

E I N G A B E N -- Programm ROHR2
Auftrag 9050300
ASU Kosice NO. 9
System: KO 08

HGH/30.1c -- Seite 1
Datum 08.06.05 14:36:15

CCC	*****	CCC
CCC	Spannungsanalyse	CCC
CCC	*****	CCC

Spannungsnachweise nach PRESSURE PIPING ASME B31.3 Stand 2002

Automatische Ermittlung der zul. Spannung nach folgenden Regeln:

Die zulaessigen Spannungen Sh und Sa werden entweder vom Programm in Anlehnung an ASME B31.3 Art. 302.3 mit den Festigkeitswerten der Werkstoffdatei ermittelt oder direkt der Werkstoffdatei entnommen, falls ein ASME/ASTM-Werkstoff vorliegt. Die im ET-Satz (RR-Aufgabe) vorgegebenen zulaessigen Spannungen haben jedoch Vorrang.

Sc = min (Rm\RT\min/3.0 , Rp0.2\RT\min/1.5)
Fuer ferritische Werkstoffe:
Sh = min (Sc , Rm\T\min/3.0 , Rp0.2\T\min/1.5 ,
Rm\100000\mitt/1.5 , 0.8*Rm\100000\min)
Fuer austenitische Werkstoffe:
Sh = min (Sc , Rp1.0\T\min/1.5 ,
Rm\100000\mitt/1.5 , 0.8*Rm\100000\min)
Sa = f * (1.25*Sc + 0.25*Sh)

Rm\RT\min	=Zugfestigkeit 20 Grad C Mindestw.	in N/mm ²
Rm\T\min	=Zugfestigkeit Berechn.-T. Mindestwert	in N/mm ²
Rp02\RT\min	=0.2% Streckgrenze 20 Grad C Mindestw.	in N/mm ²
Rp02\T\min	=0.2% Streckgrenze Berechn.-T. Mindestw.	in N/mm ²
Rp1.0\T\min	=1.0% Streckgrenze Berechn.-T. Mindestw.	in N/mm ²
Rm\100000\mitt	=Zeitstandsfestw. 100000h Mittelwert	in N/mm ²
Rm\100000\min	=Zeitstandsfestw. 100000h Mindestwert	in N/mm ²

Erlaeuterungen:

Bei austenit. Staehlen mit einem Verhaeltnis von Streckgrenze/Zugfestigkeit bei 20 Grad C ≤ 0.5 wird mit Werten der 1% Streckgrenze gerechnet. Dieser, in deutschen Regelwerken ueblicherweise verwendete Wert zur Ermittlung der zul.Spannung fuer Austenite (/1.5), ersetzt den Wert "90% der Steckgrenze bei Temperatur" aus ASME B31.3 (303.3.2 d(3))

Falls Rm\T\min nicht vorliegt, werden Naeherungsformeln eingesetzt.

Fuer ferritische Werkstoffe:

$$Rm\T\min = Rm\RT\min * (Rp02\RT\min + Rp02\T\min) / (2 * Rp02\RT\min) .$$

Der Faktor f (von Lastwechselzahl abhaengiger Spannungs-Reduktionsfaktor) kann ueber den SPI-Datenatz eingegeben werden. (SPI F=f)

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ANSI B31.3		Werkstoff: ST35.8			
Materialkennwert	ZUGF	RP02	RM1H	EMOD	
		RP1P	RM2H	AFAT	
Quelle	MMW 400R	DIN17175	DIN17175	SEW 310	
Ausgabe	08/1995	05/1979	05/1979	08/1997	
Auslegungstemp GR C	250.00	250.00			
Betriebstemp. GR C	250.00	170.00			
E-Mod kalt kN/mm ²	212.50	212.50			
E-Mod warm kN/mm ²	195.50	201.40			
Wanddicken	mm	0- 16	0- 16		
in N/mm ²					
Rm\RT\min	360.00	360.00			
Rm\T\min	305.00	305.00			
Rp0.2\RT\min	235.00	235.00			
Rp0.2\T\min	165.00	165.00			
Rm\100000\mitt	-. -	-. -			
Rm\100000\min	-. -	-. -			
Rm\RT\min/3.0	120.00	120.00			
Rp0.2\RT\min/1.5	156.67	156.67			
Sc	120.00	120.00			
Rm\T\min/3.0	101.67	101.67			
Rp0.2\T\min /1.5	110.00	110.00			
Rm\100000\mitt/1.5	-. -	-. -			
0.8*Rm\100000\min	-. -	-. -			
Sh	101.67	101.67			
Sa	175.42	175.42			

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ANSI B31.3		Werkstoff: ST37.0			
Materialkennwert	ZUGF	RP02 RP1P	RM1H RM2H	EMOD AFAT	
Quelle	DIN1629	DIN1629	---	SEW 310	
Ausgabe	10/1984	10/1984	---	08/1997	
Rp02-Werte fuer Temperatur sind nicht nachgewiesen; Beruecksichtigung des um 20% hoeheren Sicherheitsbeiwertes durch um den Faktor 1/1.2 reduzierte Rp02-Werte;					
Auslegungstemp GR C	250.00				
Betriebstemp. GR C	170.00				
E-Mod kalt kN/mm ²	212.50				
E-Mod warm kN/mm ²	201.40				
Wanddicken	mm	0- 16			
in N/mm ²					
Rm\RT\min	350.00				
(Rm\T\min)	277.02				
Rp0.2\RT\min	235.00				
Rp0.2\T\min	137.00				
Rm\100000\mitt	-. -				
Rm\100000\min	-. -				
Rm\RT\min/3.0	116.67				
Rp0.2\RT\min/1.5	156.67				
Sc	116.67				
Rm\T\min/3.0	92.34				
Rp0.2\T\min /1.5	91.33				
Rm\100000\mitt/1.5	-. -				
0.8*Rm\100000\min	-. -				
Sh	91.33				
Sa	168.67				

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Den Spannungsnachweisen liegen folgende Lastfaelle zugrunde :

Lf-Datei	Lf-Feld	Lf-Bezeichnung	erstellt am:
Gew1.erg	G1	Gewicht	08.06.05 14:35:44
Templ.erg	T1	Betrieb1	08.06.05 14:35:49
Wind1.erg	W1	Wind1-X	08.06.05 14:35:54
Wind1.erg	W2	Wind1-Y	08.06.05 14:35:54

Gedruckte Querschnittsdaten sind Nettowerte.

Es werden Toleranzeingaben beruecksichtigt fuer :
 Druck-Spannungsanteile S(P)
 Momenten-Spannungsanteile in SL, SOL

U E B E R L A G E R U N G S V O R S C H R I F T

Lf-Feld TMP1	Lastf. Betrie.-Gewich.1 = ARITHMET aus:		
	Lf-Feld T1	Lastf. Betrieb1	* 1.00
	+ Lf-Feld G1	Lastf. Gewicht	* -1.00
Lf-Feld TRANGE	Lastf. Range = RANGE aus:		
	Lf-Feld TMP1	Lastf. Betrie.-Gewich.1	* 1.00
Lf-Feld W-G_21	Lastf. Wind1-X-Gew = ARITHMET aus:		
	Lf-Feld W1	Lastf. Wind1-X	* 1.00
	+ Lf-Feld G1	Lastf. Gewicht	* -1.00
Lf-Feld W-G_22	Lastf. Wind1-Y-Gew = ARITHMET aus:		
	Lf-Feld W2	Lastf. Wind1-Y	* 1.00
	+ Lf-Feld G1	Lastf. Gewicht	* -1.00
Lf-Feld W_RMS2	Lastf. Wind1-XY = RMS aus:		
	Lf-Feld W-G_21	Lastf. Wind1-X-Gew	* 1.00
	+ Lf-Feld W-G_22	Lastf. Wind1-Y-Gew	* 1.00

Angeforderte GLEICHUNGEN:

ANSI B31.3 Nachweis 01 $SL = \frac{SLP + QXL/A + \sqrt{(ii \cdot MiL^2 + io \cdot MoL^2)}}{Z}$ < Sh
 P aus ET-Satz (Ausleg.Druck)
 Ma aus Lastfall Gewicht
 Sh aus MATDAT errechnet oder aus ET-Satz Faktor = 1.00

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ANSI B31.3 Nachweis 02 $SE = \sqrt{ii \cdot MiE^2 + io \cdot MoE^2 + MT^2} / Z < SA + f \cdot (Sh - SL)$
P aus ET-Satz (Ausleg.Druck)
Ma aus Lastfall Gewicht
Mc aus Lastfall Range
Sh aus MATDAT errechnet oder aus ET-Satz Faktor = 1.00
Sa aus MATDAT errechnet oder aus ET-Satz Faktor = 1.00
Ermuedungsfaktor $f = 1.00$
P, Ma fuer die Ermittlung von SL in Gleichung SE
 $Mc = Mc \cdot E\text{-MODkalt} / E\text{-MODwarm}$

ANSI B31.3 Nachweis 03 $SOL = SL + QXO / A + \sqrt{ii \cdot Mio^2 + io \cdot MoO^2} / Z < k \cdot Sh$
P aus ET-Satz (Ausleg.Druck)
Ma aus Lastfall Gewicht
Mb aus Lastfall Wind1-XY
Sh aus MATDAT errechnet oder aus ET-Satz Faktor = 1.33

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Pkt 10 Strg 1 n Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL n	22.0	22.5	0.548	0.008	0.152 6.7	29.3	101.7	29
02	SE n	SL=	29.3	0.096	0.049	0.325 11.1	11.1	247.8	4
03	SOLn	SL=	29.3	0.039	0.220	0.113 10.0	39.2	135.2	29

Pkt 20 Strg 1 v Da= 114.3 mm s= 2.6 mm (BGL) Bogen GLatt
 Strg 1 m Da= 114.3 mm s= 2.6 mm R= 152.0 mm
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 2.7 io= 2.2

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.493	0.158	0.007 17.4	40.0	101.7	39
01	SL m	22.0	22.5	0.343	0.140	0.016 15.4	37.9	101.7	37
01	SL n	22.0	22.5	0.022	0.092	0.016 10.0	32.5	101.7	32
02	SE v	SL=	40.0	0.096	0.278	0.043 24.3	24.3	237.1	10
02	SE m	SL=	37.9	0.038	0.245	0.096 22.2	22.2	239.2	9
02	SE n	SL=	32.5	0.040	0.212	0.091 19.4	19.4	244.5	8
03	SOLv	SL=	40.0	0.039	0.046	0.141 13.5	53.5	135.2	40
03	SOLm	SL=	37.9	0.178	0.015	0.268 24.1	62.0	135.2	46
03	SOLn	SL=	32.5	0.281	0.007	0.238 21.5	54.1	135.2	40

Pkt 30 Strg 1 v Da= 114.3 mm s= 2.6 mm (BGL) Bogen GLatt
 Strg 1 m Da= 114.3 mm s= 2.6 mm R= 152.0 mm
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 2.7 io= 2.2

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.029	0.015	0.003 1.7	24.2	101.7	24
01	SL m	22.0	22.5	0.311	0.056	0.007 6.4	28.9	101.7	28
01	SL n	22.0	22.5	0.443	0.072	0.007 8.2	30.8	101.7	30
02	SE v	SL=	24.2	0.040	0.433	0.003 37.3	37.3	252.9	15
02	SE m	SL=	28.9	0.029	0.445	0.029 38.4	38.4	248.1	15
02	SE n	SL=	30.8	0.001	0.431	0.044 37.2	37.2	246.3	15
03	SOLv	SL=	24.2	0.281	0.088	0.064 11.3	35.5	135.2	26
03	SOLm	SL=	28.9	0.221	0.079	0.093 12.1	41.0	135.2	30
03	SOLn	SL=	30.8	0.043	0.052	0.069 8.3	39.1	135.2	29

Pkt 35 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.998	0.020	0.017 2.2	24.7	101.7	24
01	SL n	22.0	22.5	0.952	0.020	0.017 2.1	24.6	101.7	24
02	SE v	SL=	24.7	0.001	0.104	0.045 3.7	3.7	252.4	1
02	SE n	SL=	24.6	0.001	0.104	0.045 3.7	3.7	252.4	1
03	SOLv	SL=	24.7	0.043	0.610	0.183 25.6	50.3	135.2	37
03	SOLn	SL=	24.6	0.274	0.610	0.183 25.9	50.5	135.2	37

