MATERIALE FERROMAGNETICO

$\bar{B}$

$$\oint_C \bar{H}\cdot d\bar{\ell} = \int_S \left(\bar{J} + \cancel{\frac{\partial \bar{D}}{\partial t}}\right)\cdot \bar{n}\, dS = I_c$$

$$\bar{H} = \frac{\bar{B}}{\mu_0} - \bar{M}$$

MEZZI LINEARI

$$\bar{B} = \mu \bar{H}$$

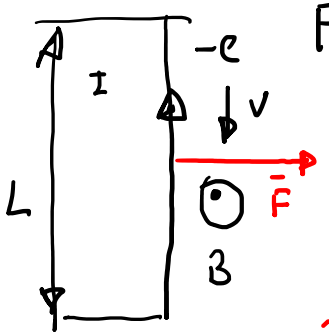
μ = PERMEABILITÀ MAGNETICA DEL MEZZO

$$\bar{F} = q\left(\bar{E} + \bar{v}\times\bar{B}\right)$$

$$\oint_C \bar{E}\cdot d\bar{\ell} = -\int_S \frac{\partial \bar{B}}{\partial t}\cdot \bar{n}\, dS$$

$$\oint_C \bar{E}\cdot d\bar{\ell} = -\frac{d\phi}{dt}$$

$$\phi = \int_S \bar{B}\cdot \bar{n}\, dS$$



$$\bar{F}_e = -e\,\bar{v}\times\bar{B}$$

$$\bar{I} = I\bar{k}$$

$$\bar{B} = B\bar{i}$$

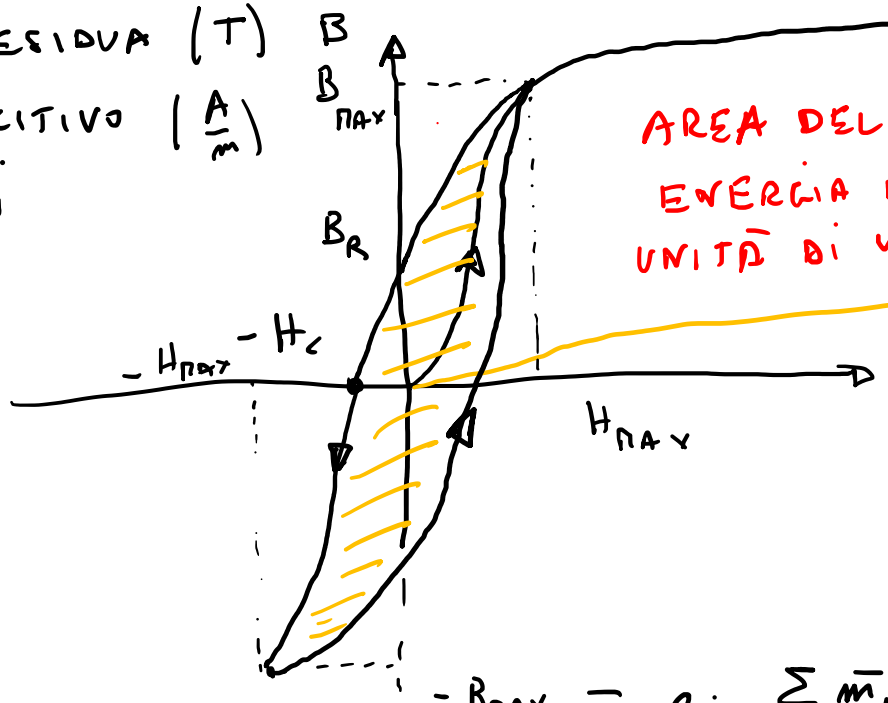
$$\bar{F} = L\bar{I}\times\bar{B}$$

$$= L I B\,\bar{j}$$

B_R = INDUZIONE RESIDUA (T)

H_c = CAMPO COERCITIVO $\left(\frac{A}{m}\right)$

CICLO DI ISTERESI



$\Delta B = \mu_0 \Delta H$

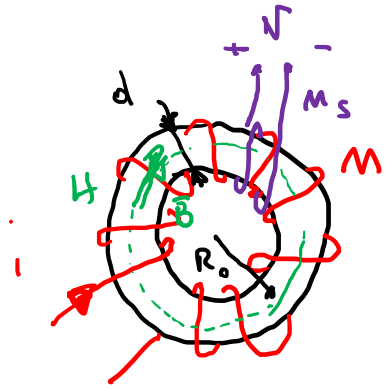
AREA DEL CICLO = ENERGIA DISSIPATA PER UNITÀ DI VOLUME

