International Journal of Mechanical Engineering (IJME)
ISSN(P): 2319-2240; ISSN(E): 2319-2259
Vol. 3, Issue 1, Jan 2014, 67- 72

International Academy of Science, Engineering and Technology
Connecting Researchers; Nurturing Innovations

MECHANICAL PROPERTY ENHANCEMENT OF NATURAL RUBBER THROUGH SCF REINFORCEMENT

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ABSTRACT

Polymer Matrix Composites are usually reinforced with fibres or granules of Nylon 66, Kevlar 49, glass, carbon etc to impart better properties. The ecological concern has resulted in a renewed interest in natural polymeric materials. Natural fibre-reinforced polymer composites have gained attention among materials scientists and engineers in recent to develop an eco friendly material and partly replace currently used synthetic fibres in fibre-reinforced composites. Sansevieria cylindrica fibre is a newly invented fibre, which was analyzed very recently and is found to exhibit excellent properties. Also, the current research has established the fact that SCFs have not been utilized as reinforcement in composite materials until today, except in polyester composite. So it is decided to fabricate a new composite with this cylindrica fibre reinforcement and the matrix is selected as natural rubber since it is one of the polymer having largest domain of applications. So a whole new composite-named SCFR is fabricated by reinforcing natural rubber with cylindrical fibre and the various mechanical properties are analyzed.

KEYWORDS: Cylindrica, Decorticattion