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Investigation on Mechanical Properties of Glass and Carbon Fiber Reinforced With Polyester Resin Composite

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Abstract : In this paper it is discussed about the mechanical properties of glass fiber reinforced with polyester resin composite and carbon fiber reinforced with polyester composite were observed. These composites are prepared in the proportion of GF 10%, GF 15%, and GF 20% for Glass fiber reinforcement with polyester resin and CF5% and CF10% for carbon fiber reinforcement with polyester resin to from composites. To identify the mechanical properties of the composites we have undergone various tests like tensile test, Flexural test and Impact strength for the samples. It is observed that the mechanical properties for GF15% , GF20% and CF10% shows higher values when compared to CF5% and GF10% and Polyester resin samples due to the higher proportion of fibers in the polyester resin. The tensile and flexural samples were prepared as per ASTM standard and corresponding values are tabulated and graphed.
Keywords: Glass fiber; Carbon fiber; Polyester resin; tensile test; Flexural test Reinforcement.

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