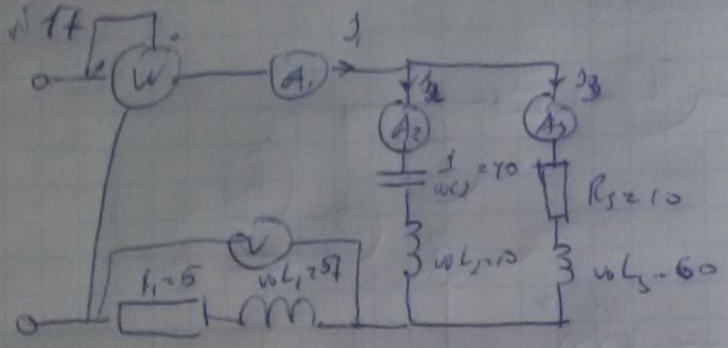

$u = 80 + 150\sqrt{2}\sin\omega t + 10\sqrt{2}\sin(2\omega t - 30^\circ)$

K=0

$U^{(0)} = 80$

$I_2^{(0)} = 0$

$I_1^{(0)} = I_3^{(0)} = \frac{U}{R_3 + R_1} = \frac{80}{10+5} = 5{,}33$

$U_V^{(0)} = U^{(0)} - I_3^{(0)} R_3 = 80 - 53{,}3 = 26{,}7$

$P = U^{(0)} \cdot I_1^{(0)} = 426{,}4$

K=1

$U^{(1)} = 150\angle 0 = 150$

$\underline{Z_e} = R_1 + j\omega L_1 + \frac{(R_3 + j\omega L_3)\left(j\omega L_2 - \frac{j}{\omega C_1}\right)}{R_3 + j\omega L_3 + j\omega L_2 - \frac{j}{\omega C_1}} = 14$

$I_1 = \frac{U^{(1)}}{\underline{Z_e}} = 10{,}71$

$I_2 = I_1 \frac{R_3 + j\omega L_3}{R_3 + j\omega L_3 + j\omega L_2 - \frac{j}{\omega C_1}} = 20{,}357 + 3{,}214j \;\Big|\; 20{,}6\angle 9^\circ$

$$J_3 = J_1 \frac{j\omega L_2 - \frac{1}{\omega C_2}}{R_3 + j\omega L_3 + j\omega L_2 - \frac{j}{\omega C_2}} = -3{,}643 - 3{,}294j \mid 10{,}16 \angle -132$$

$$U_V^{(1)} = U^{(1)} - J_3^{(1)}(R_3 + j\omega L_3) = 53{,}571 + 610{,}714j = 613{,}05 \angle 84$$

$$P^{(1)} = Re[U^{(1)} J_1^{(1)*}] = 1607.$$

$k = 2.$

$$U^{(2)} = 10 \angle -30 \mid 8{,}66 - j5$$

$$\underline{Z_e} = R_1 + 2j\omega L_1 + \frac{(R_3 + 2j\omega L_3)(2j\omega L_2 - \frac{1}{2\omega C_2})}{R_3 + 2j\omega L_3 + 2j\omega L_2 - \frac{1}{2\omega C_2}} = 5 + 11j$$

$$J_3^{(2)} = 0$$

$$J_1^{(2)} = \frac{U^{(2)}}{\underline{Z_e}} = -0{,}04 - 0{,}07j \mid 0{,}087 \angle -117$$

$$J_2^{(2)} = J_1^{(2)}$$

$$U_C^{(2)} = U^{(2)} = 10 \angle -30$$

$$P^{(2)} = Re[U^{(2)} J_1^{(2)*}] = 0{,}044$$

$P = \sum P_i = 2033{,}4$

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$$A1 = \sqrt{J_1^{(0)2} + J_1^{(1)2} + J_1^{(2)2}} = \sqrt{28{,}4085 + 114{,}7 + 0{,}008} = 11{,}96$$

$$A2 = -''- = \sqrt{0 + 424{,}36 + 0{,}008} = 20{,}6$$

$$A3 = -''- = \sqrt{28{,}4085 + 105{,}22 + 0} = 11{,}47$$

$$V = -''- = \sqrt{712{,}89 + 375{,}89 + 100} = 613{,}71$$