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Pkt 40 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 128.7 mm s= 9.8 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	1.342	0.204	0.006 9.7	32.2	101.7	32
01	SL n	22.0	5.6	1.406	0.204	0.006 2.4	8.0	101.7	8
02	SE v	SL=	32.2	0.001	0.128	0.292 10.3	10.3	244.9	4
02	SE n	SL=	8.0	0.001	0.128	0.292 3.2	3.2	269.1	1
03	SOLv	SL=	32.2	0.274	0.097	0.026 4.3	36.5	135.2	27
03	SOLn	SL=	8.0	0.274	0.097	0.026 1.1	9.1	135.2	7

Pkt 50 Strg 1 v Da= 128.7 mm s= 9.8 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	5.6	1.810	0.257	0.011 3.0	8.7	101.7	9
01	SL n	22.0	22.5	1.874	0.257	0.011 12.4	34.9	101.7	34
02	SE v	SL=	8.7	0.001	0.183	0.351 3.9	3.9	268.4	1
02	SE n	SL=	34.9	0.001	0.183	0.351 12.8	12.8	242.2	5
03	SOLv	SL=	8.7	0.274	0.024	0.060 0.7	9.4	135.2	7
03	SOLn	SL=	34.9	0.274	0.024	0.060 2.9	37.8	135.2	28

Pkt 55 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	1.891	0.267	0.012 12.8	35.3	101.7	35
01	SL n	22.0	22.5	1.891	0.267	0.012 12.8	35.3	101.7	35
02	SE v	SL=	35.3	0.001	0.193	0.361 13.3	13.3	241.7	5
02	SE n	SL=	35.3	0.001	0.193	0.361 13.3	13.3	241.7	5
03	SOLv	SL=	35.3	0.274	0.014	0.077 3.4	38.8	135.2	29
03	SOLn	SL=	35.3	0.274	0.014	0.077 3.4	38.8	135.2	29

Pkt 60 Strg 1 v Da= 114.3 mm s= 2.6 mm (BGL) Bogen GLatt
 Strg 1 m Da= 114.3 mm s= 2.6 mm R= 140.0 mm
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 2.8 io= 2.4

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	1.891	0.267	0.012 32.3	54.8	101.7	54
01	SL m	22.0	22.5	1.461	0.203	0.013 24.6	47.2	101.7	46
01	SL n	22.0	22.5	0.142	0.017	0.006 2.2	24.7	101.7	24
02	SE v	SL=	54.8	0.001	0.193	0.361 32.6	32.6	222.2	15
02	SE m	SL=	47.2	0.262	0.195	0.272 28.6	28.6	229.9	12
02	SE n	SL=	24.7	0.385	0.169	0.022 19.9	19.9	252.4	8
03	SOLv	SL=	54.8	0.274	0.014	0.077 7.7	62.6	135.2	46
03	SOLm	SL=	47.2	0.084	0.017	0.072 7.1	54.3	135.2	40
03	SOLn	SL=	24.7	0.159	0.049	0.044 7.1	31.8	135.2	24

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Pkt 70 Strg 1 v Da= 114.3 mm s= 2.6 mm (TTU) T-Stck Uverstaerkt
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 4.4 io= 5.6
 Strg 6 n Da= 114.3 mm s= 2.6 mm

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.142	0.213	0.008 38.1	60.6	101.7	60
01	SL n	22.0	22.5	0.142	0.213	0.008 37.9	60.5	101.7	59
01	SL n	22.0	22.5	0.153	0.001	0.000 0.3	22.8	101.7	22
02	SE v	SL=	60.6	0.385	0.130	0.042 23.6	23.6	216.5	11
02	SE n	SL=	60.5	0.385	0.130	0.042 23.6	23.6	216.6	11
02	SE n	SL=	22.8	0.000	0.000	0.000 0.0	0.0	254.3	0
03	SOLv	SL=	60.6	0.159	0.079	0.069 21.1	81.7	135.2	60
03	SOLn	SL=	60.5	0.115	0.086	0.068 21.6	82.1	135.2	61
03	SOLn	SL=	22.8	0.000	0.007	0.011 2.6	25.5	135.2	19

Pkt 75 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf., Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.138	0.016	1.452 58.4	81.0	101.7	80
01	SL n	22.0	22.5	0.050	0.030	0.941 37.8	60.4	101.7	59
02	SE v	SL=	81.0	0.385	0.134	0.055 13.3	13.3	196.1	7
02	SE n	SL=	60.4	1.403	0.764	0.739 56.9	56.9	216.7	26
03	SOLv	SL=	81.0	0.116	0.299	0.233 15.3	96.3	135.2	71
03	SOLn	SL=	60.4	0.371	0.283	0.346 18.4	78.7	135.2	58

Pkt 80 Strg 1 v Da= 114.3 mm s= 2.6 mm (BGL) Bogen GLatt
 Strg 1 m Da= 114.3 mm s= 2.6 mm R= 152.0 mm
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 2.7 io= 2.2

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.049	0.026	0.031 3.9	26.5	101.7	26
01	SL m	22.0	22.5	0.695	0.074	0.017 8.8	31.4	101.7	31
01	SL n	22.0	22.5	0.906	0.111	0.007 12.8	35.4	101.7	35
02	SE v	SL=	26.5	1.403	0.030	0.121 46.3	46.3	250.6	18
02	SE m	SL=	31.4	1.126	0.055	0.792 67.6	67.6	245.7	28
02	SE n	SL=	35.4	0.286	0.082	1.243 90.0	90.0	241.7	37
03	SOLv	SL=	26.5	0.371	0.349	0.144 39.9	66.3	135.2	49
03	SOLm	SL=	31.4	0.270	0.334	0.080 36.6	68.0	135.2	50
03	SOLn	SL=	35.4	0.035	0.296	0.033 31.7	67.1	135.2	50

Pkt 90 Strg 1 v Da= 114.3 mm s= 2.6 mm (BGL) Bogen GLatt
 Strg 1 m Da= 114.3 mm s= 2.6 mm R= 152.0 mm
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 2.7 io= 2.2

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.247	0.004	0.000 0.7	23.2	101.7	23
01	SL m	22.0	22.5	0.154	0.014	0.017 2.3	24.8	101.7	24
01	SL n	22.0	22.5	0.002	0.035	0.024 4.4	26.9	101.7	26
02	SE v	SL=	23.2	0.286	1.404	0.158 121.7	121.7	253.8	48
02	SE m	SL=	24.8	0.318	1.478	0.079 127.8	127.8	252.2	51
02	SE n	SL=	26.9	0.174	1.436	0.271 125.3	125.3	250.2	50

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Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
03	SOLv	SL=	23.2	0.035	0.022	0.139 12.6	35.8	135.2	27
03	SOLm	SL=	24.8	0.159	0.038	0.198 18.3	43.1	135.2	32
03	SOLn	SL=	26.9	0.204	0.044	0.141 13.6	40.6	135.2	30

Pkt 100 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.002	0.100	0.489 20.0	42.6	101.7	42
01	SL n	22.0	22.5	0.004	0.100	0.489 20.0	42.6	101.7	42
02	SE v	SL=	42.6	0.174	0.001	0.930 30.6	30.6	234.5	13
02	SE n	SL=	42.6	0.174	0.001	0.930 30.6	30.6	234.5	13
03	SOLv	SL=	42.6	0.204	0.575	0.043 23.4	66.0	135.2	49
03	SOLn	SL=	42.6	0.010	0.575	0.043 23.2	65.7	135.2	49

Pkt 110 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.010	0.100	0.523 21.4	43.9	101.7	43
01	SL n	22.0	22.5	0.020	0.100	0.523 21.4	43.9	101.7	43
02	SE v	SL=	43.9	0.174	0.939	0.721 38.7	38.7	233.2	17
02	SE n	SL=	43.9	0.174	0.939	0.721 38.7	38.7	233.1	17
03	SOLv	SL=	43.9	0.010	0.534	0.047 21.5	65.4	135.2	48
03	SOLn	SL=	43.9	0.174	0.534	0.047 21.7	65.6	135.2	49

Pkt 120 Strg 1 v Da= 114.3 mm s= 2.6 mm (BGL) Bogen GLatt
 Strg 1 m Da= 114.3 mm s= 2.6 mm R= 152.0 mm
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 2.7 io= 2.2

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.024	0.000	0.030 2.7	25.3	101.7	25
01	SL m	22.0	22.5	0.254	0.033	0.030 4.8	27.3	101.7	27
01	SL n	22.0	22.5	0.367	0.046	0.013 5.5	28.0	101.7	28
02	SE v	SL=	25.3	0.174	0.628	0.503 65.2	65.2	251.8	26
02	SE m	SL=	27.3	0.496	0.654	0.278 61.9	61.9	249.8	25
02	SE n	SL=	28.0	0.566	0.635	0.109 58.2	58.2	249.1	23
03	SOLv	SL=	25.3	0.174	0.034	0.131 12.4	37.7	135.2	28
03	SOLm	SL=	27.3	0.133	0.030	0.180 16.5	43.8	135.2	32
03	SOLn	SL=	28.0	0.029	0.021	0.122 11.1	39.1	135.2	29

Pkt 130 Strg 1 v Da= 114.3 mm s= 2.6 mm (BGL) Bogen GLatt
 Strg 1 m Da= 114.3 mm s= 2.6 mm R= 152.0 mm
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 2.7 io= 2.2

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.884	0.087	0.001 10.2	32.8	101.7	32
01	SL m	22.0	22.5	0.675	0.051	0.023 6.5	29.1	101.7	29
01	SL n	22.0	22.5	0.042	0.047	0.032 5.9	28.4	101.7	28

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Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
02	SE v	SL=	32.8	0.566	0.713	0.046 64.1	64.1	244.3	26
02	SE m	SL=	29.1	0.448	0.740	0.330 69.5	69.5	248.0	28
02	SE n	SL=	28.4	0.100	0.717	0.514 72.0	72.0	248.7	29
03	SOLv	SL=	32.8	0.029	0.357	0.020 38.2	70.9	135.2	52
03	SOLm	SL=	29.1	0.290	0.398	0.080 43.4	72.5	135.2	54
03	SOLn	SL=	28.4	0.401	0.415	0.120 46.0	74.4	135.2	55

Pkt 132 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf., Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.042	0.022	0.519 20.9	43.4	101.7	43
01	SL n	22.0	22.5	0.018	0.022	0.519 20.9	43.4	101.7	43
02	SE v	SL=	43.4	0.100	0.354	0.537 21.0	21.0	233.6	9
02	SE n	SL=	43.4	0.100	0.354	0.537 21.0	21.0	233.7	9
03	SOLv	SL=	43.4	0.401	0.160	0.413 18.2	61.6	135.2	46
03	SOLn	SL=	43.4	0.194	0.160	0.413 18.0	61.4	135.2	45

Pkt 134 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf., Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.021	0.005	0.075 3.0	25.6	101.7	25
01	SL n	22.0	22.5	0.008	0.005	0.075 3.0	25.6	101.7	25
02	SE v	SL=	25.6	0.100	0.339	0.129 12.2	12.2	251.5	5
02	SE n	SL=	25.6	0.100	0.339	0.129 12.2	12.2	251.5	5
03	SOLv	SL=	25.6	0.194	0.197	0.098 9.1	34.6	135.2	26
03	SOLn	SL=	25.6	0.090	0.197	0.098 8.9	34.5	135.2	26

Pkt 136 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf., Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.012	0.001	0.226 9.1	31.6	101.7	31
01	SL n	22.0	22.5	0.004	0.001	0.226 9.1	31.6	101.7	31
02	SE v	SL=	31.6	0.100	0.087	0.033 4.4	4.4	245.4	2
02	SE n	SL=	31.6	0.100	0.087	0.033 4.4	4.4	245.4	2
03	SOLv	SL=	31.6	0.090	0.058	0.026 2.7	34.3	135.2	25
03	SOLn	SL=	31.6	0.044	0.058	0.026 2.6	34.3	135.2	25

