

**IMPLEMENTATION OF ISO 9001:2000 QUALITY MANAGEMENT SYSTEM FOR
CONSTRUCTION BIDDINGS PROCEDURES IN CONSTRUCTION
MANAGEMENT PRACTICE**

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A project report submitted in partial fulfillment of the
requirements for the award of the degree of
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I hereby declare that this project report entitled “Implementation of ISO 9001:2000 Quality Management System for Construction Bids Procedures In Construction Management Practice” is the result of my own research except as cited in the references. This report has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

Signature :
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To my beloved family

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ABSTRACT

Construction sector is well known for its poor management system, it is mainly due to the involvement of large amount of paper works in converting data to useful information related to construction work. Tendering is the initial stage for any construction work and therefore it is vital for contractual parties to have standardized tendering documents as well as standardized tendering checklists in order to achieve efficiency for tendering work. This project examines the implementation of ISO 9001: 2000 QMS in Malaysian construction biddings procedures particularly for government projects. 43 companies with ISO 9001: 2000 certified organizations have participated for the purpose of this study. Outstanding factors contributing to an inappropriate tendering practice have been investigated, besides a complete set of tendering procedures have been drawn up for both conventional and design-build procurement systems in addition to six new tendering guidelines requested by 87% of the respondents to be part of the actual tendering guidelines. A constructive survey and in depth discussion with contractors, consultants and JKR staff have been used to support this study. It is hoped that the current study contributes as a step towards enhancing the effectiveness and efficiency of tendering practices for construction projects within ISO 9001 version 2000 QMS continual improvement stated in clause 8.5.1.

ABSTRAK

Sektor pembinaan sememangnya sudah terkenal mempunyai sistem pengurusannya yang lemah, di mana disebabkan oleh penglibatan penggunaan kertas dalam amaun yang besar bagi menukarkan data kepada maklumat yang berguna yang berkaitan dengan kerja-kerja pembinaan. Proses penenderan merupakan proses dalam peringkat permulaan bagi apa juga kerja pembinaan. Oleh itu, adalah penting bagi pihak-pihak kontrak untuk mempunyai dokumen tender yang piawai, selain dari mempunyai senarai semak tender yang piawai bagi memastikan kerja-kerja penenderan dapat dilaksanakan secara efisien. Projek ini mengkaji pelaksanaan ISO 9001 versi 2000 Sistem Pengurusan Kualiti di dalam prosedur bidaan pembinaan khususnya bagi projek-projek kerajaan Malaysia. Sebanyak 43 buah syarikat yang diiktiraf dengan ISO 9001 versi 2000 telah terlibat dalam kajian ini. Faktor-faktor utama yang menyumbang kepada amalan tender yang tidak bersesuaian telah dikaji. Satu prosedur tender yang lengkap telah disediakan bagi kedua-dua sistem perolehan konvensional dan reka-bina (design-build). Ia adalah tambahan kepada enam panduan penenderan baru seperti yang digunakan oleh 87% responden. Ia dijadikan sebagai sebahagian daripada panduan penenderan yang sebenar. Tinjauan yang teratur dan perbincangan yang mendalam dengan pihak berkaitan seperti kontraktor, perunding projek, serta kakitangan JKR telah dijalankan bagi menyokong kajian ini. Adalah diharapkan bahawa kajian yang dilaksanakan ini dapat menyumbang ke arah meningkatkan keberkesanan dan kecekapan amalan tender bagi projek pembinaan di dalam lingkungan ISO 9001: 2000 Sistem Pengurusan Kualiti selain langkah pembaharuan berterusan seperti yang dinyatakan di dalam Klaus 8.5.1.

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CHAPTER 1

1. Introduction

Construction industry is an economy pillar for every country including Malaysia. It contributes to a massive growth to the country gross product [GDP], and plays a very significant role in Malaysian's economic development. Recently The Ninth Malaysia Plan (9MP) is expected to revive, in particular, the construction sector which has undergone a severe down cycle in the past nine years.

