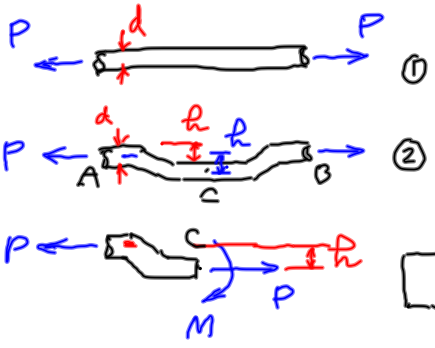
4.110

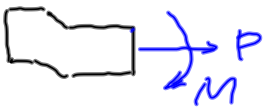
$d = 0.75$ in. $\quad t = 0.08$ thickness

$\sigma_2 = 4\sigma_1$ $\quad h = ?$



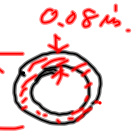
$+\circlearrowleft \Sigma M_c = 0$: $\quad hP - M = 0$

$\therefore M = hP$



$\sigma = \frac{Mc}{I}$ $\quad \therefore h = \square$

$h = \square$ in.



$$\sigma_2 = \frac{P}{\pi(0.75/2)^2 - \pi(0.59/2)^2} + \frac{hP(0.75/2)}{\frac{\pi}{4}\left(\frac{0.75}{2}\right)^4 - \frac{\pi}{4}\left(\frac{0.59}{2}\right)^4}$$

$$= 4\,\frac{P}{\pi(0.75/2)^2 - \pi(0.59/2)^2}$$

4.113