

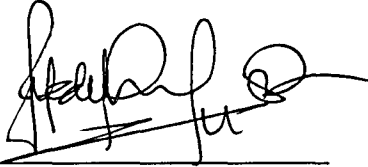
**EVALUATION OF INTERNAL PROPERTIES OF
BAMBOO PARTICLEBOARD USING
COMPUTERIZED RADIOGRAPHY TESTING**

ABU BAKAR BIN DAUD

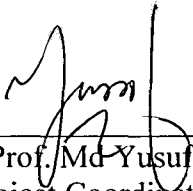
**Final Year Project Report Submitted in
Partial Fulfilment of the Requirements for the
Degree of Bachelor of Science (Hons.) Physic
in the Faculty of Applied Sciences
Universiti Teknologi MARA**

JANUARY 2012

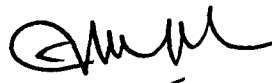
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ACKNOWLEDGEMENTS

In the name of Allah, The Compassionate and The Most Merciful

Alhamdulillah and very thankful to the Almighty Allah for giving me the strength to prepare and accomplish this thesis proposal on the right track of time. I would like to take this opportunity to give a very special thank to Dr. Syed Yusainee Syed Yahya as my supervisor in this project because giving me a guide in order to proceed this project. Special thank to my co-supervisor Dr Khazali Hj Mohd Zin and Mr. Amran Shafie for giving a lot of commitment to help me done this project. Furthermore, a thank you to all NDT staffs in SIRIM Berhad especially Miss Salwani Omar and Mr Najwan Halid those are giving me inspiration and also guidance in completing this project. I also would like to thank all my lectures and friends that give full support by directly or indirectly to finish it right on the time. Then, to my family thank for the moral support and spiritual surrounding in order to be a successful person in all wide range of my work.

Thank you.

ABU BAKAR BIN DAUD

ABSTRACT

EVALUATION OF INTERNAL PROPERTIES OF BAMBOO PARTICLE BOARD BY USING CRT

The aim of this research is to evaluate internal properties of bamboo particle board such as density and thickness weather it is effect or not the exposure time of x-ray to penetrate the samples by constructing exposure chart. The particle board was made based on the three density level which is 700kg/m^3 , 800kg/m^3 and 900kg/m^3 . Each density consist of six different thickness which is 10, 20, 30, 40, 50, 60 mm. Then the sample was exposed to the x-ray source using both conventional radiography as a test shoot and CRT for construct the exposure chart by setting the source-to-film (SFD) and current(mA) to be constant. Then, by varied the penetration power of x-ray tube and thickness of the samples, the radiographic images produced was then evaluated using densitometer for conventional and D-Tech Software for CRT in order to determine the film density. When the film density is in the range of 1.9 to 2.0, then exposure chart of each density was constructed. This exposure chart show the exposure time is directly proportional to the thickness of the sample and inversely proportional to the penetration power. From the exposure chart the best penetration power in this study was found to be 80 kV.

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