NEL VUOTO

$\bar{B} = \mu_0 \bar{H}$

$\bar{\Pi} = \lim_{\Delta V \to 0} \frac{\sum_k \bar{m}_k}{\Delta V}$

$\bar{B} = \mu_0 \bar{H} + \mu_0 \bar{\Pi}$



$2\pi R_0 H = Ni$

$H = \frac{Ni}{2\pi R_0}$

$\Phi = B \frac{\pi d^2}{4}$

$\Phi_s = m_s B \frac{\pi d^2}{4}$

$v = \frac{d\Phi_s}{dt} = m_s \frac{\pi d^2}{4} \cdot \frac{dB}{dt}$

$\bar{B}$ ED $\bar{H}$ PARALLELI $\quad \bar{B} = B\,\bar{k}$, $\bar{H} = H\,\bar{k}$

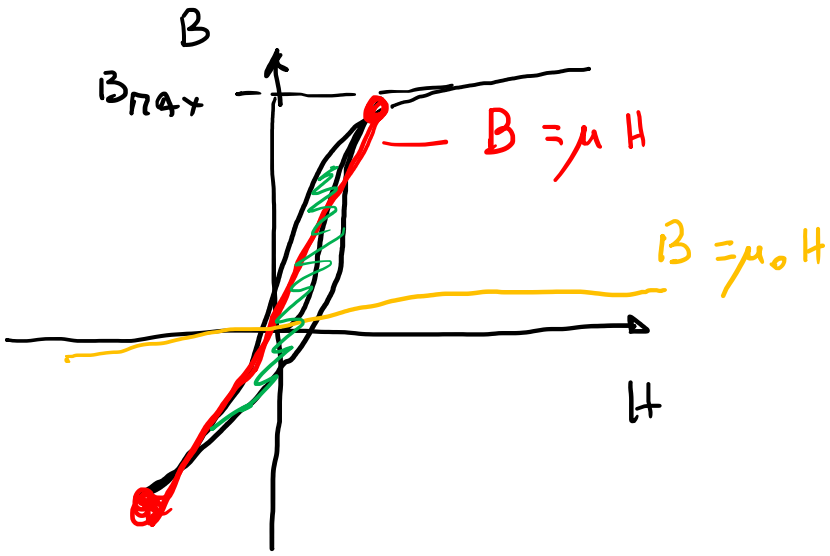
$d \ll R_0$

MATERIALE NON LINEARE CON ISTERESI

$B_{MAX} < 1\ T$

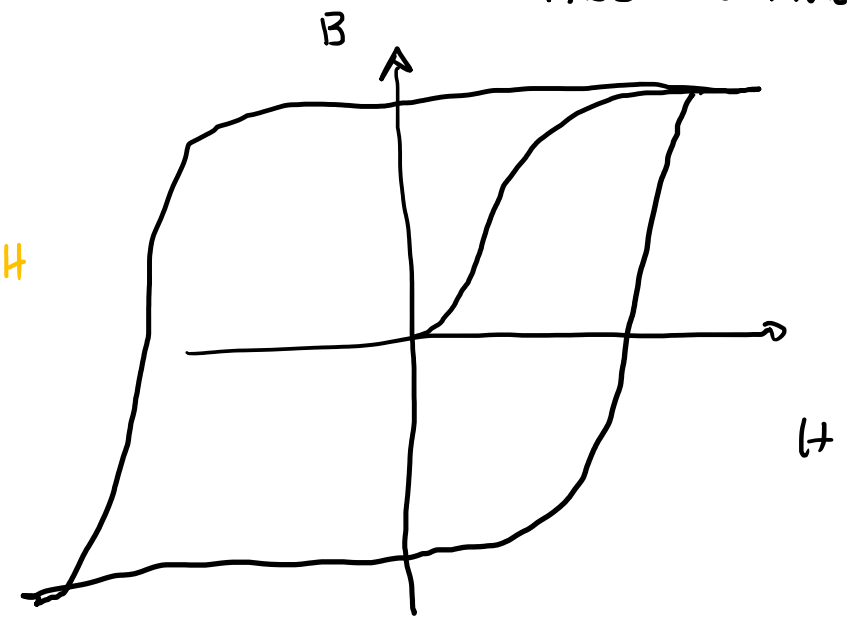
DOLCI B_R, H_c PICCOLI

AREA PICCOLA



DURI B_R, H_c GRANDI

AREA GRANDE



$\mu \gg \mu_0$

μ_R = PERMEABILITÀ RELATIVA = $\frac{\mu}{\mu_0} \simeq 1000 \div 100\,000$