

5. ASZINKRON GÉPEK

5.1. Háromfázisú aszinkron motorok

b) $f_2 = s \cdot f_1 = 0,0166 \cdot 50 = 0,83 \text{ Hz}$ $U_2 = s \cdot U_{2v} = 0,0166 \cdot 280 = 4,66 \text{ V}$	$f_2 = 0,83 \text{ Hz}$ $U_2 = 4,66 \text{ V}$
c) $s = \frac{n_0 - n_1}{n_0} = \frac{1500 - 900}{1500} = 0,4$ $f_2 = s \cdot f_1 = 0,4 \cdot 50 = 20 \text{ Hz}$ $U_2 = s \cdot U_{2v} = 0,4 \cdot 280 = 112 \text{ V}$	$s = 0,4$ $f_2 = 20 \text{ Hz}$ $U_2 = 112 \text{ V}$
d) $s = \frac{n_0 - n_2}{n_0} = \frac{1500 - 1545}{1500} = -0,03$ $f_3 = s \cdot f_1 = 0,03 \cdot 50 = 1,5 \text{ Hz}$ $U_2 = s \cdot U_{2v} = 0,03 \cdot 280 = 8,4 \text{ V}$	$s = -0,03$ $f_2 = 1,5 \text{ Hz}$ $U_2 = 8,4 \text{ V}$
5.1.16. feladat	
a) $s = \frac{n_0 - n}{n_0} = \frac{1000 - 975}{1000} = 0,025$	$s = 0,025$
b) $P_{mech} = P + P_s = 30 + 0,25 = 30,25 \text{ kW}$ $P_1 = \frac{P_{mech}}{1 - s} = \frac{30,25}{1 - 0,025} = 31,02 \text{ kW}$ $P_{v2} = P_1 - P_{mech} = 31,02 - 30,25 = 0,77 \text{ kW}$ $P_b = \frac{P}{\eta} = \frac{30}{0,91} = 32,96 \text{ kW}$ $P_{v1} = P_b - P_1 = 32,96 - 31,02 = 1,94 \text{ kW}$	$P_1 = 31,02 \text{ kW}$ $P_{v2} = 0,77 \text{ kW}$ $P_{v1} = 1,94 \text{ kW}$
c) $M = \frac{P}{2 \cdot \pi \cdot n} = \frac{30000 \cdot 60}{2 \cdot \pi \cdot 975} = 293,8 \text{ N} \cdot \text{m}$	$M = 293,8 \text{ N} \cdot \text{m}$
5.1.17. feladat	
a) $n_0 = \frac{60 \cdot f}{p} = \frac{60 \cdot 50}{2} = 1500 \text{ 1/min}$ $n = n_0 \cdot (1 - s_n) = 1500 \cdot (1 - 0,032) = 1452 \text{ 1/min}$ $P_m = P_h + P_s = 110 + 1,1 = 111,1 \text{ kW}$ $P_1 = \frac{P_m}{1 - s} = \frac{111,1}{1 - 0,032} = 114,77 \text{ kW}$	$n_0 = 1500 \text{ 1/min}$ $P_1 = 114,77 \text{ kW}$