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Effect of Fiber Content and Chemical Treatment on Hardness of Bagasse Fiber Reinforced Epoxy Composites

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Abstract : The present experimental study focused on the hardness behavior of bagasse fiber-epoxy composites. The relationship between bagasse fiber content and effect of chemical treatment on bagasse fiber as a function of Brinell hardness of bagasse fiber epoxy was investigated. Bagasse fiber was treated with sodium hydroxide followed by acrylic acid before they were reinforced with epoxy resin. Compared hardness properties with the untreated bagasse filled epoxy composites. It was observed that Brinell hardness increased up to 15 wt% fiber content and further decreases, however, chemical treatment also improved the hardness properties of composites.

Keywords : bagasse fiber, composite, hardness, sodium hydroxide
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