

**THERMAL PROPERTIES OF CEMENT BONDED
PARTICLEBOARD FROM PETAI BELALANG
(*Leucaena leucocephala*) WITH DIFFERENT
PERCENTAGE OF WASTE PAPER SLUGE ASH
(WPSA)**

SITI NASUHA BT MOHD RAFIEN

**BACHELOR OF SCIENCE (Hons.) PHYSICS
FACULTY OF APPLIED SCIENCES
UNIVERSITI TEKNOLOGI MARA**

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ABSTRACT

THERMAL PROPERTIES OF CEMENT BONDED PARTICLEBOARD FROM PETAI BELALANG(*Leucaenaleucocephala*) WITH DIFFERENT PERCENTAGE OF WASTE PAPER SLUGE ASH (WPSA)

A standard procedure has been used in this study in measuring the thermal conductivity of Cement Bonded Particleboard (CBP) from *Leucaenaleucocephala* or locally known as PetaiBelalang as wood particle and incinerator Waste Paper Sludge Ash (WPSA) from paper industry as a cement replacement in CBP manufacturing. Three differents of percentage WPSA (10%, 20% and 30%) were used for the CBP mixtures. The measured thermal conductivity of CBP is significantly affected by the percentage of WPSA. The result showed that, the higher percentage of WPSA can reduce the thermal conductivity of CBP. The effects of using different percentage of WPSA on the thermal properties of the resulted CBP boards were investigated.

Keywords: Cement Bonded Particleboard, *Leucaenaleucocephala*