



Faculty of Engineering

Department of Textile Engineering

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Study on

**Quality Issues of a Woven Garment Manufacturing with
References to Fabric Defects Found in Different Sections.**

Submitted By

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This Thesis is a partial fulfillment of the requirement for the degree of

Bachelor Science in Textile Engineering

Advance in Apparel Manufacturing technology, Spring 2022

LETTER OF APPROVAL

Date: 28-08-2022

To
The Head
Department of Textile Engineering
Daffodil International University
Daffodil Smart City, Ashulia, Dhaka-1341

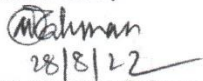
Subject: Application for thesis approval.

Dear Sir,

With due respect, beg to state that, Md. Mahadi Hasan Imran bearing ID; 181-23-465. Has completed thesis under my supervision and co-operation and collect all data from the internship factory "Platinum Apparel Manufacturing Co. Ltd." The whole report prepared on the basis of factory data. Now this thesis paper is waiting for your approval.

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

Yours Sincerely


28/8/22

Md. Mominur Rahman

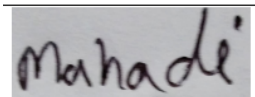
Assistant Professor
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ACKNOWLEDGEMENT

First and foremost, I want to thank Almighty Allah for blessing me with this chance and keeping me physically and psychologically fit to complete this job. Then I am grateful to Md. Mominur Rahman, Assistant Professor and Head, Department of Textile Engineering, for his guidance. He is always there to coach, advise, assist, and point me in the right direction while I work on my project. Working under his direction has provided me with a wealth of information. He is continuously trying to inspire me with his creativity. It's probable that I won't be able to finish this job without his help. I'd also like to express my gratitude to all of my respected teachers, faculty members, lab assistants, and students who have always been supportive of me. I'd also like to express my gratitude and love to my mother, who has always been a source of encouragement and inspiration for me.

DECLARATION

I hereby certify that this study was completed under the supervision of Md. Mominur Rahman, Assistant Professor and Head, Department of Textile Engineering, Daffodil International University, Faculty of Engineering. I further state that this project, or any portion of it, has not been submitted for the granting of any degree or diploma anywhere.

NAME	ID	SIGNATURE
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ABSTRACT

This study is done to know some possible steps to obtain the desired fabric quality to follow process control parameter analysis and trustworthy measurement to reduce fabric defects are to follow this study on textile finishing low-cost fabric, which lowers the percentage of defects in the manufacturing process through process control parameters. To reduce the flaws in the final fabric that has been woven. In our contemporary textile industry, fabric quality is a major problem. The largest demand is for the quality of the manufactured textile textiles, which is primarily driven by two factors: the first is the fabric's characteristics, and the second is its flaws. We completed our experimental work using certain process control data for six woven fabrics, and our shrinkage is the main issue with the finishing procedure. Next, we visualized the issue in order to determine the underlying reason of the fabric defect. Controlling the manufacturing industry's daily parameters can eliminate about 80% of errors. In order to minimize faults with respect to process parameters and safeguard fabric quality and customer.

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CHAPTER 1: INTRODUCTION

1.1 Background of Study

Every sector or organization must maintain a high level of quality to enhance sales and develop a better reputation among consumers and affiliates. A high degree of quality must be maintained to support growing global business, especially for firms that export. Export-oriented businesses contribute to the country's dignity, and as a result, export quality control standards are frequently stringent. Export houses must maintain stringent quality control over their products in order to generate foreign currency for the country. From the early stages of raw material sociability through the level of final manufactured garments, quality control is carried out in the garment industry. A thesis paper is a research document with sufficient content. Quality control is conducted in the garment business from the early phases of raw material sociability until the stage of final produced garments. A thesis paper is a research document that contains enough material on a given topic.

In the textile industry, one of the most crucial factors is quality. In order to manufacture quality comprehensive products in today competitive globe market, quality control is required. It is critical to maintain quality in both the textile and garment industries. As a result, I decided on this theme. As a result, a research was undertaken in the garment sector at Platinum Apparel Manufacturing ltd. in Charabagh, Ashulia, Savar, Dhaka, Bangladesh, to identify structures in order to minimize inaccuracies in the map's maintenance. Improving the quality of the product.

Objectives of the Study

The following are the research's objectives:

- To improve the quality of fabrics products
- To understand the causes of defects
- To apply technical solutions
- To understand which faults are more likely to occur in garments
- To identify the faults that occur in various sections of a garments industry

Limitations

I ran into some issues while working on our thesis. The following are some of them:

- Due to specific limitations, I am unable to collect complete data.
- I won't be able to bring some vital documents without the consent of higher authorities.
- Some portions still use the previous quality control system.
- Time was also a constraint.
- Getting information while working was a difficult task.

CHAPTER -2: LITERATURE REVIEW

2.1 Quality

The degree of acknowledgement of a decent or administration is defined as quality. It completely advances every item that is supported. Every item's standard level should be maintained. Markets are becoming more unpredictable in this twenty-first century of globalization, thus every industry is facing a higher level of risk.

For their business, the item must meet the client's requirements. As a result, each item's quality should be maintained. Item quality is determined in the material and garment industries by the quality of fiber, yarn, fabric construction, colorfastness, design, and the final finished garment. Nowadays, buyers are aware of a variety of qualities. If an exclusive requirement of an assessment technique can be maintained, customers will be encouraged, and higher-quality things will be produced. "Quality" is a term that everyone understands, yet deciding on it can be difficult. The general features and attributes of an item based on its utility and strength to the client are referred to as quality. Qualities differ from one person to the next depending on their choices. The two players have agreed on a quality standard to recognize any object. Client satisfaction is an indisputable indicator of fabric quality.

"Quality is the meeting of defined conditions for an item or administration," according to the International Organization for Standardization (ISO).

2.1.1 Objective of Quality Control

1. To identify various types of flaws throughout the inspection
2. To lower a product's per-unit cost
3. Making use of the raw materials, labor, and machines
4. To improve client satisfaction by eliminating errors.

2.1.2 Types of Quality Control

There are two types of quality control:

1. Process management
2. Control of the product
1. Process management

The cycle approach used should have all of the necessary exact boundaries. Each pH phase should be carefully monitored.

2. Control of the product

Item control is a control that is used to reduce blemished items within various loads of supplied merchandise. Measure control can be split into the following advancements once more:

- Online quality assurance
- Offline quality assurance

Online quality assurance:

This type of quality control measure, for example, occurs at the stage indefinitely.

The creation cycle, or the time it takes to create something, checks the diversity and discovers a quick solution to deal with the importance.

Online quality control is the process of checking for and correcting errors at the handling step. Inline inspection is the model.

Offline Quality Assurance:

Laboratory tests are used in this sort of quality control to stop the manufacturing process. Example: Factory personnel do a pre-final inspection.

2.2 Importance of Quality

Quality control is critical in the corporate world. Quality things assist to maintain customer loyalty and commitment while reducing the risk and cost of having to replace substandard items. Accreditation with recognized standards, such as ISO 9001, given by worldwide bodies, may help organizations establish a reputation for quality. Depending on the type of object, it must satisfy the client in terms of quality, attractiveness, taste, form, design, and longevity.

2.3 Quality Control

Quality control is a method and action used to ensure that quality standards are met. Examining, confirming, and regulating the degree of excellence of a feature or attribute of anything is what quality control is all about. The quality is not like that of a flower that blossoms spontaneously, with the colors of all the petals coming from inside and finally spreading the scent throughout the air to entice everyone. Until there is a quality control mechanism in place, garments will not be sent automatically. To achieve garment quality, everyone should be quality conscious, and individuals at all levels should be familiar with the tools and strategies for managing and attaining fabrics. Some should be governed by quality format, while others should be governed by figure, artistic vision, teaching, common sense, and constraint.

Only by:

- Recognizing the client's needs can satisfactory quality be achieved.
- Designing to satisfy their needs.
- Exceptional craftsmanship.
- Execution and security are guaranteed.
- Detailed instructions are included in the manual.
- Bundling that is appropriate.

From the customer's perspective, satisfaction quality can be ensured by providing:

- The correct goods.
- Good quality.
- Be on time.
- It is in perfect shape.

To guarantee a garment's quality, I must pay attention to a few key areas:

1. A fabric with no flaws.
2. The fabric' shades should be matched.
3. Providing an example based on the needs of the buyer.

4. Each article of fabric should be the correct size.
5. Excellent sewing, with fantastic crease development.
6. All further embellishments, such as the snap, zipper, tag, and level, are in place.
7. Pressing and bundling are the seventh and eighth steps in the process.

2.4 Acceptable Quality Level (AQL)

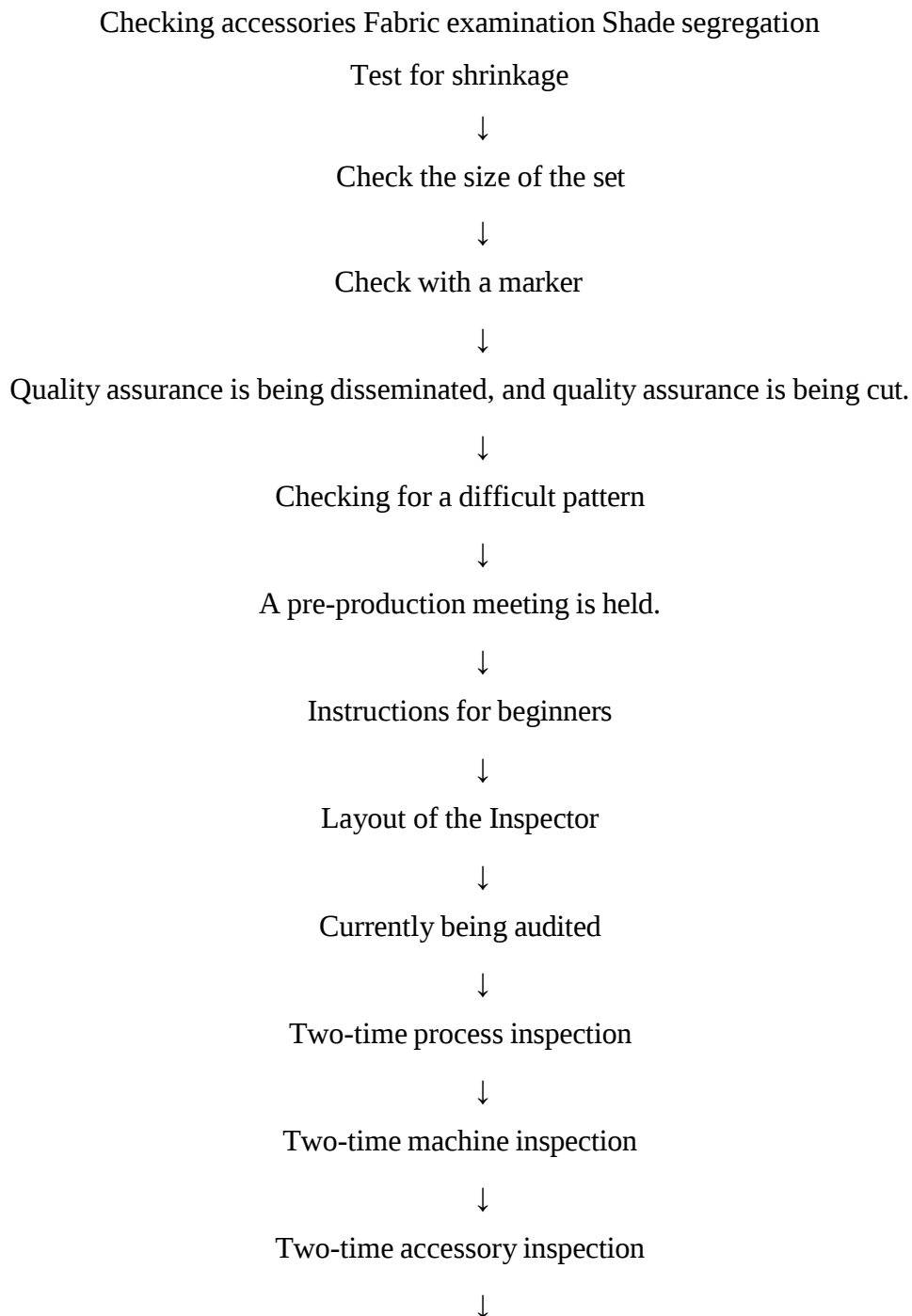
When it comes to quality in the garment export sector, AQL is one of the most commonly used terminology. Because SQL is used to make the majority of the acceptance judgments for the supply of fabric for the export market. The abbreviation AQL stands for acceptable quality level. Before accepting the finished product from the buyer, the manufacturer inspects the products in any business process. This is critical in the export garment industry. Foreign purchasers are extremely worried about the product's quality. They provide the maker with an AQL for the product. Buyers check products on a haphazard basis. He issues a certificate for transportation goods if the AQL pass indicates that the products are of acceptable quality. The AQL level differs from one process to the next, from one product to the next, and from one buyer to the next. The table below shows a sample inspection plan for the final shipment. The greatest amount of defective items that can be randomly regarded acceptable during sample testing and inspection is referred to as the Recognition Quality Level (AQL). The errors discovered during the inspection are divided into three categories:

- Critical: 100% accuracy is required. There isn't any.
- Major: Normally, it's around 2.5 percent.
- Minor: Normally, it's 4%.

