Auftrag 9050300 Datum 26.05.05 08:29:34
ASU Kosice N0. 9
System: KO 06

CCC ********** CCC
CCC Spannungsanalyse CCC
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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.

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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)
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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)

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; Berueckichtigung des um 20% hoeheren Sicherheitsbeiwertes durch um den Faktor 1/1.2 reduzierte Rp02-Werte;					
AuslegungstempGR C	50.00				
Betriebstemp. GR C	50.00				
E-Mod kalt kN/mm^2	212.50				
E-Mod warm kN/mm^2	210.12				
Wanddicken mm	0- 16				
in N/mm^2					
Rm\RT\min	350.00				
(Rm\T\min)	339.95				
Rp0.2\RT\min	235.00				
Rp0.2\T\min	221.50				
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	113.32				
Rp0.2\T\min /1.5	147.67				
Rm\100000\mitt/1.5	-.-				
0.8*Rm\100000\min	-.-				
Sh	113.32				
Sa	174.16				

Den Spannungsnachweisen liegen folgende Lastfaelle zugrunde :

Lf-Datei	Lf-Feld	Lf-Bezeichnung	erstellt am:
Gew1.erg	G1	Gewicht	26.05.05 08:29:12
Temp1.erg	T1	Betrieb1	26.05.05 08:29:15
Temp2.erg	T2	Betrieb2	26.05.05 08:29:18
Temp3.erg	T3	Betrieb3	26.05.05 08:29:22
Wind1.erg	W1	Wind1-X	26.05.05 08:29:26
Wind1.erg	W2	Wind1-Y	26.05.05 08:29:26

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 TMP2	Lastf. Betrie.-Gewich.2 = ARITHMET aus:			
	Lf-Feld T2	Lastf. Betrieb2	*	1.00
	+ Lf-Feld G1	Lastf. Gewicht	*	-1.00
Lf-Feld TMP3	Lastf. Betrie.-Gewich.3 = ARITHMET aus:			
	Lf-Feld T3	Lastf. Betrieb3	*	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 TMP2	Lastf. Betrie.-Gewich.2	*	1.00
	+ Lf-Feld TMP3	Lastf. Betrie.-Gewich.3	*	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 = SLP+QXL/A+SQRT(ii*MiL^2+io*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

ANSI B31.3 Nachweis 02 SE =SQRT(ii*MiE^2+io*MoE^2+MT^2)/Z < SA+f*(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 * E-MODkalt / E-MODwarm

ANSI B31.3 Nachweis 03 SOL = SL+QXO/A+SQRT(ii*MiO^2+io*MoO^2)/Z < k*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

Pkt 70 Strg 10 v Da= 273.0 mm s= 7.8 mm (TTU) T-Stck Uverstaerkt
Strg 10 n Da= 273.0 mm s= 7.8 mm ii= 4.4 io= 5.5
Strg 2 n Da= 168.3 mm s= 6.1 mm

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	10.0	8.0	0.118	0.200	2.440	32.0	40.0	113.3	35
01	SL n	10.0	8.0	0.039	0.046	2.464	32.2	40.2	113.3	36
01	SL n	10.0	6.2	0.058	0.154	0.318	11.6	17.8	113.3	16
02	SE v	SL=	40.0	0.295	1.727	1.586	24.9	24.9	247.5	10
02	SE n	SL=	40.2	0.697	1.245	0.641	14.1	14.1	247.3	6
02	SE n	SL=	17.8	0.945	0.482	0.993	33.3	33.3	269.7	12
03	SOLv	SL=	40.0	0.572	0.353	0.373	6.2	46.2	150.7	31
03	SOLn	SL=	40.2	0.613	0.490	0.437	7.8	48.0	150.7	32
03	SOLn	SL=	17.8	0.479	0.141	0.064	4.5	22.3	150.7	15

Pkt 1600 Strg 2 v Da= 168.3 mm s= 6.1 mm (VUU) V-Naht Umf.,Ubear.
Strg 2 n Da= 168.3 mm s= 3.5 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	10.0	6.2	0.058	0.124	0.123	1.5	7.6	113.3	7
01	SL n	10.0	11.3	0.058	0.124	0.123	2.4	13.7	113.3	12
02	SE v	SL=	7.6	0.945	0.235	0.722	8.8	8.8	279.9	3
02	SE n	SL=	13.7	0.945	0.235	0.722	13.3	13.3	273.8	5
03	SOLv	SL=	7.6	0.479	0.137	0.154	1.9	9.5	150.7	6
03	SOLn	SL=	13.7	0.479	0.137	0.154	3.1	16.8	150.7	11

Pkt 1610 Strg 2 v Da= 168.3 mm s= 3.5 mm (VUU) V-Naht Umf.,Ubear.
Strg 2 n Da= 186.3 mm s= 12.5 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	10.0	11.3	0.058	0.092	0.068	1.6	12.9	113.3	11
01	SL n	10.0	3.0	0.058	0.092	0.068	0.4	3.4	113.3	3
02	SE v	SL=	12.9	0.945	0.027	0.436	11.4	11.4	274.6	4
02	SE n	SL=	3.4	0.945	0.027	0.436	3.6	3.6	284.1	1
03	SOLv	SL=	12.9	0.479	0.133	0.256	4.2	17.1	150.7	11
03	SOLn	SL=	3.4	0.479	0.133	0.256	1.1	4.5	150.7	3

Pkt 1620 Strg 2 v Da= 186.3 mm s= 12.5 mm (VUU) V-Naht Umf.,Ubear.
Strg 2 n Da= 168.3 mm s= 3.5 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	10.0	3.0	0.058	0.017	0.144	0.5	3.5	113.3	3
01	SL n	10.0	11.3	0.058	0.017	0.144	2.0	13.3	113.3	12
02	SE v	SL=	3.5	0.945	0.640	0.234	4.0	4.0	284.0	1
02	SE n	SL=	13.3	0.945	0.640	0.234	12.8	12.8	274.2	5
03	SOLv	SL=	3.5	0.479	0.126	0.496	1.9	5.4	150.7	4
03	SOLn	SL=	13.3	0.479	0.126	0.496	7.3	20.6	150.7	14

Pkt 1630 Strg 2 v Da= 168.3 mm s= 3.5 mm (BGL) Bogen GLatt
Strg 2 m Da= 168.3 mm s= 3.5 mm R= 152.0 mm
Strg 2 n Da= 168.3 mm s= 3.5 mm ii= 4.0 io= 3.3

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	11.3	0.058	0.064	0.004	3.5	14.8	113.3	13
01 SL m	10.0	11.3	0.511	0.003	0.003	0.5	11.8	113.3	10
01 SL n	10.0	11.3	0.701	0.027	0.000	1.9	13.1	113.3	12
02 SE v	SL=	14.8	0.945	0.418	0.809	36.2	36.2	272.7	13
02 SE m	SL=	11.8	1.297	0.522	0.041	26.9	26.9	275.7	10
02 SE n	SL=	13.1	1.003	0.474	0.751	36.0	36.0	274.4	13
03 SOLv	SL=	14.8	0.479	0.563	0.125	31.5	46.3	150.7	31
03 SOLm	SL=	11.8	0.055	0.638	0.055	34.9	46.7	150.7	31
03 SOLn	SL=	13.1	0.504	0.711	0.063	39.2	52.3	150.7	35

Pkt 1640 Strg 2 v Da= 168.3 mm s= 3.5 mm (BGL) Bogen GLatt
Strg 2 m Da= 168.3 mm s= 3.5 mm R= 152.0 mm
Strg 2 n Da= 168.3 mm s= 3.5 mm ii= 4.0 io= 3.3

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	11.3	0.961	0.134	0.023	7.9	19.2	113.3	17
01 SL m	10.0	11.3	0.815	0.107	0.003	6.3	17.6	113.3	16
01 SL n	10.0	11.3	0.156	0.005	0.019	1.0	12.3	113.3	11
02 SE v	SL=	19.2	1.003	0.343	0.411	23.9	23.9	268.3	9
02 SE m	SL=	17.6	1.045	0.418	0.308	24.3	24.3	269.9	9
02 SE n	SL=	12.3	0.567	0.325	0.846	34.5	34.5	275.2	13
03 SOLv	SL=	19.2	0.504	0.063	1.116	51.2	70.4	150.7	47
03 SOLm	SL=	17.6	0.358	0.044	0.754	34.6	52.2	150.7	35
03 SOLn	SL=	12.3	0.041	0.027	0.050	2.7	15.0	150.7	10

Pkt 1650 Strg 2 v Da= 168.3 mm s= 3.5 mm (VUU) V-Naht Umf.,Ubear.
Strg 2 n Da= 168.3 mm s= 3.5 mm ii= 1.0 io= 1.0

