	0.186	0.349
9.58	-37.5	-50.8	-11.4	0.0	0.169	0.169	0.326
9.31	-34.6	-34.6	-11.4	-11.4	0.153	0.153	0.282
9.08	-32.1	-32.1	-11.4	-11.4	0.142	0.142	0.248
8.91	-30.2	-30.2	-11.4	-11.4	0.134	0.134	0.225
8.58	-26.6	-26.6	-11.4	-11.4	0.121	0.121	0.182
8.51	-25.8	-25.8	-11.4	-11.4	0.119	0.119	0.174
8.11	-21.4	-21.4	-11.4	-11.4	0.105	0.105	0.129
8.00	-20.2	-20.2	-11.4	-11.4	0.102	0.102	0.117
7.71	-17.0	-17.0	-11.4	-11.4	0.094	0.094	0.089
7.31	-12.6	-12.6	-11.4	-11.4	0.086	0.086	0.053
7.08	-48.7	-10.1	-11.4	-11.4	0.082	0.082	0.033
6.91	-46.8	-46.8	-11.4	-11.4	0.071	0.071	0.020
6.58	-123.4	-43.3	-115.1	-11.4	0.050	0.050	0.000
6.51	-115.4	-115.4	-115.1	-115.1	0.034	0.034	-0.003
6.15	-73.3	-73.3	-115.1	-115.1	-0.028	-0.028	-0.003
6.11	-69.3	-69.3	-115.1	-115.1	-0.032	-0.032	-0.002
5.71	-23.1	-23.1	-115.1	-115.1	-0.058	-0.058	0.017
5.31	23.2	23.2	-115.1	-115.1	-0.058	-0.058	0.041
5.15	42.3	42.3	-115.1	-115.1	-0.051	-0.051	0.051
4.91	69.4	69.4	-115.1	-115.1	-0.032	-0.032	0.061
4.71	92.5	92.5	9.9	-115.1	-0.004	-0.004	0.064
4.51	90.5	90.5	9.9	9.9	0.026	0.026	0.062
4.11	86.3	86.3	9.9	9.9	0.085	0.085	0.040
3.71	-100.4	81.5	-30.0	9.9	0.113	0.113	0.000
3.60	-97.4	-97.4	-30.0	-30.0	0.103	0.103	-0.012
3.20	-86.2	-86.2	-30.0	-30.0	0.068	0.068	-0.046
2.80	-74.7	-74.7	-30.0	-30.0	0.037	0.037	-0.067
2.40	-62.9	-62.9	-30.0	-30.0	0.011	0.011	-0.077
2.00	-50.9	-50.9	-30.0	-30.0	-0.009	-0.009	-0.077
1.60	-38.7	-38.7	-30.0	-30.0	-0.026	-0.026	-0.070
1.20	-26.4	-26.4	-30.0	-30.0	-0.039	-0.039	-0.056
0.80	-14.1	-14.1	-30.0	-30.0	-0.046	-0.046	-0.039
0.40	-1.6	-1.6	-30.0	-30.0	-0.049	-0.049	-0.020
0.00	0.0	10.8	0.0	-30.0	0.000	-0.047	0.000

LASTFALL 3, x (m)	S C H N I T T M li. (kNm)	T T K R Ä F T E M re. (kNm)	nach Th. H li. (kN)	I. O. / z-Ri. H re. (kN)	Phi li. Rad E2	Phi re. Rad E2	w (cm)
12.58	11.1	0.0	12.5	0.0	0.575	0.000	2.033
12.38	8.6	8.6	13.1	13.1	0.579	0.579	1.918
12.03	3.8	3.8	14.0	14.0	0.584	0.584	1.714
11.68	-1.3	-1.3	15.0	15.0	0.585	0.585	1.509
11.33	-6.7	-6.7	16.0	16.0	0.582	0.582	1.305
10.98	-12.5	-12.5	17.0	17.0	0.574	0.574	1.102
10.63	-18.6	-18.6	18.0	18.0	0.563	0.563	0.903
10.28	-25.0	-25.0	18.9	18.9	0.542	0.542	0.709
9.93	-31.8	-31.8	19.9	19.9	0.511	0.511	0.525
9.71	-36.3	-36.3	20.5	20.5	0.486	0.486	0.415
9.58	-59.9	-39.0	20.9	20.9	0.471	0.471	0.353
9.31	-65.7	-65.7	21.7	21.7	0.414	0.414	0.233
9.08	-70.7	-70.7	22.3	22.3	0.358	0.358	0.144
8.91	-74.6	-74.6	22.8	22.8	0.313	0.313	0.087
8.58	-82.2	-82.2	-41.8	23.7	0.212	0.212	0.000
8.51	-79.3	-79.3	-41.6	-41.6	0.189	0.189	-0.014
8.11	-62.9	-62.9	-40.5	-40.5	0.081	0.081	-0.068
8.00	-58.5	-58.5	-40.1	-40.1	0.060	0.060	-0.075
7.71	-46.9	-46.9	-39.6	-39.6	0.013	0.013	-0.086
7.31	-31.2	-31.2	-38.9	-38.9	-0.026	-0.026	-0.083
7.08	-24.8	-22.3	-38.5	-38.5	-0.037	-0.037	-0.075
6.91	-18.3	-18.3	-38.2	-38.2	-0.044	-0.044	-0.068
6.58	-21.8	-5.8	-37.6	-37.6	-0.051	-0.051	-0.052
6.51	-19.2	-19.2	-37.5	-37.5	-0.053	-0.053	-0.049
6.15	-5.7	-5.7	-36.8	-36.8	-0.062	-0.062	-0.027
6.11	-4.4	-4.4	-36.7	-36.7	-0.062	-0.062	-0.025
5.71	10.2	10.2	-36.0	-36.0	-0.060	-0.060	0.000
5.31	24.4	24.4	-35.3	-35.3	-0.047	-0.047	0.022
5.15	30.2	30.2	-35.0	-35.0	-0.039	-0.039	0.029
4.91	38.4	38.4	-34.6	-34.6	-0.024	-0.024	0.037
4.71	45.3	45.3	-34.2	-34.2	-0.009	-0.009	0.040
4.51	52.1	52.1	-33.9	-33.9	0.008	0.008	0.040
4.11	65.5	65.5	-33.1	-33.1	0.051	0.051	0.028
3.71	-66.4	78.6	-29.3	-32.4	0.090	0.090	0.000
3.60	-63.2	-63.2	-29.2	-29.2	0.079	0.079	-0.009
3.20	-51.6	-51.6	-28.4	-28.4	0.044	0.044	-0.034
2.80	-40.4	-40.4	-27.7	-27.7	0.016	0.016	-0.046
2.40	-29.5	-29.5	-27.0	-27.0	-0.004	-0.004	-0.048
2.00	-18.8	-18.8	-26.3	-26.3	-0.018	-0.018	-0.044
1.60	-8.5	-8.5	-25.6	-25.6	-0.027	-0.027	-0.034
1.20	1.6	1.6	-24.8	-24.8	-0.029	-0.029	-0.023
0.80	11.4	11.4	-24.1	-24.1	-0.025	-0.025	-0.012
0.40	20.9	20.9	-23.4	-23.4	-0.015	-0.015	-0.003
0.00	0.0	30.1	0.0	-22.7	0.000	0.000	0.000

LASTFALL 3, S C H N I T T K R Ä F T E nach Th. II. O. / z-Ri.							
x	M li.	M re.	H li.	H re.	Phi li.	Phi re.	w
(m)	(kNm)	(kNm)	(kN)	(kN)	Rad E2	Rad E2	(cm)
12.58	11.1	0.0	12.5	0.0	0.684	0.000	2.398
12.38	8.3	8.3	13.1	13.1	0.689	0.689	2.260
12.03	3.0	3.0	14.0	14.0	0.693	0.693	2.018
11.68	-2.7	-2.7	15.0	15.0	0.693	0.693	1.775
11.33	-8.6	-8.6	16.0	16.0	0.689	0.689	1.533
10.98	-15.0	-15.0	17.0	17.0	0.680	0.680	1.294
10.63	-21.6	-21.6	18.0	18.0	0.663	0.663	1.058
10.28	-28.6	-28.6	18.9	18.9	0.636	0.636	0.830
9.93	-35.9	-35.9	19.9	19.9	0.598	0.598	0.614
9.71	-40.6	-40.6	20.5	20.5	0.567	0.567	0.486
9.58	-64.5	-43.6	20.9	20.9	0.548	0.548	0.413
9.31	-70.8	-70.8	21.7	21.7	0.483	0.483	0.274
9.08	-76.2	-76.2	22.3	22.3	0.419	0.419	0.170
8.91	-80.3	-80.3	22.8	22.8	0.367	0.367	0.103
8.58	-88.3	-88.3	-43.6	23.7	0.253	0.253	0.000
8.51	-85.3	-85.3	-43.4	-43.4	0.228	0.228	-0.017
8.11	-68.4	-68.4	-42.3	-42.3	0.104	0.104	-0.082
8.00	-63.8	-63.8	-42.0	-42.0	0.078	0.078	-0.093
7.71	-51.8	-51.8	-41.4	-41.4	0.023	0.023	-0.107
7.31	-35.4	-35.4	-40.7	-40.7	-0.025	-0.025	-0.106
7.08	-28.5	-26.0	-40.3	-40.3	-0.040	-0.040	-0.098
6.91	-21.7	-21.7	-40.0	-40.0	-0.048	-0.048	-0.091
6.58	-24.4	-8.4	-39.4	-39.4	-0.057	-0.057	-0.073
6.51	-21.6	-21.6	-39.3	-39.3	-0.060	-0.060	-0.069
6.15	-7.2	-7.2	-38.6	-38.6	-0.070	-0.070	-0.045
6.11	-5.8	-5.8	-38.6	-38.6	-0.070	-0.070	-0.042
5.71	9.7	9.7	-37.8	-37.8	-0.069	-0.069	-0.014
5.31	24.9	24.9	-37.1	-37.1	-0.056	-0.056	0.012
5.15	31.1	31.1	-36.8	-36.8	-0.047	-0.047	0.020
4.91	39.8	39.8	-36.4	-36.4	-0.032	-0.032	0.030
4.71	47.1	47.1	-36.0	-36.0	-0.016	-0.016	0.035
4.51	54.3	54.3	-35.7	-35.7	0.002	0.002	0.036
4.11	68.3	68.3	-35.0	-35.0	0.047	0.047	0.027
3.71	-63.4	81.6	-28.3	-34.2	0.087	0.087	0.000
3.60	-60.5	-60.5	-28.1	-28.1	0.077	0.077	-0.009
3.20	-50.0	-50.0	-27.4	-27.4	0.043	0.043	-0.033
2.80	-39.4	-39.4	-26.7	-26.7	0.016	0.016	-0.045
2.40	-28.9	-28.9	-26.0	-26.0	-0.004	-0.004	-0.047
2.00	-18.5	-18.5	-25.3	-25.3	-0.018	-0.018	-0.043
1.60	-8.4	-8.4	-24.5	-24.5	-0.026	-0.026	-0.033
1.20	1.6	1.6	-23.8	-23.8	-0.028	-0.028	-0.022
0.80	11.2	11.2	-23.1	-23.1	-0.024	-0.024	-0.011
0.40	20.5	20.5	-22.4	-22.4	-0.015	-0.015	-0.003
0.00	0.0	29.3	0.0	-21.7	0.000	0.000	0.000

LASTFALL 1, B E M E S S U N G für Schnittkräfte nach Th. I. O.

