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Stress-Strain Analysis of Filament Wound Glass Epoxy Struts Under Compressive Loading

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ABSTRACT

The main objective of this paper is that the importance and implication of fiber reinforced composite material is investigated and explore for the multi industrial field. The weight reduction of the structure is not only demanded for industrial applications but also for the high specific modulus and strength. Motivation of this research work is to design the filament wound strut that can be both ends hinged condition; a condition pertaining to have an optimum helix angle under the consideration of compressive stress analysis is to be utilized. The present work is also incorporated Euler's critical load equations, finite element analysis and mathematical techniques have been adopted for conducting this experiment. Famous analysis tool ansys is used for analysis the simulation results of this research study will be beneficial and handy reference for further analysis of light weight engineering structures.