

CONSTITUTING RELATIONS

$$\begin{aligned} \vec{D} &= \epsilon \vec{E} \\ \vec{B} &= \mu \vec{H} \\ \vec{J}_e &= \sigma \vec{E} \\ \vec{J}_m &= \nu^* \vec{H} \end{aligned}$$

WHERE

J_e = MAGNETIC CONDUCTIVE CURRENT DENSITY [V/m^2]

ν^* = MAGNETIC RESISTIVITY [Ω/m]

CONTINUITY EQUATION

$$\nabla \cdot \vec{J} = -\frac{\partial \rho_v}{\partial t}$$

EXPRESSES THE PRINCIPLE OF CONSERVATION OF CHARGE.