

$$\epsilon_{\theta} = \frac{pD}{4tE} (1-\nu)$$

$$= \frac{4 \times 10^6 \times 3}{4 \times 0.012 \times 207 \times 10^9} (1-0.22)$$

$$= 8.7 \times 10^{-4}$$

$$= \underline{870 \text{ microstrain}}$$