

LETTER OF SUPERVISOR APPROVAL

I, hereby acknowledge that I have read this thesis and in my opinion, this thesis is sufficient in terms of scope and quality. This project paper is submitted to the Universiti Teknikal Malaysia, Melaka (UTeM) for the purpose of awarding the Bachelor Degree of Technology Management and Innovation with Honour.

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: 20TH JUNE 2014

ENHANCING QUALITY MANAGEMENT SYSTEM THROUGH CONTINUOUS
QUALITY IMPROVEMENT PRACTICES IN MALAYSIAN
MANUFACTURING INDUSTRY

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This report submitted in partial fulfillment of the requirements for the Bachelor
Degree of Technology Management and Innovation with Honour


Faculty of Technology Management and Technopreneurship

Universiti Teknikal Malaysia Melaka

JUNE 2014

DECLARATION

“ I declare that thesis entitled “ Enhancing Quality Management System Through Continuous Quality Improvement Practices In Malaysian Manufacturing Industry ” is my own work expect the summary and experts of each of which I have mentioned in the source.”

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Date : 20TH JUNE 2014

DEDICATION

This dedication is dedicated to my lovely parents, Razali bin Sahak and Absah Binti Md Nor and for all my siblings that always gives me supportive, guidance, encouragement and prayer. Not to be forgotten to, my beloved supervisor and very helpful panel, Dr. Syaiful Rizal Bin Abdul Hamid and Encik Amir Bin Aris for all the advice and motivation that given as a guide for me to be strive along my completion of Final Year Projects and last but not least also to all my friends that always be on my side, the wonderful memories with you all will still in my mind.

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ABSTRACT

Nowadays, most manufacturing industry usually having bad quality management system in improving their company performance. Major changes in manufacturing industry are occurring when organizations attempt to remain competitive in market. So, this research have conducted to enhance the quality management system through continuous quality improvement that is used in Malaysian manufacturing industry. The purpose of this study is to determine the kind of implementation that is used to improve the Quality Management System (QMS) in manufacturing companies. In addition, to examine and analyse the best tools and techniques of continuous quality improvement that can be used to enhance good Quality Management System (QMS) in Malaysian manufacturing Industry. The researcher has used quantitative methods by distributing the questionnaires to all manufacturing company in Malaysia. The results of this study indicated most manufacturing company have implemented the tools and techniques in continuous quality improvement and have used Lean Manufacturing as the best tools and techniques of continuous quality improvement on enhancing quality management system in their company. As a conclusion, to ensure the performance of continuous quality will always improved, organizations must play an important role to create a good continuous quality improvement in organization since many manufacturing company have compete each other to achieve the company performance.

Keyword : Tools and Techniques in CQI, Quality Management System

ABSTRAK

Kini, kebanyakan industri pembuatan biasanya mempunyai sistem pengurusan kualiti tidak baik dalam meningkatkan prestasi syarikat mereka. Perubahan besar dalam industri pembuatan yang berlaku apabila organisasi cuba untuk kekal berdaya saing dalam pasaran. Maka, kajian ini telah dijalankan untuk meningkatkan sistem pengurusan kualiti melalui peningkatan kualiti yang berterusan yang digunakan dalam industri pembuatan Malaysia. Tujuan kajian ini adalah untuk menentukan jenis pelaksanaan yang digunakan untuk meningkatkan Sistem Pengurusan Kualiti (SPK) dalam syarikat-syarikat pembuatan. Selain itu, untuk memeriksa dan menganalisis alat yang terbaik dan teknik peningkatan kualiti yang berterusan yang boleh digunakan untuk meningkatkan baik Sistem Pengurusan Kualiti (SPK) dalam Industri pembuatan Malaysia. Penyelidik telah menggunakan kaedah kuantitatif dengan mengedarkan soal selidik kepada semua syarikat pembuatan di Malaysia. Keputusan kajian ini menunjukkan kebanyakan syarikat pembuatan telah melaksanakan alat-alat dan teknik dalam peningkatan kualiti dan telah menggunakan Pembuatan Lean sebagai alat yang terbaik dan teknik peningkatan kualiti yang berterusan ke arah meningkatkan sistem pengurusan kualiti dalam syarikat mereka. Sebagai kesimpulan, untuk memastikan prestasi kualiti yang berterusan akan sentiasa bertambah baik, organisasi perlu memainkan peranan yang penting untuk mewujudkan peningkatan kualiti yang berterusan yang baik dalam organisasi kerana banyak syarikat pembuatan telah bersaing antara satu sama lain untuk mencapai prestasi syarikat.

