

## FEM Analysis of Current and Field Distributions in a Current Carrying Superconductor Thin Strip in DC Magnetic Field

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The numerical analysis on electromagnetic phenomena of a thin strip high Tc superconductor (HTSC) with time varying external current in perpendicular magnetic field were performed by a finite element method (FEM). The E-J power law and H-formulation is used to calculate the current distribution and electromagnetic field in a HTSC. This numerical method is based on the partial differential equations time dependently. Some of the numerical calculations were compared with the data experimentally obtained using a scanning Hall probe method.

Keywords : current distribution, High Tc superconductor, finite element method

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