Pkt 138 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf., Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.008	0.000	0.184 7.4	29.9	101.7	29
01	SL n	22.0	22.5	0.004	0.000	0.184 7.4	29.9	101.7	29
02	SE v	SL=	29.9	0.100	0.107	0.008 4.7	4.7	247.1	2
02	SE n	SL=	29.9	0.100	0.107	0.008 4.7	4.7	247.1	2
03	SOLv	SL=	29.9	0.044	0.220	0.007 8.9	38.8	135.2	29
03	SOLn	SL=	29.9	0.027	0.220	0.007 8.9	38.8	135.2	29

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Pkt 140 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.008	0.000	0.202 8.1	30.6	101.7	30
01	SL n	22.0	22.5	0.014	0.000	0.193 7.8	30.3	101.7	30
02	SE v	SL=	30.6	0.100	0.053	0.002 3.7	3.7	246.4	1
02	SE n	SL=	30.3	0.001	0.092	0.007 3.0	3.0	246.8	1
03	SOLv	SL=	30.6	0.027	0.054	0.004 2.2	32.8	135.2	24
03	SOLn	SL=	30.3	0.026	0.060	0.000 2.4	32.7	135.2	24

Pkt 150 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.010	0.000	0.202 8.1	30.7	101.7	30
01	SL n	22.0	22.5	0.017	0.000	0.202 8.1	30.7	101.7	30
02	SE v	SL=	30.7	0.001	0.186	0.002 6.0	6.0	246.4	2
02	SE n	SL=	30.7	0.001	0.186	0.002 6.0	6.0	246.4	2
03	SOLv	SL=	30.7	0.026	0.208	0.001 8.4	39.1	135.2	29
03	SOLn	SL=	30.7	0.043	0.208	0.001 8.4	39.1	135.2	29

Pkt 160 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.014	0.000	0.055 2.2	24.8	101.7	24
01	SL n	22.0	22.5	0.017	0.000	0.055 2.2	24.8	101.7	24
02	SE v	SL=	24.8	0.001	0.120	0.003 3.9	3.9	252.3	2
02	SE n	SL=	24.8	0.000	0.120	0.003 3.9	3.9	252.3	2
03	SOLv	SL=	24.8	0.043	0.096	0.000 3.9	28.7	135.2	21
03	SOLn	SL=	24.8	0.043	0.096	0.000 3.9	28.7	135.2	21

Pkt 170 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.017	0.000	0.161 6.5	29.0	101.7	29
01	SL n	22.0	22.5	0.005	0.000	0.161 6.5	29.0	101.7	29
02	SE v	SL=	29.0	0.000	0.157	0.007 5.1	5.1	248.0	2
02	SE n	SL=	29.0	0.000	0.157	0.007 5.1	5.1	248.1	2
03	SOLv	SL=	29.0	0.043	0.063	0.000 2.6	31.6	135.2	23
03	SOLn	SL=	29.0	0.055	0.063	0.000 2.6	31.6	135.2	23

Pkt 180 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.008	0.000	0.323 13.0	35.5	101.7	35
01	SL n	22.0	22.5	0.000	0.000	0.323 12.9	35.5	101.7	35

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Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
02	SE v	SL=	35.5	0.000	0.564	0.002 18.3	18.3	241.6	8
02	SE n	SL=	35.5	0.000	0.564	0.002 18.3	18.3	241.6	8
03	SOLv	SL=	35.5	0.055	0.323	0.001 13.0	48.5	135.2	36
03	SOLn	SL=	35.5	0.134	0.323	0.001 13.1	48.6	135.2	36

Pkt 190 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf., Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	22.5	0.005	0.000	0.224 9.0	31.5	101.7	31
01	SL n	22.0	22.5	0.001	0.000	0.224 9.0	31.5	101.7	31
02	SE v	SL=	31.5	0.000	0.508	0.003 16.5	16.5	245.5	7
02	SE n	SL=	31.5	0.000	0.508	0.003 16.5	16.5	245.5	7
03	SOLv	SL=	31.5	0.134	0.030	0.001 1.4	32.9	135.2	24
03	SOLn	SL=	31.5	0.162	0.030	0.001 1.4	32.9	135.2	24

Pkt 200 Strg 1 v Da= 114.3 mm s= 2.6 mm (BGL) Bogen GLatt
 Strg 1 m Da= 114.3 mm s= 2.6 mm R= 152.0 mm
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 2.7 io= 2.2

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	22.5	0.001	0.000	0.004 0.4	22.9	101.7	23
01	SL m	22.0	22.5	0.001	0.000	0.017 1.5	24.0	101.7	24
01	SL n	22.0	22.5	0.000	0.000	0.023 2.0	24.6	101.7	24
02	SE v	SL=	22.9	0.000	1.041	0.000 89.6	89.6	254.1	35
02	SE m	SL=	24.0	0.001	1.059	0.001 91.2	91.2	253.1	36
02	SE n	SL=	24.6	0.001	1.028	0.000 88.5	88.5	252.5	35
03	SOLv	SL=	22.9	0.162	0.077	0.001 8.4	31.3	135.2	23
03	SOLm	SL=	24.0	0.238	0.088	0.001 9.6	33.7	135.2	25
03	SOLn	SL=	24.6	0.193	0.080	0.000 8.8	33.3	135.2	25

Pkt 210 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf., Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	22.5	0.001	0.001	0.168 6.7	29.3	101.7	29
01	SL n	22.0	22.5	0.003	0.001	0.168 6.7	29.3	101.7	29
02	SE v	SL=	29.3	0.001	0.727	0.001 23.5	23.5	247.8	9
02	SE n	SL=	29.3	0.001	0.727	0.001 23.5	23.5	247.8	9
03	SOLv	SL=	29.3	0.193	0.020	0.001 1.0	30.3	135.2	22
03	SOLn	SL=	29.3	0.068	0.020	0.001 0.9	30.2	135.2	22

Pkt 220 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf., Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	22.5	0.002	0.000	0.344 13.8	36.3	101.7	36
01	SL n	22.0	22.5	0.002	0.000	0.344 13.8	36.3	101.7	36
02	SE v	SL=	36.3	0.001	0.109	0.000 3.5	3.5	240.7	1
02	SE n	SL=	36.3	0.001	0.109	0.000 3.5	3.5	240.7	1

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Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
03	SOLv	SL=	36.3	0.068	0.335	0.001 13.5	49.9	135.2	37
03	SOLn	SL=	36.3	0.052	0.335	0.001 13.5	49.8	135.2	37

Pkt 230 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	22.5	0.002	0.000	0.038 1.5	24.1	101.7	24
01	SL n	22.0	22.5	0.002	0.000	0.038 1.5	24.1	101.7	24
02	SE v	SL=	24.1	0.001	0.198	0.001 6.4	6.4	253.0	3
02	SE n	SL=	24.1	0.001	0.198	0.001 6.4	6.4	253.0	3
03	SOLv	SL=	24.1	0.052	0.137	0.002 5.6	29.6	135.2	22
03	SOLn	SL=	24.1	0.155	0.137	0.002 5.7	29.7	135.2	22

Pkt 240 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	22.5	0.001	0.001	0.430 17.3	39.8	101.7	39
01	SL n	22.0	22.5	0.003	0.001	0.430 17.3	39.8	101.7	39
02	SE v	SL=	39.8	0.001	0.609	0.002 19.7	19.7	237.3	8
02	SE n	SL=	39.8	0.001	0.609	0.002 19.7	19.7	237.3	8
03	SOLv	SL=	39.8	0.155	0.070	0.008 3.0	42.8	135.2	32
03	SOLn	SL=	39.8	0.351	0.070	0.008 3.2	43.0	135.2	32

Pkt 250 Strg 1 v Da= 114.3 mm s= 2.6 mm (TTU) T-Stck Uverstaerkt
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 4.4 io= 5.6
 Strg 8 n Da= 114.3 mm s= 2.6 mm

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	22.5	0.003	0.078	0.000 13.9	36.5	101.7	36
01	SL n	22.0	22.5	0.002	0.079	0.000 14.0	36.6	101.7	36
01	SL n	22.0	22.5	0.089	0.001	0.000 0.2	22.8	101.7	22
02	SE v	SL=	36.5	0.001	0.004	0.907 163.3	163.3	240.6	68
02	SE n	SL=	36.6	0.001	0.004	0.907 163.3	163.3	240.5	68
02	SE n	SL=	22.8	0.000	0.000	0.000 0.0	0.0	254.3	0
03	SOLv	SL=	36.5	0.351	0.006	0.109 24.7	61.1	135.2	45
03	SOLn	SL=	36.6	0.307	0.001	0.109 24.8	61.4	135.2	45
03	SOLn	SL=	22.8	0.000	0.007	0.011 2.6	25.4	135.2	19

Pkt 260 Strg 1 v Da= 114.3 mm s= 2.6 mm (BGL) Bogen GLatt
 Strg 1 m Da= 114.3 mm s= 2.6 mm R= 152.0 mm
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 2.7 io= 2.2

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	22.5	0.002	0.000	0.038 3.4	25.9	101.7	26
01	SL m	22.0	22.5	0.002	0.000	0.000 0.1	22.6	101.7	22
01	SL n	22.0	22.5	0.001	0.000	0.035 3.1	25.7	101.7	25

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Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
02	SE v	SL=	25.9	0.000	0.958	0.001 82.5	82.5	251.2	33
02	SE m	SL=	22.6	0.001	0.998	0.001 85.9	85.9	254.5	34
02	SE n	SL=	25.7	0.001	0.989	0.000 85.2	85.2	251.4	34
03	SOLv	SL=	25.9	0.307	0.133	0.000 14.5	40.5	135.2	30
03	SOLm	SL=	22.6	0.376	0.145	0.006 15.9	38.5	135.2	28
03	SOLn	SL=	25.7	0.244	0.127	0.009 13.8	39.5	135.2	29

Pkt 270 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	22.5	0.005	0.000	0.336 13.5	36.0	101.7	35
01	SL n	22.0	22.5	0.000	0.000	0.336 13.5	36.0	101.7	35
02	SE v	SL=	36.0	0.001	0.066	0.001 2.1	2.1	241.0	1
02	SE n	SL=	36.0	0.001	0.066	0.001 2.1	2.1	241.0	1
03	SOLv	SL=	36.0	0.244	0.061	0.002 2.7	38.8	135.2	29
03	SOLn	SL=	36.0	0.222	0.061	0.002 2.7	38.8	135.2	29

Pkt 280 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	22.5	0.004	0.000	0.165 6.6	29.2	101.7	29
01	SL n	22.0	22.5	0.001	0.000	0.165 6.6	29.2	101.7	29
02	SE v	SL=	29.2	0.001	0.563	0.000 18.2	18.2	247.9	7
02	SE n	SL=	29.2	0.001	0.563	0.000 18.2	18.2	247.9	7
03	SOLv	SL=	29.2	0.222	0.274	0.001 11.3	40.4	135.2	30
03	SOLn	SL=	29.2	0.083	0.274	0.001 11.1	40.3	135.2	30

Pkt 290 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	22.5	0.003	0.000	0.173 7.0	29.5	101.7	29
01	SL n	22.0	22.5	0.001	0.000	0.173 7.0	29.5	101.7	29
02	SE v	SL=	29.5	0.001	0.158	0.000 5.1	5.1	247.6	2
02	SE n	SL=	29.5	0.001	0.158	0.000 5.1	5.1	247.6	2
03	SOLv	SL=	29.5	0.083	0.015	0.000 0.7	30.2	135.2	22
03	SOLn	SL=	29.5	0.078	0.015	0.000 0.7	30.2	135.2	22

Pkt 300 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	22.5	0.003	0.000	0.160 6.4	29.0	101.7	29
01	SL n	22.0	22.5	0.000	0.000	0.160 6.4	29.0	101.7	29
02	SE v	SL=	29.0	0.001	0.149	0.001 4.8	4.8	248.1	2
02	SE n	SL=	29.0	0.001	0.149	0.001 4.8	4.8	248.1	2
03	SOLv	SL=	29.0	0.078	0.221	0.000 9.0	37.9	135.2	28
03	SOLn	SL=	29.0	0.035	0.221	0.000 8.9	37.9	135.2	28

