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# Fast Finite Element Computation for 3D Eddy Current Testing Problems with T- $\phi$ Formulation

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**Abstract :** The paper deals with T- $\phi$  formulation modeling of eddy current problems. The method is applied to the analysis of 3D eddy current testing of metallic plate with cracks, and the usefulness of the method is investigated by comparing calculated results with measured ones.

**Keywords :** nondestructive testing, Eddy Current, Cracks, T- $\phi$  formulation, 3D finite element.