



Faculty of Engineering
Department of Textile Engineering

“Study on Finishing of a Garments Industry”

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Advance in Apparel Manufacturing Technology

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LETTER OF APPROVAL

30 August 2022

To

The Head

Department of Textile Engineering

Daffodil International University

Daffodil Smart City, Ashulia, Saver, Dhaka 1341

Subject: Approval of Project Report of B.Sc. in TE Program

Dear Sir,

I am just writing to let you know that this project report titled as “**Study on Finishing of a Garments Industry**” has been prepared by the student bearing ID 183-23-5446 and 183-23-5476 is completed for final evaluation. The whole report is prepared based on the proper investigation and interruption through critical analysis of empirical data with required belongings. The students were directly involved in their project activities and the report became vital to spark of many valuable information for the readers.

Therefore, it will highly be appreciated if you kindly accept this project report and consider it for final evaluation.

Yours Sincerely



Md. Mominur Rahman

Assistant Professor

Department of Textile Engineering

DECLARATION

We hereby declare that the work which is being presented in this thesis entitled, “Study on Finishing of a Knit Garments Industry” is original work of us, has not been presented for a degree of any other university and all the resource of materials uses for this thesis have been duly acknowledged.

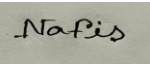
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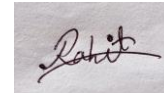
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This is to certify that the above declaration made by the candidate is correct to the best of my knowledge.

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At first we express our thanks and gratefulness to almighty Allah for His divine blessing makes us possible to complete this project successfully.

We feel grateful to and wish our profound indebtedness to **Md. Mominur Rahman, Assistant Professor & Assistant Proctor, Department of Textile Engineering, Daffodil International University**, deep knowledge & keen interest of our supervisor in the field of knit garments production influenced us to carry out this project. His endless patience, scholarly guidance, continual encouragement, constant & energetic supervision, constructive criticism, valuable advice, reading many inferior drafts & correcting them at all stage have made it possible to complete this project.

We would like to express our heartiest gratitude to our garments supervisors. **Md Liton. General Manager of “Euro Tex Knitwear Ltd” .Wahiduzzaman Industrial Engineer Manager of “Ha-Meem Group”**. For his kind help to finish our project & also to other faculty member & the staff of TE department of DIU.

Finally, we must acknowledge with due respect the constant support and patient of our parents.

ABSTRACT

Now there has been a revolution in Bangladesh's garment export business. The economy grew gradually day by day and became the second highest manufactured garment Exporting country. All these depend on the quality and quality of the garment finishing process. And makes the finishing section the most important part of garment making. Garments stitched in it go through various processing stages like thread cutting, ironing, quality checking, folding and poly-packing and then cartooning. This study is based on basic t-shirt and polo shirt knitwear finishing processes in finished garments manufacturing companies. Vast stock of knowledge which helps to know & improve how the finishing process is done and various types of finishing faults and their remedies. A garment, product to be made going through different types of processing. During this processing, products can be manufactured with some different types of faults. In this thesis paper make with various finishing processing data Production rate, rejection rate, product pass rate percentage and defects per hundred units for 12 days. As well as it is included with data analysis which data collect from different finishing section in garments by personal physical visit to the factory .Finally the report is finished with conclusion where some proposal for the best expected production number ,less defects & finishing quality can be improve.

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CHAPTER-1

INTRODUCTION

1.1 Background of the Project

Now there has been a revolution in the garment export business of Bangladesh. The economy grew gradually day by day and became the second highest producing garment Exporting country. All these depend on the quality and quality of the garment's finishing process. And makes the finishing section the most important part of garment making.

Our thesis paper started as "Study on Finishing in a Knit Garment Industry". We know garment manufacturing is crucial for maintaining the exact quality of the art. We have been interested in this category of clothing Industry since our research began. So, when we got the chance to work Garment industry, we took this issue seriously. We got the chance To work in "Euro Tex Knitwear LTD" and “Ha-Meem Group” which deals with both domestic and foreign In this buyers paper, we try to find out the errors that occur most often and how we can be reduced, which will help to produce or improve the garments. Our eyes will be looking at the finishing faults and how to solve.

1.2Objective of the Study

- ❖ To know how to increase quality and production by reducing frequent errors.
- ❖ To find the problem in garment finishing in various processing.
- ❖ To decrease finishing problems.

1.3 Importance of the Study

Finishing is the most important process in the garment industry. Process results to improve product quality. It is directly related to customer satisfaction. Its advantages are given below:

- ❖ To acquire great knowledge of various finishing processes used to improve product quality.
- ❖ It helps to know different types of finishing faults.
- ❖ Identify frequently occurring errors and find proper solutions for the same.

1.4 Limitations of the Study

To complete the project report we have to work with some constraints which we don't have a large amount of information has been collected about this topic, but we are trying our best to

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Use this thesis some of the limitations of the paper are mentioned below:

- ❖ Factory does not follow any data maintenance procedure. So, we have to do it ourselves.
- ❖ We have to base this report on a particular outfit Industry as we do not have time to visit and collect data and information from various garment industries.
- ❖ We had to work within very limited time.
- ❖ Lack of practical knowledge and experience.
- ❖ Taking data and information during work is too difficult.
- ❖ Had to work with whatever was available in the factory.

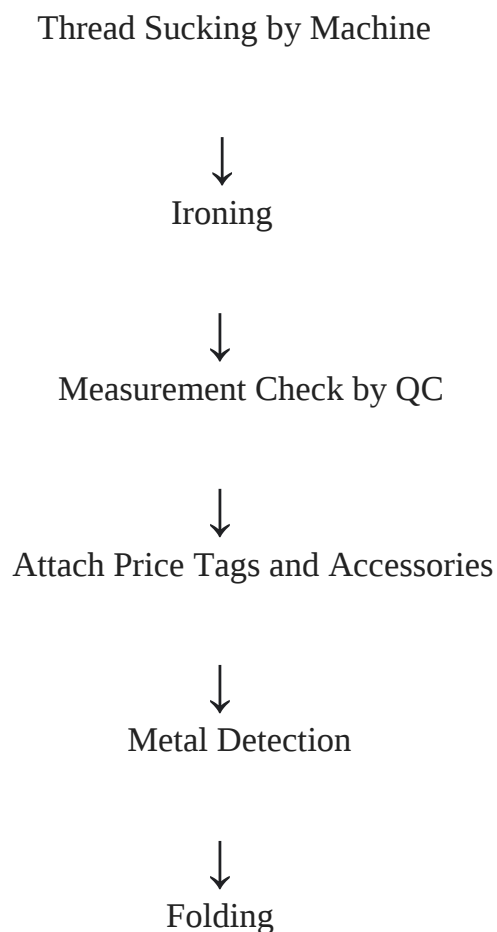
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LITERATURE SURVEY

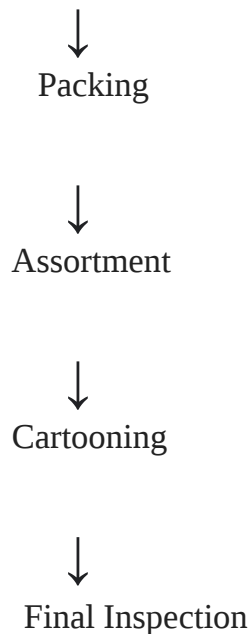
2.0 Garments Finishing

Finishing garments is an important part of the garment industry. In this department we accept garments from the sewing section. A series of operations applied to develop garment quality and to improve its characteristics. After making the fully stitched garments by the sewing section they are sent to thread cutting, etching, foiling, poly packing, cartooning at last section to get attractive look. Those, finishing process like thread cutting, ironing, stain removal, folding, Packing etc. Which makes the products complete and improves its functional properties, visual Appearance and hand feel . In fact, customer satisfaction depends on the finishing of the garment. So finishing is the most important part of a complete garment.