2.5 Quality Assurance

Quality Assurance (QA) is a method of preventing mistakes or errors in manufactured products, as well as problems when providing solutions or services to customers; ISO 9000 is defined as a type of quality management that focuses on ensuring that "quality requirements" are met.

2.5.1 Process Flow Chart of Quality Assurance Department



a weekly report of work in progress



Check that the process is 100 % in line.



Performing a last inspection of the sewing

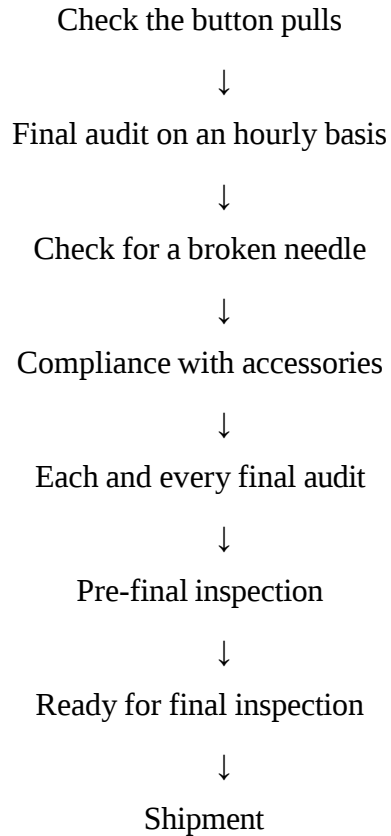


Final hourly audit with measurement

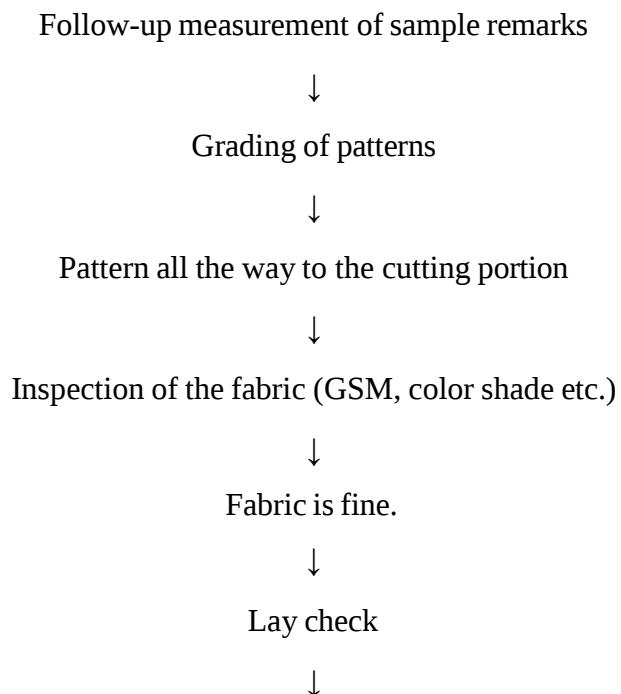


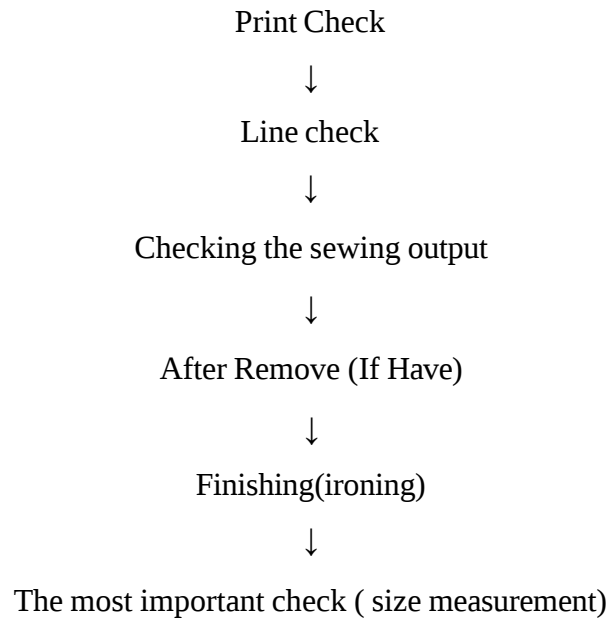
Finishing a 100 percent check

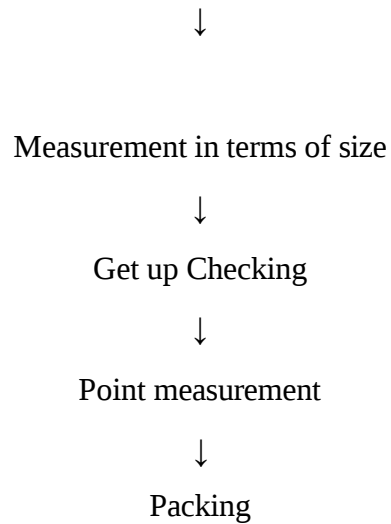




2.6 Working Sequence of Quality Section





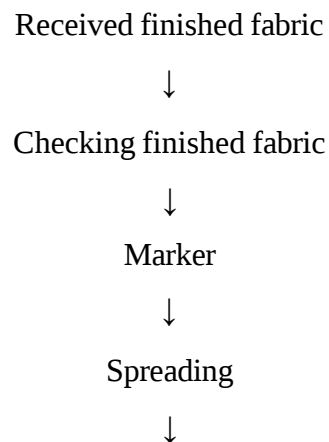


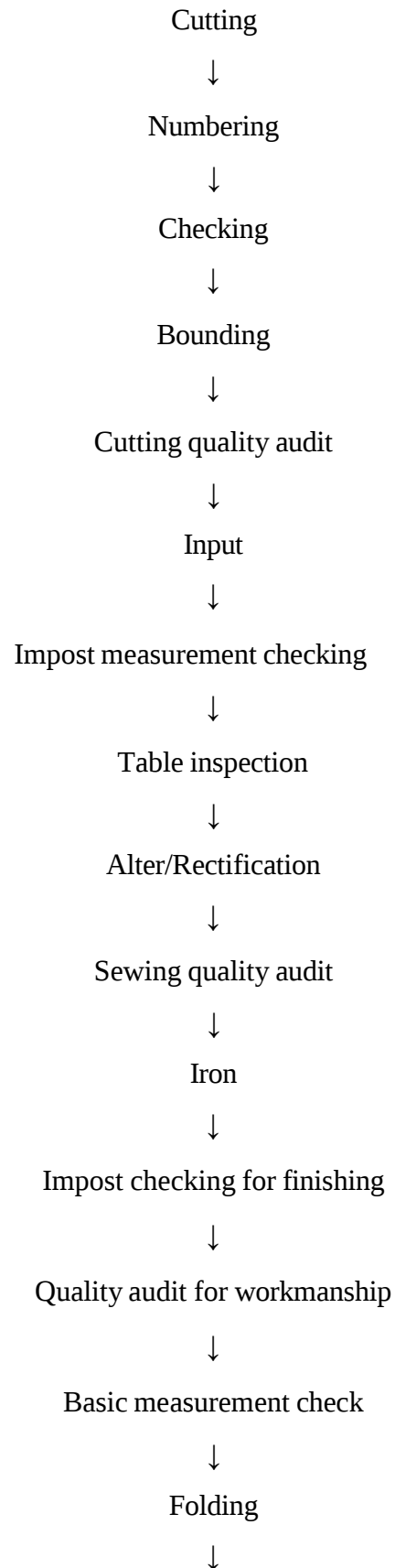
2.7 Quality Control in Apparel Production

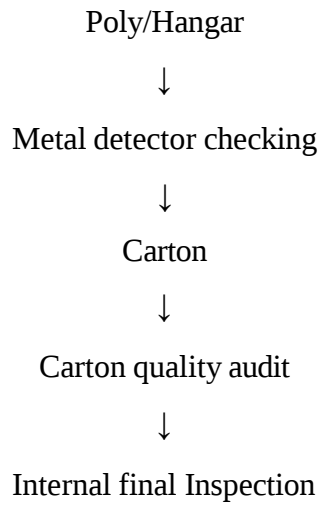
Process inspection and quality control are performed at several stages throughout garment production. In general, there are three types listed below:

1. Cutting section quality control
2. Sewing part quality control
3. In the finishing section, there is quality control.

2.7.1 Flow Chart of Garments Quality Control







2.8 Quality Management Department



2.9 Some Faults and Their Remedies in Cutting Section

In the cutting section, some typical errors occur on a regular basis. I can produce a high-quality product if I reduce these faults. The following are some of the cut flaws and how to fix them:

1. Wrong Cutting

This type of error occurs when different sizes are mixed and sliced together.



Fig I: Wrong Cutting

Remedies:

If these types of errors occur, the fabric will be rejected.

2. Miss Cut

If the appropriate line is not maintained when cutting, a miss cut will occur. There is a 1/16" tolerance.



Fig II: Miss Cut

Remedies:

If these types of errors occur, the fabric will be rejected.

3. Numbering Mistake

If the size number of cut pieces is not attached, it is referred to as a numbering error.



Fig III: Numbering Mistake

2.10 Quality Control in Cutting Section

Cutting can be done by hand or using an automatic cutting machine. Cutting mistakes can be reduced by a qualified worker. The cutting machine knife must be examined and sharpened before fabric cutting may begin. When using an auto-cutting machine, the fabric should be placed uniformly on the table. To guarantee that the quality has been cut, the cutter must be as precise as possible in following the pattern line as precisely as feasible. To get fault-free cutting fabric, consider the following factors:

- Lowering the lay height
- Lowering the cutting speed
- Using anti-fusion paper in the lay at regular intervals
- Using lubricant on the knife while cutting

Checklist for Cutting Quality

- Checking the pattern's quality.
- Checking the marker's quality.
- Checking the diameter of the fabric

- Laid Checking Cutting
- Fabric Shade Checking from Roll to Roll
- G.S.M. Checking Fabric
- Checking for Mistakes in Bundles
- Checking for Size Mistakes
- Checking for Fabric Color Mistakes
- Checking Yarn Contamination
- Checking for Fabric Issues

2.11 Sewing Faults, Their Causes and Remedies

Seam Pucker:

After stitching, seam pucker occurs. A ridge, wrinkle, or corrugation of the sewed fabric going across the seam can be defined.



Fig: Seam Pucker

Causes:

- Incorrect fabric feeding
- Incorrect tension setting
- Sewing thread extension

Remedies:

- By applying adequate tension, puckering can be reduced.
- Adjust the tension of the bobbin thread first, then the needle thread tension.
- By changing the feed timing and fabric control for maximum fabric pulling.

Skipped Stitch:

Miss stitch formation or a gap in stitch formation might result in a skipped stitch. Causes:

- If the stitching tension of the needle is improper.
- Needle deflection
- Thread Missing Yarn failure owing to inappropriate thread control mechanism setting
- Thread Missing Yarn failure due to incorrect needle size for thread size.



Fig: Skipped Stitch

Oil or Dust Spot:

When a patch of oil, dust, or wax is discovered on the fabric surface, it is referred to as an oil or dust spot.

Reason:

- If oil, wax, or dust is deposited on the fabric surface by the machine while sewing, an oil or dust stain will appear.



Fig: Oil Spot

Treatments:

- It can remove by using special type of spray. The name of that spray is 'Spot lifter'.

Displacement of label:

It will happen if the label's position is incorrect.



Fig: Displacement of Label

Reason:

- In case of inattention

Remedy:

- By removing and reattaching the label.

Stitch Density Variable:

This type of error occurs during the sewing process.

Cause:

- Ineffective fabric feed control



Fig: Stitch Density Variable

Treatment:

- Increase the pressure on the presser foot.
- Replace the negative feed mechanism with a more positive one.

Needle Mark:

The needle is the most important part of stitching. Needle marks appear as a result of stitching with a fast needle speed. Reason:

- When there is a problem with the stitching, this flaw occurs.



Fig: Needle Mark

Treatment:

By eliminating incorrect stitching during the sewing process.

Sewing Line Quality Check List

1. Check for Buyer Approved Samples and Measurement Sheets.
2. Sample-by-sample input verification.
3. Trims Card Check that has been approved by the buyer.
4. Sample Wise Style Check, which has been approved by the buyer.
5. Check the tension of all machine threads.
6. Print and Embroidery Placement Check for Style.
7. Double-check all process measurements.
8. Check for oil spots on all machines.
9. All processes are subjected to a S.P.I. check in accordance with the buyer's specifications.
10. Check for Time Shading, Bundle Mistakes, and Size Mistakes.
11. Wise Contrast Color Check, which was approved by the buyer.
12. Styling Check based on Buyer Requirements
13. Ensure that all machine stitch tensions are properly balanced.

Finishing Faults, Their Causes and Remedies

The finishing section has a variety of flaws. Here are a few examples:

Barcode Error:

It is referred to as a barcode mistake if the primary label and hang tag barcodes are not same.



Fig: Barcode Error

Reason:

- Worker makes this type of mistakes.

Remedy:

- By reattaching the same main label and hang tag.

Folding incorrectly:

It will happen if the finished garments are not folded properly before shipment.

Reason:

- When a packing activity is completed rapidly, this type of difficulty occurs.

Remedy:

- It may be folded again to remove it.

Wrong Packing:

When a corner or side is folded after packaging, it is referred to as incorrect packing.

