Od =	33.7	mm						
t =	2.6	mm	2.275	mm	1.275	mm	1.6	mm
mill tol =	-12.5	% =	-0.325	mm				
corro =	-1	mm						
id =	28.5	mm	29.15	mm	31.15	mm	30.5	mm
	no red		-mill		-mill-corr		- corr	
CSA =	254.03	mm^2	224.60	mm^2	129.88	mm^2	161.35	mm^2
Z =	1835.44	mm^3	1654.01	mm^3	1014.57	mm^3	1236.44	mm^3
hoop stress =	14.25	N/mm^2	16.66	N/mm^2	31.76	N/mm^2	24.78	N/mm^2
Axial stress 1 =	0.00	N/mm^2	0.00	N/mm^2	0.00	N/mm^2	0.00	N/mm^2
Axial stress 2 =	6.53	N/mm^2	7.73	N/mm^2	15.26	N/mm^2	11.77	N/mm^2
	6.53	N/mm^2	7.73	N/mm^2	15.26	N/mm^2	11.77	N/mm^2
bending stress =	21.36	N/mm^2	23.70	N/mm^2	38.64	N/mm^2	31.70	N/mm^2
Torsional stress =	0.00	N/mm^2	0.00	N/mm^2	0.00	N/mm^2	0.00	N/mm^2
sif =	1		1		1		1	
code stress =	29.78	N/mm^2	33.33	N/mm^2	55.82	N/mm^2	45.39	N/mm^2
C2 =	29.2	N/mm^2					44.81	N/mm^2
diff =	0.58	N/mm^2	- difference because C2 uses the alternative pressure term -				0.58	N/mm^2

8.4	= pcdo/4en		pcdo/4en =	13.7	
7.8	= ((pcdi2)/(do2-di2))+(Pc/2)		((pcdi2)/(do2-di2))+(Pc/2) =	13.1	
0.6	N/mm^2			0.6	N/mm^2
29.2	N/mm2 - using 7.83 N/mm2	- matches C2 exactly now! -		44.8	N/mm^2

	axial			torsion		
P (N/mm^2)	fx (N)	fy (N)	fz (N)	mx (Nm)	my (Nm)	mz (Nm)
2.6	0	0	-39	0	39.2	0

The stress intensification factors, *i*, are given in Tables H-1 and H-2.

As an alternative route to equations given in 12.3.2 to 12.3.6, a more detailed determination of the stresses by separating in-plane and out-of-plane moments can be performed, using the corresponding stress intensity factors in Table H-3.

In this case the factor 0,75 *i* for moment M_A, M_B and M_C in equations (12.3.2-1), (12.3.3-1), (12.3.4-2) and (12.3.5-1) shall be replaced by i_o and i_i respectively, in accordance with Table H-3. In the same way, the factor *i* for moments M_C and M_D in equations (12.3.4-1), (12.3.4-2), (12.3.5-1) and (12.3.6-1) shall be replaced by i_o and i_i.

NOTE The pressure term $\frac{p_c d_o}{4 e_n}$ in the equations (12.3.2-1), (12.3.3-1), (12.3.4-1), (12.3.4-2) and (12.3.5-1) may be replaced by the alternative term $\frac{p_c d_i^2}{d_o^2 - d_i^2} + \frac{p_c}{2}$.

For the general and the alternative route, the stress intensity factors, *i*, including the reduction factor 0,75, if defined, shall be greater than or equal to 1,0 (0,75 $i \geq 1{,}0$). If a value less than 1 is obtained then the value 1,0 shall be used.

12.3.2 Stress due to sustained loads

The sum of primary stresses σ_1, due to calculation pressure, p_c, and the resultant moment, M_A, from weight and other sustained mechanical loads shall satisfy the following equation:

$$\sigma_1 = \frac{p_c d_o}{4 e_n} + \frac{0{,}75\, i\, M_A}{Z} \leq f_f \qquad (12.3.2\text{-}1)$$

where

M_A is the resultant moment from the sustained mechanical loads which shall be determined by using the most unfavourable combination of the following loads:

- piping dead weight including insulation, internals and attachments;
- weight of fluid;
- internal pressure forces due to unrelieved axial expansion joints etc.

f_f is the design stress for flexibility analysis in N/mm2 (MPa) with $f_f = \min(f; f_{cr})$.

12.3.3 Stress due to sustained and occasional or exceptional loads

The sum of primary stresses, σ_2, due to internal pressure, p_c, resultant moment, M_A, from weight and other sustained mechanical loads and resultant moment, M_B, from occasional or exceptional loads shall satisfy the