



J. Pohl, G. Mook, A. Szwieczek, W. Hillger, D. Schmidt

Determination of Lamb Wave Dispersion

Издательство DEStech Publications, Lancaster, 2010 год

6 стр; формат: 23,5 x 16 см; библиографический список: 10 единиц
ISBN: 978-1-60595-024-2

For defect characterisation and design of a SHM-system, the velocities of Lamb modes, and especially their dispersion behaviour, must be known quantities.

Different approaches for the experimental determination of Lamb wave dispersion diagrams for carbon fibre reinforced polymers and other materials are presented. Data acquisition is performed by scanning-laser-vibrometry and air-coupled ultrasonic testing. The captured data are accordingly processed in time and space domain. Special signal processing procedures result in the desired determination of phase or group velocity dispersion. Evaluation for different directions allows the estimation of anisotropic material properties.

Ключевые слова:

Содержание.

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