



DOMEX 100XF
TENSILE STRENGTH 110000PSI
YIELD STRENGTH 100000PSI
YIELD STRENGTH WITH SAFETY FACTOR 3 33333PSI

P=2871#

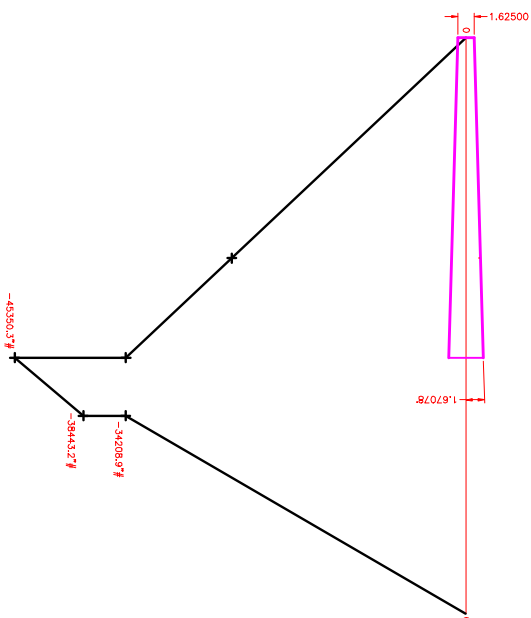
M=45350"#"

$$\frac{P}{A} \pm \frac{Mc}{I} = S_T$$

$$\frac{2871\#}{1.78\text{IN}^2} \pm \frac{45350\text{"}\#*(1.75\text{"})}{2.56\text{IN}^4} = S_T$$

1613PSI + 31001PSI = S_T = 32614PSI

BEAM 1 WILL BE A 3-1/2 X 2 X 3/16" FORMED TUBE, STRAIGHT ACROSS.



DOMEX 100XF
TENSILE STRENGTH 110000PSI
YIELD STRENGTH 100000PSI
YIELD STRENGTH WITH SAFETY FACTOR 3 33333PSI
YIELD SHEAR STRENGTH 100000*.60/3=20000PSI

P=2871#

SHEAR@ E=1063"#"

$$\frac{P}{A} = S_T$$

$$\frac{2871\#}{.737\text{IN}^2} = S_T = 3896\text{PSI}$$

$$\tau_{\text{avg}} = 1.50 * V / (2 * H * t)$$

V= SHEAR FORCE
H= CENTROID TO EXTREME FIBER
t= WALL THICKNESS

$$\frac{1.50 * 1063\#}{(2 * .813\text{"} * .188\text{"})} = \tau_{\text{avg}} = 3448\text{PSI}$$

BEAM 1 @ E WILL BE A 1-5/8 X 2 X 3/16" FORMED TUBE.