

A finite element method for free vibration analysis of generally laminated composite plates with central crack and clamped edges have been studied using ANSYS 5.4 program. The fiber-reinforced composite materials are ideal for structural applications where high strength-to-weight and stiffness-to-weight ratios are required, where structures must safely work during its service life. But damages initiate a breakdown period on the structures. Cracks are among the most encountered damage types in the structures. The non-dimensional fundamental frequency of vibration decreases with presence of cracks because, the rigidity of cracked plate decreases. The natural frequency of plates depends on size and shape of the cracks, the effect of number of layers is found to be insignificant beyond four layers and the change of fiber orientation increasing the fundamental frequency of vibration. The results obtained have been compared with the available published literature with good agreement results