THE STRENGTH PROPERTIES OF ORIENTED STRAND BOARD (OSB) FROM *ACACIA MANGIUM* AT 500 KG/M^3, 600 KG/M^3 AND 700 KG/M^3 DENSITY WITH 7% RESIN CONTENT.

BY

NORHIDAYAH BT MOHAMAD AKHIAR

Final Project Submitted in partial Fulfillment for the Diploma in Wood Industries,
Faculty of Applied Science,
Universiti Teknologi Mara, Caw. Pahang

Mac 2004

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THE STRENGTH PROPERTIES OF ORIENTED STRAND BOARD (OSB) FROM *ACACIA MANGIUM* AT 500 KG/M³, 600 KG/M³ AND 700 KG/M³ DENSITY WITH THE PERCENTAGE OF 7% RESIN CONTENT.

By

NORHIDAYAH BT MOHAMAD AKHIAR

MARCH 2004

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

Faculty: **Applied Science**

Oriented Strand Board (OSB) from *Acacia Mangium* is one of wood composite panel which have most similar strength properties with plywood. The strength properties was include Modulus of Elasticity (MOE), Modulus of Rupture (MOR), Internal Bond (IB), percentage of thickness swelling, and also percentage of water absorption. The purpose of this study is to determine the strength properties of OSB using plantation tree that was *A. mangium* as a raw material. This species have interesting physical properties and the density is about 450-690 kg/m³. These properties are the factors why this study was made and to determine whether *A.mangium* is suitable or not in the production of OSB. This trial using 7 % resin content with the different densities that are 500 kg/m³, 600 kg/m³ and 700 kg/m³ density is to determine and identify the strength properties to make comparable with Malaysian Standard whether suitable to commercialize it or not.