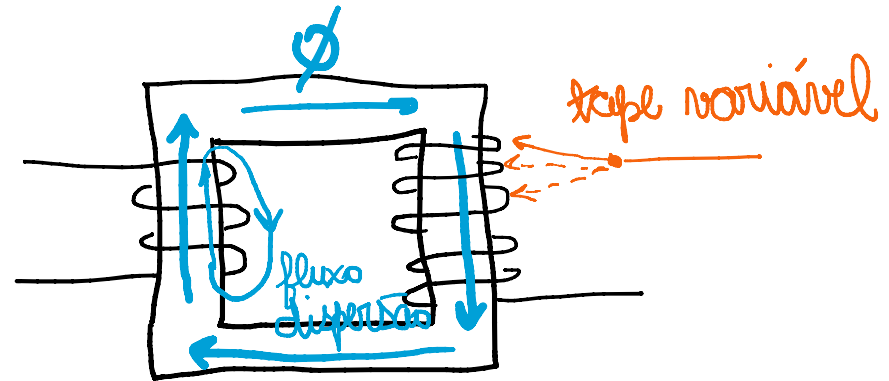
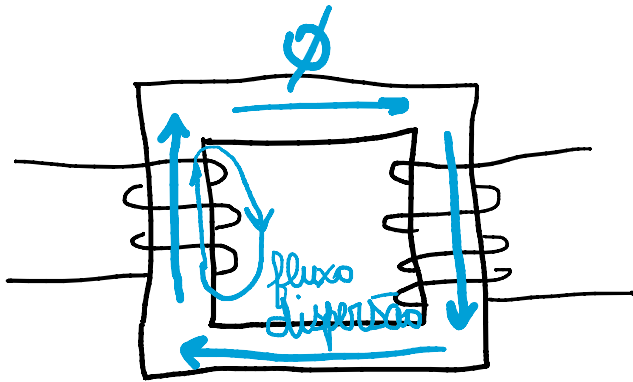


# Transformadores

segunda-feira, 22 de junho de 2020 07:18



# Transformadores

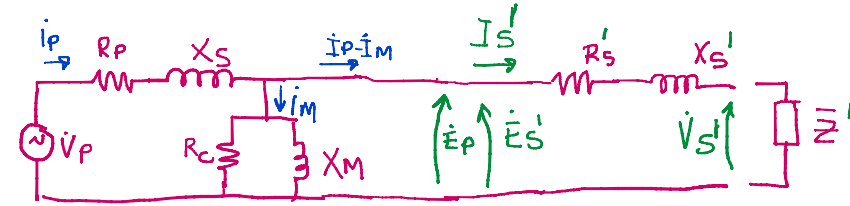
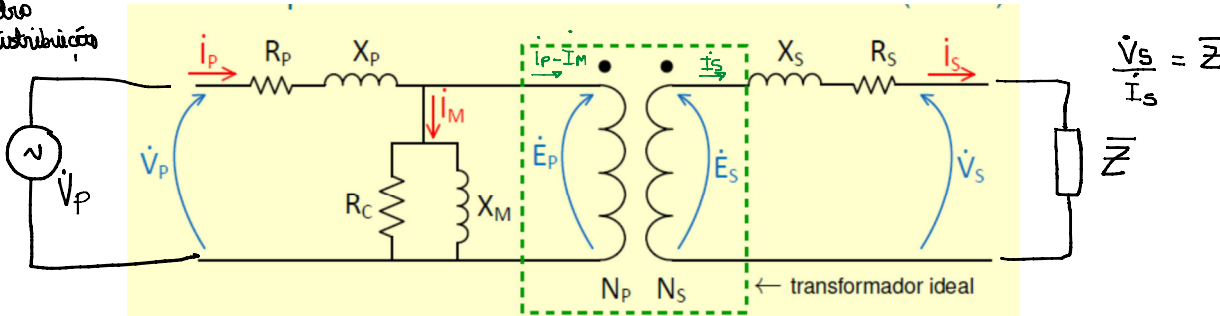
segunda-feira, 22 de junho de 2020 08:14

Temada  
Quadro  
de distribuição

$$\dot{E}_p = a \dot{E}_s$$

$$\dot{I}_s = a(\dot{I}_p - \dot{I}_M)$$

oficina eletrodomésticos  
(carga): carga:



Ex:  $\dot{V}_p = 220V$

$\bar{Z} = (10 + j2)\Omega$

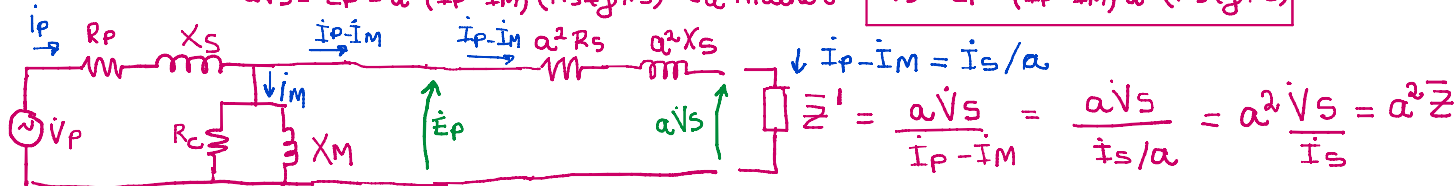
Parâmetros do transf. conhecidos  
 $a, R_p, R_s, X_p, X_s, R_c, X_M$

