5.1.42. feladat

$s_n = 5\ \%$

$n = 950$ 1/min

$P_m = 10{,}065$ kW

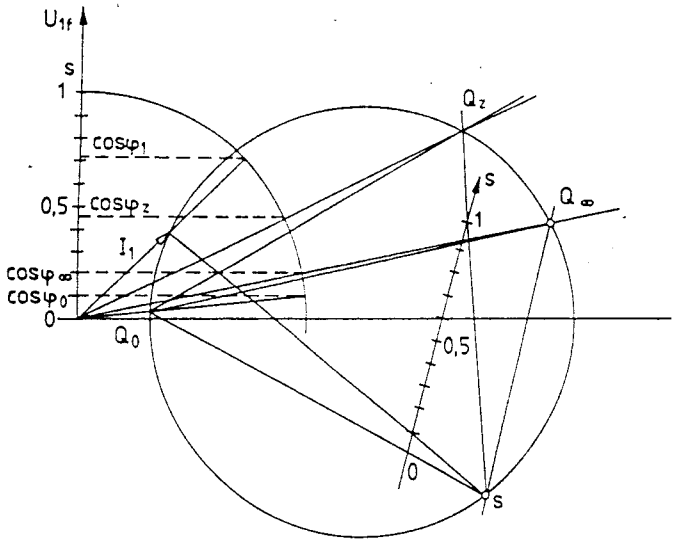
$P_f = 10{,}89$ kW

$P_1 = 11{,}715$ kW

$\eta = 0{,}859$

5.1.43. feladat

a)



b) A kördiagramból kiolvasható:

$I_1 = 49$ A

$\cos \varphi_n = 0{,}7$

$I_1 = 49$ A

$\cos \varphi_n = 0{,}7$

c) $P_1 = \sqrt{3} \cdot U_{1v} \cdot I_1 \cdot \cos \varphi_n = \sqrt{3} \cdot 380 \cdot 49 \cdot 0{,}7 = 22{,}594$ kW

$P_1 = 22{,}594$ kW

5.1.44. feladat

a) a Q_∞ pont adatai:

$I_0 = 20$ A

$$\cos \varphi_0 = \frac{P_0}{\sqrt{3} \cdot U_{1n} \cdot I_0} = \frac{1000}{\sqrt{3} \cdot 380 \cdot 20} = 0{,}076$$

Q_1 pont adatai:

$$I_{zn} = I_z \cdot \frac{U_1}{U_z} = 100 \cdot \frac{380}{200} = 190 \text{ A}$$

$$\cos \varphi_z = \frac{P_z}{\sqrt{3} \cdot U_z \cdot I_z} = \frac{10000}{\sqrt{3} \cdot 200 \cdot 100} = 0{,}287$$

$R_2'/R_1 = 1{,}2 \rightarrow 6 : 5$ arányban osztandó fel a $\overline{Q_1 E}$ szakasz