Faculty of Engineering

Department of Textile Engineering

Report on

Study on Finishing Method of a Knit Garments Industry

Course Title: Project (Thesis) **Course Code:** TE 4214

Submitted by

Ahsan Chowdhury- 181-23-5254

Rokea Akter Rupu- 181-23-5243

Supervised by

Mr. Md. Abdullah Al Mamun

Assistant Professor

Department of Textile Engineering

Daffodil International University

A thesis submitted in partial fulfillment of the requirements for the degree of

Bachelor of Science in Textile Engineering

Advance in Apparel Manufacturing Technology

Fall- 2021

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.

Name	ID	Signature
Ahsan Chowdhury	181-23-5254	
Rokea Akter Rupu	181-23-5243	

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

Faculty of Engineering

Department of Textile Engineering

Approval Sheet

This report entitled study on finishing method in a knit garment industry at 'Daffodil International University, prepared & submitted by Ahsan Chowdhury- 181-23-5254 & Rokea Akter Rupu- 181-23-5243 in partial fulfillment of the requirement for the degree of Bachelor of Science in Textile Engineering has been recommended for approval & acceptance.

Md Abdullah Al Mamun

Assistant Professor

Supervisor

Acknowledgement

At first our heartiest thanks & gratefulness to almighty Allah for his blessings which made us possible to complete the project successfully.

We feel appreciative to & wish my profound obligation to Mr. Md Abdullah Al Mamun, Assistant Professor, Department of textile Engineering, Daffodil International University Deep knowledge & keen interest of our supervisor in the field of knit garments industry influenced us to carry out this project. His guidance, encouragement, criticism, Valuable advices made it possible to complete the project.

We would like to express our heartiest gratitude to our Head of the department, all the faculty members and all the stuff of Department of Textile Engineering of DIU.

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

Abstract

Now a days readymade garments exporting business is one of the revolutionary sectors in Bangladesh. This sector keeps the lion share of the GDP, gradually it is improving day by day that now Bangladesh is one of the top countries to export readymade garments. All these happen because of the quality is provided. The quality of the garment is very important & the quality depends on the finishing process. These things made the finishing section unavoidable that there must have attention. As stitched garments are ready, the garment comes to the finishing section. This is the last section that a garment has to pass through. The stitched garment has to go through some sections like thread cutting, ironing, quality checking & many more to get packed & get ready to be shipped that also done in finishing section. From assuring the quality to shipment to buyer all the processes are included in this section. This study is based on the finishing section in a readymade garments industry. We have gathered a vast knowledge about the working procedure, collected some data, the faults occur in the section & the remedies of the problems as well. We have tried our best to cover the whole section. Since we have collected some important data of 7 to 10 days of different processes, we have identified 4 major problems of the quality of the garments. We have summarized & got the result that placket problem, skip, tuck problem & spots are the 4 major problems, we have got the result. The report consists the causes & the remedies of the problem that we have got.

Table of contents

Chapter 1

Introduction

1.1 Introduction:

The Readymade Garments industry is one of the most potential & revenue earning sector of Bangladesh. The "Made in Bangladesh" tag has also brought glory for the country, making it a prestigious brand across the world. Textile sector is a large place & there are so many sections like yarn, fabric, dyeing, sewing, finishing etc. By passing through all these sections, a garment gets ready & it is done in a bulk way. In textile manufacturing, after getting the complete stitched garments by the sewing section, the garments are passed in finishing section for thread cutting, spot removing, ironing, metal detecting, folding, tagging, packing, cartooning to get the final appearances which is known as garment finishing process. The finishing processes make the goods attractive & enhance it's functional properties, visual appearance and hand feel.

Our thesis paper is based on the finishing processes & initiated as "Study on Finishing Procedure for RMG". From the very beginning of our study, we were very interested about this section of garment industry, so as we got the opportunity to work on garments industry, we cordially chose the topic. We got the opportunity to work in Mondol Fabrics LTD & Impress-Newtex Composite Textiles LTD both industries. In this report we are trying to show the frequently occurring faults & the remedies, which will improve the quality of the garments.

1.2 Objectives:

- To introduce with the different types of finishing processes
- To identify the types of faults occurs in finishing section
- To know how to improve garment quality by decreasing the frequently occurring faults
- To know about the causes & remedies of different types of faults of different sections of garments production
- To find out the problems arise in finishing process
- To know how to solve the finishing problems

1.3 Limitations of the study:

Working on this report about finishing process, there we have got some limitations also. Some of those are mentioned below:

- Finishing section is still following some old processing systems.

- Many of the work was done by hand or manually.
- During working hour taking data was not so easy as either they weren't following any data maintaining system or we could not get the system.
- We have collected all the data from the particular garment & we could check only what the particular garment has.
- There were some limitations to visit the floor during working hour.

Chapter 2

Literature Survey

2.1 Garments Finishing:

Garments finishing is one of the most important sections in RMG sector. In this section, the complete garments get entered for enhancing its properties finally. All the sections of RMG, the final stitched garments finally come to finishing section. These are passed in finishing department for thread cutting, spot removing, ironing, metal detecting, folding, tagging, packing, cartooning to get the final appearance. So, finishing process is done by a series, & the final result of finishing is related to the buyer's requirements & satisfaction. So, garments finishing section must have a quality environment in a garment industry.

2.2 Process Flowchart:

Finishing Input (Size, color, Style)

↓

Thread Trimming

↓

Initial Quality Check

↓

Spot Removing

↓

Ironing

↓

Size Measurement

↓

Metal Detecting

↓

Tagging

↓

Folding

↓

Packing

↓

Cartooning

↓

Final Inspection by Buyer

2.3 Thread Trimming:

Thread trimming is an important process of finishing section that every garment has to pass through this process. After making complete stitched garment, it comes to thread trimming or cutting section so that the extra thread can be cut away from the garment. Though this process is a non- value added process, but unavoidable process as well. Thread cutting workers are also hired separately. Manual thread trimming process is time consuming and all cutting thread cannot be removed from garments.

2.3.1 Types of Thread Trimmers:

As this is an unavoidable process, there are some kind of thread trimmers those are explained below:

- **Hand Trimmer:**

Hand trimming is a manual process that cutting the extra threads from garments using scissors. This cutting tool is different from regular scissors. As this process can damage the garment, so skilled worker is very important as well as dedicated worker.

Fig: Hand Trimmer

- **Thread Trimming Machine:**

In Bangladesh, most of the industries use the manual process. But since there is a chance of damaging garment parts. Other than that, it is good to invest on automatic thread trimming machines. These machines are equipped with suction motor, trimming blade, table top & wastage container. This process can help to reduce the manpower & it's working speed is higher as well. Operator can use flexible trimmer & can thread tails by placing on a flat table.

Fig: Automatic Thread Trimming Machine

- **Thread Shower:** Some garments use thread sucker machine using air flow. Garments are kept in a chamber & high air circulation is produced that loose threads get removed from the garment & those are contained as wastage in wastage section.

2.4 Spot Removing:

Spots or stains on apparels are very common in garment sector. Apparel can be rejected for this spot factor by buyers. Some treatments are used to remove the spots & stains which are discussed is the article.

Fig: Spots

2.4.1 Types of Spots:

There are various types of spots can be found in apparel. Some are mentioned below:

1. Oil spot
2. Dirt spot
3. Printing spot
4. Water spot
5. Iron spot
6. Dye spot
7. Chemical spot
8. Cosmetics spot

2.4.2 Spot Removal Treatment:

Spots & stains can be removed from garments using following ways:

I. Vacuum cleaner helps to eject spot
II. By using paper tissue spots can be removed
III. Wool safe approved shampoo can be used in some fabrics
IV. Hot iron is also used to remove some stains
V. Ice & dull knife removes some stains
VI. Rubbing by using coin is a common way used
VII. Coarse sand paper & deodorizing chemical are used for some spots
VIII. Carpet re- colouring is another medium for removing stains
IX. Acceptable spot remover, rust removing chemicals are mostly used to remove spots
X. Surgical spirit is the other one which has a great importance in removing spots from the clothing

Fig: Oil Spot Removing Spray

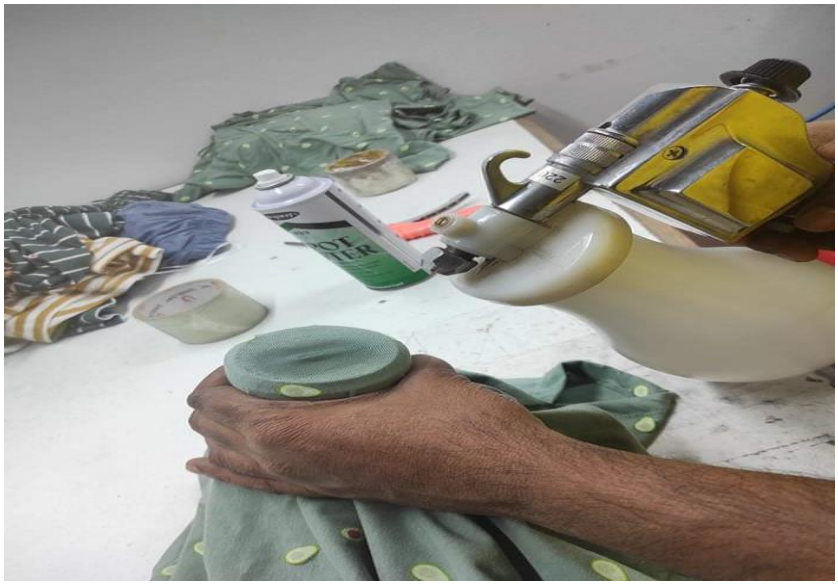


Fig: Spot Removing Gun

2.5 Ironing

Ironing is a process is used to remove wrinkles and make the fabric flat or own shaped using heat. Generally ironing temperature is kept 180° to 220° C. Ironing works by loosening the bonds between the long chain polymer molecules in the fibres of the material. While the molecules are hot, they get strained & hold the shape when its cool. These Industrial irons are different from the regular iron that it can consist & produce water and heat at a time that some fabrics such as cotton requires water to loosen the inter molecular bonds. Many modern fabrics are advertised as needing little or no ironing process nowadays. Permanent press clothing was developed to reduce the necessity of ironing by combining wrinkle- resistant polyester with cotton.

Fig: Ironing process

2.5.1 Ironing Equipment

- **Iron:**

Iron is a small appliance to remove wrinkles from garments. It is also known as clothes iron, smoothing iron & flat iron. The bottom part is called sole plate. Ironing produces heat energy, mechanical energy, electrical energy.

- **Ironing Table:**

The significant factor for the proper selection of an ironing station is the air flow through the garment to cool it & set it. Some types of ironing tables are given below:

- All purposes ironing table
- Flat top ironing table
- Seam ironing Table
- Concave ironing Table
- Convex ironing Table
- Curtain ironing Table

The stability of the covering of the ironing table is based on some factors such as hydrolysis, pressure and heat resistance of the used materials.

- **Tailor's Ham:**

A tailor's ham is a stuffed pillow in the shape of a ham used as a mold, pressing curves such a sleeve & collars.

- **Commercial Equipment:**

Commercial dry cleaning and full- service laundry providers usually use a large appliance to steam press to do most of the work of ironing clothes, rotary iron may be used alternatively.

2.5.2 Recommended Ironing Temperature for Different Fabrics:

Fabric	Temperature	Steam
Cotton	High Heat (150- 200)	Recommended
Polyester	Medium Heat (110- 150)	Not

Wool	Medium Heat (110- 150)	Required
Silk	Medium Heat (110- 150)	Iron Damp
Nylon	Low Heat (Below 110)	Not required

2.5.3 Ironing Tips:

- Checking garment label & follow manufacturer's instructions. If there is no condition, starting with a low- heat setting and test by ironing in a small area, then gradually increasing heat.
- Sorting Garments by fabric type because ironing is different for different types of fabrics.
- A little break should be given between decreasing to low temperature from high temperature.
- If the garment is lined, using a low heat setting.
- Zippers must be closed & flaps must remain flat.

2.6 Metal Detector:

Industrial Metal detection system can easily detect and reject metal contamination from production lines to help the manufacturers to achieve compliance & minimize the risk of alter the product & reduce the working hours. Sometimes metal type ingredients or needles can be found in a garment. This can be happened while sewing, or any of the department of production. Needles or any kind of metal can be harmful for the consumers. So, metal detection is very important so that metal can be found (if any) and then it must be a removed. For this process, metal detectors are used. Most of the industries use conveyor type needle detector machine.

The working procedure is pretty normal. Garments are put on the machine. Then the operation is started. Start button is used to begin the operation, the garment start running through the detector machine. If there is nothing found the garment is ready for the next process of production. If there is any metal or needle found while running the process, the machine gets alarmed & the lamp starts to give signal and there is a return sensor is placed so that if there is a signal finding any metal, the garment return to the place where it started.

