Dampturbiner

4) $h_1 + \frac{1}{2} m \cdot c_1^2 = h_2 + \frac{1}{2} m c_2^2$ $\quad p_1 = 14$ bar, $t_1 < 400$ °C

4.1 $h_1 = 3258{,}2$ kJ/kg

4.2 $h_2 = 2925$ kJ/kg

4.3 $C_2 = \sqrt{2 \cdot (3258{,}2 - 2925) \cdot 10^3 + 40^2} = 817{,}3$ m/s

4.4 $C_2 = \sqrt{2 \cdot (3258{,}2 - 2925) \cdot 10^3} = 816{,}3$ m/s

6 $p_1 = 10$ bar $t_1 = 200$°C $p_2 = 5{,}5$ bar $\eta_{is} = 0{,}95$

6.1 $h_1 = 2826{,}8$ kJ/kg

$\eta_{is} = \frac{(h_1 - h_2)}{(h_1 - h_{2is})}$ og $h_{2is} = 2715$ kJ/kg

6.2 $h_2 = h_1 - \eta_{is} \cdot (h_1 - h_{2is}) = 2826{,}8 - 0{,}95 \cdot (2826{,}8 - 2715) = 2720{,}6$ kJ/kg

6.3 $x = 0{,}985$

6.4 $C_2 = \sqrt{2 \cdot 10^3 \cdot (2826{,}8 - 2720{,}6) + 0} = 460{,}9$ m/s

9. $p_1 = 13$ bar $t_1 = 300$°C $p_2 = 1{,}2$ bar $x = 0{,}95$

9.1 $h_1 = 3044{,}3$ kJ/kg

9.2 $h_2 = 2570$ kJ/kg

9.3 $\Delta h = h_1 - h_2 = 3044{,}3 - 2570 = 474{,}3$ kJ/kg

9.4 $C_2 = \sqrt{2000 \cdot (3044{,}3 - 2570)} = 974$ m/s

9.5 For at kunne udnytte et stort trykfald over dysen - få hele trykket omsat til hastighed.

Curtis turbinen.