$$U_{O'O} = \frac{\dfrac{U_R}{Z_1} + \dfrac{U_S}{Z_2} + \dfrac{U_T}{Z_3}}{\dfrac{1}{Z_1} + \dfrac{1}{Z_2} + \dfrac{1}{Z_3}} = \frac{\dfrac{220}{199+j199} + \dfrac{220\angle-120}{169+j170} + \dfrac{220\angle120}{100}}{\dfrac{1}{199+j199} + \dfrac{1}{169+j170} + \dfrac{1}{100}}$$

$$U_{O'O} = \frac{\dfrac{43780-j43780}{79202} + \dfrac{11390-j18910}{42961} + \dfrac{-110+j190}{100}}{\dfrac{199-j199}{79202} + \dfrac{169-j820}{42961} + \dfrac{1}{100}}$$

$$U_{O'O} = \frac{0.5527-j0.5527+0.9634-j0.4402-1.1+j1.9}{0.002512-j0.002512+0.003934-j0.002793+0.01} = \frac{0.4161-j0.9021}{0.01645-j0.00531}$$

$$U_{O'O} = \frac{0.006845+j0.00221+j0.014922+0.004817}{0.00029879} = \underline{39+j57.34} \; V$$

$$I_T = \frac{U_T - U_{O'O}}{Z_T} = \frac{220\left(-\tfrac{1}{2}+j\tfrac{\sqrt{3}}{2}\right)-39-j57.34}{100} = -1.43+j1.33 = 2\angle-41.7° \; A$$

$$P_1 = I_2^2 \cdot Re\{Z_1\} = \left(\frac{U_R-U_{O'O}}{Z_1}\right)^2 \cdot Z_1 = \left(\frac{220-39-j57.34}{199+j199}\right)^2 \cdot 199 = 199 \cdot \left(0.538-j0.528\right)^2$$

$$P_1 = 142.3 \; W$$

$$P_2 = I_S^2 \cdot Re\{Z_2\} = \left(\frac{U_S-U_{O'O}}{Z_2}\right)^2 \cdot Z_2 = 169 \cdot \left(-1.277-j0.552\right) = 328 \; W$$

$$P_3 = I_T^2 \cdot Re\{Z_3\} = 2^2 \cdot 100 = 400 \; W$$

$$P_u = P_1 + P_2 + P_3 = 142.3 + 400 + 328 = 870.3 \; W$$