x (m)	Nx (kN)	M (kNm)	b (cm)	d (cm)	d1 (cm)	kx (-)	kz (-)	Mü (%)	As (cm ²)
12.58	-222.3	48.0	40.0	35.0	5.0	0.44	0.82	0.80	5.99
12.38	-223.0	48.0	40.0	35.0	5.0	0.44	0.82	0.80	5.98
12.03	-224.2	47.5	40.0	35.0	5.0	0.45	0.81	0.80	5.86
11.68	-225.4	-46.7	40.0	35.0	5.0	0.47	0.81	0.80	5.70
11.33	-226.7	-46.7	40.0	35.0	5.0	0.47	0.81	0.80	5.68
10.98	-227.9	48.3	40.0	35.0	5.0	0.45	0.81	0.80	5.97
10.63	-229.1	50.2	40.0	35.0	5.0	0.43	0.82	0.80	6.32
10.28	-230.3	53.0	40.0	35.0	5.0	0.41	0.83	0.80	6.85
9.93	-231.6	56.5	40.0	35.0	5.0	0.39	0.84	0.80	7.61
9.71	-232.3	59.1	40.0	35.0	5.0	0.38	0.84	0.80	8.18
9.58	-232.8	60.8	40.0	35.0	5.0	0.38	0.85	0.80	8.56
9.31	-354.0	71.6	45.0	40.0	5.0	0.57	0.76	0.80	7.19
9.08	-355.0	74.9	45.0	40.0	5.0	0.54	0.78	0.80	7.43
8.91	-355.8	77.6	45.0	40.0	5.0	0.52	0.78	0.80	7.76
8.58	-357.3	83.7	45.0	40.0	5.0	0.47	0.80	0.80	8.57
8.51	-357.6	83.7	45.0	40.0	5.0	0.47	0.80	0.80	8.57
8.11	-359.4	80.6	45.0	40.0	5.0	0.50	0.79	0.80	8.13
8.00	-359.9	-62.6	45.0	40.0	5.0	0.63	0.74	0.80	6.63
7.71	-361.2	-58.1	45.0	40.0	5.0	0.66	0.73	0.80	6.35
7.31	-363.0	-46.3	45.0	40.0	5.0	0.74	0.69	0.80	5.59
7.08	-364.0	31.1	45.0	40.0	5.0	0.91	0.62	0.80	4.62
6.91	-590.4	36.8	45.0	40.0	5.0	1.03	0.57	0.80	6.67
6.58	-591.9	30.3	45.0	40.0	5.0	1.10	0.54	0.80	6.28
6.51	-912.7	-99.3	40.0	45.0	5.0	0.85	0.65	0.80	12.11
6.15	-914.4	-94.0	40.0	45.0	5.0	0.88	0.64	0.80	11.84
6.11	-914.5	-66.2	40.0	45.0	5.0	1.01	0.58	0.80	10.41
5.71	-916.3	-63.5	40.0	45.0	5.0	1.03	0.57	0.80	10.27
5.31	-918.1	35.2	45.0	40.0	5.0	1.14	0.51	0.80	9.07
5.15	-918.9	34.1	45.0	40.0	5.0	1.14	0.51	0.80	9.01
4.91	-919.9	49.5	45.0	40.0	5.0	1.08	0.55	0.80	9.90
4.71	-920.8	64.5	45.0	40.0	5.0	0.99	0.59	0.80	10.87
4.51	-921.7	80.1	45.0	40.0	5.0	0.90	0.63	0.80	11.80
4.11	-923.5	112.2	45.0	40.0	5.0	0.76	0.68	0.80	13.85
3.71	-925.3	144.8	45.0	40.0	5.0	0.71	0.71	1.18	21.24
3.60	-2225.9	88.8	50.0	40.0	5.0	1.14	0.49	2.44	48.80
3.20	-2227.9	85.1	50.0	40.0	5.0	1.14	0.48	2.40	48.00
2.80	-2229.9	71.7	50.0	40.0	5.0	1.14	0.47	2.22	44.40
2.40	-2231.9	58.6	50.0	40.0	5.0	1.14	0.46	2.02	40.40
2.00	-2233.9	45.8	50.0	40.0	5.0	1.14	0.45	1.86	37.20
1.60	-2235.9	33.5	50.0	40.0	5.0	1.14	0.44	1.68	33.60
1.20	-2237.9	21.9	50.0	40.0	5.0	1.14	0.44	1.56	31.20
0.80	-2239.9	11.7	50.0	40.0	5.0	1.14	0.43	1.50	30.00
0.40	-2241.9	20.2	50.0	40.0	5.0	1.14	0.43	1.56	31.20
0.00	-2243.9	30.8	50.0	40.0	5.0	1.14	0.44	1.66	33.20

LASTFALL 1, B E M E S S U N G für Schnittkräfte nach Th. II. O.

x (m)	Nx (kN)	M (kNm)	b (cm)	d (cm)	d1 (cm)	kx (-)	kz (-)	Mü (%)	As (cm ²)
12.58	-222.3	-49.1	40.0	35.0	5.0	0.43	0.82	0.80	6.19
12.38	-223.0	50.8	40.0	35.0	5.0	0.41	0.83	0.80	6.52
12.03	-224.2	-51.5	40.0	35.0	5.0	0.41	0.83	0.80	6.64
11.68	-225.4	-52.8	40.0	35.0	5.0	0.40	0.83	0.80	6.92
11.33	-226.7	55.3	40.0	35.0	5.0	0.39	0.84	0.80	7.44
10.98	-227.9	58.3	40.0	35.0	5.0	0.38	0.84	0.80	8.09
10.63	-229.1	62.0	40.0	35.0	5.0	0.37	0.85	0.80	8.93
10.28	-230.3	66.5	40.0	35.0	5.0	0.35	0.86	0.80	9.95
9.93	-231.6	71.7	40.0	35.0	5.0	0.34	0.87	0.80	11.15
9.71	-232.3	75.3	40.0	35.0	5.0	0.34	0.86	0.88	12.32
9.58	-232.8	75.9	40.0	35.0	5.0	0.34	0.86	0.88	12.32
9.31	-354.0	91.2	45.0	40.0	5.0	0.42	0.83	0.80	9.76
9.08	-355.0	95.4	45.0	40.0	5.0	0.40	0.83	0.80	10.52
8.91	-355.8	98.9	45.0	40.0	5.0	0.39	0.84	0.80	11.16
8.58	-357.3	98.4	45.0	40.0	5.0	0.39	0.84	0.80	11.04
8.51	-357.6	98.4	45.0	40.0	5.0	0.39	0.84	0.80	11.03
8.11	-359.4	95.1	45.0	40.0	5.0	0.41	0.83	0.80	10.37
8.00	-359.9	-75.2	45.0	40.0	5.0	0.55	0.77	0.80	7.43
7.71	-361.2	-70.3	45.0	40.0	5.0	0.59	0.75	0.80	6.86
7.31	-363.0	-57.6	45.0	40.0	5.0	0.66	0.73	0.80	5.86
7.08	-364.0	-40.2	45.0	40.0	5.0	0.80	0.67	0.80	4.55
6.91	-590.4	45.4	45.0	40.0	5.0	0.95	0.60	0.80	6.06
6.58	-591.9	37.9	45.0	40.0	5.0	1.02	0.58	0.80	5.64
6.51	-912.7	105.7	45.0	40.0	5.0	0.78	0.67	0.80	11.76
6.15	-914.4	99.8	45.0	40.0	5.0	0.81	0.66	0.80	11.34
6.11	-914.5	-68.8	40.0	45.0	5.0	1.00	0.59	0.80	8.81
5.71	-916.3	-66.1	40.0	45.0	5.0	1.01	0.58	0.80	8.68
5.31	-918.1	36.5	45.0	40.0	5.0	1.14	0.51	0.80	7.61
5.15	-918.9	34.3	45.0	40.0	5.0	1.14	0.51	0.80	7.52
4.91	-919.9	50.5	45.0	40.0	5.0	1.07	0.55	0.80	8.30
4.71	-920.8	66.1	45.0	40.0	5.0	0.98	0.59	0.80	9.17
4.51	-921.7	82.2	45.0	40.0	5.0	0.89	0.63	0.80	10.18
4.11	-923.5	115.1	45.0	40.0	5.0	0.75	0.69	0.80	12.50
3.71	-925.3	147.1	45.0	40.0	5.0	0.67	0.72	0.92	16.56
3.60	-2225.9	85.9	50.0	40.0	5.0	1.14	0.50	1.44	28.80
3.20	-2227.9	82.9	50.0	40.0	5.0	1.14	0.49	1.40	28.00
2.80	-2229.9	71.4	50.0	40.0	5.0	1.14	0.48	1.26	25.20
2.40	-2231.9	59.6	50.0	40.0	5.0	1.14	0.47	1.12	22.40
2.00	-2233.9	47.4	50.0	40.0	5.0	1.14	0.46	0.98	19.60
1.60	-2235.9	35.3	50.0	40.0	5.0	1.14	0.45	0.84	16.80
1.20	-2237.9	23.6	50.0	40.0	5.0	1.14	0.44	0.80	15.62
0.80	-2239.9	11.8	50.0	40.0	5.0	1.14	0.43	0.80	15.25
0.40	-2241.9	19.8	50.0	40.0	5.0	1.14	0.44	0.80	15.47
0.00	-2243.9	30.3	50.0	40.0	5.0	1.14	0.45	0.80	15.96

LASTFALL 2, B E M E S S U N G für Schnittkräfte nach Th. I. O.

