PROPERTIES OF PARTICLEBOARD FROM OIL PALM FROND FOR EXTERIOR USE

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ABSTRACT

PROPERTIES OF PARTICLEBOARD FROM OIL PALM FROND (*Elaies guineensis*) FOR EXTERIOR USE

Due to the depleting number of logs or forest resources, panel products such as particleboard were used widely in the furniture manufacturing industries. Malaysian government encouraged the used of agricultural waste such as rice husk and oil palm biomass which include oil palm trunk (OPT), empty fruit bunch (EFB) and oil palm trunk (OPF). This study was conducted to determine the mechanical and physical properties of particleboard made from OPF and to know whether it is suitable to be used for exterior purposes. The particleboards were differing in terms of their particle sizes and the resin content. The particle sizes used were 0.5mm and 1.0mm, whereas the resin content used were 7% and 9%. A few tests were done in order to determine the physical and mechanical properties of the particleboards. The tests were made based on European standard (BS EN). The MOR and MOE showed increasing value with increasing particle size and resin content. The internal bonding was stronger with decreasing particle size and increasing resin content. The physical properties showed improvement with decreasing particle sizes and increasing resin content.