

**PROPERTIES OF ORIENTED STRAND BOARD MANUFACTURE FROM 8
YEARS OLD PETAI BELALANG (*Leucaena leucocephala*) IN RELATION TO
STRAND SIZE AND RESIN CONTENT**

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ABSTRACT

PROPERTIES OF ORIENTED STRAND BOARD (OSB) MANUFACTURE FROM 8 YEARS OLD PETAI BELALANG (*Leucaena leucocephala*) IN RELATION STRAND TO SIZE AND RESIN CONTENT

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Oriented Strand Board (OSB) is one of many wood composites. The objectives for this study are to determine the mechanical and physical properties of OSB with different grain either major or minor axis from this species. Besides, to study the effect of strand size and resin content of the OSB properties. The testing on the board are bending strength include Modulus of Rupture (MOR) and Modulus of Elasticity (MOE), internal bonding and thickness swelling. Also, compare the strength between minor and major axis. The result of these specimens will be compared to the minimum requirement of European Standard (EN 310). This study is using 5% and 7% resin with 41.8% solid content of phenol formaldehyde that act as binder between strands and the target density is 700kg/m^3 . OSB will get an optimum result is using 7% resin at the 700kg/m^3 density and largest strand size which is treatment S1+S2. Compare between major and minor axis, major more strength because of direction of strands is parallel to the grain. From these results, we had determined which one of the treatments is suitable to be commercialized or not.