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	11.3	0.156	0.021	0.781	10.8	22.1	113.3	19
01 SL n	10.0	11.3	0.156	0.021	0.781	10.8	22.1	113.3	19
02 SE v	SL=	22.1	0.567	0.133	0.639	9.5	9.5	265.4	4
02 SE n	SL=	22.1	0.567	0.133	0.639	9.5	9.5	265.4	4
03 SOLv	SL=	22.1	0.041	0.280	0.364	6.3	28.4	150.7	19
03 SOLn	SL=	22.1	0.041	0.280	0.364	6.3	28.4	150.7	19

WWWWW Bei Pkt 1660 DO/T > 100 WWWWWWW

Pkt 1660 Strg 2 v Da= 168.3 mm s= 3.5 mm (RKR) Reduz. Kl.Radien
Strg 2 n Da= 610.0 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	11.3	0.156	0.030	0.994	13.7	25.0	113.3	22
01 SL n	10.0	37.4	0.156	0.030	0.994	0.9	38.3	113.3	34
02 SE v	SL=	25.0	0.567	0.022	0.849	11.2	11.2	262.5	4
02 SE n	SL=	38.3	0.567	0.022	0.849	0.7	0.7	249.2	0
03 SOLv	SL=	25.0	0.041	0.355	0.439	7.7	32.7	150.7	22
03 SOLn	SL=	38.3	0.041	0.355	0.439	0.5	38.8	150.7	26

Pkt 1670 Strg 2 v Da= 610.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 2 n Da= 610.0 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	37.4	0.156	0.051	1.609	1.4	38.8	113.3	34
01 SL n	10.0	37.4	0.525	0.051	1.406	1.3	38.7	113.3	34
02 SE v	SL=	38.8	0.567	0.383	1.337	1.1	1.1	248.7	0
02 SE n	SL=	38.7	0.168	0.383	1.599	1.2	1.2	248.8	0
03 SOLv	SL=	38.8	0.041	0.584	0.615	0.7	39.5	150.7	26
03 SOLn	SL=	38.7	0.369	0.584	0.805	0.9	39.6	150.7	26

Pkt 1680 Strg 2 v Da= 610.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 2 n Da= 610.0 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	37.4	0.525	0.000	0.092	0.1	37.5	113.3	33
01 SL n	10.0	37.4	0.000	0.000	0.381	0.3	37.7	113.3	33
02 SE v	SL=	37.5	0.079	0.000	0.677	0.5	0.5	250.0	0
02 SE n	SL=	37.7	0.000	0.000	0.000	0.0	0.0	249.8	0
03 SOLv	SL=	37.5	0.369	0.098	0.203	0.2	37.8	150.7	25
03 SOLn	SL=	37.7	0.000	0.098	0.000	0.1	37.8	150.7	25

Pkt 1690 Strg 2 v Da= 610.0 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	37.4	0.000	0.000	0.000	0.0	37.4	113.3	33
02 SE v	SL=	37.4	0.000	0.000	0.000	0.0	0.0	250.1	0
03 SOLv	SL=	37.4	0.000	0.000	0.000	0.0	37.4	150.7	25

Pkt 150 Strg 11 v Da= 355.6 mm s= 4.6 mm (TFS) T-Stck FormStueck
Strg 11 n Da= 355.6 mm s= 4.6 mm ii= 3.4 io= 4.2
Strg 5 n Da= 273.0 mm s= 4.0 mm

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	18.6	0.442	0.138	1.869	18.0	36.6	113.3	32
01 SL n	10.0	18.6	1.482	0.261	1.859	18.2	36.8	113.3	32
01 SL n	10.0	16.3	0.102	0.399	0.046	5.3	21.6	113.3	19
02 SE v	SL=	36.6	0.433	1.437	1.146	13.1	13.1	250.9	5
02 SE n	SL=	36.8	0.818	0.829	0.771	8.3	8.3	250.7	3
02 SE n	SL=	21.6	0.376	2.266	0.385	25.2	25.2	265.9	9
03 SOLv	SL=	36.6	1.061	2.851	0.223	22.4	58.9	150.7	39
03 SOLn	SL=	36.8	2.354	7.167	0.206	55.9	92.7	150.7	62
03 SOLn	SL=	21.6	1.014	4.353	1.130	59.8	81.3	150.7	54

Pkt 900 Strg 5 v Da= 273.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 5 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	16.3	0.102	0.206	1.711	7.7	24.0	113.3	21
01 SL n	10.0	16.3	0.077	0.206	1.711	7.7	24.0	113.3	21
02 SE v	SL=	24.0	0.376	1.491	2.867	11.9	11.9	263.4	5
02 SE n	SL=	24.0	0.376	1.491	2.867	11.9	11.9	263.4	5
03 SOLv	SL=	24.0	1.014	2.770	1.245	13.9	37.9	150.7	25

03 SOLn	SL=	24.0	0.321	2.770	1.245	13.6	37.7	150.7	25

Pkt 910 Strg 5 v Da= 273.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 5 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	16.3	0.077	0.149	0.158	1.0	17.3	113.3	15
01 SL n	10.0	4.5	0.077	0.149	0.158	0.3	4.8	113.3	4
02 SE v	SL=	17.3	0.376	1.122	2.523	10.2	10.2	270.2	4
02 SE n	SL=	4.8	0.376	1.122	2.523	3.3	3.3	282.7	1
03 SOLv	SL=	17.3	0.321	2.226	0.947	10.9	28.2	150.7	19
03 SOLn	SL=	4.8	0.321	2.226	0.947	3.0	7.8	150.7	5

Pkt 920 Strg 5 v Da= 293.0 mm s= 14.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 5 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	4.5	0.077	0.141	0.377	0.5	5.0	113.3	4
01 SL n	10.0	16.3	0.077	0.141	0.377	1.8	18.1	113.3	16
02 SE v	SL=	5.0	0.376	1.070	2.474	3.2	3.2	282.5	1
02 SE n	SL=	18.1	0.376	1.070	2.474	9.9	9.9	269.3	4
03 SOLv	SL=	5.0	0.321	2.151	0.907	2.9	7.9	150.7	5
03 SOLn	SL=	18.1	0.321	2.151	0.907	10.5	28.6	150.7	19

Pkt 930 Strg 5 v Da= 273.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 5 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	16.3	0.077	0.089	1.507	6.8	23.1	113.3	20
01 SL n	10.0	4.5	0.077	0.089	1.507	1.9	6.3	113.3	6
02 SE v	SL=	23.1	0.376	0.733	2.161	8.4	8.4	264.4	3
02 SE n	SL=	6.3	0.376	0.733	2.161	2.7	2.7	281.1	1
03 SOLv	SL=	23.1	0.321	1.676	0.679	8.2	31.2	150.7	21
03 SOLn	SL=	6.3	0.321	1.676	0.679	2.2	8.6	150.7	6

Pkt 940 Strg 5 v Da= 293.0 mm s= 14.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 5 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	4.5	0.077	0.081	1.622	2.0	6.5	113.3	6
01 SL n	10.0	16.3	0.077	0.081	1.622	7.3	23.6	113.3	21
02 SE v	SL=	6.5	0.376	0.681	2.112	2.6	2.6	281.0	1
02 SE n	SL=	23.6	0.376	0.681	2.112	8.2	8.2	263.9	3
03 SOLv	SL=	6.5	0.321	1.605	0.650	2.1	8.6	150.7	6
03 SOLn	SL=	23.6	0.321	1.605	0.650	7.8	31.4	150.7	21

Pkt 950 Strg 5 v Da= 273.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 5 n Da= 273.0 mm s= 7.8 mm ii= 1.0 io= 1.0

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	16.3	0.077	0.073	1.678	7.5	23.8	113.3	21
01 SL n	10.0	8.0	0.077	0.073	1.678	4.0	12.0	113.3	11
02 SE v	SL=	23.8	0.376	0.633	2.067	8.0	8.0	263.6	3
02 SE n	SL=	12.0	0.376	0.633	2.067	4.7	4.7	275.4	2
03 SOLv	SL=	23.8	0.321	1.541	0.626	7.5	31.4	150.7	21
03 SOLn	SL=	12.0	0.321	1.541	0.626	4.0	16.0	150.7	11

Pkt 960 Strg 5 v Da= 273.0 mm s= 7.8 mm (TTU) T-Stck Uverstaerkt
Strg 5 n Da= 273.0 mm s= 7.8 mm ii= 4.4 io= 5.5
Strg 7 n Da= 168.3 mm s= 6.1 mm

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	8.0	0.077	0.051	1.832	24.0	32.0	113.3	28
01 SL n	10.0	8.0	0.099	0.231	1.810	23.8	31.8	113.3	28
01 SL n	10.0	6.2	0.031	0.180	0.103	6.0	12.2	113.3	11
02 SE v	SL=	32.0	0.376	0.485	1.929	23.3	23.3	255.5	9
02 SE n	SL=	31.8	0.398	0.319	2.206	26.3	26.3	255.7	10
02 SE n	SL=	12.2	0.277	0.166	0.774	24.3	24.3	275.3	9
03 SOLv	SL=	32.0	0.321	1.348	0.564	15.9	47.9	150.7	32
03 SOLn	SL=	31.8	0.331	1.328	0.549	15.6	47.4	150.7	31
03 SOLn	SL=	12.2	0.532	0.134	0.072	4.6	16.7	150.7	11

