

3. Бер:

- $R = 200 \text{ Ом}$
- $\eta = 80 \%$
- $U = 220 \text{ В}$
- $t = 25 \text{ мин}$
- $T_1 = 20^\circ \text{ C}$
- $V_1 = 0,6 \text{ м}$
- $\rho = 1000 \text{ кг/м}^3$
- $c = 4200 \text{ Дж/кг} \cdot ^\circ \text{C}$
- $Q = ?$

ш:

$$Q_1 = m \cdot c (t_2 - t_1)$$

$$m = \rho \cdot V$$

$$Q_2 = r \cdot m$$

$$r = \frac{Q}{m}$$

$$Q = Q_1 + Q_2$$

ш:

$$Q_1 = 600 \cdot 4200 (100 - 20) = 2016 \cdot 10^5 \text{ Дж}$$

$$m = 1000 \cdot 0,6 = 600 \text{ кг}$$

$$r = \frac{2016 \cdot 10^5}{600} = 3,36 \cdot 10^5$$

$$Q_2 = 600 \cdot 3,36 \cdot 10^5 = 2016 \cdot 10^5$$

$$Q = 2016 \cdot 10^5 + 2016 \cdot 10^5 = 4032 \cdot 10^5 \text{ Дж}$$

4. Бер:

- $h_1 = 30 \text{ мм} = 0,03 \text{ м}$
- $h_2 = 60 \text{ мм} = 0,06 \text{ м}$
- $\rho_k = 2700 \text{ кг/м}^3$
- $\rho_m = 900 \text{ кг/м}^3$
- $h_3 = ?$

ш:

$$\frac{0,06}{900} = \frac{0,03}{2700}$$

$$0,06 \cdot 2700 = 900 \cdot 0,03$$

$$162 = 27$$

$$h_3 = h_2 - h_1$$

$$h_3 = 0,03 \text{ м}$$

1. Бер:

- $R = 20 \text{ Ом}$
- $R_x = ?$

ш:

$$\frac{1}{R_x} + R_1 + R_2 + \frac{1}{R_3} = \Delta R$$

$$\frac{1}{20} + 20 + 20 + \frac{1}{20} = \Delta R = 0$$

$$40 + \frac{1}{20} - R = 0$$

$$\frac{801}{20} - R = 0$$

$$R = \frac{801}{20} \approx 40$$

$$\frac{1}{R_x} + 20 + 20 + \frac{1}{20} = 40$$

$$40 - 20 + 20 + \frac{1}{20} = \frac{1}{R_x}$$

$$20 + 20 + \frac{1}{20} = \frac{1}{R_x}$$

$$\frac{801}{20} = \frac{1}{R_x}$$

$$801 \cdot R_x = 20$$

$$R_x \approx 0,02$$

$$\Delta R = \frac{20 \cdot 20}{20 + 20} = 10$$

$$\frac{1}{R_x} + 20 + 20 + \frac{1}{20} = 10$$

$$20 + 20 + \frac{1}{20} - 10 = \frac{1}{R_x}$$

$$\frac{801}{20} - 10 = \frac{1}{R_x}$$

$$\frac{801}{20} - \frac{200}{20} = \frac{1}{R_x}$$

$$\frac{601}{20} = \frac{1}{R_x}$$

$$601 R_x = 20$$

$$R_x \approx 0,03$$

ш: $R_x = 0,02 \text{ Ом}$
 $R_x = 0,03 \text{ Ом}$ немесе

2. Бер:

$$d_1 = 3,5 \text{ см} = 0,35 \text{ м}$$

$$t = x$$

$$L = 1,5 \text{ см} = 0,15 \text{ м}$$

$$F = ?$$

ш:

$$F = 0,35 \cdot 3 + x + x + 0,15 \cdot 3$$

$$F = 1,05 + 2x + 0,45$$

$$F = 1,2 + 2x$$

$$F = x \quad 3x = 1,2$$

$$x = 0,4$$

$$F = 0,35 \cdot 3 + 0,4 + 0,4 + 0,45$$

$$F = 2,2$$