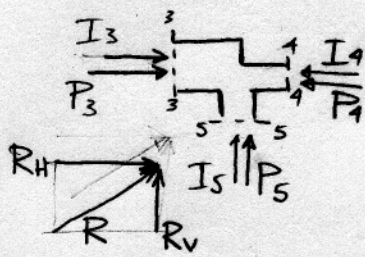




а) СИЛА НА РАЧВУ



$$P_3 = p_3 \cdot A_1 = \rho g (\pi_3 - z_3) \cdot A_1$$

$$P_3 = 1000 \cdot 9,81 \cdot (5,331 - 5,0) \cdot 0,0962$$

$$P_3 = 312,5 \text{ N}$$

$$I_3 = \rho \cdot Q_1 \cdot V_1 = 1000 \cdot 0,0875 \cdot 0,909$$

$$I_3 = 79,6 \text{ N}$$

$$P_4 = p_4 \cdot A_2 = \rho g (\pi_4 - z_4) \cdot A_2$$

$$P_4 = 1000 \cdot 9,91 \cdot (5,306 - 5,0) \cdot 0,0314$$

$$P_4 = 94,4 \text{ N}$$

$$I_4 = \rho \cdot Q_2 \cdot V_2 = 1000 \cdot 0,04375 \cdot 1,393$$

$$I_4 = 60,9 \text{ N}$$

$$P_5 = p_5 \cdot A_3 = \rho g (\pi_5 - z_5) \cdot A_3$$

$$P_5 = 1000 \cdot 9,81 \cdot (5,331 - 5,0) \cdot 0,0491$$

$$P_5 = 153,6 \text{ N}$$

$$I_5 = \rho \cdot Q_3 \cdot V_3 = 1000 \cdot 0,04375 \cdot 0,891$$

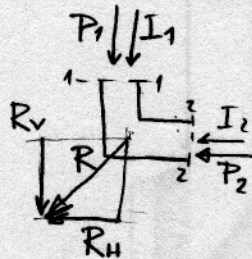
$$I_5 = 39,0 \text{ N}$$

$$R_H = I_3 + P_3 - I_4 - P_4 = 79,6 + 312,5 - 60,9 - 94,4 = 236,8 \text{ N}$$

$$R_V = I_5 + P_5 = 39,0 + 153,6 = 192,6 \text{ N}$$

$$R = \sqrt{R_H^2 + R_V^2} = \sqrt{236,8^2 + 192,6^2} = 305,2 \text{ N}$$

б) СИЛА НА КОБЕНО



$$P_1 = p_1 \cdot A_3 = \rho g (\pi_1 - z_1) \cdot A_3$$

$$P_1 = 1000 \cdot 9,81 \cdot (5,291 + 2,0) \cdot 0,0491$$

$$P_1 = 3510,8 \text{ N}$$

$$P_2 = p_2 \cdot A_3 = \rho g (\pi_2 - z_2) \cdot A_3$$

$$P_2 = 1000 \cdot 9,81 \cdot (5,283 + 2,0) \cdot 0,0491$$

$$P_2 = 3506,9 \text{ N}$$

$$I_1 = I_2 = I_5 = 39,0 \text{ N}$$

$$R_H = I_2 + P_2 = 39,0 + 3506,9 = 3545,9 \text{ N}$$

$$R_V = I_1 + P_1 = 39,0 + 3510,8 = 3549,8 \text{ N}$$

$$R = \sqrt{R_H^2 + R_V^2} = \sqrt{3545,9^2 + 3549,8^2} = 5017,4 \text{ N}$$