KENAF CORE PARTICLEBOARD BASED ON PHYSICAL, MECHANICAL AND ACOUSTIC PROPERTIES

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CANDIDATE'S DECLARATION

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ABSTRACT

KENAF CORE PARTICLEBOARD BASED ON PHYSICAL, MECHANICAL AND ACOUSTIC PROPERTIES

In this study, manufacturing Kenaf *(Hibiscus cannabinus L.)* core particleboards were carried out. Objective of this study was to evaluate the properties of Kenaf core particleboard. All the boards were manufactured with three different densities of 500kgm^{-3}, 600kgm^{-3} and 700kgm^{-3} at two percentages of urea formaldehyde which are 8% and 10%. 30 boards were produced and cut to the dimension according to 3 types of test which includes physical, mechanical and acoustic. (Acoustic characteristic was tested to evaluate the ability of Kenaf core particleboard to absorb the noise in sound.) Based on the study, it was found that the increase of resin content and density caused an improvement in the mechanical and physical properties of the boards. However, it differs with its acoustic properties that show that the lowest density shows an increase in acoustic properties while resin content gives no significant effect towards the board's properties. This kind of board also had it weakness in damp condition. Thus, improvements towards moisture resistance properties need to be done in further research to cover the lack in this particleboard.

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