

Pin diameter

$$d_{\text{pin}} := 100\text{mm}$$

Pin Shear Load

$$F_{\text{pin}} := 100\text{kN}$$

Pin Area

$$A_{\text{pin}} := \frac{\pi \cdot d_{\text{pin}}^2}{4}$$

$$A_{\text{pin}} = 7.854 \times 10^3 \text{mm}^2$$

Pin Shear Stress

$$\tau_{\text{pin}} := \frac{F_{\text{pin}}}{A_{\text{pin}}}$$

$$\tau_{\text{pin}} = 12.732 \text{MPa}$$