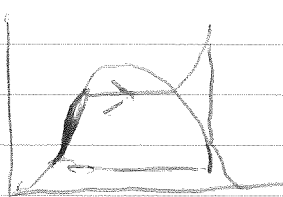


naam name	Boersma		
studienummer student number			
vak course			
code code	datum date		
opleiding program			
aantal ingeleverde vellen total number of sheets	opgave nummer question number		

1) a: boek j b



$$c) W = \dot{m} (h_1 - h_2)$$

$$h_1 = \text{Tabel} = 3526 \text{ kJ/kg}$$

$$h_2 = h_f + x(h_g - h_f)$$

$$= 121.46 + 0.91(2554.4 - 121.4)$$

$$= 2335.4 \text{ kJ/kg}$$

$$W = \dot{m} (3526 - 2335.4) = 95 \text{ MW}$$

$$\uparrow$$

$$\text{kg/s}$$

$$\uparrow$$

$$\text{kJ/kg}$$

$$\text{kJ/s}$$

$$d) h_3 = 121.46 \text{ kJ/kg} \quad h_4 = 131.46 \text{ kJ/kg}$$

$$Q = \dot{m} (h_1 - h_4) = \dot{m} (3526 - 131.46) = 272 \text{ MW}$$

$$e) W_{\text{pomp}} = 800 \text{ kW}$$

$$\eta = \frac{95}{272} = 35\% \quad (34.8\%)$$

$$f) Q_{23} = \dot{m} (h_3 - h_2) = 177 \text{ MW} = \dot{m}_K c_p \Delta T$$

$$\dot{m}_K = 177 \cdot 10^3 / 4.18 \cdot 7 = 6050 \text{ kg/s}$$

MK

1	2	3	4	5	6	7	8	9	10
b	d	b	d	c	a	c	d	c	a
11	12	13	14						
c	a	b	a						