x (m)	Nx (kN)	M (kNm)	b (cm)	d (cm)	d1 (cm)	kx (-)	kz (-)	Mü (%)	As (cm ²)
12.58	-171.0	36.9	40.0	35.0	5.0	0.44	0.82	0.80	4.61
12.38	-171.7	36.9	40.0	35.0	5.0	0.44	0.82	0.80	4.60
12.03	-172.9	36.6	40.0	35.0	5.0	0.45	0.81	0.80	4.52
11.68	-174.1	-35.9	40.0	35.0	5.0	0.47	0.81	0.80	4.38
11.33	-175.4	-35.9	40.0	35.0	5.0	0.47	0.80	0.80	4.36
10.98	-176.6	36.6	40.0	35.0	5.0	0.47	0.81	0.80	4.47
10.63	-177.8	37.7	40.0	35.0	5.0	0.45	0.81	0.80	4.66
10.28	-179.0	39.4	40.0	35.0	5.0	0.43	0.82	0.80	4.96
9.93	-180.3	41.7	40.0	35.0	5.0	0.41	0.83	0.80	5.41
9.71	-181.0	43.5	40.0	35.0	5.0	0.40	0.84	0.80	5.79
9.58	-181.5	44.7	40.0	35.0	5.0	0.39	0.84	0.80	6.05
9.31	-267.7	50.1	45.0	40.0	5.0	0.61	0.75	0.80	5.16
9.08	-268.7	52.3	45.0	40.0	5.0	0.60	0.75	0.80	5.31
8.91	-269.5	54.3	45.0	40.0	5.0	0.57	0.76	0.80	5.46
8.58	-271.0	58.8	45.0	40.0	5.0	0.52	0.78	0.80	5.87
8.51	-271.3	58.8	45.0	40.0	5.0	0.52	0.78	0.80	5.87
8.11	-273.1	56.4	45.0	40.0	5.0	0.56	0.77	0.80	5.63
8.00	-273.6	-42.3	45.0	40.0	5.0	0.67	0.72	0.80	4.70
7.71	-274.9	-38.9	45.0	40.0	5.0	0.70	0.71	0.80	4.48
7.31	-276.7	-29.9	45.0	40.0	5.0	0.81	0.66	0.80	3.91
7.08	-277.7	18.7	45.0	40.0	5.0	1.00	0.58	0.80	3.24
6.91	-453.5	22.0	45.0	40.0	5.0	1.11	0.54	0.80	4.73
6.58	-455.0	17.6	45.0	40.0	5.0	1.14	0.51	0.80	4.50
6.51	-775.8	-92.0	40.0	45.0	5.0	0.82	0.66	0.80	10.71
6.15	-777.5	-87.0	40.0	45.0	5.0	0.84	0.65	0.80	10.45
6.11	-777.6	-60.9	40.0	45.0	5.0	0.98	0.59	0.80	9.10
5.71	-779.4	-58.4	40.0	45.0	5.0	1.00	0.58	0.80	8.99
5.31	-781.2	32.1	45.0	40.0	5.0	1.14	0.52	0.80	7.83
5.15	-782.0	28.7	45.0	40.0	5.0	1.14	0.51	0.80	7.65
4.91	-783.0	42.5	45.0	40.0	5.0	1.08	0.55	0.80	8.46
4.71	-783.9	56.1	45.0	40.0	5.0	0.98	0.59	0.80	9.32
4.51	-784.8	70.2	45.0	40.0	5.0	0.89	0.63	0.80	10.17
4.11	-786.6	99.3	45.0	40.0	5.0	0.75	0.69	0.80	12.03
3.71	-788.4	128.7	45.0	40.0	5.0	0.65	0.73	0.80	13.98
3.60	-1989.0	89.0	50.0	40.0	5.0	1.14	0.50	1.96	39.20
3.20	-1991.0	85.4	50.0	40.0	5.0	1.14	0.50	1.92	38.40
2.80	-1993.0	72.3	50.0	40.0	5.0	1.14	0.49	1.72	34.40
2.40	-1995.0	59.5	50.0	40.0	5.0	1.14	0.48	1.54	30.80
2.00	-1997.0	47.0	50.0	40.0	5.0	1.14	0.46	1.38	27.60
1.60	-1999.0	34.9	50.0	40.0	5.0	1.14	0.45	1.20	24.00
1.20	-2001.0	23.5	50.0	40.0	5.0	1.14	0.44	1.04	20.80
0.80	-2003.0	-13.8	40.0	50.0	5.0	1.11	0.45	0.92	18.40
0.40	-2005.0	18.4	50.0	40.0	5.0	1.14	0.44	0.98	19.60
0.00	-2007.0	28.5	50.0	40.0	5.0	1.14	0.45	1.14	22.80

LASTFALL 2, B E M E S S U N G für Schnittkräfte nach Th. II. O.

x (m)	Nx (kN)	M (kNm)	b (cm)	d (cm)	d1 (cm)	kx (-)	kz (-)	Mü (%)	As (cm ²)
12.58	-171.0	-37.3	40.0	35.0	5.0	0.44	0.82	0.80	4.68
12.38	-171.7	38.5	40.0	35.0	5.0	0.42	0.82	0.80	4.91
12.03	-172.9	-38.6	40.0	35.0	5.0	0.42	0.82	0.80	4.91
11.68	-174.1	-39.4	40.0	35.0	5.0	0.42	0.83	0.80	5.04
11.33	-175.4	-40.0	40.0	35.0	5.0	0.41	0.83	0.80	5.15
10.98	-176.6	41.8	40.0	35.0	5.0	0.40	0.83	0.80	5.51
10.63	-177.8	43.7	40.0	35.0	5.0	0.39	0.84	0.80	5.91
10.28	-179.0	46.2	40.0	35.0	5.0	0.38	0.85	0.80	6.44
9.93	-180.3	49.2	40.0	35.0	5.0	0.37	0.85	0.80	7.12
9.71	-181.0	51.4	40.0	35.0	5.0	0.36	0.86	0.80	7.62
9.58	-181.5	51.7	40.0	35.0	5.0	0.36	0.86	0.80	7.68
9.31	-267.7	59.1	45.0	40.0	5.0	0.51	0.79	0.80	5.93
9.08	-268.7	61.6	45.0	40.0	5.0	0.48	0.80	0.80	6.26
8.91	-269.5	63.9	45.0	40.0	5.0	0.46	0.81	0.80	6.57
8.58	-271.0	64.8	45.0	40.0	5.0	0.46	0.81	0.80	6.69
8.51	-271.3	64.8	45.0	40.0	5.0	0.46	0.81	0.80	6.69
8.11	-273.1	62.3	45.0	40.0	5.0	0.49	0.80	0.80	6.32
8.00	-273.6	48.0	45.0	40.0	5.0	0.63	0.74	0.80	4.78
7.71	-274.9	-43.6	45.0	40.0	5.0	0.66	0.73	0.80	4.43
7.31	-276.7	-34.2	45.0	40.0	5.0	0.76	0.69	0.80	3.72
7.08	-277.7	-21.4	45.0	40.0	5.0	0.95	0.60	0.80	2.86
6.91	-453.5	25.4	45.0	40.0	5.0	1.07	0.56	0.80	4.12
6.58	-455.0	20.5	45.0	40.0	5.0	1.13	0.53	0.80	3.89
6.51	-775.8	-93.7	40.0	45.0	5.0	0.81	0.66	0.80	9.44
6.15	-777.5	-88.7	40.0	45.0	5.0	0.83	0.65	0.80	9.14
6.11	-777.6	-62.4	40.0	45.0	5.0	0.97	0.60	0.80	7.68
5.71	-779.4	-59.9	40.0	45.0	5.0	0.99	0.59	0.80	7.57
5.31	-781.2	32.9	45.0	40.0	5.0	1.14	0.52	0.80	6.56
5.15	-782.0	29.6	45.0	40.0	5.0	1.14	0.51	0.80	6.42
4.91	-783.0	44.0	45.0	40.0	5.0	1.07	0.56	0.80	7.12
4.71	-783.9	57.9	45.0	40.0	5.0	0.97	0.60	0.80	7.90
4.51	-784.8	72.3	45.0	40.0	5.0	0.88	0.64	0.80	8.82
4.11	-786.6	101.8	45.0	40.0	5.0	0.74	0.69	0.80	10.92
3.71	-788.4	130.5	45.0	40.0	5.0	0.65	0.73	0.80	13.15
3.60	-1989.0	87.0	50.0	40.0	5.0	1.14	0.52	1.04	20.80
3.20	-1991.0	83.8	50.0	40.0	5.0	1.14	0.52	1.00	20.00
2.80	-1993.0	72.2	50.0	40.0	5.0	1.14	0.50	0.86	17.20
2.40	-1995.0	60.3	50.0	40.0	5.0	1.14	0.49	0.80	15.69
2.00	-1997.0	48.3	50.0	40.0	5.0	1.14	0.47	0.80	15.16
1.60	-1999.0	36.3	50.0	40.0	5.0	1.14	0.46	0.80	14.63
1.20	-2001.0	24.7	50.0	40.0	5.0	1.14	0.45	0.80	14.12
0.80	-2003.0	11.5	50.0	40.0	5.0	1.14	0.43	0.80	13.66
0.40	-2005.0	18.6	50.0	40.0	5.0	1.14	0.44	0.80	13.88
0.00	-2007.0	28.8	50.0	40.0	5.0	1.14	0.45	0.80	14.35

LASTFALL 3, B E M E S S U N G für Schnittkräfte nach Th. I. O.

x (m)	Nx (kN)	M (kNm)	b (cm)	d (cm)	d1 (cm)	kx (-)	kz (-)	Mü (%)	As (cm ²)
12.58	-222.3	48.0	40.0	35.0	5.0	0.44	0.82	0.80	3.42
12.38	-223.0	48.0	40.0	35.0	5.0	0.44	0.82	0.80	3.42
12.03	-224.2	47.5	40.0	35.0	5.0	0.45	0.81	0.80	3.35
11.68	-225.4	-46.7	40.0	35.0	5.0	0.47	0.81	0.80	3.26
11.33	-226.7	-46.7	40.0	35.0	5.0	0.47	0.81	0.80	3.25
10.98	-227.9	48.3	40.0	35.0	5.0	0.45	0.81	0.80	3.41
10.63	-229.1	50.2	40.0	35.0	5.0	0.43	0.82	0.80	3.61
10.28	-230.3	53.0	40.0	35.0	5.0	0.41	0.83	0.80	3.91
9.93	-231.6	56.5	40.0	35.0	5.0	0.39	0.84	0.80	4.35
9.71	-232.3	59.1	40.0	35.0	5.0	0.38	0.84	0.80	4.68
9.58	-232.8	60.8	40.0	35.0	5.0	0.38	0.85	0.80	4.89
9.31	-354.0	72.4	45.0	40.0	5.0	0.56	0.77	0.80	4.07
9.08	-355.0	76.1	45.0	40.0	5.0	0.53	0.78	0.80	4.33
8.91	-355.8	79.1	45.0	40.0	5.0	0.51	0.79	0.80	4.55
8.58	-357.3	85.4	45.0	40.0	5.0	0.46	0.81	0.80	5.03
8.51	-357.6	85.4	45.0	40.0	5.0	0.46	0.81	0.80	5.03
8.11	-359.4	82.4	45.0	40.0	5.0	0.49	0.80	0.80	4.78
8.00	-359.9	65.4	45.0	40.0	5.0	0.62	0.74	0.80	3.69
7.71	-361.2	60.9	45.0	40.0	5.0	0.64	0.73	0.80	3.49
7.31	-363.0	48.9	45.0	40.0	5.0	0.72	0.70	0.80	2.97
7.08	-364.0	32.7	45.0	40.0	5.0	0.89	0.63	0.80	2.31
6.91	-590.4	52.2	45.0	40.0	5.0	0.89	0.63	0.80	3.71
6.58	-591.9	47.8	45.0	40.0	5.0	0.93	0.61	0.80	3.56
6.51	-912.7	-120.9	40.0	45.0	5.0	0.77	0.68	0.80	6.72
6.15	-914.4	-112.9	40.0	45.0	5.0	0.80	0.67	0.80	6.44
6.11	-914.5	-71.4	40.0	45.0	5.0	0.98	0.59	0.80	5.11
5.71	-916.3	-67.5	40.0	45.0	5.0	1.00	0.58	0.80	5.00
5.31	-918.1	33.9	45.0	40.0	5.0	1.14	0.51	0.80	4.29
5.15	-918.9	52.0	45.0	40.0	5.0	1.06	0.56	0.80	4.79
4.91	-919.9	79.0	45.0	40.0	5.0	0.91	0.62	0.80	5.69
4.71	-920.8	102.3	45.0	40.0	5.0	0.80	0.67	0.80	6.60
4.51	-921.7	103.5	45.0	40.0	5.0	0.79	0.67	0.80	6.65
4.11	-923.5	107.3	45.0	40.0	5.0	0.78	0.68	0.80	6.81
3.71	-925.3	112.5	45.0	40.0	5.0	0.76	0.68	0.80	7.03
3.60	-2225.9	121.3	50.0	40.0	5.0	1.08	0.55	0.80	11.45
3.20	-2227.9	116.7	50.0	40.0	5.0	1.09	0.55	0.80	11.33
2.80	-2229.9	100.4	50.0	40.0	5.0	1.13	0.53	0.80	10.88
2.40	-2231.9	84.3	50.0	40.0	5.0	1.14	0.51	0.80	10.46
2.00	-2233.9	68.6	50.0	40.0	5.0	1.14	0.49	0.80	10.07
1.60	-2235.9	53.3	50.0	40.0	5.0	1.14	0.47	0.80	9.68
1.20	-2237.9	-37.7	40.0	50.0	5.0	1.11	0.46	0.80	9.06
0.80	-2239.9	-25.7	40.0	50.0	5.0	1.11	0.45	0.80	8.83
0.40	-2241.9	20.9	50.0	40.0	5.0	1.14	0.44	0.80	8.87
0.00	-2243.9	31.9	50.0	40.0	5.0	1.14	0.45	0.80	9.16

