DESIGN OF FLOATING WIND TURBINE IN DEEP WATER

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2013

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT
THE REQUIREMENTS FOR 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
2012

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UNIVERSITI MALAYSIA TERENGGANU

DECLARATION AND VERIFICATION REPORT

FINAL YEAR RESEARCH PROJECT

It is hereby declared and verified that this research report entitled:
DESIGN OF FLOATING WIND TURBINE IN DEEP WATER, Matric No. **UK 19714** has 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 OF APPLIED SCIENCE (MARITIME TECHNOLOGY)**, Faculty of Maritime Studies and Marine Science, University Malaysia Terengganu.

Verified by:

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DECLARATION

I hereby declare that this thesis entitled DESIGN OF FLOATING WIND TURBINE IN DEEP WATER is the result of my own research except as cited in the references.

Signature : .....
Name : MOHD TARIQ ZIAD BIN ISMAIL
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ACKNOWLEDGEMENT

Assalamualaikum w.b.t

I would like to express my gratitude to all those who gave me the possibility to complete this thesis. I want to thank the Laboratory of Maritime Technology, University Malaysia Terengganu for giving me permission to commence this thesis in the first instance and to do the necessary experimental work.

I am deeply indebted to my supervisor Dr Eng Ahmad Fitryadhy whose help, stimulating suggestions and encouragement helped me to complete this design in time and writing of this thesis.

I also would like to give my special thanks Mr. Azlan Musa who give advices that can be a turning point for me to accomplish this design. I also grateful to Che Wan because willing to donate some ideas and guidelines I term of strength regarding my model. Not forget
Dr Ahmad Faisal that very supportive in term of moral support and make my effort to learn become easier and smooth.

Last, but certainly not least, I wish to express my sincere appreciation to the fellow member of S.M.S.G (Technology Maritime) who helps me in able to finish my design study.

DESIGN OF FLOATING WIND TURBINE IN DEEP WATER

ABSTRACT

The design of floating wind turbine in deep water is essential to provide an alternative energy to the offshore industries to obtain extra power for the cases of emergencies. Wind turbine has existed already about 200 years ago, so its capability to serve power supply for the nation is technically proven. However, when it moves further from land, maritime technologies have to be invited rather than depending on the mechanical and electrical technology itself. There are a few type of base structure had been analyze to get the best among them, Tri-floater design is found to be suitable and more stable in term of hydrostatic and hydrodynamic to support the wind power. This paper will go deeper into wind turbine performance and the stability of its support structure that I have chosen.

REKABENTUK KINCIR ANGIN YANG TERAPUNG DI LAUT DALAM

ABSTRAK

Rekabentuk kincir angin di lautan dalam boleh dianggap penting pada industri minyak dan gas pada masa kini, kerana ia mampu membekalkan kuasa elektrik pada waktu kecemasan.Kincir angin telah wujud sejak berabad lamanya, malah hampir 200 tahun dahulu. Oleh sebab itu, kemampuannya untuk membekalkan tenaga elektrik tidak boleh disangkal lagi.Walaubagaimanapun, apabila ia ingin diaplikasikan di tengah lautan, teknologi maritim hendaklah diambil kira selain daripada kejuruteraan mekanikal dan elektronik bagi menjadikan ia kenyataan. Terdapat beberapa jenis tapak pelampung yang digunakan ditengah lautan.Antaranya yang sesuai untuk menampung struktur kincir angin adalah jenis 3 tangki silinder. Kajian ini akan pergi dengan lebih mendalam tentang rekabentuk kincir angin , kestabilannya serta kuasa yg mampu di dihasilkan.