

ES N3 PAG 357

$$l_i = 0,86 \text{ m}$$

$$t_i = 17^\circ \text{C}$$

$$\Delta l = 0,00016 \text{ m}$$

$$t_f = ?$$

$$\Delta l = \lambda l_i \Delta T$$

$$\Delta l = l_f - l_i$$

$$\Delta T = T_f - T_i = t_f - t_i$$

$$\lambda = 23 \times 10^{-6} \frac{1}{\text{K}} \left(= \frac{1}{^\circ \text{C}} \right)$$

$$\Delta t = \frac{\Delta l}{\lambda l_i} \quad t_f - t_i = \frac{\Delta l}{\lambda l_i}$$

$$t_f = t_i + \frac{\Delta l}{\lambda l_i} \Rightarrow t_f = 17^\circ \text{C} + \frac{0,00016 \text{ m}}{23 \times 10^{-6} \frac{1}{^\circ \text{C}} \times 0,86 \text{ m}}$$

$$t_f = 17^\circ \text{C} + 8,08^\circ \text{C} = 25^\circ \text{C}$$