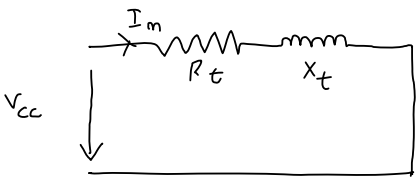
1. Em C.C.



$|V_{cc}| = \sqrt{R_t^2 + X_t^2}\ I_m \Rightarrow$ Em 1. u. $\Rightarrow |V_{cc}| = \sqrt{0,01^2 + 0,04^2} \cdot 1 \Rightarrow$

$\Rightarrow |V_{cc}| = 0.041$ 1. u. $\Rightarrow V_{cc}$ é $\approx 4\%$ de V_b que é V_m.

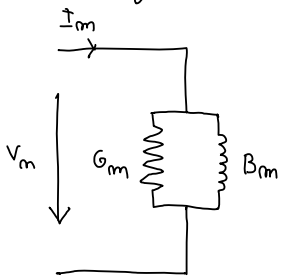
B

$I_m = I_b$

$V_m = V_b$

$S_m = S_b$

2. Em vazio



$P_a = G_m V_m^2 \Rightarrow$ Em 1. u. $\Rightarrow P_a = G_m = 0.002$ 1. u.

Para unidades $P_a = 0.002 \cdot S_b = 40\,kW$

A

3. Carga = 10 MVA $\Rightarrow S_a = 0.5$

f. p = $1 = \cos(\phi) \Rightarrow \phi = 0$ carga puramente resistiva

$V_2 = V_m = 1$ 1. u.

$S_a = V_2 \cdot I_2^* \Rightarrow I_2 = \left(\frac{S_a}{V_2}\right)^* = \frac{0.5}{1}$ 1. u. $= 0.5$ 1. u.

$V_1 = (R_t + X_t j) I_2 + V_2 = (0.01 + 0,04\,j)\,0.5 + 1 = 1.005 + 0.02\,j$ 1. u.

$|V_1| = 1$ 1. u. $= 1 \cdot 30\,kV = 30\,kV$

$|V_1| = \sqrt{1.005^2 + 0.02^2} = 1.005$ 1. u. $= 1.005 \cdot 60\,kV = 60.3\,kV$

q. d. $t = |V_1| - |V_2| = 60.3\,kV - 30\,kV = 30.3\,kV$!