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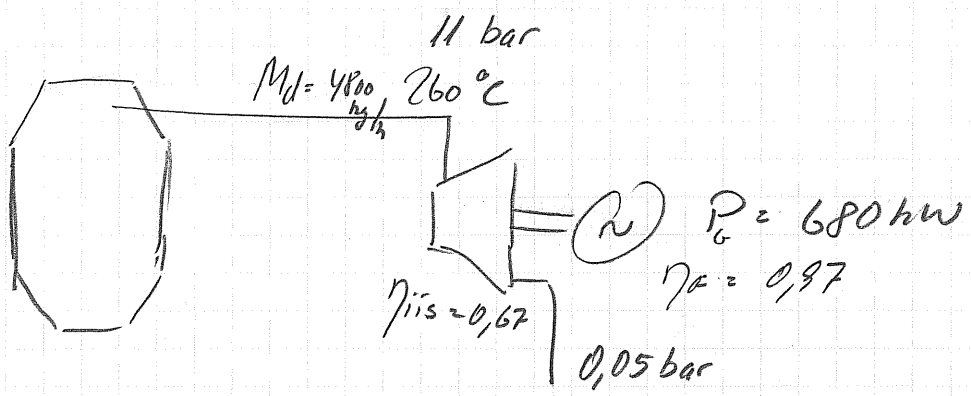

39.1 $P_i = \Delta h \cdot \dot{m}_d = (h_0 - h_{is}) \cdot \eta_{iis} \cdot \dot{M}_d$

$P_i = (2961,8 - 2112) \cdot 0,67 \cdot \frac{4800}{3600} = \underline{759 \text{ kW}}$

39.2 $\eta_m = \frac{P_u}{P_i} = \frac{P_G}{\eta_G \cdot P_i} = \frac{680}{0,97 \cdot 759} = \underline{0,923}$

39.3 $h_x = h_0 - (h_0 - h_{is}) \cdot \eta_{iis} = 2961,8 - (2961,8 - 2112) \cdot 0,67 = 2392 \text{ kJ/kg}$

$x = 0,93$

$v_x = (1-x) \cdot v' + x \cdot v''$

$v_x = (1-0,93) \cdot 1,0079 \cdot 10^{-3} + 0,93 \cdot 28,19 \left[\text{m}^3/\text{kg}\right] = 26,21 \text{ m}^3/\text{kg}$

$V = \dot{M}_d \cdot v_x = \frac{4800}{3600} \cdot 26,21 = \underline{34,95 \text{ m}^3/\text{s}}$

39.4 Mischung m/ Vacuum pumps / ejektor