

Esercizio del ricchiere con acqua e ghiaccio



m_{aeq}
 m_{gh}

$$T_{\text{aeq}} = 300^{\circ}\text{K} \equiv T_a \rightarrow 27^{\circ}\text{C}$$

$$T_{\text{gh}} = 200^{\circ}\text{K} \equiv T_g \rightarrow -73^{\circ}\text{C}$$

λ : calore lat. di fusione

calcolare T_f

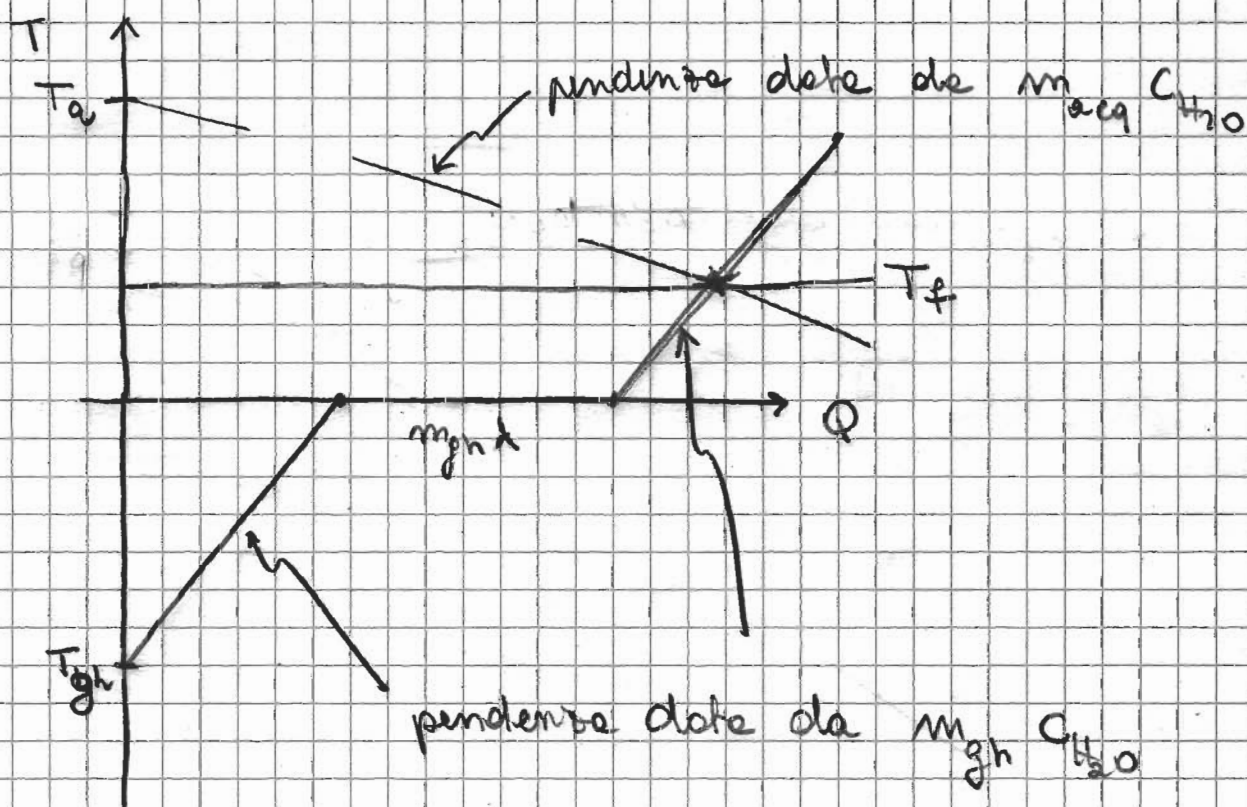
$$Q_{\text{ae} \rightarrow \text{gh}} + Q_{\text{gh} \rightarrow \text{ae}} = 0$$

$$C_{\text{H}_2\text{O}} m_{\text{aeq}} (T_f - T_a) = m_{\text{gh}} C_{\text{H}_2\text{O}} (T_0 - T_g) + m_{\text{gh}} \lambda + m_{\text{gh}} C_{\text{H}_2\text{O}} (T_f - T_0)$$

$$T_0 \equiv 273^{\circ}\text{K} \equiv 0^{\circ}\text{C}$$

$$T_f = \frac{m_{\text{gh}} \lambda - m_{\text{gh}} C_{\text{H}_2\text{O}} T_g + m_{\text{aeq}} C_{\text{H}_2\text{O}} T_a}{m_{\text{aeq}} C_{\text{H}_2\text{O}}}$$

Facciamo il grafico di $T(Q)$



Suffici di avere poca m_{aeg} e tanto m_{gh} allora

