MECHANICAL BEHAVIIOUR COCONUT COIR FIBER REENFORCED WITH EPOXY POLYMER COMPOSITE

ABSTRACT

Now-a-days, the natural fibres from renewable natural resources offer the potential to act as a reinforcing material for polymer composites alternative to the use of glass, carbon and other man-made fibres. Among various fibres, jute is most widely used natural fibre due to its advantages like easy availability, low density, low production cost and satisfactory mechanical properties. For a composite material, its mechanical behaviour depends on many factors such as fibre content, orientation, types, length etc. Attempts have been made in this research work to study the effect of fibre loading and orientation on the physical and mechanical behaviour of jute/glass fibre reinforced epoxy based hybrid composites. A hybrid composite is a combination of two or more different types of fibre in which one type of fibre balance the deficiency of another fibre.

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Keywords: Renewable, Mechanical Properties, Fiber to resin ratios .

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INTRODUCTION

Mankind has been aware composite materials since several hundred years before Christ and applied innovation to improve the quality of life. Although it is not clear has to how Man understood the fact that mud bricks made sturdier houses if lined with straw, he used them to make buildings that lasted. Ancient Pharaohs made their slaves use bricks with to straw to enhance the structural integrity of their buildings, some of which testify to wisdom of the dead civilization even today. Contemporary composites results from research and innovation from past few decades have progressed from glass fibre for automobile bodies to particulate composites for aerospace and a range other applications.

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