Experimental determination of mechanical properties of banana jute hybrid composite

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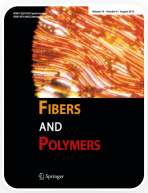

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Abstract

Presently there has been an enormous increase in demand for novel materials to produce complex products with better quality. Hence, plant fibres shall be used to achieve this goal. Hybrid natural fibre composites, can fulfil these requirements. This paper deals with the fabrication and investigation of mechanical properties of hybrid natural fibre composite (banana jute glass fibre) and compares it with single fibre natural composites made up of jute and banana separately. In this work, hand layup method is used to fabricate the composites. The mechanical tests such as tensile, flexural, impact, double shear and delamination tests are performed. Finally, failure morphology analysis is done using Scanning electron microscope (SEM) to know fracture direction, matrix structure

and fibre orientation. The results reveal that the hybrid composite has better overall mechanical properties when compared to mono composites containing same materials.

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