Kata Kunci: Alat dan Teknik CQI, Sistem Pengurusan Kualiti

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LIST OF ABBREVIATIONS

QMS	Quality Management System
CQI	Continuous Quality Improvement
PDCA	Plan, Do, Cycle and Act
WIP	Work In Progress
DMAIC	Define, Measure, Analyze, Improve and Control
ISO	International Organization for Standardization
FMM	Federation of Malaysian Manufacturers
SPSS	Statistical Package for Social Science

CHAPTER 1

INTRODUCTION

1.0 Background of the Study

Several manufacturing companies in Malaysia had never thought they would be facing a problem of economic crisis such as rising oil prices and raw material, high interest rates, advances in technology and innovation and high customer demand for quality of products and services. Nowadays, the increase of products and services is very competitive in market made many manufacturing companies continue to look for another way to improve the quality of their products and services to meet customer specifications and requirements respectively. This can only be achieved through cost reduction, improvement through product performance, increased customer satisfaction and a constant effort towards world class organizations.

In order for companies to survive and improve the company performance in the future, it is needed to them so that they deliver and produce high quality goods and services for their customers. Those that can deliver quality are the ones that will prosper in the next century (Ross, 1994).

Typically, an organization will carry out quality management and improvement program consistent with the objectives of the company. The best way is deliver significant benefits to achieve customer satisfaction, employee quality awareness and enhancing quality management system through continuous quality improvement in an organisation.

The purpose of this study is to achieve the objective of continuous quality improvement in organisation. So the concept of quality management system will appear in order to help company to continuously improve an organization performance.

The American Society for Quality Control defines quality as a subjective term for which each person has their own definition. In technical usage, quality can have two meanings which are the characteristics of a product or service that bear on its ability to satisfy stated or implied needs and a product or service free of deficiencies. However, to ensure the effectiveness of quality management system in an organisation, there are few method approach that may be used to describe and improve an existing service or product or to design a new service or product using continuous quality improvement. This philosophy is focuses on improving processes to enable companies to give customers what they want. So the system will help customer focused, process improvement oriented approach to doing business results in increased satisfaction and delight for both customers and employees. To implement the continuous quality improvement in organizations, a company should form a team that has power knowledge on using the system needing improvement, define a clear aim, and understand the needs of those served by the system, and identify and define measures of success.

Organizations can advance toward continuous quality improvement by brainstorming potential change strategies; planning, collecting, and using data for effective decision-making; and applying the scientific method to test and refine changes (Iowa State University, 2006).

This is why an organisation has to enhance the quality management system in their company and put a better standard performance along processes. For that reason, the researcher wants to investigate more about the company performance to enhance the quality management system through continuous quality improvement in manufacturing industry in Malaysia. The findings revealed that QMS were found to be partially correlated with quality performance of the Malaysian ISO 9001:2000 certified manufacturing organizations. It is also found that where customer focus and continual improvement were perceived as dominant QMS in quality performance. The outcome of the study could provide valuable knowledge to top management of ISO 9001:2000 certified manufacturing organizations to refine their quality management practices and subsequently improve quality performance.

1.1 Research Problem

This study arises to enhance the quality management system through continuous improvement in manufacturing industry in Malaysia. The process of quality management system is to provide the best tools and techniques for ensuring the implementation of the organization's ability to meet quality requirements. Lack of quality management system in the organization would result from the entire process of the organization.

Basically, one of the ways to improve the quality management system is to study more on continuous quality improvement, how the effectiveness of continuous quality improvement will contribute to an increase in the organization's quality management system (M. Kucerova, 2011).

According to L.M Franco (1997), in order to improve the quality management system, the continuous quality improvement will be used as a very good guideline to all employees and it requires them to fully understand about the system itself. In addressing this problem, a lot of effort is not successful because the organization is limited and controlled by their context and their internal characteristics. Specific context and characteristics often limit the ability of the organization to improve internal weaknesses.

1.2 Research Question

Precisely, this study is arranged based on follow questions:

1. What kind of implementation that is used to enhance Quality Management System (QMS) in Malaysian manufacturing industry?
2. What are the tools and techniques of Continuous Quality Improvement (CQI) that is used to enhance Quality Management System (QMS) in Malaysian manufacturing industry?
3. How the best tool and technique in Continuous Quality Improvement (CQI) can enhance good Quality Management System (QMS) in Malaysian manufacturing industry?

