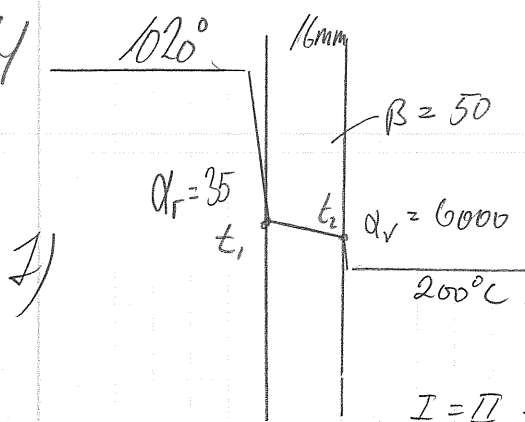


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$$I \quad \dot{Q} = A \cdot \frac{1}{\frac{1}{\alpha_r} + \frac{s}{\beta} + \frac{1}{\alpha_v}} \cdot (t_r - t_v)$$

$$II \quad \dot{Q} = A \cdot \alpha_r \cdot (t_r - t_1)$$

$$I = II \Rightarrow t_1 = t_r - \frac{1}{\frac{1}{\alpha_r} + \frac{s}{\beta} + \frac{1}{\alpha_v}} \cdot (t_r - t_v)$$

$$t_1 = 1020 - \left(\frac{1}{35} + \frac{0,016}{50} + \frac{1}{6000} \right)^{-1} \cdot 35^{-1} \cdot (1020 - 200) = \underline{\underline{213,7^\circ\text{C}}}$$

$$2) \quad I \quad \dot{Q} = 1 \cdot 35 \cdot (1020 - 213,7) = 28219,3 \text{ kJ/s} \cdot \text{m}^2$$

$$III \quad \dot{Q} = A \cdot \left(\frac{1}{\alpha_v} + \frac{s}{\beta_k} + \frac{s_s}{\beta_s} \right)^{-1} \cdot (t_1 - t_v)$$

$$t_r = \dot{Q} \cdot \left(\frac{1}{\alpha_v} + \frac{s_k}{\beta_k} + \frac{s_s}{\beta_s} \right) + t_v = 28219 \cdot \left(\frac{1}{6000} + \frac{0,016}{50} + \frac{0,005}{1} \right) + 200$$

$$\underline{\underline{t_r = 354,8^\circ\text{C}}}$$