

A STUDY ON MARINE NAVIGATION AIDS FOR SAFETY
PASSAGE AT LUNUT WATERS: LUNUT PORT

ZAMULARIFEEH BIN MOHAMMAD

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1100088512

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PERPUSTAKAAN SULTANAH NUR ZAHIRAH
UNIVERSITI MALAYSIA TERENGGANU (UMT)
21030 KUALA TERENGGANU

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**A STUDY ON MARINE NAVIGATION AIDS FOR SAFETY
PASSAGE AT LUMUT WATERS: LUMUT PORT**

By:

**ZAINULARIFFIN BIN MOHAMAD
UK 20420**

**A thesis submitted in partial fulfillment of the requirements for the
award of the degree of
Bachelor of Science (Nautical Science and Maritime Transportation)**

Department of Nautical Science & Maritime Transportation

Faculty of Maritime Studies and Marine Science

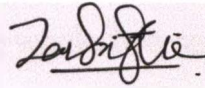
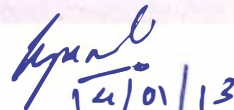
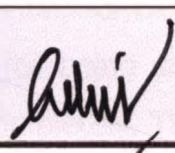
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FACULTY OF MARITIME STUDIES & MARINE SCIENCE

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| | | |
|---|--|--|
| STUDENT'S NAME | ZAINULARIFFIN B MOHAMAD | STUDENT'S ID |
| MATRIC NO. | UK 20420 | |
| CONTACT NO. | 013 4617897 | |
| EMAIL | Enol_zainul89@yahoo.com.my | |
| TITLE | A STUDY ON MARINE NAVIGATION AIDS FOR SAFETY PASSAGE AT LUMUT WATERS: LUMUT PORT | RESEARCH PROJECT |
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| Date & Signature | 13 JANUARY 2013  | MAIN SUPERVISOR |
| DECLARATION | It is hereby declared and verified that this research report has been examined and all errors identified have been corrected. This report is submitted to the Department of Nautical Science and Maritime Transportation as partial fulfillment towards obtaining the Bachelor of Science Degree (B.Sc) in Nautical Science and Maritime Transportation, Faculty of Maritime Studies and Marine Science, Universiti Malaysia Terengganu. | |
| Date, Signature & Official Stamp |  14/01/13 | CAPT. DORA APANDI BIN DAMIN PERTELARAB PROGRAM Jabatan Sains Nautika dan Pengangkutan Maritim FAKULTI PENGAJIAN MARITIM DAN SAINS MARIN UNIVERSITI MALAYSIA TERENGGANU (UMT) 21000 KUALA TERENGGANU |
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| Date, Signature & Official Stamp | | |
| Date, Signature & Official Stamp |  18/01/13 | CAPT. BOND RAJU BIN PABEL, COLT Ketua Jabatan Sains Nautika dan Pengangkutan Maritim FAKULTI PENGAJIAN MARITIM DAN SAINS MARIN UNIVERSITI MALAYSIA TERENGGANU (UMT) 21000 KUALA TERENGGANU |
| Date, Signature & Official Stamp | HEAD OF DEPARTMENT | |

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TABLE OF CONTENTS

Page

| | |
|---|-------------|
| THESIS QUALIFICATION AND VERIFICATION FORM | II |
| ACKNOWLEDGEMENT | III |
| TABLE OF CONTENTS | III |
| ABSTRACT | VII |
| ABSTRAK | VII |
| AKSTRAK | VIII |