1.3 Research Objectives

The objective of this survey is to find out:

1. To determine the kind of implementation used to enhance Quality Management System (QMS) in the Malaysian manufacturing industry?
2. To examine the tools and techniques in Continuous Quality Improvement (CQI) that is used on enhancing Quality Management System (QMS) in Malaysian manufacturing industry?
3. To analyse the best tools and techniques of Continuous Quality Improvement (CQI) that can be used to enhance good Quality Management System (QMS) in Malaysian manufacturing industry?

1.4 Scope, Limitation and Key Assumptions of study

This research presents the study at manufacturing industries to improve and enhance quality of management system through continuous quality improvement. The researcher also focuses on enhancing the quality of management system using the best tools and techniques of continuous quality improvement. By using these tools and techniques of continuous quality improvement, quality was controlled and the problem was detected. The limitation is when the researcher having difficulty to study about quality management system that are using continuous quality improvement in all manufacturing industries in Malaysia because all organization sometimes were using different tool as the tools and techniques in continuous quality improvement in order to enhance their quality management system in organizations.

1.5 Significance of the Study

The purpose of this study is to determine the enhancement of quality management system through continuous quality improvement in Malaysian manufacturing industry. The researcher has found out the best tools and techniques of continuous quality improvement that can contribute to the enhancement of quality management system for manufacturing industry in Malaysia. So, this study is focusing on the manufacturing industry in Malaysia as well as the researcher also have listing out the best tools and techniques of continuous quality improvement that can be used to help manufacturing industry in Malaysia and contributing to enhancement of quality management system in Malaysian manufacturing industry.

Furthermore, this study is to increases the performance in organization and helping on management to conduct a good quality performance in manufacturing industry. It also studied about the importance of implementing the tools and techniques in continuous quality improvement that can be used to enhance quality management system in Malaysian manufacturing industry.

1.6 Summary

As a conclusion to this chapter, the researchers have briefly explains the background of the study as well as describe the research questions, the research objectives and purposes of this study. Finally, this chapter will also explain the importance of this study and why researchers want to examine in this study.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents a literature review on the fundamental of Quality Management System (QMS) and also background of manufacturing industry in Malaysia. Furthermore, it also includes in a concept of Quality Management System (QMS) in the manufacturing industry. This chapter also discusses the importance of QMS in the manufacturing industry as well as the concept and importance of implementing CQI in the quality system.

In addition, this chapter will also include the best methods of CQI in terms of using the tools and techniques. Finally, researcher will discuss the relationship on using the best tools and techniques of CQI towards enhancement of QMS as well the factors and results in the manufacturing industry in Malaysia.

2.1 Fundamental of Quality Management System (QMS)

Quality Management System (QMS) is a concept and an application that usually used in the organization of manufacturing industry in Malaysia. Theoretically, QMS can be executed either in the organization or in the project itself. Looking at the current scenario in Malaysian manufacturing industry, QMS have been certified under ISO 9001:2000 organization in the manufacturing industry in Malaysia that can be used. *QMS is a necessary factor towards in enhancing the quality management system in Malaysia manufacturing industry (SIRIM, 2005)*. ISO 9001:2000 quality management system (QMS) is a quality framework established at the international level which requires organization to pursuing the quality of products in creating a good quality framework according to their standard quality.

2.2 Manufacturing Industry in Malaysia

The manufacturing industry in Malaysia is one of industry sector that contribute to manufacturing companies. Based on crisis economic happen in Malaysia, most of organisations especially companies who is new involve in manufacturing industry in Malaysia are now faced with rising oil prices and raw materials, high interest rates, advances in technology and innovation and high customer expectations for their quality products and services.

With the competitive pressures on product and services, many manufacturing companies try to find several ways to improve the quality of products and services in the manufacturing sector in Malaysia as a step to invest to the government.

For that reason, the government is try to use the best method to ensure that the manufacturing sector is one of the country who have high competitive and innovative among themselves. *The role in the manufacturing industry in Malaysia has become the sector producing high quality products to ensure that the product is made correctly, (Donald R.Keough).*

In addition, the manufacturing sector is also the sector that contributed most to the government in all aspects. This indicates that the manufacturing sector is the most valuable and progressing to the country. With collaboration in other countries, especially in developing countries also bring many benefits to the country itself. This collaboration will also enhance technology transfer, knowledge flow and enables the solution to the shortage of technical and marketing skills.

2.3 Concept of Quality Management System (QMS)

Quality management is one approach to achieve and sustain high quality of output. The concept is based on the continuous improvement of the performance of quality in a product and services produces in an organization.

Meanwhile, the Quality Management System can be identified as the organizational structure of responsible for regulating all activities, resources and events related to how to prepare on a regular basis process. It also requires a good technique to ensure that the implementation of organizations ability to meet quality requirements.