Fig: Metal Detector Machine

2.6.1 Features of Metal Detector Machine:

- **Two Head Sensor:** The two sensor heads are set at different angle to minimize a different detection difference made by direction of broken.
- **Operation Panel:** This panel is used for setting the specifications that will detect the metal according to the manufacturer's demand.
- **Detection Position Indicator:** Machine detects the location of the broken needle to find out easier.
- **Φ 0.8mm:** This machine can detect Φ 0.8mm & 100 mm height needle. It promises detecting assurance.
- **Return Device:** There is a return device that the products to an operator after making alarm when the machine detects foreign object in a product.
- **Optional Printer:** Convenient to make a report.

2.7 Garment Measurement:

For preparing a complete garment, perfect measurement guidelines must be needed. Sometimes basic measurement is not enough for preparing a complete garment. Measurement specification is generally given by buyer to get the actual size of each and every part of the garment.

Garment Measurement guidelines are used when reviewing size specifications and also creating sample product. Measurement of garments can also contribute not to be rejected by buyers since size of garments is a big factor. Every reputed garment industry has a measurement department & they use some essential key points of measurement to get a perfect garment.

2.7.1 Method of Garment Measurement:

The method of garment measurement has been introduced to show the wide variety of different measurement points on finished garments across all product areas.

The Method of garments measurement is differentiated in four sections-

1- **GEN- General**
   - Body lengths
   - Necks
   - Hoods
   - Shoulder/Chest
   - Bridge
   - Under band
   - Armhole/Sleeve
   - Waist
   - Hip
   - Hem
   - Crotch
   - Rise
   - Yokes
   - Zipper/Fly/Placket
   - Pocket
   - Darts/Vents/Pleats
   - Miscellaneous

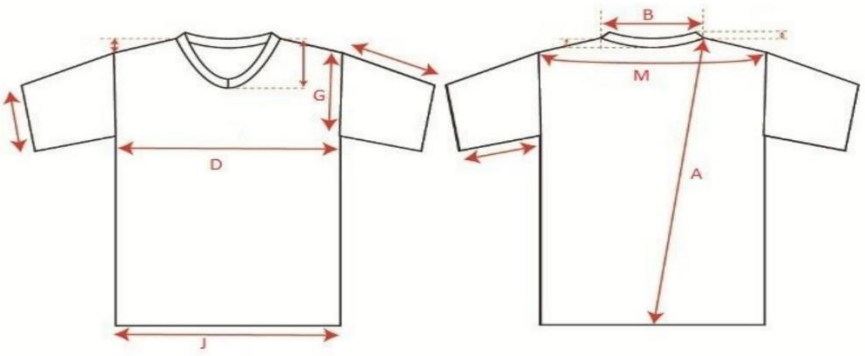


Fig: Basic T-Shirt Measurement Process

2- LUS- Lingerie, Underwear & Swimwear

- Body lengths
- Collars
- Shoulder/Chest
- Bridge/Cups
- Wings
- Armhole/Sleeve
- Waist
- Hip
- Gusset
- Rise/Leg
- Zipper/Fly/Placket

3- ACC- Accessories

- Hats
- Gloves/Mask
- Bags/Wallet
- Scarves
- Belts

4- SAH- Shocks & Hosiery

- Socks
- Hosiery

2.7.2 Preparation for Measuring Garments:

- Flat & smooth table must be used
- Measuring garment should kept zipped or buttoned
- Garment with non- closure should be kept overlapped
- Carefully remove all folds

2.7.3 Measurement Technique:

Measuring for various types of garment types are different. Here are discussing some of them-

For upper outfits: Tops, Shirt, Jackets

- **Back Length**: Take the measurement straight down from highest to lowest point of shoulder.
- **Shoulder**: Measuring tape is placed from shoulder point to shoulder point.
- **Chest**: Placing measuring tape 1'' below under arm seam, straight across front, outside edge to outside edge.
- **Waist**: Take the measurement straight across front, edge to edge.
- **Hip**: Measure straight across front, edge to edge.
- **Centre back sleeve length**: Fold neck in half to find centre, now take the measurement from centre cack neck to shoulder point, pivot, and follow top of sleeve line to bottom edge of sleeve including cuff.

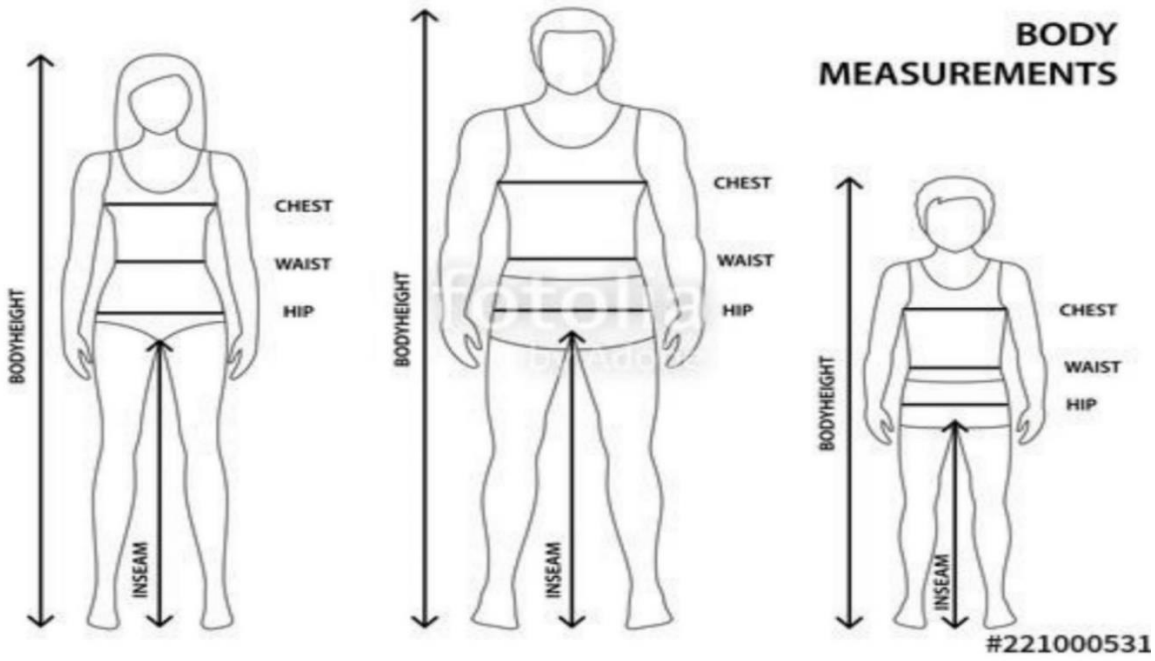


Fig: Body Measurement Technique

For bottom outfits: Pant, Trousers, Shorts

- **Waist**: Garment is laid flat and measure along top edge of waistband outside edge to edge of outside.
- **Hip**: Lay garment flat and let if fall naturally from waist, measure 4'' up from crotch point on front, along curve. Measure in a V perpendicular to grain, from outside edge to edge.
- **Rise**: Tale measurement tape and measure along curve from crotch point to bottom of waistband.
- **Inseam**: Measure left leg from crotch point to bottom of hem following inseam shape.
- **Leg opening**: Place a measurement tape on left leg straight across bottom edge outside edge to edge.

2.7.4 Importance of Taking Accurate Measurement:

An important of pre- sewing process is taking accurate measurements to ensure you get the correct fit on whatever you're making be it a garment to be worn or new curtains to hang in the living room. Garments are sewn with the measurement & that are rechecked in finishing section though that was measured before sewing, it is a must process to check the measurement. The old saying, "measure twice, cut once" is a perfect advice.

2.8 Folding

After completing pressing, the garments are folded with a predetermine area. Garment are folded according to the buyers in a standard area.

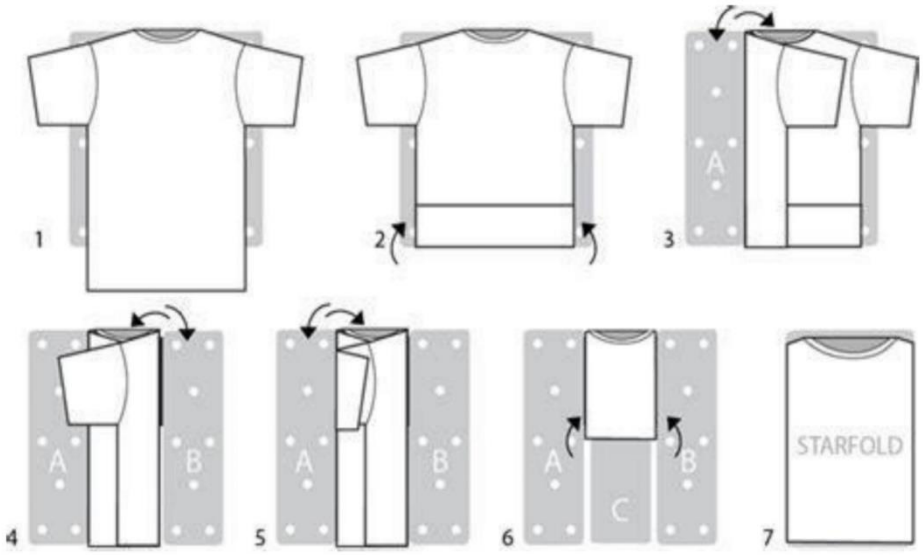


Fig: T-Shirt Folding Process

2.8.1 Folding Process of Some Basic Garments:

2.8.1.1 Basic Shirt:

There are mainly 4 types of fold are used to fold a shirt, given below-

I. **Stand up**- Collar is folded with body and situated at 90° angle.
II. **Semi Stand up**- Collar is folded with body and situated at 45° angle.
III. **Flat pack**: Collar is spread as a whole on the body of shirt.
IV. **Hanger pack**: Shirt is kept on a hanger and at the end of folding it is placed in a permanent polythene packet.

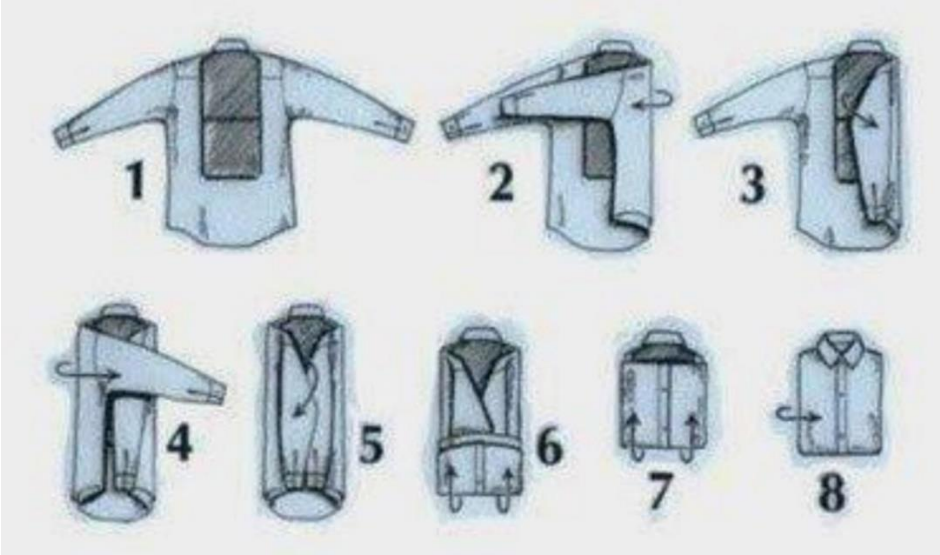


Fig: Folding Process of Long Sleeve Shirt

2.8.1.2 Short-Sleeve T- shirt:

I. Fold the arms straight across back.
II. Fold the garment side seams across back of shirt.
III. Fold the bottom edge of shirt about 2 inches from the bottom.
IV. Fold the shirt in half.

