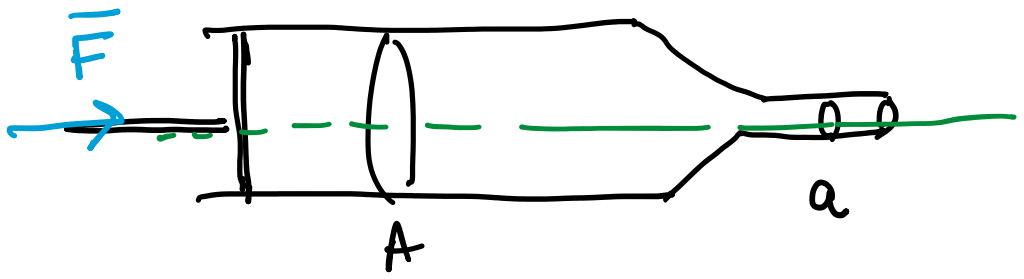
jueves, 1 de julio de 2021 11:37 a. m.

Repaso C

6



$\rho = 1010 \frac{kg}{m^3}$

$A = 5,2\ cm^2$

$a = \frac{A}{100}$

Como $A \cdot v_I = a \cdot v_S$

$A \cdot v_I = \frac{A}{100} \cdot v_S$

$p_S = 1,18 \cdot 10^5 Pa$

$v_S = 4,9 \frac{m}{s}$

$v_I = \frac{v_S}{100} \Rightarrow$ v_I es despreciable

$\Rightarrow p_I + \rho g h_I + \frac{1}{2} \rho \cdot v_I^2 = p_S + \rho g h_S + \frac{1}{2} \rho \cdot v_S^2$

$p_0 + \frac{F}{A} = p_S + \frac{1}{2} \rho \cdot v_S^2$

$1,013 \cdot 10^5 Pa + \frac{F}{5,2\ cm^2} = 1,18 \cdot 10^5 Pa + \frac{1}{2} 1010 \frac{kg}{m^2} \cdot \left(4,9 \frac{m}{s}\right)^2$

$F = 26037\ Pa \cdot 0,00052\ m^2$

$F = 13,5\ N$