

→ Duilio Roberto

σ_A → incertiza de Tipo A.

ALTURA

$$\sigma_A = \sqrt{\frac{\sum (h_i - \bar{h})^2}{n-1}}$$

$$\begin{aligned} (h_1 - \bar{h})^2 &= (22,95 - 22,91)^2 = (0,04)^2 = 0,0016 \\ (h_2 - \bar{h})^2 &= (22,90 - 22,91)^2 = (-0,01)^2 = 0,0001 \\ (h_3 - \bar{h})^2 &= (22,90 - 22,91)^2 = (-0,01)^2 = 0,0001 \\ (h_4 - \bar{h})^2 &= (22,90 - 22,91)^2 = (-0,01)^2 = 0,0001 \\ (h_5 - \bar{h})^2 &= (22,90 - 22,91)^2 = (-0,01)^2 = 0,0001 \end{aligned}$$

$$\sigma_A = \sqrt{\frac{0,002}{4}} = \sqrt{0,0005} \approx 0,022 \text{ mm} //$$

→ Incertiza de Tipo B.

$$\sigma_B \text{ DIÂMETRO} = 0,05 //$$

$$\sigma_B \text{ ALTURA} = 0,05 //$$

→ Incertiza Final σ_F

DIÂMETRO

$$\sigma_{Fd} = \sqrt{\sigma_A^2 + \sigma_B^2}$$

$$\sigma_{Fd} = \sqrt{(0,022)^2 + (0,05)^2}$$

$$\sigma_{Fd} = \sqrt{0,000729 + 0,0025}$$

$$\sigma_{Fd} = 0,00979 \text{ mm} \approx 9,79 \cdot 10^{-3} \text{ mm} //$$

ALTURA

$$\sigma_{Fh} = \sqrt{\sigma_A^2 + \sigma_B^2}$$

$$\sigma_{Fh} = \sqrt{(0,022)^2 + (0,05)^2}$$

$$\sigma_{Fh} = \sqrt{0,000729 + 0,0025}$$

$$\sigma_{Fh} = 0,00979 \text{ mm} \approx 9,79 \cdot 10^{-3} \text{ mm} //$$