



ENRIQUE_G
UIDO_2P...

GUIDO ENRIQUE 164.272-8

justificación?

1) $i(t) = N \cdot w \cdot \frac{B \cdot A}{R} \cdot \sin(wt)$ $N = 147$

$i(t) = 147 \times 290 \times 3.07 \times (0.1)^2 \times \sin(290t)$ $Lado = 0.1[m]$

$w = 290 [rad/s]$

$|B| = 3.0T$ $(-i)$

$R = 97$

$i(t) = \frac{147 \times 290 \times 3.0 \times (0.1)^2}{97} \times \sin(290t)$

$i(t) = 13.1345 \sin(290t)$

REPUBLICA ARGENTINA - MERCOSUR
REGISTRO NACIONAL DE LAS PERSONAS
MINISTERIO DEL INTERIOR Y TRANSPORTE

Apellido / Surname
ENRIQUE 27272-8

Nombre / Name
GUIDO DEMIAN

Sexo / Sex
M

Nacionalidad / Nationality
ARGENTINA

Fecha de nacimiento / Date of birth
04/ABR/ APR 1995

Fecha de emisión / Date of issue
12/JUN/ JUN 2013

Fecha de vencimiento / Date of expiry
12/JUN/ JUN 2028

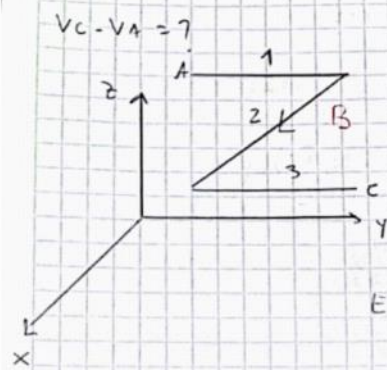
Documento / Document
41.686.484

Trámite N° / Of. ident.
00158212207
8011

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NOTA ④ (CUATRO)

② $V = 5 \text{ [m/s]}$ $B = 0.9 \text{ [T]}$ $L = 0.4 \text{ [m]}$



$$E = \oint (\vec{v} \times \vec{B}) \cdot d\vec{l}$$

la curva debe ser cerrada

$$E = \int (v_x B_z) dl_x + \int (v_z B_x) dl_z + \int (v_y B_z) dl_y \dots$$

$$E = \int v \cdot B \cdot |dl| \cdot \cos(120^\circ) + \int v \cdot B \cdot |dz| \cdot \cos(0^\circ) + \int v \cdot B \cdot |dy| \cdot \cos(120^\circ)$$

ángulos?
trans?

$$E = -vB + vB - vB \Rightarrow -vB$$

$$V_A - V_C = \int E \cdot dl \Rightarrow -vB = 5 \text{ [m/s]} \cdot 0.9 \text{ [T]} \cdot 0.4 \text{ [m]}$$

$$V_A - V_C = 1.8 \text{ [V]}$$



(4)

$$I = 14.1 \text{ [A]} \quad \phi_{B2} = 84.5 \text{ [mWb]}$$

$$M = \frac{N \cdot \phi_{B2}}{I} \quad \checkmark$$

$$M = \frac{84.5}{14.1}$$

$$M = 5.9929 \approx 6$$

$$i(t) = 14.1 \text{ [A]} \cdot \sin(62.5 \cdot t)$$

$$\text{derivo} = 2(i(t)) = \{ 4.1 \cos(62.5t) \cdot 62.5 \}$$

$$2(i(t)) = \{ 256.25 \cos(62.5t) \}$$

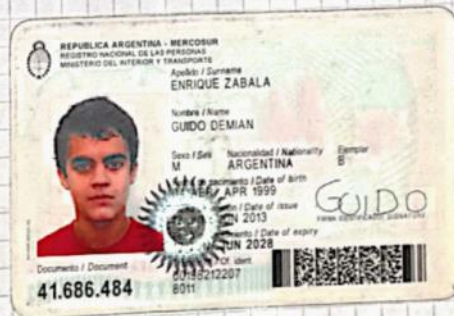
$$\checkmark \quad \varepsilon = M \frac{di(t)}{dt} = M \cdot 256.25 \cos(62.5t)$$

$$\varepsilon = 6 (256.25) \cos(62.5t)$$

$$\varepsilon = 1537.5 \cos(62.5t) \quad (\text{en mV})$$

$$\Rightarrow 1.53 \text{ V} \quad \Rightarrow \varepsilon = 1.53 \text{ V} \cos(62.5t)$$

$$\Rightarrow V_{\text{eff}} \checkmark = \frac{V}{\sqrt{2}} = \frac{1.53}{\sqrt{2}} = 1.0813 \text{ [V]}$$



