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BUCKLING LOAD OF AN ELASTIC QUADRATIC NON-LINEAR STRUCTURE STRESSED BY AN AXIAL IMPULSE

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Abstract

In this paper perturbation procedures are used in asymptotic expansions of the variables in the analytical determination of the dynamic buckling impulse load of an imperfection-sensitive quadratic model structure stressed by an axial impulse. The results show that light damping enhances the dynamic stability of the structure. This is evident as the structure buckles at relatively higher values of dynamic loads.