

# Ejercicio nº 17. T1.

## Datos

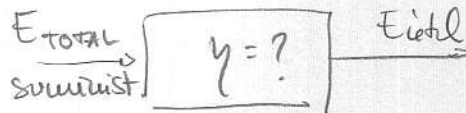
$$h = 40 \text{ m.}$$

$$\eta = ?$$

$$m_c = 3 \text{ kg.}$$

$$V = 100.000 \text{ l} = \text{kg}$$

$$P_c = 11.000 \frac{\text{kcal}}{\text{kg}}$$



$$E_{\text{util}} = E_p = mgh = 100.000 \cdot 9,8 \cdot 40 = 39200000 \text{ J.}$$

$$E_{\text{sum}} = m \cdot P_c = 3 \cdot 11.000 = 33.000 \text{ kcal}$$

$$33.000 \text{ kcal} = 33 \cdot 10^6 \text{ cal} \cdot \frac{4,18 \text{ J}}{1 \text{ cal}} = 13794 \cdot 10^4 \text{ J.}$$

$$\eta = \frac{E_{\text{util}}}{E_{\text{sum}}} \cdot 100 = \frac{39200000}{13794 \cdot 10^4} \cdot 100 = 28,41\%$$