

عنوان مقاله:

Application of Continuous Wavelet Transform in Vibration-Based Damage Detection for Circular Cylindrical Shells

محل انتشار:

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خلاصه مقاله:

Application of the continuous wavelet transform in vibration-based damage detection for simply supported cracked beams, and, circular cylindrical shells with one or more circumferential grooves is considered in this paper. The Sanders' thin shell theory is employed in order to derive strain- displacement relationships. The vibration modes of a simply supported Euler-Bernoulli beam with multiple cracks are used in approximating the vibration behavior of the shell with circumferential grooves. One-dimensional continuous wavelet transform is applied on the signals corresponding to the mode shapes of the considered systems and the obtained wavelet coefficients are used in order .to detect the location and severity of damage

کلمات کلیدی:

Damage detection, Wavelet analysis, Rayleigh-Ritz method, Mode shape

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