Pkt 970 Strg 5 v Da= 273.0 mm s= 7.8 mm (VUU) V-Naht Umf.,Ubear.
Strg 5 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	8.0	0.099	0.201	1.741	4.2	12.2	113.3	11
01 SL n	10.0	16.3	0.099	0.201	1.741	7.9	24.2	113.3	21
02 SE v	SL=	12.2	0.398	0.294	1.859	4.2	4.2	275.3	2
02 SE n	SL=	24.2	0.398	0.294	1.859	7.0	7.0	263.3	3
03 SOLv	SL=	12.2	0.331	1.130	0.490	3.0	15.2	150.7	10
03 SOLn	SL=	24.2	0.331	1.130	0.490	5.6	29.8	150.7	20

Pkt 980 Strg 5 v Da= 273.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 5 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	16.3	0.099	0.143	1.528	6.9	23.2	113.3	20
01 SL n	10.0	4.5	0.099	0.143	1.528	1.9	6.4	113.3	6
02 SE v	SL=	23.2	0.398	0.245	1.185	4.7	4.7	264.3	2
02 SE n	SL=	6.4	0.398	0.245	1.185	1.5	1.5	281.1	1
03 SOLv	SL=	23.2	0.331	0.743	0.377	3.8	27.0	150.7	18
03 SOLn	SL=	6.4	0.331	0.743	0.377	1.0	7.4	150.7	5

Pkt 990 Strg 5 v Da= 293.0 mm s= 14.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 5 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	4.5	0.099	0.043	0.009	0.1	4.6	113.3	4
01 SL n	10.0	16.3	0.099	0.043	0.009	0.2	16.5	113.3	15
02 SE v	SL=	4.6	0.398	0.160	0.013	0.5	0.5	282.9	0
02 SE n	SL=	16.5	0.398	0.160	0.013	1.6	1.6	270.9	1
03 SOLv	SL=	4.6	0.331	0.070	0.180	0.3	4.8	150.7	3
03 SOLn	SL=	16.5	0.331	0.070	0.180	1.0	17.5	150.7	12

Pkt 1000 Strg 5 v Da= 273.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 5 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	16.3	0.099	0.010	0.906	4.1	20.4	113.3	18
01 SL n	10.0	16.3	0.124	0.010	0.906	4.1	20.4	113.3	18

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
02	SE v	SL=	20.4	0.343	0.094	0.470	2.2	2.2	267.1	1
02	SE n	SL=	20.4	0.343	0.094	0.470	2.2	2.2	267.1	1
03	SOLv	SL=	20.4	0.331	0.155	0.114	1.0	21.3	150.7	14
03	SOLn	SL=	20.4	0.111	0.155	0.114	0.9	21.3	150.7	14

Pkt 1010 Strg 5 v Da= 273.0 mm s= 4.0 mm (BGL) Bogen GLatt
Strg 5 m Da= 273.0 mm s= 4.0 mm R= 381.0 mm
Strg 5 n Da= 273.0 mm s= 4.0 mm ii= 3.6 io= 3.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	10.0	16.3	0.124	0.394	0.019	6.4	22.7	113.3	20
01	SL m	10.0	16.3	0.958	0.055	0.059	1.5	17.8	113.3	16
01	SL n	10.0	16.3	1.081	0.043	0.103	1.9	18.2	113.3	16
02	SE v	SL=	22.7	0.343	1.005	0.098	13.3	13.3	264.8	5
02	SE m	SL=	17.8	0.368	1.178	0.198	15.7	15.7	269.7	6
02	SE n	SL=	18.2	0.118	0.742	0.405	10.7	10.7	269.3	4
03	SOLv	SL=	22.7	0.111	0.022	0.132	1.8	24.5	150.7	16
03	SOLm	SL=	17.8	0.266	0.038	0.091	1.4	19.2	150.7	13
03	SOLn	SL=	18.2	0.266	0.038	0.020	0.7	18.9	150.7	13

Pkt 1015 Strg 5 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	10.0	16.3	1.081	0.103	0.043	0.8	17.1	113.3	15
02	SE v	SL=	17.1	0.118	0.405	0.742	3.1	3.1	270.3	1
03	SOLv	SL=	17.1	0.266	0.020	0.038	0.3	17.4	150.7	12

Pkt 1030 Strg 5 n 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL n	10.0	16.3	0.312	0.086	0.036	0.5	16.8	113.3	15
02	SE n	SL=	16.8	0.118	0.418	0.745	3.1	3.1	270.7	1
03	SOLn	SL=	16.8	0.266	0.049	0.033	0.3	17.2	150.7	11

Pkt 1040 Strg 5 v Da= 273.0 mm s= 4.0 mm (RKR) Reduz. Kl.Radien
Strg 5 n Da= 219.1 mm s= 3.5 mm A= 28.0 Grd
ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	10.0	16.3	0.267	0.083	0.047	0.5	16.8	113.3	15
01	SL n	10.0	14.9	0.267	0.083	0.047	0.9	15.8	113.3	14
02	SE v	SL=	16.8	0.118	0.419	0.952	3.8	3.8	270.7	1
02	SE n	SL=	15.8	0.118	0.419	0.952	6.6	6.6	271.7	2
03	SOLv	SL=	16.8	0.266	0.055	0.043	0.4	17.2	150.7	11
03	SOLn	SL=	15.8	0.266	0.055	0.043	0.7	16.4	150.7	11

Pkt 1050 Strg 5 v Da= 219.1 mm s= 3.5 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)

01 SL v	10.0	14.9	0.210	0.079	0.066	0.9	15.8	113.3	14

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
02	SE v	SL=	15.8	0.118	0.422	1.303	8.7	8.7	271.7	3
03	SOLv	SL=	15.8	0.266	0.064	0.060	0.8	16.6	150.7	11

Pkt 1700 Strg 7 v Da= 168.3 mm s= 6.1 mm (VUU) V-Naht Umf.,Ubear.
Strg 7 n Da= 168.3 mm s= 3.5 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	10.0	6.2	0.031	0.146	0.059	1.3	7.5	113.3	7
01	SL n	10.0	11.3	0.031	0.146	0.059	2.2	13.4	113.3	12
02	SE v	SL=	7.5	0.277	0.091	0.587	4.8	4.8	280.0	2
02	SE n	SL=	13.4	0.277	0.091	0.587	7.2	7.2	274.0	3
03	SOLv	SL=	7.5	0.532	0.132	0.089	1.5	8.9	150.7	6
03	SOLn	SL=	13.4	0.532	0.132	0.089	2.5	15.9	150.7	11

Pkt 1710 Strg 7 v Da= 168.3 mm s= 3.5 mm (VUU) V-Naht Umf.,Ubear.
Strg 7 n Da= 186.3 mm s= 12.5 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	10.0	11.3	0.031	0.110	0.215	3.3	14.6	113.3	13
01	SL n	10.0	3.0	0.031	0.110	0.215	0.9	3.9	113.3	3
02	SE v	SL=	14.6	0.277	0.012	0.389	5.2	5.2	272.9	2
02	SE n	SL=	3.9	0.277	0.012	0.389	1.6	1.6	283.6	1
03	SOLv	SL=	14.6	0.532	0.131	0.192	3.5	18.1	150.7	12
03	SOLn	SL=	3.9	0.532	0.131	0.192	0.9	4.8	150.7	3

Pkt 1720 Strg 7 v Da= 186.3 mm s= 12.5 mm (VUU) V-Naht Umf.,Ubear.
Strg 7 n Da= 168.3 mm s= 3.5 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	10.0	3.0	0.031	0.026	0.209	0.8	3.8	113.3	3
01	SL n	10.0	11.3	0.031	0.026	0.209	2.9	14.2	113.3	13
02	SE v	SL=	3.8	0.277	0.174	0.074	1.1	1.1	283.7	0
02	SE n	SL=	14.2	0.277	0.174	0.074	3.7	3.7	273.3	1
03	SOLv	SL=	3.8	0.532	0.127	0.460	1.8	5.5	150.7	4
03	SOLn	SL=	14.2	0.532	0.127	0.460	6.8	21.0	150.7	14

Pkt 1730 Strg 7 v Da= 168.3 mm s= 3.5 mm (BGL) Bogen GLatt
Strg 7 m Da= 168.3 mm s= 3.5 mm R= 152.0 mm
Strg 7 n Da= 168.3 mm s= 3.5 mm ii= 4.0 io= 3.3

