Abstract

This paper expounds the 3D modelling of the MFL imaging system to monitoring the outer
surface defects in Ferro-magnetic Steam Generator Tube (SGT). It features a new flaw detection technique in conjunction with the Magnetic Flux Leakage (MFL) inspection and Digital Imaging. It delivers information of the defective tube surface in the form of a digital image. The impact of variation in the dimension of flaws on the MFL signal is additionally analysed for enhancing the reliability of detection of various defect characteristics. Modelling of MFL imaging system has been done using COMSOL 4.3 for prediction of leakage fields of defective SGT.

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Index Terms

Computer Science
Electronics

Keywords
Magnetic Flux Leakage    Steam Generator Tube    Digital Imaging    Comsol 4. 3    3d Modelling
Defect Characterisation.