عنوان مقاله:

Dynamic Stability of Functionally Graded Beams with Piezoelectric Layers Located on a Continuous Elastic Foundation

محل انتشار:

فصلنامه مکانیک جامد, دوره 1, شماره 2 (سال: 1388)

تعداد صفحات اصل مقاله: 7

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خلاصه مقاله:

This paper studies dynamic stability of functionally graded beams with piezoelectric layers subjected to periodic axial compressive load that is simply supported at both ends lies on a continuous elastic foundation. The Young's modulus of beam is assumed to be graded continuously across the beam thickness. Applying the Hamilton's principle, the governing dynamic equation is established. The effects of the constituent volume fractions, the influences of applied voltage, foundation coefficient and piezoelectric thickness on the unstable regions are presented.

کلمات کلیدی:

Dynamic stability, Functionally graded beam, Elastic foundation, Piezoelectric layer