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	10.0	11.3	0.031	0.106	0.002	5.8	17.1	113.3	15
01	SL m	10.0	11.3	0.613	0.020	0.002	1.4	12.7	113.3	11
01	SL n	10.0	11.3	0.871	0.014	0.005	1.3	12.6	113.3	11
02	SE v	SL=	17.1	0.277	0.202	0.224	12.4	12.4	270.4	5
02	SE m	SL=	12.7	0.372	0.280	0.005	12.9	12.9	274.8	5
02	SE n	SL=	12.6	0.283	0.262	0.218	14.3	14.3	274.9	5
03	SOLv	SL=	17.1	0.532	0.534	0.126	30.0	47.1	150.7	31
03	SOLm	SL=	12.7	0.194	0.617	0.050	33.8	46.5	150.7	31
03	SOLn	SL=	12.6	0.568	0.695	0.059	38.3	50.9	150.7	34

Pkt 1740 Strg 7 v Da= 168.3 mm s= 3.5 mm (BGL) Bogen GLatt
Strg 7 m Da= 168.3 mm s= 3.5 mm R= 152.0 mm
Strg 7 n Da= 168.3 mm s= 3.5 mm ii= 4.0 io= 3.3

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	11.3	1.131	0.155	0.013	9.1	20.4	113.3	18
01 SL m	10.0	11.3	0.950	0.123	0.005	7.2	18.5	113.3	16
01 SL n	10.0	11.3	0.176	0.003	0.020	1.0	12.3	113.3	11
02 SE v	SL=	20.4	0.283	0.113	0.227	10.1	10.1	267.1	4
02 SE m	SL=	18.5	0.386	0.111	0.022	6.5	6.5	269.0	2
02 SE n	SL=	12.3	0.314	0.025	0.196	8.0	8.0	275.2	3
03 SOLv	SL=	20.4	0.568	0.069	1.133	52.0	72.4	150.7	48
03 SOLm	SL=	18.5	0.410	0.045	0.771	35.4	53.9	150.7	36
03 SOLn	SL=	12.3	0.015	0.017	0.044	2.2	14.5	150.7	10

Pkt 1750 Strg 7 v Da= 168.3 mm s= 3.5 mm (VUU) V-Naht Umf.,Ubear.
Strg 7 n Da= 168.3 mm s= 3.5 mm ii= 1.0 io= 1.0

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	11.3	0.176	0.002	0.901	12.4	23.7	113.3	21
01 SL n	10.0	11.3	0.176	0.002	0.901	12.4	23.7	113.3	21
02 SE v	SL=	23.7	0.314	0.198	0.642	8.1	8.1	263.8	3
02 SE n	SL=	23.7	0.314	0.198	0.642	8.1	8.1	263.8	3
03 SOLv	SL=	23.7	0.015	0.323	0.409	7.1	30.8	150.7	20
03 SOLn	SL=	23.7	0.015	0.323	0.409	7.1	30.8	150.7	20

WWWWW Bei Pkt 1760 D0/T > 100 WWWWWWW

Pkt 1760 Strg 7 v Da= 168.3 mm s= 3.5 mm (RKR) Reduz. Kl.Radien
Strg 7 n Da= 610.0 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	11.3	0.176	0.007	1.139	15.7	27.0	113.3	24
01 SL n	10.0	37.4	0.176	0.007	1.139	1.0	38.4	113.3	34
02 SE v	SL=	27.0	0.314	0.283	0.787	9.8	9.8	260.5	4
02 SE n	SL=	38.4	0.314	0.283	0.787	0.6	0.6	249.1	0
03 SOLv	SL=	27.0	0.015	0.406	0.494	8.7	35.7	150.7	24
03 SOLn	SL=	38.4	0.015	0.406	0.494	0.6	39.0	150.7	26

Pkt 1770 Strg 7 v Da= 610.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 7 n Da= 610.0 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	37.4	0.176	0.018	1.814	1.6	39.0	113.3	34
01 SL n	10.0	37.4	0.406	0.018	1.687	1.5	38.9	113.3	34
02 SE v	SL=	39.0	0.314	0.483	1.125	0.9	0.9	248.5	0
02 SE n	SL=	38.9	0.212	0.483	0.957	0.8	0.8	248.6	0
03 SOLv	SL=	39.0	0.015	0.652	0.693	0.8	39.8	150.7	26
03 SOLn	SL=	38.9	0.183	0.652	0.789	0.9	39.8	150.7	26

Pkt 1780 Strg 7 v Da= 610.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 7 n Da= 610.0 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	37.4	0.406	0.000	0.158	0.2	37.6	113.3	33
01 SL n	10.0	37.4	0.000	0.000	0.381	0.3	37.7	113.3	33
02 SE v	SL=	37.6	0.144	0.000	0.503	0.4	0.4	249.9	0
02 SE n	SL=	37.7	0.000	0.000	0.000	0.0	0.0	249.8	0
03 SOLv	SL=	37.6	0.183	0.098	0.101	0.1	37.7	150.7	25
03 SOLn	SL=	37.7	0.000	0.098	0.000	0.1	37.8	150.7	25

Pkt 1790 Strg 7 v Da= 610.0 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	37.4	0.000	0.000	0.000	0.0	37.4	113.3	33
02 SE v	SL=	37.4	0.000	0.000	0.000	0.0	0.0	250.1	0
03 SOLv	SL=	37.4	0.000	0.000	0.000	0.0	37.4	150.7	25

Pkt 10 Strg 10 n Da= 219.1 mm s= 3.5 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL n	10.0	14.9	0.185	0.059	0.034	0.6	15.5	113.3	14
02 SE n	SL=	15.5	0.916	0.518	0.944	9.0	9.0	272.0	3
03 SOLn	SL=	15.5	0.180	0.073	0.039	0.7	16.3	150.7	11

Pkt 20 Strg 10 v Da= 219.1 mm s= 3.5 mm (RKR) Reduz. Kl.Radien
Strg 10 n Da= 273.0 mm s= 4.0 mm A= 28.0 Grd
ii= 1.0 io= 1.0

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	14.9	0.243	0.060	0.024	0.6	15.5	113.3	14
01 SL n	10.0	16.3	0.243	0.060	0.024	0.4	16.7	113.3	15
02 SE v	SL=	15.5	0.916	0.421	0.694	7.8	7.8	272.0	3
02 SE n	SL=	16.7	0.916	0.421	0.694	4.5	4.5	270.8	2
03 SOLv	SL=	15.5	0.180	0.069	0.028	0.7	16.2	150.7	11
03 SOLn	SL=	16.7	0.180	0.069	0.028	0.4	17.1	150.7	11

Pkt 25 Strg 10 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	16.3	0.288	0.060	0.018	0.4	16.7	113.3	15
02 SE v	SL=	16.7	0.916	0.363	0.547	4.1	4.1	270.8	2
03 SOLv	SL=	16.7	0.180	0.066	0.021	0.4	17.0	150.7	11

Pkt 28 Strg 10 n 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL n	10.0	16.3	1.057	0.065	0.023	0.6	16.9	113.3	15
02 SE n	SL=	16.9	0.916	0.050	0.510	3.8	3.8	270.5	1

03	SOLn	SL=	16.9	0.180	0.047	0.024	0.3	17.2	150.7	11

Pkt 30 Strg 10 v Da= 273.0 mm s= 4.0 mm (BGL) Bogen GLatt
Strg 10 m Da= 273.0 mm s= 4.0 mm R= 381.0 mm
Strg 10 n Da= 273.0 mm s= 4.0 mm ii= 3.6 io= 3.0

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	16.3	1.057	0.023	0.065	1.3	17.6	113.3	16
01 SL m	10.0	16.3	0.899	0.088	0.023	1.7	18.0	113.3	16
01 SL n	10.0	16.3	0.065	0.427	0.032	6.9	23.2	113.3	20
02 SE v	SL=	17.6	0.916	0.510	0.050	7.5	7.5	269.9	3
02 SE m	SL=	18.0	0.541	0.817	0.857	14.4	14.4	269.4	5
02 SE n	SL=	23.2	0.295	0.668	1.162	15.5	15.5	264.3	6
03 SOLv	SL=	17.6	0.180	0.024	0.047	0.8	18.4	150.7	12
03 SOLm	SL=	18.0	0.177	0.023	0.030	0.6	18.6	150.7	12
03 SOLn	SL=	23.2	0.071	0.018	0.088	1.2	24.4	150.7	16

Pkt 40 Strg 10 v Da= 273.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 10 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	16.3	0.065	0.029	0.930	4.2	20.5	113.3	18
01 SL n	10.0	16.3	0.118	0.029	0.930	4.2	20.5	113.3	18
02 SE v	SL=	20.5	0.295	1.387	0.237	5.2	5.2	267.0	2
02 SE n	SL=	20.5	0.295	1.387	0.237	5.2	5.2	267.0	2
03 SOLv	SL=	20.5	0.071	0.099	0.080	0.6	21.1	150.7	14
03 SOLn	SL=	20.5	0.572	0.099	0.080	0.7	21.2	150.7	14

Pkt 50 Strg 10 v Da= 273.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 10 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	16.3	0.118	0.006	0.066	0.3	16.6	113.3	15
01 SL n	10.0	4.5	0.118	0.006	0.066	0.1	4.6	113.3	4
02 SE v	SL=	16.6	0.295	1.439	0.040	5.4	5.4	270.8	2
02 SE n	SL=	4.6	0.295	1.439	0.040	1.7	1.7	282.9	1
03 SOLv	SL=	16.6	0.572	0.092	0.125	0.9	17.5	150.7	12
03 SOLn	SL=	4.6	0.572	0.092	0.125	0.2	4.8	150.7	3