LASTFALL 3, B E M E S S U N G für Schnittkräfte nach Th. II. O.

x (m)	Nx (kN)	M (kNm)	b (cm)	d (cm)	d1 (cm)	kx (-)	kz (-)	Mü (%)	As (cm ²)
12.58	-222.3	-46.7	40.0	35.0	5.0	0.46	0.81	0.80	3.28
12.38	-223.0	48.0	40.0	35.0	5.0	0.44	0.82	0.80	3.42
12.03	-224.2	-47.9	40.0	35.0	5.0	0.45	0.81	0.80	3.39
11.68	-225.4	-48.5	40.0	35.0	5.0	0.44	0.82	0.80	3.46
11.33	-226.7	49.9	40.0	35.0	5.0	0.43	0.82	0.80	3.59
10.98	-227.9	51.8	40.0	35.0	5.0	0.41	0.83	0.80	3.80
10.63	-229.1	54.5	40.0	35.0	5.0	0.40	0.83	0.80	4.13
10.28	-230.3	58.0	40.0	35.0	5.0	0.39	0.84	0.80	4.55
9.93	-231.6	62.1	40.0	35.0	5.0	0.37	0.85	0.80	5.07
9.71	-232.3	65.0	40.0	35.0	5.0	0.36	0.86	0.80	5.46
9.58	-232.8	67.0	40.0	35.0	5.0	0.36	0.86	0.80	5.71
9.31	-354.0	78.8	45.0	40.0	5.0	0.50	0.79	0.80	4.53
9.08	-355.0	82.7	45.0	40.0	5.0	0.47	0.80	0.80	4.83
8.91	-355.8	85.8	45.0	40.0	5.0	0.45	0.81	0.80	5.07
8.58	-357.3	92.2	45.0	40.0	5.0	0.41	0.83	0.80	5.65
8.51	-357.6	92.2	45.0	40.0	5.0	0.41	0.83	0.80	5.65
8.11	-359.4	89.2	45.0	40.0	5.0	0.44	0.82	0.80	5.35
8.00	-359.9	71.7	45.0	40.0	5.0	0.58	0.76	0.80	4.01
7.71	-361.2	67.0	45.0	40.0	5.0	0.61	0.75	0.80	3.77
7.31	-363.0	54.5	45.0	40.0	5.0	0.68	0.72	0.80	3.21
7.08	-364.0	37.5	45.0	40.0	5.0	0.83	0.65	0.80	2.49
6.91	-590.4	56.4	45.0	40.0	5.0	0.86	0.64	0.80	3.87
6.58	-591.9	51.6	45.0	40.0	5.0	0.90	0.63	0.80	3.69
6.51	-912.7	-123.4	40.0	45.0	5.0	0.76	0.68	0.80	6.81
6.15	-914.4	-115.4	40.0	45.0	5.0	0.79	0.67	0.80	6.53
6.11	-914.5	-73.3	40.0	45.0	5.0	0.97	0.60	0.80	5.16
5.71	-916.3	-69.3	40.0	45.0	5.0	0.99	0.59	0.80	5.05
5.31	-918.1	34.1	45.0	40.0	5.0	1.14	0.51	0.80	4.29
5.15	-918.9	52.5	45.0	40.0	5.0	1.06	0.56	0.80	4.80
4.91	-919.9	80.0	45.0	40.0	5.0	0.90	0.63	0.80	5.73
4.71	-920.8	103.8	45.0	40.0	5.0	0.79	0.67	0.80	6.66
4.51	-921.7	105.5	45.0	40.0	5.0	0.79	0.67	0.80	6.74
4.11	-923.5	110.1	45.0	40.0	5.0	0.77	0.68	0.80	6.93
3.71	-925.3	115.3	45.0	40.0	5.0	0.75	0.69	0.80	7.15
3.60	-2225.9	118.8	50.0	40.0	5.0	1.08	0.55	0.80	11.38
3.20	-2227.9	114.7	50.0	40.0	5.0	1.09	0.54	0.80	11.27
2.80	-2229.9	99.6	50.0	40.0	5.0	1.14	0.53	0.80	10.85
2.40	-2231.9	84.4	50.0	40.0	5.0	1.14	0.51	0.80	10.47
2.00	-2233.9	69.2	50.0	40.0	5.0	1.14	0.49	0.80	10.08
1.60	-2235.9	54.2	50.0	40.0	5.0	1.14	0.47	0.80	9.70
1.20	-2237.9	-38.7	40.0	50.0	5.0	1.11	0.46	0.80	9.08
0.80	-2239.9	-26.4	40.0	50.0	5.0	1.11	0.45	0.80	8.85
0.40	-2241.9	20.5	50.0	40.0	5.0	1.14	0.44	0.80	8.86
0.00	-2243.9	31.3	50.0	40.0	5.0	1.14	0.45	0.80	9.14

LASTFALL 1, M-K-BEZIEHUNG für Schnittkräfte nach Th. I. O.

x (m)	Nx (kN)	MIz (kNm)	As (cm ²)	Ebo (o/oo)	Es (o/oo)	k (1/m)	BIz (kNm ²)
12.58	-222.3	-46.7	19.64	-0.833	0.688	0.005072	9203.0
12.38	-223.0	-46.7	19.64	-0.833	0.688	0.005072	9203.0
12.03	-224.2	-46.7	19.64	-0.836	0.688	0.005081	9187.3
11.68	-225.4	-46.7	19.64	-0.839	0.688	0.005090	9171.8
11.33	-226.7	-46.7	19.64	-0.836	0.679	0.005048	9246.9
10.98	-227.9	-46.7	19.64	-0.832	0.670	0.005006	9324.7
10.63	-229.1	-46.7	19.64	-0.835	0.670	0.005015	9308.7
10.28	-230.3	-46.7	19.64	-0.837	0.670	0.005023	9292.9
9.93	-231.6	-46.7	19.64	-0.840	0.670	0.005032	9275.7
9.71	-232.3	-46.7	19.64	-0.842	0.670	0.005037	9266.5
9.58	-232.8	-46.7	19.64	-0.498	0.316	0.002035	22938.6
9.31	-354.0	-33.3	19.64	-0.402	-0.013	0.000864	38575.3
9.08	-355.0	-28.6	19.64	-0.370	-0.040	0.000733	39212.4
8.91	-355.8	-24.5	19.64	-0.345	-0.059	0.000634	39145.7
8.58	-357.3	-21.5	19.64	-0.327	-0.074	0.000561	39098.3
8.51	-357.6	-15.7	19.64	-0.290	-0.102	0.000419	39067.9
8.11	-359.4	-14.5	19.64	-0.284	-0.109	0.000388	39047.9
8.00	-359.9	-7.5	19.64	-0.239	-0.143	0.000214	39082.7
7.71	-361.2	-5.5	19.64	-0.228	-0.153	0.000167	39093.5
7.31	-363.0	6.6	19.64	-0.220	-0.160	0.000133	39091.1
7.08	-364.0	10.6	19.64	-0.246	-0.141	0.000233	39036.3
6.91	-590.4	-28.0	19.64	-0.520	-0.158	0.000804	36724.0
6.58	-591.9	-25.0	24.16	-0.481	-0.172	0.000688	38735.8
6.51	-912.7	-99.3	24.16	-1.303	0.093	0.003490	28985.9
6.15	-914.4	-94.0	24.16	-1.249	0.047	0.003238	29565.8
6.11	-914.5	-66.2	24.16	-0.993	-0.136	0.001905	35398.9
5.71	-916.3	-63.5	24.16	-0.975	-0.151	0.001832	35344.0
5.31	-918.1	-33.0	24.16	-0.744	-0.314	0.000957	35255.9
5.15	-918.9	10.0	24.16	-0.566	-0.439	0.000283	35581.3
4.91	-919.9	27.9	24.16	-0.704	-0.344	0.000802	35280.9
4.71	-920.8	43.2	24.16	-0.822	-0.262	0.001245	35183.7
4.51	-921.7	58.4	24.16	-0.939	-0.182	0.001684	35225.8
4.11	-923.5	88.9	24.16	-1.197	-0.005	0.002648	34102.1
3.71	-925.3	119.4	51.32	-0.936	0.040	0.002168	55961.5
3.60	-2225.9	-62.6	51.32	-1.479	-0.830	0.001297	46698.1
3.20	-2227.9	-60.4	51.32	-1.465	-0.840	0.001251	46727.6
2.80	-2229.9	-52.4	51.32	-1.413	-0.873	0.001081	46939.7
2.40	-2231.9	-44.4	51.32	-1.361	-0.905	0.000911	47165.7
2.00	-2233.9	-36.4	51.32	-1.309	-0.937	0.000744	47410.0
1.60	-2235.9	-28.4	51.32	-1.258	-0.969	0.000577	47667.3
1.20	-2237.9	-20.4	51.32	-1.207	-1.001	0.000413	47942.4
0.80	-2239.9	-12.4	51.32	-1.157	-1.032	0.000250	48229.8
0.40	-2241.9	-4.4	51.32	-1.107	-1.063	0.000089	48533.9
0.00	-2243.9	11.6	51.32	-1.154	-1.038	0.000231	48206.1

LASTFALL 1, M-K-BEZIEHUNG für Schnittkräfte nach Th. II. O.