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Pkt 310 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.003	0.000	0.203 8.1	30.7	101.7	30
01	SL n	22.0	22.5	0.001	0.000	0.203 8.1	30.7	101.7	30
02	SE v	SL=	30.7	0.001	0.028	0.002 0.9	0.9	246.4	0
02	SE n	SL=	30.7	0.001	0.028	0.002 0.9	0.9	246.4	0
03	SOLv	SL=	30.7	0.035	0.048	0.001 2.0	32.7	135.2	24
03	SOLn	SL=	30.7	0.033	0.048	0.001 2.0	32.6	135.2	24

Pkt 320 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.005	0.000	0.193 7.7	30.3	101.7	30
01	SL n	22.0	22.5	0.012	0.000	0.115 4.6	27.2	101.7	27
02	SE v	SL=	30.3	0.001	0.063	0.007 2.1	2.1	246.8	1
02	SE n	SL=	27.2	0.056	0.011	0.010 1.9	1.9	249.9	1
03	SOLv	SL=	30.3	0.033	0.273	0.001 11.0	41.3	135.2	31
03	SOLn	SL=	27.2	0.008	0.185	0.000 7.4	34.6	135.2	26

Pkt 340 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.011	0.000	0.010 0.4	22.9	101.7	23
01	SL n	22.0	22.5	0.009	0.000	0.010 0.4	22.9	101.7	23
02	SE v	SL=	22.9	0.056	0.008	0.000 1.8	1.8	254.1	1
02	SE n	SL=	22.9	0.056	0.007	0.000 1.8	1.8	254.1	1
03	SOLv	SL=	22.9	0.008	0.062	0.000 2.5	25.5	135.2	19
03	SOLn	SL=	22.9	0.008	0.062	0.000 2.5	25.5	135.2	19

Pkt 330 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.012	0.000	0.166 6.7	29.2	101.7	29
01	SL n	22.0	22.5	0.002	0.000	0.166 6.7	29.2	101.7	29
02	SE v	SL=	29.2	0.056	0.003	0.002 1.8	1.8	247.9	1
02	SE n	SL=	29.2	0.056	0.003	0.002 1.8	1.8	247.9	1
03	SOLv	SL=	29.2	0.008	0.025	0.000 1.0	30.2	135.2	22
03	SOLn	SL=	29.2	0.008	0.025	0.000 1.0	30.2	135.2	22

Pkt 350 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.006	0.001	0.202 8.1	30.7	101.7	30
01	SL n	22.0	22.5	0.001	0.001	0.202 8.1	30.7	101.7	30

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Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
02	SE v	SL=	30.7	0.056	0.022	0.003 2.0	2.0	246.4	1
02	SE n	SL=	30.7	0.056	0.022	0.003 2.0	2.0	246.4	1
03	SOLv	SL=	30.7	0.008	0.251	0.001 10.1	40.7	135.2	30
03	SOLn	SL=	30.7	0.016	0.251	0.001 10.1	40.7	135.2	30

Pkt 360 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.002	0.002	0.194 7.8	30.3	101.7	30
01	SL n	22.0	22.5	0.005	0.002	0.194 7.8	30.3	101.7	30
02	SE v	SL=	30.3	0.056	0.023	0.011 2.0	2.0	246.8	1
02	SE n	SL=	30.3	0.056	0.023	0.011 2.0	2.0	246.8	1
03	SOLv	SL=	30.3	0.016	0.054	0.002 2.2	32.5	135.2	24
03	SOLn	SL=	30.3	0.034	0.054	0.002 2.2	32.5	135.2	24

Pkt 370 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.001	0.009	0.192 7.7	30.3	101.7	30
01	SL n	22.0	22.5	0.009	0.009	0.192 7.7	30.3	101.7	30
02	SE v	SL=	30.3	0.056	0.091	0.044 3.7	3.7	246.8	2
02	SE n	SL=	30.3	0.056	0.091	0.044 3.7	3.7	246.8	2
03	SOLv	SL=	30.3	0.034	0.227	0.007 9.2	39.4	135.2	29
03	SOLn	SL=	30.3	0.074	0.227	0.007 9.2	39.5	135.2	29

Pkt 380 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.006	0.037	0.076 3.4	25.9	101.7	26
01	SL n	22.0	22.5	0.019	0.037	0.076 3.4	26.0	101.7	26
02	SE v	SL=	25.9	0.056	0.136	0.176 7.4	7.4	251.1	3
02	SE n	SL=	26.0	0.056	0.136	0.176 7.4	7.4	251.1	3
03	SOLv	SL=	25.9	0.074	0.075	0.027 3.3	29.2	135.2	22
03	SOLn	SL=	26.0	0.155	0.075	0.027 3.4	29.3	135.2	22

Pkt 390 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.015	0.134	0.537 22.2	44.8	101.7	44
01	SL n	22.0	22.5	0.039	0.134	0.537 22.2	44.8	101.7	44
02	SE v	SL=	44.8	0.056	0.183	0.376 13.6	13.6	232.3	6
02	SE n	SL=	44.8	0.056	0.183	0.376 13.6	13.6	232.3	6
03	SOLv	SL=	44.8	0.155	0.639	0.096 26.1	70.8	135.2	52
03	SOLn	SL=	44.8	0.335	0.639	0.096 26.3	71.1	135.2	53

Pkt 410 Strg 1 v Da= 114.3 mm s= 2.6 mm (BGL) Bogen GLatt
Strg 1 m Da= 114.3 mm s= 2.6 mm R= 152.0 mm
Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 2.7 io= 2.2

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	22.5	0.036	0.140	0.011 15.0	37.6	101.7	37
01	SL m	22.0	22.5	0.092	0.150	0.013 16.2	38.7	101.7	38
01	SL n	22.0	22.5	0.064	0.150	0.008 16.1	38.7	101.7	38
02	SE v	SL=	37.6	0.056	1.644	0.243 142.6	142.6	239.5	60
02	SE m	SL=	38.7	0.221	1.733	0.157 149.8	149.8	238.3	63
02	SE n	SL=	38.7	0.278	1.714	0.020 147.8	147.8	238.4	62
03	SOLv	SL=	37.6	0.335	0.188	0.070 21.3	58.9	135.2	44
03	SOLm	SL=	38.7	0.314	0.184	0.074 21.1	59.9	135.2	44
03	SOLn	SL=	38.7	0.129	0.155	0.039 17.1	55.7	135.2	41

Pkt 420 Strg 1 v Da= 114.3 mm s= 2.6 mm (BGL) Bogen GLatt
Strg 1 m Da= 114.3 mm s= 2.6 mm R= 152.0 mm
Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 2.7 io= 2.2

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	22.5	0.843	0.280	0.026 31.0	53.5	101.7	53
01	SL m	22.0	22.5	0.676	0.251	0.001 27.5	50.1	101.7	49
01	SL n	22.0	22.5	0.087	0.159	0.028 17.3	39.8	101.7	39
02	SE v	SL=	53.5	0.278	0.783	0.491 76.6	76.6	223.6	34
02	SE m	SL=	50.1	0.571	0.759	0.221 69.7	69.7	227.0	31
02	SE n	SL=	39.8	0.589	0.653	0.177 60.7	60.7	237.2	26
03	SOLv	SL=	53.5	0.129	0.119	0.078 14.6	68.1	135.2	50
03	SOLm	SL=	50.1	0.272	0.147	0.091 17.9	68.0	135.2	50
03	SOLn	SL=	39.8	0.313	0.153	0.095 18.8	58.6	135.2	43

Pkt 425 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf., Ubear.
Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	22.5	0.090	0.065	0.945 38.1	60.6	101.7	60
01	SL n	22.0	22.5	0.067	0.065	0.945 38.1	60.6	101.7	60
02	SE v	SL=	60.6	0.589	0.492	0.504 29.7	29.7	216.4	14
02	SE n	SL=	60.6	0.589	0.492	0.504 29.7	29.7	216.5	14
03	SOLv	SL=	60.6	0.313	0.325	0.145 14.6	75.3	135.2	56
03	SOLn	SL=	60.6	0.180	0.325	0.145 14.5	75.1	135.2	56

Pkt 430 Strg 1 v Da= 114.3 mm s= 2.6 mm (BGL) Bogen GLatt
Strg 1 m Da= 114.3 mm s= 2.6 mm R= 152.0 mm
Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 2.7 io= 2.2

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	22.5	0.076	0.026	0.077 7.5	30.0	101.7	30
01	SL m	22.0	22.5	0.079	0.026	0.066 6.6	29.1	101.7	29
01	SL n	22.0	22.5	0.070	0.025	0.045 4.8	27.4	101.7	27
02	SE v	SL=	30.0	0.589	0.221	0.460 42.6	42.6	247.1	17
02	SE m	SL=	29.1	0.720	0.201	0.199 32.3	32.3	247.9	13
02	SE n	SL=	27.4	0.741	0.153	0.093 28.2	28.2	249.7	11

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Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
03	SOLv	SL=	30.0	0.180	0.026	0.019 3.5	33.5	135.2	25
03	SOLm	SL=	29.1	0.237	0.036	0.038 5.4	34.5	135.2	26
03	SOLn	SL=	27.4	0.265	0.040	0.051 6.6	33.9	135.2	25

Pkt 440 Strg 1 v Da= 114.3 mm s= 2.6 mm (BGL) Bogen GLatt
 Strg 1 m Da= 114.3 mm s= 2.6 mm R= 152.0 mm
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 2.7 io= 2.2

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.070	0.056	0.012 6.2	28.7	101.7	28
01	SL m	22.0	22.5	0.308	0.091	0.017 10.1	32.7	101.7	32
01	SL n	22.0	22.5	0.396	0.100	0.035 11.6	34.1	101.7	34
02	SE v	SL=	28.7	0.741	0.095	0.197 29.0	29.0	248.4	12
02	SE m	SL=	32.7	0.707	0.134	0.278 32.5	32.5	244.4	13
02	SE n	SL=	34.1	0.348	0.230	0.590 48.1	48.1	243.0	20
03	SOLv	SL=	28.7	0.265	0.063	0.062 9.0	37.8	135.2	28
03	SOLm	SL=	32.7	0.205	0.058	0.040 7.3	40.0	135.2	30
03	SOLn	SL=	34.1	0.031	0.039	0.005 4.3	38.4	135.2	28

Pkt 450 Strg 1 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 128.7 mm s= 9.8 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.656	0.072	0.028 3.8	26.3	101.7	26
01	SL n	22.0	5.6	0.720	0.072	0.028 1.0	6.6	101.7	6
02	SE v	SL=	26.3	0.348	0.509	1.080 40.2	40.2	250.7	16
02	SE n	SL=	6.6	0.348	0.509	1.080 12.4	12.4	270.5	5
03	SOLv	SL=	26.3	0.031	0.318	0.090 13.3	39.7	135.2	29
03	SOLn	SL=	6.6	0.031	0.318	0.090 3.3	9.9	135.2	7

Pkt 460 Strg 1 v Da= 128.7 mm s= 9.8 mm (VUU) V-Naht Umf.,Ubear.
 Strg 1 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	5.6	1.124	0.063	0.055 1.1	6.7	101.7	7
01	SL n	22.0	22.5	1.188	0.063	0.055 4.7	27.2	101.7	27
02	SE v	SL=	6.7	0.348	0.483	1.552 16.6	16.6	270.3	6
02	SE n	SL=	27.2	0.348	0.483	1.552 53.8	53.8	249.9	22
03	SOLv	SL=	6.7	0.031	0.471	0.137 4.9	11.6	135.2	9
03	SOLn	SL=	27.2	0.031	0.471	0.137 19.7	46.9	135.2	35

