

ELEKTRIČNO POLJE

$$E = \frac{F}{Q} \dots \left[\frac{N}{C} \right] \quad E = \frac{U}{d} \dots \left[\frac{V}{m} \right]$$

elektri
na poljska jakost

$$\Phi_c = Q \dots [C]$$

elektri
ni pretok

$$D = \frac{\Phi_c}{A} \dots \left[\frac{C}{m^2} \right] \quad D = \epsilon_0 \cdot \epsilon_r \cdot E$$

gostota elektri
nega pretoka

$$E = \frac{Q}{2\epsilon \cdot A} \dots \left[\frac{V}{m} \right]$$

naelektrena kovinska plošč

a $E = \frac{Q}{2\epsilon\pi \cdot rl} \dots \left[\frac{V}{m} \right]$ naelektren vodnik

$$E = \frac{Q}{4r^2 \epsilon\pi} \dots \left[\frac{V}{m} \right] \quad E = \frac{U_p}{d} \dots \left[\frac{V}{m} \right]$$

naelektrena krogla elektri
na prebojna trdnost

$$q = \frac{Q}{l} \dots \left[\frac{C}{m} \right] \quad \frac{E_1}{E_2} = \frac{\epsilon \cdot r_2}{\epsilon \cdot r_1}$$

prema elektrina ve
plastni izolator

$$C = \frac{Q}{U} \dots \left[\frac{C}{V} = F \right] \quad C = \epsilon_0 \cdot \epsilon_r \cdot \frac{A}{d} \dots [F] \quad W = \frac{CU^2}{2}$$

energija kondenzatorja

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MAGNETNO POLJE

$$\Theta = I \cdot N \dots [A \cdot ovoj] \quad H = \frac{\Theta}{l} \dots \left[\frac{A}{m} \right]$$

magnetna napetost magnetna poljska jakost

$$H = \frac{I}{2r\pi} \dots \left[\frac{A}{m} \right] \quad H = \frac{I \cdot r}{2R^2\pi} \dots \left[\frac{A}{m} \right]$$

magnetno polje vodnika m.p.j. v notranjosti vodnika

$$B = \frac{\Phi_m}{A} \dots \left[\frac{Vs}{m^2} \right] \quad B_0 = \mu_0 \cdot H \dots [T]$$

gostota magnetnega pretoka g.m.p. v praznem prostoru

$$B = \mu_0 \cdot \mu_R \cdot H \quad \text{g.m.p. v snovi} \quad \frac{H_1}{H_2} = \frac{\mu_{R2}}{\mu_{R1}} \quad \text{zaporedni snovi B je enak}$$

$$\Phi_m = \frac{\Theta}{R_m} \quad R_m = \frac{\Theta}{\Phi_m} = \frac{\Theta}{B \cdot A} = \frac{\Theta}{\mu_0 \cdot \mu_R \cdot H \cdot A} = \frac{I}{\mu_0 \cdot \mu_R \cdot A} \dots \left[\frac{A}{Vs} \right] \text{magnetna upornost}$$

$$w_m = \frac{B \cdot H}{2} = \frac{B^2}{2 \cdot \mu_0 \cdot \mu_R} \dots \left[\frac{Ws}{m^3} \right] \quad \text{prostorska gostota mag. energije} \quad W_m = w_m \cdot V \dots [Ws] \quad \text{celotna energija}$$