

$\eta = \frac{P_h}{P_1} = \frac{110}{120} = 0,916$	$\eta = 0,916$
$b) s_1 = \frac{n_0 - n_1}{n_0} = \frac{1500 - 1350}{1500} = 0,1$	
$R_{v1} = R_r \cdot \frac{s_1 - s_n}{s_n} = 0,0138 \cdot \frac{0,1 - 0,032}{0,032} = 0,0293 \Omega$	$R_{v1} = 0,0293 \Omega$
$P_{m1} = P_1 \cdot (1 - s_1) = 114,77 \cdot (1 - 0,1) = 103,3 \text{ kW}$	
$P_{h1} = P_{m1} - P_s = 103,3 - 1,1 = 102,2 \text{ kW}$	
$\eta_1 = \frac{P_{h1}}{P_1} = \frac{102,2}{120} = 0,852$	$\eta_1 = 0,852$
$a) \omega_{go} = \frac{2 \cdot \pi \cdot f}{p} = \frac{2 \cdot \pi \cdot n_0}{60} = \frac{2 \cdot \pi \cdot 1500}{60} = 157,079 \text{ 1/s}$	5.1.18. feladat
$M = \frac{P_1}{\omega_{go}} = \frac{24 \cdot 10^3}{157,079} = 152,788 \text{ N} \cdot \text{m}$	$M = 152,788 \text{ N} \cdot \text{m}$
$b) P_{2v} = s \cdot P_1 = 0,04 \cdot 24000 = 960 \text{ W}$	$P_{2v} = 960 \text{ W}$
$c) n = n_0 \cdot (1 - s) = 1500 \cdot (1 - 0,04) = 1440 \text{ 1/s}$	$n = 1440 \text{ 1/s}$
$d) P_m = (1 - s) \cdot P_1 = (1 - 0,04) \cdot 24 = 23,04 \text{ kW}$	$P_m = 23,04 \text{ kW}$
$e) s_2 = \frac{n_0 - n}{n_0} = \frac{1500 - 900}{1500} = 0,4 = 40 \%$	$s_2 = 40 \%$
$f) R_f = R_2 \cdot \frac{s_2 - s_1}{s_1} = 0,5 \cdot \frac{40 - 4}{4} = 4,5 \Omega$	$R_f = 4,5 \Omega$
$g) P_{2v} = s \cdot P_1 = 0,4 \cdot 24 = 9,6 \text{ kW}$	$P_{2v} = 9,6 \text{ kW}$
$h) \frac{P_{2vg}}{P_{2v} \cdot R_f} = \frac{R_2}{R_f} = \frac{0,5}{4,5} = \frac{1}{9}$	
1 rész a gépre: 960 W	960 W
9 rész az ellenállásra: $9 \cdot 960 = 8640 \text{ W}$	8640 W

$$a) P_1 = \frac{P_{el}}{\eta}$$

$$I = \frac{P}{\sqrt{3} \cdot U}$$

$$b) S = \sqrt{3} \cdot U \cdot I$$

$$Q = S \cdot \sin \phi$$

$$c) n_0 = \frac{60 \cdot f}{p}$$

$$n = n_0 \cdot (1 - s)$$

$$d) f_2 = s \cdot f_1$$

$$e) P_v = P_1 - P_{2v}$$

$$a) P_{0tek} = 3 \cdot P_{0tek}$$

ellenállás k

harmadik f

$$R_{mert} = \frac{2}{2}$$

$$R_f = \frac{3}{2}$$

$$P_{0tek}$$

$$P_{1te}$$

$$b) P_{\delta} = P_{felv}$$

$$P_{2tek} =$$

$$P_{1te}$$

$$c) \eta = \frac{P_{teng}}{P_{felv}}$$