2.1 Process Flow Chart of Finishing Section In Garments Industry:



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2.2 Thread Cutting:

After complete stitching in the sewing section, every product passes through this finishing department. But cutting the thread from sewing before the garment is finished adds a non-standard but essential process. This section cuts away excess thread from clothes. Manual thread cutting is time consuming and not all cutting threads can be permanently removed from clothes. A number of helpers are working in this thread cutting section for complete garments production. Anything that is cut off is considered excess thread waste. This is done manually with sharp scales. To reduce labor and over time, factories use UBT machines. If you use UBT Sewing machine, you need to take the threads out of your clothes to get clean clothes, because other machines used for sewing clothes cannot be under bed trimmer. The sewing operator cannot be sent to cut the thread after sewing of each garment.

2.2.1 Types of Thread Cutter:

There are 3 types of cutter use in finishing section. They are:

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Hand Trimmer:

The use of these thread cutting tools is the most in our country. This is a manual process. Usually, Garment factories employ many workers for this job. There is a possibility of damaged garment parts. The skill and attentiveness of the staff is very important to do this.



Figure 2.2.1 Hand Trimmer

Thread Cutting Machine:

The practice of most factories in Bangladesh is manual thread cutting by hand. This manual process has the chance to damage the garment part. For that it is better to invest in an automatic thread cutting machine. Sewing thread, embroidery thread and other thin thread may need to be cut.



Figure 2.2.2 Thread cutting Machine

Two head thread cutters:

This machine is built with suction motor, table top, waste container, and cutting blade .By Usage of automatic thread cutting machine can improve in reducing human power manufacture of thread cutting section and thread cutting speed. These machines are found in various designs & versions.

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An operator can be cutting thread by sitting in the chair when the thread cutting machine is fixed on a table. For establishing garment on a flat table operator can be use moveable cutter & thread tile trim.



Figure 2.2.3 two head thread cutter

2.3 Ironing:

Ironing and pressing is the only way to remove creases from clothes. This heating temperature depending on the fabric, if the heating temperature is higher than the fabric tolerable heat the temperature property will then damage the fabric and lower heating temperature.

The hot temperature property of the fabric can then reduce the wrinkle of the fabric. The normal heating temperature of the iron machine is usually 180-220 degrees Celsius Ironing.

2.3.1 Ironing Equipment's

Iron: Ironing is the small equipment used to remove wrinkles from fabric. This is a clothes iron, flat iron, or iron known as smooth. The bottom piece is called a single plate. Ironing uses heat energy, chemical power, electrical power, and mechanical strength.

Tailor's Hem: A silted ham or a dressmaker's hammer is a hard steel pillow in the shape of a ham when pressed.

Ironing Table: An ironing station is important for proper selection as it cools and air flows through dress to set it. Some types of ironing tables are listed below:

- ❖ Flat top ironing table
- ❖ Blouse and shirt ironing station

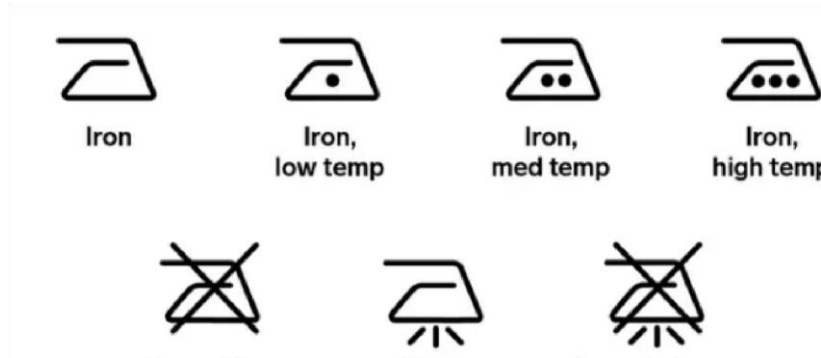
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- ❖ Jacket seam station
- ❖ Trouser seam ironing station
- ❖ All-purpose table
- ❖ Dress board ironing table
- ❖ Flat top ironing table
- ❖ Concave ironing station
- ❖ Curtain ironing station
- ❖ Sleeve seam ironing station

2.3.2 Recommended Ironing Temperature for Different Fabrics:

Fabric	Temperature (Degrees Celsius)	Steam
Cotton	High heat (150-200)	Recommended
Polyester	Medium heat (110-150)	Not
Silk	Medium heat (110-150)	Iron Damp
Wool	Medium heat (110-150)	Required
Nylon	Low heat (110)	Not Required
Acrylic	Low heat (110)	Not Required
Acetate	Low heat (110)	Iron Damp
Rayon	Medium heat (110-150)	Not
Spandex	Low heat (110)	Not Required
Linen	High heat (150-200)	Recommended
Denim	High heat (150-200)	Iron Damp

2.3.3 Ironing Symbol



NOTE: The point system of the temperature range is the same for all the ironing processes.

- ❖ One dot of symbol indicates 110°C ironing temperature.
- ❖ Two dots of symbols indicate 150°C ironing temperature.
- ❖ Three dots of symbols indicate 300°C ironing temperature.

2.3.4 Ironing Tips

- ❖ Before the ironing process, check the garment label and follow the instructions. If any guidelines don't exist, start ironing in a low heat on a small area, then slowly raise the heat
- ❖ Put a piece of fabric on the iron area & zippers in a closed position.
- ❖ Sort by garment type. A lower temperature setting of iron is the first article, and then gradually works in the range of the temperature.
- ❖ When steam iron on fabric surfaces frequently for a long time, slow and single-use passes allow the moisture to dry.
- ❖ Allow five minutes for the temperature change from any low temperature to high temperature.
- ❖ Use a low temperature setting.

2.3.5 Safety Instruction

- ❖ Always disconnect iron from electrical connection when not in use.
- ❖ Notice all the instruction before using a iron
- ❖ If the iron or cord is damaged, or it shows signs of leaking, the iron will not work... For not taking any risk of electric shock, have to be inspected and repaired by a qualified person.
When iron is used in an improper way it may result in risk of electric shock.
- ❖ Use iron only for its needy time.
- ❖ Don't allow anybody to touch hot surfaces. Before putting the iron away let it cool.
- ❖ Do not iron any liquid to protect against any risk of electric shock.
- ❖ The iron should always be turned off before plugging or unplugging the outlet. To disconnect the plug from the outlet will instead be caught and disconnected.

2.4 Garments Measurement

A full dress will require preparation for dress patterns and perfect measurement guidelines.

Sometimes the base alone is not enough to prepare this measure. Measure of the actual size of each piece of clothing comes from the customer's specifications.

Garments measurement Techniques are designed to show how all product measurements differ by measurements across areas and measurement. Measurements clothing size guidelines review, measurements and Sample garments should be used when making products.

The system can play a role in reducing cost of garment production and production time. Each famous garment manufacturing industry has a garment measurement department. They get it is essential to measure the sample accurately using the exact pattern and some key points.