GUIDO ENRIQUE 164.212-8 $\mu = 0.108$

(5) $I = 9.1 \text{ [A]}$ $a = 12.8 \text{ [cm]}$ $b = 15.6 \text{ [cm]} = 0.156$

$\theta = 34.6^\circ$; $\mu_0 = 4\pi \times 10^{-7} \text{ [T} \cdot \frac{\text{m}}{\text{A}}]$

$B_t = B_\theta - B_z$ $B_{\text{ot-S}} \Rightarrow B = \frac{\mu_0 \cdot I}{4\pi \cdot d} \times$ *justificación?*

$B_t = \frac{\mu_0 \cdot I}{4\pi} \left(\frac{\theta_B}{b} - \frac{\theta_C}{a} \right)$ $\theta = \phi \frac{\pi}{180} \Rightarrow 0.6038 \approx 0.6$

$B = \frac{4\pi \times 10^{-7} \cdot I}{4\pi} \left(\frac{34.6^\circ}{0.156} - \frac{2 \times (34.6^\circ)}{0.108} \right) \left(\frac{0.6}{0.156} - \frac{2(0.6)}{0.108} \right)$

~~$B = 10^{-7} \cdot 9.1 \cdot \left(\frac{0.6}{0.156} - \frac{2(0.6)}{0.108} \right)$~~

$B = 10^{-7} \cdot 9.1 \cdot \left(\frac{0.6}{0.156} - \frac{2(0.6)}{0.108} \right)$ -64.157

-7.2649

$\Rightarrow B = 10^{-7} \cdot 9.1 \cdot (-7.2649)$

$\Rightarrow B = -6.61 \times 10^{-6} \text{ [T]} \Rightarrow B = -6.61 \text{ [mT]}$



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3) RLC con (N) R

$$V_g = 652 [V] \quad f = 575 [Hz]$$

$$V_L = 453 [V] \quad V_C = 552 [V]$$

construye el circuito?

$$R = 223 [\Omega]$$

$$I_{oc} = \frac{V_{ef}}{Z} \Rightarrow Z = \sqrt{R^2 + (X_L - X_C)^2}$$

$$X_L = \omega L = \frac{V_L}{I}$$

$$X_C = \omega C = \frac{I}{V_C}$$

$$\frac{V_{ef}}{I_{se}} = Z = \sqrt{R^2 + \left(\frac{V_L}{I} - \frac{V_C}{I} \right)^2}$$

$$\frac{V_{ef}^2}{I_{se}^2} = R^2 + \frac{V_L^2}{I^2} - \frac{2 \cdot V_L \cdot V_C}{I^2} + \frac{V_C^2}{I^2}$$

$$\Rightarrow 223^2 + \frac{453^2}{I^2} - \frac{2 \cdot 453 \cdot 552}{I^2} + \frac{552^2}{I^2}$$

$$\Rightarrow 223^2 = -\frac{453^2}{I^2} + \frac{500112}{I^2} - \frac{552^2}{I^2}$$

$$\Rightarrow 223^2 = \frac{9301}{I^2}$$

$$\frac{652^2}{I^2} - \frac{453^2}{I^2} + \frac{500112}{I^2} - \frac{552^2}{I^2} = 223^2$$

$$I^2 = 0.11974$$

$$I = 0.346$$

$$\frac{652^2}{I^2} - \frac{453^2}{I^2} + \frac{500112}{I^2} - \frac{552^2}{I^2} =$$

$$I^2 = \frac{415303}{223^2}$$

$$I^2 = 6.3518$$

$$I = 2.52$$



$$X_C = \frac{1}{\omega C}$$