

geg. $\mu_r = 800$, $l_1 = 150 \text{ mm}$, $l_2 = 80 \text{ mm}$, $l_c = 2 \text{ mm}$

$A = 0,0003 \text{ m}^2$, $I_1 = 10 \text{ A}$, $N_1 = 500$

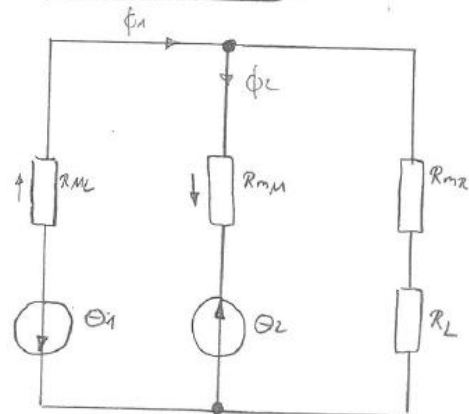
$I_2 = 5 \text{ A}$, $N_2 = 200$

$\mu_0 = 4\pi \cdot 10^{-7}$

$R_{ML} = 23 \text{ cm} \approx 0,23 \text{ m}$; $R_{mM} = 8 \text{ cm} = 0,08 \text{ m}$

$R_{M2} = 22,8 \text{ cm} \approx 0,228 \text{ m}$; $R_L = 2 \text{ cm} = 0,02 \text{ m}$

Ersatzschaltbild



$\Theta_1 = 500 \cdot 10 = 5000 \text{ A}$

$\Theta_2 = 200(-5) = -1000 \text{ A}$

1) Ges. mag. Fluss (Φ) im Eisen

$\Phi = \frac{\Theta}{R_m}$ $R_m = \frac{l}{\mu_0 \cdot \mu_r \cdot A}$

$R_{ML} = \frac{0,23 \text{ m}}{(4\pi \cdot 10^{-7}) \cdot 800 \cdot 0,0003 \text{ m}^2} = 762617,44 \frac{\text{A}}{\text{Tm}}$

$R_{M2} = \frac{0,228 \text{ m}}{(4\pi \cdot 10^{-7}) \cdot 800 \cdot 0,0003 \text{ m}^2} = 755905,98 \frac{\text{A}}{\text{Tm}}$

$R_{mM} = \frac{0,08 \text{ m}}{(4\pi \cdot 10^{-7}) \cdot 800 \cdot 0,0003 \text{ m}^2} = 265258,24 \frac{\text{A}}{\text{Tm}}$

$R_L = \frac{0,02 \text{ m}}{(4\pi \cdot 10^{-7}) \cdot 1 \cdot 0,0003 \text{ m}^2} = 53051647,7 \frac{\text{A}}{\text{Tm}}$