2.4.1 Method of Garments Measurement

All products in the measurement field are calculation methods for measuring different types of clothing measurement. Measurement are different measurements where measurements are designed to show how measurements are made and what can be done. To make this process more efficient and effective. The method of measuring clothing has been classified into 4 parts. They are:

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1. GEN-General

- ❖ NE Body length
- ❖ Body length
- ❖ Hoods
- ❖ Under band/Wings
- ❖ Cups/Bridge
- ❖ Armhole/Sleeve
- ❖ Hip
- ❖ Hem
- ❖ Gusset
- ❖ Waist
- ❖ Zipper/Fly/Placket
- ❖ Rise/Leg pocket/
- ❖ Pocket positioning width
- ❖ Dart
- ❖ Miscellaneous

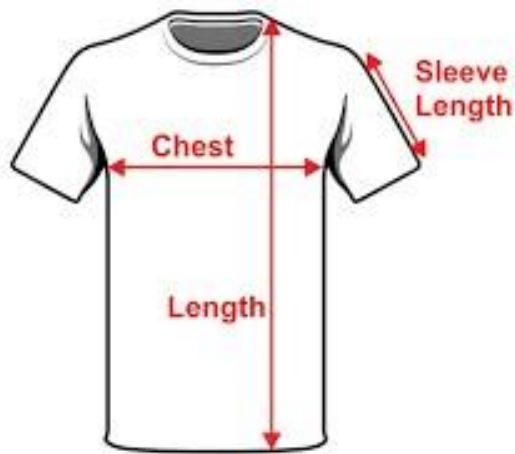


Figure 2.4.1.1: Garments Measurement

2. LUS- Lingerie, Underwear, Swimwear

- ❖ Necks/ Collar
- ❖ Body lengths
- ❖ Shoulder/bust/chest
- ❖ Armhole/Strap/Sleeve
- ❖ Wings/Under band



Figure2.4.1.2: Underwear, Lingerie

3. ACC- Accessories

- ❖ Hats/Headwear
- ❖ Gloves/Mittens
- ❖ Bags/Wallets
- ❖ Scarves

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❖ Belt



Figure 2.4.1.3 : Head ,Bag, Belt

4. SAH- Socks & hosiery

❖ Socks

❖ Hosiery



Figure 2.4.1.4: Socks, Hosiery

2.4.2 Preparation for Measuring Garments:

- ❖ A smooth and flat surface of the table must be used.
- ❖ Garments must be buttoned and zipped unless otherwise specified.
- ❖ Overlapping with clothing must be specified as non-stop.
- ❖ Remove all folds, wrinkles or creases from garments.

2.4.3 Basic Measurement Guidelines

Before measuring the garment, accept the measuring equipment, measurement specification Sheets and documentation of those measurements. Take all measurements with a fiberglass scale or metal ruler. Take measurements with the garment on a surface in a natural position. Measure using the flexible metal tape or make all measurements as buyer requirements not stretch or pull the garment during measurement. Until measurement is inside as specified, take all measurements from outer edge to outer edge. Garment measure from the left side of the wear. Measure the waist belt, neck, leg opening, etc. from the inside edge. When taking stretch measurements, stretch the fabric but not the extension extensively.

2.4.4 Measurement Technique

- ❖ Shoulder- Measuring tape is placed from shoulder point to shoulder point.
- ❖ Straight back, armhole seam armhole.
- ❖ Back Length – Measure directly from the bottom edge of the garment
- ❖ High point shoulders.
- ❖ Chest- Tape your measurement “below the arm seam, directly in front, outer edge at the outer edge.
- ❖ Center Back Sleeve Length – Find the center to use a half-fold neck or center back Center Now measure from the point of the shoulder, from the pivot follow the arm with the cuff at the top of the shoulder and brace line.
- ❖ Waist – Measured straight across the front, from edge to outer edge.
- ❖ Seat/Hip – From front edge of straight edge, measure.
- ❖ Bottom-To the outer edge of the straight edge of the measuring tape Bottom edge of the garment. If available, vent on the outer edge of the top vents on the outer edge, clothing directly measuring cover.

2.4.5 Importance of Taking Accurate Measurements

The pre-knitting process is an important part of what we're doing to ensure consistency.

The right to appropriate measures, or new curtains covering cloth for sight-seeing. The old adage "measure twice, cut once" really rings true in my case, measure five or six times, cut once.

2.5 Spot Removing

Stains or stains are common in fabrics or garments or in the garment industry not free from Stains or stains may be rejected by buyers. Garment manufacturing factories, mentioned in this article, treatments applied to remove blemishes or scars.

2.5.1 Types of Spot

- ❖ Oil spot
- ❖ Dye spot
- ❖ Water spot
- ❖ Blood spot
- ❖ Cosmetics spot
- ❖ Dirt spot
- ❖ Iron spot
- ❖ Printing spot



Figure 2.5.1.1.: Oil Spot

2.5.2 Spot Removal Treatment

Spot can be removed by doing in these ways:

- ❖ The most important means of being exposed to cold water and warm water.
- ❖ Dress or spot wool can be safely removed from clothing using an approved carpet shampoo
- ❖ Solution.
- ❖ Vacuum cleaners can be helped to eject the spot of garments finishing.
- ❖ In some cases, white spirit is a simple solution for removing stains from clothing.
- ❖ Another which is very important in removing stains from surgical spirit dressings.
- ❖ Garment manufacturing sector, in some cases, to remove stains from clothes deodorizer's pesticides or chemicals are used.
- ❖ Rusty remover is also used to remove the spot from the garments.
- ❖ For water-based stains, acceptable clothing spot remover is used to remove the spot from the garments.



Figure 2.5.1.2.: Oil Spot removing spray

2.6 Folding

After applying pressure, the garment is attached to the predefined area. Garment buyer, according to a standard folded according to the requirements of the area.

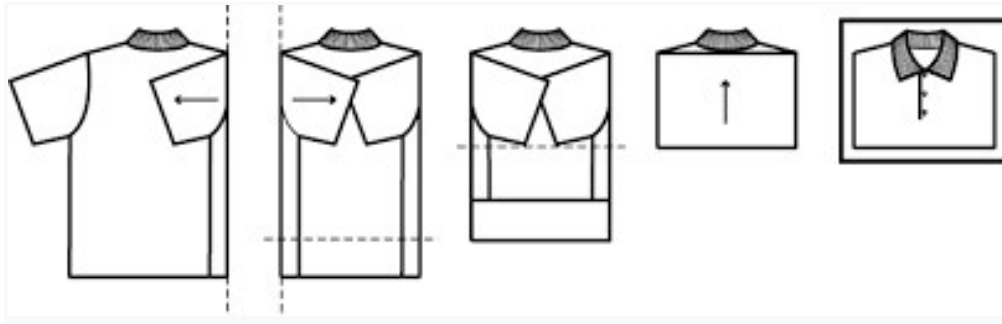


Figure :2.6.1.: T-shirt folding process

2.6.1 Folding Process of Some Basic Garment

2.6.1.1 Folding of a Short-Sleeve T-shirt

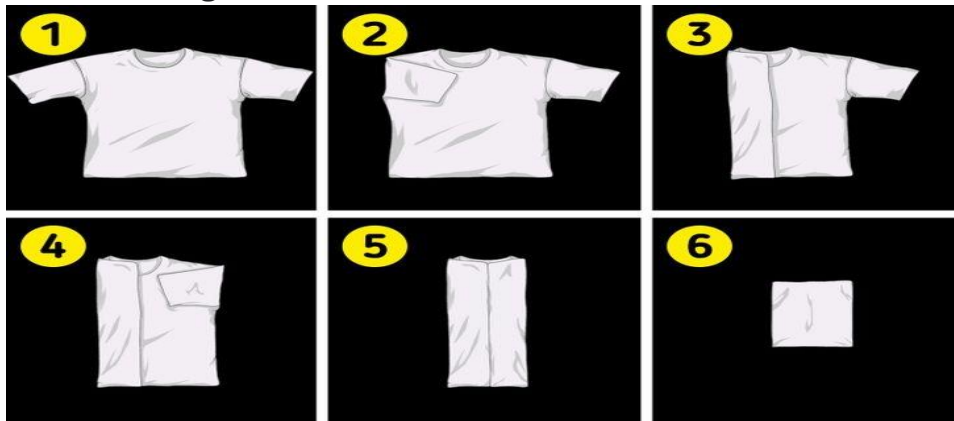


Figure2.6.1.1: T-shirt folding process

2.6.1.2 Pant folded side-to-side

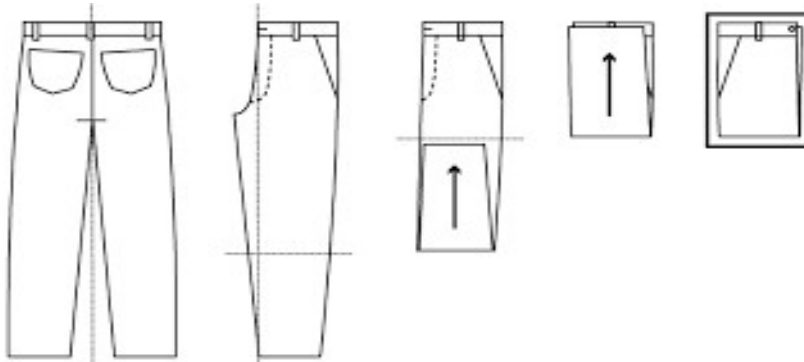


Figure 2.6.1.2: Folding process of pant

2.7 Faults and their Remedies

Various types of garment fault are detected in this section. Their visual and remedies are given below.

