

A Comparative Study of Basalt and Glass Fiber Reinforced Composites By Thermography

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Abstract:

Basalt fibers combine ecological safety and natural longevity which has gained increasing attention as a reinforcing material when compared to traditional glass fibers. This paper investigates the detection limits associated to defects geometry and depth as well as recognition of barely visible impact damage. The results were analyzed experimentally to assess the size of the defects by reflection and transmission pulse thermographic techniques. The detection capabilities and performance of NDE methods for the inspection of these fibers were analyzed for different parameters and presented in this work.

Keywords: Non Destructive Evaluation, Composites, Defects, Infrared Thermography, Ultrasonics.