PROPERTIES OF ORIENTED STRAND BOARD (OSB) FROM *ACACIA MANGIUM* WITH DENSITY OF 800 KG/M^3

SITI AISHAH BT MUHAMAD

DIPLOMA IN WOOD INDUSTRY
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By

SITI AISHAH BT MUHAMAD

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Advisor : **En Wan Mohd Nazri Bin Wan Abdul Rahman**

Faculty : **Applied Science**

Oriented Strand Board (OSB) is a new type of wood composite, which is yet to be commercially produced in Malaysia. In this study, *Acacia mangium* was selected as a raw material. This species was selected because to identify either *Acacia mangium* is suitable or not in the production of OSB with high density. Normally, *Acacia mangium* have density of 450 kg/m³ - 690 kg/m³. The objective of this study is to determine the strength properties that include Modulus of Elasticity (MOE), Modulus of Rupture (MOR), and Internal Bond (IB), percentage of thickness swelling (TS) and also percentage of water absorption (WA). This study using 800 kg/m³ density with 7% resin content to determine and identify the strength properties comparable with Europe Standard EN 310 whether suitable or not economical to commercialized.