Força magnètica

$F = Q \cdot V \cdot B \quad (N)$

$R = \frac{m \cdot v}{Q \cdot B} \qquad E_c = \frac{1}{2} \cdot \frac{(QBR)^2}{m}$

$f = \frac{\omega}{2\pi} \qquad v = \frac{Q \cdot B \cdot R}{m}$

Conductor

$F = I \ell B \cdot \sin\alpha \qquad \mathcal{E} = VB$

$\vec{F} = I(\vec{\ell} \times \vec{B}) \qquad \Delta V = VB\ell = E\ell$

Flux

$\Phi = B \cdot S \cos\alpha$

$\phi = \vec{B} \times \vec{S}$

FEM

$\mathcal{E} = \frac{\Delta\Phi}{\Delta t}$

Força elèctrica

$F_e = Q \cdot E \quad (N)$

Camp magnètic

* conductor rectlini $B = \frac{\mu \cdot I}{2\pi R}$
* Espira $B = \frac{\mu I}{R \cdot 2}$
* Solenoide / Bobina $B = \mu \cdot n I$

$n = \frac{N}{\ell}$

$I = \frac{vB\ell}{R}$

$\Delta\Phi = B \Delta S \cos\varphi$

$\mathcal{E} = N \frac{\Delta\Phi}{\Delta t}$

↓ N: voltes

instantània

↳ $\mathcal{E} = n \frac{d\Phi}{dt}$

màxima

↳ $\mathcal{E}_0 = NSB\omega V$

Valors eficaços d'un C.A

$I_e = \frac{I_0}{\sqrt{2}} \qquad I_0 = \frac{\mathcal{E}_0}{R}$

$\mathcal{E}_e = \frac{\mathcal{E}_0}{\sqrt{2}}$

Transformadors

$\frac{\mathcal{E}_p}{\mathcal{E}_s} = \frac{I_s}{I_p} = \frac{n_p}{n_s}$

Alternador

$\mathcal{E} = BS\omega \sin\omega t \quad$ (Bobina)

$\mathcal{E} = N \cdot BS\omega \sin\omega t$