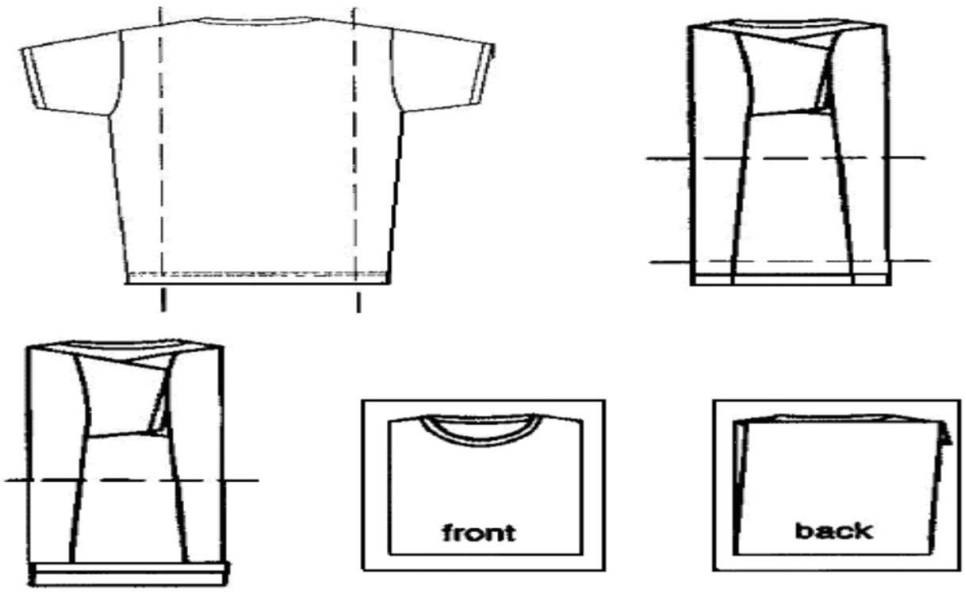


Fig: Folding Process of Short Sleeve T-Shirt

2.8.1.3 Pant folded side to side:

I. Close zipper and waist button.
II. Fold pant in half, with inseam to out seam keeping ends of waistband to inside of pant.
III. Fold leg in thirds- fold bottom edge to above knee and fold up to waist edge.

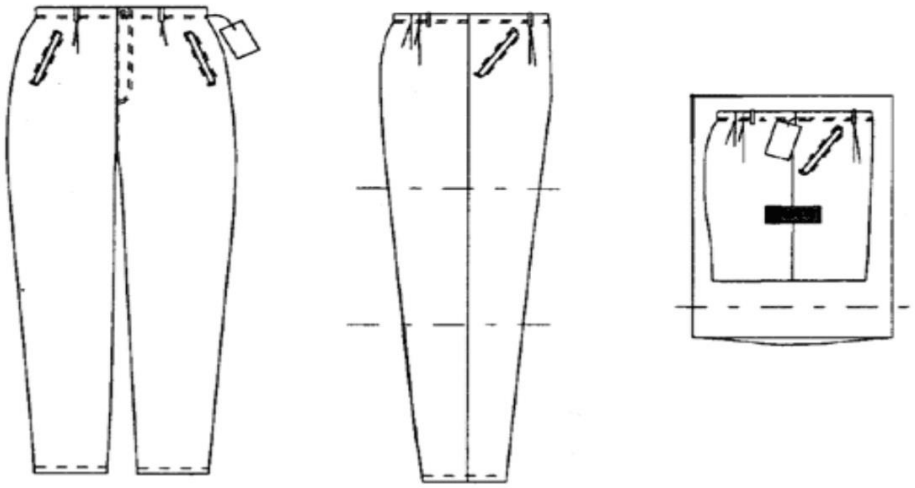


Fig: Folding Process of Pant Side to Side

2.8.1.4 Pant Folded Front to Back:

I. Close zipper and waist button.
II. Fold pant front to back with rise.
III. Fold leg in thirds- fold bottom edge to above knee and fold up to waist edge.

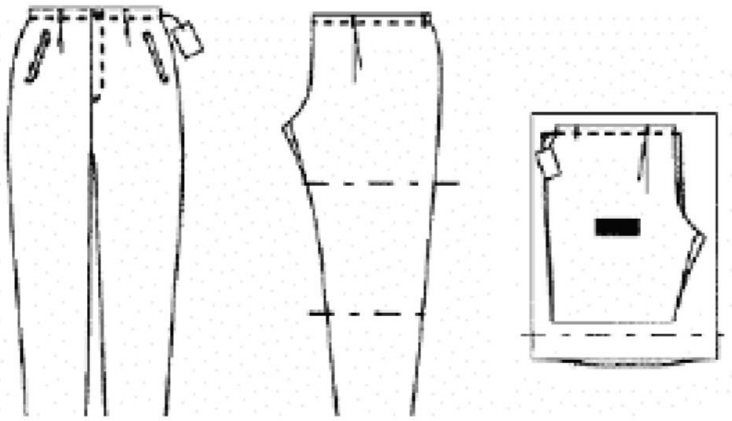


Fig: Folding Process of Pant Front to Back

2.8.2 Automatic Folding Machine:

The automatic folding machine folds clothes quickly and accurately. It is designed to fold upper & bottom outfits both. It can be very easily adjusted for the various sizes and types of clothes so that the best desired folding is achieved.

Fig: Automatic Folding Machine

Some common automatic folding machines are:

I. THERMOSOL STP- 950
II. THERMOSOL STP- 1000
III. THERMOSOL FX- 23

2.9 Garments Packing & Cartoning:

Packaging means wrapping, compressing, filling or creating of goods for the purpose of protection of goods and their convenient handling. Packaging is an important part of the product, which has to receive a lot of attention to the people. After passing through all the finishing processes garment come to be packed in.

After final inspection, the garments are poly packed dozen wise, color wise, size wise, bundled and packed in the cartoon. The cartoon is marked with important information in printed from which is seen from outside the cartoon easily. It is needed to ensure the placement of sticker in proper place.

2.9.1 Types of Packaging:

Different types of packaging are there for different types of garments. Mostly used packing types are mentioned-

- **Stand up pack**- Shirt 90
- **Flat pack**- Sport wear/ shirt/ trousers
- **Hanger pack**- Blazer, coats, pants
- **Semi stand up**- Shirt
- **Half fold pack**- pant

2.9.2 Packaging Materials:

- Plastic clip
- Paper board
- Wooden box
- Plastic collar
- Tag pin
- Poly bag
- Tissue paper
- Cartoon
- Scotch tape

Fig: Different Types of Scotch Tape

2.9.3 Classification of packaging

After packing & cartooning, some packing types of packing are mostly used-

- Solid colour solid size pack
- Solid colour assorted size pack
- Assorted colour solid size pack
- Assorted colour assorted size pack

2.9.4 Types of Garments packaging Carton

Carton is used to deliver the final bulk product to the buyer. As per buyer recommendation, final garments are kept in it. This is done in a way named assortment. Assortment is size and colour wise garments loading in a carton. This differentiate the sizes and colours and in that way garments are kept in carton.

Fig: Master Carton

Generally packaging type depends on buyer's requirement. These types are differentiated on some factors-

2.9.4.1 Paper

- Khaki carton or brown paper box
- Duplex carton
- Box carton

2.9.4.2 Stitching

- Gum pasting carton
- Stitched box

2.9.4.3 Ply

- 3 ply carton
- 5 ply carton
- 7 ply carton

2.9.4.4 Liner

- Both side liner carton
- Outside liner carton

2.9.4.5 Size

- Master Carton
- Inner Carton

2.10 Final Inspection:

Final inspection is the last activity which performed before shipment. After passing through all the stages of production & finishing processes, final inspection is held. It is also called as pre-shipment inspection. After packing & cartooning, fully packed consignments are ready for shipment is called a lot or population. Any sample can be picked from the consignment to check, so that the random one can represent the whole consignment.

Final inspection or pre- shipment is generally done by buyer's representative. This inspection process mainly held on the apparel factory. If the rate of rejection from consignment is higher than the pre- set value, then the whole lot gets rejected or returned to recheck.

2.10.1 Final Inspection Activities:

Activities are performed during final inspection are as follows:

- ❖ Verifying packing list comparing with P.O sheet
- ❖ Determining of size of the consignment
- ❖ Comparing of severity level & checking sampling plan
- ❖ Selection & checking the cartons

- Packaging and packing check
- Checking of garments sample
- Checking measurements
- Noting all the major & minor defects
- Evaluating all the records are noted while inspecting
- Drawing of defective sample for reference

2.10.2 Acceptable Quality Level:

The term AQL, elaborately acceptable quality level refers to the maximum range that could considered as accepted during the random sampling and inspection. As most of the acceptance decisions of the apparel shipments for the export market are depends on AQL based sampling plan. In any industrial sector, before accepting the finished goods from the manufacturer buyer does inspection of goods. Foreign buyers are so much concerned about product quality and so they provide AQL on the product to the manufacturer at the beginning when the order is placed.

If the AQL pass that means goods are in acceptable quality level that inspection team give certificate to be shipped & if it fails to pass the AQL then it can be rechecked or returned. So AQL is so important for garment manufacturing industry. The defects that are found during inspection are classified into 3 categories:

I. Critical: Must be 100% accurate. There is no range.
II. Major: Normally 2.5%
III. Minor: Normally 4%

2.10.3 AQL Chart:

Sampling plan for shipment inspection & acceptable level at AQL 2.5, 4, 6.5

Lot or Batch Size	Sample Size Code Letter	Sample Size (Level 1)	Acceptable Quality Level (AQL)					
			2.5		4		6.5	
			Ac	Re	Ac	Re	Ac	Re
2-8	A	2	0	1	0	1	0	1
9-15	B	3	0	1	0	1	0	1
15-25	C	5	0	1	0	1	0	1
26-50	D	8	0	1	1	2	1	2
51-90	E	13	1	2	1	2	2	3
91-150	F	20	1	2	2	3	3	4
151-280	G	32	2	3	3	4	5	6
251-500	H	50	3	4	5	6	7	8
501-1200	I	80	5	6	7	8	10	11
1201-3200	J	125	7	8	10	11	14	15
3201-10000	K	200	10	11	14	15	21	22
10001-35000	L	315	14	15	21	22	21	22

Source: ANSI/ASQ z 1.4 The sampling procedures and table for inspection by attributes

Chapter- 3

Experimental Details

3.1 Experimental Data

As we have worked on finishing section, so we tried to learn as much as possible about this section and so we had to check out all the processes on a routine basis. We have followed the process sequence which was maintained by the workers & tried to gather some data. We also worked on the faults found during garments finishing check- up & the remedies of those faults as well.

3.2 Finishing Sequence:

Sequence which is followed in finishing section is given below-

Receives stitched garments from sewing section

↓

Garments are sent to tread trimming section

↓

Spot removing process (If required)

↓

Ironing is done

↓

There is a quality check term

↓

Measuring Size

↓

Metal detection process is done

↓

Hanging tags to the garments

↓

Folding the garments

↓

Folded garments are inserted into poly bags

↓

The poly bags are put in the carton

↓

Consignment is ready for final inspection

↓

Ready to be shipped

3.3 Thread Cutting

To maintain the quality, it's been very important to take care of the product from the very beginning. The very first process is done to the stitched garment in finishing section is trimming the extra tread remaining after sewing process. The process is done with some ways, they are- Hand trimming, trimming machine & thread shower machine.

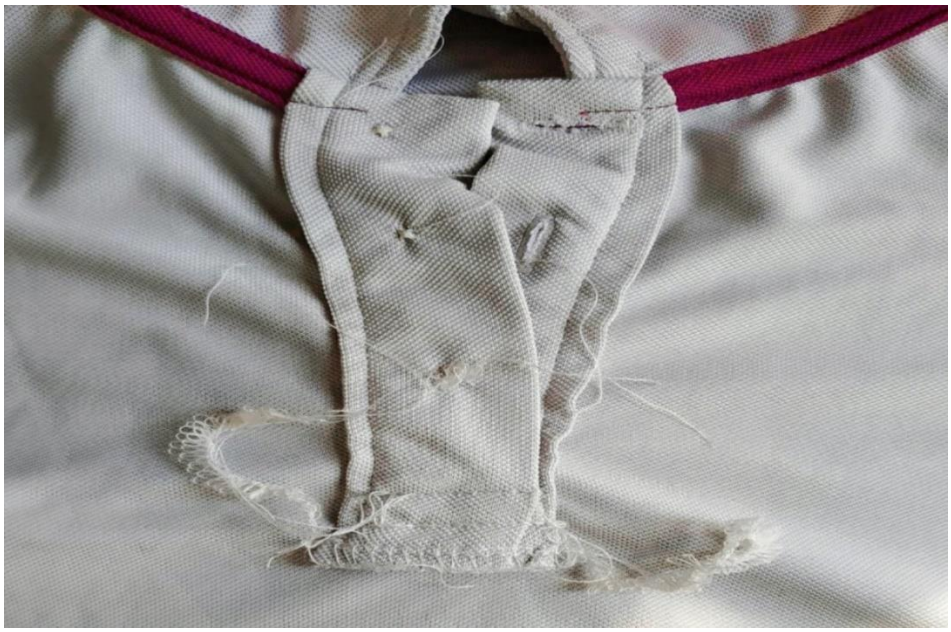


Fig: Extra Thread of Stitched Garment

3.3.1 Faults & remedies:

The main purpose of this section is to cut the extra threads from the garments & that is done very carefully. So, this is a regular process, and so apart from major faults such as garment

made without a part, spot with a big area, open seam, this section doesn't reject any garment. Cutting the extra thread, garments are ready to go to the next stage.

3.3.2 Daily Sewing Thread Cutting Report:

From thread cutting section, we have collected some data and analysed them to find the accuracy of the sewing section and how many faults are found in per 3 hours in thread cutting section. We have collected the data of hand trimming process.

