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(57) Abstract :
ABSTRACT Composites are being used as an effective alternate replacement of various traditional metals and alloys. They possess very high mechanical properties and high corrosion resistance. With high strength to weight ratio, the composites are widely used to withstand high stress. GFRP are the composites having Glass fibers as reinforcements and epoxy resin as matrix. With the addition of Al alloy powder to the epoxy matrix, an enhanced mechanical property is observed. The existing domestic LPG cylinders are made up of low carbon steel with suitable heat treatment. It is used to store the mixture of Butane and Propane under high pressure. However, the gross weight of the cylinder is very high which makes handling difficult. The aim of our project is to replace the traditional LPG cylinders with GFRP- Al composite which is less dense than the traditional steel, however having significant mechanical properties that satisfies the safety standards.

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