

STUDY ON THE CATAMARAN RESISTANCE  
IN THE CALM WATER

MOHD FARHAN BIN KASSIM

FACULTY OF MARITIME STUDIES AND MARINE SCIENCE  
UNIVERSITI MALAYSIA TERENGGANU

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Kassim.

PERPUSTAKAAN SULTANAH NUR ZAHIRAH  
UNIVERSITI MALAYSIA TERENGGANU (UMT)  
21000 KUALA TERENGGANU.

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PERPUSTAKAAN SULTANAH NUR ZAHIRAH UMT

**STUDY ON THE CATAMARAN RESISTANCE IN CALM WATER**

**By**

**MOHD FARHAN BIN KASSIM**

**UK 21485**

**A Project Proposal Submitted in Partial Fulfillment of the Requirements for the  
Bachelor of Applied Science, Maritime Technology**

**DEPARTMENT OF MARITIME TECHNOLOGY  
FACULTY OF MARINE SCIENCE AND MARITIME STUDY  
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: **Study On The Catamaran Resistance In Calm Water** by **Mohd Farhan bin Kassim**, Matric No. **UK 21485** 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 **Bachelor Degree of Applied Science (Maritime Technology)**, Faculty of Maritime Studies and Marine Science, Unitversiti Malaysia Terengganu.

Verified by:

  
DR. ENG. AHMAD FITRIADHY  
LECTURER  
DEPARTMENT OF MARINE TECHNOLOGY  
FACULTY OF MARITIME STUDIES AND MARINE SCIENCE  
UNIVERSITI MALAYSIA TERENGGANU (UMT)  
21030 KUALA TERENGGANU

First Supervisor

Name: **Dr. Eng. Ahmad Fitriadhy**

Official stamp:

Date: 16/01/2013

  
.....

Head of Department of Maritime Technology

Name: **Assoc. Prof. Dr. Mohammad Fadhli bin Ahmad**


Official stamp:

Date: 16/1/13

ASSOC. PROF. DR. MOHAMMAD FADHLI AHMAD  
HEAD  
DEPARTMENT OF MARITIME TECHNOLOGY  
FACULTY OF MARITIME STUDIES AND MARINE SCIENCE  
UNIVERSITI MALAYSIA TERENGGANU (UMT)  
21030 KUALA TERENGGANU

## DECLARATION

I hereby declare that this thesis entitled **STUDY ON THE CATAMARAN RESISTANCE IN CALM WATER** is the result of my own research except as cited in the references.

Signature   
Name : MOHD FARHAN BIN KASSIM  
Matric No. : UK 21485  
Date : 16 JANUARY 2012

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## **STUDY ON CATAMARAN RESISTANCE IN CALM WATER**

### **ABSTRACT**

This study will be about the determination of design and simulation of catamaran. Factor that will be focusing is on catamaran resistance based on difference of separation length of hull and based on difference of hull speed. The factors that will be focusing as written will be diminished into few sub topic such as provide a design by refer to the principal particulars of an existing prototype design available in database. Hull form and simulation for resistance also will be a main part of this study. Five scope of study in this research, which are the resistance of catamaran on the parametric studies. Maxsurf and CFD (Ansys) will be the main tools of this study. Maxsurf is used to generate main catamaran hull while CFD (Ansys) is used to simulate the design created in Maxsurf to assess the catamaran resistance and finally based from above brief explanation the study on the catamaran resistance in calm water will be constructed in well ordered form and can be use for others to review.

## **KAJIAN DI ATAS KETAHANAN CATAMARAN DALAM AIR TENANG**

### **ABSTRAK**

Kajian ini tentang penentuan reka bentuk dan simulasi catamaran. Faktor yang akan diberi tumpuan ialah terhadap rintangan catamaran berdasarkan perbezaan panjang pemisahan badan kapal dan berdasarkan perbezaan kelajuan kapal. Faktor-faktor yang akan diberi tumpuan adalah seperti menyediakan reka bentuk kepada butir-butir utama reka bentuk prototaip yang sedia ada dalam pangkalan data. Bentuk badan kapal serta simulasi untuk rintangan juga akan menjadi sebahagian utama kajian ini. Lima skop kajian yang telah perincikan iaitu rintangan catamaran pada kajian parametrik. Maxsurf dan CFD (ANSYS) akan menjadi alat utama kajian ini. Maxsurf digunakan untuk menjana badan kapal catamaran utama manakala CFD (ANSYS) digunakan untuk reka bentuk yang dicipta dalam Maxsurf menilai rintangan catamaran dan akhirnya berdasarkan dari atas penjelasan ringkas kajian mengenai rintangan catamaran dalam air tenang akan dibina dalam bentuk yang baik dan boleh digunakan untuk orang lain untuk di kaji.