Construction contributes to the growth of many related industries such as the manufacturing of construction's material industry, cement, pipes, sanitary wares, tiles, ready mix concrete. Besides from being an important asset that generates profit to the country, construction encourage the development of human resources in Malaysia and creates massive job opportunities within the country.

Considering the significance of the construction, it is necessary to identify major issues affecting the efficiency of its sector .the main objectives of any project are improvements in time, cost and quality. The poor state of technology adopted by the construction industry in many countries as well as fragmented relation between construction cost and delay time of delivery .many clients nowadays are dissatisfied with

contractors' performance in terms of keeping to the quoted price and time delivering a final product of the required quality.

Nowadays, more and more management of construction companies are focusing on quality issue as a competitive edge. Delivering projects that satisfied client requirement has become a main priority in order to maintain business relationships .hence, the construction industry should develop common standards during procurement stage in order to deliver satisfactory products. The international organization for standardization ISO has been formed to promote the development of standardization, therefore the acceptance of ISO standards in construction industry should be widely implemented In order to achieve high quality product in every stage of construction process.

Procurement phase is known as a critical stage throughout the whole life cycle of the project since it involves looking for the qualified contractor to complete the designed project. A good project constructor should be appointed through a tender process; usually contractors will compete in the process of bidding to get the project. The tender process should be executed appropriately, in order to select a qualified and experienced contractor; there should be fair competitions among tenders by giving sufficient time, surety of the document, equal opportunity, equal treatment and also availability of complete documents. One of the matters which has taken place during the 9MP discussion was about reviewing the tender system.

Malaysia should review tender system: Transparency International Malaysia President Tan Sri Ramon Navaratnam has asked the government to review the present system of awarding projects to reduce or eliminate delays or failures. These contracts, he said, should be given only to people who were really competent. He suggested that an inquiry committee comprising government and private sector officials to investigate and draw lessons on why a project had failed to be set up.

The committee could also make recommendations to avoid a repeat of the costly mistakes, he said, adding that this was in addition to the National Implementation Task Force being chaired by Prime Minister Datuk Seri Abdullah Ahmad Badawi. Of late, poor implementation of projects and abandoned ones costing the government and the rakyat millions of ringgit are back in the news again. Last week Abdullah lamented on the half-completed Sarawak Prison Department headquarters and prison building although the project started nine years ago. A few weeks earlier he had warned government servants against jeopardizing government projects under the Ninth Malaysia Plan through implementation delays.

As a result, the need to enhance the effectiveness and efficiency of the actual tender system to be more competitive is highly recommended in order to lead the country towards achieving its objectives and goals. Enhancing the efficiency of the tender practice can be done by several ways; hence, my focus will be on the availability of complete document during the tendering process especially part related to tendering checklists.

A tendering checklist is known as an essential piece of the document used during the tendering process, a well designed checklist can contribute to the efficiency of the tendering process which in turn leads to better selected contractor. Currently companies do not have a common or a standardized checklist, so the necessity to establish a practical ISO tendering procedure checklist is vital for the construction industry.

One of the important elements revised in MS ISO 9001:2000 is the element of *clause 4-2 document requirement*. It requires that the organization shall ensure that all contractual requirements in tendering process [in construction industry] are met. in Malaysia there are different types of contracts commonly used between client and contractors such as traditional contracting, negotiated lump-sum contracting for design

and build tendering, management contracting and so on. Even though the procedure of each contract type is different, the basic documents used are still similar such as specification, details of drawings, summary of tender and conditions of contract. This study will focus on the procedures of traditional tendering and design –build tendering.

Although ISO 9001-2000 standard is gaining a large place in construction, still there is neither standard procedures nor standard checklist which is widely accepted and used in construction sectors. Each company only needs to design and generate documents, which outline the minimum requirement for quality systems of the organization. One study conducted by two Chinese researchers about competitive tendering in china construction have highlighted that one of the major causes of the inefficiency of the tendering practice was the inconsistency of procurement documentation, there is no standard system of procurement documentation for reference in the practice. Tendering documents and procurement procedures are varied from for different projects at various localities. Formal contractual documentation is mainly requested for large national projects.

