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## Abstract

A Non Destructive Analysis (NDA) of Three Phase Induction Machine fault Diagnosis has been discussed in this paper. The Induction Machine Prototype was designed using Finite Element Analysis (FEM) based CAD software. Stator Inter turn Fault is designed by short circuiting the turns with current limiting resistor. The Motor current Signature Analysis (MCSA) has been done using LabVIEW based FFT with current data which is generated by 'FEM'.

based Induction Machine prototype. The Flux Signature Analysis also has been done and compared with MCSA. Both the Analysis are done for Different load conditions with different fault severity. The fault frequency Magnitude at various fault conditions are calculated and tabulated. This cost less NDA methodology will be the best for Machine fault Diagnosis. This paper uses a CAD package called "Infolytica Magnet 6. 11. 2" for the Static 2D and Transient 2D analysis.

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### Index Terms

Computer Science

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### Keywords

3? Induction Motor   Finite Element Analysis   Motor Current Signature Analysis   Flux Signature Analysis

Fast Fourier Transform.