

UNIVERSITI TEKNOLOGI MARA

**STRUCTURE DESIGN AND STRENGTH ANALYSIS
OF MALAY FISHING BOAT**

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ABSTRACT

Fishing boat structure design is a complex and challenging process that must consider a wide range of factors, including the type of fishing to be done, the size and weight of the boat, the materials available, and the budget. Malay fishing boats' traditional structural designs may not completely meet with new safety regulations, exposing fishermen to higher hazards at sea. This raises questions regarding the structural integrity and safety of these vessels in a variety of environments. Traditional materials and strength of the material used in Malay fishing boat construction may not fulfil current maritime engineering standards. This constraint could affect the boats' overall strength and lifetime, impacting their performance and safety. This study will be based on the structural and strength factor for the boat, and the construction standard that meet the requirement provided. The objective for this project is to design the framing structure of Malay fishing boat based on FRP construction standard and analyse the strength of structure design of the Malay fishing boat. Methodology that included in this research is based on article that and research. There is also inclusion of Rhino software to create the 3D model of the boat. The findings on this research are that the new material and arrangement on the boat can provide a better fishing vessel. Conclusion is this study has achieved its objective. The study for this project manages to improve the structural and strength of Malay fishing boat. The structure for the boat is much durable with the addition of the new material. The strength also improved with the improvised frame. The factor safety that obtained are aligned with the motives of this project. However, this study does not provide a proper simulation of the boat on the sea and does not include a real test in real life.

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