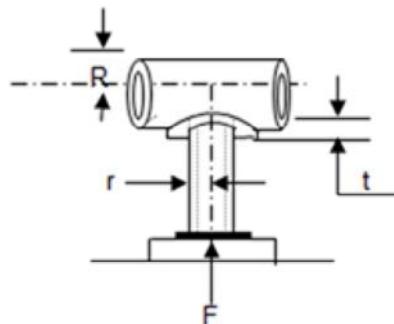


# PIPING ENGINEERING

## PIPE SUPPORT TRUNNION EVALUATION

**INPUT DATA**    **PGM RUN**    **V1.0 / Pgm By C.M.Ryu/P.E**

* Item Name	E-1004	* Description	NODE-320		
* Pipe Allowable Stress, Sh	18900	psi	* Material	A106-B	
* Design Pressure, P	100	psi	* Pipe O.D	12.75	in
* Trunnion O.D	6.625	in	* Pipe Wall thickness, t	0.375	in
* Load, F	2000	Lb	* Pad thickness	0	in



### **RESULT OF CALCULATION**

#### **Axial Load Stress and Axial Load Capacity, Pa Calculations**

1. Unit force, f	=2000/(6.28*(6.625/2))	96	Lb/in
2. Pipe Stress, S	=1.75*96.1*((12.75/2)*(0.375+0))^0.5/(0.375+0)^2+		
	100*(12.75/2)/((0.375+0))	3,550	psi
3. Allowable Stress, Sa	=1.5*18900	28,350	psi
4. % of Sa used	=3,549.9/28350*100	13	%
5. Axial Load Capacity, Pa	=((2.692*18900*(0.375+0)^2*(6.625/2))/((12.75/2)*(0.375+0))^0.5)-(6.283*(12.75/2)*(0.375+0)^2*100*6.625/2/0.375)	10,353	Lbs
		4,696	Kgf

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