

magnetische Feldstärke H

$\vec{H} \rightarrow$ Analogie zu \vec{E}

$$\vec{B} \sim \vec{H}$$

$$\vec{B} = \mu \vec{H} \rightarrow \mu = \mu_0 \cdot \mu_r$$

$\mu \rightarrow$ Permeabilitätszahl

$$\mu_0 = 4\pi \cdot 10^{-7} \frac{\text{Vs}}{\text{Am}}$$

$$[\mu] = \frac{\text{Vs}}{\text{Am}}$$

$$[H] = \frac{\text{A}}{\text{m}}$$

$$\mu_0 \cdot \epsilon_0 = \frac{1}{c^2} \quad c \rightarrow \text{Lichtgeschwindigkeit}$$

$$\left. \begin{array}{l} \mu_{r \text{Luft}} = 1 + 4 \cdot 10^{-7} \\ \mu_{r \text{Al}} = 1 + 2 \cdot 10^{-5} \end{array} \right\} \text{Paramagnetika}$$

$$\left. \begin{array}{l} \mu_{r \text{Cu}} = 1 - 10^{-5} \\ \mu_{r \text{H}_2\text{O}} = 1 - 9 \cdot 10^{-6} \end{array} \right\} \text{Diamagnetika}$$

$$\left. \begin{array}{l} \mu_{r \text{Fe}} \\ \mu_{r \text{Nickel}} \\ \mu_{r \text{Cobalt}} \end{array} \right\} \text{AlNiCo} \left. \begin{array}{l} \\ \\ \end{array} \right\} 1000 \dots 9000 \dots 100000$$

