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STUDY OF MECHANICAL AND ELECTRICAL BEHAVIOR OF CHEMICALLY TREATED COIR FIBRE REINFORCED EPOXY COMPOSITES

ALVEERA KHAN[1], M. AYAZ AHMAD[2], SHRISH JOSHI[1] AND A. M. ABD EL-KHALEK[2]

[1] Physics Department, Government MVM College Bhopal – 462001, India
[2] Physics Department, College of Science, University of Tabuk – 71491, Kingdom of Saudi Arabia

Abstract

In this paper an attempt has been made to study some mechanical and electrical properties of a proposed composite polymer i.e. resin coconut fibres (which is identified as coir fibres). A volumetric amount of coir fibre up to ≈ 15% was made-up and also it was arranged in arbitrarily oriented discontinues fashion. In order to measure the mechanical characteristics on the coir fibre composite due to the chemical treatment (*$Fe(NO_3)_3$ and NH_4Cl salts*) various characterising tools such as SEM and XRD are carried out to determine the strength of material. Finally, it was observed that the effects of reinforcing epoxy matrix with the chemically treated coir fibres caused the composites to be more rigid and not easy to deform due to high strain values and reduction of high resonant amplitude.

Keywords : Natural coconut / coir fibres, SEM, and polymer composites.

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