MECHANICAL PROPERTIES OF WOOD PLASTIC COMPOSITE FROM KELEMPAYAN SPECIES (*Neolamarckia cadamba*)

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FINAL YEAR PROJECT PAPER SUBMITTED IN PARTIAL FULFILLMENT FOR THE REQUIREMENT OF DIPLOMA IN WOOD INDUSTRY

FACULTY OF APPLIED SCIENCES
UNIVERSITY TEKNOLOGI MARA
2012

ACKNOWLEDGEMENT

Alhamdulillah, first of all, we would like to take this opportunity to express our thanks to Allah S.W.T for His Blessing and Strength that allow us to complete our final year project successfully.

Our special thanks to our beloved parents because of their prayers for our success continuosly. We also would like to dedicate our thanks to our project advisor, En. Mohd Sukhairi bin Mat Rasat because of his guide and lesson helping us at every phase of this study till this project completed. Meanwhile, we also have to appreciate to Prof. Madya Hj Abdul Jalil bin Hj Ahmad for his entire lesson in finishing this final year project paper and we could not finish this project without his generous in lending knowledge and shows us where we done wrong.

Also special thanks to all of the staff in Wood Industry department for their priceless help in preparing and giving information for us in this research. Besides that, our special thanks to our entire fellow friend because of their continuous support, ideas and helping us to complete this project paper. Finally, our special appreciation to those who are involving either directly or indirectly in completing this project paper.

Thanks you.

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ABSTRACT

MECHANICAL PROPERTIES OF WOOD PLASTIC COMPOSITE FROM KELEMPAYAN SPECIES (*Neolamarckia cadamba*)

This research was producing wood plastic composite from Kelempayan species (*Neolamarckia cadamba*) wood dust. Wood plastic composite from Kelempayan species produced from two types of ratio (30:70 and 10:90) between sawdust (Kelempayan species) and plastic (Polypropylene) with the size of sawdust were 250 and 75 µm. Mechanical testing were conducted in this research for bending and tensile strength. The result showed that sawdust from 75 µm in size with ratio of 30:70 between sawdust and plastic is most suitable in producing wood plastic composite. It was concreted by bending testing that shown the wood plastic composite is very strength from 75 µm in size with ratio of 30:70 between sawdust and plastic compare to the others. By using more Polypropylene (PP) in wood plastic composite can give advantage to the sawdust to bind each other with PP. The result of tensile testing also showed that the right amount of plastic and sawdust, could produce the board in extra strength and elasticity. Generally, using sawdust from 75 µm in size with the ratio of 30:70 between sawdust and plastic is the most suitable percentage in mixing both of them for making the best wood plastic composite from Kelempayan species (*Neolamarckia cadamba*).