De La Salle University – Dasmariñas College of Technology

A STUDY ON THE REDUCTION OF NON-PRODUCTIVE MAN-HOURS AT ASTEC POWER INCORPORATED

Submitted to:

Engr. Marluna L. Urubio

In Partial Fulfillment

of the Requirements for the Degree

Bachelor of Science in Industrial Technology

Jesse S. Desingaño

Darlene B. Molato

March 2002

8 mm

TABLE OF CONTENTS

	PAGE
TITLE PAGE	i
APPROVAL SHEET	ii
ACKNOWLEDGEMENTS	iii
TABLE OF CONTENTS	iv
CHAPTER 1	
Background of the Study	1
Background of the Study	1
General Objective	2
Specific Objective	2
Significance of the Study	2
Scope and Limitation	3
Methodology	3
Summary of the Interview with the Operators, Line Leaders	
and Supervisors	3
Definition of Terms	5
CHAPTER 2	
Resume of Related Literature	7
Methods of Engineering	7
Time-Based Strategies	7
Lean Manufacturing	8
Work Simplification	8

CHAPTER 3

Presentation of Data

Process Flow Diagram of a Unit Assembled in the	
Assembly Line	10
Headcount of the Direct Laborers and Their Corresponding Incurred	
Productive (non-standard) Hours	11
Headcount of the Direct Laborers and Their Corresponding	
Incurred Non-Productive Hours	12
Summary of Incurred Hours of the Direct Laborers	
And Line Supports	13
Present Headcount of the Line	14
Direct Laborers Productive and Non-Productive	
Incurred Hours	14
Incurred Hours Due to Non-Productive Activities	15
CHAPTER 4	
Analysis and Interpretation of Data	16
Problem Tree	20
Objective Tree	22
CHAPTER 5	
Alternative Courses of Action	24
CHAPTER 6	
Conclusion and Recommendation	26
Cost - Benefit Analysis	27

Computation of Benefits	28
Summary	29
Attachment	30
References	31
Cominglyon Vitae	37



Transferring the activities to the material handler will help him/ her to be involved directly in the acquisition of the materials.

Advantages:

- It will reduce non-productive hours due to follow-up and receiving materials.
- It will not incur cost.

Disadvantages:

• It will be an additional workload to the material handler.

CHAPTER 6

Conclusion and Recommendation

The researchers recommend all alternative courses of action. When they are implemented, the number of non-productive hours would be reduced from 334 hours to 128.5 hours, therefore there has been a reduction of about 195.5 hours (refer to the Summary on page 29). The reduced non-productive man-hours is equal to 6 workers which is equivalent to a savings Php 1320 per day based or 58.53% reduction of the Non-Productive incurred hours (refer to the Computation of the Benefits on page 28). Although the non-productive hours are not totally eliminated due to some unavoidable non-productive activities, the objectives of the study to reduce the number of non-productive man-hours incurred by the direct laborers and to reduce the present headcount are attained.