| | | |
|------------------|---|-----------|
| CHAPTER 1 | INTRODUCTION | 1 |
| | 1.1 Background of research | 3 |
| | 1.2 Important risk analysis | 4 |
| | 1.3 Problem statement | 4 |
| | 1.4 Research Objectives | 6 |
| | 1.5 Research Scope | 6 |
| | | |
| CHAPTER 2 | LITERATURE REVIEW | 8 |
| | 2.1 Theory of safety | 8 |
| | 2.2 Definition of risk | 10 |
| | 2.3 Theory of risk | 12 |
| | 2.4 Risk management and risk assessment | 14 |
| | 2.5 Safety of navigation | 18 |
| | 2.6 Water transport accident factor | 19 |
| | 2.7 safety and environment of risk | 20 |
| | | |
| CHAPTER 3 | METHODOLOGY | 21 |
| | 3.1 Introduction | 21 |
| | 3.1.2 Locations of the research | 21 |
| | 3.2 Data collection | 23 |
| | 3.2.1 Interviews | 23 |
| | 3.2.2 Observation and Experience | 25 |
| | 3.3 Data Analysis in General | 27 |
| | 3.4 Secondary data | 24 |
| | 3.5 Data for accident and traffic | 25 |
| | 3.6 Risk identification | 26 |
| | | |
| CHAPTER 4 | DATA ANALYSIS | 31 |
| | 4.1 Introduction | 31 |
| | 4.2 Result | 31 |
| | 4.2.1 Interviews with Marine Department | 31 |

| | | |
|-------------------|--|-----------|
| 4.2.2 | Interview with Royal Malaysia Navy | 36 |
| 4.2.3 | Interview with boatman How Wei Boat Service | 37 |
| 4.2.4 | Interview with Lumut Fishermen association | 37 |
| 4.3 | Risk assessment (FSA) | 38 |
| 4.3.1 | Risk analysis | 40 |
| 4.3.2 | Risk of grounding | 41 |
| 4.4 | Risk management issues | 42 |
| 4.5 | Research findings | 45 |
| CHAPTER 5 | DISCUSSION AND RECOMMENDATION | 47 |
| 5.1 | Introduction | 47 |
| 5.2 | First Objective: to study the location of marine navigational aids within Lumut waters. | 48 |
| 5.3 | Second Objective: to analyze the accident happen involving watercraft within Lumut waters | 49 |
| 5.4 | Third objective: To conduct risk analysis assessment regarding aids to navigation system in Selat Dinding. | 49 |
| 5.4.1 | Risk level in Selat Dinding waterways | 49 |
| 5.4.2 | Grounding | 50 |
| 5.4.3 | Sunk | 51 |
| 5.4.4 | Probability of Grounding Accident | 51 |
| CHAPTER 6 | CONCLUSION | 53 |
| 6.1 | Introduction | 53 |
| 6.2 | Conclusion | 53 |
| REFERENCES | | 56 |
| APPENDIX 1 | | 58 |

ABSTRACT

Currently, maritime transportation has become one of the most important components in trading of many countries. In transportation, safety should be the main concern. sea condition is dynamic, navigation will becomes difficult without any navigational equipment or guidance tools. in entering narrow channels or port, the vessel will be assist by marine navigational aids that have been introduce to guide any vessel or watercraft to ensure safety navigation. Aids to navigation such as lighthouses, buoys and beacons constitute a form of marine infrastructure. Their function is both to prevent marine accidents and to facilitate seaborne trade. Somehow, the level of navigational safety depends on a many factors, the present navigational situation, persistence of aids to navigation system, and navigators' skills. The probability of ship collision is one of the indicators in navigational safety level. The availability requirements for the navigational aids, and to assess its future categorization based upon its navigational safety procedure.

AKSTRAK

Pada masa kini, pengangkutan maritim telah menjadi salah satu komponen yang penting dalam perdagangan banyak negara. Dalam pengangkutan, keselamatan harus menjadi kekhawatiran utama. Keadaan laut yang dinamik membuatkan pelayaran menjadi sukar tanpa apa-apa kelengkapan pelayaran atau alat bantuan pelayaran. Apabila kapal memasuki terusan atau pelabuhan, kapal akan dibantu oleh bantuan pelayaran marin yang telah diperkenalkan untuk membimbing mana-mana kapal untuk memastikan keselamatan pelayaran. Alat bantuan pelayaran seperti rumah api, pelampung dan beacon merupakan satu bentuk infrastruktur marin. Fungsinya adalah untuk mencegah kemalangan marin dan untuk memudahkan pelayaran di lautan. Tahap keselamatan pelayaran dipengaruhi oleh banyak faktor seperti keadaan pelayaran, kemampuan alat bantuan pelayaran, dan kemahiran pelayaran. Tetapi dengan adanya alat bantuan pelayaran, ia dapat membantu mengurangkan tahap kemalangan di lautan.