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Dynamic analysis of functionally graded plates using a novel FSDT

1st JL Mantari
31.74 · Universidad de Ingeniería y Tecnología (Peru)

2nd E.V. Granados

Abstract

The purpose of this paper is to study the vibrational behavior of advanced composite plates by using a novel first shear deformation theory (FSDT). This theory contains only four unknowns, with is even less than the classical FSDT. The governing equations are derived by employing the Hamilton's principles and solved via Navier's solution. The present results were validated by comparing it with the 3D, classical FSDT and other solutions available in the literature. Shear correction factor apper to be unfovarable in some cases (case dependent). Finally, authors recommend further study of this new manner to model the displacement field.

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