

Abstract

The effect of wheat straw and wood industrial fiber size, content and characteristics on the properties of wood – plastic compositions investigated. For this purpose industrial wood chip and wheat straw was milled and screened to the desired size (30, 50, 70 mesh). Anatomy structure and chemical composition of wheat straw were studied. The flour of wood and straw, wheat flour and polypropylene and compatibilizer mixed by extruder mill and then the test samples by using of injection molding method were made. And mechanical properties included the tensile, flexural and impact and the Physical properties such as water absorption and thickness swelling were measured in accordance with ASTM standard test methods. A scanning electron microscope imaging (SEM) were performed to interpret the results. The results showed the thickness swelling and water uptake values were increased and mechanical properties were decreased by using wheat straw. All physical and mechanical properties of composites were improve whit increase particle size from 70 mesh to 30 mesh the SEM image showed the inter face bet wean matrix and rein for cement natural was improve by using compatibilizer.

Key words: Wood plastic composite, Wheat straw, Mechanical properties.



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**Effects of wheat straw and wood
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