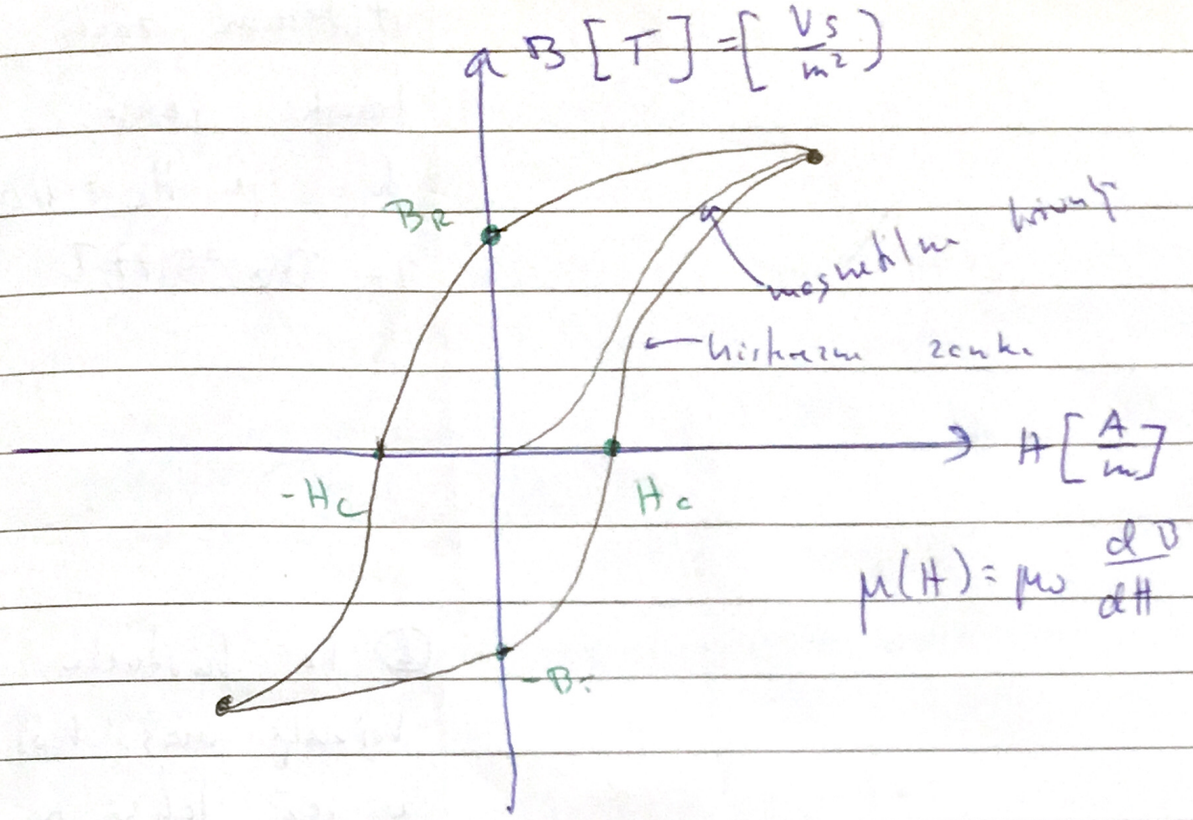
FerMag Feromagnetizem

1



$$\mu(H) = \mu_0 \frac{dB}{dH}$$

Vzamimo sestavljen magnetni krog

$$U_m = L H_{fero} + x H_{rez} = n I$$

$$\Phi_m = S B_{fero} = S B_{rez}$$

