

41.1

$$\eta_K = \frac{M_{d1} \cdot \lambda_d}{M_b \cdot h_{i1}} = \frac{105000 \cdot (3441,9 - 800)}{7264 \cdot 41510} = \underline{\underline{0,92}}$$

$$41.2 \quad \lambda = \frac{n_2}{n_2 - \frac{79}{21}(O_2 - 0,5 CO)} = \frac{84}{84 - \frac{79}{21} \cdot (1,8 - 0,5 \cdot 0)} = 1,088$$

$$M_{LV} = M_{LT} \cdot \lambda = 13,63 \cdot 1,088 = 14,83 \text{ kg/s}$$

$$M_T = M_{LV} \cdot M_b + M_b + M_{dBr} \quad (M_{dBr} = \text{Dampf Zil fortbewegung})$$

$$M_T = (14,83 \cdot 7264 + 7264 + 500) = \underline{\underline{115453 \text{ kg/h}}} \\ = \underline{\underline{32,07 \text{ kg/s}}}$$

$$41.3 \quad Q_{r1} = M_T \cdot c_r \cdot \Delta t = 32,07 \cdot 1,05 \cdot (1300 - 900) = 13469,4 \text{ kW}$$

$$h_x = h' + x \cdot r = 1363,7 + 0,98 \cdot 1380,9 = 2717,0 \text{ kJ/kg}$$

$$h_{o1} = \frac{Q_r}{M_d} + h_x = \frac{13469,4 \cdot 3600}{105000} + 2717,0 = \underline{\underline{3178,8 \text{ kJ/kg}}}$$

$$41.4 \quad Q_{r2} = M_T \cdot c_r \cdot \Delta t = 32,07 \cdot 1,05 \cdot (900 - 600) = 10102 \text{ kW}$$

$$h_{o2} = 3441,9 \text{ kJ/kg} \quad (\text{Abg. hebel})$$

$$h_{okul} = 2843,6 \text{ kJ/kg} \quad (\text{dampf fra koeler})$$

$$h_{o1} = 3178,8 \text{ kJ/kg} \quad (\text{Abg. primer OH})$$

$$Q_{r2} + M_d \cdot h_{o1} + M_{dk} \cdot h_{ok} = M_{dk} \cdot h_{o1} + M_d \cdot h_{o2}$$

$$M_{dk} \cdot (h_{o1} - h_{ok}) = Q_{r2} + M_d (h_{o1} - h_{o2})$$

$$M_{dk} = \frac{Q_{r2} + M_d (h_{o1} - h_{o2})}{h_{o1} - h_{ok}} =$$

$$M_{dk} = \frac{10102 + \frac{105000}{3600} \cdot (3178,8 - 3441,9)}{(3178,8 - 2843,6)} = \underline{\underline{7,24 \text{ kg/s}}}$$

$$= \underline{\underline{26078 \text{ kg/h}}}$$

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