

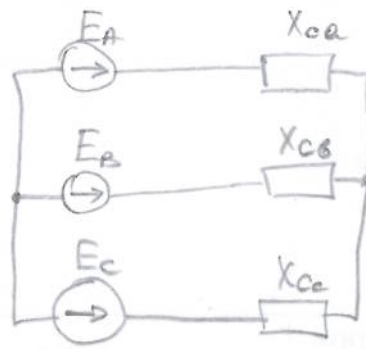
Dано:

$$E_A = E_B = E_C = E_{\phi} = 127 \text{ В}$$

$$X_{ca} = X_{cb} = X_{cc} = X_{\phi} = 200 \text{ Ом}$$

Найти $I_A, I_B, I_C, \varphi^0,$

P, Q, S



Заг. 4. Бap. 13.

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$$U_A = 127 \text{ В}, U_B = 127 \cdot e^{-j120} \text{ В}, U_C = 127 \cdot e^{j120} \text{ В}$$

$$Z_A = Z_B = Z_C = 200 \cdot e^{-j90} \text{ Ом}$$

$$I_A = \frac{U_A}{Z_A} = \frac{127}{200 \cdot e^{-j90}} = 0,635 \cdot e^{j90} \text{ А}$$

$$I_B = \frac{U_B}{Z_B} = \frac{127 \cdot e^{-j120}}{200 \cdot e^{-j90}} = 0,635 \cdot e^{-j30} \text{ А}$$

$$I_C = \frac{U_C}{Z_C} = \frac{127 \cdot e^{j120}}{200 \cdot e^{-j90}} = 0,635 \cdot e^{j210} \text{ А}$$

$$S = 3 \cdot U_A \cdot I_A = 3 \cdot 127 \cdot 0,635 \cdot e^{j90} = 242 \cdot e^{j90} = j242 \text{ ВА}$$

$$P = 0 \text{ Вт}, Q = 242 \text{ Вар}, \varphi^0 = 90^0$$