Printing Spot:

Sometimes it is desirable to customize the appearance of the product. This will be done with different types of dyes and chemicals. Thus, the printing product can be printed by spot by printing time. Those faults are called printing spots.

Causes:

- ❖ Using a faulty printing machine.
- ❖ Lack of awareness in handling clothes.
- ❖ Use of poor-quality printing screens, dyes or chemicals.

Remedies:

- ❖ High quality instrument should be used
- ❖ Wash such spots by appropriate washing methods

Wrong Side Chap Tuck:

When chap tuck is done on the wrong side of the garment it is called wrong side chap tuck. Actually, chap the garment is tucked to secure the seam line.

Causes:

- ❖ Not attentive operator
- ❖ Unskilled worker

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Remedies:

- ❖ Should be done the operation again.
- ❖ Operators have to give attention to the work.

Fabric Hole:

This is a defect part of the fabric from where you can see the other part of the garment through the hole.



Figure 2.7.1: Fabric Hole

Causes:

- ❖ The holes may happen from the fabric or it may be due to the stitching section.
- ❖ Holes can be created by yarn breakage or yarn cracks.
- ❖ Broken needles many times cause it.
- ❖ Faulty thread cutting by the operator.

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Remedies:

- ❖ Improve fabric inspection and cut pieces of garments.
- ❖ Fabric fault detectors can be used.
- ❖ By improving worker attention & skill.

Main Label Missing:

If any garment comes to the quality category without the original label after the sewing process the main label is considered missing. The main label represents the brand name of the garment.



Figure 2.7.2: Main label missing

Causes:

- ❖ Ignoring of the worker.
- ❖ Carelessness of the worker.

Remedies:

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- ❖ Process should be done more attentively & carefully.
- ❖ Process needs to be done rapidly

Stitch Missing:

After the sewing process when a garment comes to the quality department with an operation missing seam is called missing stitch.



Figure2.7.3: Stich missing

Causes:

- ❖ Attention of the operator.
- ❖ Lack of skill
- ❖ Input and output garments combine

Remedies:

- ❖ Process needs to be done in sequence
- ❖ While working, the operators must fully give their attention to their work.

Chap Tuck Missing:

After the sewing process, if the garment comes to the finishing department without a chap tuck, it is called missing chap tuck. Chap tuck is actually done to secure the SIM line.

Causes:

- ❖ Unskilled worker.

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- ❖ Lack of Attention.

Remedies:

- ❖ Process needs to be done again.
- ❖ Operators should give attention to their work.

Raw Edge problem:

After sewing, if the fabric raw material is unexpectedly shown in the garment sewing area as the problem refers to the raw edge problem.



Figure 2.7.4: Raw Edge

Causes:

- ❖ Lack of fabric handling by workers.
- ❖ Stickiness of the presser foot.

Remedies:

- ❖ Operators should be well trained.
- ❖ Use an accurate needle plate.
- ❖ Cut the raw edge part exactly.

Seam Puckering:

Gathering of a seam due to sewing that creates an unacceptable seam appearance also known as garment seam puckering.



Figure: 2.7.5: Seam Puckering

Causes:

- ❖ Due to unskilled workers..
- ❖ Improper handling of fabric plies.
- ❖ Improper thread & fabric tension

Remedies:

- ❖ Skilled workers should be used.
- ❖ Proper thread should be selected.
- ❖ Needle-thread-fabric selection should be more accurate.
- ❖ Proper thread & fabric tension should be maintained.

Scissor Hole:

In order to make a garment, the product has to go through various processes. Scissors are the most common tools in the industry. Sometimes, the processed product may be defective or cut by scissors which is a completely unforeseen accident by workers. And the fault is known as scissor hole.

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Figure: 2.7.6: Scissor Hole

Causes:

- ❖ UN skilled worker.
- ❖ Ignorance of workers.
- ❖ Poor handling.

Remedies:

- ❖ Carefully handled Sharp equipment.
- ❖ Remove the defect part from the product and attach a new part.

Broken Stitch:

After the stitching process, if a garment arrives at the quality control department with broken stitches, it is a fault that is called broken stitches.



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Figure: 2.7.7: Broken Stitch

Causes:

- ❖ Using low quality thread & Needle
- ❖ Excess thread tension.
- ❖ Unskilled workers.

Remedies:

- ❖ Use high quality thread & Needle
- ❖ Trimming should be done more attentively
- ❖ Daily Quality Checking Report

2.8 Garments Packing

Packaging is an important part of the product, which is going to get a lot of attention from people. This package is suitable for designing and manufacturing a product. Packaging refers to the design, evaluation, and package manufacturing process.

After final inspection and folded clothing, clothing poly-pack dozen-wise, color, size, direction Proportions, packed in bundles and cartons. Printed cartoons are easily identified from the outer carton important information. In particular, the right location must be found so that recruitment can be guaranteed.

2.8.1 Packaging Materials:

- ❖ Paper board
- ❖ Plastic clip
- ❖ Inner box
- ❖ Butterfly
- ❖ Plastic collar

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- ❖ Tag pin
- ❖ Wooden boxes and Crates
- ❖ Ball head pin
- ❖ Ploy bag
- ❖ Tissue paper
- ❖ Carton
- ❖ Scotch tape



Figure:2.8.1: Different type of scotch tape

2.8.2 Types of Garments Packaging Carton

The buyer must deliver the final product to the buyer. According to the customer Recommendation, poly bags and clothes are kept. Actually, it is a sort of categorization done in a way. Cartoons will go with the presentation. Generally, the design of the packaging carton depends on the customer's needs.



Figure:2.8.2: Carton

The packaging carton depends on several factors. They are

2.8.2.1 Depend on Stitching

Gum Pasting Carton

2.8.2.2 Depend on Paper

- ❖ Khaki Carton or Brown Paper
- ❖ Duplex Carton
- ❖ Box Carton

2.8.2.3 Depend on Ply

- ❖ 3 ply Carton
- ❖ 5 ply Carton
- ❖ 7 ply Carton

2.9 Final Inspection:

Final quality inspection which is finally performed before the shipment process. After the pre-final or complete many pass inspections, the inspection process before running the final inspection process. This type is coordinated by the inspector, it is called the final inspection. This is known as pre-shipment Inspection.

After packing and cartoning are done, all goods are called with prepared invoice. Many or populations, which can be used successfully. Many samples are taken from all over the world which can represent the whole.

