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Damage Localization Algorithms in Isotropic and Anisotropic Composite Materials Using Fiber Bragg Gratings

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A number of algorithms for ultrasonic defect localization in isotropic and anisotropic composite materials are proposed. Generalized ellipses are used to locate defects in anisotropic plates with a known velocity angular profile. Another algorithm uses a single geometrical observation in order to approximately estimate the defect location area as the intersection of circles, using only the maximum acoustic group velocity. Some of the methods were validated experimentally using fiber Bragg gratings as sensors for ultrasonic Lamb waves, while the others were successfully tested using simulations.

Ключевые слова:

Содержание.

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