A Study on Eliminating the 37.872% Production Loss in manufacturing ¼ litre Welcoat AP small tin cans amounting to PHP 2,883.055.00 from the months of June to November 2013

A Practicum Study presented to the Faculty of the College of Engineering, Architecture and Technology De La Salle University- Dasmariñas Dasmariñas City, Cavite

In Partial Fulfillment
of the Requirements for the Degree of
Bachelor of Science in Industrial Engineering

Submitted By: CASTILLO, Kier S. IEE51

Submitted To: Engr. Ma. Estrella Natalie B. Pineda





## **ABSTRACT**

Time is as valuable as money, and every company has set their aim on costreduction through process engineering. In accordance to the matter, the company, Kane Industrial Corporation still experiences production loss rooting from productivity problems even beyond of its success as a top manufacturer of The problem as identified and analyzed by different cans after 40 years. methods used by the proponents proved to be rooted on the non-compliance to the set standards in both time and method – the operators work at a much slower pace than the desired pace, inefficient work instruction and working conditions as well as poor preventive maintenance, which in general is poor compliance to the application of time and methods study. Knowing these, the proponent made a study with the focal point of eliminating the average loss of 37.87% in the company's productivity, with data based on the past six months of production, June to November 2013. Reaching the conclusion of the study, the proponent has made several options, alternative courses of action to meet the standards obtained and to eliminate the recurring loss, which is based on the mix of theoretical and realistic application of time and method principles and guidelines.





## **Table of Contents**

Title page	i
Approval Sheet	ii
Acknowledgement	iii
Abstract	iv
Table of Contents	V
List of Tables and Figures	viii
CHAPTER I: INTRODUCTION	
Company Profile	
Background of the Study	2
Statement of the Problem	
Objective of the Study	3
Scope and Limitation	4
Design and Methodology	
Significance of the Study	
Definition of Terms	9
CHAPTER II: REVIEW OF RELATED LITERATURE	11
The Product	11
The Canning Process	12
The Problem: Production Loss Defined	13
Overall Labor Effectiveness (OLE)	15
The Time and Motion Principle	17
Man-Related Contributions	18
Improving the Manufacturer's Methodologies	19





CHAPTER III: PRESENTATION OF DATA	21
Production Loss of KIC	21
Actual Monthly Production Record	22
Time Study Form For Flanging	23
Time Study Form For Bottom Seam	23
Time Study Form For Top Seam	24
Time Study Form For Packing	24
Process Flow Chart	25
Flow Process Chart	26
Establishing Standard Time	26
Contributors to the Production Loss	
Machine Breakdowns	28
Poor Preventive Maintenance	
Unnecessary Movements of Workers	29
Comparison of Actual Work to Standard	30
Comparison of Actual Work to Standard  Absence of Packer in Line 10	31
Cramped Slide Plates	32
Slide Plate Space	
Fishbone Diagram	34
CHAPTER IV: PROBLEM AND OBJECTIVE TREE	34
Problem Tree	34
Objective Tree	
,	
CHAPTER V: ALTERNATIVE COURSES OF ACTION	43
Strict Implementation Work Method and Sanctions	43
Improving the Preventive Maintenance Schedule	45
Widening of Slide Plates to Eliminate Stoppages	50
Use of Stack Boxes	51
Cost-Benefit Analyses	53





CHAPTER VI: CONCLUSION AND RECOMMENDATION	55
Conclusion	55
Recommendation	56
CHAPTER VII: DETAILED PLAN OF ACTION	57
GANTT Chart	57
Bibliography	59
Appendices	60
Appendix A: Endorsement Letter for the On-the-Job-Training	61
Appendix B: Certification of On-the-Job-Training	62
Appendix C: Researcher's Profile	63
LIST OF TABLES AND FIGURES	
TABLES	
Table 1: Production Loss of KIC	21
Table 2: Actual Monthly Production Record	22
Table 3: Time Study Form for Flanging	23
Table 4: Time Study Form for Bottom Seam	23
Table 5: Time Study Form for Top Seam	24
Table 6: Time Study Form for Packing	24
Table 7: Flow Process Chart	26
Table 5: Establishing Standard Time	26
Table 6: Contributors to the Production Loss	27
Table 7: Machine Breakdowns	28





	Table 8: Poor Preventive Maintenance Schedule	. 29
	Table 9: Unnecessary Movements of Workers	. 29
	Table 10: Comparison of Actual Work to Standard	. 30
	Table 10: Absence of Packer in Line 10	. 31
	Table 11: Cramped Slide Plates	. 32
	Table 12: Actual Work Method vs Standard Method	. 35
	Table 13: Sanctions	. 43
	Table 14: Improved Preventive Maintenance Schedule	. 47
	Table 15: Comparison of PM Schedule	. 48
	Table 16: Dimension of Slide Plates	. 50
	Table 17: Dimensions of Tall Boxes	. 51
	Table 18: Line Comparison Upon Implementation	. 52
	Table 19: Cost-Benefit Analyses	. 53
	Table 20: Gantt Chart	. 57
FIG	URES	
	Figure 1: Process Flow Chart	. 25
	Figure 2: Slide Plate Space	. 33
	Figure 3: Fishbone Diagram	. 34
	Figure 4: Problem Tree	. 34
	Figure 5: Objective Tree	. 39
	Figure 6: Standard Method Reminders	. 44
	Figure 7: Seaming Rollers	. 46
	Figure 8: Existing Slide Plates	. 50
	Figure 9: Stack Boxes as Packaging Methodology	. 51