

DESIGN OF A GLUE LAMINATED TIMBER PORTAL FRAME STRUCTURE

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ABSTRACT

Glue laminated structure industry is a potential secondary industry for Malaysia since it permits an effective and efficient utilization of our timber resources. Although, the portal frame structures for industrial buildings are designed using steel, it also can be designed by using timber, and the main purpose of this project is to design a glue laminated timber portal frame structure to show that the timber portal frame can also be used for the industrial building.

This report is suitable for those novice readers who are interested and have no ideas on the glue laminated timber portal frame structures and its structural design. Besides that, this report is concentrated on designing a simply three hinged Tudor portal frame that includes an effective design example presented to readers such as design procedures, engineering drawings, effective way to calculate the loading and moment act on the structure and so forth. All this information is provided to let the readers know more about the structure. Readers who have gone through this report will have a better understanding on glue laminated timber portal frame structure. This report also can be used as reference and guideline to designer who prefer to design other types of three hinged timber frame besides the one mentioned above using the same principle, which is stated in this report.