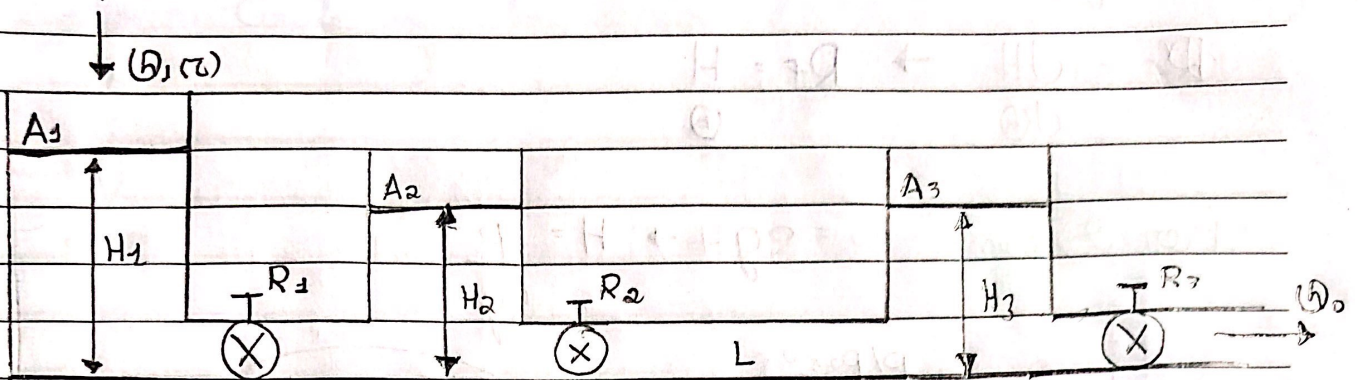
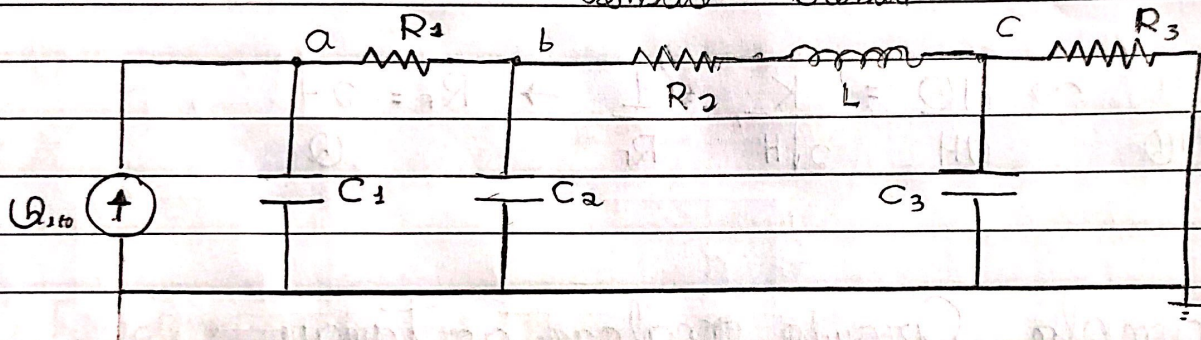


• Torção de Casa:



* Analogia elétrica: Corrente - Vazão
Tensão - Pressão



• 2ª analogia hidráulica:

$$C_f = \frac{A g H}{s g} ; L_f = \frac{s \cdot l}{a} ; R_f^* = s g R$$

• 2ª Lei dos nós:

$$\left(\frac{1}{R_1} + C_1 D \right) V_a - \frac{1}{R_2} V_b = (Q_{1,t})$$

$$\left(\frac{1}{R_1} + C_1 D + \frac{1}{R_2} + \frac{1}{L_1 D} \right) V_b - \left(\frac{1}{R_1} \right) V_a - \left(\frac{1}{R_2} + \frac{1}{L_1 D} \right) V_c = 0$$

$$\left(\frac{1}{R_2} + \frac{1}{L_1 D} + C_2 D + \frac{1}{R_3} \right) V_c - \left(\frac{1}{R_2} + \frac{1}{L_1 D} \right) V_b = 0$$

S T Q Q S S D

___/___/___

→ Substituindo as seções do sistema hidráulico:

$$\left(\frac{1}{\rho g R_1} + \frac{A_1}{\rho g} \right) p_a - \frac{1}{\rho g R_2} p_b = (h, c)$$

$$\left(\frac{1}{\rho g R_1} + \frac{A_2 D}{\rho g} + \frac{1}{\rho g R_2} + \frac{a}{\rho g L D} \right) p_b - \frac{1}{\rho g R_1} p_a - \left(\frac{1}{\rho g R_2} + \frac{a}{\rho g L D} \right) p_c = 0$$

$$\left(\frac{1}{\rho g R_2} + \frac{a}{\rho g L D} + \frac{A_3}{\rho g} + \frac{1}{\rho g R_3} \right) p_c - \left(\frac{1}{\rho g R_2} + \frac{a}{\rho g L D} \right) p_b = 0$$