

Dynamic Mechanical Thermal Properties of Arenga pinnata Fibre Reinforced Epoxy Composite: Effects of Alkaline Treatment

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Abstract : In present investigations, thermal behaviours of Arenga pinnata fibres prior and after alkaline treatment were studied. The alkaline treatments were applied on the Arenga pinnata fibres by immersing in the alkaline solution, 6% sodium hydroxide (NaOH). Using hand lay-out technique, composites were fabricated at 20% and 40% by Arenga pinnata fibres weight contents. The thermal behaviours of both untreated and treated composites were determined by employing Dynamic Mechanical Analysis (DMA). The results show that the TAP owned better results of Storage Modulus (E'), Loss Modulus (E'') and Tan Delta temperatures ranges from 0°C to 60°C.

Keywords : composites, Arenga pinnata fibre, alkaline treatment, dynamic mechanical properties

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