

Hoop stress given by:

$$\sigma = \frac{P d}{2 h}$$

Pressure
 → diameter
 → wall thickness

$$\Rightarrow h = \text{Wall thickness} = \frac{P d}{2 \sigma}$$

Design stress at 2% strain (after 20000 hrs):

from GRAPH 16.45 MPa

20000 ISOCHRONAL
HOUR

$$\Rightarrow h = \frac{0.7 \cdot 150}{2 \cdot 16.45}$$

$$= 3.19 \text{ mm}$$