Pkt 500 Strg 2 n Da= 219.1 mm s= 5.3 mm (VUU) V-Naht Umf.,Ubear.
 ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL n	22.0	21.1	0.081	0.020	0.997 5.4	26.5	101.7	26
02	SE n	SL=	26.5	0.773	0.068	0.191 4.0	4.0	250.6	2
03	SOLn	SL=	26.5	0.517	0.320	0.089 1.9	28.4	135.2	21

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Pkt 490 Strg 2 v Da= 219.1 mm s= 5.3 mm (TTU) T-Stck Uverstaerkt
 Strg 2 n Da= 219.1 mm s= 5.3 mm ii= 4.7 io= 5.9
 Strg 3 n Da= 114.3 mm s= 2.6 mm

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	21.1	0.081	0.165	0.025 4.3	25.4	101.7	25
01	SL n	22.0	21.1	0.057	0.198	0.005 5.0	26.1	101.7	26
01	SL n	22.0	22.5	1.271	0.032	0.057 8.6	31.1	101.7	31
02	SE v	SL=	25.4	0.773	0.752	0.134 18.5	18.5	251.7	7
02	SE n	SL=	26.1	0.471	0.535	0.110 13.2	13.2	251.0	5
02	SE n	SL=	31.1	0.244	1.288	0.301 113.0	113.0	246.0	46
03	SOLv	SL=	25.4	0.517	0.177	0.074 5.2	30.6	135.2	23
03	SOLn	SL=	26.1	0.187	0.182	0.045 4.9	31.0	135.2	23
03	SOLn	SL=	31.1	0.037	0.359	0.476 63.3	94.4	135.2	70

Pkt 480 Strg 2 v Da= 219.1 mm s= 5.3 mm (TTU) T-Stck Uverstaerkt
 Strg 2 n Da= 219.1 mm s= 5.3 mm ii= 4.7 io= 5.9
 Strg 4 n Da= 219.1 mm s= 5.3 mm

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	21.1	0.057	0.490	0.002 12.4	33.5	101.7	33
01	SL n	22.0	21.1	0.057	0.490	0.002 12.4	33.5	101.7	33
01	SL n	22.0	21.1	0.490	0.000	0.000 0.1	21.2	101.7	21
02	SE v	SL=	33.5	0.471	0.138	0.036 4.1	4.1	243.6	2
02	SE n	SL=	33.5	0.471	0.138	0.036 4.1	4.1	243.6	2
02	SE n	SL=	21.2	0.000	0.000	0.000 0.0	0.0	255.8	0
03	SOLv	SL=	33.5	0.187	0.117	0.159 5.9	39.4	135.2	29
03	SOLn	SL=	33.5	0.127	0.099	0.159 5.7	39.2	135.2	29
03	SOLn	SL=	21.2	0.000	0.018	0.018 0.7	22.0	135.2	16

Pkt 470 Strg 2 v Da= 219.1 mm s= 5.3 mm (TTU) T-Stck Uverstaerkt
 Strg 2 n Da= 219.1 mm s= 5.3 mm ii= 4.7 io= 5.9
 Strg 1 v Da= 114.3 mm s= 2.6 mm

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	21.1	0.057	0.535	0.009 13.5	34.6	101.7	34
01	SL n	22.0	21.1	0.017	0.600	0.002 15.2	36.3	101.7	36
01	SL v	22.0	22.5	1.227	0.066	0.059 10.4	32.9	101.7	32
02	SE v	SL=	34.6	0.471	0.813	0.181 19.9	19.9	242.5	8
02	SE n	SL=	36.3	0.002	0.941	0.167 22.6	22.6	240.8	9
02	SE v	SL=	32.9	0.348	1.754	0.469 155.8	155.8	244.2	64
03	SOLv	SL=	34.6	0.127	0.076	0.230 7.6	42.2	135.2	31
03	SOLn	SL=	36.3	0.076	0.126	0.154 5.9	42.2	135.2	31
03	SOLv	SL=	32.9	0.031	0.161	0.541 63.4	96.3	135.2	71

Pkt 510 Strg 2 v Da= 219.1 mm s= 5.3 mm (VUU) V-Naht Umf., Ubear.
 Strg 2 n Da= 219.1 mm s= 5.3 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	21.1	0.017	0.000	0.070 0.4	21.5	101.7	21
01	SL n	22.0	21.1	0.000	0.000	0.070 0.4	21.5	101.7	21

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Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
02	SE v	SL=	21.5	0.000	0.000	0.000	0.0	0.0	255.6 0
02	SE n	SL=	21.5	0.000	0.000	0.000	0.0	0.0	255.6 0
03	SOLv	SL=	21.5	0.076	0.018	0.000	0.1	21.6	135.2 16
03	SOLn	SL=	21.5	0.000	0.018	0.000	0.1	21.6	135.2 16

Pkt 520 Strg 2 v Da= 219.1 mm s= 5.3 mm (VUU) V-Naht Umf.,Ubear.
 ii= 1.0 io= 1.0

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	21.1	0.000	0.000	0.000	0.0	21.1	101.7 21
02	SE v	SL=	21.1	0.000	0.000	0.000	0.0	0.0	256.0 0
03	SOLv	SL=	21.1	0.000	0.000	0.000	0.0	21.1	135.2 16

Pkt 600 Strg 3 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 3 n Da= 128.7 mm s= 9.8 mm ii= 1.0 io= 1.0

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	22.5	1.232	0.047	0.029	3.6	26.1	101.7 26
01	SL n	22.0	5.6	1.168	0.047	0.029	0.9	6.5	101.7 6
02	SE v	SL=	26.1	0.244	0.301	1.166	39.7	39.7	251.0 16
02	SE n	SL=	6.5	0.244	0.301	1.166	12.3	12.3	270.6 5
03	SOLv	SL=	26.1	0.037	0.418	0.310	20.9	47.0	135.2 35
03	SOLn	SL=	6.5	0.037	0.418	0.310	5.2	11.6	135.2 9

Pkt 610 Strg 3 v Da= 128.7 mm s= 9.8 mm (VUU) V-Naht Umf.,Ubear.
 Strg 3 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	5.6	0.763	0.022	0.021	0.5	6.1	101.7 6
01	SL n	22.0	22.5	0.699	0.022	0.021	2.0	24.5	101.7 24
02	SE v	SL=	6.1	0.244	0.301	0.878	9.6	9.6	271.0 4
02	SE n	SL=	24.5	0.244	0.301	0.878	31.0	31.0	252.6 12
03	SOLv	SL=	6.1	0.037	0.296	0.207	3.6	9.7	135.2 7
03	SOLn	SL=	24.5	0.037	0.296	0.207	14.6	39.1	135.2 29

Pkt 620 Strg 3 v Da= 114.3 mm s= 2.6 mm (BGL) Bogen GLatt
 Strg 3 m Da= 114.3 mm s= 2.6 mm R= 152.0 mm
 Strg 3 n Da= 114.3 mm s= 2.6 mm ii= 2.7 io= 2.2

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	22.5	0.310	0.069	0.049	8.9	31.5	101.7 31
01	SL m	22.0	22.5	0.245	0.064	0.017	7.2	29.8	101.7 29
01	SL n	22.0	22.5	0.069	0.039	0.025	4.8	27.3	101.7 27
02	SE v	SL=	31.5	0.244	0.028	0.453	33.5	33.5	245.6 14
02	SE m	SL=	29.8	0.517	0.090	0.212	23.9	23.9	247.3 10
02	SE n	SL=	27.3	0.542	0.117	0.152	23.0	23.0	249.8 9
03	SOLv	SL=	31.5	0.037	0.093	0.062	11.4	42.8	135.2 32
03	SOLm	SL=	29.8	0.096	0.098	0.029	10.9	40.6	135.2 30
03	SOLn	SL=	27.3	0.103	0.096	0.026	10.6	37.9	135.2 28

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Pkt 630 Strg 3 v Da= 114.3 mm s= 2.6 mm (BGL) Bogen GLatt
 Strg 3 m Da= 114.3 mm s= 2.6 mm R= 152.0 mm
 Strg 3 n Da= 114.3 mm s= 2.6 mm ii= 2.7 io= 2.2

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	22.5	0.067	0.003	0.078	7.1	29.6	101.7 29
01	SL m	22.0	22.5	0.049	0.006	0.094	8.5	31.0	101.7 31
01	SL n	22.0	22.5	0.023	0.010	0.095	8.6	31.1	101.7 31
02	SE v	SL=	29.6	0.542	0.335	0.128	35.0	35.0	247.5 14
02	SE m	SL=	31.0	0.452	0.361	0.327	41.6	41.6	246.1 17
02	SE n	SL=	31.1	0.292	0.371	0.476	47.7	47.7	246.0 19
03	SOLv	SL=	29.6	0.103	0.056	0.056	7.9	37.5	135.2 28
03	SOLm	SL=	31.0	0.117	0.058	0.029	6.8	37.9	135.2 28
03	SOLn	SL=	31.1	0.116	0.059	0.026	6.8	37.9	135.2 28

Pkt 635 Strg 3 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 3 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	22.5	0.017	0.197	0.837	34.5	57.1	101.7 56
01	SL n	22.0	22.5	0.089	0.197	0.837	34.6	57.2	101.7 56
02	SE v	SL=	57.1	0.292	0.367	0.516	22.6	22.6	220.0 10
02	SE n	SL=	57.2	0.292	0.367	0.516	22.6	22.6	219.9 10
03	SOLv	SL=	57.1	0.116	0.536	0.138	22.4	79.4	135.2 59
03	SOLn	SL=	57.2	0.371	0.536	0.138	22.6	79.8	135.2 59

Pkt 640 Strg 3 v Da= 114.3 mm s= 2.6 mm (BGL) Bogen GLatt
 Strg 3 m Da= 114.3 mm s= 2.6 mm R= 152.0 mm
 Strg 3 n Da= 114.3 mm s= 2.6 mm ii= 2.7 io= 2.2

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	22.5	0.084	0.235	0.004	25.1	47.7	101.7 47
01	SL m	22.0	22.5	0.221	0.257	0.026	27.8	50.4	101.7 50
01	SL n	22.0	22.5	0.200	0.258	0.033	28.0	50.5	101.7 50
02	SE v	SL=	47.7	0.292	0.506	0.305	49.7	49.7	229.4 22
02	SE m	SL=	50.4	0.436	0.552	0.046	49.7	49.7	226.7 22
02	SE n	SL=	50.5	0.357	0.555	0.239	52.0	52.0	226.6 23
03	SOLv	SL=	47.7	0.371	0.344	0.136	39.1	86.8	135.2 64
03	SOLm	SL=	50.4	0.377	0.345	0.151	39.6	90.0	135.2 67
03	SOLn	SL=	50.5	0.185	0.314	0.104	35.0	85.5	135.2 63

Pkt 650 Strg 3 v Da= 114.3 mm s= 2.6 mm (BGL) Bogen GLatt
 Strg 3 m Da= 114.3 mm s= 2.6 mm R= 152.0 mm
 Strg 3 n Da= 114.3 mm s= 2.6 mm ii= 2.7 io= 2.2

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	22.5	0.598	0.336	0.009	36.6	59.1	101.7 58
01	SL m	22.0	22.5	0.514	0.319	0.015	34.7	57.2	101.7 56
01	SL n	22.0	22.5	0.095	0.254	0.031	27.4	49.9	101.7 49
02	SE v	SL=	59.1	0.357	0.775	0.006	67.7	67.7	218.0 31
02	SE m	SL=	57.2	0.256	0.788	0.238	70.4	70.4	219.9 32
02	SE n	SL=	49.9	0.019	0.748	0.330	68.6	68.6	227.2 30

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Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
03	SOLv	SL=	59.1	0.185	0.220	0.091 25.0	84.2	135.2	62
03	SOLm	SL=	57.2	0.320	0.251	0.145 30.1	87.3	135.2	65
03	SOLn	SL=	49.9	0.343	0.258	0.138 30.5	80.4	135.2	59

Pkt 660 Strg 3 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 3 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.093	0.152	1.027 41.8	64.3	101.7	63
01	SL n	22.0	22.5	0.046	0.152	1.027 41.7	64.3	101.7	63
02	SE v	SL=	64.3	0.019	0.063	0.008 2.1	2.1	212.7	1
02	SE n	SL=	64.3	0.019	0.063	0.008 2.1	2.1	212.8	1
03	SOLv	SL=	64.3	0.343	0.290	0.285 16.7	81.0	135.2	60
03	SOLn	SL=	64.3	0.173	0.290	0.285 16.5	80.8	135.2	60