2.11.3 Finishing Quality Checking List

1. Thorough garment examination, including measurement, spot, and dirt.
2. Check for shade variation
3. Smooth and unfold in pockets
4. Wrong fold
5. Proper fabric form
6. Proper ironing
7. Barcode application
8. Tag application
9. Closure of the collar

CHAPTER – 3: EXPERIMENTAL DETAILS

3.1 : Fabric inspection

Fabric is the primary raw material used in the creation of fabrics, accounting for 60-70 percent of the entire cost. If a defective fabric is utilized to produce a garment, the garment maker will end up with a defective or defective garment, not a good one. Fabric inspection is an integral part of the garment production process. Fabric inspection is commonly done using the four-point technique. Missing Yarn, set up, needle mark, stop mark, hole, knot/slab, thick and thin, Y / C fly, star, strap, light out, stripe, oil spot, and other garments are all called fabrics.

Grey fabric inspection report: (07-04-2022)

PAMCO
Platinum Apparel Mfg. Co., Ltd.
Charabagh, Ashulia, Dhaka-1341
Visual Fabric Inspection / Roll

Buyer : SOS
Style : 8239 W
Po. No. :

Insp. Report No: Fabric supplier: JIN LING TEX. Garment Supplier: PAMCO. Date: 07-4-22

Colour	TRUE RED				379				418				290				367							
Roll No.	261																							
Dye Lot																								
Colour Shade	D65	TL83	A		D65	TL83	A		D65	TL83	A		D65	TL83	A		D65	TL83	A					
To Approved fabric																								
End to End :																								
Side/ Center :																								
Length :																								
	Ticket				Actual				Ticket				Actual				Ticket				Actual			
Cutttable Width:	76 M	Beg	Mid	End	76 M	Beg	Mid	End	75 M	Beg	Mid	End	65 M	Beg	Mid	End	63 M	Beg	Mid	End	63 M	Beg	Mid	End
Defective Points	1	57	3	4	1	57	3	4	1	57	3	4	1	57	3	4	1	57	3	4	1	57	3	4
Thick Yarn	///				///				///				///				///				///			
Missing	///				///				///				///				///				///			
Filing Bar																								
Wet Bar End Out																								
Coarse End																								
Coarse Pick																								
Foreign Yarn																								
Hole																								
Slub/ Knots	///				///				///				///				///				///			
Stains/ Dirts																								
Crease Mark																								
Splice																								
Oil Spot																								
Dirty Spot																								
BROKEN YARN																								
Sub-Total	09				11				08				07				09				09			
Roll Points	7.47%				9.26%				7.98%				7.01%				9.02%				7.47%			
Remarks:																								

Fabric Inspector: (Signature) G.P.Q Sign: (Signature) Q.C. Incharge: (Signature) Sr. Q.A. Manager: (Signature)

Buyer# SOS	Fabrication# 100% cotton Y/D check fabric.	Yarn count #	Received roll Quality# 176	Total length# 11086 M
Style no#	Composition#	Yarn lot#	Inspection Roll #qty. 10	Total fault point# 86
Order no :#	Total roll wt.:# 280 kg	Yarn brand #	Acceptable rolls#10	Req width#

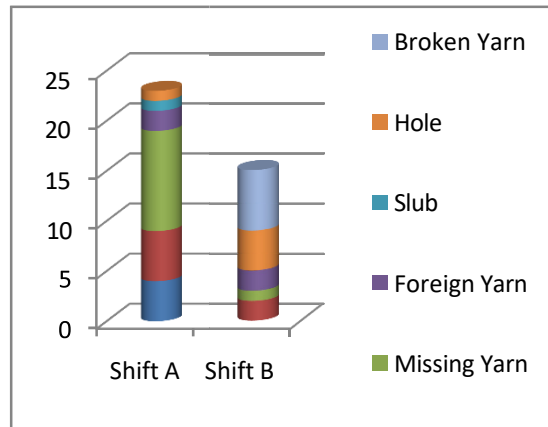
Order quality:#	Color and code:# Check Mix Color	Req.GSM#	Rejected Roll#	
-----------------	----------------------------------	----------	----------------	--

Sh i ft	Rol l no.	G. dia	mc /di a	G a ug e	Roll weig ht	Leng t h (yd)	G r ey G S M	M i ssi ng Y a rn	Bro k en PI CK /E ND	Fault description		Kn o t/Sl ub	Thic k and Thin	Missi ng Yarn/ Yarn	Fo rei gn Y a rn	T o tal Po int	Point /100 lenie r yd	Clas s AB C
										Hole								
										<1	>1							
A	261	87	36	20	22	76	180					2	3	4		6	4.77	A
	379	87	36	20	28	76	180			1						10	6.26	A
	418	87	36	20	22	75	180					2	2	2	2	6	4.77	A
	390	87	36	20	22	75	180	1						4		8	6.36	A
	367	87	36	20	28	65	180			1				2	1	6	4.77	A
B	261	87	36	20	28	65	180		2	1						16	6.26	A
	379	87	36	20	22	63	180		1	1				2		8	6.36	A
	418	87	36	20	22	63	180		1	1						6	4.77	A
	390	87	36	20	28	63	180		2	1						10	6.26	A
	367	87	36	20	26	63	180						2	1	2	10	6.26	A
Total						684		1	6	5		4	7	13	4	86		

Table: 3.1.1 Grey Fabric Inspection Day 1

This table shows the number of specific problems found per hour of grey fabric inspection over the course of a day. 280 kg of fabric are inspected here.

A graph is given on the basis of this table:



Graph: 3.1.1

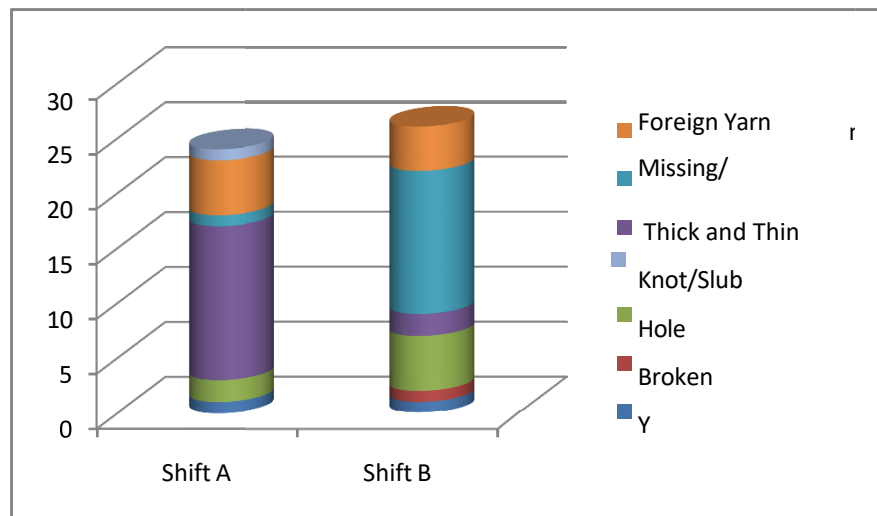
Graph 3.1.1 depicts a day's worth of grey fabric inspection. Missing Yarn and broken yarn are the most serious flaws, whereas Missing Yarn is the least serious.

Style no#	Composition# 5%gm	Yarn lot# 88091	Inspection Roll #qty.10	Total fault pont# 60
Order no :#	Total roll wt.:# 256 kg	Yarn brand # S.pur	Acceptable rolls#10	Req width# 70 (90)
Order quality:#	Color and code:# Check Mix Color	Req.GSM#300	Rejected Roll#	

Sh i ft	Rol l no.	G. dia	mc /di a	G a ug e	Roll weig ht	Leng t h (yd)	G r ey G S M	M i ssi ng Y a rn	Br ok en Ya rn	Fault description		Kn o t/Sl ub	Thic k and Thin	Missi ng Yarn / Y a rn	Fo rei gn Y a rn	T o tal Po int	Point /100 lenie r yd	Class ABC
										Hole								
										<1	>1							
A	1	87	36	20	22	76	180					6	1	2		8	6.36	A
	2	87	36	20	28	76	180				1	4				10	6.26	A
	3	87	36	20	22	75	180					3			1	6	4.77	A
	4	87	36	20	22	75	180					1		2		8	6.36	A
	5	87	36	20	28	65	180	1		1				1		10	6.26	A
B	1	87	36	20	28	65	180				1	1	7			6	4.77	A
	2	87	36	20	22	63	180	1					3			8	6.36	A
	3	87	36	20	22	63	180			1			3			6	4.77	A
	4	87	36	20	28	63	180				2	1		1		10	6.26	A
	5	87	36	20	26	63	180		1		1			3		10	6.26	A
Total						684		2	1	2	5	16	14	9	1	82		

Table 3.1.2 Grey fabric inspection report day 2 (09-04-2022)

This table shows the number of specific problems found per hour of grey fabric inspection over the course of a day. Here, 256 kg of fabric are assessed, and the roll with the highest flaw point is eliminated.



Graph 3.1.2 Grey Fabric Inspection (Day 2)

Inspection report for grey fabric on day 3 (10-04-2022)

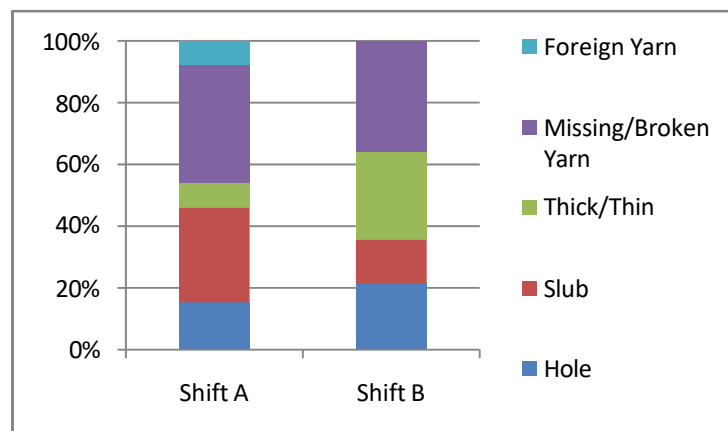
Style no#	Composition# 5%gm	Yarn lot# 88091	Inspection Roll #qty.10	Total fault pont# 60
Order no :#	Total roll wt.:# 212 kg	Yarn brand # S.pur	Acceptable rolls#10	Req width# 70 (90)
Order quality:#	Color and code:# Check Mix Color	Req.GSM#300	Rejected Roll#	

Sh i ft	Rol l no.	G. dia	mc /di a	G a ug e	Roll weig ht	Leng t h (yd)	G r ey G S M	M i ssi ng Y a rn	Broke n Yarn	Fault description		Kn o t/Sl ub	Thic k and Thin	Miss i ng Yar n/ 	Forei gn Yarn	To t al Poi nt	Point/1 00 lenier yd	Class ABC
										Hole								
										<1	>1							
A	1	87	36	20	22	76	180					1	1	2		6	4.77	A
	2	87	36	20	28	76	180				1					10	6.26	A
	3	87	36	20	22	75	180					2			1	8	6.36	A
	4	87	36	20	22	75	180					1		2		8	6.36	A
	5	87	36	20	28	65	180			1				1		10	6.26	A
B	1	87	36	20	28	65	180				1	1	2			6	4.77	A
	2	87	36	20	22	63	180						1			8	6.36	A
	3	87	36	20	22	63	180			1			1	1		6	4.77	A
	4	87	36	20	28	63	180					1		1		10	6.26	A
	5	87	36	20	26	63	180				1			3		10	6.26	A
Total						684				2	3	6	5	10	1	84		

Table 3.1.3 Inspection report for grey fabric on day 3

This table shows the number of specific problems found per hour of grey fabric inspection over the course of a day. Here, 212 kg of fabric are assessed, and the roll with the highest flaw point is eliminated.

The graph of this inspection:



Graph 3.1.3 Grey Fabric inspection (Day 3).

Here maximum fault is Missing Yarn/ Broken yarn and minimum is Foreign Yarn.

