RELATIONSHIP OF BOARD DENSITY AND RESIN CONTENTS TOWARDS THE PARTICLEBOARD PROPERTIES FROM WEATHERED OIL PALM TRUNK

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I hope this paper will give benefit to all of wood industry especially particleboard industry in order to found new raw material in making particleboard.

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ABSTRACT

RELATIONSHIP OF BOARD DENSITY AND RESIN CONTENTS TOWARDS THE PARTICLEBOARD PROPERTIES FROM WEATHERED OIL PALM TRUNK

In this study, the influences of density and resin content (RC) on mechanical and physical properties of particleboard manufactured from weathered oil palm trunk raw materials were determined. Weathered trunk of Oil palm *(Elaeis guineensis Jacq.)* was used as alternative raw materials for particleboard manufacturing. Variable factors were as resin content (7, 9 and 11%) and density (500, 600 and 700kg/m^3). The experimental panels were tested for their mechanical strength including modulus of rapture (MOR), modulus of elasticity (MOE), internal bonding (IB) and physical properties thickness swelling (TS) and water absorption (WA) were determine based on British European (BS EN) standard. Mechanical properties and physical properties strength of particleboard were increased toward density of board and resin contents used were increased.