Pkt 670 Strg 3 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 3 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.042	0.042	0.059 3.0	25.5	101.7	25
01	SL n	22.0	22.5	0.023	0.042	0.059 2.9	25.5	101.7	25
02	SE v	SL=	25.5	0.019	0.531	0.002 17.2	17.2	251.6	7
02	SE n	SL=	25.5	0.019	0.531	0.002 17.2	17.2	251.6	7
03	SOLv	SL=	25.5	0.173	0.508	0.079 20.8	46.3	135.2	34
03	SOLn	SL=	25.5	0.088	0.508	0.079 20.7	46.2	135.2	34

Pkt 680 Strg 3 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 3 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.020	0.011	0.225 9.1	31.6	101.7	31
01	SL n	22.0	22.5	0.013	0.011	0.225 9.1	31.6	101.7	31
02	SE v	SL=	31.6	0.019	0.105	0.002 3.4	3.4	245.5	1
02	SE n	SL=	31.6	0.019	0.105	0.002 3.4	3.4	245.5	1
03	SOLv	SL=	31.6	0.088	0.019	0.020 1.2	32.8	135.2	24
03	SOLn	SL=	31.6	0.054	0.019	0.020 1.2	32.8	135.2	24

Pkt 690 Strg 3 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 3 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.009	0.005	0.182 7.3	29.8	101.7	29
01	SL n	22.0	22.5	0.021	0.025	0.258 10.4	33.0	101.7	32
02	SE v	SL=	29.8	0.019	0.205	0.007 6.7	6.7	247.2	3
02	SE n	SL=	33.0	0.245	0.246	0.036 11.3	11.3	244.1	5
03	SOLv	SL=	29.8	0.054	0.171	0.010 6.9	36.8	135.2	27
03	SOLn	SL=	33.0	0.158	0.234	0.014 9.6	42.5	135.2	31

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Pkt 700 Strg 3 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf., Ubear.
 Strg 3 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx, Mt (kN, kNm)	Mi (kNm)	Mo S(Q, M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.018	0.051	0.070 3.5	26.1	101.7	26
01	SL n	22.0	22.5	0.030	0.051	0.070 3.5	26.1	101.7	26
02	SE v	SL=	26.1	0.245	0.148	0.062 9.5	9.5	251.0	4
02	SE n	SL=	26.1	0.245	0.148	0.062 9.5	9.5	251.0	4
03	SOLv	SL=	26.1	0.158	0.091	0.028 4.0	30.1	135.2	22
03	SOLn	SL=	26.1	0.171	0.091	0.028 4.0	30.1	135.2	22

Pkt 710 Strg 3 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf., Ubear.
 Strg 3 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx, Mt (kN, kNm)	Mi (kNm)	Mo S(Q, M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.026	0.184	0.634 26.5	49.1	101.7	48
01	SL n	22.0	22.5	0.057	0.184	0.634 26.5	49.1	101.7	48
02	SE v	SL=	49.1	0.245	0.347	0.956 33.9	33.9	228.0	15
02	SE n	SL=	49.1	0.245	0.347	0.956 33.9	33.9	228.0	15
03	SOLv	SL=	49.1	0.171	0.681	0.099 27.8	76.9	135.2	57
03	SOLn	SL=	49.1	0.381	0.681	0.099 28.0	77.1	135.2	57

Pkt 720 Strg 3 v Da= 114.3 mm s= 2.6 mm (BGL) Bogen GLatt
 Strg 3 m Da= 114.3 mm s= 2.6 mm R= 152.0 mm
 Strg 3 n Da= 114.3 mm s= 2.6 mm ii= 2.7 io= 2.2

Na	Gl	P (bar)	SLP (N/mm2)	Qx, Mt (kN, kNm)	Mi (kNm)	Mo S(Q, M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.054	0.178	0.007 19.1	41.7	101.7	41
01	SL m	22.0	22.5	0.120	0.190	0.011 20.5	43.0	101.7	42
01	SL n	22.0	22.5	0.085	0.189	0.009 20.3	42.9	101.7	42
02	SE v	SL=	41.7	0.245	0.898	0.228 79.5	79.5	235.4	34
02	SE m	SL=	43.0	0.347	0.983	0.020 85.4	85.4	234.1	36
02	SE n	SL=	42.9	0.273	0.990	0.200 86.8	86.8	234.2	37
03	SOLv	SL=	41.7	0.381	0.353	0.120 39.6	81.3	135.2	60
03	SOLm	SL=	43.0	0.393	0.355	0.104 39.4	82.4	135.2	61
03	SOLn	SL=	42.9	0.191	0.323	0.051 35.0	77.9	135.2	58

Pkt 730 Strg 3 v Da= 114.3 mm s= 2.6 mm (BGL) Bogen GLatt
 Strg 3 m Da= 114.3 mm s= 2.6 mm R= 152.0 mm
 Strg 3 n Da= 114.3 mm s= 2.6 mm ii= 2.7 io= 2.2

Na	Gl	P (bar)	SLP (N/mm2)	Qx, Mt (kN, kNm)	Mi (kNm)	Mo S(Q, M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.793	0.331	0.009 36.2	58.8	101.7	58
01	SL m	22.0	22.5	0.652	0.305	0.014 33.4	55.9	101.7	55
01	SL n	22.0	22.5	0.104	0.220	0.029 23.8	46.3	101.7	46
02	SE v	SL=	58.8	0.273	0.773	0.111 67.6	67.6	218.3	31
02	SE m	SL=	55.9	0.286	0.763	0.078 66.6	66.6	221.2	30
02	SE n	SL=	46.3	0.162	0.677	0.222 60.6	60.6	230.8	26
03	SOLv	SL=	58.8	0.191	0.136	0.082 16.5	75.3	135.2	56
03	SOLm	SL=	55.9	0.290	0.162	0.128 21.1	76.9	135.2	57
03	SOLn	SL=	46.3	0.313	0.166	0.127 21.4	67.7	135.2	50

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Pkt 732 Strg 3 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf., Ubear.
Strg 3 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx, Mt (kN, kNm)	Mi (kNm)	Mo S(Q, M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.107	0.092	0.969 39.2	61.7	101.7	61
01	SL n	22.0	22.5	0.055	0.092	0.969 39.1	61.7	101.7	61
02	SE v	SL=	61.7	0.162	0.162	0.418 15.4	15.4	215.4	7
02	SE n	SL=	61.7	0.162	0.162	0.418 15.4	15.4	215.4	7
03	SOLv	SL=	61.7	0.313	0.240	0.216 13.3	75.0	135.2	55
03	SOLn	SL=	61.7	0.073	0.240	0.216 13.0	74.7	135.2	55

Pkt 738 Strg 3 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf., Ubear.
Strg 3 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx, Mt (kN, kNm)	Mi (kNm)	Mo S(Q, M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.066	0.003	0.217 8.8	31.3	101.7	31
01	SL n	22.0	22.5	0.068	0.003	0.217 8.8	31.3	101.7	31
02	SE v	SL=	31.3	0.162	0.162	0.844 28.3	28.3	245.8	12
02	SE n	SL=	31.3	0.162	0.162	0.844 28.3	28.3	245.8	12
03	SOLv	SL=	31.3	0.073	0.479	0.060 19.5	50.8	135.2	38
03	SOLn	SL=	31.3	0.145	0.479	0.060 19.5	50.9	135.2	38

Pkt 740 Strg 3 v Da= 114.3 mm s= 2.6 mm (BGL) Bogen GLatt
Strg 3 m Da= 114.3 mm s= 2.6 mm R= 152.0 mm
Strg 3 n Da= 114.3 mm s= 2.6 mm ii= 2.7 io= 2.2

Na	Gl	P (bar)	SLP (N/mm2)	Qx, Mt (kN, kNm)	Mi (kNm)	Mo S(Q, M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.073	0.065	0.007 7.1	29.6	101.7	29
01	SL m	22.0	22.5	0.135	0.058	0.006 6.3	28.9	101.7	28
01	SL n	22.0	22.5	0.150	0.060	0.002 6.6	29.1	101.7	29
02	SE v	SL=	29.6	0.162	1.310	0.023 112.9	112.9	247.4	46
02	SE m	SL=	28.9	0.103	1.370	0.123 118.3	118.3	248.2	48
02	SE n	SL=	29.1	0.010	1.266	0.151 109.6	109.6	248.0	44
03	SOLv	SL=	29.6	0.145	0.011	0.019 2.2	31.8	135.2	24
03	SOLm	SL=	28.9	0.122	0.007	0.069 6.3	35.2	135.2	26
03	SOLn	SL=	29.1	0.044	0.007	0.077 7.0	36.1	135.2	27

Pkt 750 Strg 3 v Da= 114.3 mm s= 2.6 mm (BGL) Bogen GLatt
Strg 3 m Da= 114.3 mm s= 2.6 mm R= 152.0 mm
Strg 3 n Da= 114.3 mm s= 2.6 mm ii= 2.7 io= 2.2

Na	Gl	P (bar)	SLP (N/mm2)	Qx, Mt (kN, kNm)	Mi (kNm)	Mo S(Q, M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.584	0.180	0.010 19.9	42.4	101.7	42
01	SL m	22.0	22.5	0.486	0.161	0.013 17.7	40.3	101.7	40
01	SL n	22.0	22.5	0.072	0.096	0.008 10.3	32.9	101.7	32
02	SE v	SL=	42.4	0.010	1.167	0.026 100.5	100.5	234.7	43
02	SE m	SL=	40.3	0.008	1.271	0.017 109.5	109.5	236.8	46
02	SE n	SL=	32.9	0.014	1.209	0.001 104.1	104.1	244.2	43
03	SOLv	SL=	42.4	0.044	0.021	0.044 4.6	47.0	135.2	35
03	SOLm	SL=	40.3	0.069	0.010	0.040 3.8	44.0	135.2	33
03	SOLn	SL=	32.9	0.131	0.008	0.011 1.5	34.4	135.2	25

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Pkt 760 Strg 3 v Da= 114.3 mm s= 2.6 mm (TTU) T-Stck Uverstaerkt
 Strg 3 n Da= 114.3 mm s= 2.6 mm ii= 4.4 io= 5.6
 Strg 10 n Da= 33.7 mm s= 1.6 mm

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	22.5	0.072	0.183	0.010	32.7	55.2	101.7 54
01	SL n	22.0	22.5	0.072	0.183	0.010	32.7	55.2	101.7 54
01	SL n	22.0	10.0	0.009	0.000	0.000	0.1	10.0	101.7 10
02	SE v	SL=	55.2	0.014	0.738	0.031	105.7	105.7	221.8 48
02	SE n	SL=	55.2	0.014	0.738	0.031	105.7	105.7	221.8 48
02	SE n	SL=	10.0	0.000	0.000	0.000	0.0	0.0	267.1 0
03	SOLv	SL=	55.2	0.131	0.024	0.071	16.5	71.7	135.2 53
03	SOLn	SL=	55.2	0.153	0.022	0.071	16.4	71.7	135.2 53
03	SOLn	SL=	10.0	0.000	0.002	0.002	5.8	15.9	135.2 12

Pkt 770 Strg 3 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 3 n Da= 128.7 mm s= 9.8 mm ii= 1.0 io= 1.0

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	22.5	0.072	0.011	0.322	13.0	35.6	101.7 35
01	SL n	22.0	5.6	0.072	0.011	0.322	3.2	8.8	101.7 9
02	SE v	SL=	35.6	0.014	0.045	0.528	17.1	17.1	241.5 7
02	SE n	SL=	8.8	0.014	0.045	0.528	5.3	5.3	268.3 2
03	SOLv	SL=	35.6	0.153	0.118	0.031	5.1	40.6	135.2 30
03	SOLn	SL=	8.8	0.153	0.118	0.031	1.2	10.1	135.2 7