Pkt 60 Strg 10 v Da= 293.0 mm s= 14.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 10 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	4.5	0.118	0.109	1.900	2.3	6.8	113.3	6
01 SL n	10.0	16.3	0.118	0.109	1.900	8.5	24.8	113.3	22
02 SE v	SL=	6.8	0.295	1.593	0.867	2.1	2.1	280.6	1
02 SE n	SL=	24.8	0.295	1.593	0.867	6.7	6.7	262.6	3
03 SOLv	SL=	6.8	0.572	0.210	0.257	0.5	7.3	150.7	5
03 SOLn	SL=	24.8	0.572	0.210	0.257	1.7	26.5	150.7	18

Pkt 65 Strg 10 v Da= 273.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 10 n Da= 273.0 mm s= 7.8 mm ii= 1.0 io= 1.0

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	16.3	0.118	0.169	2.283	10.3	26.6	113.3	23
01 SL n	10.0	8.0	0.118	0.169	2.283	5.5	13.5	113.3	12

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
02	SE v	SL=	26.6	0.295	1.682	1.342	7.9	7.9	260.9	3
02	SE n	SL=	13.5	0.295	1.682	1.342	4.7	4.7	274.0	2
03	SOLv	SL=	26.6	0.572	0.303	0.334	2.2	28.8	150.7	19
03	SOLn	SL=	13.5	0.572	0.303	0.334	1.2	14.7	150.7	10

Pkt 75 Strg 10 v Da= 273.0 mm s= 7.8 mm (VUU) V-Naht Umf.,Ubear.
Strg 10 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	10.0	8.0	0.039	0.064	2.361	5.6	13.7	113.3	12
01	SL n	10.0	16.3	0.039	0.064	2.361	10.6	26.9	113.3	24
02	SE v	SL=	13.7	0.697	1.067	0.584	3.0	3.0	273.8	1
02	SE n	SL=	26.9	0.697	1.067	0.584	5.1	5.1	260.6	2
03	SOLv	SL=	13.7	0.613	0.437	0.371	1.5	15.1	150.7	10
03	SOLn	SL=	26.9	0.613	0.437	0.371	2.7	29.6	150.7	20

Pkt 80 Strg 10 v Da= 273.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 10 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	10.0	16.3	0.039	0.070	2.321	10.4	26.7	113.3	24
01	SL n	10.0	4.5	0.039	0.070	2.321	2.8	7.3	113.3	6
02	SE v	SL=	26.7	0.697	1.010	0.566	4.9	4.9	260.8	2
02	SE n	SL=	7.3	0.697	1.010	0.566	1.6	1.6	280.1	1
03	SOLv	SL=	26.7	0.613	0.420	0.350	2.6	29.3	150.7	19
03	SOLn	SL=	7.3	0.613	0.420	0.350	0.7	8.1	150.7	5

Pkt 90 Strg 10 v Da= 293.0 mm s= 14.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 10 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	10.0	4.5	0.039	0.076	2.224	2.7	7.2	113.3	6
01	SL n	10.0	16.3	0.039	0.076	2.224	9.9	26.3	113.3	23
02	SE v	SL=	7.2	0.697	0.948	0.546	1.5	1.5	280.3	1
02	SE n	SL=	26.3	0.697	0.948	0.546	4.7	4.7	261.2	2
03	SOLv	SL=	7.2	0.613	0.401	0.328	0.7	7.9	150.7	5
03	SOLn	SL=	26.3	0.613	0.401	0.328	2.5	28.8	150.7	19

Pkt 100 Strg 10 v Da= 273.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 10 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	10.0	16.3	0.039	0.117	1.209	5.4	21.8	113.3	19
01	SL n	10.0	4.5	0.039	0.117	1.209	1.5	6.0	113.3	5
02	SE v	SL=	21.8	0.697	0.546	0.416	3.6	3.6	265.7	1
02	SE n	SL=	6.0	0.697	0.546	0.416	1.1	1.1	281.5	0
03	SOLv	SL=	21.8	0.613	0.280	0.197	1.7	23.5	150.7	16
03	SOLn	SL=	6.0	0.613	0.280	0.197	0.5	6.5	150.7	4

Pkt 110 Strg 10 v Da= 293.0 mm s= 14.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 10 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	4.5	0.039	0.123	1.008	1.2	5.7	113.3	5
01 SL n	10.0	16.3	0.039	0.123	1.008	4.5	20.9	113.3	18
02 SE v	SL=	5.7	0.697	0.483	0.396	1.1	1.1	281.7	0
02 SE n	SL=	20.9	0.697	0.483	0.396	3.4	3.4	266.6	1
03 SOLv	SL=	5.7	0.613	0.262	0.181	0.4	6.2	150.7	4
03 SOLn	SL=	20.9	0.613	0.262	0.181	1.6	22.5	150.7	15

Pkt 120 Strg 10 v Da= 273.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 10 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	16.3	0.039	0.168	0.733	3.4	19.7	113.3	17
01 SL n	10.0	16.3	0.038	0.168	0.733	3.4	19.7	113.3	17
02 SE v	SL=	19.7	0.697	0.042	0.254	2.7	2.7	267.8	1
02 SE n	SL=	19.7	0.697	0.042	0.254	2.7	2.7	267.8	1
03 SOLv	SL=	19.7	0.613	0.130	0.159	1.1	20.8	150.7	14
03 SOLn	SL=	19.7	0.563	0.130	0.159	1.1	20.8	150.7	14

Pkt 130 Strg 10 v Da= 273.0 mm s= 4.0 mm (BGL) Bogen GLatt
Strg 10 m Da= 273.0 mm s= 4.0 mm R= 381.0 mm
Strg 10 n Da= 273.0 mm s= 4.0 mm ii= 3.6 io= 3.0

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	16.3	0.038	0.080	0.451	6.2	22.5	113.3	20
01 SL m	10.0	16.3	0.339	0.035	0.246	3.4	19.8	113.3	17
01 SL n	10.0	16.3	0.442	0.074	0.061	1.6	17.9	113.3	16
02 SE v	SL=	22.5	0.697	0.623	0.316	9.2	9.2	265.0	3
02 SE m	SL=	19.8	0.751	1.455	0.187	19.4	19.4	267.7	7
02 SE n	SL=	17.9	0.433	1.677	0.580	23.0	23.0	269.6	9
03 SOLv	SL=	22.5	0.563	0.150	0.153	3.3	25.8	150.7	17
03 SOLm	SL=	19.8	1.138	0.353	0.099	6.2	25.9	150.7	17
03 SOLn	SL=	17.9	1.061	0.319	0.025	5.5	23.3	150.7	15

Pkt 135 Strg 10 v Da= 273.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 11 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	16.3	0.442	0.115	0.881	4.1	20.4	113.3	18
01 SL n	10.0	16.3	0.442	0.115	0.881	4.1	20.4	113.3	18
02 SE v	SL=	20.4	0.433	1.100	0.959	5.6	5.6	267.1	2
02 SE n	SL=	20.4	0.433	1.100	0.959	5.6	5.6	267.1	2
03 SOLv	SL=	20.4	1.061	2.508	0.199	11.5	32.0	150.7	21
03 SOLn	SL=	20.4	1.061	2.508	0.199	11.5	32.0	150.7	21

Pkt 140 Strg 11 v Da= 273.0 mm s= 4.0 mm (RKR) Reduz. Kl.Radien
Strg 11 n Da= 355.6 mm s= 4.6 mm A= 25.0 Grd
ii= 1.0 io= 1.0

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	16.3	0.442	0.121	1.125	5.2	21.5	113.3	19

01	SL	n	10.0	18.6	0.442	0.121	1.125	2.7	21.2	113.3	19

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
02 SE v	SL=	21.5	0.433	1.191	1.010	5.9	5.9	266.0	2
02 SE n	SL=	21.2	0.433	1.191	1.010	3.1	3.1	266.2	1
03 SOLv	SL=	21.5	1.061	2.601	0.205	12.0	33.5	150.7	22
03 SOLn	SL=	21.2	1.061	2.601	0.205	6.1	27.4	150.7	18

Pkt 145 Strg 11 v Da= 355.6 mm s= 4.6 mm (VUU) V-Naht Umf.,Ubear.
Strg 11 n Da= 355.6 mm s= 4.6 mm ii= 1.0 io= 1.0

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	18.6	0.442	0.127	1.386	3.3	21.8	113.3	19
01 SL n	10.0	18.6	0.442	0.127	1.386	3.3	21.8	113.3	19
02 SE v	SL=	21.8	0.433	1.283	1.061	3.3	3.3	265.6	1
02 SE n	SL=	21.8	0.433	1.283	1.061	3.3	3.3	265.6	1
03 SOLv	SL=	21.8	1.061	2.694	0.212	6.4	28.2	150.7	19
03 SOLn	SL=	21.8	1.061	2.694	0.212	6.4	28.2	150.7	19

