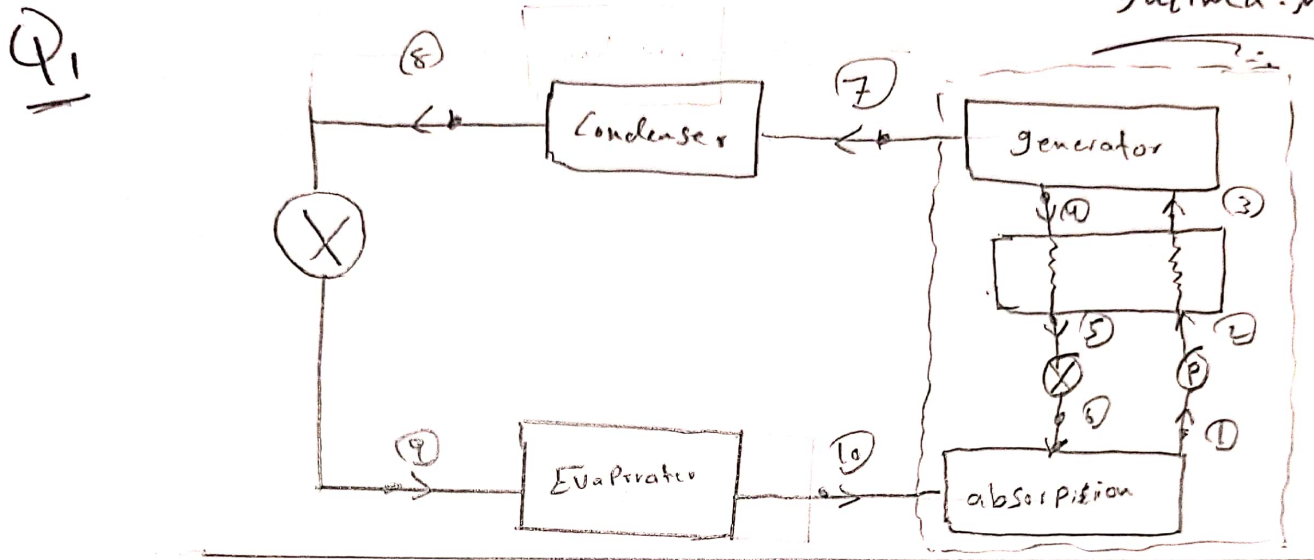


الاسم: فاطمة مشرف راجع  
 المرحلة الرابعة  
 الدراسة الصباحية  
 التجميد

fatima.m



$$w = 0.6 \text{ Kg/s}$$

$$T_{\text{gen}} = 100^\circ \text{C}$$

$$T_{\text{cond}} = 40^\circ \text{C}$$

from table

$$P = 7.3844 \text{ KPa H.P}$$

$$T_{\text{evap}} = 10^\circ \text{C}$$

$$P = 1.2282 \text{ KPa L.P}$$

$$T_{\text{abs}} = 30^\circ \text{C}$$

from chart

$$T_{\text{abs}} = 30^\circ \text{C}$$

with

$$\text{L.P } P = 1.2282$$

$$x_1 = 50\% = 0.5$$

$$T_{\text{gen}} = 100^\circ \text{C}$$

with

H.P

$$P = 7.3844$$

$$x_2 = 65\% = 0.65$$

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$$X_1 = 50\% \quad \text{and} \quad T_{asb} = 30^\circ \text{C} \quad \text{from chart}$$

$$h_1 = -170 \text{ KJ/Kg}$$

$$X_2 = 65\% \quad \text{and} \quad T_{gen} = 100^\circ \text{C}$$

$$h_2 = -55 \text{ KJ/Kg}$$

From table at  $T_{gen} = 100^\circ \text{C}$

$$h_3 = h_g = 2675.37 \text{ KJ/Kg}$$

$$\text{at } T_{cond} = 40^\circ \text{C} \quad h_4 = h_f = 167.5 \text{ KJ/Kg}$$

$$\text{at } T_{evap} = 10^\circ \text{C} \quad h_5 = h_g = 2519.2$$

$$h_5 = h_g = 2519.2 \text{ KJ/Kg}$$

$$W_1 X_1 = W_2 X_2$$

$$(0.6) \cdot (0.5) = W_2 \cdot (0.65)$$

$$W_2 = 0.461 \text{ Kg/sec}$$

$$W_1 = W_2 + W_3 \quad \Rightarrow \quad 0.6 = 0.461 + W_3$$

$$W_3 = 0.1384 \text{ Kg/sec}$$

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$$\dot{w}_2 h_2 + \dot{w}_3 h_3 = \dot{w}_1 h_1 + Q_{abs}$$

$$0.461 \cdot (-55) + 0.1384 \cdot (2675.57) = 0.6 \cdot (-170) + Q_{abs}$$

$$Q_{abs} = 446.943$$

$$\dot{w}_1 h_1 + Q_{gen} = \dot{w}_2 h_2 + \dot{w}_3 h_3 - 55$$

$$0.6 \cdot (-170) + Q_{gen} = 0.461 \cdot (2675.57) + 0.1384 \cdot (2675.57)$$