3.2 Cutting Section

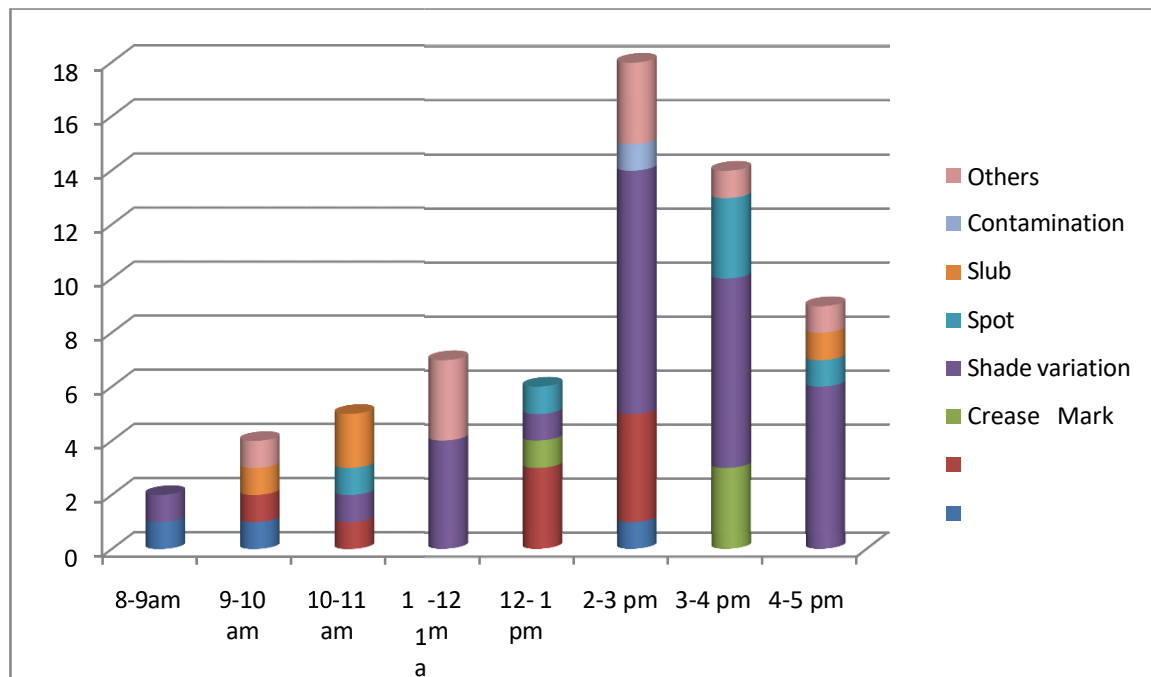
It is a significant segment of the apparel business. Cutting is the process of making a garment by cutting a pattern piece from a certain fabric. The fabric is trimmed to prepare the garments for assembly using the issue plan's grade patterns and markers. This is the cutting room's principal operation; of all the cutting room's tasks, it is the most determined, because once the fabric is cut, there is very little that can be done to repair serious flaws. As a result, I gathered data and analyzed it to determine how many errors occur on a daily basis. Here's everything need to know:

Table 3.2.1 Cutting Section Inspection (Day 1)

D a t e	H o u r s	Bunde ling Mistak e	Cre as e Ma rk	Shade Variati on	Sp ot	Slu b	Wr ong Cut	Contaminati on	Othe rs	Toal Inspecti on	Total Defec ts	QC Pas s	Tota l defe ct %
11 - 04 - 22	8-9 am	1			1					325	2	323	0.61 %
	9-10 am	1	1				1		1	315	4	311	1.2%
	10-11 am		1		1	1	2			325	5	320	1.53 %
	11-12 am				4				3	300	7	293	2.33 %
	12-1 pm		3	1	1	1				300	6	294	2%
	2-3 pm	1	4		9			1	3	350	18	332	5.14 %
	3-4 pm			3	7	3			1	300	14	286	4.67 %
	4-5 pm				6	1	1		1	240	9	231	3.75 %
To tal	8 hour s	3	9	4	29	6	4	1	9	2455	65	239 0	2.64 %

This table shows each day's specific errors. In the cut area, you'll find things like stripes, pinholes, contamination, slabs, crease lines, shade differences, and so on. In a single day, 2455 fabrics are inspected, with 2390 garments passing QC and a 2.64 percent garment defect rate.

Figure: 3.2.1 Cutting faults of day 1 (11-04-22)



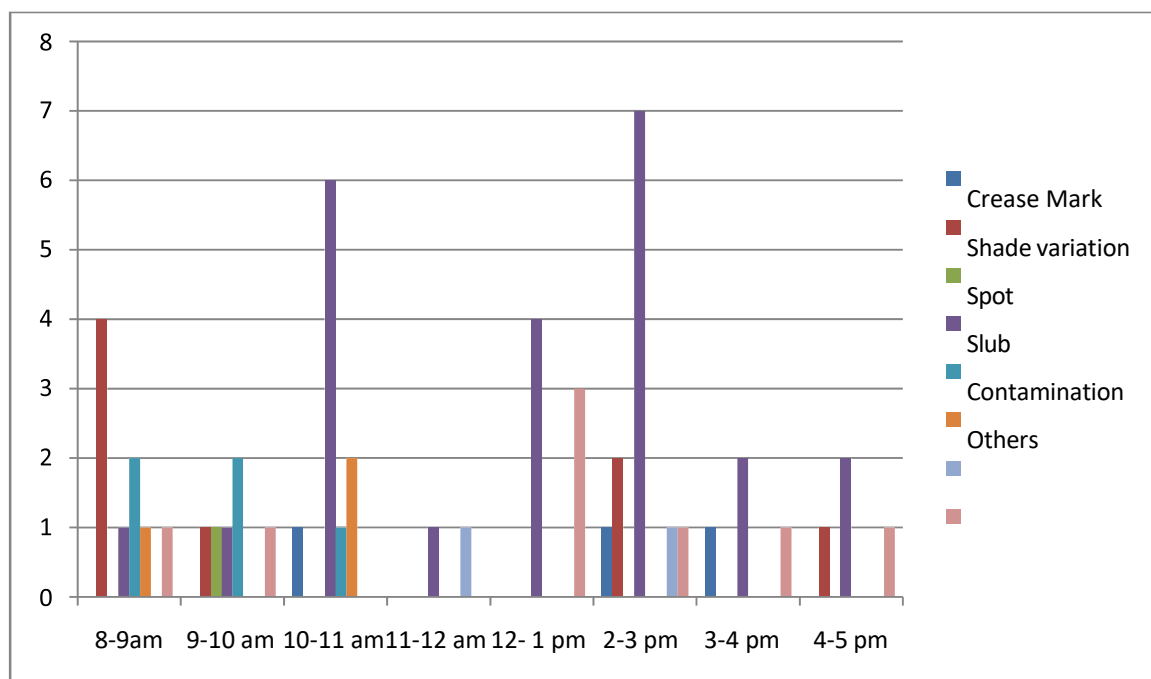
Cutting defects of a day are shown in graph 3.2.1, with the maximum fault value of 29 (Spot) and the lowest fault value of 1 (Contamination).

Table 3.2.2: Cutting Section Inspection

Date	Hours	Numbering Mistake	Crease Mark	Shade Variation	Spot	Slub	Wrong Cut	Contamination	Others	Total Inspection	Total Defects	QC Passes	Total defect %
12-04-22	8-9 am		4		1	2	1		1	360	9	351	2.5%
	9-10 am		1	1	1	2			1	300	6	294	2%
	10-11 am	1			6	1	2			325	10	315	3%
	11-12 am		1		1			1		300	3	297	1%
	12-1 pm				4				3	300	7	293	2.33%

	2-3 pm	1	2		7			1	1	350	12	338	3.42 %
	3-4 pm	1			2				1	280	4	276	1.42
	4-5 pm		1		2				1	300	4	296	1.34
To tal	hour s	3	9	1	24	5	3	2	8	2515	55	2460	2.19 %

Figure: 3.2.2 Cutting faults of day 2(12-04-22)

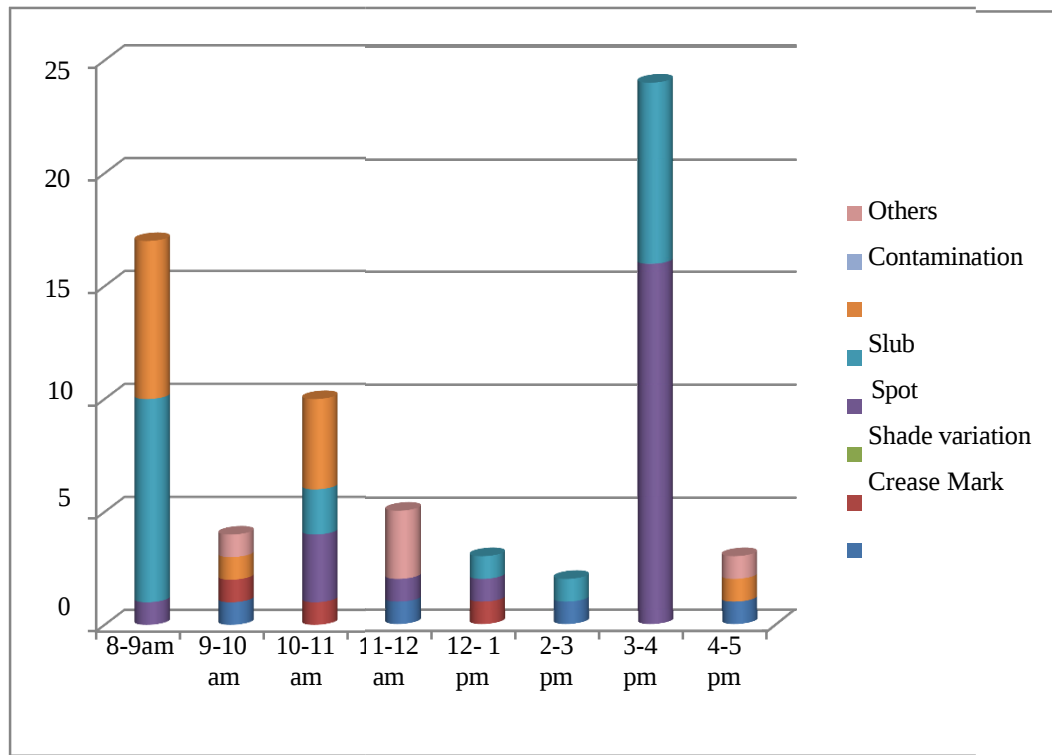


Cutting defects of a day are shown in graph 3.2.1, with the maximum fault value of 24 (Spot) and the lowest fault value of 1 (Shade Variation).

Table 3.2.3: Cutting Section Inspection (13-04-2022)

D a t e	H o u r s	N. Mis tak e	Creas e Mark	Shade Variati on	Sp ot	Slu b	Wr ong Cut	Contaminati on	Othe rs	Toal Inspecti on	Total Defec ts	QC Pas s	Tota l defe ct %
15 - 04 - 22	8-9 am				1	9	7			400	17	383	4.25 %
	9-10 am	1	1				1		1	300	4	296	1.33 %
	10-11 am		1		3	2	4			340	9	331	2.64 %
	11-12 am	1			1				3	300	5	295	1.67 %
	12-1 pm		1		1	1				300	3	297	1%
	2-3 pm	1				1				250	2	248	0.8%
	3-4 pm				16	8				350	24	326	6.85 %
	4-5 pm	1					1		1	250	3	247	1.2%
To tal	8 hour s	4	3		22	21	13		5	2490	67	242 3	2.69 %

Figure: 3.2.3 Cutting faults of day 3 (13-04-22)



Cutting defects of a day are shown in graph 3.2.3, with the maximum fault value of 22 (Spot).

3.1 : Section Sewing

Sewing is an important cycle in the textile and apparel industries. It plays an important role in Maintaining the fabric's quality. As a result, when making any garment, all abnormalities must be avoided. Various faults or exclusions that may occur during sewing are discussed in this paper. As a result, I obtained data by studying it to determine the number of errors that occur each day. The following information is provided:

P.O. NO. : 0500000000
ITEM : Ladies Top

HOURLY INSPECTION / ALTERATION REPORT FOR: Line

LINE : 02
Q. INSPECTOR: N. H. H. H.

