

*Upor*

$$u = Ri$$

$$i = Gu$$

$$W_i(t_1, t_2) = \int_{t_1}^{t_2} p_i dt$$

$$p_i = ui$$

$$P = \frac{1}{T} \int_t^{t+T} p_i(t') dt'$$

$$I_{ef} = \sqrt{\frac{1}{T} \int_t^{t+T} i^2(t') dt'}$$

$$P = RI_{ef}^2 = GU_{ef}^2$$

$$I_{sr} = \frac{1}{T} \int_t^{t+T} i(t') dt'$$

*Kondenzator*

$$i = C \frac{du}{dt}$$

$$u(t_2) - u(t_1) = \frac{1}{C} \int_{t_1}^{t_2} i dt$$

$$W_e = \frac{1}{2} Cu^2$$

$$p_e = ui$$

$$U_{ef} = \sqrt{\frac{1}{T} \int_t^{t+T} u^2(t') dt'}$$

$$U_{sr} = \frac{1}{T} \int_t^{t+T} u(t') dt'$$

*Tuljava*

$$u = L \frac{di}{dt}$$

$$i(t_2) - i(t_1) = \frac{1}{L} \int_{t_1}^{t_2} u dt$$

$$W_m = \frac{1}{2} Li^2$$

$$p_m = ui$$

*Sklopljene tuljave*

$$u_j = \sum_{k=1}^n L_{jk} \frac{di_k}{dt}$$

$$W_m(t) = \frac{1}{2} \sum_{j=1}^n \sum_{k=1}^n L_{jk} i_j i_k$$

$$p_m = \sum_{j=1}^n u_j i_j$$

*Kirchoffova zakona*

$$\sum_{k=1}^m (\pm) i_k = 0$$

$$\sum_{j=1}^n (\pm) u_j = 0$$

$$\sum_{j=1}^n u_j i_j = 0$$

**Harmonično vzbujana vezja:**

*Upor*

$$\underline{U} = R\underline{I}$$

$$\varphi_u = \varphi_i$$

$$P = \frac{1}{2} UI \cos \varphi$$

*Kondenzator*

$$\underline{I} = j\omega C\underline{U}$$

$$\varphi_i = \varphi_u + \frac{\pi}{2}$$

$$Q = \frac{1}{2} UI \sin \varphi$$

*Tuljava*

$$\underline{U} = j\omega L\underline{I}$$

$$\varphi_u = \varphi_i + \frac{\pi}{2}$$

$$\underline{S} = P + jQ$$

*Sklopljene tuljave*

$$\underline{U}_1 = j\omega L_1 \underline{I}_1 + j\omega M \underline{I}_2$$

$$\underline{U}_2 = j\omega L_2 \underline{I}_2 + j\omega M \underline{I}_1$$

*Kirchoffova zakona*

$$\sum_{r=1}^m (\pm) \underline{I}_r = 0$$

$$\sum_{s=1}^n (\pm) \underline{U}_k = 0$$

*Impedanca, imitanca*

$$\underline{Z} = \frac{\underline{U}}{\underline{I}} \quad \underline{Y} = \frac{1}{\underline{Z}}$$

