

عنوان مقاله:

Experimental Study on Mechanical Properties of Randomly Oriented Natural Fiber Hybrid Composites

محل انتشار:

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خلاصه مقاله:

Natural fibers such as banana, sisal, snake grass, coir, hemp, jute and so on are armed with enormous advantages like less weight, reliability, recyclability and environmental friendly nature. Such fibers may enhance the system's performance by acting as additives with the thermoplastics in different perspectives. Besides the natural composites, hybrid composites facilitate the design of material with specific property matched to an application. In the present work an attempt has been made to manufacture and test the banana and snake grass short fiber reinforced hybrid polyester composites in random orientation and random lay-up. Methyl Ethyl Ketone Peroxide was used as the coupling agent and Cobalt Naphthalene as the catalyst. Hand layup technique was used to manufacture the composites. Relative volume fraction of the fibers was varied between 2.5-12.5% in the ratio 1:1. Properties like tensile strength and modulus, flexural strength and modulus are measured for the composites by conducting the appropriate tests according to ASTM standards.

کلمات کلیدی:

Hybrid composite, Mechanical properties, modulus, Natural Fiber, polyester, Strength

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