DEFECTS	SHIRT	8-9	9-10	10-11	11-12	12-01	02-03	03-04	04-05	05-06	06-07	TOTAL
BROKEN STITCH AT	COLLAR, BEND CUFF, BUTTON PLATE, BOX PLATE, F.YOKE, F.TEKEN, FKT FLAP, PKT DESIGN, BK PLATE, BK LOOP, BK YOKE, SHOULDER, COLLAR TOP, COLLAR JOIN, ARM HOLE, CUFF JOIN, SLV PLACKET, SLV ROLLING, SIDE SEAM, SIDE SLIT, BOTTOM HEM, LBL ATTACH											
SKIP STITCH AT	COLLAR, BEND CUFF, BUTTON PLATE, BOX PLATE, F.YOKE, F.TEKEN, FKT FLAP, PKT DESIGN, BK PLATE, BK LOOP, BK YOKE, SHOULDER, COLLAR TOP, COLLAR JOIN, ARM HOLE, CUFF JOIN, SLV PLACKET, SLV ROLLING, SIDE SEAM, SIDE SLIT, BOTTOM HEM, LBL ATTACH											
OPEN STITCH AT	COLLAR, BEND CUFF, BUTTON PLATE, BOX PLATE, F.YOKE, F.TEKEN, FKT FLAP, PKT DESIGN, BK PLATE, BK LOOP, BK YOKE, SHOULDER, COLLAR TOP, COLLAR JOIN, ARM HOLE, CUFF JOIN, SLV PLACKET, SLV ROLLING, SIDE SEAM, SIDE SLIT, BOTTOM HEM, LBL ATTACH											
RUN OF STITCH AT	COLLAR, BEND CUFF, BUTTON PLATE, BOX PLATE, F.YOKE, F.TEKEN, FKT FLAP, PKT DESIGN, BK PLATE, BK LOOP, BK YOKE, SHOULDER, COLLAR TOP, COLLAR JOIN, ARM HOLE, CUFF JOIN, SLV PLACKET, SLV ROLLING, SIDE SEAM, SIDE SLIT, BOTTOM HEM, LBL ATTACH											
OVER STITCH AT	COLLAR, BEND CUFF, BUTTON PLATE, BOX PLATE, F.YOKE, F.TEKEN, FKT FLAP, PKT DESIGN, BK PLATE, BK LOOP, BK YOKE, SHOULDER, COLLAR TOP, COLLAR JOIN, ARM HOLE, CUFF JOIN, SLV PLACKET, SLV ROLLING, SIDE SEAM, SIDE SLIT, BOTTOM HEM, LBL ATTACH											
UNEVEN STITCH AT	COLLAR, BEND CUFF, BUTTON PLATE, BOX PLATE, F.YOKE, F.TEKEN, FKT FLAP, PKT DESIGN, BK PLATE, BK LOOP, BK YOKE, SHOULDER, COLLAR TOP, COLLAR JOIN, ARM HOLE, CUFF JOIN, SLV PLACKET, SLV ROLLING, SIDE SEAM, SIDE SLIT, BOTTOM HEM, LBL ATTACH											
MISSING STITCH AT	COLLAR, BEND CUFF, BUTTON PLATE, BOX PLATE, F.YOKE, F.TEKEN, FKT FLAP, PKT DESIGN, BK PLATE, BK LOOP, BK YOKE, SHOULDER, COLLAR TOP, COLLAR JOIN, ARM HOLE, CUFF JOIN, SLV PLACKET, SLV ROLLING, SIDE SEAM, SIDE SLIT, BOTTOM HEM, LBL ATTACH											
INCOMPLETE STITCH AT	COLLAR, BEND CUFF, BUTTON PLATE, BOX PLATE, F.YOKE, F.TEKEN, FKT FLAP, PKT DESIGN, BK PLATE, BK LOOP, BK YOKE, SHOULDER, COLLAR TOP, COLLAR JOIN, ARM HOLE, CUFF JOIN, SLV PLACKET, SLV ROLLING, SIDE SEAM, SIDE SLIT, BOTTOM HEM, LBL ATTACH											
TENSION LOOSE/TIGHT	COLLAR, BEND CUFF, BUTTON PLATE, BOX PLATE, F.YOKE, F.TEKEN, FKT FLAP, PKT DESIGN, BK PLATE, BK LOOP, BK YOKE, SHOULDER, COLLAR TOP, COLLAR JOIN, ARM HOLE, CUFF JOIN, SLV PLACKET, SLV ROLLING, SIDE SEAM, SIDE SLIT, BOTTOM HEM, LBL ATTACH											
PUCKERING AT	COLLAR, BEND CUFF, BUTTON PLATE, BOX PLATE, F.YOKE, F.TEKEN, FKT FLAP, PKT DESIGN, BK PLATE, BK LOOP, BK YOKE, SHOULDER, COLLAR TOP, COLLAR JOIN, ARM HOLE, CUFF JOIN, SLV PLACKET, SLV ROLLING, SIDE SEAM, SIDE SLIT, BOTTOM HEM, LBL ATTACH											
OIL MARK AT	COLLAR, BEND, CUFF, FRONT, F. POCKET, FLAP, BK, BK YOKE, SLV, F. YOKE											
DIRTY STAIN AT	COLLAR, BEND, CUFF, FRONT, F. POCKET, FLAP, BK, BK YOKE, SLV, F. YOKE											
FABRIC DEFECTS	COLLAR, BEND, CUFF, FRONT, F. POCKET, FLAP, BK, BK YOKE, SLV, F. YOKE											
SHADING												
PLEAT												
UP DOWN												
S.P.I												
TOTAL RECEIVED		50	70	80	80	80	80	80	80	80	80	780
TOTAL CHECKED		50	70	80	80	80	80	80	80	80	80	780
TOTAL ACCEPTED		47	67	77	77	77	77	77	77	77	77	752
TOTAL DEFECT		3	3	3	3	3	3	3	3	3	3	28
DEFECTIVE PERCENTAGE												3.5

SUPERVISOR: N. H. H. H. Q.I. C.Q.C. LINE IN S.Q.M. F.M.

Fig: Sewing Quality Report

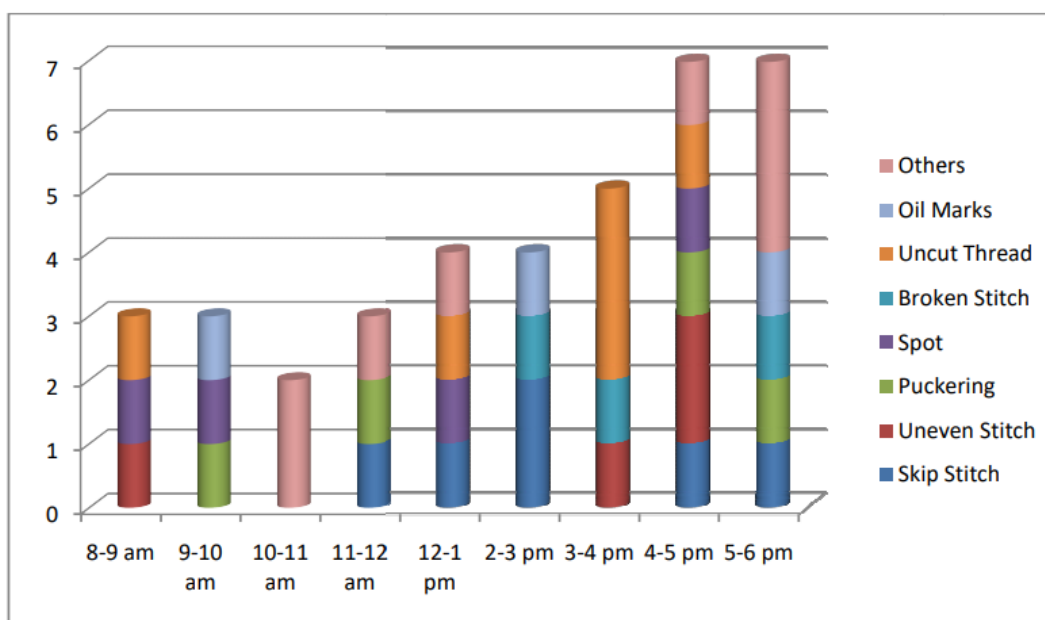
D a t e	H O U R S	Skip Stitch	Uneven Stitch	Puck ering	Spot	Broken Stitch	Uncut Tread	Oil Marks	Othe rs	Total Ins pection	Total Defec ts	Q C Pa ss	Tot al Def ect %
12-04-22	8-9 am		1		1		1			100	3	97	3%
	9-10 am			1	1			1		90	3	87	3.34 %
	10-11 am								2	100	2	98	2%
	11-12 am	1		1					1	80	3	77	3.75 %
	12-1 pm	1			1		1		1	80	4	76	5%
	2-3 pm	2				1		1		80	4	76	5%
	3-4 pm		1			1	3			80	5	75	6.25 %
	4-5 pm	1	2	1	1		1		1	80	7	73	8.75 %
	5-6 pm	1		1		1		1	3	90	7	83	7.77 %
Tot al		6	4	4	4	3	6	3	7	780	38	742	4.87 %

Individual errors per hour are shown in this table. The sewing area contains defects such as skip stitch, hole, needle mark, oil stain, broken stitch, packing, and so on. In one day, 780 garments are inspected, with 742 garments passing QC and 4.87% percent of the garments being defective. On the basis of this table, the following graph is provided:

Figure 3.3.1 Sewing faults of Day-1

In the sewing segment, graph 3.3.1 displays sewing defects from day 1, with the maximum fault value of 7 (Others) and the lowest fault value of 3 (Broken Stitch).

Table 3.3.2 Sewing Quality Report (Day-2)

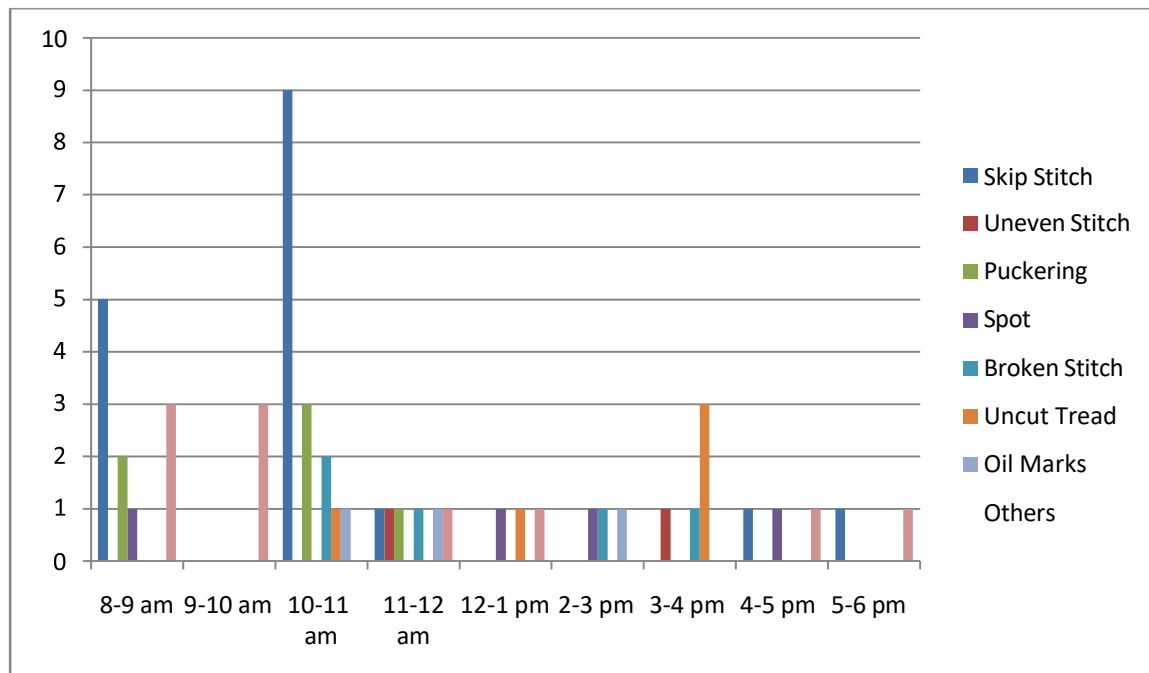


D a t e	H O U R S	Skip Stitch	Uneven Stitch	Puck ering	Spot	Broken Stitch	Uncut Tread	Oil Marks	Othe rs	Total Ins pec ion	Total Defec ts	Q C Pa ss	Tot al Def ect %
13-04-22	8-9 am	5		2	1				3	150	11	139	7.34 %
	9-10 am								3	120	3	117	2.5%
	10-11 am	9		3		2	1	1		150	16	134	10.67%
	11-12 am	1	1	1		1		1	1	150	6	144	4%
	12-1 pm				1		1		1	80	3	77	3.75 %
													%

	2-3 pm				1	1		1		150	3	147	2%
	3-4 pm		1			1	3			100	5	95	5%
	4-5 pm	1			1				1	150	3	147	8.75 %
	5-6 pm	1							1	100	2	98	7.77 %
Tot al		17	2	6	4	5	5	3	10	1150	52	1098	4.52 %

Individual errors per hour are shown in this table. The sewing area contains defects such as skip stitch, hole, needle mark, oil stain, broken stitch, packing, and so on. In one day, 1150 garments are inspected, with 1098 garments passing QC and 4.52% percent of the garments being defective. On the basis of this table, the following graph is provided:

Figure 3.3.2 Sewing faults of Day-2



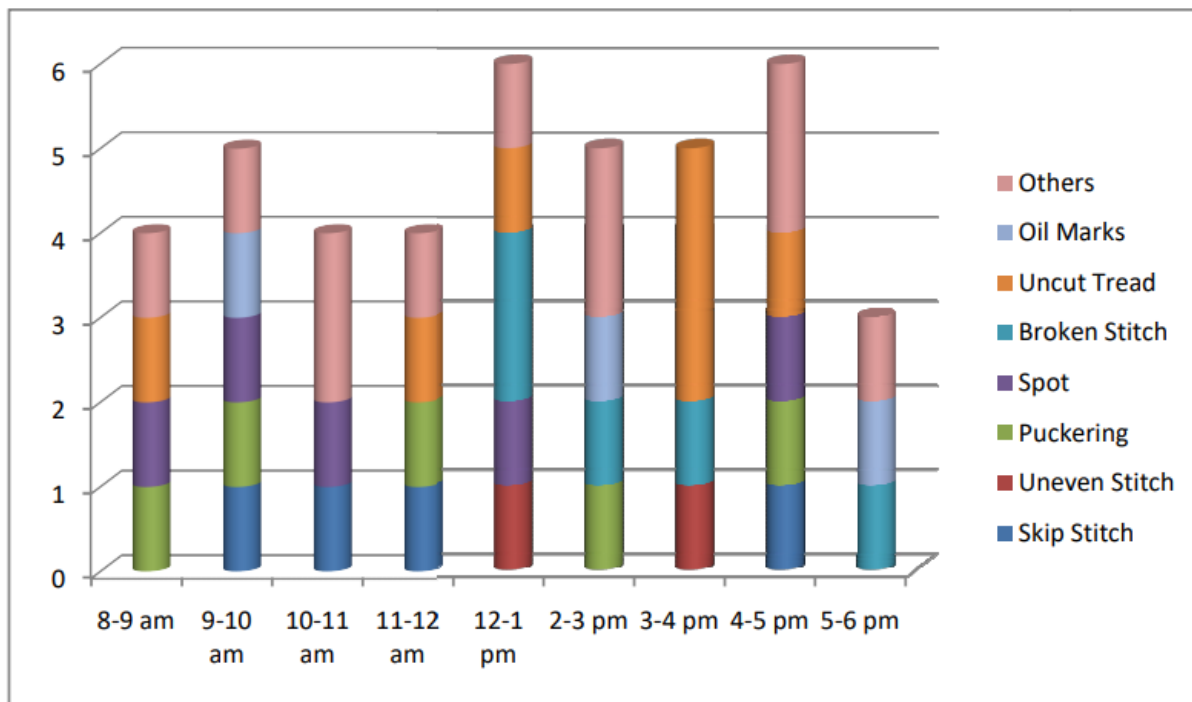
In the sewing segment, graph 3.3.1 displays sewing defects from day 2, with the maximum fault value of 17 (Skip Stitch) and the lowest fault value of 2 (Uneven Stitch).

