

DAMAGE DETECTION USING A NON-DESTRUCTIVE TECHNIQUE FOR INSPECTION WIND TURBINE BLADES

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ABSTRACT

The increasing of the use renewable power sources in the next decades which make the use of non-destructive testing techniques will improve the regular inspections of wind turbine blades. There are several techniques for non destructive testing such as thermography, x-ray imaging, acoustic emission vibration analysis and ultrasonic testing. In this paper we evaluated the measurements of the propagation characteristics of waves that are used to determine material properties; this technique is useful for detection of flaws to discover damages at the boundary surfaces. The ultrasonic A- scan and C-scan imaging are used for the area to map interface disband. This method of testing object be carefully planned with regard to safety economic and high efficiency and investigated during the pulse–echo technique developed for practical applications.

KEYWORDS: Ultrasonic, Echo, Technique, Wind Turbine Blade, NDT Techniques, A-Scan, C-Scan