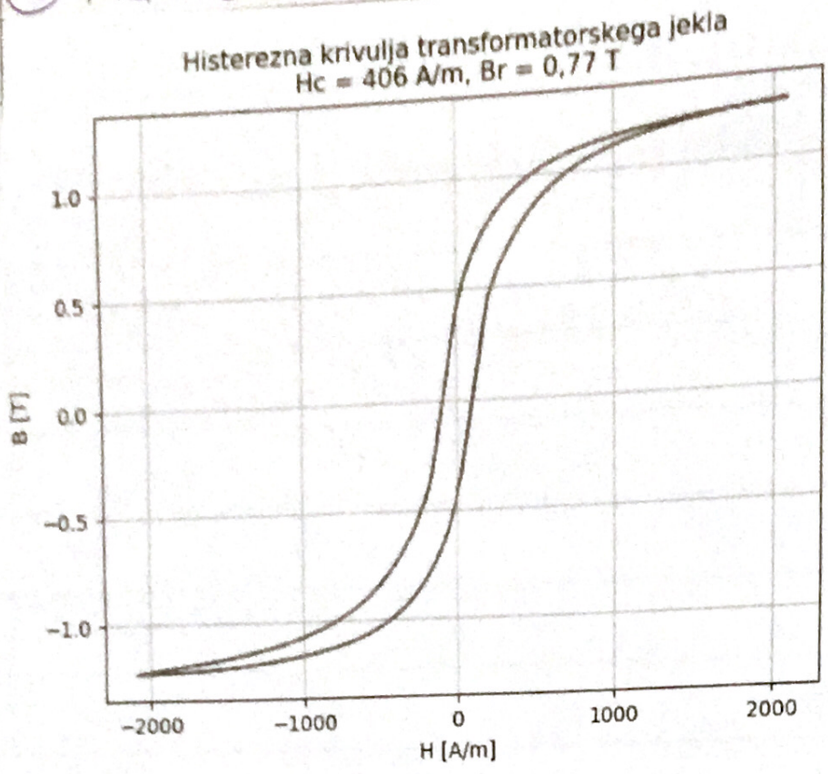
$$B_{rez} = \mu_0 H_{rez}$$

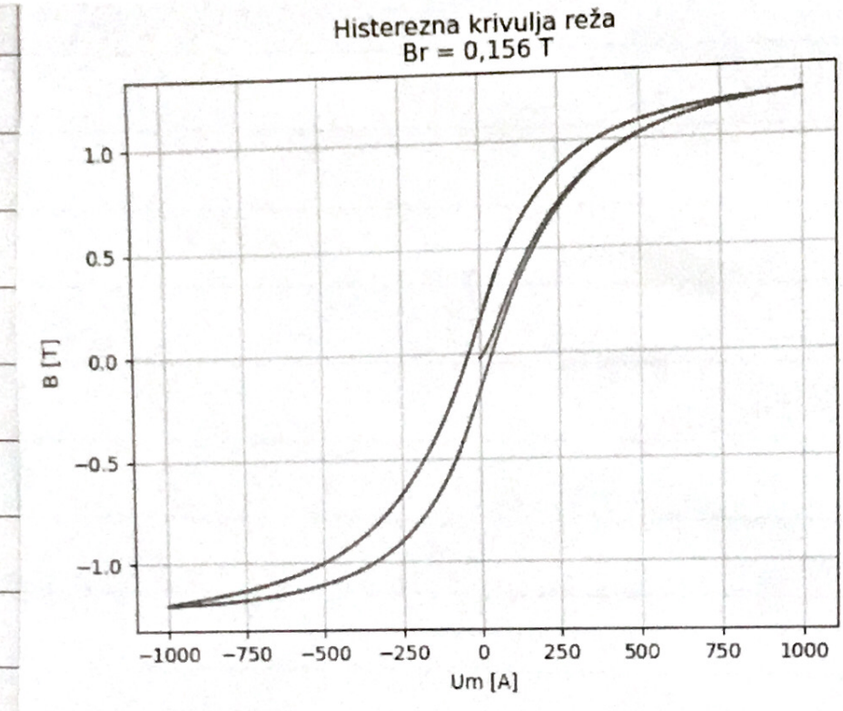
Pri $I = 0$

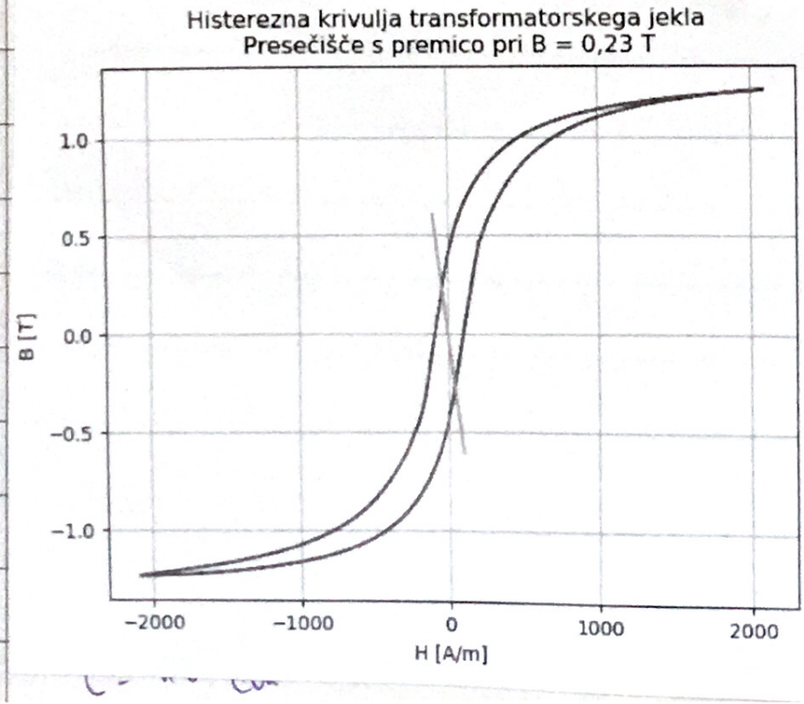
$$H_{rez} = -\frac{L}{x} H_{fero} \qquad \text{ker } B_{fero} = B_{rez}$$

