

عنوان مقاله:

Post-critical Behavior of Three-dimensional Composite Beams Near the Autoparametric Resonance under Flapwise Excitation

محل انتشار:

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خلاصه مقاله:

The bifurcation analysis of a symmetrically composite beam subjected to harmonic flapwise base excitation is studied when the ratio of flapwise and chordwise internal resonances is 1:2. Results are obtained by the numerical solution of modulation equations. In previous works, the modulation equations did not exhibit any symmetric properties. Therefore, modified equations with symmetric properties are studied in this paper. Characteristics of the response are investigated in terms of time history, phase portraits diagrams and bifurcation diagram of Poincaré maps. It is observed that periodic and multi-periodic motions, jump and stable motion are appeared near the internal and external tuning frequency parameters.

کلمات کلیدی:

Composite Beam Flapwise Excitation Autoparametric Resonance Periodic Motions

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