

Z40000-V-0068_Rev 0 SAVED:1 - Output

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PV Elite 2011 SP2 Licensee: L&T - Chiyoda Limited
FileName : Z40000-V-0068_Rev 0
Horizontal Vessel Analysis (Ope.): Step: 9 8:49a Apr 10,2012

Check = $107.15 / 1547.73 + (720.37 / 193611.453) / 1781.11$
Check = 0.28

Check of Inside Ribs
Inertia of Saddle, Inner Ribs - Axial Direction

	Y	A	AY	Ay ⁴	Io
Rib	120.8	2803.0	338578.2	18049464.0	12941639.0
Web	6.5	6605.7	42934.4	7658857.5	93024.3
Values	40.6	9408.7	381512.7	25708322.0	13034663.0

$KL/R < C_c$ (8.7439 < 122.7358) per AISC E2-1
 $Sca = (1 - (KL/R)^2 / (2 * C_c^2)) * F_y / (5/3 + 3 * (KL/R) / (8 * C_c)) - (KL/R)^3 / (8 * C_c^3)$
 $Sca = (1 - (8.74)^2 / (2 * 122.74^2)) * 2671 / (5/3 + 3 * (8.74) / (8 * 122.74)) - (8.74^3) / (8 * 122.74^3)$
 $Sca = 1573.75 \text{ KG/CM}^2$

AISC Unity Check on Inside Ribs (must be <= 1.0)
Check = $S_c / Sca + (P_m / Z) / Sba$
Check = $139.08 / 1573.75 + (724.39 / 338958.750) / 1781.11$
Check = 0.21

Input Data for Base Plate Bolting Calculations:

Total Number of Bolts per BasePlate	Nbolts	4
Total Number of Bolts in Tension/Baseplate	Nbt	4
Bolt Material Specification		SA-36
Bolt Allowable Stress	Stba	1345.98 KG/CM ²
Bolt Corrosion Allowance	Bca	0.0000 mm.
Distance from Bolts to Edge	Edgedis	281.0002 mm.
User Defined Area in a Single Bolt	UserBoltArea	1225.0000 sq.mm.
BasePlate Allowable Stress	S	1406.14 KG/CM ²
Area Available in a Single Bolt	BltArea	1225.0000 sq.mm.
Saddle Load Q0 (Weight)	Q0	64118.4 KG
Saddle Load QL (Wind/Seismic contribution)	QL	5635.8 KG
Minimum Transverse Force	Pt	7812.0 KG
Minimum Longitudinal Force	F1	15524.0 KG
Saddle Bolted to Steel Foundation		Yes

Bolt Area Calculation per Dennis R. Moss

Bolt Area Requirement Due to Longitudinal Load [Bltarear]:
= 0.0 (Q0 > QL --> No Uplift in Longitudinal direction)

Bolt Area due to Shear Load [Bltarears]:
= $F1 / (Stba * Nbolts)$

Ready CAP NUM

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