

Str. 137 / úloha 745

$$m_l = ? \text{ [kg]}$$

$$t_{0l} = 0^\circ\text{C}$$

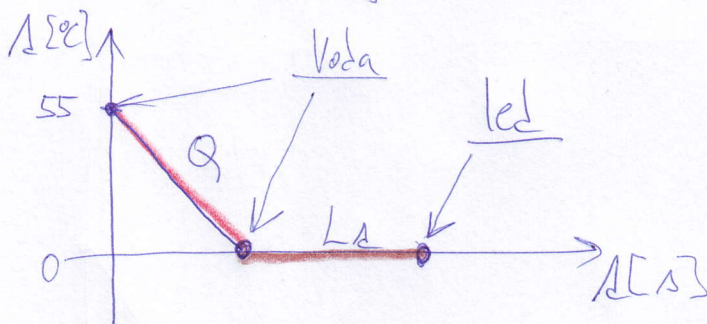
$$m_n = 4 \text{ kg}$$

$$t_{0n} = 55^\circ\text{C}$$

$$c_n = 4200 \frac{\text{J}}{\text{kg}\cdot^\circ\text{C}}$$

$$l_d = 334\,000 \frac{\text{J}}{\text{kg}}$$

Náčrt:



Plati:

$$Q = L_d$$

$$L_d = m_l \cdot l_d \Rightarrow$$

$$m_l = \frac{L_d}{l_d}$$

$$Q = m_n \cdot c_n \cdot (t_{0n} - t_{0l})$$

$$Q = 4 \cdot 4200 \cdot (55 - 0)$$

$$m_l = \frac{L_d}{l_d}$$

$$m_l = \frac{924\,000}{334\,000}$$

$$L_d = Q = 924\,000 \text{ J}$$

$$m_l = 2,8 \text{ kg}$$

Ve vode máme rozít 2,8 kg ledu.