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H. Sohn, D. Dutta, J.Y. Yang, M.P. Desimio, S.E. Olson, E.D. Swenson

A Wavefield Imaging Technique for Delamination Detection in Composite Structures

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In this study, a ID scanning laser vibrometer and imaging techniques are utilized to detect hidden delamination in multi-layer composites. First, Lamb waves are excited by a surface-mounted piezoelectric wafer transducer and the corresponding out-of-plane velocities are measured by a scanning laser vibrometer. Second, wave field images are constructed from the scanned velocity signals, and the images are processed to highlight the interaction of Lamb waves with delamination. In particular, several image processing techniques such as Laplacian filtering are explored to accentuate the Lamb wave interactions with delamination from incident and reflected waves.

Ключевые слова:

Содержание.

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