Mondol Fabrics LTD

Daily Quality Check Report

Thread Cutting Unit

Style NO: ARC POLO	Fab Description: 100% Polyester, Lacoste
Buyer: Louice	Odr/Qty: 4220 pcs
Color: Grey	

Day	Checked Quantity/3hr	No. of Defect/3hr	DHU%/3hr	Passed Qty/3hr	OK%/3hr
Day 1	89	1	1.14%	88	98.88%
Day 2	96		0%	96	100%
Day 3	94		0%	94	100%
Day 4	102	1	0.98%	101	99.02%
Day 5	99		0%	99	100%
Day 6	92		0%	92	100%
Day 7	101	1	0.99%	100	99.00%
Day 8	112		0%	112	100%
Day 9	111	2	1.80%	109	98.20%
Day 10	102		0%	102	100%
Total	998	5	0.501%	993	99.50%

The Following table indicates the daily sewing thread cutting report of 3 hours by a single operator. The data consists 2 different orders though the operator was the same. Day 1 to Day 6's products are for export in foreign & Day 7 to Day 10's products are made for local buyer.

Here 998 pieces garments are checked in 3 hours of a day in 10 days by a single operator. Where 993 pieces are passed, DHU (Defect per hundred unit) is 0.501% and 99.50% garments are passed for the further process.

3.4 Spot Removing Section:

In garments manufacturing industry, garments may be affected by many types of spots or stains. To remove this type of different spots from garment there are some processes are followed and these processes are called spot removing. This section is an optional section as only spotted garments are treated here. Different types of spots are removed here with different processes.

3.4.1 Causes & Remedies of Spots:

As different types of spots are seen here, so the removing processes are also different. But most of the time we found the oil spots are removed using oil spot lifter spray, dirty spot and printing spots are removed by using spirit or water spray or wash away.

3.4.1.1 Printing spot:

Sometimes in time of printing product may be printed with spot by the process. Also some spots can be spotted by the chemicals used for printing, these are called printing spot.

Causes:

- Using low quality printing dyes, screen or chemicals
- Using faulty printing machine
- Lack of conscious in fabric handling

Remedies:

- High quality printing equipment should use
- Wash of such type of spot by relevant washing procedure

Fig: Printing Spot

3.4.1.2 Oil Spot: Sometimes in the time of production may be oils of machine makes spot on the garments. Some spots can be spotted by the oily chemicals also. These are called oil spot.

Causes:

- Using oily dyes, screen or chemicals
- Using faulty sewing machine
- Lack of conscious in fabric handling

Remedies:

- High quality machine equipment should use
- Wash of such type of spot by relevant washing procedure

Fig: Spot Removing Process

3.5 Ironing

When the thread cutting process & spot removing process is done, the garments are sent to the ironing table. Ironing is very important part of garments production to enhance the quality of the garments. By ironing process wrinkles can be removed, even it is able to remove crease mark from the product. It can change the appearance or outlook of the product.

Ironing process and temperature varies fabric to fabric. Required temperature setting & ironing type setting is the first decision to take, before ironing process. Operation time is the most crucial part of this section. Less time operation may cause low quality & more time operation may cause product damage. Concentration is highly required to do ironing.

Fig: Ironed T-Shirt

3.5.1 Problems & Faults

During ironing process some problems may arise-

- May change in length & width of the garment body if the shrinkage property of fabric is poor
- Higher temperature may change the shade of fabric
- Lack of concentration of operator can burn or damage the garment
- If the fabric quality is poor, ironing can hamper the fabric

3.5.2 Remedies:

- Setting up the perfect temperature according to fabric type
- Operator should be careful about ironing temperature & pressure
- Ironing must be run accurately to the whole garment otherwise the temperature can create shade variation
- If the garment is thin & may have the chance to change the shape, then the temperature must be kept lower

3.5.3 Daily Ironing Section Report:

From the ironing section we have collected some data and analysed them to find out the accuracy of the product & how many faults are found per hour in ironing section. Discussion given below-

Style NO; ARC POLO	Fab Description: 100% Polyester, Lacoste
Buyer: Louice	Odr/Qty: 4220 pcs
Color: Grey	

Day	Production/3hr	Ironing Temperature	Defected Qty/3hr	Passed Qty/3hr	OK%/3hr
Day 1	187	110° - 150° C		187	100%
Day 2	183	110° - 150° C		183	100%
Day 3	182	110° - 150° C		182	100%
Day 4	188	110° - 150° C		188	100%
Day 5	184	110° - 150° C		184	100%
Day 6	183	110° - 150° C		183	100%
Day 7	190	150° - 200° C	1	189	99.47%
Day 8	193	150° - 200° C		193	100%
Day 9	190	150° - 200° C		190	100%
Day 10	191	150° - 200° C		191	100%
Total	1871		1	1870	99.95%

The following table indicates the daily ironing section report of 3 hours. The data is based on the order

as two types of temperature was used & the process was done by a single operator. Here 1871 pcs garments were processed & just 1 was failed to go for the further process in a 10 days check- up. So, here 1870 pcs garments are passed where the percentage of passing the garments was impressive as it is 99.95%.

3.6 Quality Checking Process:

This is the most important & critical part of garment finishing section. Though during the whole production time, the product passes through so many times of quality checking, but this term of quality checking is the final touch of manufacturers of the final product which will be delivered to buyer. Every single part, faults are checked here. Different types of faults are detected in this section such as seam pucker, stitch missing, spots, fabric hole, improper joining, placket, label missing etc.

After doing all the processes garment may contain some faults. This quality checking is so much important for the garment as it is the last check up before delivery. From this section decision are taken that either the garment will go forward for folding and packing or will go back to alter the product or reject completely. Skilled worker is highly recommended for this job.

Fig: Quality Checking Process

3.6.1 Faults found

Various types of garment faults are detected here, some of them are discussed below-

3.6.1.1 Printing spot:

Sometimes in time of printing product may be printed with spot by the process also some spots can be spotted by the chemicals used for printing, these are called printing spot.

Fig: Printing Spot

3.6.1.2 Wrong Side Chap Tuck

Chap tuck is done to secure the seam line. Sometimes this tuck is done wrong side of garments is known as wrong side chap tuck.

Fig: Wrong Side Chap Tuck

3.6.1.3 Fabric Hole

It's a defective portion in the fabric where a hole can be seen in the garment. It can be seen any part of the garment. It may be occurred any time of the production time.

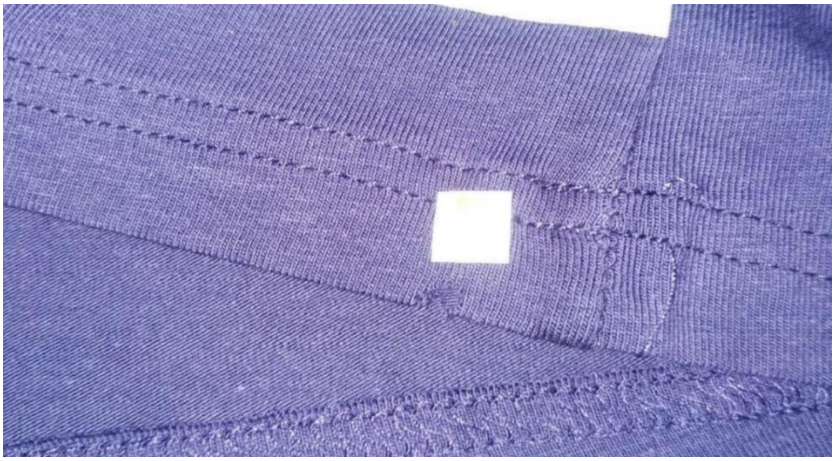


Fig: Fabric Hole

3.6.1.4 Stitch Missing:

After sewing process when any seam is found missing is called stitch missing. This can be found in any part, i.e neck top seam missing is considered as stitch missing.

Fig: Stitch Missing

3.6.1.5 Raw Edge:

If the fabric raw parts are unexpectedly shown on sewn area of the garments, then the problem refers as raw edge problem.

Fig: Raw Edge

3.6.1.6 Seam Puckering:

The gathering of a seam due to sewing fault causing an unacceptable seam appearance to the garments is known as seam puckering.

Fig: Seam Puckering

3.6.1.7 Broken Stitch:

After sewing process, if any garments come with broken stitch in quality section is called as broken stitch fault.

Fig: Broken Stitch

3.6.1.8 Main Label Missing:

Main label represents the brand name or sometimes very few specifications. As it carries the branding so it is a very important part for a garment. So missing of this label in a garment is considered as a fault.

Fig: Main Label Missing

3.6.1.9 Improper Size Label Joining:

This happen when size label joining is not accurate or partly joined with garment.

Fig: Improper Size Label Joining

3.6.1.10 Open Seam:

If the seam line is open or the fabric joint is open or loose then the fault is called a open seam. It's a common & major sewing fault.

Fig: Open Seam

3.6.1.11 Wrong Joining:

When a garment made with a part of other garment is known as wrong joining.

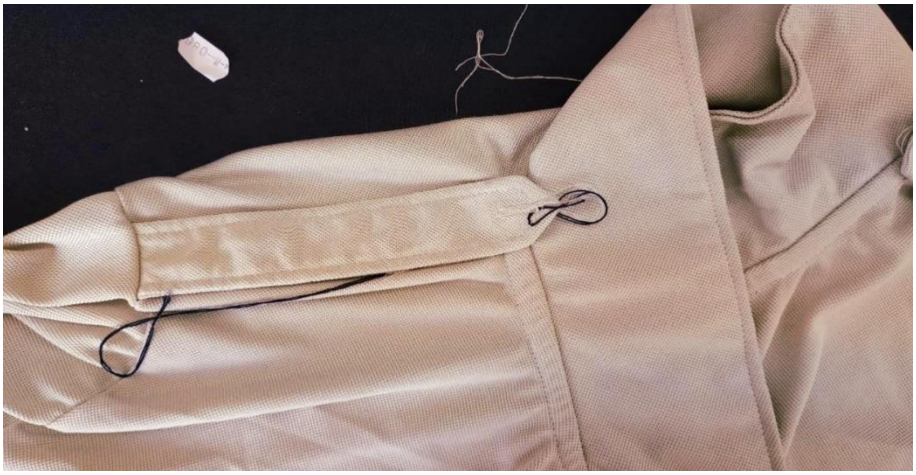


Fig: Wrong Joining

3.6.1.12 Cuff Missing:

If a garment made without cuff is called cuff missing. Cuff is a very important part for a garment. Missing of cuff is also an unacceptable fault.

Fig: Cuff Missing

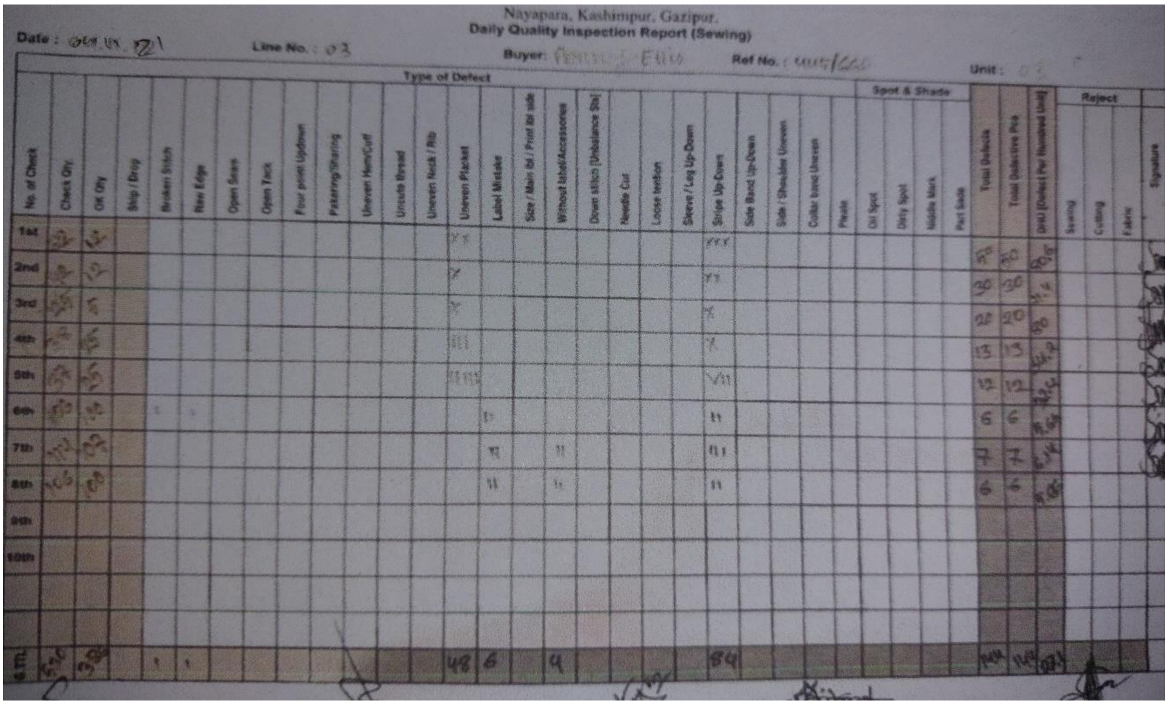
There are some more faults can be found such as care label missing, fall of stitch, scissor hole, tuck missing etc. Most of the faults are happened because of lack of worker's concentration. However by training the workers & making them more attentive for their job will reduce the amount of faults.

