

عنوان مقاله:

Investigating the Effect of Fabric Surface Texture in the Tensile Properties of Hemp/PLA Bio-Composites

محل انتشار:

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خلاصه مقاله:

Nowadays, the use of biocomposites as a worthy alternative to traditional synthetic fiber-reinforced plastics is increasing dramatically. Despite this, the high dependence of the material properties on different parameters is considered as one of the greatest challenges of using these composites in real industrial applications. The characteristics of bio-composites are influenced by a number of variables including the type of fibers, fabric surface texture, environmental conditions, manufacturing methods, etc. In this study, the tensile properties of three different types of woven hemp fabric reinforced Poly Lactic Acid (PLA) composites were experimentally studied. The results show that the physical properties of natural reinforcement such as fabric surface texture can significantly affect the mechanical properties of these bio-composites. In addition, it was found that the tensile properties of hemp/PLA bio-composites increase with the increased fineness of the fabric surface texture.

کلمات کلیدی:

Biocomposites, Hemp fibers, Polylactic acid, Fabric surface texture, Tensile properties

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