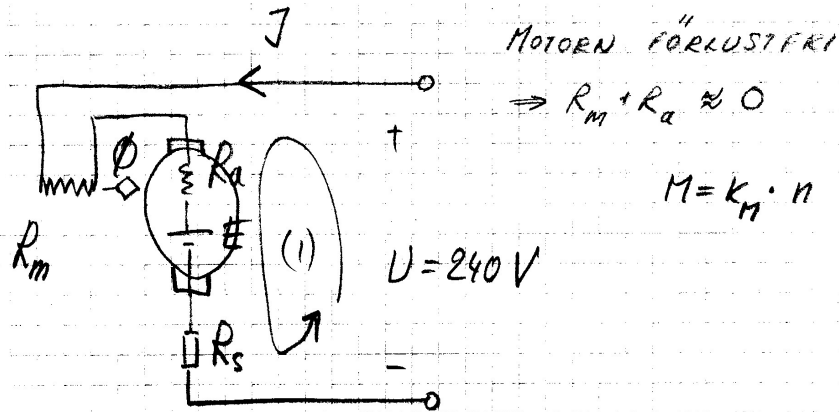


A5.22



FALL I $J_I = 5 \text{ A}$ $n_I = 1000 \text{ RPM}$ $R_s = 0$

FALL II $n_{II} = 500 \text{ RPM}$ $R_s = ?$ ($J_{II} = ?$)

$$M = k_e \Phi J = \Phi = k J \Rightarrow k_e k J^2$$

$$\Rightarrow \frac{M_I}{M_{II}} = \frac{k_e k J_I^2}{k_e k J_{II}^2} \quad \frac{k_M n_I}{k_M n_{II}} = \frac{J_I^2}{J_{II}^2} \Rightarrow$$

$$\frac{1000}{500} = \frac{5^2}{J_{II}^2} \Rightarrow J_{II} \approx 3,53 \text{ A}$$

$$+U - (R_m + R_a) J - E - R_s J = 0 \dots (1)$$

ANTAG $k_e \Phi n = k_e k J n$

$$R_s \gg R_m + R_a \approx 0, \text{ FALL I INS 1 (1)} \Rightarrow$$

$$+240 - 0 \cdot 5 - k_e k \cdot 5 \cdot 1000 \approx 0 \Rightarrow k_e k = 0,048$$

$$\text{FALL II INS 1 (1)} \Rightarrow +240 - 0,353 - 0,048 \cdot 3,53 \cdot 500 - R_s \cdot 3,53 = 0$$

$$\Rightarrow \underline{R_s \approx 44 \Omega}$$