

$$1.) \quad \hat{P}_1 = 250 \text{ W} \quad \Delta P_1 = 50 \text{ W} \quad \sigma_1 = \frac{\Delta P_1}{\hat{P}_1} = 16,67\% \text{ (1)} \quad \Delta P_a = \sigma_a \cdot z_{\frac{b}{2}} = \sigma_a \cdot 2,96 = 206,6 \text{ W}$$

$$P_a^1 = N_1 \cdot \hat{P}_1 = 10 \text{ kW} \quad \sigma_a = \sqrt{N_1} \cdot \sigma_1 = 105,41\% \text{ (1)} \quad \frac{b}{2} = 0,025$$

$$P [P_a^1 - \Delta P_a < P_a < P_a^1 + \Delta P_a] = 1 - b$$

$$P [9793 \text{ W} < P_a < 10207 \text{ W}] = 95\% \text{ (1)}$$

$$\sigma_b = \sqrt{N_1 \cdot \sigma_1^2 + N_2 \cdot \sigma_2^2} = 117,38\%$$

$$\sigma_2 = \frac{\Delta P_2}{\hat{P}_2} = 11,55\% \quad \hat{P}_2^1 = N_1 \hat{P}_1 + N_2 \hat{P}_2 = 14 \text{ kW} \text{ (1)} \quad \Delta P_b = \sigma_b \cdot z_{\frac{b}{2}} = \sigma_b \cdot 1,96 = 230,1 \text{ W} \text{ (5)}$$

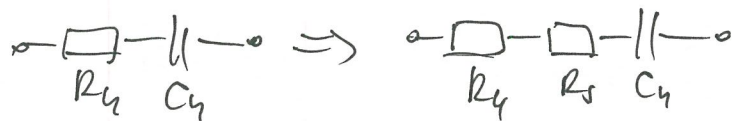
$$P [P_b^1 - \Delta P_b < P_b < P_b^1 + \Delta P_b] = 1 - b$$

$$P [13770 \text{ W} < P_b < 14230 \text{ W}] = 95\% \text{ (1)}$$

$$II.) \quad \frac{z_1}{z_3} = \frac{z_2}{z_4} \Rightarrow \frac{1}{R_3 (G_x + \frac{1}{j\omega L_x})} = \frac{R_2}{R_4 + \frac{1}{j\omega C_4}} \Rightarrow G_x = \frac{R_4}{R_2 R_3} = 730,72 \mu\text{S} \text{ (1)}$$

$$(1368,5 \Omega)$$

$$L_x = 1,46,25 \text{ mH} = R_2 R_3 C_4 \text{ (1)}$$



$$\Delta R_4 = R_5 \quad \left| \frac{\Delta G_x}{G_x} \right| = \left| \frac{\Delta R_4}{R_4} \right| = 2,34\% \text{ (1)}$$

$$D_4 = \omega R_5 C_4 \Rightarrow R_5 = \frac{D_4}{\omega C_4} = 106,95 \Omega \text{ (1)}$$

$$\frac{\Delta L_x}{L_x} = \emptyset$$

(5)