

GOCCIA 1

$$d_{\text{aria}} = 1029 \frac{\text{kg}}{\text{m}^3}$$

$$E = 10^5 \frac{\text{N}}{\text{cm}^2}$$

$$\eta = 1,7 \cdot 10^{-4} \frac{\text{N} \cdot \text{s}}{\text{m}^2}$$

$$v_{\text{caduta libera}} = -7,66 \frac{\text{m}}{\text{s}}$$

$$v_2 = 3,30 \frac{\text{m}}{\text{s}}$$

FASE 1 DISCESA

? raggio

$$m = d \cdot V$$

$$P = F_{\text{ATT}}$$

$$mg = 6\pi \eta r v_1$$

$$d_0 \cdot \frac{4}{3} \pi r^3 \rho = 6\pi \eta r v_1$$

$$r = \sqrt{\frac{6 \eta v_1}{\frac{4}{3} \rho d_0}}$$

$$= \sqrt{\frac{6 \cdot 1,7 \cdot 10^{-4} \frac{\text{N} \cdot \text{s}}{\text{m}^2} \cdot (-7,66 \cdot 10^{-3} \frac{\text{m}}{\text{s}})}{\frac{4}{3} \cdot 3,8 \frac{\text{m}}{\text{s}^2} \cdot 1029 \frac{\text{kg}}{\text{m}^3}}}$$

$$= 7,62 \cdot 10^{-7} \text{ m}$$

FASE 2 SALITA

$$F_{el} = P + F_{ATT}$$

$$qE = mg + F_{ATT}$$

$$qE = 6\pi\eta r v_1 + 6\pi\eta r v_2$$

$$q = \frac{6\pi\eta r (v_1 + v_2)}{E} = \frac{6\pi \cdot 1,7 \cdot 10^{-4} \frac{N \cdot s}{m^2} \cdot 7,62 \cdot 10^{-7} \cdot 12,96 \cdot 10^{-6} \frac{m}{s}}{10^5 \frac{N}{C}}$$

$$= 3,1 \cdot 10^{-19} C$$

2 elettroni

7,66 + 5,30

↑

$\frac{m}{s}$

$\frac{N}{C}$