WOOD PLASTIC COMPOSITE FROM RESAM(*Dicranopteris linearis*): EFFECT OF MAPP, FILLER LOADINGS AND PARTICLE GEOMETRY

BY

NOR HIDAYAH BINTI ISMAIL
NUR ATIQAH BINTI HAJI MOHD ZAHAR
SERI RUKIAH BINTI HAJI MOHAMAD FARID

Final Project in Partial Fulfilment for the Diploma in Wood Industries, Faculty of Applied Science, Universiti Teknologi MARA

April 2008

ACKNOWLEDGEMENT

Alhamdulillah….. After all the hardness and obstacle, with the god will, we finally managed to finish this project. It is not easy to complete this project. But with all the guidance and thought from all people, and of course with the permission from Allah s.w.t, this project is finally completed.

First of all, we would like to thank our beloved advisor, Tn Shaikh Abdul Karim Yamani bin Zakaria (Pak Shaikh) for all of his thought and guidance. He had been with us all the time since from the early stage of our project. He never failed to guide us and give his support to us. Thank you very much, Pak Shaikh. Without the support and guidance from him, it is impossible for us finish this project.

Secondly, lots of thank to all the workshop's staff especially En. Akso as he was the one who brought us to find the raw material. Thank you very much. Not forgotten also to En. Sardey which have been helping and guiding us all the way to complete our project.

Thirdly, we would like to thank Prof Madya Dr Jamaludin B Kasim that had been guiding us in writing of the thesis. Only god that can return a compliment towards all of your kindness.

Last but not least, we also would like to thank our entire friend that had been helping us towards completing this task.

Lastly, we hope that this thesis will provide knowledge and bring benefits to everyone. All the goodness comes from only HIM, while weakness is from us.

TABLE OF CONTENTS

WOOD PLASTIC COMPOSIT FROM RESAM: EFFECT OF MAPP, FILLER LOADING AND PARTICLE GEOMETRI

By

NOR HIDAYAH BT ISMAIL
NUR ATIQAH BT MOHD. ZAHAR
SERI RUKIAH BT MOHAMAD FARID

APRIL 2008

ABSTRACT

The properties of wood plastic composite from Resam with addition of MAPP, different amount of fillers and particle size loaded to the board was ascertained. The amount of MAPP added are 0%, 1.5% and 3.0%, the amount of fillers loaded are 5%, 10%, and 15% while particle size used are 250μm, 150μm, 75μm and fines. Tensile test, bending test, impact, water absorption and thickness swelling test had been carried out to determine the physical and mechanical properties and hence determine the suitability of Resam to be used as fillers in the production of thermoplastic composites. From the test done, it shows that higher amount of MAPP added will increase the property of the board while the less the fillers are loaded the stronger the board will be and finally board produced by 250μm particles will result in better properties.