x (m)	Nx (kN)	MIlz (kNm)	As (cm ²)	Ebo (o/oo)	Es (o/oo)	k (1/m)	BIIz (kNm ²)
12.58	-222.3	-49.1	19.64	-0.904	0.800	0.005679	8887.7
12.38	-223.0	-50.0	19.64	-0.904	0.800	0.005679	8887.7
12.03	-224.2	-51.5	19.64	-0.942	0.856	0.005991	8740.9
11.68	-225.4	-52.8	19.64	-0.979	0.911	0.006303	8576.4
11.33	-226.7	-54.0	19.64	-1.006	0.949	0.006515	8527.4
10.98	-227.9	-55.0	19.64	-1.032	0.986	0.006727	8450.2
10.63	-229.1	-55.8	19.64	-1.059	1.023	0.006939	8343.6
10.28	-230.3	-56.5	19.64	-1.073	1.042	0.007050	8329.9
9.93	-231.6	-57.0	19.64	-1.088	1.060	0.007161	8280.6
9.71	-232.3	-57.2	19.64	-1.090	1.060	0.007167	8308.0
9.58	-232.8	-54.9	19.64	-0.619	0.530	0.002873	19817.0
9.31	-354.0	-41.5	19.64	-0.491	0.074	0.001413	30849.7
9.08	-355.0	-36.3	19.64	-0.443	0.023	0.001166	32934.2
8.91	-355.8	-31.9	19.64	-0.408	-0.010	0.000884	38430.3
8.58	-357.3	-28.6	19.64	-0.384	-0.031	0.000785	39089.0
8.51	-357.6	-22.1	19.64	-0.342	-0.063	0.000621	39119.7
8.11	-359.4	-20.8	19.64	-0.335	-0.071	0.000587	39085.5
8.00	-359.9	-13.0	19.64	-0.284	-0.109	0.000387	39046.4
7.71	-361.2	-10.8	19.64	-0.270	-0.121	0.000332	39040.0
7.31	-363.0	-5.1	19.64	-0.234	-0.150	0.000187	39063.8
7.08	-364.0	7.1	19.64	-0.219	-0.162	0.000127	39085.9
6.91	-590.4	-31.5	19.64	-0.549	-0.137	0.000916	36741.7
6.58	-591.9	-28.2	24.16	-0.506	-0.153	0.000785	38740.0
6.51	-912.7	-102.1	24.16	-1.336	0.121	0.003643	28621.0
6.15	-914.4	-96.8	24.16	-1.278	0.070	0.003369	29328.2
6.11	-914.5	-68.8	24.16	-1.012	-0.123	0.001976	35433.9
5.71	-916.3	-66.1	24.16	-0.994	-0.138	0.001901	35374.1
5.31	-918.1	-35.1	24.16	-0.757	-0.305	0.001006	35244.6
5.15	-918.9	8.9	24.16	-0.563	-0.441	0.000273	35589.4
4.91	-919.9	27.1	24.16	-0.706	-0.343	0.000807	35279.2
4.71	-920.8	42.7	24.16	-0.827	-0.259	0.001263	35183.2
4.51	-921.7	58.2	24.16	-0.947	-0.176	0.001712	35234.2
4.11	-923.5	88.9	24.16	-1.216	0.009	0.003064	30012.1
3.71	-925.3	118.8	51.32	-0.944	0.047	0.002201	55751.5
3.60	-2225.9	-63.1	51.32	-1.469	-0.836	0.001266	46740.6
3.20	-2227.9	-61.3	51.32	-1.458	-0.844	0.001228	46759.6
2.80	-2229.9	-54.1	51.32	-1.413	-0.873	0.001081	46938.8
2.40	-2231.9	-46.6	51.32	-1.366	-0.902	0.000927	47141.1
2.00	-2233.9	-38.7	51.32	-1.317	-0.933	0.000767	47370.9
1.60	-2235.9	-30.6	51.32	-1.266	-0.965	0.000602	47622.8
1.20	-2237.9	-22.2	51.32	-1.214	-0.997	0.000435	47900.9
0.80	-2239.9	-13.6	51.32	-1.162	-1.029	0.000265	48198.0
0.40	-2241.9	-4.9	51.32	-1.110	-1.062	0.000097	48517.9
0.00	-2243.9	12.4	51.32	-1.157	-1.037	0.000240	48188.2

LASTFALL 1, M-K-BEZIEHUNG für Schnittkräfte nach Th. I. O.

x (m)	Nx (kN)	MIy (kNm)	As (cm ²)	Ebo (o/oo)	Es (o/oo)	k (1/m)	BIy (kNm ²)
12.58	-222.3	11.1	19.64	-0.240	-0.068	0.000430	25858.1
12.38	-223.0	11.1	19.64	-0.240	-0.068	0.000430	25858.1
12.03	-224.2	8.6	19.64	-0.218	-0.085	0.000331	25842.2
11.68	-225.4	3.8	19.64	-0.176	-0.117	0.000148	25857.2
11.33	-226.7	-6.7	19.64	-0.203	-0.099	0.000259	25825.2
10.98	-227.9	-12.5	19.64	-0.255	-0.062	0.000483	25827.4
10.63	-229.1	-18.6	19.64	-0.311	-0.022	0.000724	25673.0
10.28	-230.3	-25.0	19.64	-0.386	0.047	0.001236	20261.8
9.93	-231.6	-31.8	19.64	-0.474	0.149	0.001780	17885.3
9.71	-232.3	-36.3	19.64	-0.544	0.242	0.002245	16160.0
9.58	-232.8	-39.0	19.64	-0.483	0.279	0.002176	17910.0
9.31	-354.0	-65.7	19.64	-0.856	0.577	0.004092	16048.2
9.08	-355.0	-70.7	19.64	-0.927	0.688	0.004614	15329.1
8.91	-355.8	-74.6	19.64	-0.985	0.781	0.005046	14775.0
8.58	-357.3	-82.2	19.64	-1.100	0.967	0.005907	13919.6
8.51	-357.6	-82.2	19.64	-1.101	0.967	0.005909	13915.8
8.11	-359.4	-79.3	19.64	-1.059	0.893	0.005578	14203.9
8.00	-359.9	-62.6	19.64	-0.806	0.484	0.003685	16910.4
7.71	-361.2	-58.1	19.64	-0.741	0.381	0.003206	18011.9
7.31	-363.0	-46.3	19.64	-0.582	0.158	0.002114	21674.9
7.08	-364.0	-30.3	19.64	-0.411	-0.023	0.000969	30538.9
6.91	-590.4	-23.8	19.64	-0.497	-0.181	0.000791	29017.0
6.58	-591.9	-17.2	24.16	-0.427	-0.215	0.000531	30552.9
6.51	-912.7	-20.5	24.16	-0.653	-0.376	0.000693	27880.4
6.15	-914.4	-17.8	24.16	-0.631	-0.393	0.000595	27902.1
6.11	-914.5	-4.0	24.16	-0.511	-0.474	0.000092	28165.6
5.71	-916.3	12.1	24.16	-0.608	-0.410	0.000494	27930.3
5.31	-918.1	26.7	24.16	-0.737	-0.325	0.001030	27743.5
5.15	-918.9	32.6	24.16	-0.790	-0.291	0.001248	27705.0
4.91	-919.9	40.9	24.16	-0.864	-0.242	0.001554	27690.6
4.71	-920.8	47.9	24.16	-0.926	-0.202	0.001811	27711.4
4.51	-921.7	54.9	24.16	-0.987	-0.162	0.002062	27760.6
4.11	-923.5	68.5	24.16	-1.116	-0.080	0.002589	27479.1
3.71	-925.3	81.9	51.32	-0.886	-0.027	0.002146	39492.1
3.60	-2225.9	-63.1	51.32	-1.623	-0.770	0.002133	28248.4
3.20	-2227.9	-60.0	51.32	-1.597	-0.787	0.002025	28290.0
2.80	-2229.9	-49.0	51.32	-1.498	-0.842	0.001640	28519.7
2.40	-2231.9	-38.3	51.32	-1.403	-0.895	0.001269	28772.9
2.00	-2233.9	-27.9	51.32	-1.312	-0.946	0.000914	29048.6
1.60	-2235.9	-17.8	51.32	-1.225	-0.995	0.000576	29342.1
1.20	-2237.9	-7.9	51.32	-1.143	-1.041	0.000254	29650.0
0.80	-2239.9	10.9	51.32	-1.170	-1.029	0.000351	29527.6
0.40	-2241.9	19.9	51.32	-1.248	-0.989	0.000647	29213.5
0.00	-2243.9	28.6	51.32	-1.325	-0.950	0.000938	28926.2

LASTFALL 1, M-K-BEZIEHUNG für Schnittkräfte nach Th. II. O.

x (m)	Nx (kN)	MIIy (kNm)	As (cm ²)	Ebo (o/oo)	Es (o/oo)	k (1/m)	BIIy (kNm ²)
12.58	-222.3	0.0	19.64	-0.250	-0.060	0.000473	25865.3
12.38	-223.0	12.1	19.64	-0.250	-0.060	0.000473	25865.3
12.03	-224.2	8.7	19.64	-0.217	-0.085	0.000330	25842.1
11.68	-225.4	-5.0	19.64	-0.198	-0.101	0.000244	25838.1
11.33	-226.7	-11.8	19.64	-0.265	-0.053	0.000530	25848.4
10.98	-227.9	-19.2	19.64	-0.345	0.009	0.001013	21356.4
10.63	-229.1	-27.0	19.64	-0.448	0.121	0.001626	18413.2
10.28	-230.3	-35.1	19.64	-0.573	0.288	0.002461	15667.5
9.93	-231.6	-43.5	19.64	-0.710	0.493	0.003437	13813.2
9.71	-232.3	-48.9	19.64	-0.799	0.632	0.004090	13011.0
9.58	-232.8	-52.4	19.64	-0.726	0.707	0.004095	13918.2
9.31	-354.0	-83.6	19.64	-1.206	1.153	0.006740	13179.4
9.08	-355.0	-90.0	19.64	-1.309	1.321	0.007512	12720.4
8.91	-355.8	-94.7	19.64	-1.389	1.451	0.008115	12387.1
8.58	-357.3	-95.9	19.64	-1.404	1.469	0.008210	12357.0
8.51	-357.6	-95.9	19.64	-1.405	1.469	0.008212	12354.2
8.11	-359.4	-92.8	19.64	-1.352	1.376	0.007795	12604.6
8.00	-359.9	-75.2	19.64	-1.066	0.902	0.005623	14211.8
7.71	-361.2	-70.3	19.64	-0.989	0.772	0.005031	14878.9
7.31	-363.0	-57.6	19.64	-0.793	0.456	0.003568	17244.5
7.08	-364.0	-40.2	19.64	-0.553	0.121	0.001924	22419.3
6.91	-590.4	-32.7	19.64	-0.595	-0.112	0.001207	29077.8
6.58	-591.9	-25.4	24.16	-0.513	-0.155	0.000895	30534.2
6.51	-912.7	-27.1	24.16	-0.730	-0.324	0.001015	27793.5
6.15	-914.4	-24.1	24.16	-0.704	-0.344	0.000900	27804.1
6.11	-914.5	-8.5	24.16	-0.561	-0.440	0.000301	28041.3
5.71	-916.3	9.9	24.16	-0.584	-0.426	0.000394	27977.2
5.31	-918.1	26.4	24.16	-0.737	-0.325	0.001030	27743.3
5.15	-918.9	33.1	24.16	-0.800	-0.284	0.001289	27701.7
4.91	-919.9	42.5	24.16	-0.887	-0.227	0.001650	27697.9
4.71	-920.8	50.4	24.16	-0.959	-0.179	0.001950	27740.1
4.51	-921.7	58.1	24.16	-1.029	-0.133	0.002240	27820.7
4.11	-923.5	73.1	24.16	-1.194	-0.026	0.002921	26827.4
3.71	-925.3	86.7	51.32	-0.944	0.019	0.002749	33875.6
3.60	-2225.9	-58.3	51.32	-1.543	-0.813	0.001824	28438.4
3.20	-2227.9	-55.8	51.32	-1.523	-0.826	0.001743	28470.2
2.80	-2229.9	-46.6	51.32	-1.446	-0.870	0.001442	28662.7
2.40	-2231.9	-37.1	51.32	-1.368	-0.914	0.001135	28880.9
2.00	-2233.9	-27.4	51.32	-1.290	-0.958	0.000829	29124.8
1.60	-2235.9	-17.6	51.32	-1.213	-1.002	0.000527	29389.7
1.20	-2237.9	-8.0	51.32	-1.138	-1.044	0.000234	29671.0
0.80	-2239.9	10.7	51.32	-1.161	-1.033	0.000320	29560.6
0.40	-2241.9	19.4	51.32	-1.231	-0.998	0.000584	29274.2
0.00	-2243.9	27.6	51.32	-1.298	-0.964	0.000835	29017.7

LASTFALL 2, M-K-BEZIEHUNG für Schnittkräfte nach Th. I. O.

