

②

$$Z_{cc2} = V_{cc} \% \cdot \frac{E_{2N}}{I_{2N}} \cdot \frac{1}{100} = 4 \times \frac{230}{577} \cdot \frac{1}{100} = 0.016 \Omega$$

$$\underline{X_{cc2}} = \sqrt{Z_{cc2}^2 - R_{cc2}^2} = \sqrt{(0,016)^2 - (0,005)^2} \approx \underline{0,015 \Omega}$$

[NOTA: $X_{cc2} > R_{cc2}$]

2. PARAMETER TRANSISJAN (A WADO DI MAGNETIFER.)

$$I_{02} = 20 \% \cdot \frac{I_{N2}}{100} = 2 \times \frac{577}{100} = 11,5 \text{ A}$$

$$\underline{G_0} = \frac{P_{fe/3}}{(E_{N2})^2} = \frac{1200/3}{(230)^2} = \underline{0,0076 \Omega^{-1}}$$

$$\cos \varphi_0 = \frac{P_{fe/3}}{E_{2N} \cdot I_{20}} = \frac{1200/3}{230 \cdot 11,5} \approx 0,15$$

$$\varphi_0 = 81,3^\circ \Rightarrow \Delta \text{m } \varphi_0 = 0,9885$$

$$\Gamma \varphi_0 \approx 6,54$$

$$\underline{B_0} = G_0 \cdot \Gamma \varphi_0$$

$$= 0,0076 \times 6,54 \approx \underline{0,05 \Omega^{-1}}$$

$$\Rightarrow \left\{ \begin{array}{l} R_0 = 1/G_0 = 131,6 \Omega \\ X_0 = \pm \frac{1}{B_0} = 20 \Omega \end{array} \right.$$

NOTA: $X_0 \ll R_0$
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 $Z_0 \approx X_0$

INOLTRE

$$\underline{Z_0 > Z_{cc}}$$

1
 ESERCIZIO CIRCUITO EQUIVALENTE
 TRASFORMATORE TRIFASE

DATI DI TARGA

$$S_N = 400 \text{ kVA}$$

$$V_{1N} = 20 \text{ kV}$$

$$V_{2N} = 400 \text{ V}$$

$$K = \frac{20000}{400} = 50$$

$$\gamma_{cc\%} = 4\%$$

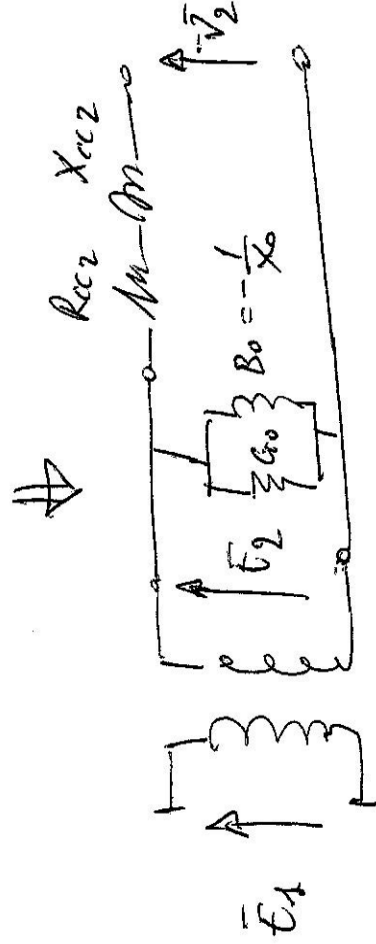
$$P_{CH} = 5 \text{ kW}$$

$$P_{fe} = 1200 \text{ W}$$

$$\gamma_0\% = 2\%$$

$$I_{1N} = \frac{S_N}{\sqrt{3} V_{1N}} = \frac{400.000}{\sqrt{3} \times 20.000} = 11.6 \text{ A}$$

$$I_{2N} = \frac{S_N}{\sqrt{3} V_{2N}} = \frac{400.000}{\sqrt{3} \times 400} = 577 \text{ A}$$



1. PARAMETRI LONGITUDINALI (A C.T.O. C.V.O)

$$\underline{R_{ac2}} = \frac{P_{CH}/3}{I_{2N}^2} = \frac{5000/3}{(577)^2} \approx 0.005 \Omega$$