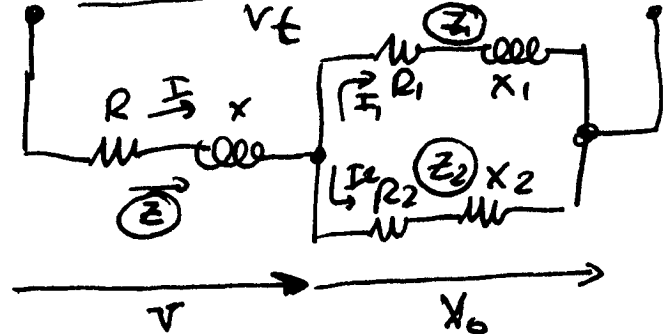




$$\vec{V}_0 = \vec{Z}_1 \vec{I}_1 = \vec{Z}_2 \vec{I}_2$$

$$\vec{I} = \vec{I}_1 + \vec{I}_2$$

$$\vec{V} = \vec{Z} \cdot \vec{I}$$

$$\vec{V}_t = \vec{V} + \vec{V}_0$$

$$\text{Dolo } \vec{V}_0 \quad \vec{I}_1 = \frac{\vec{V}_0}{\vec{Z}_1} = \frac{\vec{V}_0}{R_1 + jX_1} = \left[\frac{R_1}{R_1^2 + X_1^2} - j \frac{X_1}{R_1^2 + X_1^2} \right] \vec{V}_0$$

$$\vec{I}_2 = \frac{\vec{V}_0}{\vec{Z}_2} = \frac{\vec{V}_0}{R_2 + jX_2} = \left[\frac{R_2}{R_2^2 + X_2^2} - j \frac{X_2}{R_2^2 + X_2^2} \right] \vec{V}_0$$

$$\vec{I}_1 = (G_1 - jB_1) \vec{V}_0$$

$$\vec{I}_2 = (G_2 - jB_2) \vec{V}_0$$

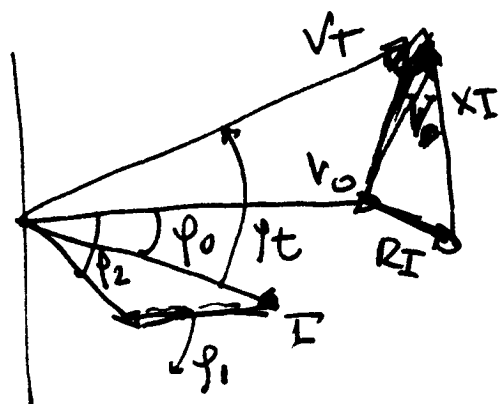
$$\vec{I} = [G_1 + G_2 - j(B_1 + B_2)] \vec{V}_0$$

$$\phi_0 = -\frac{B_1 + B_2}{G_1 + G_2} \quad \phi_1 = -\frac{B_1}{G_1} \quad \phi_2 = -\frac{B_2}{G_2}$$

$$\vec{V} = \vec{Z} \cdot \vec{I} = (R + jX) \cdot [G_1 + G_2 - jB_1 + B_2] \vec{V}_0$$

$$\vec{V}_t = \vec{V} + \vec{V}_0$$

$$= \left\{ 1 + [R(G_1 + G_2) + X(B_1 + B_2)] + j[X(G_1 + G_2) - R(B_1 + B_2)] \right\} \vec{V}_0$$



$$\vec{Z}_t = \vec{Z} + \frac{1}{\vec{Y}_1 + \vec{Y}_2}$$

$$\vec{Z} = R + jX$$

$$\vec{Y}_1 = G_1 - jB_1$$

$$\vec{Y}_2 = G_2 - jB_2$$