Pkt 780 Strg 3 v Da= 128.7 mm s= 9.8 mm (VUU) V-Naht Umf.,Ubear.
 Strg 3 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	5.6	0.072	0.013	0.697	6.9	12.5	101.7 12
01	SL n	22.0	22.5	0.072	0.013	0.697	28.1	50.6	101.7 50
02	SE v	SL=	12.5	0.014	0.071	0.115	1.4	1.4	264.6 1
02	SE n	SL=	50.6	0.014	0.071	0.115	4.4	4.4	226.5 2
03	SOLv	SL=	12.5	0.153	0.225	0.049	2.3	14.8	135.2 11
03	SOLn	SL=	50.6	0.153	0.225	0.049	9.4	60.0	135.2 44

Pkt 785 Strg 3 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 3 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P	SLP	Qx,Mt	Mi	Mo S(Q,M)	S-ges	S-zul	Ausn
		(bar)	(N/mm2)	(kN, kNm)	(kNm)	(kNm) (N/mm2)	(N/mm2)	(N/mm2)	(%)
01	SL v	22.0	22.5	0.072	0.014	1.061	42.7	65.2	101.7 64
01	SL n	22.0	22.5	0.001	0.014	1.061	42.6	65.1	101.7 64
02	SE v	SL=	65.2	0.014	0.091	0.197	7.0	7.0	211.9 3
02	SE n	SL=	65.1	0.014	0.091	0.197	7.0	7.0	212.0 3
03	SOLv	SL=	65.2	0.153	0.318	0.063	13.2	78.4	135.2 58
03	SOLn	SL=	65.1	0.156	0.318	0.063	13.2	78.3	135.2 58

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Pkt 790 Strg 3 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 3 n Da= 128.7 mm s= 9.8 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.001	0.014	0.530 21.3	43.8	101.7	43
01	SL n	22.0	5.6	0.001	0.014	0.530 5.2	10.9	101.7	11
02	SE v	SL=	43.8	0.014	0.054	0.433 14.1	14.1	233.3	6
02	SE n	SL=	10.9	0.014	0.054	0.433 4.4	4.4	266.2	2
03	SOLv	SL=	43.8	0.156	0.210	0.050 8.8	52.7	135.2	39
03	SOLn	SL=	10.9	0.156	0.210	0.050 2.2	13.0	135.2	10

Pkt 800 Strg 3 v Da= 128.7 mm s= 9.8 mm (VUU) V-Naht Umf.,Ubear.
 Strg 3 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	5.6	0.001	0.013	0.032 0.3	6.0	101.7	6
01	SL n	22.0	22.5	0.001	0.013	0.032 1.4	23.9	101.7	24
02	SE v	SL=	6.0	0.014	0.005	0.745 7.4	7.4	271.1	3
02	SE n	SL=	23.9	0.014	0.005	0.745 24.1	24.1	253.1	10
03	SOLv	SL=	6.0	0.156	0.083	0.032 0.9	6.9	135.2	5
03	SOLn	SL=	23.9	0.156	0.083	0.032 3.7	27.7	135.2	20

Pkt 810 Strg 3 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 Strg 3 n Da= 114.3 mm s= 2.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.001	0.012	0.387 15.5	38.1	101.7	37
01	SL n	22.0	22.5	0.001	0.012	0.387 15.5	38.1	101.7	37
02	SE v	SL=	38.1	0.014	0.068	1.205 39.0	39.0	239.0	16
02	SE n	SL=	38.1	0.014	0.068	1.205 39.0	39.0	239.0	16
03	SOLv	SL=	38.1	0.156	0.073	0.006 3.1	41.2	135.2	30
03	SOLn	SL=	38.1	0.156	0.073	0.006 3.1	41.2	135.2	30

WWWWW Bei Pkt 815

DO/T > 100

WWWWWWW

Pkt 815 Strg 3 v Da= 114.3 mm s= 2.6 mm (RKR) Reduz. Kl.Radien
 Strg 3 n Da= 500.0 mm s= 4.0 mm A= 60.0 Grd
 ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.001	0.012	0.476 19.1	41.7	101.7	41
01	SL n	22.0	67.1	0.001	0.012	0.476 0.6	67.7	101.7	67
02	SE v	SL=	41.7	0.014	0.089	1.338 43.4	43.4	235.4	18
02	SE n	SL=	67.7	0.014	0.089	1.338 1.5	1.5	209.4	1
03	SOLv	SL=	41.7	0.156	0.111	0.003 4.6	46.3	135.2	34
03	SOLn	SL=	67.7	0.156	0.111	0.003 0.2	67.9	135.2	50

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Pkt 820 Strg 3 v Da= 500.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
 Strg 3 n Da= 500.0 mm s= 4.0 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	67.1	0.001	0.012	0.588 0.8	67.9	101.7	67
01	SL n	22.0	67.1	0.003	0.012	0.587 0.8	67.9	101.7	67
02	SE v	SL=	67.9	0.014	0.138	1.649 1.9	1.9	209.2	1
02	SE n	SL=	67.9	0.033	0.138	1.705 2.0	2.0	209.2	1
03	SOLv	SL=	67.9	0.156	0.186	0.020 0.3	68.1	135.2	50
03	SOLn	SL=	67.9	0.144	0.186	0.024 0.3	68.1	135.2	50

Pkt 830 Strg 3 v Da= 500.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
 Strg 3 n Da= 500.0 mm s= 4.0 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	67.1	0.003	0.007	0.928 1.2	68.3	101.7	67
01	SL n	22.0	67.1	0.004	0.007	0.927 1.2	68.3	101.7	67
02	SE v	SL=	68.3	0.033	0.267	2.040 2.3	2.3	208.8	1
02	SE n	SL=	68.3	0.029	0.267	2.060 2.4	2.4	208.8	1
03	SOLv	SL=	68.3	0.144	0.257	0.029 0.4	68.7	135.2	51
03	SOLn	SL=	68.3	0.146	0.257	0.033 0.4	68.7	135.2	51

Pkt 835 Strg 3 v Da= 500.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
 Strg 3 n Da= 500.0 mm s= 4.0 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	67.1	0.004	0.005	0.954 1.2	68.3	101.7	67
01	SL n	22.0	67.1	0.004	0.005	0.954 1.2	68.3	101.7	67
02	SE v	SL=	68.3	0.029	0.297	1.594 1.9	1.9	208.7	1
02	SE n	SL=	68.3	0.029	0.297	1.594 1.8	1.8	208.7	1
03	SOLv	SL=	68.3	0.146	0.231	0.028 0.3	68.7	135.2	51
03	SOLn	SL=	68.3	0.146	0.231	0.028 0.3	68.7	135.2	51

WWWWW Bei Pkt 840

D0/T > 100

WWWWWWW

Pkt 840 Strg 3 v Da= 500.0 mm s= 4.0 mm (RKR) Reduz. Kl.Radien
 Strg 3 n Da= 273.0 mm s= 4.0 mm A= 35.0 Grd
 ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	67.1	0.004	0.004	0.942 1.2	68.3	101.7	67
01	SL n	6.0	9.8	0.004	0.004	0.942 4.2	14.0	91.3	15
02	SE v	SL=	68.3	0.029	0.306	1.461 1.7	1.7	208.8	1
02	SE n	SL=	14.0	0.029	0.306	1.461 5.7	5.7	246.0	2
03	SOLv	SL=	68.3	0.146	0.221	0.026 0.3	68.6	135.2	51
03	SOLn	SL=	14.0	0.146	0.221	0.026 1.0	15.0	121.5	12

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Pkt 845 Strg 3 v Da= 273.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
 Strg 3 n Da= 273.0 mm s= 4.0 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	6.0	9.8	0.004	0.004	0.923	4.1	13.9	91.3
01	SL n	6.0	9.8	0.004	0.004	0.923	4.1	13.9	91.3
02	SE v	SL=	13.9	0.029	0.315	1.328	5.2	5.2	246.1
02	SE n	SL=	13.9	0.029	0.315	1.328	5.2	5.2	246.1
03	SOLv	SL=	13.9	0.146	0.210	0.025	1.0	14.9	121.5
03	SOLn	SL=	13.9	0.146	0.210	0.025	1.0	14.9	121.5

Pkt 850 Strg 3 v Da= 273.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
 Strg 3 n Da= 293.0 mm s= 14.0 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	6.0	9.8	0.004	0.003	0.904	4.0	13.8	91.3
01	SL n	6.0	2.7	0.004	0.003	0.904	1.1	3.8	91.3
02	SE v	SL=	13.8	0.029	0.322	1.213	4.8	4.8	246.2
02	SE n	SL=	3.8	0.029	0.322	1.213	1.5	1.5	256.2
03	SOLv	SL=	13.8	0.146	0.201	0.024	0.9	14.8	121.5
03	SOLn	SL=	3.8	0.146	0.201	0.024	0.3	4.1	121.5

Pkt 860 Strg 3 v Da= 293.0 mm s= 14.0 mm (VUU) V-Naht Umf.,Ubear.
 Strg 3 n Da= 273.0 mm s= 4.0 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	6.0	2.7	0.004	0.002	0.322	0.4	3.1	91.3
01	SL n	6.0	9.8	0.004	0.002	0.322	1.4	11.2	91.3
02	SE v	SL=	3.1	0.029	0.402	0.024	0.5	0.5	256.9
02	SE n	SL=	11.2	0.029	0.402	0.024	1.5	1.5	248.8
03	SOLv	SL=	3.1	0.146	0.053	0.015	0.1	3.2	121.5
03	SOLn	SL=	11.2	0.146	0.053	0.015	0.3	11.5	121.5

Pkt 870 Strg 3 v Da= 273.0 mm s= 4.0 mm (BGL) Bogen GLatt
 Strg 3 m Da= 273.0 mm s= 4.0 mm R= 381.0 mm
 Strg 3 n Da= 273.0 mm s= 4.0 mm ii= 3.7 io= 3.1

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	6.0	9.8	0.004	0.002	0.228	3.2	13.0	91.3
01	SL m	6.0	9.8	0.002	0.004	0.213	3.0	12.8	91.3
01	SL n	6.0	9.8	0.007	0.006	0.580	8.1	17.9	91.3
02	SE v	SL=	13.0	0.029	0.410	0.146	6.1	6.1	247.0
02	SE m	SL=	12.8	0.271	0.130	0.580	7.2	7.2	247.2
02	SE n	SL=	17.9	0.791	0.606	0.675	12.2	12.2	242.1
03	SOLv	SL=	13.0	0.146	0.035	0.015	0.7	13.6	121.5
03	SOLm	SL=	12.8	0.304	0.027	0.012	0.6	13.3	121.5
03	SOLn	SL=	17.9	0.309	0.032	0.027	0.7	18.6	121.5

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Pkt 875 Strg 3 v Da= 273.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 3 n Da= 273.0 mm s= 4.0 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	6.0	9.8	0.007	0.008	1.330 5.9	15.7	91.3	17
01	SL n	6.0	9.8	0.007	0.008	1.330 5.9	15.7	91.3	17
02	SE v	SL=	15.7	0.791	1.755	1.376 9.0	9.0	244.3	4
02	SE n	SL=	15.7	0.791	1.755	1.376 9.0	9.0	244.3	4
03	SOLv	SL=	15.7	0.309	0.058	0.024 0.4	16.1	121.5	13
03	SOLn	SL=	15.7	0.309	0.058	0.024 0.4	16.1	121.5	13

Pkt 880 Strg 3 v Da= 273.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	6.0	9.8	0.007	0.006	1.936 8.6	18.4	91.3	20
02	SE v	SL=	18.4	0.791	1.705	1.884 10.1	10.1	241.6	4
03	SOLv	SL=	18.4	0.309	0.072	0.036 0.5	18.9	121.5	16

Pkt 1000 Strg 4 v Da= 219.1 mm s= 5.3 mm (VUU) V-Naht Umf.,Ubear.
ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	21.1	0.211	0.000	0.000 0.1	21.2	101.7	21
02	SE v	SL=	21.2	0.000	0.000	0.000 0.0	0.0	255.9	0
03	SOLv	SL=	21.2	0.000	0.000	0.000 0.0	21.2	135.2	16

