عنوان مقاله:

Numerical Study of Increasing Error Order in Finite Difference Method Used for Analyzing the Rectangular Isotropic Plate's Vibration Behavior

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خلاصه مقاله:

Now a days, structures with planar geometry such as Sheet metals, have attracted special consideration among advanced techno logia, and hence investing vibration behavior of sheet metal is of prim important . In particular regarding dynamical investigations, if the natural frequencies get ignored, the resonance phenomena can exert noun computing damages to the structure and systems. In this research for investigating the plates' vibration behavior, finite difference method with error orders of and is implemented. At first, the classical and analytical solutions are reviewed and then relevant equations, needed for numerical analysis, are extracted for those mentioned error orders. Finally the obtained natural frequencies for both modes are compared non-dimensionally. In this research , finite difference method using error order , is being applied for the first time, however the results of various references and simulation with ANSYS software are used to verify the outcome and accuracy of the proposed method.

کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

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