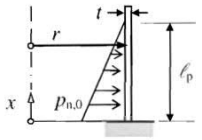
x	axial coordinate on cylinder
r	Outside radius of circular plate
t	Thickness of shell wall
p_n	Distributed normal pressure
P_x	Load per unit circumference acting in the meridional direction
$\sigma_{eq,n}$	Von Mises equivalent stress associated with only membrane stress components
$\sigma_{eq,s}$	Von Mises equivalent stress derived from surface stresses
σ_{MT}	Reference stress deri ved from membrane theory
σ_{bx}	Meridional bending stress
$\sigma_{b\theta}$	Circumferential bending stress
σ_{sx}	Meridional surface stress
$\sigma_{s\theta}$	Circumferential surface stress
τ_{xn}	Transverse shear stress associated with meridional bending
$\sigma_{MT\theta}$	Reference stress deri ved from membrane theory

C.2.4 Cylinder, clamped: hydrostatic internal pressure



$$\sigma_{MT\theta} = p_{n0}\frac{r}{t}$$

BC1r

p_{nh}	0,069 [N/mm2]
r	3005,00 [mm]
t	5,00 [mm]
$\sigma_{MT\theta}$	41 [MPa]
l_p	3500,00 [mm]
$\left(\frac{\sqrt{rt}}{\ell_p}\right)$	0,04
ρ	2,0

Maximum σ_x	Maximum $\sigma_{x\theta}$	Maximum τ_{xn}	Maximum $\sigma_{eq,s}$	Maximum $\sigma_{eq,m}$		
$k_x\ \sigma_{MT\theta}$	$k_\theta\ \sigma_{MT\theta}$	$k_\tau\sqrt{t/r}\ \sigma_{MT\theta}$	$k_{eq,s}\ \sigma_{MT\theta}$	$k_{eq,m}\ \sigma_{MT\theta}$		
72,8 [MPa]	42,0 [MPa]	1,9 [MPa]	64,7 [MPa]	40,1 [MPa]		
14,0 [MPa]	48,0 [MPa]	6,0 [MPa]	47,0 [MPa]	32,0 [MPa]	11.160	S8
31,7 [MPa]	42,5 [MPa]	5,5 [MPa]	42,0 [MPa]	34,0 [MPa]	43.740	S8
52,7 [MPa]	41,9 [MPa]	5,3 [MPa]	41,9 [MPa]	37,0 [MPa]	173.160	S8
71,8 [MPa]	47,6 [MPa]	3,3 [MPa]	57,6 [MPa]	38,0 [MPa]	198.450	Local refinement. Shell size in clamped area aprox 1.6t
73,3 [MPa]	49,8 [MPa]		66,0 [MPa]	38,0 [MPa]		Same with internal solver

$\left(\frac{\sqrt{rt}}{\ell_p}\right)$	k_x	k_θ	k_τ	$k_{eq,s}$	$k_{eq,m}$
0	1,816	1,08	1,169	1,614	1,043
0,2	1,533	0,733	1,076	1,363	0,647
0,04	1,77	1,02	1,15	1,57	0,97