x (m)	Nx (kN)	MIz (kNm)	As (cm ²)	Ebo (o/oo)	Es (o/oo)	k (1/m)	BIz (kNm ²)
12.58	-171.0	-35.9	19.64	-0.622	0.521	0.003811	9422.9
12.38	-171.7	-35.9	19.64	-0.622	0.521	0.003811	9422.9
12.03	-172.9	-35.9	19.64	-0.625	0.521	0.003819	9402.8
11.68	-174.1	-35.9	19.64	-0.627	0.521	0.003827	9382.8
11.33	-175.4	-35.9	19.64	-0.630	0.521	0.003836	9361.2
10.98	-176.6	-35.9	19.64	-0.621	0.502	0.003744	9590.5
10.63	-177.8	-35.9	19.64	-0.623	0.502	0.003752	9569.9
10.28	-179.0	-35.9	19.64	-0.626	0.502	0.003760	9549.3
9.93	-180.3	-35.9	19.64	-0.629	0.502	0.003769	9527.1
9.71	-181.0	-35.9	19.64	-0.630	0.502	0.003774	9515.2
9.58	-181.5	-35.9	19.64	-0.380	0.242	0.001556	23084.1
9.31	-267.7	-26.9	19.64	-0.313	0.002	0.000788	34087.6
9.08	-268.7	-23.0	19.64	-0.284	-0.023	0.000580	39908.1
8.91	-269.5	-19.7	19.64	-0.264	-0.039	0.000499	39972.2
8.58	-271.0	-17.2	19.64	-0.250	-0.052	0.000441	39927.7
8.51	-271.3	-12.5	19.64	-0.221	-0.074	0.000327	39895.8
8.11	-273.1	-11.5	19.64	-0.216	-0.079	0.000303	39871.6
8.00	-273.6	-5.8	19.64	-0.181	-0.107	0.000164	39893.2
7.71	-274.9	-4.2	19.64	-0.171	-0.115	0.000126	39895.3
7.31	-276.7	5.7	19.64	-0.169	-0.118	0.000113	39891.0
7.08	-277.7	9.0	19.64	-0.190	-0.103	0.000193	39846.6
6.91	-453.5	-19.0	19.64	-0.372	-0.132	0.000533	38123.8
6.58	-455.0	-16.6	24.16	-0.344	-0.143	0.000448	40091.4
6.51	-775.8	-92.0	24.16	-1.132	0.140	0.003179	29424.0
6.15	-777.5	-87.0	24.16	-1.084	0.093	0.002943	30061.9
6.11	-777.6	-60.9	24.16	-0.847	-0.093	0.001676	36981.2
5.71	-779.4	-58.4	24.16	-0.831	-0.107	0.001609	36930.8
5.31	-781.2	-29.9	24.16	-0.627	-0.255	0.000827	36765.3
5.15	-782.0	10.4	24.16	-0.485	-0.356	0.000287	36982.9
4.91	-783.0	27.1	24.16	-0.608	-0.270	0.000753	36762.5
4.71	-783.9	41.4	24.16	-0.713	-0.196	0.001149	36728.1
4.51	-784.8	55.6	24.16	-0.816	-0.123	0.001540	36830.9
4.11	-786.6	84.2	24.16	-1.061	0.060	0.002804	30581.3
3.71	-788.4	112.7	51.32	-0.840	0.088	0.002063	55633.8
3.60	-1989.0	-67.7	51.32	-1.322	-0.672	0.001300	50416.7
3.20	-1991.0	-65.3	51.32	-1.309	-0.682	0.001254	50434.2
2.80	-1993.0	-56.7	51.32	-1.259	-0.716	0.001086	50592.2
2.40	-1995.0	-48.1	51.32	-1.208	-0.749	0.000919	50769.7
2.00	-1997.0	-39.5	51.32	-1.159	-0.783	0.000752	50966.6
1.60	-1999.0	-31.0	51.32	-1.109	-0.816	0.000586	51182.2
1.20	-2001.0	-22.4	51.32	-1.060	-0.849	0.000422	51416.5
0.80	-2003.0	-13.8	51.32	-1.011	-0.881	0.000259	51668.9
0.40	-2005.0	-5.2	51.32	-0.962	-0.913	0.000098	51940.2
0.00	-2007.0	12.0	51.32	-1.002	-0.891	0.000223	51676.5

LASTFALL 2, M-K-BEZIEHUNG für Schnittkräfte nach Th. II. O.

x (m)	Nx (kN)	MIlz (kNm)	As (cm ²)	Ebo (o/oo)	Es (o/oo)	k (1/m)	BIIz (kNm ²)
12.58	-171.0	-37.3	19.64	-0.667	0.595	0.004209	9048.3
12.38	-171.7	-37.8	19.64	-0.667	0.595	0.004209	9048.3
12.03	-172.9	-38.6	19.64	-0.681	0.614	0.004316	9058.7
11.68	-174.1	-39.4	19.64	-0.706	0.651	0.004523	8848.8
11.33	-175.4	-40.0	19.64	-0.720	0.670	0.004631	8815.5
10.98	-176.6	-40.6	19.64	-0.734	0.688	0.004739	8760.8
10.63	-177.8	-41.1	19.64	-0.736	0.688	0.004748	8865.3
10.28	-179.0	-41.5	19.64	-0.750	0.707	0.004856	8760.7
9.93	-180.3	-41.7	19.64	-0.753	0.707	0.004865	8812.0
9.71	-181.0	-41.9	19.64	-0.754	0.707	0.004870	8829.5
9.58	-181.5	-40.5	19.64	-0.438	0.344	0.001956	21194.7
9.31	-267.7	-31.4	19.64	-0.356	0.047	0.001006	32199.3
9.08	-268.7	-27.3	19.64	-0.321	0.009	0.000827	34302.2
8.91	-269.5	-23.8	19.64	-0.297	-0.014	0.000630	39552.5
8.58	-271.0	-21.2	19.64	-0.280	-0.029	0.000559	39979.8
8.51	-271.3	-16.1	19.64	-0.249	-0.053	0.000435	39922.6
8.11	-273.1	-15.0	19.64	-0.243	-0.059	0.000409	39891.8
8.00	-273.6	-8.9	19.64	-0.204	-0.089	0.000258	39872.2
7.71	-274.9	-7.2	19.64	-0.194	-0.097	0.000216	39865.1
7.31	-276.7	3.4	19.64	-0.167	-0.120	0.000105	39893.9
7.08	-277.7	6.9	19.64	-0.175	-0.115	0.000133	39869.4
6.91	-453.5	-21.1	19.64	-0.388	-0.120	0.000595	38127.7
6.58	-455.0	-18.5	24.16	-0.358	-0.132	0.000503	40088.8
6.51	-775.8	-93.7	24.16	-1.152	0.158	0.003275	29144.6
6.15	-777.5	-88.7	24.16	-1.100	0.107	0.003016	29951.3
6.11	-777.6	-62.4	24.16	-0.859	-0.085	0.001719	36951.8
5.71	-779.4	-59.9	24.16	-0.842	-0.099	0.001650	36953.5
5.31	-781.2	-30.8	24.16	-0.634	-0.250	0.000853	36761.1
5.15	-782.0	10.4	24.16	-0.485	-0.356	0.000286	36983.2
4.91	-783.0	27.6	24.16	-0.611	-0.268	0.000763	36760.2
4.71	-783.9	42.1	24.16	-0.718	-0.192	0.001167	36730.3
4.51	-784.8	56.7	24.16	-0.823	-0.118	0.001565	36842.7
4.11	-786.6	85.5	24.16	-1.072	0.070	0.002854	30503.4
3.71	-788.4	113.6	51.32	-0.845	0.093	0.002085	55503.8
3.60	-1989.0	-66.7	51.32	-1.316	-0.675	0.001281	50435.9
3.20	-1991.0	-64.7	51.32	-1.305	-0.684	0.001242	50447.0
2.80	-1993.0	-57.1	51.32	-1.261	-0.714	0.001093	50584.3
2.40	-1995.0	-49.1	51.32	-1.214	-0.746	0.000937	50745.9
2.00	-1997.0	-40.8	51.32	-1.166	-0.778	0.000776	50932.8
1.60	-1999.0	-32.2	51.32	-1.116	-0.811	0.000611	51144.6
1.20	-2001.0	-23.5	51.32	-1.066	-0.844	0.000443	51381.7
0.80	-2003.0	-14.6	51.32	-1.015	-0.878	0.000274	51642.1
0.40	-2005.0	-5.6	51.32	-0.965	-0.912	0.000105	51924.5
0.00	-2007.0	12.4	51.32	-1.005	-0.889	0.000232	51660.3

LASTFALL 2, M-K-BEZIEHUNG für Schnittkräfte nach Th. I. O.

x (m)	Nx (kN)	MIy (kNm)	As (cm ²)	Ebo (o/oo)	Es (o/oo)	k (1/m)	BIy (kNm ²)
12.58	-171.0	8.6	19.64	-0.182	-0.052	0.000326	26229.9
12.38	-171.7	8.6	19.64	-0.182	-0.052	0.000326	26229.9
12.03	-172.9	7.0	19.64	-0.170	-0.063	0.000267	26214.2
11.68	-174.1	4.0	19.64	-0.144	-0.083	0.000153	26210.5
11.33	-175.4	-3.0	19.64	-0.136	-0.090	0.000115	26214.1
10.98	-176.6	-7.0	19.64	-0.172	-0.065	0.000269	26186.1
10.63	-177.8	-11.4	19.64	-0.212	-0.038	0.000435	26206.1
10.28	-179.0	-16.1	19.64	-0.256	-0.004	0.000632	25494.4
9.93	-180.3	-21.2	19.64	-0.316	0.056	0.001062	19921.1
9.71	-181.0	-24.5	19.64	-0.362	0.112	0.001354	18104.0
9.58	-181.5	-26.6	19.64	-0.322	0.140	0.001319	20121.9
9.31	-267.7	-44.5	19.64	-0.557	0.316	0.002495	17851.4
9.08	-268.7	-48.5	19.64	-0.605	0.391	0.002844	17036.9
8.91	-269.5	-51.4	19.64	-0.651	0.465	0.003188	16135.2
8.58	-271.0	-57.5	19.64	-0.729	0.595	0.003783	15185.2
8.51	-271.3	-57.5	19.64	-0.729	0.595	0.003785	15179.5
8.11	-273.1	-55.2	19.64	-0.700	0.539	0.003541	15568.3
8.00	-273.6	-42.3	19.64	-0.524	0.251	0.002214	19050.8
7.71	-274.9	-38.9	19.64	-0.481	0.186	0.001905	20301.3
7.31	-276.7	-29.9	19.64	-0.373	0.047	0.001199	24697.6
7.08	-277.7	-17.8	19.64	-0.268	-0.048	0.000550	31553.9
6.91	-453.5	-11.0	19.64	-0.315	-0.177	0.000345	30172.1
6.58	-455.0	-6.0	24.16	-0.268	-0.200	0.000169	31702.2
6.51	-775.8	-12.5	24.16	-0.502	-0.341	0.000403	29134.7
6.15	-777.5	-10.5	24.16	-0.486	-0.353	0.000333	29152.1
6.11	-777.6	0.8	24.16	-0.421	-0.398	0.000058	29300.8
5.71	-779.4	11.7	24.16	-0.513	-0.337	0.000440	29089.4
5.31	-781.2	22.4	24.16	-0.603	-0.277	0.000816	28965.3
5.15	-782.0	26.7	24.16	-0.640	-0.252	0.000968	28938.0
4.91	-783.0	32.8	24.16	-0.691	-0.218	0.001181	28921.7
4.71	-783.9	37.9	24.16	-0.734	-0.190	0.001360	28927.6
4.51	-784.8	42.9	24.16	-0.775	-0.162	0.001534	28950.7
4.11	-786.6	52.7	24.16	-0.857	-0.108	0.001872	29044.1
3.71	-788.4	62.2	51.32	-0.685	-0.063	0.001554	41207.0
3.60	-1989.0	-57.8	51.32	-1.380	-0.656	0.001809	30931.2
3.20	-1991.0	-55.0	51.32	-1.358	-0.671	0.001718	30956.2
2.80	-1993.0	-44.8	51.32	-1.277	-0.720	0.001394	31114.9
2.40	-1995.0	-35.0	51.32	-1.199	-0.767	0.001080	31297.9
2.00	-1997.0	-25.4	51.32	-1.125	-0.813	0.000780	31499.3
1.60	-1999.0	-16.2	51.32	-1.053	-0.856	0.000492	31719.6
1.20	-2001.0	-7.2	51.32	-0.985	-0.898	0.000216	31951.9
0.80	-2003.0	9.9	51.32	-1.007	-0.887	0.000301	31852.9
0.40	-2005.0	18.0	51.32	-1.072	-0.851	0.000551	31612.6
0.00	-2007.0	25.9	51.32	-1.134	-0.817	0.000794	31393.6

