

**IMPLEMENTATION OF 5S TO PT. TRIPLE FIVE PLASTIC FOR
WORKSTATION IMPROVEMENT**

By

LAWRENCE DAVID M. CAVESTANY

11307013



BACHELOR'S DEGREE

in

INDUSTRIAL ENGINEERING

ENGINEERING AND INFORMATION TECHNOLOGY



Swiss German University

The Prominence Tower Alam Sutera

Jalan Jalur Sutera Barat no.15

Tangerang, Banten 15143 - Indonesia

August 2017

Revision after the Thesis Defense on 18 July 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.

Lawrence David M. Cavestany

Student

Date

Approved by:

Dr. Tanika D. Sofianti, ST,MT,

Thesis Advisor

Date

Dr. Eng. Sumarsono, ST,MT

Thesis Co-Advisor

Date

Dr. Ir. Gembong Baskoro, M.Sc

Dean

Date

Lawrence David M. Cavestany

ABSTRACT

IMPLEMENTATION OF 5S TO PT. TRIPLE FIVE PLASTIC FOR WORKSTATION IMPROVEMENT

By

Lawrence David M. Cavestany

Dr. Tanika D. Sofianti, ST, MT Advisor

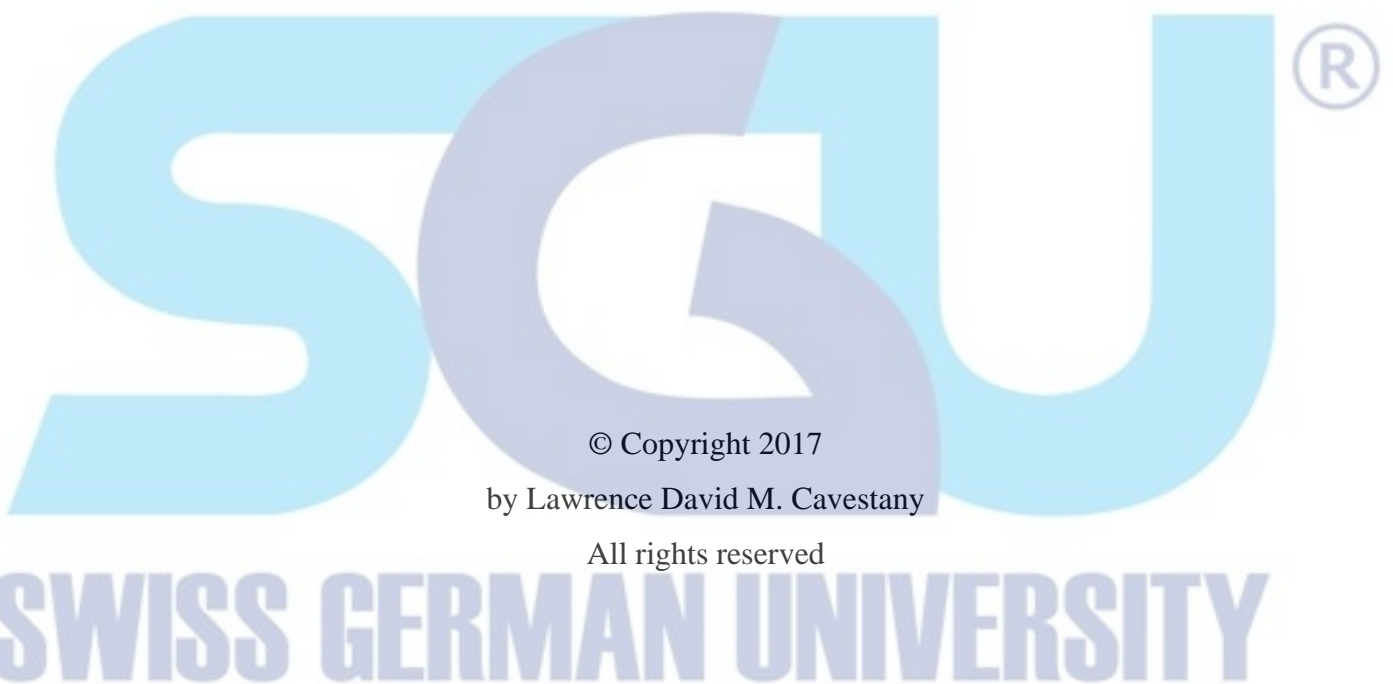
Dr. Eng. Sumarsono, ST, MT, Co-Advisor

SWISS GERMAN UNIVERSITY

PT. Triple Five Plastic is an injection molding company. This company has several areas including workshop, inventory, and production area. The problem in this company is that they have no standard work. Employees does not have a guide on what the company should be like. Employees does not have a basis of a standard work. 5S is a methodology that can give solution to the company problem. This methodology involves the dedication of each worker in the company in order to make the 5S run.

