

Mechanical and morphology of interwoven Kenaf/PALF hybrid composites at different fibre ratio

Abstract

As the extension to the research involving woven and natural fibre hybrid composites, this study characterise the mechanical properties of natural fibre hybrid composites with different fibre ratio. Plain weaved kenaf/PALF composites with fibre weight ratio of 10/10, 15/15 and 20/20 are fabricated via the hand lay up technique using epoxy as the matrix. Tensile and flexural test are performed according to ASTM D3039 and ASTM D790 standards, respectively. Morphological structure of the fracture specimens were examine using the Scanning Electron Microscope (SEM). As a result, the 15/15 fibre ratio composite had the highest tensile and flexural strength. Addition of kenaf fibre improve the mechanical properties of the composites and increase the potential of PALF fibre as filler for future natural fibre applications.