BENDING CURVATURE ANALYSIS OF RUBBERWOOD (*Hevea Brasiliensis*)

By

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Thesis Submitted In Partial Fulfillment of the Requirement for the Degree of Bachelor of Science (Hons) In Furniture Technology, Faculty of Applied Science, Universiti Teknologi MARA

October 1999

ACKNOWLEDGEMENT

Alhamdulillah, the writer would like to express his deep sincere to Allah swt. with the strength and ability given to complete this study. Thanks to Encik Said Ahmad as the first advisor, for his ideas, constructive and suggestion throughout the course of undertaking this project.

In the course of researching and preparing this thesis, he is also indebted to my second advisor, Encik Zaihan Jalaludin, a Research Officer of FRIM who has helped him and kindly share all the information about wood bending.

The co-operation of FRIM in providing the raw materials, permission to use all the machinery and equipment to conduct the project is gratefully acknowledged. Similarly to other Research Officers, lot of thanks to Encik Tarmizi Mustafa from the Wood Preservation Department, Dr. Tan Yu Eng of Glue Lamination Laboratory and Encik Emlee Abdullah from the Seasoning Department who have helped him in completing this research. The writer wishes to profound appreciation and thanks to all Research Assistants and person who direct or indirectly support him during the attempting of the experiment.

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The development of furniture industry in Malaysia has expanded lately. This factor has been stressed by the Government several times to ensure that priorities are given to this industry focusing on rubberwood. Rubberwood is a famous Malaysian timber, which is also known as *Hevea Brasiliensis*. The raw materials has been made possible taken from Klang, Selangor which was then sent to FRIM to be processed as sawntimber. The main objectives of this study is to determine the bending tolerance of Rubberwood at different thickness, the correlation between thickness and boiling time to bending tolerance and to find out the degree of spring back of different thickness at two condition which include the conditioning chamber and workshop condition. This study was to observe the level of changes of the curvature for Rubberwood. It involved species of the same length and width of measurement (600mm x 60mm) and with four different thickness (15mm, 20mm, 25mm and 30mm). The degree of curvature 500 radius was fixed on moulder and supported by metal strap. Soaked species in boiling water 100°C (water temperature) was used as a method to softening the samples with a 20 minutes and 40 minutes of boiling time. All the samples were observed directly for five days at two different conditions. First, at the setting relative humidity under the conditioning chamber, which was set and controllable, and the second condition referred to the natural temperature at the workshop or the store, which was uncontrollable. The result obtained through the direct observation has resulted where the changes of high curvature happened at the workshop condition (opened relative humidity). Among the factors that influence the changes are place, thickness and duration of day. The failure of wood bending is caused by moisture absorption that increases moisture contents in the wood. In addition, both the soaking times had given best quality to the surface performance of thickness especially to the samples of 15mm, 20mm and 25mm. Therefore, the sample with 25mm thickness of wood bending is the most suitable to be used by manufacturers as furniture parts.