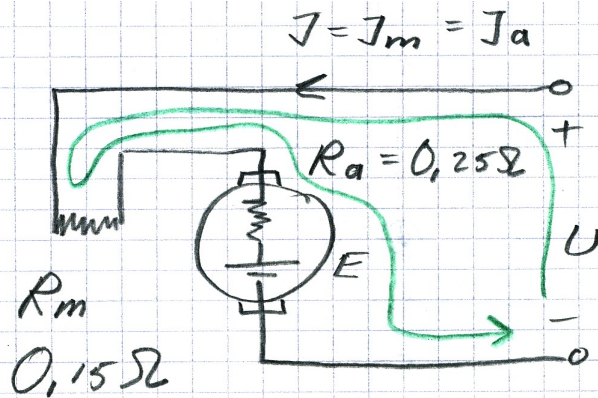


3.13



FALL I

FALL II

$$U_I = 240 \text{ V}$$

$$U_{II} = 220 \text{ V}$$

$$J_{aI} = 50 \text{ A}$$

$$n_I = 1100 \text{ RPM}$$

$$n_{II} = ?$$

$$M_I = M$$

$$M_{II} = M$$

$$M = k_2 \Phi J_a = k_2 k_3 J_a^2$$

$$\frac{M_I}{M_{II}} = \frac{k_2 k_3 J_{aI}^2}{k_2 k_3 J_{aII}^2}$$

$$M_I = M_{II} \rightarrow J_{aII} = J_{aI} = 50 \text{ A}$$

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

$$\text{FALL I INS 1 (1)} \rightarrow 240 - (0,15 + 0,25) \cdot 50 - E_I = 0$$

$$\Rightarrow E_I = 220 \text{ V}$$

$$\text{FALL II INS 1 (1)} \rightarrow 220 - (0,15 + 0,25) \cdot 50 - E_{II} = 0$$

$$\Rightarrow E_{II} = 200 \text{ V}$$

$$\frac{E_I}{E_{II}} = \frac{k_f \Phi_I n_I}{k_f \Phi_{II} n_{II}}$$

$$J_{aII} = J_{aI} \rightarrow \Phi_{II} = \Phi_I \rightarrow$$

$$\frac{220}{200} = \frac{1100}{n_{II}} \rightarrow \underline{n_{II} = 1000 \text{ rpm}}$$