The present study will focus on the traditional tendering procedures and design-build tendering procedures in Malaysian construction sectors, in order to derive standardized ISO 9001:2000 checklist followed by tendering guidelines which can be considered as a step towards enhancing the competitiveness of tendering practice, otherwise making transparency throughout the tendering process, hopefully the result of this research will be benefic to all Malaysian construction companies.

1.1 Problem Statement

There is an increasing demand towards high quality projects in Malaysian country. the growth of international trade and multinational companies as well as demand of high quality projects locally have forced the national construction companies to direct attention towards improving quality in order to compete globally and at the same time to locally survive. ISO 9001.2000 standards are designed with generic documents outlining minimum requirement for quality systems of organizations in all industries. Every company has its company quality policies based on the operation of the company, otherwise every company only needs to design and generate documents which outline the minimum requirements of quality systems of the organization.

It is known that a consistent and completed documentation can be a successful key for the tender process, tendering checklist and proper tendering guidelines is an essential piece of the document. By having tendering checklist the company can keep track of the tendering process and make rough estimate of the duration required to complete the tendering works. Many problems occur when client's tendering checklist is not similar to tenderer's checklist, thus it would be tedious and time consuming for a bidder to obtain documents that are found to be essential in completing a tender by him not by the client, as a result there are no standardized tendering procedures and proper tendering guidelines which should be applicable to the whole construction industries to ensure smoothness an efficiency of the work. The purpose from developing standardized tendering ISO 9001 2000 checklist followed by tendering guidelines is to avoid conflict problems between contractual parties then enhancing the flow of tendering process. By having standardized checklist, companies with ISO 9001 certification will have more organized documentation system, so the need to establish a proper legal frame work for tendering practices is recommended.

1.3 Research Objective

The aim of this research is to draw up a framework for tendering practices based on ISO 9001 version 2000 quality management system. The aim of this research can be achieved with the following objectives;

- To identify the major factors that contributes to an inappropriate tendering practice.
- To determine the main process and sub-process for either conventional tendering procedures or design-build tendering procedures.
- To establish practical MS ISO 9001 version 2000 standard tendering checklists for both conventional and design-build procurement systems.
- To establish a common framework for an effective tendering practice by enhancing the actual tendering guidelines

1.4 Scope of Research

The present project will provide a description and an understanding of MS ISO 9001:2000 quality standard, the requirements and procedures of the systems. Besides the analysis of construction tendering process for conventional and design-build procurement systems based on local construction industry, other procurement systems are out of this scope, in addition the actual tendering guidelines will be included in the scope of research. MS ISO 9001 procedures for companies will be studied and compared to the tendering procedures in order to get the expected results or objectives.

Previous studies had been carried out by Janet et al. [1997] regarding on the development and the use of the ISO 9000 series of quality standards in the construction industry. Besides a study regarding the quality the quality system in accordance to ISO 9000 in construction companies was conducted by Abdul-Aziz et al.[1999]. There is even study carried out by Edwin et al. [1999] regarding the imposing of ISO 9000 standards on statutory agent. Nevertheless , studies regarding MS ISO 9001 2000 standardized checklist procedure are never carried out , therefore this research will contribute to how ISO 9001 2000 standard checklist enhance the efficiency and effectiveness of tender process.

1.5 Importance of this Research

Quality assurance and high productivity are the important factors in construction industry. Since more and more parties have shown concern on the quality management system. The research on the ISO 9001 2000 standardized tendering checklist followed by tendering guidelines can be as an instant need to study the response from involved parties. It is hopeful that the result of this research may give contribution to further study on the tendering practice and provide other guidelines and solutions to improve the current practice through ISO quality standard. It is hoped also that this research will contribute to how ISO 9001:2000 standard checklists and tendering guidelines enhance the efficiency and effectiveness of the tender process.