Fig: Care Label Missing

Fig: Scissor Hole

Fig: Tuck Missing

3.6.2 Daily checking Report:

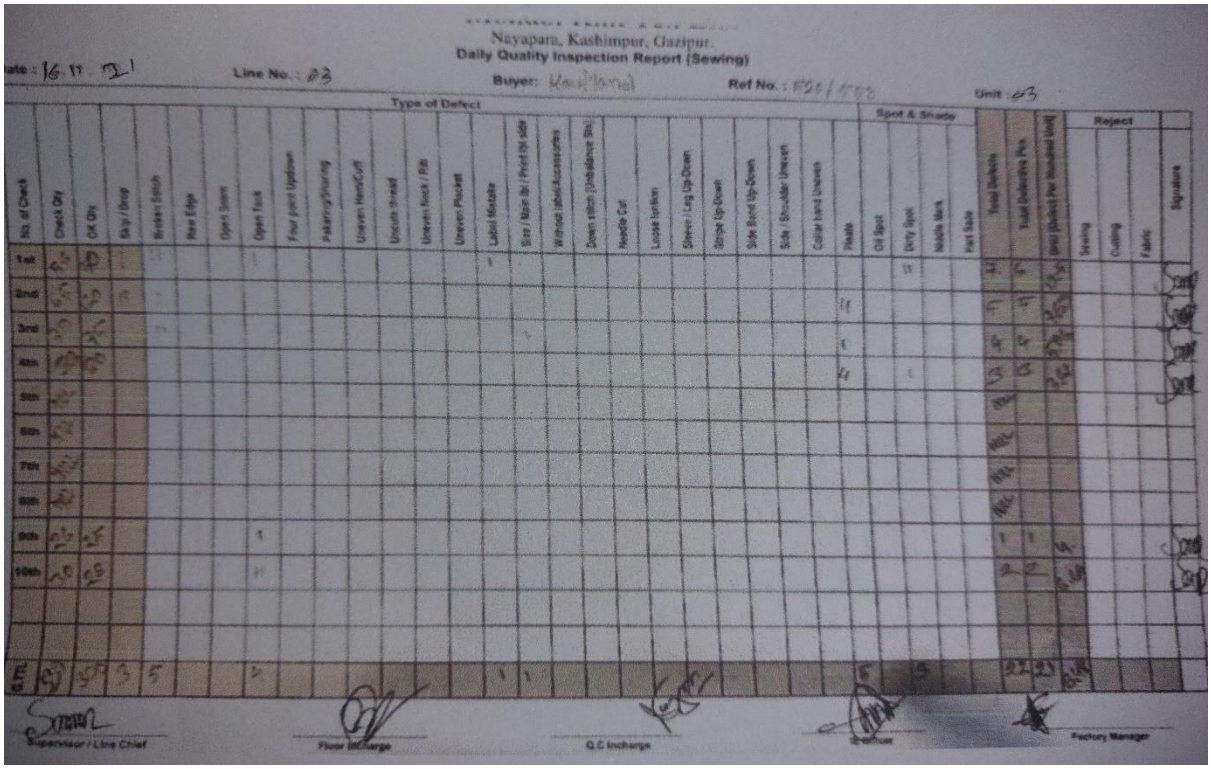

Nayapara, Kashimpur, Gazipur.
Daily Quality Inspection Report (Sewing)
Date :
Line No. :
Buyer:
Ref No.:
Unit :
Type of Defect
Spot & Shade
Reject
Signature

Style NO: Polo	
Buyer: Perry Ellis	Qty: 4220 pcs
Color: Grey	Date: 04-11-21

Defects Name	Hour			Total
	9 am – 12 pm	12 pm – 3 pm	3 pm – 6 pm	
Skip/ Drop		1		1
Broken Stitch				
Raw Edge	1			1
Open Seam				
Open Tuck				
Puckering				
Uneven Hem				
Uncut Thread				

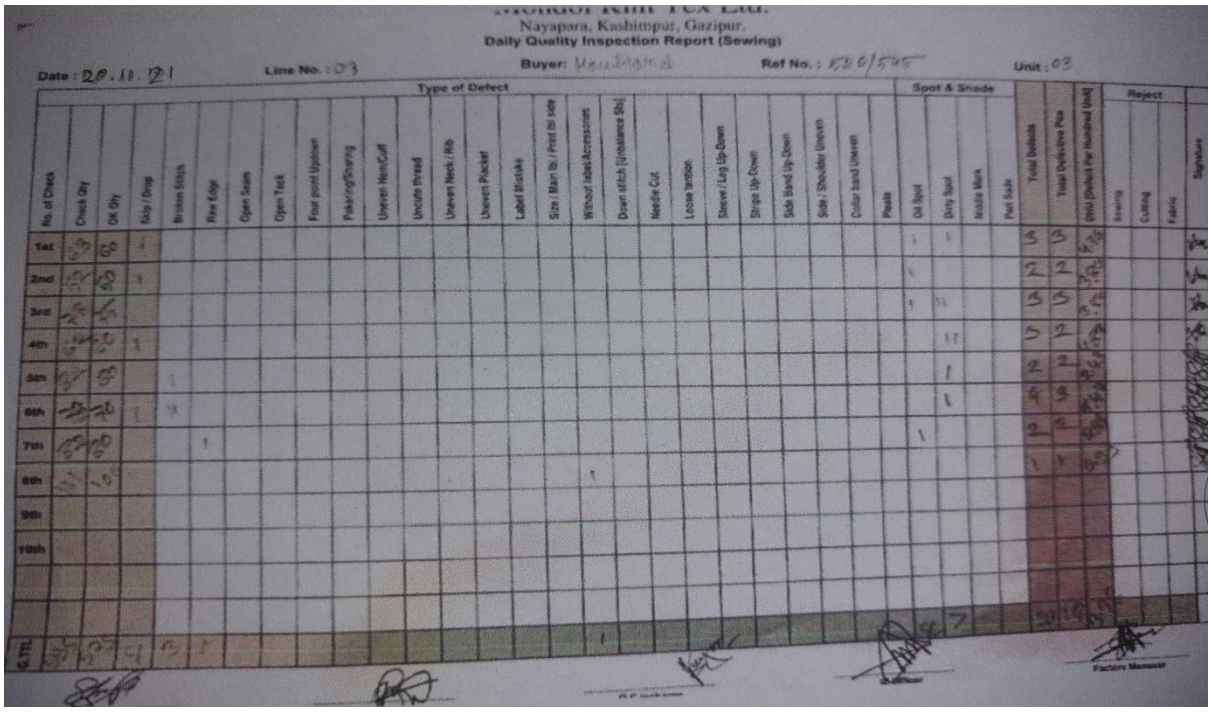
Size				
Uneven placket	26	13	9	48
Accessories				4
Down Stitch				
Needle Cut				
Loose Tension				
Sleeve				
Stripe up- down	47	33	6	86
Label mistake				
Care Label Missing				
Spot				
Others				
Reject				

Total Inspected Qty	173	171	186	530
Total Passed Qty	128	126	132	386
Total Defective Qty	45	45	54	144
DHU%				27%
Buyer: Kaufland	Line no: 03			
Ref: 520/550	Date: 16-11-21			



Defects Name	Hour			Total
	9 am – 12 pm	12 pm – 3 pm	3 pm – 6 pm	
Skip/ Drop	2		1	3
Broken Stitch	2	1	2	5
Raw Edge		2	1	3
Open Seam				
Open Tuck	3		1	4
Puckering				
Uneven Hem				
Uncut Thread	2		1	3
Size		2		2
Uneven placket				
Accessories	2		6	8
Down Stitch				
Needle Cut				

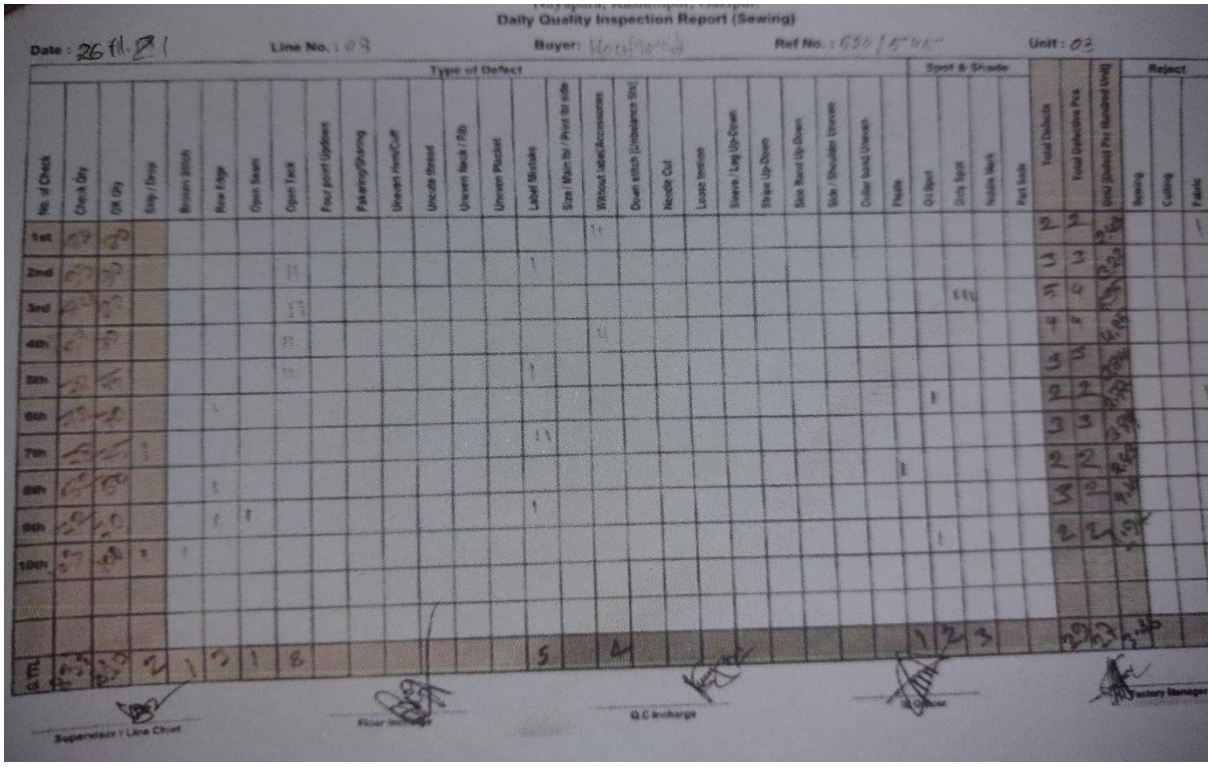
Loose Tension				
Pleate		5		5
Stripe up- down				
Label mistake		1		1
Care Label Missing				
Spot	3		2	5
Others				
Reject				
Total Inspected Qty	120	111	108	339
Total Passed Qty	115	96	89	300
Total Defective Qty	5	15	19	39
DHU%				6.48%



Buyer: Kaufland	Line: 03
Ref: 520/545	Date: 20-11-21

Defects Name	Hour			Total
	9 am – 12 pm	12 pm – 3 pm	3 pm – 6 pm	
Skip/ Drop	3		1	4
Broken Stitch			3	3
Raw Edge	1			1
Open Seam				
Open Tuck				
Puckering				
Uncut Thread				
Size				
Uneven placket				
Accessories			1	1
Down Stitch				
Needle Cut				
Loose Tension				
Sleeve				
Label mistake				
Care Label Missing				
Spot	7	1	3	11
Others				
Reject				

Total Inspected Qty	201	203	191	595
Total Passed Qty	194	195	186	575
Total Defective Qty	7	8	5	20
DHU%				3.38%

