MECHANICAL AND PHYSICAL PROPERTIES OF WOOD CEMENT BOARD FROM OIL PALM TRUNK AND RICE HUSK IN RELATION TO PARTICLES:CEMENT RATIO

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MECHANICAL AND PHYSICAL PROPERTIES OF WOOD CEMENT BOARD FROM OIL PALM TRUNK AND RICE HUSK IN RELATION TO PARTICLES:CEMENT RATIO

An experimental study was conducted to determine the physical and mechanical properties of Wood Cement Board (WCB) made from Oil Palm Trunk (*Elaies guineensis Jacq*.) and Rice husk particles. Different particles: cement ratio (1:2.5, 1:2.75 and 1:3.0) was applied. The target board density was set at 1300 kg/m^3. The mechanical (bending test and internal bonding test) and physical (water absorption test and thickness swelling test) properties of the WCB were evaluated. From this study, it showed that there is a highly significant difference on the physical and mechanical properties of WCB on the effect of different material. The result for internal bonding (IB), water absorption (WA) and thickness swelling (TS) of WCB from OPT meet the requirement standard of MS544:2001. Moreover, based on the application of different wood cement ratio, there is no significant difference for all testing except for internal bonding (IB) test. However, the result showed that mechanical and physical properties of WCB increase as the increasing of cement ratio.