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Abstract

Research into the manufacture of lightweight automobiles is driven by the need to reduce fuel consumption to preserve dwindling hydrocarbon resources without compromising other attributes such as safety, performance, recyclability and cost. Materials development plays an important role against this background, since significant weight decrease is made possible through the substitution of high density materials and more precise adjustment of material

parameters to the functional requirements of components. This white paper will outline the materials suitable for the application for the light weight vehicles, which are in the development stage and will be a great substitution of conventional materials used in the automotive industries. This paper seeks to provide some basic knowledge of structure and properties, mechanical properties and applications of Aluminum based metal foam, Natural Fibers, ULSAB AVC Steel and Magnesium Alloys in the automobiles.

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Index Terms

Computer Science

Automation

Keywords

Avc–advance Vehicle Concept Gjt-giga Joule Per Ton Hp-high Purity Ulsab-ultra
Light Steel For Automotive Body