

**STUDY ON THE MANAGEMENT OF ENGINEERING PROCUREMENT
AND CONSTRUCTION (EPC) PROJECTS**

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**A master's project report submitted in partial fulfillment of the
requirements for the award of the degree of
Master of Science in Construction Contract Management.**

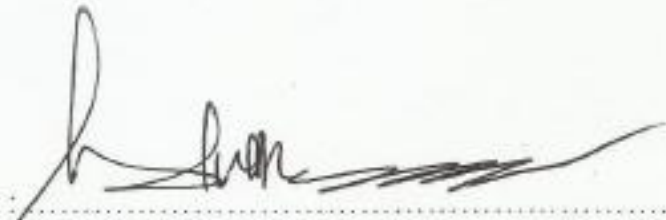
**Faculty of Built Environment
Universiti Teknologi Malaysia**

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SUPERVISOR'S DECLARATION

"I hereby declare that I have read this project report and in my opinion this project report is sufficient in terms of scope and quality for the award of the degree of Master of Science in Construction Contract Management"

Signature



Name of Supervisor

: ASSOC PROF. DR. RAZALI ADUL HAMID

Date

: 22/8/12

STUDENT'S DECLARATION

"I declare that this Master Research Project entitled "*Study on the Management of Engineering Procurement and Construction (EPC) Projects*" is the result of my own research except as cited in the references. The project report has not been accepted for any degree and is not concurrently submitted in candidature of any other degrees."



Signature :
Name : SENG HANSEN
Date : 31 / 8 / 12

To my beloved Father, Mother, Brother and Sisters

THANK YOU

*Thousand of candles can be lit from a single candle,
and the life of the candle will not be shortened.
Knowledge never decreases by being shared.*

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ABSTRACT

Procurement system in construction industry can be categorized into several methods. One of them is EPC type of procurement. EPC is the abbreviation for engineering, procurement and construction. EPC is a type of construction contract where the contractor is responsible for engineering services, procurement of materials, and construction. Power plants, factories, gas development project, infrastructure projects, and industrial plant construction sectors are the typical examples of EPC projects. With its rapid development, Indonesia needs many industrial public sector projects. Especially with the population over 230 million people and blessed with so many natural resources, its demand for power plant projects, gas development projects, and other type of industrial sector projects has risen significantly. Meanwhile, PT Waskita Karya (Persero) is one of the main leading construction company in Indonesia and it just recently established EPC Division in 2011. Therefore, this research aims to (1) identify the nature of EPC projects, (2) identify EPC projects management system as applied in Waskita, and (3) determine the strategies which can improve the effectiveness of EPC business process. The findings of this research are (1) there are 34 (thirty four) EPC projects' characteristics, in which 10 (ten) of them are specifically only found in EPC projects; (2) EPC projects in Waskita are quite different in their implementation, where for some projects, EPC Division serves only engineering and procurement phases; and (3) the improvement strategies can be divided into 3 (three) groups, namely: for contractor with 15 strategies, for employer with 5 strategies, and for both parties with 6 strategies. At the end, this research is important for all players to face the increase popularity of EPC project procurement.