



Modal vibration response of hybrid composite panel having artificial impregnated defects: A comparison

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ABSTRACT

With the technology advancement, various new materials have been evolved with better mechanical properties. One such area of research is Hybrid composites and is manufactured by blending two or more reinforcement fibres and are used when properties of different types of fibres are to be combined, and essential features can be acquired. Hybrid composites are advantageous over traditional composites as they offer higher strength to weight ratio, improved fatigue life, cost reduction, higher corrosion resistance etc. However, structural defects like delaminations, cracks which reduce its strength and stiffness cannot be avoided. Delamination refers to de-bonding or separation of adjacent plies in composite laminates. Delamination reduces the natural frequency of the composite laminate. So this paper is an attempt to review the recent developments of free vibration analysis of delaminated composite plates under different order theories. Hence it is very critical to analyse the vibrational behaviour of these materials to avoid resonance.

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