$$B_{rez} = B_{fero} = -\mu_0 \frac{L}{x} H_{fero}$$

② Meritve in rezultati



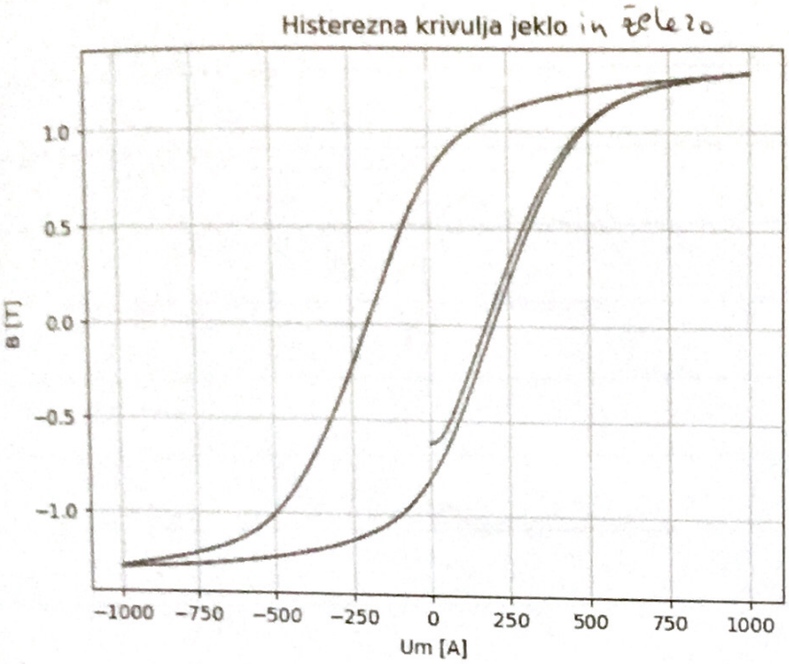




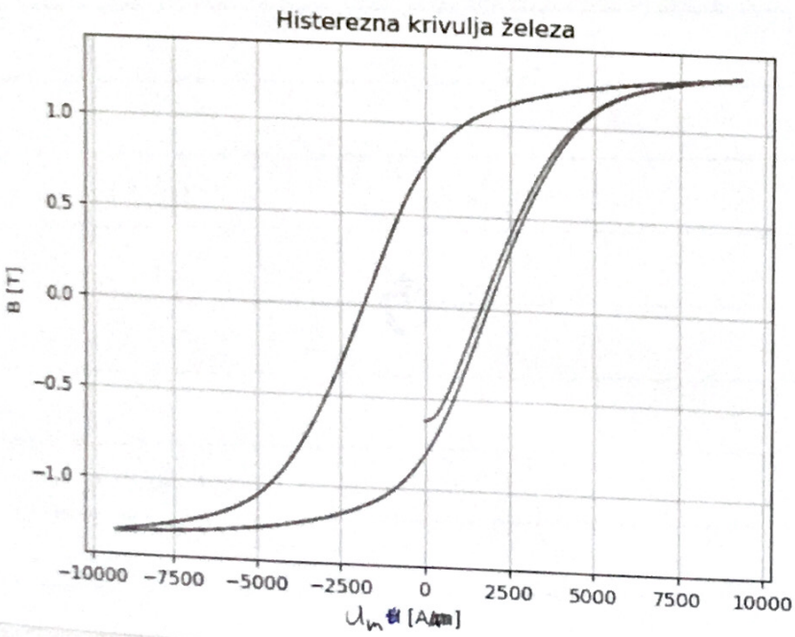
① Histerezna zank. transf. jekla, kje je $H_c = 406$ in $B_R = 0{,}77\,T$

② Iz histerezne krivulje mag. kroga z režo lahko pri $I = 0 \Rightarrow U_m = 0$ izmerimo $B_R = 0{,}156\,T$

Če poskušam presečišče premice $B = -\frac{L}{x} H$ in histerezne krivulje jekla vidim, da je presečišče pri $B = 0{,}23\,T$



3



$$N_1 I = U_m = L H_F + d H_s$$

$$\Downarrow$$

$$H_F = \frac{U_m - d H_s}{L}$$

$$B_s = B_F = B$$

Iz teh dveh krivulj

~~B~~ $B_{železa}$ ($H_{železa}$)