

Damage Detection in Beams Using Wavelet Analysis

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Abstract : In the present study, wavelet analysis was used for locating damage in simply supported and cantilever beams. Study was carried out varying different levels and locations of damage. In numerical method, ANSYS software was used for modal analysis of damaged and undamaged beams. The mode shapes obtained from numerical analysis is processed using MATLAB wavelet toolbox to locate damage. Effect of several parameters such as (damage level, location) on the natural frequencies and mode shapes were also studied. The results indicated the potential of wavelets in identifying the damage location.

Keywords : damage, detection, beams, wavelets

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