044-MAT

Processing and characterization of Natural fiber reinforced polymer composites

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Composite materials are widely adopted in many different industries because of several unique features as lightweight, high strength, corrosion and chemical resistance, elastic properties, etc. Natural fibers reinforced polymer composite materials can be classified as special class of materials that seek to remedy most of the environmental and economic issues regarding synthetic fibers reinforced composites. An important benefit of using fillers is the reduction of cost by replacing portion of polymer with a less expensive material. Straw fibers are generally produced in large amount throughout the world. Straw fibers are considered as waste and nearly half the straw is simply burned on the fields just to get rid of it. The effect of adding rice straw, calcium carbonate (CaCO3) and talc powder on Polyester with different filler weight fractions was studied. Tensile, flexural, and compression tests were performed to determine and compare the mechanical properties of different natural fiber reinforced polyester.