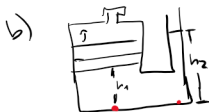


$$p_A + \gamma_B h_B + \gamma_{wh} h_w = p_{atm} + \gamma_B h_B$$

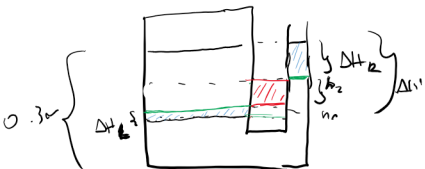
$$p_{A, man} = 24.7 \text{ kPa}$$



$$\cancel{p_{A, man}} + \gamma_B h_B + \gamma_{wh} h_w + h_1 \gamma_B = \gamma_B h_2 + \cancel{p_{atm}}$$

$$(h_2 - h_1) = \frac{\gamma_B h_B + \gamma_{wh} h_w}{\gamma_B}$$

$$h_2 - h_1 = 0.01384 \text{ m}$$



$$\Delta V_L = \Delta V_R$$

$$|\Delta H_L| A_L = |\Delta H_R| A_R$$

$$\Delta H_L \cdot \frac{\pi D_L^2}{4} = \Delta H_R \cdot \frac{\pi D_R^2}{4}$$

$$\Delta H_R = \Delta H_L \cdot \frac{D_L^2}{D_R^2} = \Delta H_L \frac{0.25^2}{0.225^2}$$

$$\Delta H' = 10.3 \text{ m} - 0.1 \text{ m} = 0.2 \text{ m}$$

$$\Delta H' = |\Delta H_L| + (h_2 - h_1) \Rightarrow |\Delta H_L| = 0.2 \text{ m}$$

$$h_2 - h_1 = 0.01384$$

$$0.2 = (h_2 - h_1) + |\Delta H_L| + |\Delta H_R|$$

$$\Delta H_R = \Delta H_L \frac{0.25^2}{0.225^2}$$

$$h_2 = 0.1157 \text{ m}$$