

**A STUDY ON THE ELIMINATION OF THE REJECTION RATE
OF OSHIBUCHI 3-20-3, A SELECTED ITEM
AT NANBU PHILIPPINES INC.**

**A Practicum Study Presented to the Faculty of the
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	PAGE
Acknowledgement	ii
Approval Sheet	iii
Table of Contents	iv
CHAPTER 1: Introduction	
1.1 Background of the Study.....	1
1.2 Company Profile.....	2
1.3 Problem Statement.....	3
1.4 Objective of the Study.....	3
1.5 Scope and Limitations.....	3
1.6 Significance of the Study.....	4
1.7 Methodology.....	5
1.8 Definition of Terms.....	5
CHAPTER 2: Review of Related Literature.....	7
CHAPTER 3: Presentation of Gathered Data.....	11
CHAPTER 4: Presentation of Problem Analysis.....	13
CHAPTER 5: Presentation of Alternative Courses of Action and Cost Benefit Analysis.....	19
CHAPTER 6: Presentation of Conclusion, Recommendation and Detailed Plan of Action.....	26
BIBLIOGRAPHY.....	28
ATTACHMENTS	

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Quality of a product is the first factor to consider when making a purchase decision. Being able to meet and conform to the design and specifications given by the customer for a specific product to make the product marketable is very important. The main concern of Quality Control is to identify rejects, and this kind of problem challenges the effectiveness of the Quality Control Department.

The study was conducted around the production area of Nanbu Philippines Inc. The situation faced by NPI is the mass defect on the selected item OSHIBUCHI, one of their main products for Window Frames and Furniture/Houses Accessories. The raw materials used include different types of plastics like PVC and acrylic. These products are basically manufactured through extrusion moulding process. When the material is extruded in the mould, forming and cooling process follows. The formed material is automatically pulled by a machine to the cutter to be cut on the specified length. Inspection follows, and when defects are detected such as scratches, cracks, dents, holes, etc., an item is labeled as "NG" or no good and good items are those without defects and are loaded to corresponding tracks. The mass defect on the selected item OSHIBUCHI has a big impact for the profit loss of NPI, so as a whole, this study show an analysis on the rejection rate problem using quality control theories and techniques, hence propose an effective solution that will be useful to the company and contribute to its success.

1.2 Company Profile

Nanbu Philippines, Inc.(NPI)

NPI is located in Lot 12, Block 3, Phase 2 of (CEPZA) Cavite Export Zone Processing Authority in Rosario, Cavite. Manufacturing operation started on July 2001, two months after the establishment of its first factory in the Philippines. It is engaged in manufacturing of Window Frames and Furniture/Houses Accessories. It is equipped with Jet Cooler, Extruder Machine, Sub-Extruder Machine, Mold/Die, Dry and Wet Calibrator, Puller Machine, Cutter Machine, Chillers, Fabrication Machinery as well as Calipers, Steel Meters, Pin Gauge, Assembly, Test Gauge, Cap gauge and other measuring instruments necessary in the production of products. PMMA, PVC, AES, ABS are the basic raw materials used by NPI in producing the products. The materials are available in the Philippines but most of the raw materials used come from Japan.

The key to NPI success lies in the character of five Japanese officials namely, Mr. Kenjie Terao, Mr. Keiji Oishi, Mr. Daisuke Aoshima, Mr. Hideyuke Iwazaki and Mr. Inoue. Supporting them are Filipino staff holding the key position in the company. They made the company grow and it is projected to move ahead even further in the future.

Nanbu Philippines Inc. aims to provide technical training among Filipino employees, with the right levels of equipment coming from Japan. It also has the goal to strengthen people's skills, abilities to do jobs better for higher productivity. Quality should come first and good philosophies on shop floor management are the foundations of NPI to attain the productivity, quality and sales improvement.

1.3 Problem Statement

Nanbu Philippines Inc. is encountering an average of 14% rejection rate on the production of OSHIBUCHI 3-20-3.

1.4 Objective of the Study

General

To eliminate the rejects on OSHIBUCHI 3-20-3 manufactured at NPI.

Specific

- » The study aims to minimize the downtime process
- » The study intends to improve actions delivered in monitoring OSHIBUCHI.
- » The study seeks to show the importance of quality control in a product.

1.5 Scope and Limitations

This study is only concerned with the processes of loading OSHIBUCHI product, monitoring on machine conditions and the condition of person in charge on a selected line. The data used in the analysis were data from Quality Control reject reports of the Company.