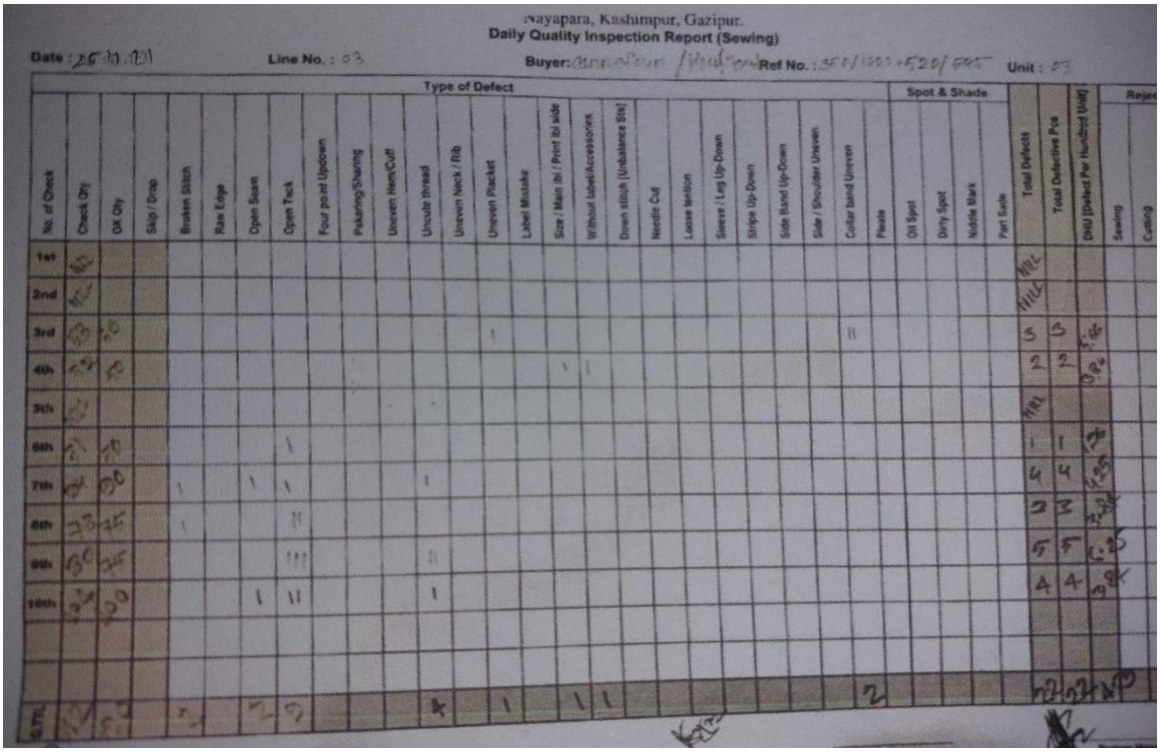


Buyer: Kaufland	Line: 03
Ref: 520/545	Date: 26-11-21

Defects Name	**Hour**			**Total**
	9 am – 12 pm	**12 pm – 3 pm**	**3 pm – 6 pm**	
Skip/ Drop	1		1	2
Broken Stitch			1	1
Raw Edge	3			3
Open Seam		1		1
Open Tuck	2	6		8
Four Point Up- down				
Puckering				
Uneven Hem				
Uncut Thread				
Size				

Uneven placket				
Accessories	2	1	1	4
Down Stitch				
Needle Cut				
Loose Tension				
Sleeve				
Stripe up- down				
Label mistake	2	2	1	5
Pleate	1			1
Spot		2	3	5
Others				
Reject				

Total Inspected Qty	201	203	191	837
Total Passed Qty	194	195	186	810
Total Defective Qty	7	8	5	27
DHU%				3.48%

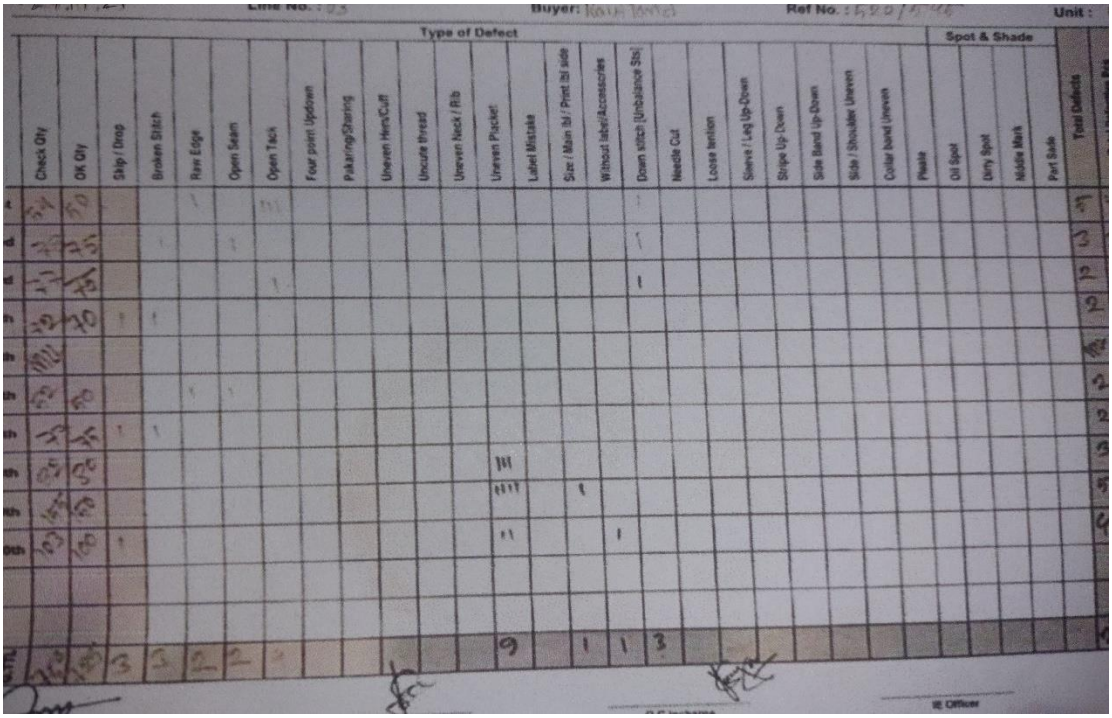


Buyer: Kaufland	Line: 03
Ref: 520/545	Date: 25-11-21

Defects Name	Hour			Total
	9 am – 12 pm	12 pm – 3 pm	3 pm – 6 pm	
Skip/ Drop				
Broken Stitch		2		2
Raw Edge				
Open Seam		1	1	2
Open Tuck	5	4		9
Four Point Up- down				
Puckering				
Uneven Hem				
Uncut Thread	1	1	2	4
Size			1	1
Uneven placket		1		1
Accessories	1			1
Down Stitch				
Needle Cut				
Loose Tension				
Sleeve				
Stripe up- down				
Label mistake				
Care Label Missing				
Spot			2	2
Others				
Reject				

Total Inspected Qty	201	203	191	512
Total Passed Qty	194	195	186	490

Total Defective Qty	7	8	5	22
DHU%				4.29%

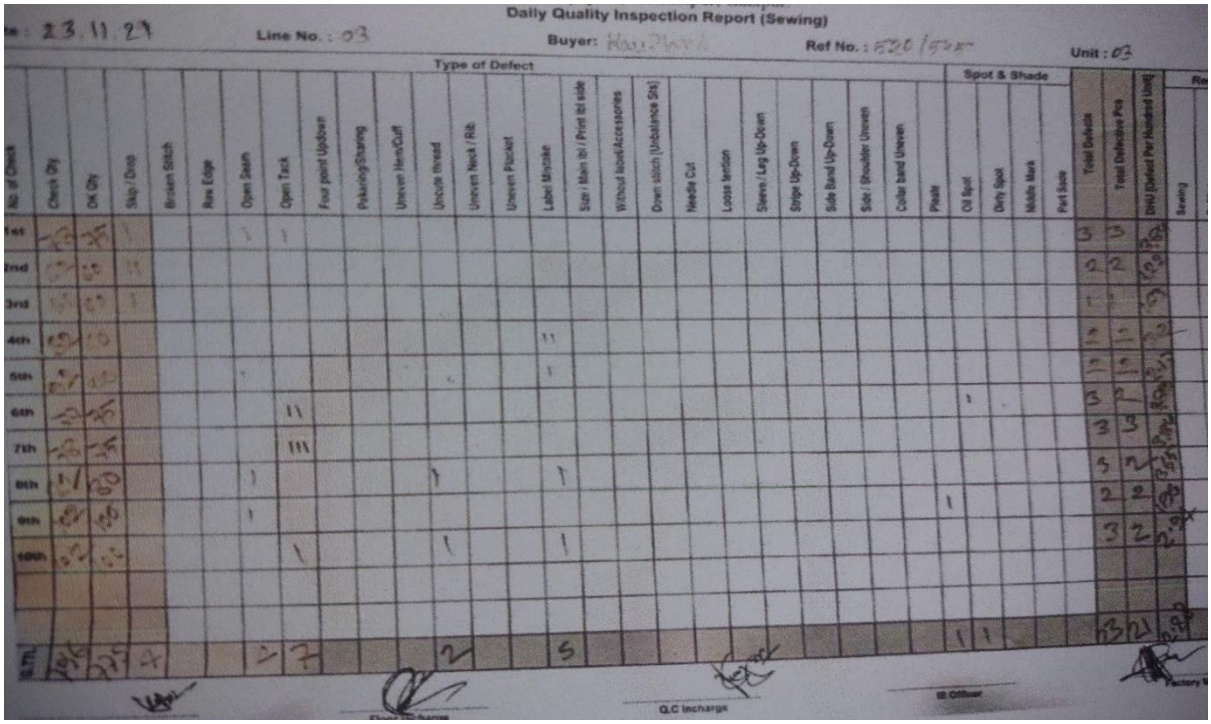


Buyer: Kaufland	Line: 03
Ref: 520/545	Date: 24-11-21

Defects Name	**Hour**			**Total**
	9 am – 12 pm	**12 pm – 3 pm**	**3 pm – 6 pm**	
Skip/ Drop		1	2	3
Broken Stitch		3		3
Raw Edge		2		2
Open Seam		2		2
Open Tuck		4		4
Four Point Up- down				
Puckering				

Uneven Hem				
Uncut Thread				
Size		1		1
Uneven placket	5		4	9
Accessories				
Down Stitch		2	1	3
Needle Cut				
Loose Tension				
Sleeve				
Stripe up- down				
Label mistake				
Care Label Missing				
Spot				
Others				
Reject				

Total Inspected Qty	201	203	191	750
Total Passed Qty	194	195	186	725
Total Defective Qty	7	8	5	25
DHU%				3.73%



Buyer: Kaufland	Line: 03
Ref: 520/545	Date: 23-11-21

Defects Name	**Hour**			**Total**
	9 am – 12 pm	**12 pm – 3 pm**	**3 pm – 6 pm**	
Skip/ Drop				4
Broken Stitch				
Raw Edge				
Open Seam	2	2		4
Open Tuck	2	4	1	7
Four Point Up- down				
Puckering				
Uneven Hem				
Uncut Thread			2	2
Size				
Uneven placket				

Accessories				
Down Stitch				
Needle Cut				
Loose Tension				
Sleeve				
Stripe up- down				
Label mistake	1		4	5
Care Label Missing				
Spot		1		1
Others		1		1
Reject				

Total Inspected Qty	201	203	191	796
Total Passed Qty	194	195	186	775
Total Defective Qty	7	8	5	21
DHU%				2.88%

3.6.3 Summary of Quality Checking in Finishing Section:

Date	Checked Qty	Ok Qty	Skip/ Drop	Broken Stitch	Raw Edge	Open Seam/ Open tuck	Spot/Size	Label	Accessories	Stripe Up- Down	Down Stitch	Placket/Thread	Total
04-11-21	530	386	1		1				4	86		48	144
16-11-21	339	300	3	5	3	1/4	5/2	1	8		5	0/3	39
20-11-21	595	575	4	3	1		11/0		1				20
23-11-21	796	775	4			4/7	1	5			1	2	21
24-11-21	750	725	3	3	2	2/4	0/1				3	9	25
25-11-21	512	490		2		2/9	0/1		1			1/1	22
26-11-21	837	810	2	1	3	1/8	5	5	4		1		27
Total	**4359**	**4061**	**17**	**14**	**10**	**10/32**	**22/4**	**11**	**18**	**86**	**10**	**59/4**	**298**

3.7 Hang Tag

After passing all the quality related checking sections, garments are fit to attach hang- tag. Hangtags are the labels attached to garment which usually contain the basic information about the product such as brand name, style no, size, price etc. But the most common purpose is to represent the brandings.

Design of the hangtags are varied brand wise or may be type wise. Hangtags is hanging with garment by means of plastic staples or strings. The process is done manually.

Fig: Hang Tag

3.8 Folding & Packing:

When the garment passed quality checking section then it folded as per buyer instruction. Only those garments which are totally in good condition, those good quality products are folded and then those folded garments are inserted into poly for further processes.

Fig: Board Folded Polo Shirt

Generally packing is done in two terms that one is poly and another one is cartooning. First garments are inserted in poly bag then the whole packed products are kept in the carton.

Fig: Cartoning Process

3.8.1 Folding process:

Most of the garments use manual process to fold the garment in our country. So here manual process is discussed-

1- At first lay the T-Shirt on a flat table. Garments should be laid in the way that back side will be on the top.
2- Place the card board in the middle.

