OVERALL EQUIPMENT EFFECTIVENESS (OEE) THROUGH TOTAL PRODUCTIVE MAINTENANCE (TPM) PRACTICES – A CASE STUDY IN CHEMICAL INDUSTRY

By

Ferry Yulius Agung
21553002

MASTER'S DEGREE
in

MASTER OF BUSINESS ADMINISTRATION
FACULTY OF BUSINESS ADMINISTRATION AND HUMANITIES

SWISS GERMAN UNIVERSITY
The Prominence Tower
Jalan Jalur Sutera Barat No. 15, Alam Sutera
Tangerang, Banten 15143 - Indonesia

August 2017

Revision after the Thesis Defense on 12th August 2017

STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

Ferry Yulius Agung, ST.

Student Date

Approved by:

Dr. Antonius TP. Siahaan, SE., Akt., MM,CA

Thesis Advisor Date

Dr. Badikenita Sitepu, SE., MSi.

Thesis Co-Advisor Date

Dr. Nila K. Hidayat, SE., MM.

Dean Date

ABSTRACT

OVERALL EQUIPMENT EFFECTIVENESS (OEE) THROUGH TOTAL PRODUCTIVE MAINTENANCE (TPM) PRACTICES – A CASE STUDY IN CHEMICAL INDUSTRY

By

Ferry Yulius Agung, ST.
Dr. Antonius TP. Siahaan, SE., Akt., MM, CA. Advisor
Dr. Badikenita Sitepu, SE., MSi. Co-Advisor

SWISS GERMAN UNIVERSITY

This study aims to examines about the influence of four pillars Total Productive Maintenance (TPM) towards manufacturing performance in PT.XYZ. A survey methodology is used where a four- point Likert type scale questionnaires are sent to 180 respondents in PT.XYZ with the resulting response rate of 100% which is comparable with other studies. Using statistical tools (SPSS), the correlation between four pillars TPM and Overall Equipment Effectiveness (OEE) has been calculated. The study reveals that the TPM pillars Planned Maintenance (PM) and Quality Maintenance (QM) have significant contribution towards OEE while Training & Education (T&E) and Safety, Health & Environment (SHE) have not significant contribution towards OEE. which leads to conclusion that PT.XYZ Indonesia must move forward to eliminate six major losses and focus to design a continuous improvement system to achieve zero defects, world class manufacturing and customer satisfaction in terms of quality.

Keywords: *Total Productive Maintenance, Overall Equipment Effectiveness, Planned Maintenance, Quality Maintenance, Training & Education, Safety, Health and Environment.*

DEDICATION

Specially dedicate to Allah SWT,

my beloved parents, wife, children's, family and always cherished friends.

ACKNOWLEDGEMENTS

Alhamdulillah, I would like thank Allah SWT, which my help and strength comes from. Truly none of this researched would have been possible without His blessing.

I would like to express my deep appreciation to my advisor, Dr. Antonius TP. Siahaan, SE., Akt., MM, CA. and co-advisor, Dr. Badikenita Sitepu, SE., MSi. for their guidance, understanding and patience during my post graduate studies at Swiss German University. I would not have been able to do the research and achieve learning in the same manner without their help and support.

Furthermore, I would also like to thank to my beloved wife dr. Evi Kurniawati, MARS and my little man Darrel and Fairel for their unconditional support and help through my life by giving encouragement and providing the moral and emotional support I needed to complete this thesis. I thank my parents for their love, prayers, caring sacrifices for educating me and allowing me to be as ambitious as I wanted and thanks to my sisters and brother who were always supporting and encouraging me with their best wishes.

And lastly, to the people who helped me with great ideas and advices, especially my fellow friends in batch 27 Master of Business Administration SGU.

TABLE OF CONTENTS

Table Page