

IMPROVEMENT OF WORKSITE CONTROL IN WAREHOUSE

NOOR ERMA LIANA BINTI ROSLE (2011271642)

A thesis submitted in partial fulfillment of the requirements for the award of Bachelor of Engineering (Hons.) Mechanical

Faculty of Mechanical Engineering Universiti Teknologi Mara (UiTM)

JULY 2015

ACKNOWLEDGEMENT

بِسْمِ اللهِ الْرَّحْمَنِ الْرَّحِيمِ

First of all, I am grateful to The Almighty Allah for his blessing and giving me strength and patience to complete my undergraduate research project entitled **"Improvement of worksite control in warehouse."**

I express my sincere thanks to Dr. Azianti , my project in charge, who guided me through the project, also gave valuable suggestions and guidance for completing the project. She helped me to understand the project and to let me utilized all the necessary facilities of the institute.

I am grateful to Autokeen Sdn Bhd especially En. Asyfar Abd Rahman for his constant encouragement. He also helps me during the preparation and collection of data and guidance at every step during the project. I also would like to thank the whole Mechanical Engineering Department for providing me the technical support to carry out the project work.

Finally, I would like to acknowledge with gratitude, the support and love of my family – my parents, Rosle bin Sukaimi and Norleha binti Yahya; my siblings and family members. I also place on record, my sense of gratitude to one and all, who directly or indirectly, have lent their hand in this research. They all kept me going, and this project would not have been possible without them.

ABSTRACT

This project was proposed to improve the worksite control for warehouse in Autokeen Sdn. Bhd. (AKSB). Some problems with worksite control for warehouse in which the current warehouse layout is congested, less efficient and also failed to apply the principle of first in first out or FIFO in the warehouse supply chain. Thus, some of the finished goods have been kept at the warehouse for too long. Only easy access finished goods which just arrive from the production line are shipped to the customers and it cause most of the earlier finished goods which have been pushed to the back are left for many days which lead to corrosion and increase the cost of the production by done rework. Due to high humidity, some of these have started to corrode. Rework to remove the corrosion has to be performed prior delivery to the customer.

Suggestion for improvement in the management of warehouses was proposed by redesigning the new warehouse layout. Some of implementations were modifying the facilities in the warehouse, as well as floor demarcation by labeling, line making of the finished-goods warehouse. To make sure the worker arranged all pallets according to designated arrangement, standard operation procedure (SOP) was issued as guidance. The effects from the implementation of the new layout in warehouse can be seen by the reduction number of customer complaints in the warehouse and also the reduction number of the rework operator. The new communication flow that suggested in the warehouse gave significant impact to the successful of the improvement plans.

"I declared that this thesis is the result of my own work except the ideas and summaries which I have clarified their sources. The thesis has not been accepted for any degree is not concurrently submitted in candidature of any degree."

Noor Erma Liana Binti Rosle UiTM No : 2011682554

Table of Contents

ACKNO	WLEDGEMENT	iv
ABSTRA	ACT	v
CHAPTI	ER 1: INTRODUCTION	1
1.1	Project Background	1
1.2	Problem Statement	2
1.3	Objectives of the Project	2
1.4	Scope of Work	2
1.5	Thesis Structure	3
CHAPTI	ER 2: PROJECT METHODOLOGY	4
CHAPTI	ER 3: LITERATURE REVIEW	6
3.1	Definition of Warehouse	6
3.2	Function of Warehouse	7
3.3	Warehouse Management	8
3.4	Lean Management in Warehouse	10
3.5	First In First Out (FIFO)	11
CHAPTI	ER 4: DATA COLLECTION AND ANALYSIS	13
4.1	Plant layout	13
4.1.	1 Plant Layout Idea #1	15
4.1.	2 Plant Layout Idea #2	16
4.2	Number of Customer Complaints	17
4.3	Communication Flow	19
CHAPTI	ER 5: RESULT AND DISCUSSION	20
5.1	Plant Layout	20
5.2	Standard Operating Procedure	24
5.3	Reduced Customer Complaint	25
5.4	Number of Rework Operator	26
5.5	Finished Goods Travel Distance	26
5.6	Improved Communication Flow	
CHAPTI	ER 6: CONCLUSION AND RECOMMENDATION	
REFERENCES		