Fig: 2nd step of folding process

3- Hold the Left part of the t-shirt and fold over the card board.

Fig: 3rd step of folding process

4- Then edge of the sleeve fold down.

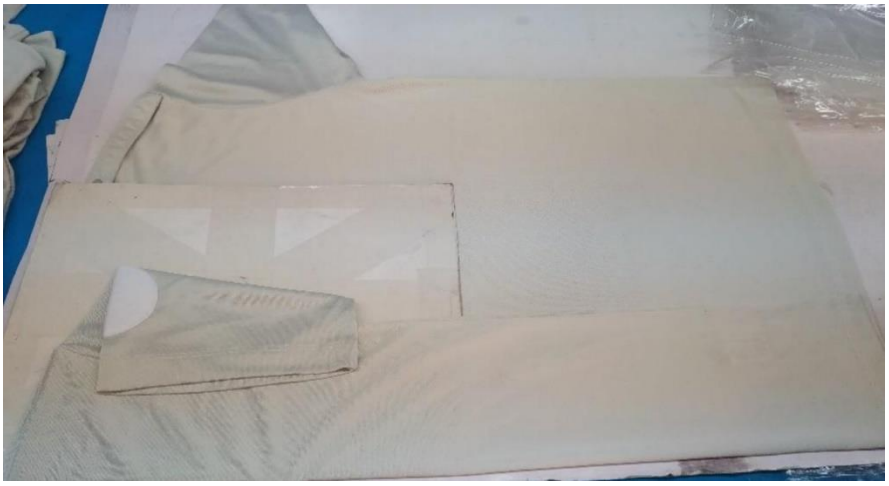


Fig: 4th step of folding process

5- Same process for the right part also.

Fig: 5th step of folding process

6- Lower portion folded over the upper portion as per card board size.

Fig: 6th step of folding process

7- Pull over the garment and folding is done.

Fig: 7th step of folding process

8- Then the folded garments inserted into poly bag as per buyer requirement. It's also a part of garments packing.

Fig: 8th step of folding process

3.8.2 Daily Folding & Packing Report:

Style NO; ARC POLO	Fab Description: 100% Polyester, Lacoste
Buyer: Louice	Odr/Qty: 4220 pcs

Color: Grey	

Day	Folding & Poly Packing Type		Faulty Folding or Packing Qty/3hr	Total Passed Qty/3hr	OK%/3hr
	Board Folding	Half Folding			
Day 1	258			258	100%
Day 2	253		1	252	99.60%
Day 3	246			246	100%
Day 4	255			255	100%
Day 5	256		2	254	99.22%
Day 6	269			269	100%
Day 7	259		1	258	99.61%
Day 8	264			264	100%
Day 9	271			271	100%
Day 10	255		1	254	99.61%
Total	2586	0	5	2581	99.81%

The following table indicates the daily folding & poly packing report of 3 hours by a single operator. Here 2586 pcs garments are ready for being folded & packed where 2581 pcs are passed & 5 of them are faulty. The accuracy is 99.81 in percentage.

Chapter- 4

Discussion of Results

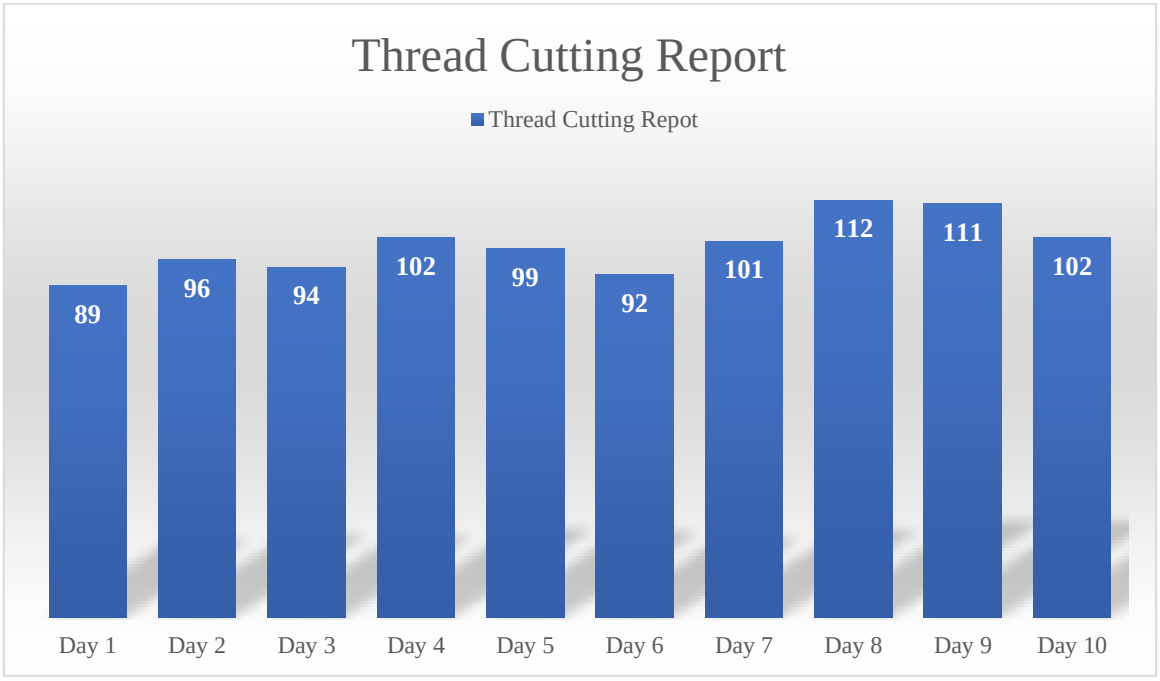
4.1 Discussion of Results:

As we collected data from different sections, now we would like to discuss & analysis the data here & make a result on the basis of those data.

4.2 Sewing Thread Cutting Data Analysis:

Cutting extra thread from stitched garment is very important. Here we are giving a graph below on the basis of table and discuss the result:

4.2.1 Graph of Sewing Thread Cutting Report:

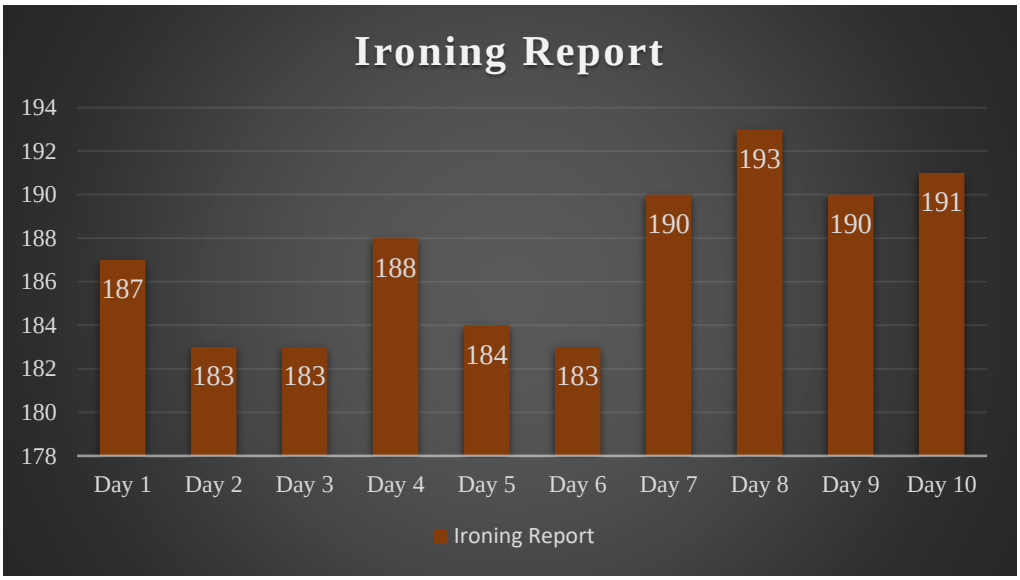


The following graph shows thread cutting production report of 3 hours in 10 days for a single operator. Here 998 pieces garments are checked & the checked amount is shown here. The highest amount of checking the thread is shown is 112 & the lowest is 89. So, the average amount of checking garments is 99.8. So, almost 100 pcs garments are checked in 3 hours.

4.3 Data Analysis of Ironing:

Ironing garments is a very important part. Here we are giving a graph below on the basis of table and discuss the result:

4.3.1 Ironing Production for 10 Days:

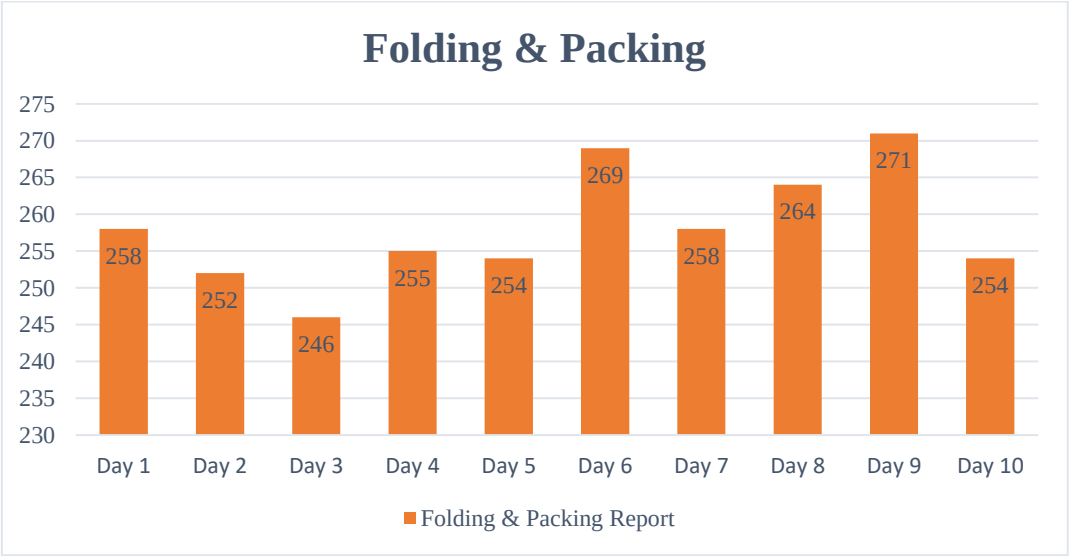


The following graph shows ironing process report of 3 hours in 10 days for a single operator. Here 1871 pieces garments are in the operation & the amount is shown here. Highest pcs of operation was done in Day 8 of 193 pcs and 183 is the lowest which is shown in day 2, 3, 6. So, the average amount of garments is 187.1. So, almost 187 pcs garments are ironed in 3 hours.

4.4 Folding & Packaging:

Folding & Packaging garments are the very last process before shipment to buyer. Here we are giving a graph below on the basis of table and discuss the result:

4.4.1 Graph of Folding & Packaging Production:

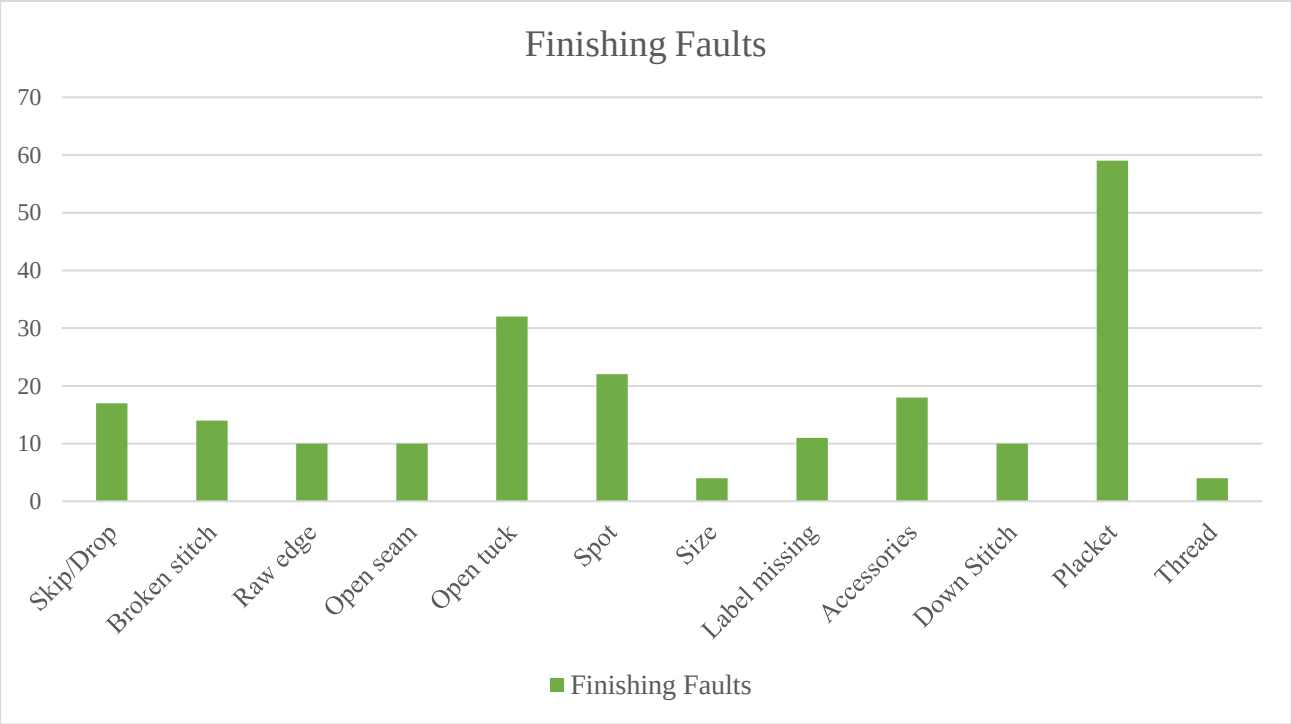


The graph shows the amount of garment are ready to be packed. This is the last process before shipment & so here is the graph which shows the final amount of packaging in 3 hours in a day. The most packed amount is 271 & the lowest is 246. So, the average amount of garment is packed is 258. Almost 260 pcs are packed in 3 hours on an average.

