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A Comprehensive review on Light weight Kenaf fiber for Automobiles

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Abstract

Natural fibers have been used since the dawn of civilization. Customer demand for sustainable products and advances in technology has increased due to which the utilization of natural fibers are playing vital role in application of aerospace, automobile, marine industries etc., whereas natural fibers are extensively used in automotive industries and aerospace applications. Good amount of research has been directed on natural fibers and related composites to find mechanical, thermal and physical characteristics. Amongst variety of available natural fibers like bamboo, sisal, cotton, jute, kenaf, coir, industrial hemp, banana etc., kenaf fibers has been used exclusively in hybrid composites because of its enhancing mechanical properties. Therefore, this paper gives an overview on development of kenaf based composite by considering various factors like, stacking sequence (layer by layer), volume ratio of fibers to matrix, angular orientation of fibers and chemical modification of fiber surface to enhance adhesion of fiber to matrix etc., the mechanical properties and various application of kenaf hybrid composite. Several issues related to enhancing the properties of composite are also discussed in order to get sustainable hybrid composite.

Keywords:

Natural fiber, Kenaf. Composite material, Development of composite, Hybrid composite, Mechanical properties

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