2.9.1 Some Activities of Final Inspection

- ❖ Size fixes
- ❖ Checking carton
- ❖ Measurement test
- ❖ Packing and packaging check
- ❖ Carton selection
- ❖ Clothes sample check
- ❖ Inspection preparation

2.9.2 Acceptable Quality Level:

Acceptable Quality Level is one of the most commonly used terms in the apparel export. Industrial means acceptable level of quality. In a business process, before the end product to visit the manufacturer's products from the manufacturer's buyer. It is very important in the export garments sector. During the inspection found that errors are classified in 3 sections

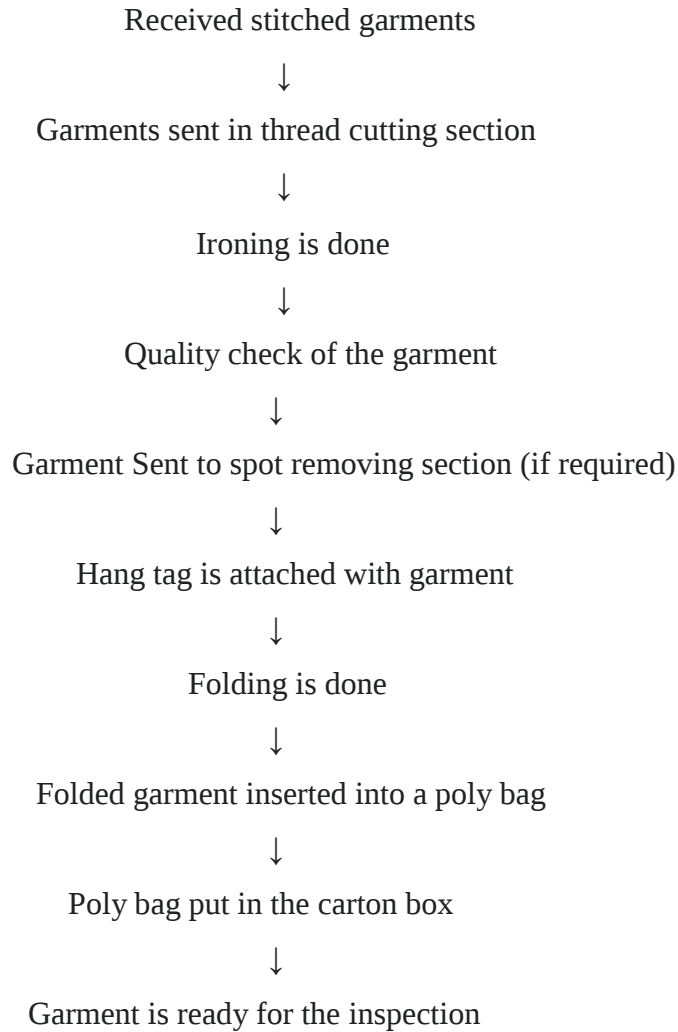
- ❖ Critical: Must be 100% accurate. There is no range
- ❖ Major: Normally 2.5%
- ❖ Minor: Normally 4%

CHAPTER-3

EXPERIMENTAL DETAILS

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3.0 We worked on the finishing section of a garments, we learned all the process which maintenance for garment finishing and the defects found during the garment checkup is over.



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3.1 Thread cutting

In order to maintain proper quality, it is necessary to take care of the product in the first stage finishing section. First process of sewing the garment is done. In the finishing section the remaining excess sewing thread is trimmed. This is done manually with scissors.

3.1.1 Thread Cutting Faults

The main function of this section is to cut excess threads. They don't check clothing faults. But sometimes they find some defective clothes which contain critical and major defects. For example, garments made spots with a large area, without a part, miss seams, etc.

Table 3.2 Daily Sewing Thread Cutting Report

EURO TEX KNITWEAR LTD
Daily Quality Report of Thread Cutting Unit

Date: 12.06.22

Style No	Quality Check/shift	After repair shift	No of defects/ shift	Passed Quantity/shift	OK%	OK%
male	0280	04	07	329		99%
NOI22	0288	05	03	337		98.54%
TAKKO	0278	6	4	346		98.29%
NOI22	0276	4	5	342		98.74%
OM	0271	03	05	312		99%
male	02298	03	05	312		99.12%
NOI22	02106	04	07	329		99.2%
NOI22	02106	03	08	343		99.14%
NOI22	0280	05	06	346		98.46%
NOI22	0274	3	7	288		99.8%
NOI22	02009	03	05	302		99.02%

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Here in 12.06.22 the report of thread cutting section we can see different Buyer & there different style number hourly passed production for next process. This report shows us products of Buyer:

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ORIGINAL MARINE (OM) style No: DCA2721 is 315 pieces in one shift (8 hours) are inspected. Number of alter & defects are 03 & 05 respectfully. From this 2 data we can found ok% of this day. Here in the garments, from (1pm-2pm) Lunch break is given.in 8 hours total 312 pieces are passed for next process.

Now in the basis of daily report, we summaries a total 12 days report in one place for this product which Buyer name is ORIGINAL MARINE(OM) & style No is (DCA2721)

EURO TEX KNITWEAR LTD Daily Quality Report of Thread Cutting Unit

Order no : DCA 2721			Date: 05.06.2022			
Buyer Name: Original Marine			Type of fabrics: CVC			
Color: Light Blue			Quantity: 20000 pc			
Day	Quality Check/per shift	Alter repair/per shift	No of defects/per shift	Passed Quantity/per shift	DHU%	Ok%
1	315	03	05	312	0.95%	99.05%
2	300	05	03	295	1.6%	98.4%

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3	289	03	07	286	1.0%	99%
4	315	03	05	312	0.95%	99.05%
5	321	05	06	316	1.55%	98.45%
6	316	04	05	312	1.26 %	98.74%
7	332	04	04	328	1.2%	98.8%
8	333	04	07	329	1.2%	98.8%
9	342	05	03	337	1.46%	98.54%
10	352	04	06	348	1.13%	98.87%
11	346	03	08	343	0.86%	99.14%
12	305	03	05	302	0.98%	99.02%
Total	3866	46	64	3820	1.08%	98.79%

The above table indicates per shift (daily) sewing thread cutting report. Based on the data product the buyer is made for export as a foreigner. Here 3866 pcs garments are inspected per shift(day) in 12 days where 3820 pcs of garments are passed by a single operator, DHU% (defects per hundred unit) is 1.08% and 98.79% of garments are able to pass for further processing.

3.2.1 Ironing

The excess thread is completely cut, and then the clothes are sent to the ironing table. To improve the visual quality of clothing by the process of ironing is important, it is able to remove creases and also solve simple puckering problems from the product. It changes the look and hand feel of the garment.



Figure:3.2.1 Ironed T-Shirt

3.2.2 Ironing Process

The temperature of the ironing process will vary from fabric to fabric. Need to execute highly skilled operators to do this process. First clothes are laid flat on the surface of the ironing table. Then set the ironing temperature according to the quality of fabric. Set the right temperature for ironing is the most important part of this process. Ironing the garment from the back and then slowly to the front.

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Table 3.3.3 Daily Ironing Section Report

EURO TEX KNITWEAR LTD
Daily Quality Report of Ironing Unit

Date: 18.06.2022

Style No	8am-9am	9am-10am	10am-11am	11am-12pm	12pm-1pm	1pm-2pm	2pm-3pm	3pm-4pm	4pm-5pm	Defective Qty/lot	Ironing Temp	Passed Qty/lot	CR%
OM DCA2721	81	85	87	82	79	84	80	85			160-180°C	663	99.70%
NIJ 0285	80	84	83	80	84	78	80	80			140-160°C	596	100%
Takvo 20678	80	90	78	70	80	85	91	88			120°C	680	100%
NIJ 101202	87	84	81	78	74	80	73	73	2		130°C	529	99.8%
Mob: PAS208	88	91	76	73	86	83	87	80	3		160-180°C	654	99.54%
NIJ 280	79	75	76	70	82	79	87	85			150°C	626	100%
Remme CMC30	90	87	92	4	1	1	1				90°C	269	100%

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  In charge
  PM
  ED

Here in 18.06.22 the report of ironing section we can see different Buyer & there different style number hourly passed production for next process. This report shows us in (8am-9am) products of Buyer: ORIGINAL MARINE(OM) style No:DCA2721 is 81 pieces. In (9am-10am) the number is 85 pieces. Then at (10am-11am),(11am-12pm),(12pm -1pm),(2pm-3pm),(3pm-4pm)&(4pm-5pm) the production is 87,82,79,84,80,85 pieces respectively. Here in the garments, from (1pm-2pm) Lunch break is given.in 8 hours total 663 pieces are passed for next process.