Table 3.3.3 Sewing Quality Report (Day-3)

D a t e	H O U R S	Skip Stitch	Uneven Stitch	Puck ering	Spot	Broken Stitch	Uncut Tread	Oil Marks	Othe rs	Total Ins pection	Total Defec ts	Q C Pa ss	Tot al Def ect %
16-04-22	8-9 am			1	1		1		1	100	4	96	4%
	9-10 am	1		1	1			1	1	100	5	95	5%
	10-11 am	1			1				2	100	4	96	4%
	11-12 am	1		1			1		1	90	4	86	4.45 %
	12-1 pm		1		1	2	1		1	80	6	74	7.5%
	2-3 pm			1		1		1	2	80	5	75	6.25 %
	3-4 pm		1			1	3			80	5	75	6.25 %
	4-5 pm	1		1	1		1		2	80	6	74	7.5%
	5-6 pm					1		1	1	90	3	87	3.34 %
Tot al		4	2	5	5	5	7	3	11	800	42	758	5.25 %

Individual errors per hour are shown in this table. The sewing area contains defects such as skip stitch, hole, needle mark, oil stain, broken stitch, packing, and so on. In one day, 800 garments are inspected, with 758 garments passing QC and 5.25% percent of the garments being defective. On the basis of this table, the following graph is provided:

GRAPH 3.3: Quality report day 3



In the sewing segment, graph 3.3.3 displays sewing defects from day 3, with the maximum fault value of 11 (Others) and the lowest fault value of 2 (Uneven Stitch).

In textile finishing, it recovers by reducing the percentage of defects in the manufacturing process through low fabric-related process control parameters, and it is well known that process control parameter analysis and reliable measurements to reduce fabric defects are some possible steps to achieve the desired fabric quality. To reduce the number of faults in the woven finished fabric.

Eurofins CPA inspection draft

The information in this draft document are not final and remains subject to change after the final review. The final decision will be made by the customer.

Office	City	Inspection date	Inspector	Report of
TEAM-WORLD	London	Supplier	Level	#1
Customer Order	40054164-40054160	Brand	Inspection type	#1
Ordered quantity	4800+260+1110	Reference / style	Inspector	Cartons presented
Sample size	Packed quantity	4008+4007 4800+1115+103	Presented quantity	4915

RESULT	1. Workmanship	2. Conformity	3. Measurement	4. Test	5. Packing	Sampling	Add. draft used
PASS	X	X					YES NO
FAIL					X	200	X

RESERVATION	AQI	Critical defects		MAJOR defects		Minor defects	
		accepted	refused	accepted	refused	accepted	refused
		0	0	10	11	14	15
	No of defects	0	0	10	11	14	15

DEFECT DESCRIPTION	Defect size (cm)	Color	Product size	Dn	C	M	m	DEFECT DESCRIPTION	Defect size (cm)	Color	Product size	Dn	C	M	m
Dirty stain	4cm	Orange	46	D-1	O1			Unkennig	2cm	Orange	46	D-10	O1		
Sized Pant	4x3y	"	48	D-2-3	O2			Pan shape front	"	"	40	D-11	O1		
" "	"	"	46	"	"			Pocket	"	"	44	D-12	O1		
Pleat	"	"	46	D-4	O2			Unken bottom	"	"	42	D-13	O1		
Unkennig	3cm	"	46	D-5-6	O2			Hea	"	"	42	D-13	O1		
" "	6cm	"	48	"	"			Unken Pkt	"	"	44	D-14	O1		
Unken Pkt	"	"	44	D-7-9	O3			Jin	"	"	44	D-14	O1		
Bint	"	"	43	"	"			Unken Unken	3cm	"	44	D-14	O1		
" " "	"	"	46	"	"			" "	2cm	"	44	"			
								" "	2cm	"	40	"			
								Unken cleave	"	"	42	D-17-19	O3		
								rdling	"	"	44	"			
								" " n	"	"	46	"			

POINT TO CHECK	RESULT				Qty checked	OBSERVATION
	P	F	E	R		
2.1 Product general checking	✓					
2.2 Conformity with sample	✓					
2.3 Conformity of raw material, fabric, handfeel	✓					
2.4 Conformity of product symmetry	✓					
2.5 Conformity of color	✓					
2.6 Conformity and position of woven brand label	✓					
2.7 Conformity and position of washcare label	✓					
2.8 Brand label (name label)	✓					
2.9 Conformity and position of hanging	✓					
2.10 Promo Label	N/A					
2.11 Conformity and position of pricing and barcode	✓					
2.12 Conformity of barcode number (Scan)	✓					
2.13 RF tag	✓					
2.14 Conformity and position of merchandise price (position measured)	N/A					
2.15 Conformity and position of size label	✓					
2.16 Conformity of button, snaps, velcro, zip	✓					
2.17 Conformity of accessories	✓					

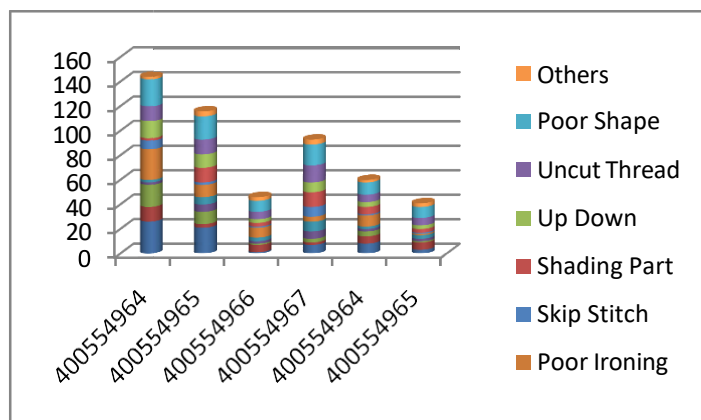
415(D) = 60%, 4(D) = 40%

Table 3.4.1 Finishing quality report

Buyer Name	Order No.	Style	Inspected pieces	Broken Stitch	Oil Spot	Loose thread	Needle Hole	Open Seam	Poor Ironing	Poor Shape	Skip Stitch	Shading Part	Up Down	Uncut Thread	Others	Total Defected Pieces
SO S	400554964	95 Q E L E S A	400	26	12	18	2	2	25	7	2	14	12	22	2	144
SO S	400554965		345	21	3	10	6	6	10	2	12	11	12	19	4	116
SO S	400554966		400	1	6	1	2	3	8	1	3	3	6	9	3	46
SO S	400554967		400	7	2	3	6	8	4	8	12	8	14	17	4	93
SO S	400554964		400	8	6	4	2	2	9	1	6	4	6	10	2	60
SO S	400554965		400	3	6	1	2	3	1	1	3	3	6	9	3	41
Total			2345	66	35	37	20	24	57	20	38	43	56	86	18	500

By removing the errors of the day, this table shows the individual errors of the day. Oil Spot, Loose Thread, Needle Hole, Needle Mark, Open Sew, Poor Iron, Poor Shed, Leave a Sew, Part Shading, Up-Down, Un-Sum, Un-Cut Thread, and so on. In one day, 2345 fabric are inspected. On the basis of this table, the following graph is provided:

Fig 3.4.1 Finishing defect of day 1



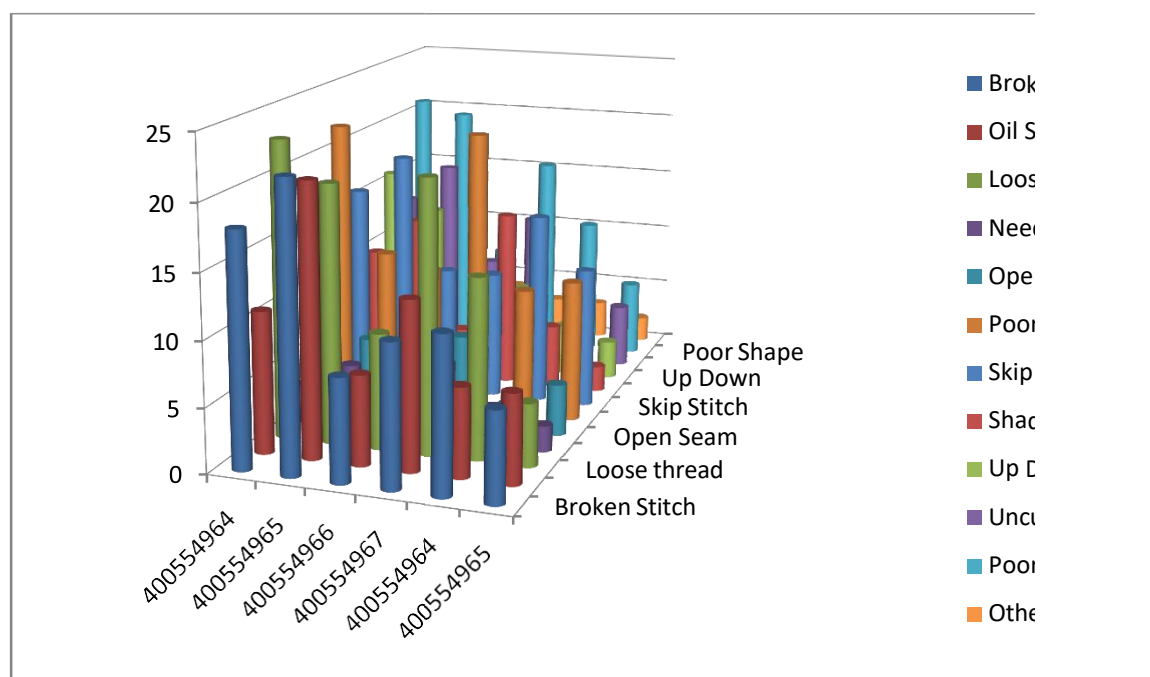
In the finishing section, graph 3.4.1 illustrates a day's finishing defects, with the greatest fault value of 86 (Uncut Thread) and the lowest fault value of 18 (Others).

Table 3.4.2 Finishing quality report (16.04.2022)

Buyer Name	Order No.	Style	Inspected pieces	Broken Stitch	Oil Spot	Loose thread	Needle Hole	Open Seam	Poor Ironing	Poor Shape	Skip Stitch	Shading Part	Up Down	Uncut Thread	Others	Total Defected Pieces
SO S	400554964	95 Q E L E S A	450	18	11	23	3	3	22	16	10	16	13	21	3	159
SO S	400554965		345	22	21	20	5	6	12	19	13	13	16	20	2	170
SO S	400554966		450	8	7	9	3	4	11	10	4	2	8	8	4	78
SO S	400554967		400	11	13	21	6	7	22	10	14	7	12	16	3	142
SO S	400554964		400	12	7	14	3	2	10	15	5	4	6	11	3	92
SO S	400554965		400	7	7	5	2	4	11	11	2	3	5	6	2	64
Total			2445	78	66	92	22	26	88	81	48	45	58	72	17	705

Individual daily errors are listed in this table. Errors in two-day completion In the finishing section, you can find broken stitching, oil spots, loose thread, needle hole, needle mark, open seam, poor shade, avoid a stitch, part shading, up-down, un-even, un-cut thread, and other issues. In one day, 2445 fabric are inspected here.

Fig 3.4.2 Finishing defect of day 2



In the finishing section, graph 3.4.2 illustrates a day's finishing defects, with the greatest fault value of 88 (Poor Ironing) and the lowest fault value of 17 (Others).

