

**PREFABRICATED WOOD I-JOIST FROM KERUING (*Dipterocarpus spp.*)
FLANGES AND PLYWOOD (*Hevea brasiliensis*) WEB**

By

MOHD AZRI BIN AZMY

**Final Paper Project Submitted in fulfillment of the Requirements for the
Diploma in Wood Industries in the Faculty of Applied Science
Universiti Teknologi MARA**

April 2001

ACKNOWLEDGEMENT

I would like to express my deepest appreciation and sincere gratitude to my supervisor, En. Wan Mohd Nazri Bin Wan Abdul Rahman and committee member Assoc Prof. Dr. Jamaludin Kasim, Dr. Suhaimi Mohammad and my friends Mohd Rosdy Fauzi and Mohd Nadmin Md Hassan for their unfailing help, support and guidance throughout the progress of the study.

His sincere thanks to Assoc Prof. Abdul Jalil Bin Ahmad, En. Sardy and En. Anuar for their guidance and assistance in operating kiln dry. My greatest appreciation also to Forestry Department, Mentakab Veneer and plywood and FRIM (Forest Research Institute Malaysia) for the cooperation rendered that made the study possible.

The author also wishes to thank all my friends who in one way or another contributed supports and this opinion to completion of my study.

Finally, the special wishes goes to my beloved my parents for their moral and financial support throughout the years of my study.

May Allah S.W.T bless us all.

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Wood I-joist is a system that consist of flange and web component. Both components have work together as a system in order to match the strength property of a solid wood beam. The objective of the study is to obtain strength properties of prefabricated wood I-joist made from L-butt jointed web (Plywood : *Hevea brasiliensis*) and *Dipterocarpus spp.* flanges which used PRF (Phenol Resorcinol Formaldehyde) adhesive as a joint binder. The I-joist was combine with synthetic materials, resulting in lightweight, strong and environment-friendly building materials. The average of modulus of rupture (MOR) for the study was 15.4 MPa and the average value of modulus of elasticity (MOE) was 15,961 MPa. As the conclusion to this study, plywood web and solid wood flanges as an I-joist system cannot perform as a system.