Now in the basis of daily report, we summaries a total 12 days report in one place for this product which Buyer name is ORIGINAL MARINE(OM) & style No is (DCA2721)

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EURO TEX KNITWEAR LTD

Daily Quality Report of Ironing Unit

Order no: DCA2721							Date: 05.06.2022					
Buyer: Original Marine							Type of fabrics: CVC					
Color: Light Blue							Quantity: 20000 pc					
Day	8am - 9am	9am - 10am	10am - 11am	11am - 12pm	12pm - 1pm	2pm - 3pm	3pm - 4pm	4pm - 5pm	Defective Qty/ shift	Ironing Temp.	Passed Qty/ shift	Ok %
01	81	85	87	82	79	84	80	85		160- 190°C	663	99.70 %
02	80	84	87	89	83	76	89	90	2	160- 190°C	676	100%
03	87	89	90	79	83	87	90	85		160- 190°C	690	100%
04	87	90	79	84	77	87	78	90		160- 190°C	672	100%
05	89	90	78	79	80	85	91	88		160- 190°C	680	100%

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06	90	87	92	75	89	84	82	85	1	160-190°C	683	99.85 %
07	85	87	91	89	83	77	79	81		160-190°C	672	100%
08	89	90	76	74	85	83	81	79	3	160-190°C	654	99.54 %
09	85	84	87	85	89	90	79	83	1	160-190°C	681	99.85 %
10	86	81	90	91	85	87	83	85		160-190°C	688	100%
11	79	75	76	79	73	82	85	87		160-190°C	636	100%
12	87	84	81	78	74	79	73	73	2	160-190°C	627	99.68 %
Total -12	1025	1026	1014	984	980	1001	990	1011	9		8022	99.88 %

The above table indicates a per shift (8 hour) daily ironing section report. Information based on that product. The buyer is made for export as a foreigner. The ironing temperature was 160-190°C. Here are 8031pcs Garments are inspected by a single operator a day (8hrs) for 12 days. Where 8022 pcs of garments are passed and 99.88% of garments are able to pass for further processing.

Table 3.4 Daily Quality Report of Folding & Packing.

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EURO TEX KNITWEAR LTD
Daily Quality Report of Folding & Packing Report

Date: 18.06.22

Style No	8am-9am	9 am -10am	10am-11am	11am -12pm	12pm-1pm	2pm-3pm	3pm-4pm	4pm-5pm	Faulty packing Qty/8hrs	Total passed Qty	Ok %
NB270	80	79	81	79	76	76	75	81	1	632	100%
P3298	82	79	84	76	77	78	89	75		640	100%
CM DCA2721	78	80	85	79	71	74	76	70		613	100%
NB106	75	84	82	83	78	79	79	84		647	100%
CM100	77	76	84	79	82	78	89	75		640	100%

 Supervisor
  In charge
  PM
  ED

Here in 18.06.22 the report of folding and packing section we can see different Buyer & there different style number hourly passed production for next process. This report shows us in (8am-9am) products of Buyer: ORIGINAL MARINE(OM) style No:DCA2721 is 78 pieces. In (9am-10am) the number is 80 pieces. Then at (10am-11am),(11am-12pm),(12pm -1pm),(2pm-3pm),(3pm-4pm)&(4pm-5pm) the production is 85,79,71,74,76,70 pieces respectively. Here in the garments, from (1pm-2pm) Lunch break is given. In 8 hours total 613 pieces are procced for next process.

Now in the basis of daily report, we summaries a total 12 days report in one place for this product which Buyer name is ORIGINAL MARINE(OM) & style No is (DCA2721)

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EURO TEX KNITWEAR LTD
Daily Quality Report of Folding & Packing Report

Order no: DCA2721	Date: 05.06.2022
Buyer: Original Marine	Type of fabrics: CVC
Color: Light Blue	Quantity: 20000 pc

Day	8a m - 9a m	9am - 10a m	10am - 11am	11am - 12p m	12pm - 1pm	2p m - 3p m	3p m - 4p m	4p m - 5p m	Faulty packin g Qty./8 hrs	Total passe d Qty.	Ok %
1	78	80	85	79	71	74	76	70		613	100%
2	72	76	77	79	81	86	75	74	1	619	99.98 %
3	75	84	82	83	75	79	79	84		641	100%
4	79	82	84	76	77	78	89	75		640	100%
5	80	79	81	79	76	78	75	85	1	632	99.98 %
6	80	82	87	81	75	77	79	82		643	100%
7	78	85	77	78	82	85	83	79		647	100%
8	74	78	79	82	85	76	78	80	1	631	99.98 %
9	75	82	80	85	76	79	82	75		634	100%
10	78	77	79	81	85	83	78	89		650	100%
11	70	86	76	89	85	75	80	82	2	641	98%

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12	69	65	82	76	87	78	83	85		625	100%
Total	908	956	969	968	955	948	957	960	5	7616	99.55 %

3.5 Quality Checking Section

It is the most important part of the garment finishing department. After all the procedure may have some garment defects. Conclusions are made from this section that happened with certain products, such as going ahead and packing or returning to change, reject the product or completely done. Very skilled workers have to work. Every part of the garment is checked here.

3.5.1 Quality Checking Process

The ironed garments are sent for quality checking. Each part is checked in this process to find fault. Various types of defects are detected in this section such as seam cracking, missing stitches, and missing labels, various stains, fabric holes, improper joining placket problems etc. Well trained operators do such a job. The operator checks the garment down, out and over inside the body.



Figure 3.5.1 Quality Checking (T Shirt)

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Table 3.5.2 Daily Quality Checking Report

EURO TEX KNTWEAR LTD
Daily Quality Report of Quality checking UNIT

Date: 14.06.22

Defect Name	8am-9am	9am-10am	10am-11am	11am-12pm	12pm-1pm	2am-3pm	3pm-4pm	4pm-5pm	Total
Stitch missing	47	11	111	11	1	111	1111	111	36
Printing spot	1	1	1	1	1	1	1	1	6
Crap tuck problem	11	11	11	111	11	11	111	11	24
Label missing	11	1	11	11	1	11	1	11	15
Shade variation	11111	111	111	1111	111	111	11	11	36
Oil spot	11	11	1	1111	111	1111	11	11	12
Crease mark	11	1	111	11	111	11	111	111	22
Raw edge	11	111	1	11	111	1	11	111	12
Improper joining	11	111	111	11	111	111	111	11	24
Fall of stitch	11	111	1	11	111	111	11	1	19
Seam pucker	1	1	11	1	11	111	111	11	18
Improper placket	11	111	1111	1111	11	111	1111	11	29
Broken stitch	11	1	11	11	111	11	11	11	12
Hole	1	1	1	1	1	1	1	1	5
Open seam	11	111	111	1111	1111	11	111	111	30
Reject	111	1111	1111	11	11	11	111	1111	32
Uneven joining	111	1111	1111	1111	111	111	1	1	32
Uncut thread	1	1	11	111	11	11	111	111	14
Others	1111	111	1111	1	11	111	11	11	29

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  PM
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Total Inspected Qty	1509	1588	1557	1613	1609	1622	1673	1567	12753
Total Passed Qty	1400	1534	1510	1582	1544	1546	1584	1516	12336
Total Defective Qty	81	51	45	42	55	53	48	49	417
Total Rejected Qty	4	3	2	4	3	3	2	2	24
DHU%									06.69%
QC pass%									

 Supervisor
  In charge
  PM
  ED

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In this Quality report of 14.06.2022 we can see different types of defects found in per hour for different products. This report shows us stitch missing, shade variation, open seam, reject & uneven joining is happening rapidly in large number. Also chap tuck problem, crease mark, improper joining, improper placket & other defects are almost same number as rapidly occurring defects. Number of holes, printing mistakes are not so much like other defects. so it can be reduced more by improving the printing quality, fabric inspection & by appoint skilled operator in those sections. At the last part of this report it gives us the overall number of inspected products in 12 days. Which is 12763 & pass quality for next process is 12336. So from this 2 data we can calculate the total quality pass% of 12 days. Which is 96.65%

EURO TEX KNITWEAR LTD

Daily Quality Report of Quality checking Unit

Order no: DCA2721	Date: 05.06.2022
Buyer: Original Marine	Type of fabrics: CVC
Color: Light Blue	Quantity: 20000 pc