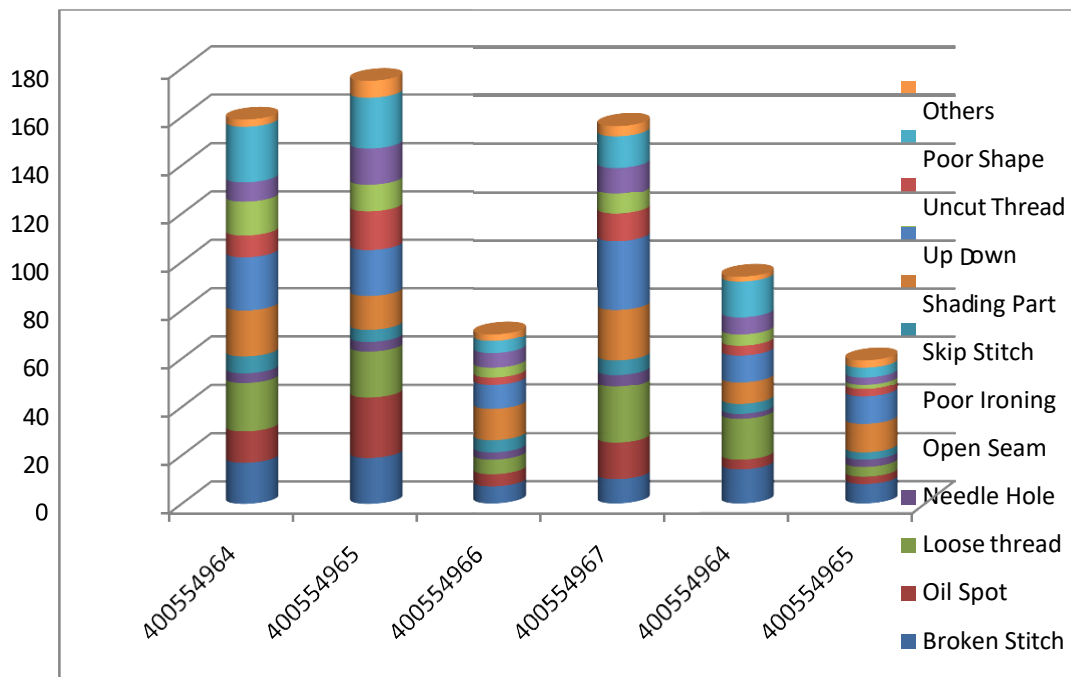
Table 3.4.3 Finishing quality report (17.04.2022)

Buyer Name	Order No.	Style	Inspected pieces	Broken Stitch	Oil Spot	Loose thread	Needle Hole	Open Seam	Poor Ironing	Poor Shape	Skip Stitch	Shading Part	Up Down	Uncut Thread	Others	Total Defected Pieces
SO S	400554964	95 Q E L E S A	607	17	13	20	4	7	19	22	9	14	8	23	3	159
SO S	400554965		626	19	25	19	4	5	14	19	16	11	15	21	7	175
SO S	400554966		348	7	5	6	3	5	13	10	3	4	6	5	3	70
SO S	400554967		327	10	15	23	5	6	21	29	11	8	11	13	4	156
SO S	400554964		242	14	4	17	2	4	9	11	4	5	7	15	2	94
SO S	400554965		328	8	3	4	4	3	12	12	3	2	3	4	3	60

To tal			2476	75	65	89	22	30	88	103	46	44	50	81	22	714
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Individual daily errors are listed in this table. Errors in two-day completion In the finishing section, you can find broken stitching, oil spots, loose thread, needle hole, needle mark, open seam, poor shade, avoid a stitch, part shading, up-down, un-even, un-cut thread, and other issues. In one day, 2476 fabric are inspected here.

Fig 3.4.3 Finishing defect of day 3



In the finishing section, graph 3.4.3 illustrates a day's finishing defects, with the greatest fault value of 103 (Poor Shape) and the lowest fault value of 22 (Needle Hole).

CHAPTER – 4: DISCUSSION OF RESULTS

A number of essential processes are used to create garments. In the gray fabric inspection department, cutting department, sewing department, and finishing department, numerous forms of flaws are common during manufacturing. I have frequently discovered more sensitive flaws as a result of the above study, and they are comparatively greater than each other.

4.1 Fabric Inspection Section

Result:

Every day, different types of faults are discovered in the fabric inspection area. So I spent a day analyzing the flaws and came up with a solution. The outcome of the calculations is

Table 4.1: Data Analysis of Total Result in grey fabric inspection section

Month	Date	Length (yrd)	Missin g Yarn	Set up	Hole<1	Hole>1	Knot/Slub	Thic k and Thin	Total defect	Total point
April	7-4-2022	684	1	14	8		20	13	44	86
	9-4-2022	684		10	3			21	34	82
	10-4-2022	684	2	12	11		2		27	84
Total	3 days	2052	3	36	22		22	34	117	252

Table 4.1 shows the individual fabric inspection defects per day. In this case, 2052 yards of fabric were inspected, with a total defect count of 117 and a total point total of 252 for three days.

On the basis of this table, the following graph is provided:

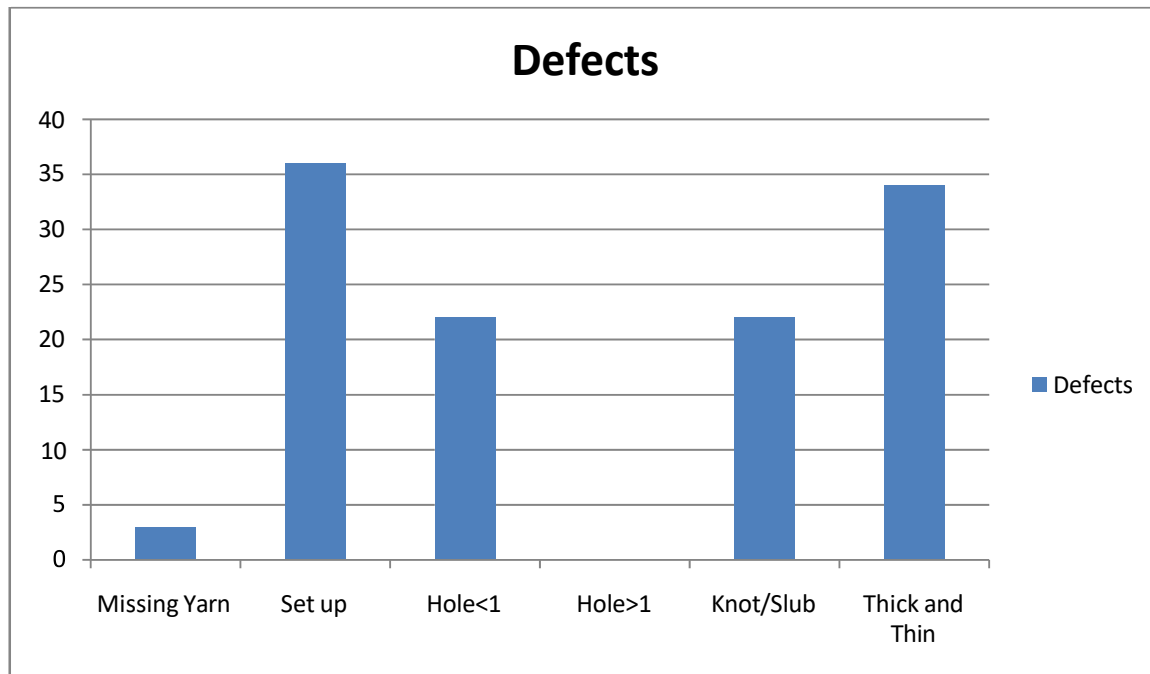
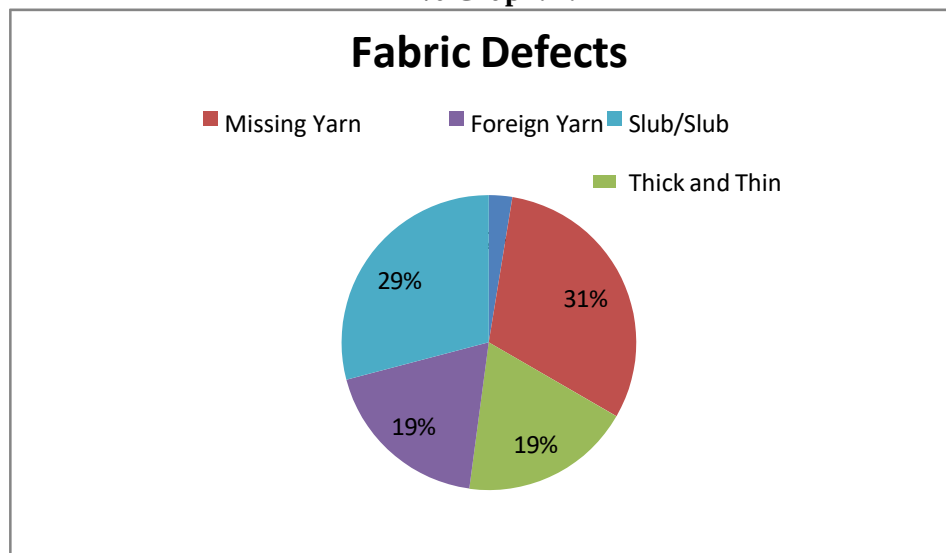


Fig:

In the grey fabric inspection section, graph 4.1 illustrates grey fabric flaws with the maximum fault value of 34 (Thick and Thin) and the lowest fault value of 3 (Missing Yarn).

On the basis of this table, a percentage graph is provided below.

% Graph: 4.1



Set up has the highest fault proportion (31%), Slub and Hole has the middle fault percentage (19%), and the lowest fault percentage is 2%. (Missing Yarn).

We can observe from the graphs 4.1 and 4.1Percentage graphs that,

- There are 117 defects in all. The lowest flaw was detected by Missing Yarn, which was 2 percent.
- There are 117 defects in all. The largest percentage of defects in the inspection system is observed in set up 36, which is 31 percent.
- There are 117 defects in all. Hole 1 is identified 22 times, for a percentage of 19%, and this is a medium stage of fault in the inspection system.
- Slub is discovered 22 times out of 117 defects, for a proportion of 19%. This is likewise in the medium stage, although less frequently identified in the inspection system.
- Thick/Thin is discovered 34 times out of 117 defects, with a frequency of 29% and a rarity in the inspection system.

Discussion:

1. Missing Yarn is found as the lowest amount.
2. Slub and Thick/Thin Yarn also found a major amount in woven fabric inspection.

4.2 Cutting Section Inspection

Result:

Every day, different types of faults are discovered in the cut section. So we spent a week analyzing the inaccuracies and came up with some conclusions. The calculation yielded the following result:

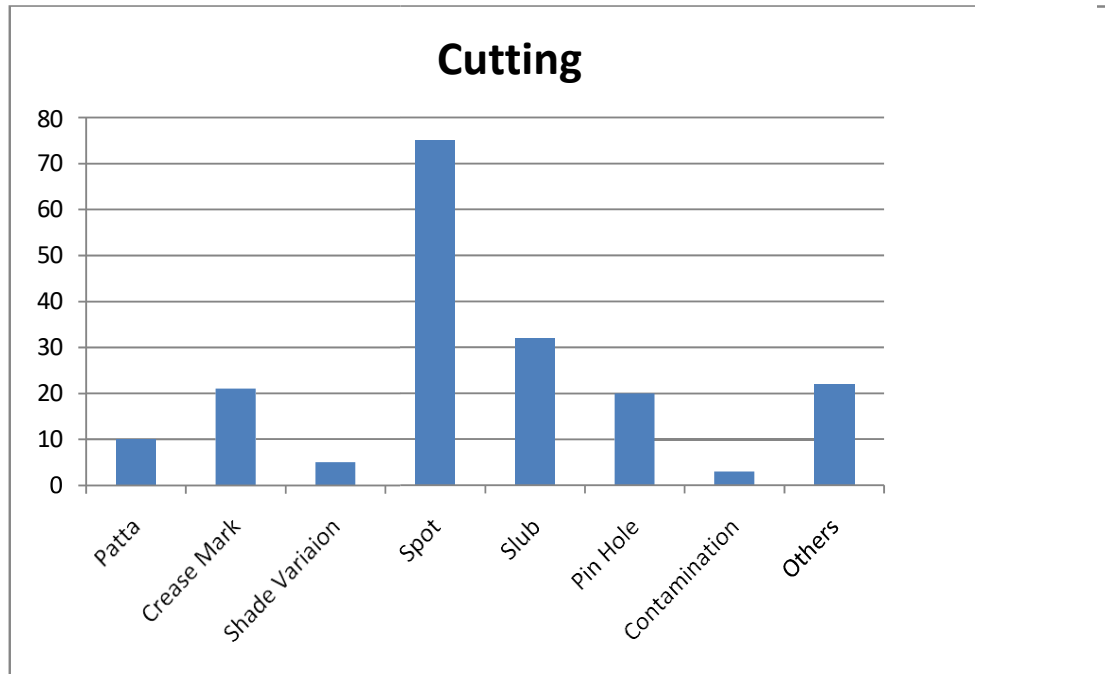
Table 4.2: Data Analysis of Total Result in Cutting Section

Months	Date	Numbering Mistake	Crease Mark	Shade Variation	Spot	Slub	Wrong Cut	Contamination	Others	Total Inspection	Total Defects	QC Pass	Total defect %
April	11-4-22	3	9	4	29	6	4	1	9	2455	65	2390	2.64 %
	12-4-22	3	9	1	24	5	3	2	8	2515	55	2460	2.19 %
	13-4-22	4	3		22	21	13		5	2490	67	2423	2.69 %

Tot al	3 days	10	21	5	75	32	20	3		22	7460	187	7273	2.50 %
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Individual Cutting faults are inspected cut pcs are 7460 pcs every day, total flaws are detected 187 pieces, and total QC passed cut pcs are 7273 pcs for three days, according to Table (4.2).

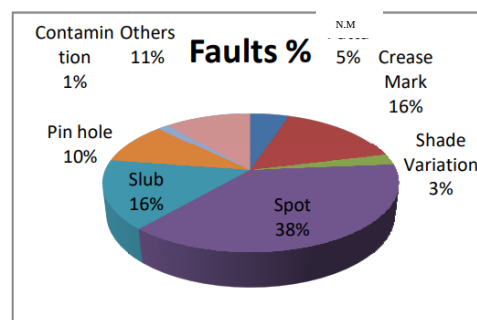
A graph is given on the basis of this table:



Cutting faults are shown in Graph 4.2, with the highest fault value of 75 (Spot) and the lowest fault value of 3 (Contamination) in the Cutting section.

