

$$12.1 \quad Q_{kr} = \dot{m}_i \cdot c_v \cdot \Delta t_v = \frac{2900 \cdot 10^3}{3600} \cdot 4,19 \cdot (24-10) = \underline{47254 \text{ kW}}$$

$$12.2 \quad Q_{kr} = \dot{M} d_i \cdot (h_x - h') \Rightarrow h_x = \frac{47254 \cdot 3600}{80 \cdot 10^3} + 121,4 = \underline{2247,8 \frac{\text{kJ}}{\text{kg}}}$$

$$12.3 \quad h_x = h' + r \cdot X \Rightarrow X = \frac{h_x - h'}{r} = \frac{2247,8 - 121,4}{2433,1} = \underline{0,874}$$

$$12.4 \quad h_0 = 3246,6$$

$$\Delta h = h_0 - h_x = 3246,6 - 2247,8 = \underline{998,8 \frac{\text{kJ}}{\text{kg}}}$$

$$12.5 \quad \Delta h_{is} = h_0 - h_{is} = 3246,6 - 2025 = \underline{1221,6 \frac{\text{kJ}}{\text{kg}}}$$

$$12.6 \quad P_i = \dot{M} d_i \cdot \Delta h = \frac{80 \cdot 10^3}{3600} \cdot 998,8 = \underline{22196 \text{ kW}}$$

$$12.7 \quad \eta_{is} = \frac{\Delta h}{\Delta h_{is}} = \frac{998,8}{1221,6} = \underline{0,818}$$

$$12.8 \quad \eta_m = \frac{P_{kl}}{\eta_i \cdot P_i} = \frac{20000}{0,92 \cdot 22196} = \underline{0,98}$$

12.9 *Skivvel; Guidning-, Ventilations-, lekketab.
mekanisk, strålings- og ledningstab til omgivelserne.*