LASTFALL 2, M-K-BEZIEHUNG für Schnittkräfte nach Th. II. O.

x (m)	Nx (kN)	MIIy (kNm)	As (cm ²)	Ebo (o/oo)	Es (o/oo)	k (1/m)	BIIy (kNm ²)
12.58	-171.0	0.0	19.64	-0.188	-0.048	0.000351	26233.6
12.38	-171.7	9.1	19.64	-0.188	-0.048	0.000351	26233.6
12.03	-172.9	7.2	19.64	-0.172	-0.061	0.000275	26214.4
11.68	-174.1	3.6	19.64	-0.139	-0.087	0.000131	26214.4
11.33	-175.4	-5.1	19.64	-0.159	-0.073	0.000215	26198.0
10.98	-176.6	-9.8	19.64	-0.203	-0.043	0.000401	26205.8
10.63	-177.8	-14.9	19.64	-0.252	-0.006	0.000617	25570.4
10.28	-179.0	-20.3	19.64	-0.322	0.065	0.001105	19335.9
9.93	-180.3	-26.1	19.64	-0.402	0.167	0.001627	16801.0
9.71	-181.0	-29.9	19.64	-0.454	0.242	0.001988	15714.3
9.58	-181.5	-32.3	19.64	-0.408	0.279	0.001963	17185.8
9.31	-267.7	-52.4	19.64	-0.680	0.521	0.003432	15749.5
9.08	-268.7	-56.9	19.64	-0.746	0.632	0.003939	14896.7
8.91	-269.5	-60.3	19.64	-0.800	0.725	0.004359	14257.2
8.58	-271.0	-62.8	19.64	-0.834	0.781	0.004616	13971.6
8.51	-271.3	-62.8	19.64	-0.830	0.772	0.004576	14093.6
8.11	-273.1	-60.5	19.64	-0.796	0.707	0.004294	14459.7
8.00	-273.6	-47.2	19.64	-0.607	0.381	0.002822	17187.0
7.71	-274.9	-43.6	19.64	-0.556	0.298	0.002439	18378.5
7.31	-276.7	-34.2	19.64	-0.435	0.121	0.001589	22127.8
7.08	-277.7	-21.4	19.64	-0.303	-0.022	0.000703	31299.1
6.91	-453.5	-14.1	19.64	-0.347	-0.154	0.000482	30147.8
6.58	-455.0	-8.8	24.16	-0.295	-0.181	0.000286	31659.6
6.51	-775.8	-14.6	24.16	-0.525	-0.325	0.000499	29096.9
6.15	-777.5	-12.4	24.16	-0.508	-0.339	0.000422	29113.1
6.11	-777.6	-1.4	24.16	-0.414	-0.403	0.000029	29319.2
5.71	-779.4	11.6	24.16	-0.510	-0.339	0.000429	29093.9
5.31	-781.2	23.1	24.16	-0.609	-0.272	0.000843	28960.7
5.15	-782.0	27.7	24.16	-0.649	-0.246	0.001009	28934.6
4.91	-783.0	34.2	24.16	-0.705	-0.208	0.001242	28924.4
4.71	-783.9	39.6	24.16	-0.751	-0.177	0.001435	28939.1
4.51	-784.8	44.9	24.16	-0.797	-0.147	0.001623	28973.4
4.11	-786.6	55.2	24.16	-0.885	-0.089	0.001990	28966.2
3.71	-788.4	64.2	51.32	-0.705	-0.049	0.001639	40984.5
3.60	-1989.0	-55.8	51.32	-1.353	-0.671	0.001705	30982.6
3.20	-1991.0	-53.3	51.32	-1.335	-0.684	0.001628	31002.8
2.80	-1993.0	-44.3	51.32	-1.265	-0.727	0.001345	31144.4
2.40	-1995.0	-35.1	51.32	-1.194	-0.770	0.001058	31313.3
2.00	-1997.0	-25.8	51.32	-1.123	-0.814	0.000773	31504.5
1.60	-1999.0	-16.6	51.32	-1.053	-0.856	0.000492	31719.0
1.20	-2001.0	-7.5	51.32	-0.985	-0.898	0.000219	31949.4
0.80	-2003.0	10.1	51.32	-1.007	-0.887	0.000298	31855.1
0.40	-2005.0	18.3	51.32	-1.070	-0.852	0.000545	31617.7
0.00	-2007.0	26.0	51.32	-1.131	-0.819	0.000779	31405.4

LASTFALL 3, M-K-BEZIEHUNG für Schnittkräfte nach Th. I. O.

x (m)	Nx (kN)	Miz (kNm)	As (cm ²)	Ebo (o/oo)	Es (o/oo)	k (1/m)	BIz (kNm ²)
12.58	-222.3	-46.7	19.64	-0.456	0.391	0.002824	16532.0
12.38	-223.0	-46.7	19.64	-0.456	0.391	0.002824	16532.0
12.03	-224.2	-46.7	19.64	-0.452	0.381	0.002779	16798.1
11.68	-225.4	-46.7	19.64	-0.454	0.381	0.002783	16771.2
11.33	-226.7	-46.7	19.64	-0.455	0.381	0.002788	16742.2
10.98	-227.9	-46.7	19.64	-0.456	0.381	0.002793	16715.5
10.63	-229.1	-46.7	19.64	-0.452	0.372	0.002748	16988.5
10.28	-230.3	-46.7	19.64	-0.454	0.372	0.002752	16961.1
9.93	-231.6	-46.7	19.64	-0.455	0.372	0.002757	16931.6
9.71	-232.3	-46.7	19.64	-0.456	0.372	0.002760	16915.7
9.58	-232.8	-46.7	19.64	-0.275	0.177	0.001130	41303.0
9.31	-354.0	-33.3	19.64	-0.222	-0.008	0.000475	70087.6
9.08	-355.0	-30.5	19.64	-0.212	-0.018	0.000431	70890.6
8.91	-355.8	-28.1	19.64	-0.204	-0.025	0.000398	71038.0
8.58	-357.3	-26.4	19.64	-0.198	-0.030	0.000374	70996.2
8.51	-357.6	-22.9	19.64	-0.186	-0.039	0.000327	70944.4
8.11	-359.4	-22.2	19.64	-0.184	-0.041	0.000317	70927.5
8.00	-359.9	-18.0	19.64	-0.170	-0.053	0.000260	70894.7
7.71	-361.2	-16.9	19.64	-0.166	-0.056	0.000245	70878.4
7.31	-363.0	-13.9	19.64	-0.156	-0.065	0.000203	70857.2
7.08	-364.0	-9.7	19.64	-0.142	-0.076	0.000146	70860.1
6.91	-590.4	-46.0	19.64	-0.346	-0.041	0.000677	68892.2
6.58	-591.9	-44.2	24.16	-0.327	-0.047	0.000622	72241.4
6.51	-912.7	-120.9	24.16	-0.767	0.149	0.002289	53168.8
6.15	-914.4	-112.9	24.16	-0.725	0.102	0.002068	54910.8
6.11	-914.5	-71.4	24.16	-0.530	-0.069	0.001026	69232.4
5.71	-916.3	-67.5	24.16	-0.516	-0.080	0.000968	69153.8
5.31	-918.1	23.5	24.16	-0.364	-0.193	0.000380	69031.4
5.15	-918.9	42.3	24.16	-0.437	-0.140	0.000659	68959.0
4.91	-919.9	69.0	24.16	-0.539	-0.065	0.001052	69200.5
4.71	-920.8	91.7	24.16	-0.636	0.012	0.001620	59316.1
4.51	-921.7	91.7	24.16	-0.637	0.012	0.001622	59254.1
4.11	-923.5	89.5	24.16	-0.630	0.005	0.001588	59442.1
3.71	-925.3	85.0	51.32	-0.424	-0.046	0.000756	120308.3
3.60	-2225.9	-101.5	51.32	-0.802	-0.355	0.000895	105454.9
3.20	-2227.9	-98.1	51.32	-0.794	-0.362	0.000866	105454.2
2.80	-2229.9	-86.1	51.32	-0.764	-0.385	0.000758	105533.1
2.40	-2231.9	-74.0	51.32	-0.733	-0.407	0.000651	105645.0
2.00	-2233.9	-61.9	51.32	-0.703	-0.430	0.000544	105774.0
1.60	-2235.9	-49.8	51.32	-0.672	-0.453	0.000438	105927.5
1.20	-2237.9	-37.7	51.32	-0.642	-0.476	0.000331	106106.2
0.80	-2239.9	-25.7	51.32	-0.611	-0.499	0.000225	106309.4
0.40	-2241.9	-13.6	51.32	-0.581	-0.522	0.000119	106536.5
0.00	-2243.9	10.6	51.32	-0.574	-0.528	0.000092	106583.0

LASTFALL 3, M-K-BEZIEHUNG für Schnittkräfte nach Th. II. O.

