

Approaches to Vibration Analysis of Thick Plates Subjected to Different Supports, Loadings and Boundary Conditions: A Literature Review

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Abstract : Plates are one of the most important structural components used in many industries like aerospace, marine and various other engineering fields and thus motivate designers and engineers to study the vibrational characteristics of these structures. This paper is a review of existing literature on vibration analysis of plates. Focus has been kept on prominent studies related to isotropic plates based on Mindlin plate theory; however few citations on orthotropic plates and higher order shear deformation theories have also been included. All citations are in English language. This review is aimed to provide contemporarily relevant survey of papers on vibrational characteristics of thick plates and will be useful for scientists, designers and researchers to locate important and relevant literature/research quickly.

Keywords : mindlin plates, vibrations, arbitrary boundary conditions, mode shapes, natural frequency

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