Pkt 900 Strg 6 v Da= 114.3 mm s= 2.6 mm (TTU) T-Stck Uverstaerkt
Strg 6 n Da= 114.3 mm s= 2.6 mm ii= 4.4 io= 5.6
Strg 7 n Da= 33.7 mm s= 1.6 mm

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.106	0.001	0.000 0.2	22.8	101.7	22
01	SL n	22.0	22.5	0.097	0.000	0.000 0.1	22.6	101.7	22
01	SL n	22.0	10.0	0.000	0.001	0.000 1.5	11.5	101.7	11
02	SE v	SL=	22.8	0.000	0.000	0.000 0.0	0.0	254.3	0
02	SE n	SL=	22.6	0.000	0.000	0.000 0.0	0.0	254.4	0
02	SE n	SL=	11.5	0.000	0.000	0.000 0.0	0.0	265.6	0
03	SOLv	SL=	22.8	0.000	0.001	0.001 0.3	23.1	135.2	17
03	SOLn	SL=	22.6	0.000	0.001	0.001 0.3	23.0	135.2	17
03	SOLn	SL=	11.5	0.000	0.000	0.002 4.6	16.0	135.2	12

Pkt 910 Strg 6 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN, kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.064	0.000	0.000 0.1	22.6	101.7	22
02	SE v	SL=	22.6	0.000	0.000	0.000 0.0	0.0	254.5	0
03	SOLv	SL=	22.6	0.000	0.000	0.000 0.0	22.6	135.2	17

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Pkt 1310 Strg 7 v Da= 33.7 mm s= 1.6 mm (VUU) V-Naht Umf.,Ubear.
 ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	10.0	0.000	0.000	0.000 0.0	10.0	101.7	10
02	SE v	SL=	10.0	0.000	0.000	0.000 0.0	0.0	267.1	0
03	SOLv	SL=	10.0	0.000	0.000	0.000 0.0	10.0	135.2	7

Pkt 950 Strg 8 v Da= 114.3 mm s= 2.6 mm (TTU) T-Stck Uverstaerkt
 Strg 8 n Da= 114.3 mm s= 2.6 mm ii= 4.4 io= 5.6
 Strg 9 n Da= 33.7 mm s= 1.6 mm

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.042	0.001	0.000 0.2	22.7	101.7	22
01	SL n	22.0	22.5	0.033	0.000	0.000 0.0	22.6	101.7	22
01	SL n	22.0	10.0	0.000	0.001	0.000 1.5	11.5	101.7	11
02	SE v	SL=	22.7	0.000	0.000	0.000 0.0	0.0	254.4	0
02	SE n	SL=	22.6	0.000	0.000	0.000 0.0	0.0	254.5	0
02	SE n	SL=	11.5	0.000	0.000	0.000 0.0	0.0	265.6	0
03	SOLv	SL=	22.7	0.000	0.001	0.001 0.3	23.0	135.2	17
03	SOLn	SL=	22.6	0.000	0.001	0.001 0.3	22.9	135.2	17
03	SOLn	SL=	11.5	0.000	0.000	0.002 4.6	16.0	135.2	12

Pkt 960 Strg 8 v Da= 114.3 mm s= 2.6 mm (VUU) V-Naht Umf.,Ubear.
 ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	22.5	0.000	0.000	0.000 0.0	22.5	101.7	22
02	SE v	SL=	22.5	0.000	0.000	0.000 0.0	0.0	254.5	0
03	SOLv	SL=	22.5	0.000	0.000	0.000 0.0	22.5	135.2	17

Pkt 970 Strg 9 v Da= 33.7 mm s= 1.6 mm (VUU) V-Naht Umf.,Ubear.
 ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	10.0	0.000	0.000	0.000 0.0	10.0	101.7	10
02	SE v	SL=	10.0	0.000	0.000	0.000 0.0	0.0	267.1	0
03	SOLv	SL=	10.0	0.000	0.000	0.000 0.0	10.0	135.2	7

Pkt 1300 Strg 10 v Da= 33.7 mm s= 1.6 mm (VUU) V-Naht Umf.,Ubear.
 ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo S(Q,M) (kNm) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	22.0	10.0	0.000	0.000	0.000 0.0	10.0	101.7	10
02	SE v	SL=	10.0	0.000	0.000	0.000 0.0	0.0	267.1	0
03	SOLv	SL=	10.0	0.000	0.000	0.000 0.0	10.0	135.2	7

EXTRAKT DER SPANNUNGSANALYSE NACH ASME B31.3:

Nachweis 01 Spannungen infolge staendiger Lasten (SL)

Bauteile mit maximaler Spannungsausnutzung

Pkt		ii	io	Errechn. Spannung (N/mm2)	Zulaess. Spannung (N/mm2)	Aus- nutzung (%)
75	(VUU)	1.00	1.00	81.0	101.7	79.6
835	(VUU)	1.00	1.00	68.3	101.7	67.2
840	(RKR)	1.00	1.00	68.3	101.7	67.2
830	(VUU)	1.00	1.00	68.3	101.7	67.2
820	(VUU)	1.00	1.00	67.9	101.7	66.8
815	(RKR)	1.00	1.00	67.7	101.7	66.6
785	(VUU)	1.00	1.00	65.2	101.7	64.1
660	(VUU)	1.00	1.00	64.3	101.7	63.3
732	(VUU)	1.00	1.00	61.7	101.7	60.7
425	(VUU)	1.00	1.00	60.6	101.7	59.6
70	(TTU)	4.42	5.56	60.6	101.7	59.6
650	(BGL)	2.66	2.22	59.1	101.7	58.2
730	(BGL)	2.66	2.22	58.8	101.7	57.8
635	(VUU)	1.00	1.00	57.2	101.7	56.2
760	(TTU)	4.42	5.56	55.2	101.7	54.3
60	(BGL)	2.82	2.35	54.8	101.7	53.9
420	(BGL)	2.66	2.22	53.5	101.7	52.6
780	(VUU)	1.00	1.00	50.6	101.7	49.8
640	(BGL)	2.66	2.22	50.5	101.7	49.7
710	(VUU)	1.00	1.00	49.1	101.7	48.3
390	(VUU)	1.00	1.00	44.8	101.7	44.1
110	(VUU)	1.00	1.00	43.9	101.7	43.2
790	(VUU)	1.00	1.00	43.8	101.7	43.1
132	(VUU)	1.00	1.00	43.4	101.7	42.7
720	(BGL)	2.66	2.22	43.0	101.7	42.3
100	(VUU)	1.00	1.00	42.6	101.7	41.9
750	(BGL)	2.66	2.22	42.4	101.7	41.7
20	(BGL)	2.66	2.22	40.0	101.7	39.3
240	(VUU)	1.00	1.00	39.8	101.7	39.1
410	(BGL)	2.66	2.22	38.7	101.7	38.1

0 Schnitte mit Spannungseueberschreitungen

(*)

S P A N N U N G E N -- Programm ROHR2
 Auftrag 9050300
 ASU Kosice NO. 9
 System: KO 08

HGH/30.1c -- Seite 33
 Datum 08.06.05 14:36:15

EXTRAKT DER SPANNUNGSANALYSE NACH ASME B31.3:

Nachweis 02 Spannungen infolge Staend. u. Temperaturlast

Bauteile mit maximaler Spannungsausnutzung

Pkt		ii	io	Errechn. Spannung (N/mm2)	Zulaess. Spannung (N/mm2)	Aus- nutzung (%)
250	(TTU)	4.42	5.56	163.3	240.5	67.9
470	(TTU)	4.69	5.92	155.8	244.2	63.8
410	(BGL)	2.66	2.22	149.8	238.3	62.8
90	(BGL)	2.66	2.22	127.8	252.2	50.7
740	(BGL)	2.66	2.22	118.3	248.2	47.7
760	(TTU)	4.42	5.56	105.7	221.8	47.7
750	(BGL)	2.66	2.22	109.5	236.8	46.2
490	(TTU)	4.69	5.92	113.0	246.0	46.0
80	(BGL)	2.66	2.22	90.0	241.7	37.2
720	(BGL)	2.66	2.22	86.8	234.2	37.1
200	(BGL)	2.66	2.22	91.2	253.1	36.0
420	(BGL)	2.66	2.22	76.6	223.6	34.2
260	(BGL)	2.66	2.22	85.2	251.4	33.9
650	(BGL)	2.66	2.22	70.4	219.9	32.0
730	(BGL)	2.66	2.22	67.6	218.3	31.0
130	(BGL)	2.66	2.22	72.0	248.7	28.9
75	(VUU)	1.00	1.00	56.9	216.7	26.3
120	(BGL)	2.66	2.22	65.2	251.8	25.9
640	(BGL)	2.66	2.22	52.0	226.6	23.0
460	(VUU)	1.00	1.00	53.8	249.9	21.5
440	(BGL)	2.66	2.22	48.1	243.0	19.8
630	(BGL)	2.66	2.22	47.7	246.0	19.4
815	(RKR)	1.00	1.00	43.4	235.4	18.4
430	(BGL)	2.66	2.22	42.6	247.1	17.2
110	(VUU)	1.00	1.00	38.7	233.1	16.6
810	(VUU)	1.00	1.00	39.0	239.0	16.3
450	(VUU)	1.00	1.00	40.2	250.7	16.0
600	(VUU)	1.00	1.00	39.7	251.0	15.8
30	(BGL)	2.66	2.22	38.4	248.1	15.5
710	(VUU)	1.00	1.00	33.9	228.0	14.8

0 Schnitte mit Spannungseuberschreitungen

(*)

EXTRAKT DER SPANNUNGSANALYSE NACH ASME B31.3:

Nachweis 03 Spannungen infolge staend. + gelegentl. Lasten (SOL)

Bauteile mit maximaler Spannungsausnutzung

Pkt		ii	io	Errechn. Spannung (N/mm2)	Zulaess. Spannung (N/mm2)	Aus- nutzung (%)
470	(TTU)	4.69	5.92	96.3	135.2	71.2
75	(VUU)	1.00	1.00	96.3	135.2	71.2
490	(TTU)	4.69	5.92	94.4	135.2	69.8
640	(BGL)	2.66	2.22	90.0	135.2	66.6
650	(BGL)	2.66	2.22	87.3	135.2	64.6
720	(BGL)	2.66	2.22	82.4	135.2	61.0
70	(TTU)	4.42	5.56	82.1	135.2	60.7
660	(VUU)	1.00	1.00	81.0	135.2	59.9
635	(VUU)	1.00	1.00	79.8	135.2	59.0
785	(VUU)	1.00	1.00	78.4	135.2	58.0
710	(VUU)	1.00	1.00	77.1	135.2	57.0
730	(BGL)	2.66	2.22	76.9	135.2	56.9
425	(VUU)	1.00	1.00	75.3	135.2	55.7
732	(VUU)	1.00	1.00	75.0	135.2	55.5
130	(BGL)	2.66	2.22	74.4	135.2	55.0
760	(TTU)	4.42	5.56	71.7	135.2	53.0
390	(VUU)	1.00	1.00	71.1	135.2	52.6
835	(VUU)	1.00	1.00	68.7	135.2	50.8
830	(VUU)	1.00	1.00	68.7	135.2	50.8
840	(RKR)	1.00	1.00	68.6	135.2	50.8
820	(VUU)	1.00	1.00	68.1	135.2	50.4
420	(BGL)	2.66	2.22	68.1	135.2	50.4
80	(BGL)	2.66	2.22	68.0	135.2	50.3
815	(RKR)	1.00	1.00	67.9	135.2	50.2
100	(VUU)	1.00	1.00	66.0	135.2	48.8
110	(VUU)	1.00	1.00	65.6	135.2	48.5
60	(BGL)	2.82	2.35	62.6	135.2	46.3
20	(BGL)	2.66	2.22	62.0	135.2	45.9
132	(VUU)	1.00	1.00	61.6	135.2	45.6
250	(TTU)	4.42	5.56	61.4	135.2	45.4

0 Schnitte mit Spannungseuberschreitungen

(*)

2 Warnung(en)