Defect Name	8am9am	9am-10am	10am11am	11am12pm	12pm1pm	2pm3pm	3pm4pm	4pm5pm	Total
Stitch missing	5	4	6	3	1	5	7	5	36
Printing spot		1		1		1	1		4
Chap tuck problem	3	3	4	2	3	4	4	2	25

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Label missin g	2	1	3	2	1	3	1	2	15
Shade variati on	6	3	4	6	5	7	2	3	36
Oil spot	2	2	1	1	2	1	1	2	12
Crease mark	3	1	5	3	4	2	5	4	27
Raw edge	2	3	1	2	3	1	2	3	17
Impro per joining	3	4	5	2	3	4	4	2	27
Fall of stitch	2	3	1	2	4	4	2	1	19
Seam pucker	1	1	2	1	1	4	5	3	18
Impro per placke	2	3	4	5	3	4	5	3	29

T									
Broke n Stitch	2	1	2	3	4	2	1	2	17

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Hole	1		1				1	1		4
Open seam	2	3	4	5	6		2	4	4	30
Reject	4	5	6	3	2		3	2	5	30
Uneven Joining	4	6	5	7	4		4	1	1	32
Uncut thread	1	1	2	3	3		2	1	4	17
Others	6	4	6	1	2		4	2	2	27
Total Inspected Qty	1599	1588	1557	1613	1604	1622	1613	1567	12763	
Total Passed Qty	1540	1534	1510	1562	1544	1566	1564	1516	12336	
Total Defective Qty	54	51	45	47	55	53	48	49	402	

Total Rejected Qty	5	3	2	4	5	3	1	2	25
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DHU%									3.44%
QC pass%									96.65 %

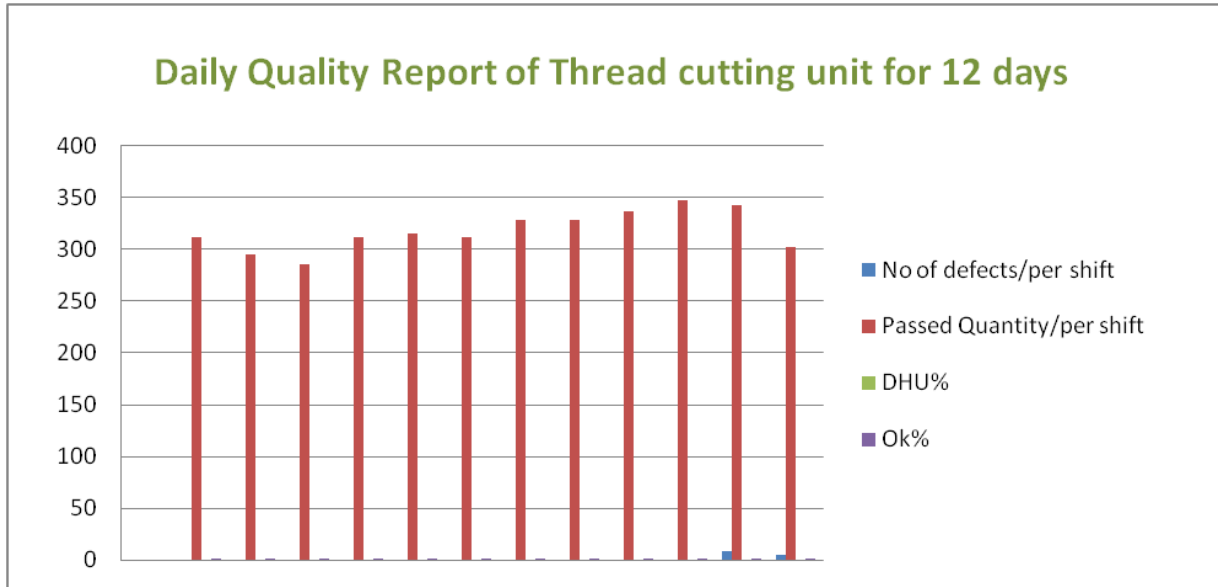
CHAPTER-4

DISCUSSION OF RESULTS

4.1 Analysis on Thread Cutting

We collect information from various sections, now we want to discuss and analyze. Here are the facts and make conclusions based on them.

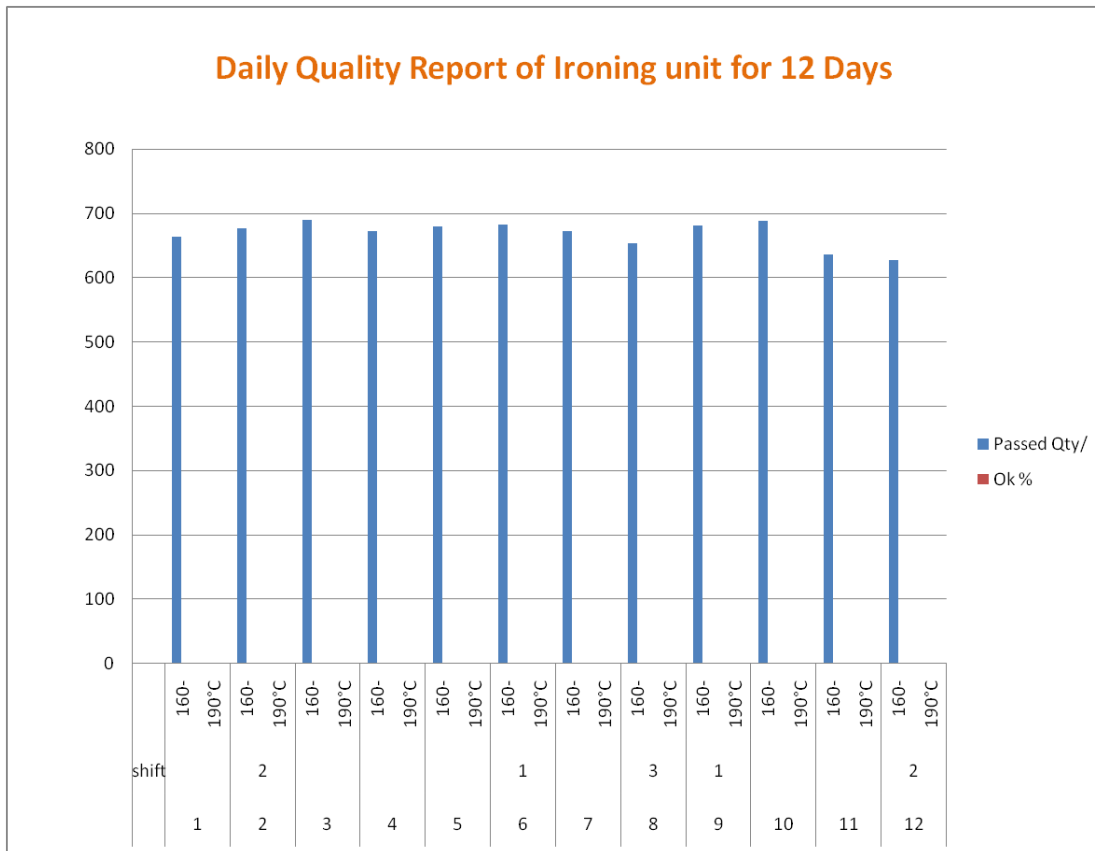
Graph 4.1 Thread Cutting Production for 12 days



Graph 4.1 shows the sewing thread cutting production report for per shift in 12 days of thread cutting unit. Day1-Day 12 production averaged 318 per shift. We collect 12 days of data based on this Production Half Sleeve T-Shirt which contains CVC (60%cotton 40% polyester).

