

A STUDY TO DETERMINE THE SUITABLE "PASAK" SIZE ON
38.10mm PLANK THICKNESS FOR CONSTRUCTION OF
TRADITIONAL FISHING BOAT IN TERENGGANU

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A STUDY TO DETERMINE THE SUITABLE “PASAK” SIZE ON
38.10 mm PLANK THICKNESS FOR CONSTRUCTION OF
TRADITIONAL FISHING BOAT IN TERENGGANU

By
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A thesis submitted in partial fulfilment
of the requirements for the award of the degree of
Bachelor of Applied Science (Maritime Technology)

DEPARTMENT OF MARITIME TECHNOLOGY
FACULTY OF MARITIME STUDIES AND MARINE SCIENCE
UNIVERSITI MALAYSIA TERENGGANU
2013



DEPARTMENT OF MARITIME TECHNOLOGY

FACULTY OF MARITIME STUDIES AND MARINE SCIENCE
UNIVERSITI MALAYSIA TERENGGANU

**DECLARATION AND VERIFICATION REPORT FINAL YEAR
RESEARCH PROJECT**

It is hereby declared and verified that this research report entitled: A Study To Determine The Suitable "Pasak" Size on 38.10 mm Plank Thickness For Construction Of Traditional Fishing Boat by W. Muhamad Mursyid Bin W. Razali, matric number UK21544, have been examined and all errors identified have been corrected. This report is submitted to the Department of Maritime Technology as partial fulfillment towards obtaining the degree of Bachelor of Applied Science (Maritime Technology), Faculty of Maritime Studies and Marine Science, Universiti Malaysia Terengganu.

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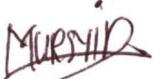
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DECLARATION

I hereby declare that this thesis entitle "A Study To Determine The Suitable "Pasak " Size On 38.10 mm Plank Thickness For Construction Of Traditional Fishing Boat In Terengganu" is my own research except as cited in the references.

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ABSTRACT

Traditional fishing boats are still used in Terengganu. Its main purpose is to catch the fish. Although traditional fishing boats are still in use, but the fact is the amount of boat builder or "Tukang Timbal" is getting depleted. The construction of traditional fishing boats in Terengganu is quite unique because using the "Pasak" to make the boat hull and rather than using nails.

In construction of traditional fishing boat, the use of size of "Pasak" is depend on the thickness of the plank that used to make the hull of boat. Usually, the boat builder only using one type size of "Pasak" which sized is 10.76 mm for plank thickness is 38.1 mm for the making of the boat hull, whereas there are three different sizes of "Pasak". And this has given rise to doubts and problems which are the size of pegs used are appropriate to the thickness of the plank used because there is no scientific evidence to prove the problem.

There are two objectives of this study which is to study and analyze the strengths "Pasak" through several tests such as static bending tests, tensile tests and compressive test and to determine the suitable size of "Pasak" for plank thickness is 38.1 mm.

There are seven types of methodology were used for this study which is surveys, interviews, observations, computer software, field work which include the process making the "Pasak" and the process making the samples, laboratory work which include the three types of tests such as static bending test, compressive test and tensile test, and the lastly is analyze the data.

By through this methodology, the both objectives of this study were achieved and the results clearly show that what is practiced by the boat builders to use size pegs 10.76 mm for 38.1 mm thickness of plank is correct and accurate.

ABSTRAK

Bot nelayan tradisional masih lagi digunakan di Terengganu. Tujuan utamanya adalah untuk menangkap ikan. Walaupun bot nelayan tradisional masih digunakan, tetapi hakikatnya jumlah tukang timbai atau pembuat bot nelayan tradisional ini semakin berkurangan. Pembinaan bot nelayan tradisional di Terengganu adalah cukup unik kerana menggunakan kaedah pasak untuk membuat badan bot dan bukannya menggunakan paku.

Dalam pembinaan bot nelayan tradisional ini, penggunaan saiz "pasak" adalah bergantung kepada ketebalan papan yang digunakan untuk membuat badan bot. Kebiasaanya, pembuat bot hanya menggunakan satu jenis saiz pasak iaitu 10.76 mm untuk ketebalan papan 38.1 mm bagi membuat badan bot, sedangkan terdapat tiga lagi saiz pasak yang berbeza. Dan ini telah menimbulkan keraguan dan permasalahan dimana adakah saiz pasak yang digunakan adalah sesuai dengan ketebalan kayu yang digunakan kerana tidak terdapat bukti saintifik untuk membuktikan permasalahan tersebut.

Terdapat dua objektif dalam kajian ini iaitu untuk mengkaji dan menganalisis kekuatan pasak melalui beberapa ujian seperti ujian lenturan statik, ujian tegangan dan ujian mampatan dan untuk menentukan saiz pasak yang sesuai bagi ketebalan kayu 38.1 mm.

Terdapat tujuh jenis kaedah metodologi yang digunakan dalam kajian ini iaitu tinjauan, temuramah, pemerhatian, perisian komputer, kerja lapangan yang meliputi proses membuat pasak dan membuat sampel, kerja makmal yang meliputi tiga jenis ujian iaitu ujian lenturan statik, mampatan dan tegangan serta yang terakhir adalah menganalisis data.

Melalui kaedah-kaedah metodologi ini, kedua-dua objektif kajian ini telah dicapai dan keputusan jelas menunjukkan bahawa apa yang amalkan oleh pembuat bot iaitu menggunakan pasak bersaiz 10.76 mm untuk papan berketeduhan 38.1 mm adalah betul dan tepat.