x (m)	Nx (kN)	MIlz (kNm)	As (cm ²)	Ebo (o/oo)	Es (o/oo)	k (1/m)	BIIz (kNm ²)
12.58	-222.3	-46.7	19.64	-0.462	0.400	0.002873	16444.3
12.38	-223.0	-47.1	19.64	-0.462	0.400	0.002873	16444.3
12.03	-224.2	-47.9	19.64	-0.469	0.409	0.002926	16453.7
11.68	-225.4	-48.5	19.64	-0.475	0.419	0.002980	16430.4
11.33	-226.7	-49.1	19.64	-0.482	0.428	0.003034	16373.1
10.98	-227.9	-49.6	19.64	-0.489	0.437	0.003088	16286.6
10.63	-229.1	-50.1	19.64	-0.496	0.446	0.003141	16169.7
10.28	-230.3	-50.4	19.64	-0.497	0.446	0.003146	16272.7
9.93	-231.6	-50.7	19.64	-0.504	0.456	0.003200	16088.2
9.71	-232.3	-50.8	19.64	-0.505	0.456	0.003202	16113.6
9.58	-232.8	-50.8	19.64	-0.306	0.233	0.001347	38365.3
9.31	-354.0	-37.5	19.64	-0.244	0.012	0.000638	60054.1
9.08	-355.0	-34.6	19.64	-0.231	-0.001	0.000512	69164.8
8.91	-355.8	-32.1	19.64	-0.221	-0.010	0.000469	70270.8
8.58	-357.3	-30.2	19.64	-0.215	-0.017	0.000439	70847.7
8.51	-357.6	-26.6	19.64	-0.202	-0.027	0.000388	71006.6
8.11	-359.4	-25.8	19.64	-0.199	-0.030	0.000377	70978.7
8.00	-359.9	-21.4	19.64	-0.184	-0.042	0.000316	70920.6
7.71	-361.2	-20.2	19.64	-0.180	-0.045	0.000299	70898.1
7.31	-363.0	-17.0	19.64	-0.169	-0.055	0.000255	70861.0
7.08	-364.0	-12.6	19.64	-0.154	-0.067	0.000193	70845.7
6.91	-590.4	-48.7	19.64	-0.358	-0.032	0.000723	68796.2
6.58	-591.9	-46.8	24.16	-0.338	-0.039	0.000663	72288.5
6.51	-912.7	-123.4	24.16	-0.784	0.167	0.002377	52362.3
6.15	-914.4	-115.4	24.16	-0.738	0.116	0.002136	54424.2
6.11	-914.5	-73.3	24.16	-0.538	-0.063	0.001057	69266.4
5.71	-916.3	-69.3	24.16	-0.524	-0.075	0.000998	69182.6
5.31	-918.1	23.2	24.16	-0.362	-0.195	0.000372	69035.6
5.15	-918.9	42.3	24.16	-0.436	-0.141	0.000656	68958.4
4.91	-919.9	69.4	24.16	-0.540	-0.065	0.001055	69204.4
4.71	-920.8	92.5	24.16	-0.639	0.014	0.001632	59221.9
4.51	-921.7	92.5	24.16	-0.640	0.014	0.001634	59160.4
4.11	-923.5	90.5	24.16	-0.633	0.007	0.001600	59517.7
3.71	-925.3	86.3	51.32	-0.427	-0.043	0.000767	120329.7
3.60	-2225.9	-100.4	51.32	-0.799	-0.357	0.000884	105463.2
3.20	-2227.9	-97.4	51.32	-0.792	-0.363	0.000858	105461.0
2.80	-2229.9	-86.2	51.32	-0.764	-0.385	0.000758	105533.1
2.40	-2231.9	-74.7	51.32	-0.735	-0.406	0.000656	105638.2
2.00	-2233.9	-62.9	51.32	-0.705	-0.429	0.000552	105761.6
1.60	-2235.9	-50.9	51.32	-0.675	-0.452	0.000446	105912.0
1.20	-2237.9	-38.7	51.32	-0.644	-0.475	0.000339	106089.7
0.80	-2239.9	-26.4	51.32	-0.613	-0.498	0.000231	106295.2
0.40	-2241.9	-14.1	51.32	-0.582	-0.521	0.000123	106526.0
0.00	-2243.9	10.8	51.32	-0.574	-0.528	0.000094	106575.5

LASTFALL 3, M-K-BEZIEHUNG für Schnittkräfte nach Th. I. O.

x (m)	Nx (kN)	MIy (kNm)	As (cm ²)	Ebo (o/oo)	Es (o/oo)	k (1/m)	BIy (kNm ²)
12.58	-222.3	11.1	19.64	-0.134	-0.038	0.000239	46446.1
12.38	-223.0	11.1	19.64	-0.134	-0.038	0.000239	46446.1
12.03	-224.2	8.6	19.64	-0.122	-0.048	0.000184	46434.7
11.68	-225.4	3.8	19.64	-0.099	-0.066	0.000082	46431.3
11.33	-226.7	-6.7	19.64	-0.114	-0.056	0.000144	46426.4
10.98	-227.9	-12.5	19.64	-0.143	-0.035	0.000269	46421.0
10.63	-229.1	-18.6	19.64	-0.174	-0.013	0.000402	46171.4
10.28	-230.3	-25.0	19.64	-0.213	0.023	0.000674	37166.4
9.93	-231.6	-31.8	19.64	-0.263	0.084	0.000991	32119.4
9.71	-232.3	-36.3	19.64	-0.297	0.130	0.001221	29727.6
9.58	-232.8	-39.0	19.64	-0.266	0.153	0.001198	32543.3
9.31	-354.0	-65.7	19.64	-0.460	0.316	0.002218	29603.9
9.08	-355.0	-70.7	19.64	-0.498	0.381	0.002513	28140.6
8.91	-355.8	-74.6	19.64	-0.525	0.428	0.002723	27385.2
8.58	-357.3	-82.2	19.64	-0.588	0.539	0.003220	25538.4
8.51	-357.6	-82.2	19.64	-0.588	0.539	0.003221	25532.0
8.11	-359.4	-79.3	19.64	-0.564	0.493	0.003020	26246.5
8.00	-359.9	-62.9	19.64	-0.438	0.270	0.002021	31001.0
7.71	-361.2	-58.5	19.64	-0.404	0.214	0.001767	32924.8
7.31	-363.0	-46.9	19.64	-0.323	0.093	0.001190	39040.9
7.08	-364.0	-31.2	19.64	-0.231	-0.010	0.000554	55148.7
6.91	-590.4	-24.8	19.64	-0.275	-0.098	0.000442	54344.8
6.58	-591.9	-18.3	24.16	-0.239	-0.116	0.000306	56891.1
6.51	-912.7	-21.8	24.16	-0.353	-0.201	0.000381	54480.1
6.15	-914.4	-19.2	24.16	-0.343	-0.210	0.000333	54490.3
6.11	-914.5	-5.7	24.16	-0.284	-0.252	0.000080	54684.0
5.71	-916.3	10.2	24.16	-0.316	-0.230	0.000214	54546.6
5.31	-918.1	24.4	24.16	-0.378	-0.186	0.000481	54397.3
5.15	-918.9	30.2	24.16	-0.404	-0.168	0.000590	54369.7
4.91	-919.9	38.4	24.16	-0.440	-0.143	0.000743	54360.8
4.71	-920.8	45.3	24.16	-0.470	-0.122	0.000871	54380.4
4.51	-921.7	52.1	24.16	-0.500	-0.101	0.000997	54428.2
4.11	-923.5	65.5	24.16	-0.559	-0.061	0.001246	54481.8
3.71	-925.3	78.6	51.32	-0.463	-0.027	0.001088	74624.5
3.60	-2225.9	-66.4	51.32	-0.774	-0.386	0.000971	65692.4
3.20	-2227.9	-63.2	51.32	-0.764	-0.394	0.000924	65700.6
2.80	-2229.9	-51.6	51.32	-0.724	-0.422	0.000754	65792.4
2.40	-2231.9	-40.4	51.32	-0.685	-0.449	0.000588	65911.5
2.00	-2233.9	-29.5	51.32	-0.647	-0.476	0.000428	66046.3
1.60	-2235.9	-18.8	51.32	-0.610	-0.501	0.000272	66204.9
1.20	-2237.9	-8.5	51.32	-0.575	-0.526	0.000122	66372.5
0.80	-2239.9	11.4	51.32	-0.586	-0.520	0.000165	66300.8
0.40	-2241.9	20.9	51.32	-0.619	-0.498	0.000303	66124.5
0.00	-2243.9	30.1	51.32	-0.652	-0.477	0.000437	65962.6

LASTFALL 3, M-K-BEZIEHUNG für Schnittkräfte nach Th. II. O.

x (m)	Nx (kN)	MIIy (kNm)	As (cm ²)	Ebo (o/oo)	Es (o/oo)	k (1/m)	BIIy (kNm ²)
12.58	-222.3	0.0	19.64	-0.134	-0.038	0.000239	46446.1
12.38	-223.0	11.1	19.64	-0.134	-0.038	0.000239	46446.1
12.03	-224.2	8.3	19.64	-0.120	-0.050	0.000176	46434.4
11.68	-225.4	3.0	19.64	-0.095	-0.069	0.000066	46440.0
11.33	-226.7	-8.6	19.64	-0.126	-0.047	0.000198	46421.7
10.98	-227.9	-15.0	19.64	-0.158	-0.024	0.000337	46458.3
10.63	-229.1	-21.6	19.64	-0.198	0.009	0.000593	37912.7
10.28	-230.3	-28.6	19.64	-0.248	0.065	0.000894	33104.8
9.93	-231.6	-35.9	19.64	-0.303	0.140	0.001263	29325.0
9.71	-232.3	-40.6	19.64	-0.343	0.200	0.001551	27012.6
9.58	-232.8	-43.6	19.64	-0.309	0.228	0.001532	29307.3
9.31	-354.0	-70.8	19.64	-0.508	0.400	0.002594	27853.4
9.08	-355.0	-76.2	19.64	-0.550	0.474	0.002927	26577.6
8.91	-355.8	-80.3	19.64	-0.581	0.530	0.003175	25803.9
8.58	-357.3	-88.3	19.64	-0.647	0.651	0.003709	24282.3
8.51	-357.6	-88.3	19.64	-0.647	0.651	0.003710	24276.8
8.11	-359.4	-85.3	19.64	-0.624	0.605	0.003511	24782.6
8.00	-359.9	-68.4	19.64	-0.492	0.363	0.002442	28554.1
7.71	-361.2	-63.8	19.64	-0.455	0.298	0.002152	30223.8
7.31	-363.0	-51.8	19.64	-0.366	0.153	0.001485	35460.6
7.08	-364.0	-35.4	19.64	-0.257	0.014	0.000774	46226.6
6.91	-590.4	-28.5	19.64	-0.294	-0.083	0.000528	54361.4
6.58	-591.9	-21.7	24.16	-0.256	-0.104	0.000380	56881.1
6.51	-912.7	-24.4	24.16	-0.367	-0.191	0.000440	54455.7
6.15	-914.4	-21.6	24.16	-0.355	-0.200	0.000387	54462.5
6.11	-914.5	-7.2	24.16	-0.292	-0.246	0.000114	54651.0
5.71	-916.3	9.7	24.16	-0.313	-0.231	0.000205	54553.4
5.31	-918.1	24.9	24.16	-0.382	-0.184	0.000494	54393.9
5.15	-918.9	31.1	24.16	-0.409	-0.164	0.000612	54367.0
4.91	-919.9	39.8	24.16	-0.448	-0.137	0.000777	54365.9
4.71	-920.8	47.1	24.16	-0.481	-0.115	0.000915	54396.5
4.51	-921.7	54.3	24.16	-0.512	-0.092	0.001050	54458.4
4.11	-923.5	68.3	24.16	-0.577	-0.048	0.001321	54262.1
3.71	-925.3	81.6	51.32	-0.477	-0.015	0.001154	74032.5
3.60	-2225.9	-63.4	51.32	-0.759	-0.396	0.000906	65728.2
3.20	-2227.9	-60.5	51.32	-0.749	-0.404	0.000864	65735.9
2.80	-2229.9	-50.0	51.32	-0.713	-0.429	0.000711	65823.5
2.40	-2231.9	-39.4	51.32	-0.678	-0.454	0.000559	65937.7
2.00	-2233.9	-28.9	51.32	-0.642	-0.479	0.000409	66065.7
1.60	-2235.9	-18.5	51.32	-0.607	-0.503	0.000261	66218.1
1.20	-2237.9	-8.4	51.32	-0.574	-0.527	0.000117	66379.2
0.80	-2239.9	11.2	51.32	-0.584	-0.521	0.000158	66308.8
0.40	-2241.9	20.5	51.32	-0.616	-0.500	0.000289	66139.5
0.00	-2243.9	29.3	51.32	-0.646	-0.481	0.000414	65985.1