A Review of the State-of-the-Art on Combining Multiple NDT Techniques in Terms of Precise Fault Detection

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Abstract

The present industrial scenario demands optimum quality, feasible processing time and enhanced machine availability to cope-up with continuously increasing customer expectations. To achieve this target, it is mandatory to ensure the optimum performance and higher availability of machinery. Therefore, the present work begins with, review of the research work of different researchers, which includes the applied combinations from year 2000-2016 proceed with discussion on the parameters being checked before making combination of NDT and finally, covers the maintenance performance parameters for quantifying improvement in performance after combining NDT. The result indicates that very few researches uses combination of NDT's, in areas like aeronautical, compressors etc., and most of the works done in composites to be tested without using any decision making technique. The researchers and practitioners can use the outcome of this work as a guideline for combining multiple NDT technique to achieve precise fault prediction and forecasting of upcoming failures.

Keywords: condition monitoring, corrective actions, fault detection, non-destructive testing

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