

Combined Loadings:

$$) E_{\text{max}} = \frac{M_{\text{max}}}{S_x} + \frac{M_{\text{min}}}{S_x} + \frac{P_{\text{max}}}{A}$$

$$E_{\text{min}} = \frac{M_{\text{min}}}{S_x} + \frac{M_{\text{max}}}{S_x} + \frac{P_{\text{min}}}{A}$$

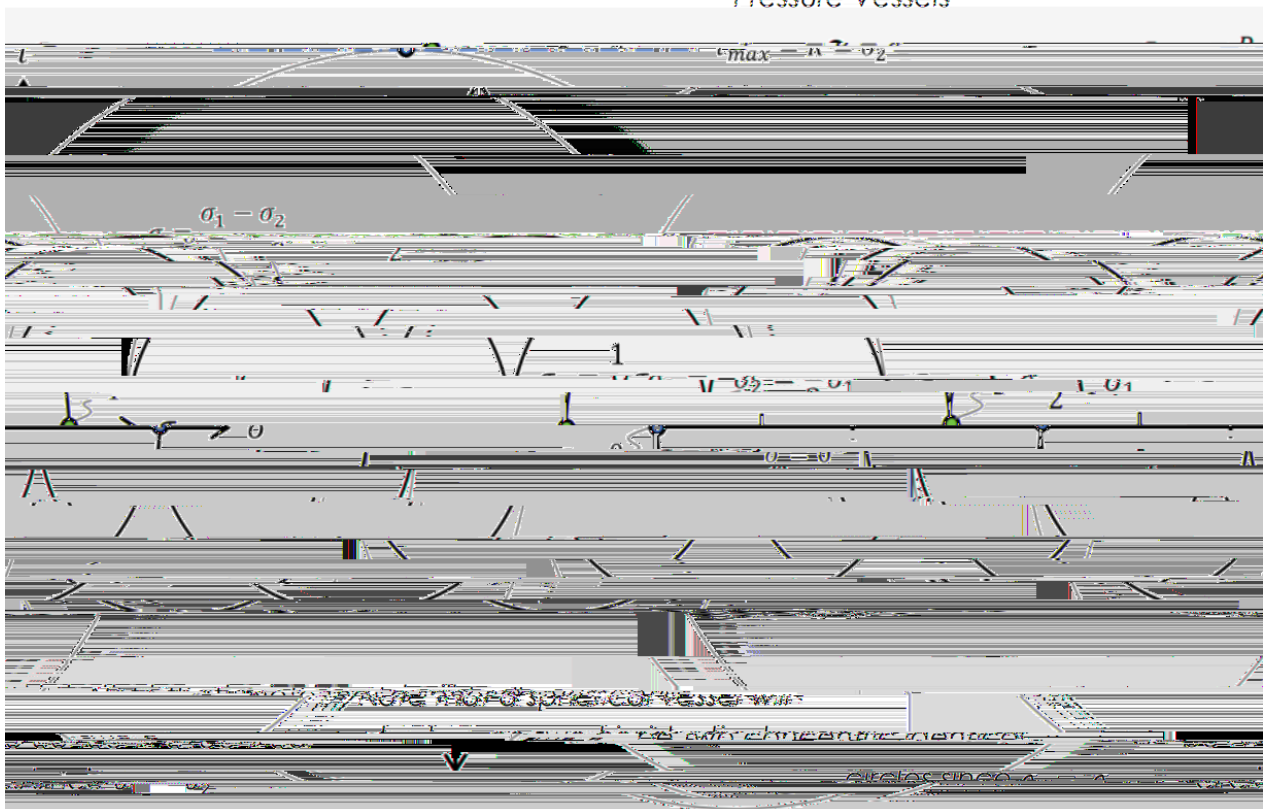
$$\sigma_{\theta} = \frac{p}{r} \sqrt{\frac{r^2 + z^2}{z}}$$

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Pressure Vessels



Beam Design:

1. $\sigma = \frac{M}{I} \cdot y$ $\tau = \frac{V}{I} \cdot y \cdot z$ $\delta = \frac{W L^3}{48 E I}$ $\theta = \frac{W L^2}{2 E I}$



2. $\sigma = \frac{M}{I} \cdot y$ $\tau = \frac{V}{I} \cdot y \cdot z$ $\delta = \frac{W L^3}{48 E I}$ $\theta = \frac{W L^2}{2 E I}$