

Nivel 150 kV

Ej 1

9/7/2013

$$\bar{X}_{gs} = 0,02 j \cdot \frac{150^2}{100} = 4,5 j \text{ (}\Omega\text{)}$$

$$\bar{X}_{g0} = 0,01 j \cdot \frac{150^2}{100} = 2,25 j \text{ (}\Omega\text{)}$$

$$\bar{X}_{Ls} = 1 j \text{ (}\Omega\text{)}$$

$$\bar{X}_{L0} = 2 j \text{ (}\Omega\text{)}$$

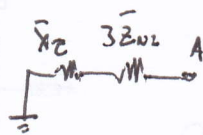
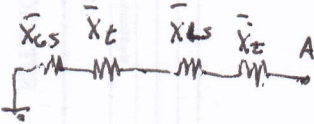
$$\bar{X}_T = 0,03 j \cdot \frac{150^2}{100} = 6,75 j \text{ (}\Omega\text{)}$$

$$\bar{Z}_{n1} = 10 j \text{ (}\Omega\text{)}$$

$$\bar{Z}_{n2} = 0,1 j \times \frac{150^2}{15^2} = 10 j \text{ (}\Omega\text{)}$$

CC en A: Sec. s\u00ednc. y as\u00ednc.

Sec. homop.



$$\bar{Z}_0^A = \bar{Z}_s^A = \bar{X}_{gs} + 2\bar{X}_g + \bar{X}_{LS} = 19 j \text{ (}\Omega\text{)}$$

$$\bar{Z}_0^A = \bar{X}_g + 3\bar{Z}_{n2} = 36,1 j \text{ (}\Omega\text{)}$$

$$\bar{f}_{d1}^A = \bar{f}_{d2}^A = 1$$

$$\bar{f}_{h1}^A = \bar{f}_{h2}^A = 0$$

$$\bar{f}_{i1}^A = 1$$

$$\bar{f}_{i2}^A = -1$$

$$\bar{I}_{Th}^A = \frac{150 \times 10^3 / \sqrt{3}}{\bar{Z}_s^A + \bar{Z}_a^A + \bar{Z}_0^A} = -1158 j \text{ (A)}$$

$$\bar{I}_{d1}^A = \bar{f}_{d1}^A \cdot \bar{I}_{Th}^A = -1158 j \text{ (A)}$$

$$\bar{I}_{d2}^A = \bar{f}_{d2}^A \cdot \bar{I}_{Th}^A = -1158 j \text{ (A)}$$

$$\bar{I}_{i1}^A = \bar{f}_{i1}^A \cdot \bar{I}_{Th}^A = -1158 j \text{ (A)}$$

$$\bar{I}_{i2}^A = \bar{f}_{i2}^A \cdot \bar{I}_{Th}^A = 1158 j \text{ (A)}$$

$$\bar{I}_{h1}^A = \bar{f}_{h1}^A \cdot \bar{I}_{Th}^A = 0$$

$$\bar{I}_{h2}^A = \bar{f}_{h2}^A \cdot \bar{I}_{Th}^A = 0$$

$$\bar{I}_{a1}^A = -2317 j \text{ (A)}$$

$$\bar{I}_{a2}^A = 1158 j \text{ (A)}$$

$$\bar{I}_{c1}^A = 1158 j \text{ (A)}$$

$$\left. \begin{aligned} I_{a1} &= 23,17 \text{ kA} \\ I_{a2} &= 11,58 \text{ kA} \\ I_{c1} &= 11,58 \text{ kA} \end{aligned} \right\} \Rightarrow$$

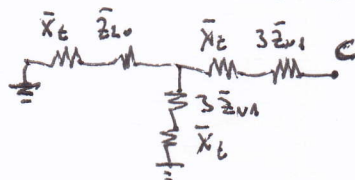
$$\left. \begin{aligned} \bar{I}_{a2}^A &= 0 \\ \bar{I}_{b2}^A &= -2007 \text{ (A)} \\ \bar{I}_{c2}^A &= 2007 \text{ (A)} \end{aligned} \right\} \Rightarrow$$

$$\left. \begin{aligned} I_{a2} &= 0 \\ I_{b2} &= 2007 \text{ A} \\ I_{c2} &= 2007 \text{ A} \end{aligned} \right\}$$

CC en B: Sec s\u00ednc y As\u00ednc

Red sec homop.

Idem a CC en A



$$\bar{f}_{i1}^B = -1$$

$$\bar{f}_{i2}^B = 1$$

$$\bar{Z}_0^B = \bar{X}_g + 3\bar{Z}_{n1} + (\bar{X}_g + \bar{Z}_{L0}) \parallel (\bar{X}_g + 3\bar{Z}_{n1}) = 43,8 j \text{ (}\Omega\text{)}$$

$$\bar{I}_{h1}^B = 0 ; \bar{f}_{h2}^B = \frac{(\bar{X}_g + \bar{Z}_{L0}) \parallel (\bar{X}_g + 3\bar{Z}_{n1})}{\bar{X}_g + \bar{Z}_{L0}} = 0,8077$$

$$\left. \begin{aligned} \bar{I}_{d1}^B &= -1059 j \text{ (A)} \\ \bar{I}_{i1}^B &= 1059 j \text{ (A)} \\ \bar{I}_{h1}^B &= 0 \text{ (A)} \end{aligned} \right\} \Rightarrow \left. \begin{aligned} \bar{I}_{a1}^B &= 0 \\ \bar{I}_{b1}^B &= 18,33 \text{ kA} \\ \bar{I}_{c1}^B &= 18,33 \text{ kA} \end{aligned} \right\}$$

M\u00f3dulos a nivel 150 kV

$$\left. \begin{aligned} \bar{I}_{d2}^B &= -1059 j \text{ (A)} \\ \bar{I}_{i2}^B &= -1059 j \text{ (A)} \\ \bar{I}_{h2}^B &= -1059 j \text{ (A)} \end{aligned} \right\} \Rightarrow$$

$$\left. \begin{aligned} \bar{I}_{a2}^B &= 2,97 \text{ kA} \\ \bar{I}_{b2}^B &= 204 \text{ A} \\ \bar{I}_{c2}^B &= 204 \text{ A} \end{aligned} \right\}$$