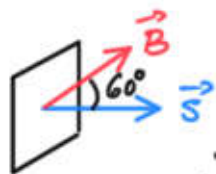


EJERCICIO F28E3212:

"achimagec.com"

Espira cuadrada $l = 18 \text{ cm} = 0,18 \text{ m}$



$$B(t) = 5 \cdot \cos(3\pi t)$$

¿ $\phi(t)$; $\mathcal{E}(t)$?

a) $\phi(t) = ?$

$$\phi = \vec{B} \cdot \vec{S} = B \cdot S \cdot \cos \alpha$$

$$\begin{aligned} \phi(t) &= 5 \cdot \cos(3\pi t) \cdot 0,18^2 \cdot \cos 60^\circ = \\ &= 5 \cdot 0,18^2 \cdot \frac{1}{2} \cdot \cos(3\pi t) = \end{aligned}$$

$$\phi(t) = 0,081 \cdot \cos(3\pi t) \text{ (wb)}$$

$$\phi(t) = 0,081 \cdot \cos(6\pi)$$

$$\phi(t) = 0,081 \text{ wb}$$

b) $\mathcal{E}(t) = ?$

$$\mathcal{E}(t) = - \frac{d\phi}{dt} = - \frac{d[0,081 \cdot \cos(3\pi t)]}{dt}$$

$$\mathcal{E}(t) = - 0,081 \cdot [-3\pi \cdot \sin(3\pi t)] =$$

$$\mathcal{E}(t) = 0,243 \cdot \sin(3\pi t) \text{ (v)}$$

$$\mathcal{E}(t) = 0,243 \cdot \sin(6\pi) = 0 \text{ V}$$