Experimental Design and Analysis of Carbon Fiber Reinforced Composite Drive Shaft

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Abstract

This work examines mechanical properties like torsional strength, tensile strength, flexural strength, impact strength, and hardness strength of carbon fiber composite material. The carbon fibers are oriented and stacked in [0/45/-45/0] degree sequence in order to have better torsional rigidity. In this work, the drive shaft is replaced by our proposed composite material. The specimen is fabricated by Hand Lay up process and shaped into the required size by machining process. Various mechanical tests are carried out as per the ASTM standard to evaluate the suitability of carbon fiber reinforced polymer composite.

Keywords: Mechanical property, Torsional strength, Stacking sequence, Carbon fiber, Drive shaft.
Reference


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