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Modal Analysis of FGM Structures using FEM Technique

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ABSTRACT

The main aim of this work is to free vibration analysis of FGM structures and effect of power law index on natural frequency also reported. Effort has been made to focus the discussion on the various research studies carried out for modal analysis of FGM structures. The material properties are varying continuously within the thickness direction from bottom level (metal rich) to top level (ceramic rich) consistent with rule of mixture (P-FGM). The FEM software COMSOL MULTIPHYSICS 5.4 is used to obtain a natural Frequency. This Paper also presents a brief overview of functionally graded materials and its applications.

Keyword- free vibration analysis, power law, FG-spherical cap, FG- Spherical Shell

