EFFECT OF PARTICLE SIZE ON MOULDED PARTICLEBOARD FROM OIL PALM FROND (*Elaeis guineensis*) WITH DENSITY 700 Kg/m^3 AND 15% RESIN CONTENT

By

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ABSTRACT

Particleboard is one of many woods composite. Today, this panel is the most popular engineered wood for worldwide since this tremendous industrial replaces plywood for building construction. Oil palm frond from oil palm tree (*Elaies gueneensis*) is selected to know the properties of particleboard and which one size of particle is suitable for particleboard manufacturing. It is included 1st, 2nd and 3rd hammer mill. The testing on the board are bending strength, internal bond, thickness swelling, water absorption, density profile and moisture content. From this testing, the bending strength is higher with larger particle size. The value for internal bond is higher with smaller particle size. Thickness swelling and water absorption is increase with an increase the particle size. After compared with JIS Standard, all samples are passing with standard data.