Pkt 155 Strg 11 v Da= 355.6 mm s= 4.6 mm (VUU) V-Naht Umf.,Ubear.
Strg 11 n Da= 355.6 mm s= 4.6 mm ii= 1.0 io= 1.0

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	18.6	1.482	0.357	1.297	3.4	21.9	113.3	19
01 SL n	10.0	18.6	1.482	0.357	1.297	3.4	21.9	113.3	19
02 SE v	SL=	21.9	0.818	1.245	5.176	10.3	10.3	265.5	4
02 SE n	SL=	21.9	0.818	1.245	5.176	10.3	10.3	265.5	4
03 SOLv	SL=	21.9	2.354	6.483	1.482	15.6	37.5	150.7	25
03 SOLn	SL=	21.9	2.354	6.483	1.482	15.6	37.5	150.7	25

Pkt 156 Strg 11 v Da= 355.6 mm s= 4.6 mm (VUU) V-Naht Umf.,Ubear.
Strg 11 n Da= 355.6 mm s= 4.6 mm ii= 1.0 io= 1.0

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	18.6	1.482	0.362	1.361	3.5	22.1	113.3	19
01 SL n	10.0	18.6	1.482	0.362	1.361	3.5	22.1	113.3	19
02 SE v	SL=	22.1	0.818	1.268	5.501	10.9	10.9	265.4	4
02 SE n	SL=	22.1	0.818	1.268	5.501	10.9	10.9	265.4	4
03 SOLv	SL=	22.1	2.354	6.445	1.568	15.6	37.6	150.7	25
03 SOLn	SL=	22.1	2.354	6.445	1.568	15.6	37.6	150.7	25

WWWWW Bei Pkt 160 DO/T > 100 WWWWWWW

Pkt 160 Strg 11 v Da= 355.6 mm s= 4.6 mm (RKR) Reduz. Kl.Radien
Strg 11 n Da= 500.0 mm s= 4.0 mm A= 27.0 Grd
ii= 1.0 io= 1.0

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	18.6	1.482	0.366	1.416	3.6	22.2	113.3	20
01 SL n	10.0	30.5	1.482	0.366	1.416	2.1	32.6	113.3	29
02 SE v	SL=	22.2	0.818	1.286	5.765	11.4	11.4	265.3	4
02 SE n	SL=	32.6	0.818	1.286	5.765	6.3	6.3	254.8	2
03 SOLv	SL=	22.2	2.354	6.415	1.638	15.5	37.7	150.7	25
03 SOLn	SL=	32.6	2.354	6.415	1.638	9.0	41.7	150.7	28

Pkt 162 Strg 11 v Da= 500.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 11 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	30.5	1.482	0.370	1.477	2.2	32.7	113.3	29
01 SL n	10.0	30.5	1.482	0.370	1.477	2.2	32.7	113.3	29
02 SE v	SL=	32.7	0.818	1.305	6.028	6.6	6.6	254.8	3
02 SE n	SL=	32.7	0.818	1.305	6.028	6.6	6.6	254.8	3
03 SOLv	SL=	32.7	2.354	6.385	1.708	9.0	41.7	150.7	28
03 SOLn	SL=	32.7	2.354	6.385	1.708	9.0	41.7	150.7	28

Pkt 165 Strg 11 v Da= 500.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 11 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	30.5	1.482	0.414	2.556	3.6	34.1	113.3	30
01 SL n	10.0	30.5	0.088	0.414	3.253	4.3	34.8	113.3	31
02 SE v	SL=	34.1	0.818	1.495	8.744	9.5	9.5	253.4	4
02 SE n	SL=	34.8	0.487	1.495	6.687	7.3	7.3	252.7	3
03 SOLv	SL=	34.1	2.354	6.074	2.428	8.9	43.0	150.7	29
03 SOLn	SL=	34.8	2.802	6.074	3.135	9.4	44.2	150.7	29

Pkt 168 Strg 11 v Da= 500.0 mm s= 4.0 mm (VUU) V-Naht Umf.,Ubear.
Strg 11 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	30.5	0.088	0.362	1.064	1.5	32.0	113.3	28
01 SL n	10.0	30.5	0.088	0.362	1.064	1.5	32.0	113.3	28
02 SE v	SL=	32.0	0.487	1.231	5.714	6.2	6.2	255.5	2
02 SE n	SL=	32.0	0.487	1.231	5.714	6.2	6.2	255.5	2
03 SOLv	SL=	32.0	2.802	4.490	2.232	7.0	39.0	150.7	26
03 SOLn	SL=	32.0	2.802	4.490	2.232	7.0	39.0	150.7	26

WWWWW Bei Pkt 170 DO/T > 100 WWWWWWW

Pkt 170 Strg 11 v Da= 500.0 mm s= 4.0 mm (RKR) Reduz. Kl.Radien
Strg 11 n Da= 355.6 mm s= 4.6 mm A= 27.0 Grd
ii= 1.0 io= 1.0

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	30.5	0.088	0.357	0.895	1.3	31.8	113.3	28
01 SL n	10.0	18.6	0.088	0.357	0.895	2.2	20.8	113.3	18
02 SE v	SL=	31.8	0.487	1.205	5.620	6.1	6.1	255.7	2
02 SE n	SL=	20.8	0.487	1.205	5.620	11.0	11.0	266.7	4
03 SOLv	SL=	31.8	2.802	4.336	2.146	6.8	38.5	150.7	26
03 SOLn	SL=	20.8	2.802	4.336	2.146	11.6	32.4	150.7	21

Pkt 172 Strg 11 v Da= 355.6 mm s= 4.6 mm (VUU) V-Naht Umf.,Ubear.
Strg 11 n Da= 355.6 mm s= 4.6 mm ii= 1.0 io= 1.0

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	18.6	0.088	0.352	0.731	1.9	20.4	113.3	18
01 SL n	10.0	18.6	0.088	0.352	0.731	1.9	20.4	113.3	18
02 SE v	SL=	20.4	0.487	1.179	5.526	10.8	10.8	267.0	4

02 SE n	SL=	20.4	0.487	1.179	5.526	10.8	10.8	267.0	4

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
03	SOLv	SL=	20.4	2.802	4.183	2.060	11.2	31.6	150.7	21
03	SOLn	SL=	20.4	2.802	4.183	2.060	11.2	31.6	150.7	21

Pkt 175 Strg 11 v Da= 355.6 mm s= 4.6 mm (VUU) V-Naht Umf.,Ubear.
Strg 11 n Da= 355.6 mm s= 4.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	10.0	18.6	0.088	0.346	0.535	1.5	20.0	113.3	18
01	SL n	10.0	18.6	0.088	0.346	0.535	1.5	20.0	113.3	18
02	SE v	SL=	20.0	0.487	1.148	5.409	10.6	10.6	267.4	4
02	SE n	SL=	20.0	0.487	1.148	5.409	10.6	10.6	267.4	4
03	SOLv	SL=	20.0	2.802	3.993	1.954	10.7	30.7	150.7	20
03	SOLn	SL=	20.0	2.802	3.993	1.954	10.7	30.7	150.7	20

Pkt 180 Strg 11 v Da= 355.6 mm s= 4.6 mm (BGL) Bogen GLatt
Strg 11 m Da= 355.6 mm s= 4.6 mm R= 533.0 mm
Strg 11 n Da= 355.6 mm s= 4.6 mm ii= 3.6 io= 3.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	10.0	18.6	0.088	0.309	0.000	2.6	21.1	113.3	19
01	SL m	10.0	18.6	1.254	0.255	0.064	2.4	21.0	113.3	19
01	SL n	10.0	18.6	1.973	0.500	0.090	4.5	23.1	113.3	20
02	SE v	SL=	21.1	0.417	1.536	0.658	11.2	11.2	266.3	4
02	SE m	SL=	21.0	0.812	1.935	0.295	13.5	13.5	266.5	5
02	SE n	SL=	23.1	0.834	1.878	0.241	13.1	13.1	264.4	5
03	SOLv	SL=	21.1	2.802	4.393	1.197	37.6	58.7	150.7	39
03	SOLm	SL=	21.0	2.952	4.472	2.313	40.6	61.6	150.7	41
03	SOLn	SL=	23.1	1.491	3.689	2.008	33.6	56.7	150.7	38

