

بيانات عن بحث (٨) مقدم للترقية

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Structural Analysis of Composite Laminated Box-Beams Under Various Types of Loading

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ملخص البحث باللغة الانجليزية

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. In this study an analytical solution for composite laminated beam with Box-section has been developed. The solution includes the structural characteristics which are often ignored in the most published studies such as axial and bending stiffness. Also, a finite element model has been developed using ANSYS software to validate the results obtained from the analytical solution and it has been seen a good agreement between results. Moreover, a parametric study has been conducted using the developed finite element model. The parametric study includes the effect of fiber orientation angle for symmetric angle ply Box beam on the axial, bending, and torsional deformations. Furthermore, the effect of changing the number of layers in both the web and flange laminates on the formerly mentioned deformations (i.e. axial, bending, torsional deformations) has been studied.