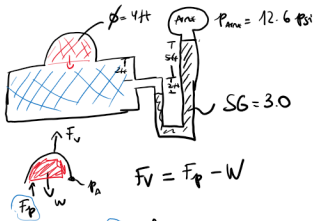
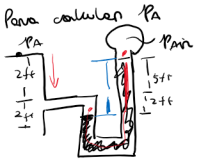


$F_v = F_p - W$

$F_p = P_A \cdot A_\bullet$

Para calcular P_A



$$P_A + (2 + 2ft)\cdot \gamma_w - (5+2)\gamma_G - P_{Air} = 0$$

$$P_A = P_{AIR} + (7ft \cdot \gamma_w \cdot SG_G - 4ft\ \gamma_w)$$

(P_{AIR} = 12.6 psi; SG_G = 3)

$$P_A = 86.874\ kPa + 17ft \cdot 9.8 \frac{kPa}{m}$$

$$P_A = 137.7\ kPa$$

$$F_p = P_A \cdot A_\bullet$$

$$F_p = 137.7\ kPa \cdot \frac{\pi D^2}{4} = 137.7\ kPa \cdot \frac{\pi (4\ ft)^2}{4}$$

$$F_p = 160.75\ kN$$

$$F_v = F_p - W$$

$$F_v = 160.75\ kN - V_\bullet \cdot \gamma_w$$

$$F_v = 160.75\ kN - \left[\frac{4\pi}{3}\left(\frac{D}{2}\right)^3\right]\frac{1}{2}\cdot \gamma_w$$

$$F_v = 160.75\ kN - 4.65\ kN = 156.1\ kN$$

La fuerza horizontal NETA tiene magnitud igual a cero