This thesis focuses on the implementation of 5S in PT. Triple Five plastic. With the use of 5S in the company. It should eliminate the wastes that occur in the company such as motion and waiting. Standardized work will be achieved with the use of SOPs and Videos in the company.

Keyword: *Lean, 5S methodology, Standard Operating Procedure, Training Video, 8 Wastes, Lean Thinking.*



DEDICATION

I dedicate this thesis to my parents,
my sister, my family, and friends.
And for me in the future.



ACKNOWLEDGEMENTS

First of all, the author would like to thank God for the grace and blessings that he has given in order to complete this thesis.

The author also express his deepest gratitude to the people who has helped him complete this thesis. These people include his parents, sibling, family, and friends. Without the presence of these people, it would be a difficult task to complete. Their presence has motivated the author to continue doing his best to complete the thesis.

The author would like to thank his advisor Dr. Tanika D Sofianti ST,MT, and co-advisor Dr. Eng. Sumarsono ST,MT, who has always guided the author to the success of this thesis. Their assistance has been a great impact in the completion of this thesis.

Lastly, the author would like to thank PT. Triple Five Plastic that has given the author opportunity to be a part of the company and be a help to a better company.

SWISS GERMAN UNIVERSITY

TABLE OF CONTENTS

STATEMENT BY THE AUTHOR.....	2
ABSTRACT.....	3
DEDICATION.....	5
ACKNOWLEDGEMENTS.....	6
LIST OF FIGURES.....	10
LIST OF TABLES.....	12
CHAPTER 1 – INTRODUCTION.....	13
1.1. Background.....	13
1.2. Research Problems.....	14
1.3. Research Objectives.....	14
1.4. Significance of Study.....	14
1.5. Thesis Scope.....	15
1.6. Thesis Limitations.....	15
1.7. Thesis Organization.....	16
CHAPTER 2 - LITERATURE REVIEW.....	18
2.1. Lean.....	18
2.1.2. History of Lean.....	18
2.1.3 Lean Thinking.....	20
2.1.4 Wastes.....	22
2.1.5 Benefits of Lean.....	25
2.1.6 Foundation for Lean.....	28
2.2. 5S Methodology.....	29
2.2.1. Brief History of 5S.....	31
2.2.2. Phase 1-Sieri.....	32
2.2.3. Phase 2-Seiton.....	33
2.2.4. Phase 3 Seiso.....	33

2.2.5. Phase 4- Seiketsu	34
2.2.6. Phase 5- Shitsuka.....	34
2.2.7. 5S Reward System.....	35
CHAPTER 3 – METHODOLOGY	36
3.1. Thesis Methodology.....	36
3.1.1. Sort	38
3.1.2. Set in Order.....	39
3.1.3. Shine	41
3.1.4. Standardize	42
3.1.5. Sustain	44
3.2. Data Collection	45
CHAPTER 4 - RESULT & DISCUSSION	46
4.1. Step 1 – Sort.....	46
4.2. Step 2 – Set in Order.....	54
4.3. Step 3 – Shine	61
4.4. Step 4 - Standardize	66
4.5. Sustain.....	72
4.6. Time Consuming Analysis.....	74
4.7. User Acceptance Test.....	75
4.7.1 Respondent’s profile.....	76
4.8. Tool board Testing Result.....	79
4.10 SOP Testing Result	84
4.10. Video Testing Result.....	89
CHAPTER 5 - CONCLUSION AND RECCOMENDATION	96
5.1. Conclusions.....	96
5.2. Recommendations.....	97
GLOSSARY	98

REFERENCES	99
APPENDICES	101
APPENDIX A – LIST OF TOOLS	102
APPENDIX A1 – LOG SHEET	105
APPENDIX B – STANDARD OPERATING PROCEDURE	107
APPENDIX C - QUESTIONNAIRES	133
APPENDIX D – 5S AUDIT	140
APPENDIX E – VIDEO FOOTAGE	144
APPENDIX F – CONTACT REPORT	147