1.6 Significance of the Study

1.6.1 To the Company

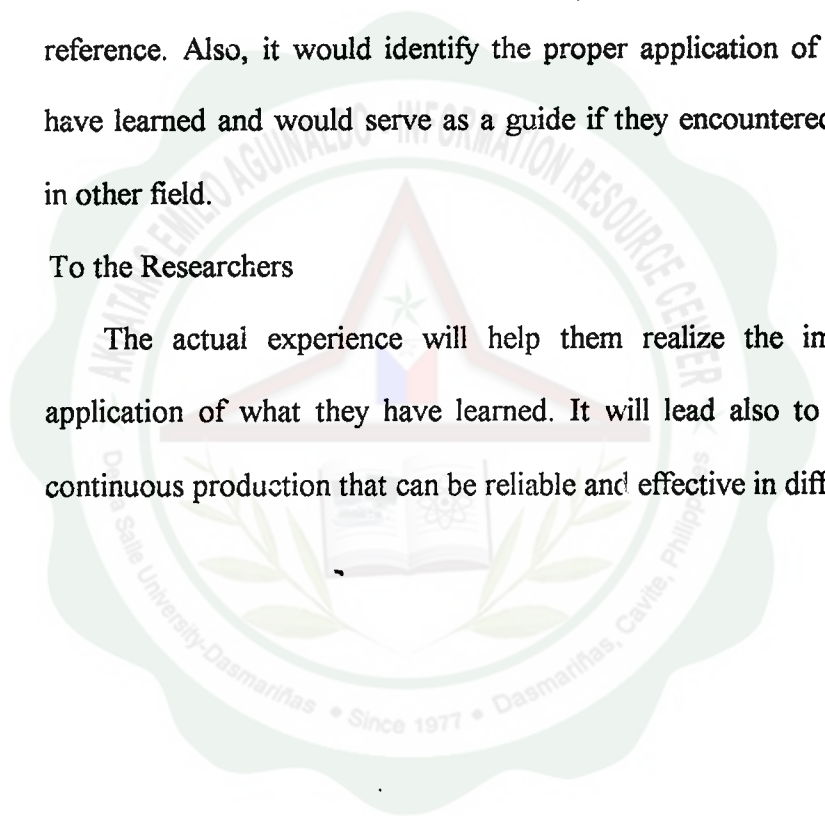
The findings of the study may provide additional knowledge of detailed analysis on the causes of rejects and help the company to lessen the idle time in the whole operation.

1.6.1 To the Students

This study may be of great help for students who may need future reference. Also, it would identify the proper application of the theories they have learned and would serve as a guide if they encountered similar situation in other field.

1.6.3 To the Researchers

The actual experience will help them realize the importance of the application of what they have learned. It will lead also to create good and continuous production that can be reliable and effective in different structures.



1.7 Methodology

The following methods were used in the analysis of the study:

Data Gathering – Most of the data and other information used on the study were taken from documents provided by the company. The production staff also contributes by giving the right data about OSHIBUCHI reject based on monthly report.

Interviews - Interviews were made with the production staff to determine their observation on evaluation regarding the problem on rejects. Opinions and suggestions of the interviewed personnel were considered in the study. Interviewing the operators and Q/C staff also is a big factor in finding out what are to be solved.

Observation – Some information on actual methods used throughout the manufacturing process were based on observations made by the students. It is also through observation that the work performance of production staff were evaluated. By evaluation, it would be easy to find out what is the specific problem in product process in the production area.

QC Tools -To make a further analysis on the gathered data and information, quality control tools were used in the study. The Pareto and other computation techniques were used for an easy understanding, and in getting the percentage of rejects in OSHIBUCHI.

- Pareto Chart – the use of Pareto Chart led the study to a clear analysis on the distribution of the defects that was reported Q/C Department. This was used to identify where the study is to focus.

1.8 Definition of Terms

Boot-up – is a process of pulling the gelatin form material towards the calibrator to make a product on which operator has physical contact with the material.

Cutting – products are being cut according to the size required by the customer.

Defects – a shortcoming, imperfection, or lack.

Extrusion Moulding – The heart of screw extrusion is a screw rotating in the hot barrel. The raw materials are fed into the screw through the hopper. The solid is conveyed forward, plasticized, homogenized, and pressurized along the screw. Thus, the homogenized melt is pumped or pushed across the die attached to the extruder head.

Gelatination – is a process of turning a raw material into a gelatin form for the material to flow out easily through the die by setting up the speed and temperature.

Inspect/Inspection – to look at (someone or something) closely, typically to assess their condition or to discover any shortcomings.

Mold/Die – Equipment attached to the extrusion machine, used for forming the design product

Puller Machine – used for pulling the material with continuous and equal flow.

Quality – the standard of something as measured against other things of a similar kind; the degree of excellence of something.

Rejects – a thing dismissed as failing to meet standards or satisfy tastes.

Standard – level of quality accepted as norm: level of quality or excellence that is accepted as the norm or by which actual attainments are judged.

Specification – a detailed description of the design and materials used to make something. A standard of workmanship, materials, required to be met in a piece of work.