4.5 Data Analysis of Quality Inspection:

Quality inspection in finishing section is the most important part because of the efficiency of this work. This is where the faults are found & make sure to rework if needed. Here we are giving a graph below on the basis of table and discuss the result:

4.5.1 Graph of Total Finishing Faults:

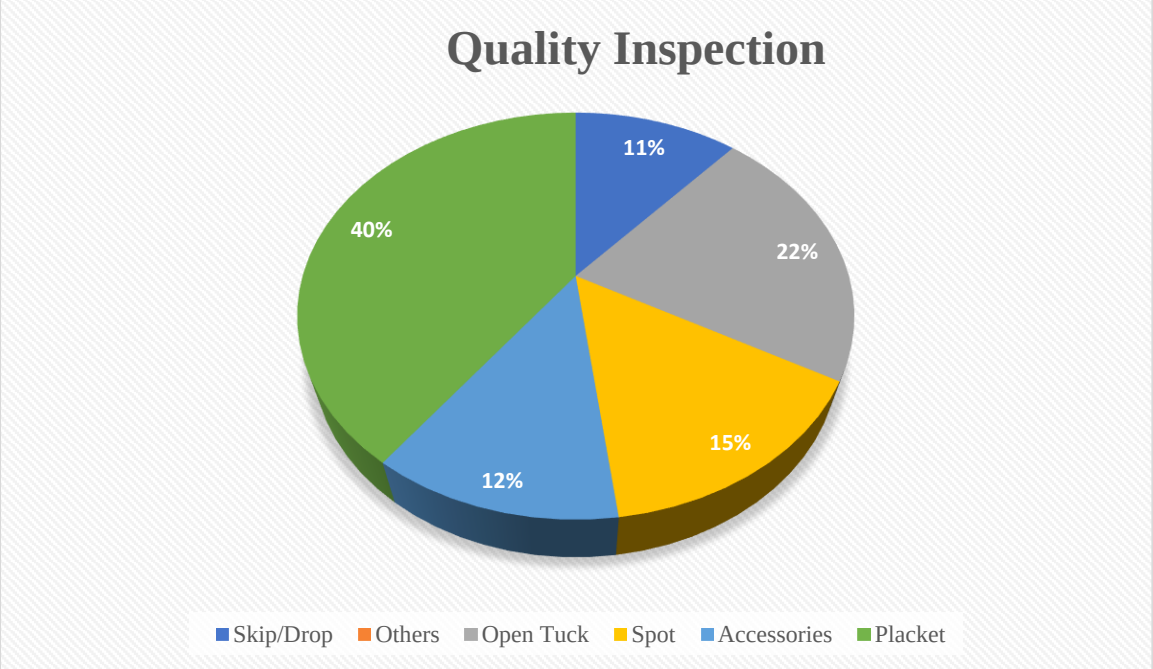


The following graph shows some different types of faults report which are found while checking the quality of garments in 3 hours basis of 7 days by a single operator. There are different types of faults can be found. The mostly found fault is placket problem as it was found for 59 times according to the graph & there were so many faults which was not found while checking the garments quality, also the rarely found fault according to the graph is size fault & thread cutting. These both were found for 4 times each.

4359 pcs garments were checked, 298 was faulty which is being shown in the graph & the rest are passed in the quality checking process.

N.B: There held a mistake in 04-11-21 that stripe up down fault was happened in a bulk, & since the problem was not a regular fault, it was a mistake, so we did not include it in the graph.

4.5.2 Pie Chart of Quality Inspection Report:



The following graph shows the percentage of faults found while inspecting the quality of garments. The mostly found problem is placket fault which contains 40% of the faults. The other mostly found faults are open tuck, spots, accessories & others.

4.5.3 Four (4) Major Defects:

- **Placket Problem:** Packet is an opening part of a garment. This is used to allow to put on or off the garments.

Fig: Placket

Causes:

- Improper thread tension
- Improper handling of fabric plies during sewing
- Negligence on sewing thread selection
- Lack of concentration of operator

Remedies:

- Skilled worker should be used
- Proper sewing thread selection
- The combination among needle, thread, fabric should be more accurate
- Periodically checking of pressure foot, feed dog, thread tension etc

- **Open Tuck:** Tuck is done to secure the seam line. Sometimes this tuck is done wrong side or the tuck goes missing of garments is known as open tuck.

Fig: Open Tuck

Causes:

- Unskilled worker
- Negligence of the operator

Remedies:

- Operator should work carefully
- Operation should be done again

- **Skip/Drop:**

Skipped or dropped stitches occur during the sewing process and usually happens either a faulty sewing machine or a worker error.

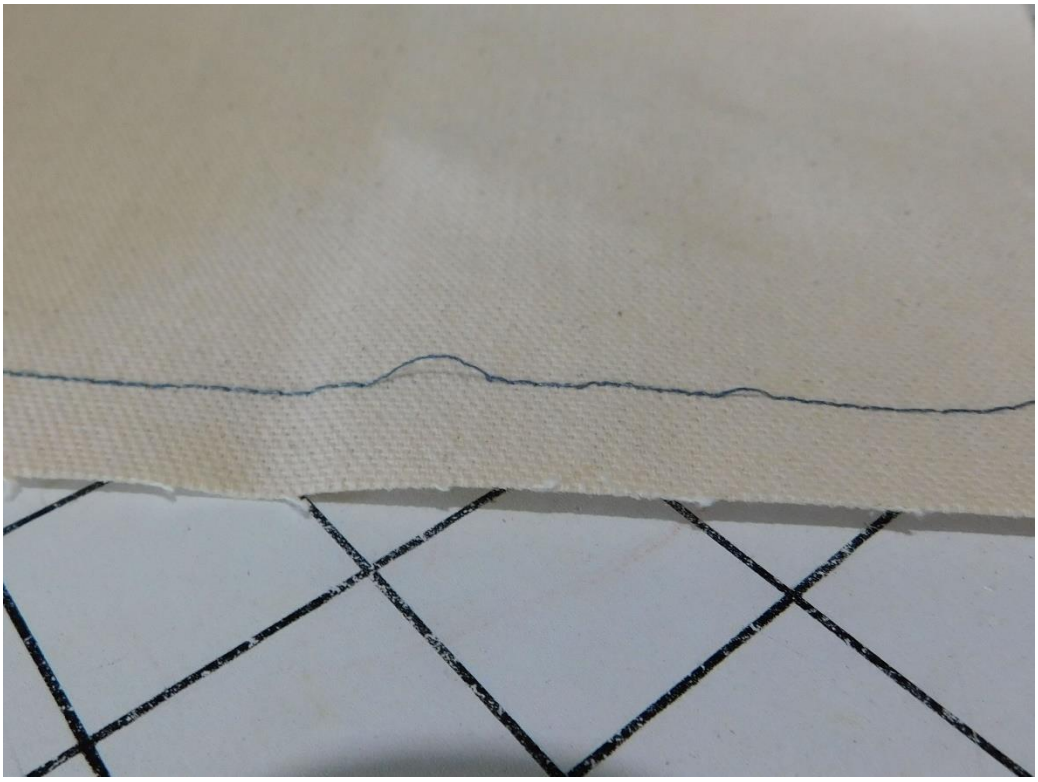


Fig: Skip

Causes:

- Improper handling of garment parts by worker
- Needle deflection
- Needle loop
- Timing fault between needle and looper
- Inappropriate foot pressure control
- Mechanical problem of sewing machine

Remedies:

- Accurate thread tension should maintain
- Proper using the garments parts
- Checking pressure foot regularly
- Skilled worker should be used

- **Spots:** Sometimes in time of printing product may be printed with spot by the process. Also some spots can be spotted by the chemicals used for printing, these are called printing spot.

Fig: Spot

Causes:

- Using low quality printing dyes, screen or chemicals
- Using faulty printing machine
- Lack of conscious in fabric handling

Remedies:

- High quality printing equipment should use
- Wash of such type of spot by relevant washing procedure

So, here we can see the 4 major defects which were found in the quality inspection session in the finishing section. Many different types of faults were found in the session, but these 4 problems were found on a regular basis & large in numbers as well. So, the factory should look after about these problems as well as others.

Here we have discussed about every process of finishing section. Every part has different types of work as well as different way of handling. All the necessary note was picked that we can learn about all the processes and discuss about those. Faults & there causes including remedies are also discussed her of all the processes in the finishing section.

Chapter- 5

Conclusion

5.1 Conclusion:

Finishing process is one of the most crucial parts of RMG sector. Here we have tried to discuss & analyse about different types of garments finishing processes which departments are generally seen in most of the industries. We tried to cover all the departments & to collect some important data. We have discussed about the sections & there working procedure, faults are found commonly, the remedies of those faults with pictures. There are so many chances to develop & improve the knit garments manufacturing industrial Sector. The Thesis paper is concluded as,

- In thread cutting section, extra threads are depended on the type of garment. Polo shirt contains more extra thread than t-shirt.
- In ironing section, ironing temperature, production accuracy, time consuming etc are depends on fabric type.
- In quality checking section, we found different types of faults. We tried to find out the causes and remedies according to the problems. Mostly occurring faults is different types of spots and most of the faults wouldn't be found if the operators would be more attentive. By there attention, many more faults can be reduced.
- In folding & packaging section, all garments are folded in board folding way and consists passing accuracy of 99.81%.

In Bangladesh, many of the garment industry still use conventional manufacturing tools, equipment & machines. In modern time, implementation of newly invented finishing tools & equipment are highly needed to be in the competitive market. Soon the RMG sector will improve more & more by taking all the necessary steps & improve the running impact of economic growth of Bangladesh.

References

1. http://www.iosrjournals.org/iosr-jpte/papers/Vol3-issue2/A03020118.pdf
2. http://fashion2apparel.blogspot.com/2016/12/garment-defects-causes-remedies.html?m=1
3. https://textilestudycenter.com/knitting-faults-infabric
4. https://www.onlineclothingstudy.com/2016/07/use-of-thread-trimming-machine-in.html?m=1
5. https://www.scribd.com/doc/88395159/Ironing-and-Pressing-Equipment
6. http://textilefashionstudy.com/pressing-or-ironing-in-finishing-section-pressing-types/
7. https://en.m.wikipedia.org/wiki/Ironing
8. https://www.sunbeam.com/blog/archive/categories/garment-care/ironing-hints-andtips/ironing-hints-and-tips.html
9. http://www.textileaffairs.com/c-common.htm
10. https://clothingindustry.blogspot.com/2017/12/pressing-equipments-garment.html?m=1
11. http://fashion2apparel.blogspot.com/2017/11/garment-measurement-guidelines.html?m=1
12. http://textilemerchandising.com/methods-for-garments-measurement/
13. http://textilelearner.blogspot.com/2012/11/body-measurement-for-clothgarments.html?m=1
14. http://www.garmentsmerchandising.com/garment-measurement-process/
15. https://jajecreative.wordpress.com/2012/09/07/the-importance-of-taking-accuratemeasurements/
16. http://fashion2apparel.blogspot.com/2017/02/final-inspection-apparel-industry.html?m=1
17. http://textilelearner.blogspot.com/2013/07/acceptable-quality-level-aql-in-apparel.html?m=1

Finishing Method

ORIGINALITY REPORT

21%	19%	2%	12%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to Daffodil International University Student Paper	4%
2	tohproblemkyahai.com Internet Source	4%
3	fashion2apparel.blogspot.com Internet Source	2%
4	dspace.daffodilvarsity.edu.bd:8080 Internet Source	2%
5	en.wikipedia.org Internet Source	1%
6	clothingindustry.blogspot.com Internet Source	1%
7	droidlessons.com Internet Source	1%
8	textilelearner.blogspot.com Internet Source	1%
9	www.fccnh.org Internet Source	1%