

ANALYSIS OF THE $A, V - A - \psi$ POTENTIAL FORMULATION FOR THE EDDY CURRENT PROBLEM IN A BOUNDED DOMAIN*

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Abstract. The aim of this paper is to provide a mathematical analysis of the well-known $A, V - A - \psi$ potential formulation for the eddy current problem. The resulting variational problem is proved to be well posed and error estimates are settled for a numerical method based on standard nodal finite elements.

Key words. eddy currents, potential formulation, well-posedness, finite elements, error estimates

AMS subject classifications. 78M10, 65N30

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