Pkt 190 Strg 11 v Da= 355.6 mm s= 4.6 mm (BGL) Bogen GLatt
Strg 11 m Da= 355.6 mm s= 4.6 mm R= 533.0 mm
Strg 11 n Da= 355.6 mm s= 4.6 mm ii= 3.6 io= 3.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	10.0	18.6	4.057	0.318	0.233	3.9	22.4	113.3	20
01	SL m	10.0	18.6	3.126	0.316	0.160	3.4	22.0	113.3	19
01	SL n	10.0	18.6	0.075	1.999	0.007	16.4	35.0	113.3	31
02	SE v	SL=	22.4	0.826	0.885	0.061	6.3	6.3	265.0	2
02	SE m	SL=	22.0	0.711	0.808	0.338	6.0	6.0	265.5	2
02	SE n	SL=	35.0	0.644	0.212	0.456	3.2	3.2	252.5	1
03	SOLv	SL=	22.4	1.491	1.890	1.778	20.0	42.5	150.7	28
03	SOLm	SL=	22.0	1.995	2.657	1.433	24.3	46.3	150.7	31
03	SOLn	SL=	35.0	2.282	3.017	1.006	26.2	61.2	150.7	41

Pkt 200 Strg 11 v Da= 355.6 mm s= 4.6 mm (VUU) V-Naht Umf.,Ubear.
Strg 11 n Da= 355.6 mm s= 4.6 mm ii= 1.0 io= 1.0

Na	Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01	SL v	10.0	18.6	0.075	0.046	4.090	9.3	27.9	113.3	25
01	SL n	10.0	18.6	0.014	0.046	4.090	9.3	27.9	113.3	25
02	SE v	SL=	27.9	0.644	0.146	0.379	1.5	1.5	259.6	1
02	SE n	SL=	27.9	0.644	0.146	0.379	1.5	1.5	259.6	1
03	SOLv	SL=	27.9	2.282	1.007	3.159	8.0	35.9	150.7	24

03 SOLn	SL=	27.9	0.045	1.007	3.159	7.6	35.4	150.7	24

Pkt 205 Strg 11 v Da= 355.6 mm s= 4.6 mm (VUU) V-Naht Umf.,Ubear.
Strg 11 n Da= 355.6 mm s= 4.6 mm ii= 1.0 io= 1.0

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	18.6	0.014	0.014	4.034	9.2	27.8	113.3	25
01 SL n	10.0	18.6	0.014	0.014	4.034	9.2	27.8	113.3	25
02 SE v	SL=	27.8	0.348	8.163	0.034	15.6	15.6	259.7	6
02 SE n	SL=	27.8	0.348	8.163	0.034	15.6	15.6	259.7	6
03 SOLv	SL=	27.8	0.045	5.060	1.153	11.8	39.6	150.7	26
03 SOLn	SL=	27.8	0.045	5.060	1.153	11.8	39.6	150.7	26

Pkt 210 Strg 11 v Da= 355.6 mm s= 4.6 mm (VUU) V-Naht Umf.,Ubear.
Strg 11 n Da= 355.6 mm s= 4.6 mm ii= 1.0 io= 1.0

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	18.6	0.014	0.018	1.801	4.1	22.7	113.3	20
01 SL n	10.0	18.6	0.001	0.018	1.801	4.1	22.7	113.3	20
02 SE v	SL=	22.7	0.348	16.024	0.218	30.6	30.6	264.8	12
02 SE n	SL=	22.7	0.348	16.024	0.218	30.6	30.6	264.8	12
03 SOLv	SL=	22.7	0.045	0.719	1.429	3.6	26.3	150.7	17
03 SOLn	SL=	22.7	2.421	0.719	1.429	4.1	26.8	150.7	18

Pkt 220 Strg 11 v Da= 355.6 mm s= 4.6 mm (BGL) Bogen GLatt
Strg 11 m Da= 355.6 mm s= 4.6 mm R= 533.0 mm
Strg 11 n Da= 355.6 mm s= 4.6 mm ii= 3.6 io= 3.0

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	18.6	0.001	0.003	0.343	2.4	20.9	113.3	18
01 SL m	10.0	18.6	0.008	0.001	0.267	1.8	20.4	113.3	18
01 SL n	10.0	18.6	0.010	0.002	0.149	1.0	19.6	113.3	17
02 SE v	SL=	20.9	0.348	2.245	0.014	15.5	15.5	266.5	6
02 SE m	SL=	20.4	0.257	6.502	0.205	44.8	44.8	267.1	17
02 SE n	SL=	19.6	0.058	7.701	0.276	53.0	53.0	267.9	20
03 SOLv	SL=	20.9	2.421	2.454	0.185	20.7	41.6	150.7	28
03 SOLm	SL=	20.4	2.779	2.741	1.314	24.8	45.2	150.7	30
03 SOLn	SL=	19.6	1.781	2.309	1.793	22.9	42.5	150.7	28

Pkt 230 Strg 11 v Da= 355.6 mm s= 4.6 mm (VUU) V-Naht Umf.,Ubear.
Strg 11 n Da= 355.6 mm s= 4.6 mm ii= 1.0 io= 1.0

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	18.6	0.010	0.001	1.690	3.8	22.4	113.3	20
01 SL n	10.0	18.6	0.002	0.001	1.690	3.8	22.4	113.3	20
02 SE v	SL=	22.4	0.002	4.277	0.023	8.2	8.2	265.1	3
02 SE n	SL=	22.4	0.002	4.277	0.023	8.2	8.2	265.1	3
03 SOLv	SL=	22.4	1.781	1.895	0.549	4.8	27.3	150.7	18
03 SOLn	SL=	22.4	0.702	1.895	0.549	4.6	27.1	150.7	18

Pkt 240 Strg 11 v Da= 355.6 mm s= 4.6 mm (VUU) V-Naht Umf.,Ubear.
Strg 11 n Da= 355.6 mm s= 4.6 mm ii= 1.0 io= 1.0

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	18.6	0.002	0.000	5.317	12.1	30.7	113.3	27
01 SL n	10.0	18.6	0.000	0.000	5.317	12.1	30.7	113.3	27

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
02 SE v	SL=	30.7	0.058	3.215	0.005	6.1	6.1	256.8	2
02 SE n	SL=	30.7	0.058	3.215	0.005	6.1	6.1	256.8	2
03 SOLv	SL=	30.7	0.702	6.259	0.158	14.4	45.1	150.7	30
03 SOLn	SL=	30.7	0.161	6.259	0.158	14.3	45.0	150.7	30

Pkt 250 Strg 11 v Da= 355.6 mm s= 4.6 mm (VUU) V-Naht Umf.,Ubear.
Strg 11 n Da= 355.6 mm s= 4.6 mm ii= 1.0 io= 1.0

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	18.6	0.000	0.000	3.693	8.4	27.0	113.3	24
01 SL n	10.0	18.6	0.003	0.053	5.250	11.9	30.5	113.3	27
02 SE v	SL=	27.0	0.058	1.590	0.002	3.0	3.0	260.5	1
02 SE n	SL=	30.5	0.346	0.049	1.001	2.0	2.0	257.0	1
03 SOLv	SL=	27.0	0.161	1.665	0.078	3.8	30.8	150.7	20
03 SOLn	SL=	30.5	0.095	4.595	0.036	10.5	41.0	150.7	27

Pkt 260 Strg 11 v Da= 355.6 mm s= 4.6 mm (VUU) V-Naht Umf.,Ubear.
Strg 11 n Da= 355.6 mm s= 4.6 mm ii= 1.0 io= 1.0

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	18.6	0.003	0.107	3.465	7.9	26.5	113.3	23
01 SL n	10.0	18.6	0.011	0.107	3.465	7.9	26.5	113.3	23
02 SE v	SL=	26.5	0.346	0.100	2.025	3.9	3.9	261.0	2
02 SE n	SL=	26.5	0.346	0.100	2.025	3.9	3.9	261.0	2
03 SOLv	SL=	26.5	0.095	1.288	0.074	3.0	29.4	150.7	20
03 SOLn	SL=	26.5	0.429	1.288	0.074	3.0	29.5	150.7	20

Pkt 270 Strg 11 v Da= 355.6 mm s= 4.6 mm (VUU) V-Naht Umf.,Ubear.
Strg 11 n Da= 355.6 mm s= 4.6 mm ii= 1.0 io= 1.0

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	18.6	0.011	0.485	1.352	3.3	21.9	113.3	19
01 SL n	10.0	18.6	0.045	0.485	1.352	3.3	21.9	113.3	19
02 SE v	SL=	21.9	0.346	0.447	9.164	17.5	17.5	265.6	7
02 SE n	SL=	21.9	0.346	0.447	9.164	17.5	17.5	265.6	7
03 SOLv	SL=	21.9	0.429	6.968	0.333	16.0	37.8	150.7	25
03 SOLn	SL=	21.9	1.388	6.968	0.333	16.1	38.0	150.7	25

Pkt 280 Strg 11 v Da= 355.6 mm s= 4.6 mm (BGL) Bogen GLatt
Strg 11 m Da= 355.6 mm s= 4.6 mm R= 533.0 mm
Strg 11 n Da= 355.6 mm s= 4.6 mm ii= 3.6 io= 3.0

