

CHAPTER 1

INTRODUCTION

1.1. Background

PT. Purinusa Ekapersada is a packaging product company that is subsidiary of Sinarmas Group Company. PT. Purinusa Ekapersada located on Jl. Merakrejo Km 31 Bawen, Semarang. Sheets and cardboard boxes are the orders commonly received by this company. A Sinarmas Group company is the only company that producing cardboard and box and dominates Indonesia and Asian region.

PT. Purinusa Ekapersada produces cardboard with full machinery in each process. Overall process is divided in two departments; they are Corrugating Department and Finishing Department. Corrugating Department uses one Corrugators machine and Finishing Department uses Flexo (printing machines) and Vega (stitching machines). Corrugating Department is the main department because all processes began from this machine. Corrugator is a serial of machine that work together and converting paper roll as raw material into cardboard sheet.

Corrugator is the main machine in PT. Purinusa Ekapersada because the outputs from Corrugators become input for next process. There are two main parts of Corrugators, hotplate and mechanical part. Hotplate is a part with 30 m length used for pressing the paper after fluting. Dusts of paper usually stick on hotplate part and disturbing pressing process (machine down).

Nowadays, company cleans the hotplate after the machine down (corrective maintenance). The effect of down machine in hotplate part is overheating paper or dry paper, and 30 m overheat paper become defect product. Mechanical parts are parts that are using mechanical moment, for instance roller belt, mill roll stand. Hotplate will stop working when mechanical part have some trouble or down. Applying of corrective maintenance creates both defect cost and opportunity cost.

Preventive maintenance means that operator remove the material before entering the hotplate part. Cost will reduce because there is no material along the hotplate part, it means no defect product along the hotplate part and only opportunity cost that occur when preventive maintenance is applied.

1.2. Problem Statement

PT. Purinusa Ekapersada apply corrective maintenance which cause the defect cost and opportunity cost, and amount of defect cost and opportunity cost is relatively high than preventive maintenance which cause only opportunity cost, then interval preventive maintenance is needed to reduce cost.

1.3. Research Objectives

The goal of this research is determining the interval preventive maintenance of hotplate and mechanical part in order to minimize maintenance cost per unit time.

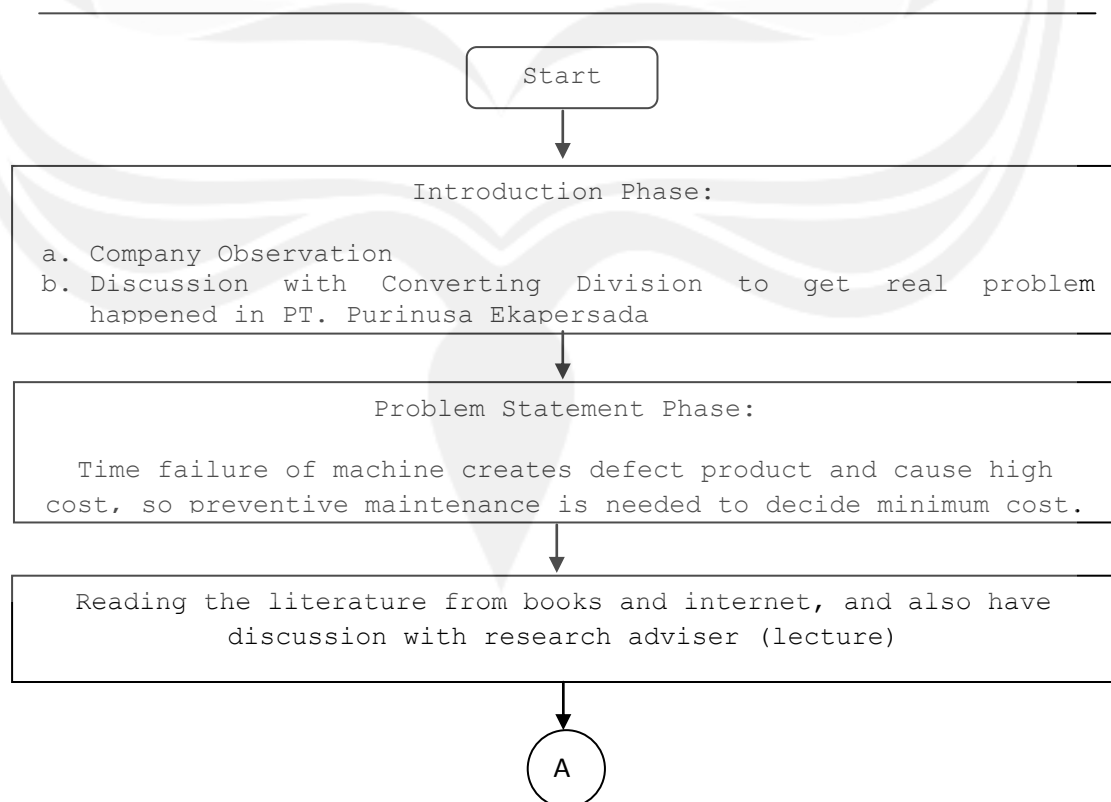
1.4. Scope

There are several limitations related with this research, i.e.:

1. The research is limited to mechanical and hotplate that are part of Corrugators.
2. Research data are taken from January to June 2010.

