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Finite element modeling of composite plates with internal delamination

K. Alnefaie

Mechanical Engineering Department, King Abdulaziz University, P.O. Box 80248, Jeddah 21589, Saudi Arabia

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ABSTRACT

A three-dimensional (3D) finite element model of delaminated fiber-reinforced composite plates is developed to analyze their dynamics. Natural frequencies and modal displacements are calculated for various case studies with different dimensions and delamination characteristics. Numerical results showed a good agreement with available experimental data. A new proposed model shows enhancement of the accuracy of the results. This study also introduces a method for detecting delamination in composite plates.

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