

A quantitative comparison of stimulation and post-processing thermographic inspection methods applied to aeronautical carbon fiber reinforced polymer

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Abstract

Active thermographic inspection is a very powerful tool for many areas of science. However, there is no agreement about the proper stimulation and post-processing method for a particular material and defect type which forces technicians to carry out trial and error tests. This paper presents a comparison of three stimulation and six post-processing thermographic inspection methods applied to aeronautical carbon fiber reinforced polymer with different kind of simulated defects. The obtained results have been quantitatively assessed using the SNR metric. Conclusions provide recommendations for technicians interested in thermographic inspection of this type of material.

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