

EFFECT OF ENGINEERING PROCUREMENT CONSTRUCTION (EPC)
CONTRACT CLAUSES: A CASE STUDY IN BALONGAN – JAKARTA II
PIPELINE PROJECT, INDONESIA

DONA ALISYAH SIREGAR

A project report submitted in partial fulfillment of the
requirements for the award of the degree of
Master of Science (Construction Contract Management)

Faculty of Built Environment
Universiti Teknologi Malaysia

AUGUST 2012

I declare that this master's project report entitled "EFFECT OF ENGINEERING PROCUREMENT CONSTRUCTION (EPC) CONTRACT CLAUSES: A CASE STUDY IN BALONGAN – JAKARTA II PIPELINE PROJECT, INDONESIA" 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 degree.

Signature : 
Name : DONA ALISYAH SIREGAR
Date : 29 AUGUST 2012

To my beloved father, mother, son, and bude Nap

Thank you for your support and everything.

ACKNOWLEDGEMENT

First of all, Alhamdulillah I prayed to Allah SWT, because only upon His mercy and grace, my study and this master's project report can be completed.

I wish to express my highest appreciation to my supervisor, Associate Professor Dr. Maizon Hashim for her encouragement, constructive guidance, support and friendship so that this project report can be completed on time. I am also very thankful to all lecturers for their support and advice during my master study.

I am also very grateful to Ministry of Public Works, Republic of Indonesia and PT. Wijaya Karya (Persero) Tbk. for funding my master study and giving me an opportunity to enhance my knowledge in Universiti Teknologi Malaysia.

I am very thankful to all my classmates, especially for all Indonesian students, for their friendship and support. My sincere appreciation also extends to all my families and colleagues in Indonesia for their support and encouragement during this year. It is a great pleasure to thank to everyone; however, it is not possible to list all of them in this limited space.

Dona Alisyah Siregar

August, 2012

ABSTRACT

EPC (Engineering, Procurement and Construction) is most widely used for industrial plant, petrochemical projects, power plant and energy sector and oil and gas facilities. EPC project is very complex and have its own character differ from other project delivery system. EPC is an integrated procurement system which has characteristics which benefits in time and cost but at the expense of quality. The objective of this study is to identify the contract clauses which affect the performance of the EPC Balongan – Jakarta II Pipeline Project, Indonesia, in relation to time, cost and quality with reference to the project's contractual problems. The methodology of this study is embedded-single case study. The study is limited to contractual aspects under the Main Contract and analysis to the substances of the contracts clauses. The form of contract of this project is Bespoke Contract drafted by the Employer. The sources of data for this study collected from project documentation and interview of nine (9) persons from the main team of the project management. After the contractual problems were listed out, the relevant clauses in the contract are evaluated by comparing them with the ideal concept of EPC contract which is adopted in FIDIC standard forms of contract. It is found that the main contractual problems which related to time are: delay in giving site possession, delay of employer's approval during the engineering works, and delay due to pipe leakage, while the contractual problems which related to cost and quality are: change/variation disputes. The main clauses which directly caused these problems are: Commencement of Works, Site Possession, Pricing Method, Design Obligation, Review Document, Variation, Programme, Extension of Time, Claim and Priority Document. These clauses are not sufficient to convey the appropriate concept of EPC contract therefore this project was not fully executed according to ideal concept of EPC contract and finally affected the project performance.

ABSTRAK

EPC (Kejuruteraan, Perolehan dan Pembinaan) adalah yang paling banyak digunakan untuk loji perindustrian, projek petrokimia, loji kuasa dan sektor tenaga dan kemudahan minyak dan gas. Projek EPC adalah sangat kompleks dan mempunyai ciri-ciri tersendiri yang berbeza daripada kaedah pembinaan projek lain. EPC adalah satu sistem perolehan bersepadu yang mempunyai ciri-ciri memberikan kelebihan dari segi masa dan kos tetapi kekurangan dari segi kualiti. Objektif kajian ini adalah untuk mengenal pasti klaus-klaus dalam kontrak yang akan mempengaruhi prestasi Projek EPC Talian Paip Balongan - Jakarta II, Indonesia, berhubung dengan masa, kos dan kualiti dengan merujuk kepada masalah dalam aspek kontrak. Metodologi yang digunakan dalam kajian ini adalah kajian kes tunggal-separa. Kajian ini dihadkan kepada aspek kontrak di bawah Kontrak Utama dan analisis daripada kandungan klaus kontrak. Borang kontrak projek ini adalah "*Bespoke*" Kontrak yang digubal oleh majikan. Sumber-sumber data untuk kajian ini dikumpulkan daripada dokumen projek dan temuduga yang dilakukan kepada sembilan (9) orang daripada pasukan utama pengurusan projek. Selepas masalah kontrak disenaraikan, klaus-klaus yang berkaitan dalam kontrak dinilai dengan membandingkan klaus itu dengan konsep ideal kontrak EPC yang diguna pakai dalam kontrak piawai FIDIC. Hasil kajian ini mendapati bahawa masalah utama yang berkaitan dengan masa adalah kelewatan dalam pemberian tapak, kelewatan kelulusan majikan semasa kerja-kerja kejuruteraan dan kelewatan disebabkan kebocoran paip, manakala masalah berkaitan kos dan kualiti adalah pertikaian tentang perubahan kerja. Klaus-klaus utama yang membawa kepada masalah ini ialah Permulaan Kerja, Pemilikan Tapak, Sistem Harga, Tanggungjawab Reka Bentuk, Kajian Dokumen, Perubahan Kerja, Program, Lanjutan Masa, Tuntutan dan Keutamaan Dokumen. Semua Klaus ini tidak mencukupi untuk menyampaikan konsep kontrak EPC yang sesuai oleh itu projek ini tidak dapat dibina berdasarkan konsep sebenar kontrak EPC dan seterusnya menjejaskan prestasi projek.