1.5. Research Methodology

Phases to be conducted in this research can be shown in Figure 1.1.



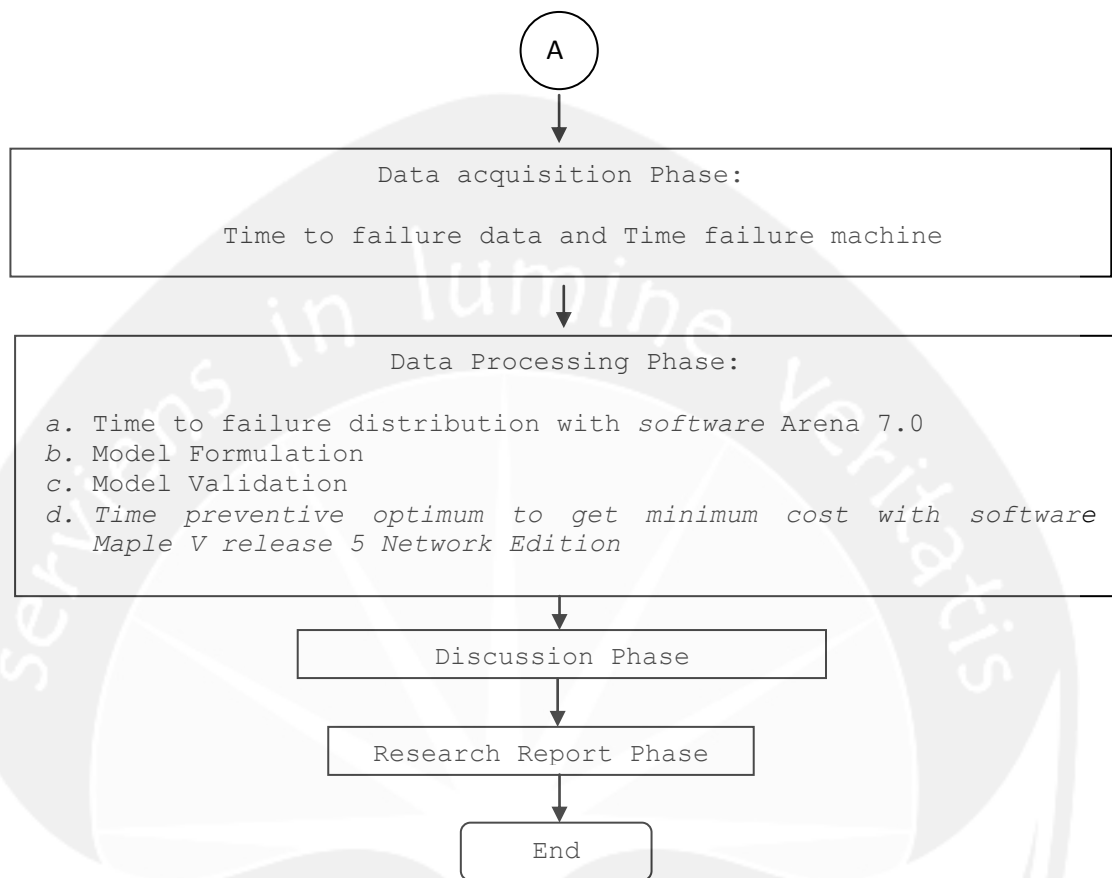


Figure 1.1. Flowchart of Research Methodology

1.6. Outline:

The outline of this research report is as follow:

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| CHAPTER 1 | INTRODUCTION |
| | Introduction consists of Research Background, Problem Statement, Objective, Scope, Research Methodology, and Report outline. |
| CHAPTER 2 | LITERATURE REVIEW |
| | Literature Review consist of brief description about another similar research and the Research benefit |

CHAPTER 3 BASIC THEORY

Basic Theory consists of theories that support the research about maintenance system and simulation. Basic theory is taken from support books or literature.

CHAPTER 4 COMPANY PROFILE AND DATA

This part consists of a brief description of PT. Purinusa Ekapersada especially on maintenance system and data observed.

CHAPTER 5 DATA ANALYSIS AND DISCUSSION

This part consists of data calculation result and discussion of the result.

CHAPTER 6 CONCLUSION

This part consists of research result summaries and ideas to improve quality for next research.