

CERTIFICATION OF APPROVAL

**EXPERIMENTAL STUDY ON THE EFFECT OF FOUNDATION
CONFIGURATIONS ON DYNAMIC RESPONSES OF WIND TOWER**

by

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A project dissertation submitted to the

Civil Engineering Programme

Universiti Teknologi PETRONAS

In partial fulfillment of the requirement for the

BACHELOR OF ENGINEERING (Hons)

(CIVIL ENGINEERING)

Approved by,

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UNIVERSITI TEKNOLOGI PETRONAS

TRONOH, PERAK

SEPTEMBER 2012

CERTIFICATION OF ORIGINALITY

This is to certify that I am responsible for the work submitted in this project, that the original work is my own except as specified in the references and acknowledgements, and that the original work contained herein have not been undertaken or done by unspecified sources or persons.

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ABSTRACT

This experimental project is to study on the effect of foundation for offshore wind tower on dynamic responses due to wind load. Power Spectral Density (PSD) is developed as spectrum energy from acceleration motion of structure in order to determine the effect of foundation configurations. The characteristics of offshore support structure could be described on the spectrum energy during applying wind load. The experimental study is required to collect the acceleration motion of structure before developing spectrum energy by using MATLAB software in order to analyze a characteristic of structure due to the effect of structure from wind load and provide offshore model of wind tower including controlling all environmental factor during testing. The fabrication of offshore wind tower model is to construct with a scale down from actual wind tower. There are three types of foundation which are involved in this experimental study such as monopile, tripod and jacket foundation. The effect of foundation configurations could be developed as the preliminary design. Dynamic responses will be measured at the wind tower and offshore support structure in order to produce the effective data collection and enhance dynamic analysis of foundation in this study.

ACKNOWLEDGEMENT

First and foremost, the author would like to express my deepest gratitude to my supervisor, AP. Dr. Indra Sati Hamonangan Harahap, with all of his knowledge, experience, critical thinking and also his innumerable and invaluable contribution in this work as well as his ongoing support to complete this work.

Heartfelt gratitude also dedicated to offshore lab technician, Mr. Meor Asniwan Bin Mew Ghazali and civil technologist, Mr. Azran Bin Shaharuddin who never hesitated to help when necessary. Without their guidance and valuable information, this thesis would not be completed in time.

Thanks are extended to my course mates; especially Mr. Mohd Idzwan Bin Razali and Mr. Aduot Madit Anheim for assisted me in programming Power Spectral Density (PSD) on MATLAB software.

Last but not least, thanks to all mechanical lab technicians involved in my fabrication of prototype and supervision for material usage. Without their support, result of this study would not be concluded. Therefore, I would like to thank whoever that was involved in contribution to my project study and Universiti Teknologi PETRONAS for providing the lab facilities to run the experiments.