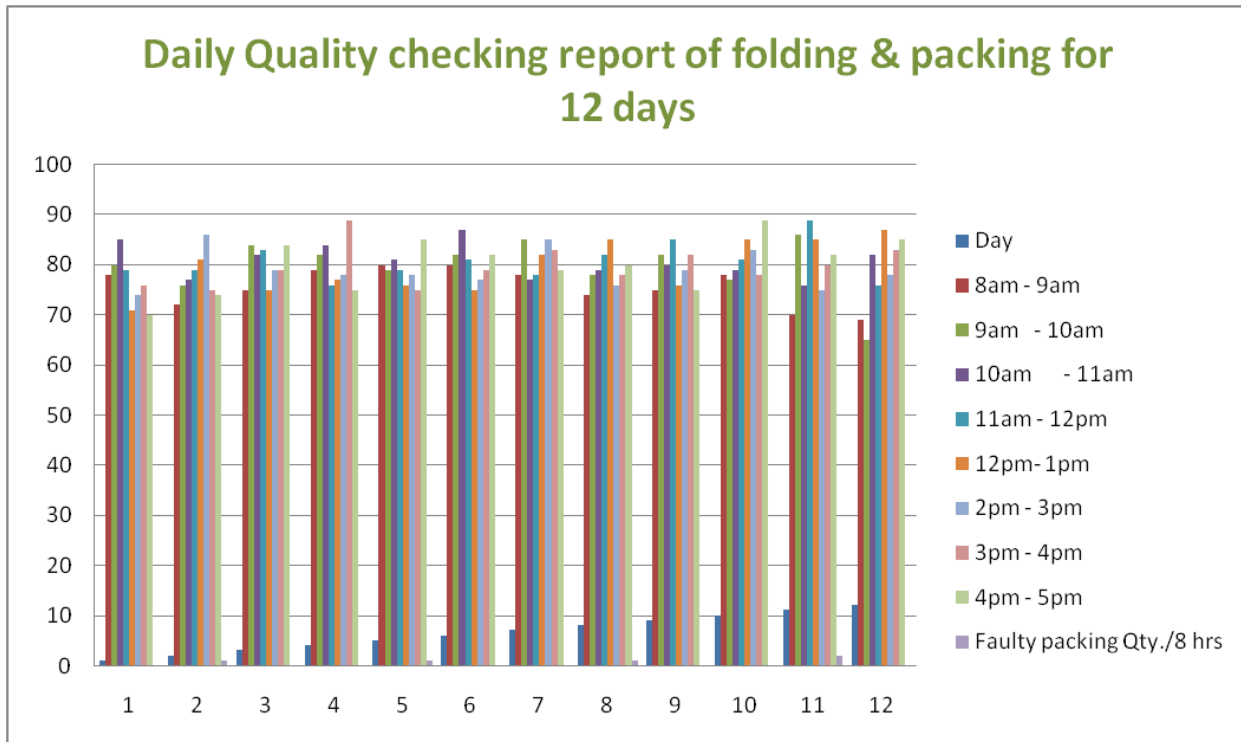
4.2 Analysis on Ironing

Graph 4.2 Daily Quality Report of Ironing Unit



Graph 4.2 shows an Ironing production report of 8 hours in 12 days for a single operator. Day1- Day 12th production per shift average is 668. We collect data of 12 days based on production of Half Sleeve T-Shirt which contains CVC (60%cotton 40% polyester)

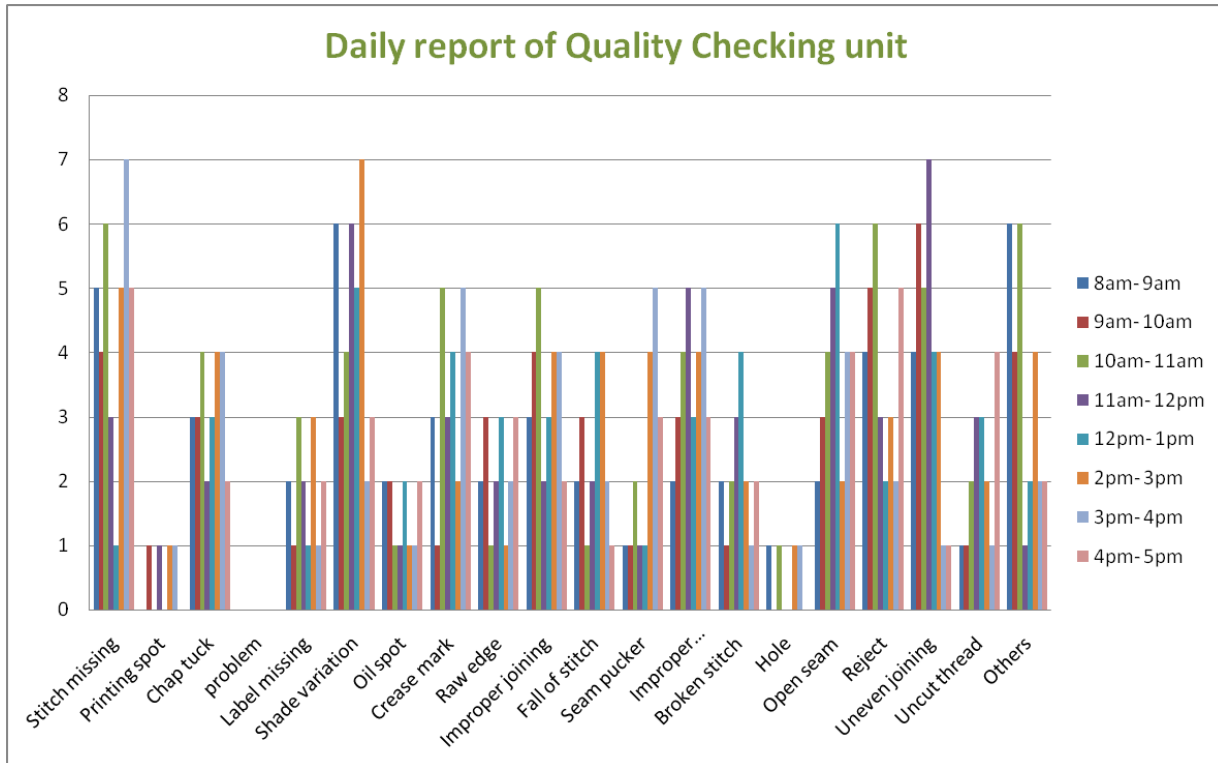
Graph 4.3 Folding & Packing Production for 12 Days



Graph 4.3 shows folding and packing production report of 8 hours in 12 days for a single operator. Day1-Day 12's production per 8 hrs. Average is 634. We collect data of 12 days based on production is Half Sleeve T-Shirt which contains CVC (60%cotton 40% polyester)

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Graph 4.4 Daily report of quality checking unit 12 Days



Graph 4.4 shows the number of faults we found in 8 hours (12 days) for a single operator, and the data is based on two different order types. Here spot related (oil spot, printing spot and dirty spot) faults took the top three positions and occurred 36 times. Then comes improper joining, which occurred 27 times. During these 12 days 30 pcs of garments were rejected. Most of them are due to having different types of holes.

CHAPTER-5

CONCLUSION

“Study on Finishing of a Garments Industry”

Finishing Process is the most important part of garment production sector in textile industry. In conclusion here we try to analyze and discuss different types of garments like thread cutting, Ironing, quality check, spot removal process, folding, multi packing, cartooning etc. and we have Some defects and we try to make a knit garment manufacturing industry find out the reasons and remedies for those faults. The thesis paper is concluded as-

.

- ❖ For better finishing quality garment input should be in proper flow.
- ❖ In thread cutting unit number of defects per shift is find continuously and this is caused for unskilled worker in sewing section. It can be solved by appoint skilled Worker.
- ❖ In quality checking unit there are common two faults they are stitch missing & shade variation took the top two positions and occurred 36 time. It can be solved by using high quality fabric and proper sewing equipment.
- ❖ To reduce oil and dirt sports workers must clean their sewing machines properly.
- ❖ In every finishing section make sure alter is low.

If there is any problem found in finishing section which can be caused by machine or operator find the actual reason for it & take necessary steps on it.

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<https://fashion2apparel.blogspot.com/2017/11/garment-measurement-guidelines.html>