$\dot{E}_s = \dot{E}_p / a; \dot{I}_s = a(\dot{I}_p - \dot{I}_M)$

$\dot{V}_s = \dot{E}_s - \dot{I}_s (R_s + jX_s) = \frac{\dot{E}_p}{a} - [a(\dot{I}_p - \dot{I}_M)] (R_s + jX_s)$

$\dot{V}_s = \frac{\dot{E}_p - a^2(\dot{I}_p - \dot{I}_M)(R_s + jX_s)}{a}$

$a\dot{V}_s = \dot{E}_p - a^2(\dot{I}_p - \dot{I}_M)(R_s + jX_s)$  ou melhor:  $a\dot{V}_s = \dot{E}_p - (\dot{I}_p - \dot{I}_M)a^2(R_s + jX_s)$



$\dot{E}_s' = a \dot{E}_s$

$\dot{V}_s' = a \dot{V}_s$

$\dot{I}_s' = \dot{I}_s / a$

$R_s' = a^2 R_s$

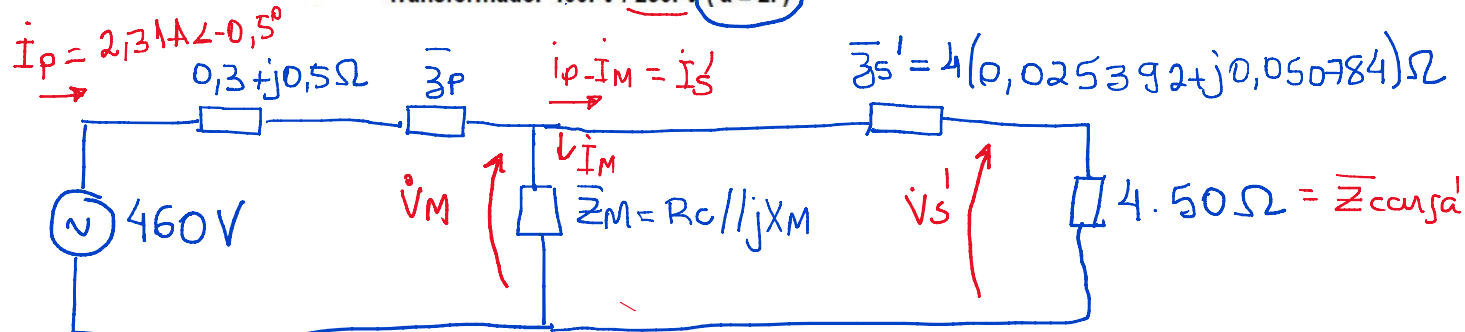
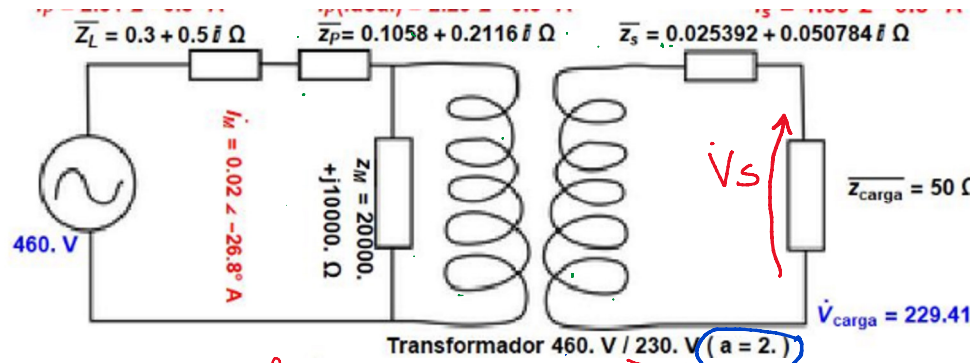
$X_s' = a^2 X_s$

$\bar{Z}' = a^2 \bar{Z}$

↑  
valores refletidos ao primário

# Transformadores

segunda-feira, 22 de junho de 2020 08:47



$$\dot{V}_M = 460 - \dot{I}_p (\bar{Z}_L + \bar{Z}_p)$$

$$\dot{I}_M = \dot{V}_M / \bar{Z}_M = 0.02 \angle -26.8^\circ \text{ A}$$

$$\dot{I}_s' = 2.129 \angle -0.3^\circ \text{ A}$$

$$\dot{V}_s' = \dot{I}_s' \cdot 200 \Omega = 458.82 \text{ V} \angle -0.3^\circ \text{ (refletida)}$$

$$\dot{I}_s = a \dot{I}_s' = 4.159 \angle -0.3^\circ \text{ A}$$

$$\dot{V}_s = 229.41 \angle -0.3^\circ \text{ A}$$

$$\dot{V}_s / \dot{I}_s = 50 \Omega$$