

# DIMENSIONAMENTO CONDUTTORI (IMPIANTO CIVILE)

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QUADRO  
ELETTRICO

li consideriamo  
a fine linea

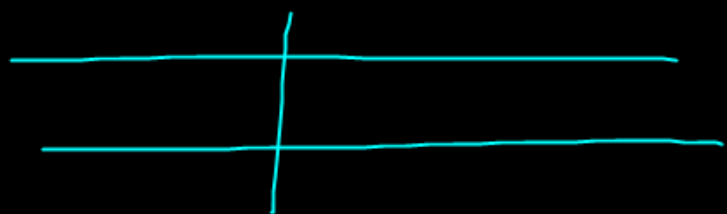
1. ~~OF~~  
~~PLATINO~~  
~~AG~~  
~~AL~~

Cu (CUPRUM) → Rame → conduce bene →  
→ poca resistenza

"poca" resistenza

$$Area = \pi \cdot r^2$$

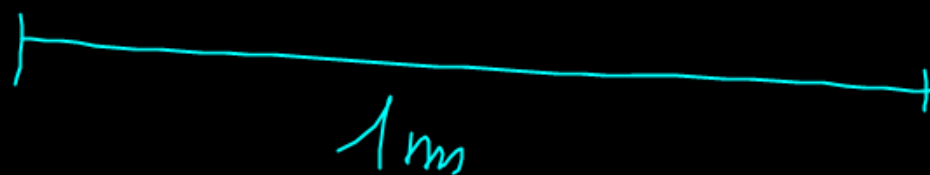
$$r = \sqrt{\frac{S}{\pi}} = \sqrt{\frac{1}{3,14}} = 0,56 \text{ mm}$$



AREA

$1 \text{ mm}^2$

$$S = 1 \text{ mm}^2$$



$$R = 0,0186 \Omega$$

$(\rho)$  = resistenza specifica  $\left[ \frac{\Omega \cdot \text{mm}^2}{\text{m}} \right]$



Esempio:

Trovare la  $R$  di un conduttore

$$l = 100 \text{ m}$$

$$S = 1,5 \text{ mm}^2$$

$$V = R \cdot I$$

MAX

4 % V

IMPIANTI  
CIVILI

$$I = \frac{V}{R} = \frac{9,2}{1,24} = 7,4 \text{ A}$$

$$R_{\text{filo}} = 0,0186 \cdot \frac{100}{1,5} = 1,24 \Omega$$

$$\frac{\frac{\Omega \cdot \text{mm}^2}{\text{m}}}{\text{mm}^2} \cdot \frac{\text{m}}{\text{mm}^2}$$

$$\Delta V_{\text{MAX}} = \frac{4}{100} \cdot 230 = 9,2 \text{ V}$$