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

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JULY 2013

ACKNOWLEDGMENT

First of all I would like to thank Allah, the Lord Almighty for giving me this wonderful opportunity to enhance my knowledge and thinking ability through pursing this degree. This thesis would not have been written without the help, advice, guidance and information given so willingly by very many people. Their names are endless. Here, I wish to express my sincere gratitude to my honorable supervisor, En Nazree b. Ahmad, for introducing me to the field of research and guiding me throughout this work.I learn a lot from him about thermal conductivity that make me interest in this field. I would like to express my sincere thanks to DrMarzuki b. Ab.Rahman who help with supplying material and give more information about the material.

I would also like to express my real appreciation and thanks to the followings for their help with technical problems En MuhamadSukri b. Muda, En MohdFaidzal b. Mohamed and En Khalid b. Abd. Rahman from Physic laboratory staff, En Rudaini b. Ahmad Nawawi and En Rosli b. Jaafar from Wood Industry Department (WID).

SitiNasuhabtMohdRafien.

TABLE OF CONTENTS

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*