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	18.6	0.045	0.294	0.030	2.4	21.0	113.3	19
01 SL m	10.0	18.6	0.712	0.004	0.065	0.6	19.2	113.3	17
01 SL n	10.0	18.6	1.250	0.153	0.062	1.6	20.1	113.3	18
02 SE v	SL=	21.0	0.346	4.670	1.322	33.0	33.0	266.5	12
02 SE m	SL=	19.2	1.220	5.822	0.787	40.4	40.4	268.3	15
02 SE n	SL=	20.1	1.460	5.510	0.208	38.0	38.0	267.3	14
03 SOLv	SL=	21.0	1.388	0.391	0.546	5.2	26.2	150.7	17
03 SOLm	SL=	19.2	1.111	0.245	0.933	6.9	26.1	150.7	17
03 SOLn	SL=	20.1	0.306	0.200	0.713	5.2	25.4	150.7	17

Pkt 290 Strg 11 v Da= 355.6 mm s= 4.6 mm (BGL) Bogen GLatt
Strg 11 m Da= 355.6 mm s= 4.6 mm R= 533.0 mm
Strg 11 n Da= 355.6 mm s= 4.6 mm ii= 3.6 io= 3.0

Na Gl	P (bar)	SLP (N/mm2)	Qx,Mt (kN,kNm)	Mi (kNm)	Mo (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	18.6	4.428	0.767	0.057	7.2	25.8	113.3	23
01 SL m	10.0	18.6	3.443	0.104	0.021	1.5	20.1	113.3	18
01 SL n	10.0	18.6	0.153	1.707	0.087	14.1	32.6	113.3	29
02 SE v	SL=	25.8	1.460	0.988	6.148	36.0	36.0	261.7	14
02 SE m	SL=	20.1	5.774	0.445	4.268	27.0	27.0	267.4	10
02 SE n	SL=	32.6	7.496	1.062	0.112	16.1	16.1	254.8	6
03 SOLv	SL=	25.8	0.306	0.587	0.498	6.0	31.7	150.7	21
03 SOLm	SL=	20.1	1.195	1.172	0.531	10.5	30.6	150.7	20
03 SOLn	SL=	32.6	1.693	1.453	1.251	15.0	47.7	150.7	32

Pkt 295 Strg 11 v Da= 355.6 mm s= 4.6 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 (kNm)	S(Q,M) (N/mm2)	S-ges (N/mm2)	S-zul (N/mm2)	Ausn (%)
01 SL v	10.0	18.6	0.153	0.074	3.225	7.4	26.0	113.3	23
02 SE v	SL=	26.0	7.496	0.639	2.281	15.0	15.0	261.5	6
03 SOLv	SL=	26.0	1.693	1.546	1.481	5.2	31.2	150.7	21

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 (%)
70	(TTU)	4.36	5.48	40.2	113.3	35.5
1770	(VUU)	1.00	1.00	39.0	113.3	34.4
1670	(VUU)	1.00	1.00	38.8	113.3	34.2
1760	(RKR)	1.00	1.00	38.4	113.3	33.9
1660	(RKR)	1.00	1.00	38.3	113.3	33.8
1780	(VUU)	1.00	1.00	37.7	113.3	33.3
1680	(VUU)	1.00	1.00	37.7	113.3	33.3
1790	(VUU)	1.00	1.00	37.4	113.3	33.0
1690	(VUU)	1.00	1.00	37.4	113.3	33.0
150	(TFS)	3.40	4.20	36.8	113.3	32.4
190	(BGL)	3.61	3.01	35.0	113.3	30.9
165	(VUU)	1.00	1.00	34.8	113.3	30.7
162	(VUU)	1.00	1.00	32.7	113.3	28.9
160	(RKR)	1.00	1.00	32.6	113.3	28.8
290	(BGL)	3.61	3.01	32.6	113.3	28.8
168	(VUU)	1.00	1.00	32.0	113.3	28.2
960	(TTU)	4.36	5.48	32.0	113.3	28.2
170	(RKR)	1.00	1.00	31.8	113.3	28.0
240	(VUU)	1.00	1.00	30.7	113.3	27.1
250	(VUU)	1.00	1.00	30.5	113.3	26.9
200	(VUU)	1.00	1.00	27.9	113.3	24.6
205	(VUU)	1.00	1.00	27.8	113.3	24.5
75	(VUU)	1.00	1.00	26.9	113.3	23.7
80	(VUU)	1.00	1.00	26.7	113.3	23.6
65	(VUU)	1.00	1.00	26.6	113.3	23.4
260	(VUU)	1.00	1.00	26.5	113.3	23.4
90	(VUU)	1.00	1.00	26.3	113.3	23.2
295	(VUU)	1.00	1.00	26.0	113.3	22.9
60	(VUU)	1.00	1.00	24.8	113.3	21.9
970	(VUU)	1.00	1.00	24.2	113.3	21.3

0 Schnitte mit Spannungsueberschreitungen (*)

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 (%)
220	(BGL)	3.61	3.01	53.0	267.9	19.8
280	(BGL)	3.61	3.01	40.4	268.3	15.1
290	(BGL)	3.61	3.01	36.0	261.7	13.8
1630	(BGL)	3.99	3.33	36.2	272.7	13.3
1640	(BGL)	3.99	3.33	34.5	275.2	12.5
70	(TTU)	4.36	5.48	33.3	269.7	12.3
210	(VUU)	1.00	1.00	30.6	264.8	11.5
960	(TTU)	4.36	5.48	26.3	255.7	10.3
150	(TFS)	3.40	4.20	25.2	265.9	9.5
130	(BGL)	3.60	3.00	23.0	269.6	8.5
270	(VUU)	1.00	1.00	17.5	265.6	6.6
205	(VUU)	1.00	1.00	15.6	259.7	6.0
30	(BGL)	3.60	3.00	15.5	264.3	5.9
1010	(BGL)	3.60	3.00	15.7	269.7	5.8
295	(VUU)	1.00	1.00	15.0	261.5	5.7
1730	(BGL)	3.99	3.33	14.3	274.9	5.2
180	(BGL)	3.61	3.01	13.5	266.5	5.1
1600	(VUU)	1.00	1.00	13.3	273.8	4.8
1620	(VUU)	1.00	1.00	12.8	274.2	4.7
900	(VUU)	1.00	1.00	11.9	263.4	4.5
160	(RKR)	1.00	1.00	11.4	265.3	4.3
1660	(RKR)	1.00	1.00	11.2	262.5	4.3
1610	(VUU)	1.00	1.00	11.4	274.6	4.2
170	(RKR)	1.00	1.00	11.0	266.7	4.1
156	(VUU)	1.00	1.00	10.9	265.4	4.1
172	(VUU)	1.00	1.00	10.8	267.0	4.0
175	(VUU)	1.00	1.00	10.6	267.4	4.0
155	(VUU)	1.00	1.00	10.3	265.5	3.9
1740	(BGL)	3.99	3.33	10.1	267.1	3.8
910	(VUU)	1.00	1.00	10.2	270.2	3.8

0 Schnitte mit Spannungsueberschreitungen (*)

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 (%)
150	(TFS)	3.40	4.20	92.7	150.7	61.5
1740	(BGL)	3.99	3.33	72.4	150.7	48.0
1640	(BGL)	3.99	3.33	70.4	150.7	46.7
180	(BGL)	3.61	3.01	61.6	150.7	40.8
190	(BGL)	3.61	3.01	61.2	150.7	40.6
1630	(BGL)	3.99	3.33	52.3	150.7	34.7
1730	(BGL)	3.99	3.33	50.9	150.7	33.8
70	(TTU)	4.36	5.48	48.0	150.7	31.8
960	(TTU)	4.36	5.48	47.9	150.7	31.8
290	(BGL)	3.61	3.01	47.7	150.7	31.6
220	(BGL)	3.61	3.01	45.2	150.7	30.0
240	(VUU)	1.00	1.00	45.1	150.7	29.9
165	(VUU)	1.00	1.00	44.2	150.7	29.3
162	(VUU)	1.00	1.00	41.7	150.7	27.7
160	(RKR)	1.00	1.00	41.7	150.7	27.6
250	(VUU)	1.00	1.00	41.0	150.7	27.2
1770	(VUU)	1.00	1.00	39.8	150.7	26.4
1670	(VUU)	1.00	1.00	39.6	150.7	26.3
205	(VUU)	1.00	1.00	39.6	150.7	26.3
168	(VUU)	1.00	1.00	39.0	150.7	25.9
1760	(RKR)	1.00	1.00	39.0	150.7	25.8
1660	(RKR)	1.00	1.00	38.8	150.7	25.7
170	(RKR)	1.00	1.00	38.5	150.7	25.6
270	(VUU)	1.00	1.00	38.0	150.7	25.2
900	(VUU)	1.00	1.00	37.9	150.7	25.1
1780	(VUU)	1.00	1.00	37.8	150.7	25.1
1680	(VUU)	1.00	1.00	37.8	150.7	25.1
156	(VUU)	1.00	1.00	37.6	150.7	25.0
155	(VUU)	1.00	1.00	37.5	150.7	24.9
1790	(VUU)	1.00	1.00	37.4	150.7	24.8

0 Schnitte mit Spannungsueberschreitungen (*)

4 Warnung(en)