

This article presents the buckling analysis of laminated composite stiffened plates subjected to partial in-plane edge loading. The finite element method is used to carry out the analysis. The eight-noded isoparametric degenerated shell element with C^0 continuity and first-order shear deformation and a compatible three-noded curved beam element are used to model the plate skin and the stiffeners, respectively. The eigen value analysis is carried out to track the buckling load. The convergence study is performed for some specific problems and the results are compared with the available results in the literature. It is observed that the convergence of results is very fast for this finite element model. Effect of different parameters like orientation of fibers, number of layers, and loading types are considered in the present investigation. It is also observed that all these parameters have significant effect on the buckling response of the composite stiffened plate.