A percentage graph is given below on the basis of this table

% Graph: 4.2



The average error percentage (percentage) in this case is 2.7676 percent. The spot error is more

common than any other error of the day. After that, the slub value is preserved. According to the percentage of spots and pin holes, the fault has an average position. Straps, slabs, and wrinkles are at the bottom of the list.

Discussion:

- ❖ Contamination has a significant part in defining the quality of cotton by omitting crucial characteristics such as length, strength, and fineness. This problem is caused by the presence of dead fibers and other foreign substances such as pigment fibers, buds, synthetic fibers, and so on. Contamination can be reduced by lowering the quality of the yarn, fabric, and fabric, or by increasing the total rejection of the batch or shipment by employing a rich fiber blend in the weaving yarns. As a result, there will be fewer dead fiber fabrics and less pollution. Foreign contaminants in the cotton blend can be avoided by using tight control techniques in the blow room.
- ❖ Men's the range of hues found in garments made of colorful or printed materials is a prevalent issue. A dress with shade variations is regarded as faulty. When separate garment elements have varying skin colors (shades) or when different garment parts of the same garment do not match the shade, the shade of the garment varies. Variations in the hues of the fabric are caused by changes in the shade of the order's fabric. The majority of the time, the shed differed due to improper fabric roll spreading during cutting.
- ❖ The pinhole is also a remnant of the time when the fabric was being woven. A pinhole may appear in the fabric as a result of the latch breaking or bending. Pinholes can be caused by reflected cam boxes, fractured needle butts, needle breakage, insufficient tension, and other factors. It can be removed by switching needles, and the knot should be correctly tied once the yarn has been severed. Pinholes can be reduced with proper arousal and feeding settings.

Slab contraction joints should cross over at column apertures and should cross over at column openings. The slabs cannot be reduced by fine yarn or any slab section of the yarn. During the weaving process, we utilize fine yarn, but the slab is less critical. Slab contraction joints should cross over at column apertures and should cross over at column openings.

4.3 Sewing Section Inspection

Result:

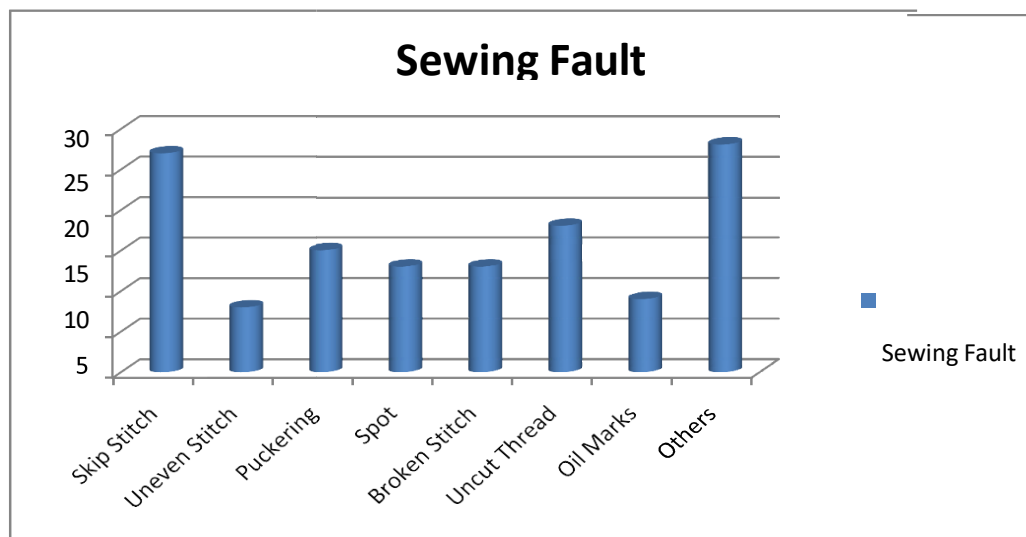
Every day, numerous types of faults are discovered in the sewing section. So we spent a week analyzing the flaws and came up with a conclusion. The computed outcome is as follows:

Table 4.3: Data Analysis of Total Result in Sewing Section

Months	Date	Skip Stitch	Uneven Stitch	Puckering	Spot	Broken Stitch	Uncut Thread	Oil Marks	Others	Total Inspection	Total Defects	QC Pass	Total Defect %
April	12-04-22	6	4	4	4	3	6	3	7	780	38	742	4.87 %
	13-04-22	17	2	6	4	5	5	3	10	1150	52	1098	4.52 %
	16-04-22	4	2	5	5	5	7	3	11	800	42	758	5.25 %
Total		27	8	15	13	13	18	9	28	2730	132	2598	4.84 %

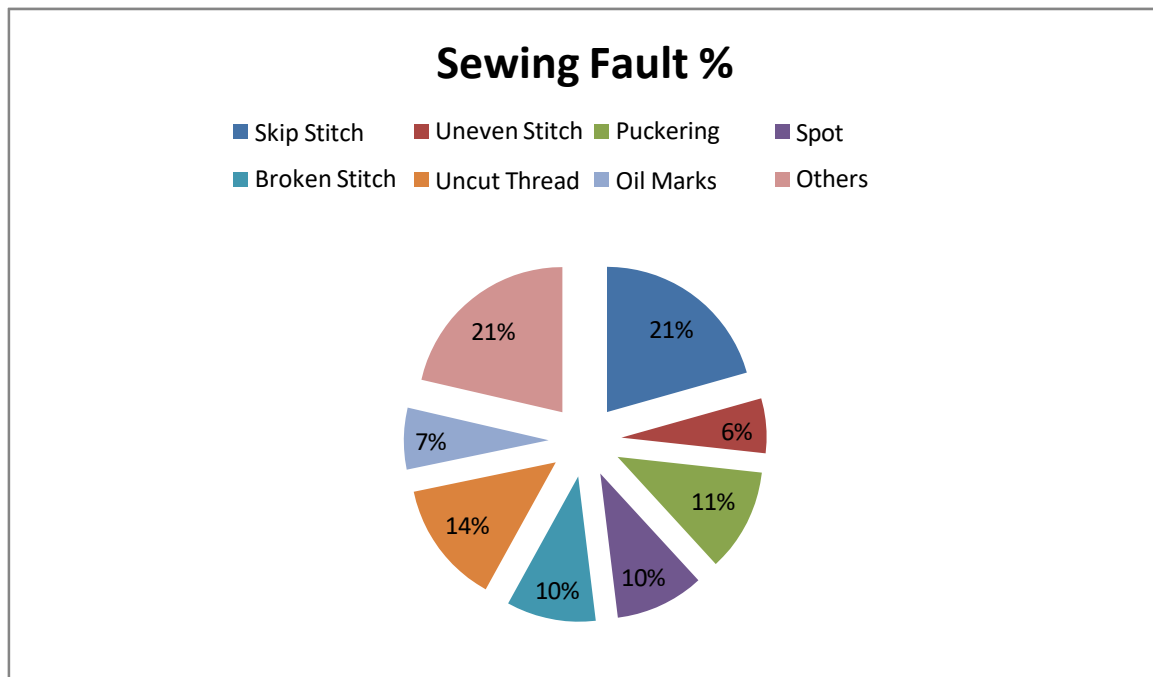
Individual sewing faults per day are inspected cut pcs are 2730 pieces, total flaws are 132 pcs, and overall QC passed cut pcs are 2598 pcs for three days, according to Table (4.3).

On the basis of this table, the following graph is provided:



In the Sewing section, graph 4.3 illustrates Sewing defects with the greatest fault value of 28 (Others) and the lowest fault value of 8 (Uneven Stitch).

On the basis of this table, the following percentage graph 4.3 is provided:



The average error percentage (percentage) in this case is 4.84 percent. The skip stitch, more than any other fault of those days, is among them. The trafficking values then go awry. According to the percentage value, uncut thread and puckering problems have a moderate place as a fault. They are the ones with the smallest seam opening.

We can observe from the graph (4.3) and percentage graph (4.3) that,

- There are 29 pcs and 27 pcs of the 132 pcs Garment Error, Skip Stitch and other faults percentage numbers are 21% for each. As a result, these errors are common in the sewing section.
- There are 18 pcs of the 132 pcs Garment Error, uncut thread percentage numbers are 14%. As a result, these errors are common in the sewing section.
- Puckering, Spot and broken stitch error percentages are 11%, 10% and 10% respectively.
- The lower number of faults are uneven stitch and oil marks. Their percentages are 6% and 7% respectively.

Discussion:

- ❖ Uncut/loose threads are one of the faults that the sewing checker and the finishing department both make by accident. As a result, the style will collapse during the next inspection procedure, failing to fulfill the buyer's AQL standards. To reduce this malfunctioning thread cutter, be conscious of uncut threads.
- ❖ The distortion or wrinkling of the fabric along the sewing line is known as packing. The most common issue in the cosmetics industry is SIM ripening. Fabric finishers, sewing machine manufacturers, and sewing thread manufacturers are all affected by this issue. The introduction of new and outmoded fabrics and treatments has compounded the problem. Because there must be some buckling at the seam line, avoiding seam packing is particularly effective. There is no universally accepted degree of acceptability. According to the fabric being used and the strength of the needed stitching, choose the appropriate sewing thread thickness, needle thickness, and fine feed dog. Sewing machine inspections and maintenance, as well as regular needle replacements, can help reduce seam packing.
- ❖ Another major issue in the sewing department is wing spots. When oil and wax spots appear on the fabric surface, these flaws appear. Stains are more common on older equipment. A particular sort of spray called 'spot lifter' and 'millet powder' are used to remove the stains from the fabric.

4.4 Finishing Section

Result:

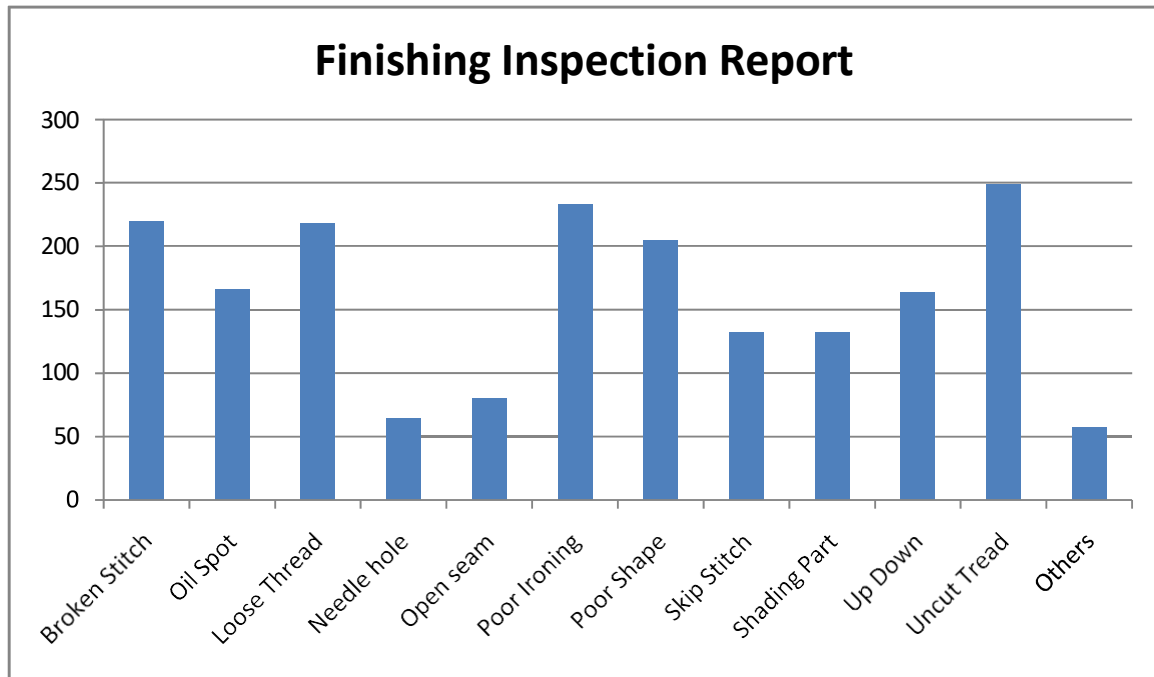
Every day, different types of faults are discovered in the finishing area. So we spent a week analyzing the flaws and came up with a conclusion. The computed outcome is as follows

Table 4.4: Data Analysis of Total Result in Finishing Section

M o n t h	Date	Insp ecte d Pcs	Bro ken Stit ch	Oi l Sp ot	Lo o se thr ead	Nee dle Hol e	O pe n Se a m	Po or Iro nin g	Po or Sh ap e	Sk i p Sti tc h	Sha din g Part	Up D own	Un cut Thr ead	Ot her s	Tota l Defe ct ed Piec es
A p	13-4- 22	234 5	66	35	37	20	24	57	20	38	43	56	86	18	500
ri l	16-4- 22	244 5	78	6 6	92	22	26	88	81	48	45	58	72	17	705
	17-4- 22	24 76	75	6 5	89	22	30	88	10 3	46	44	50	81	22	714
	Total	726 6	219	16 6	218	64	80	233	204	13 2	132	164	249	57	1919

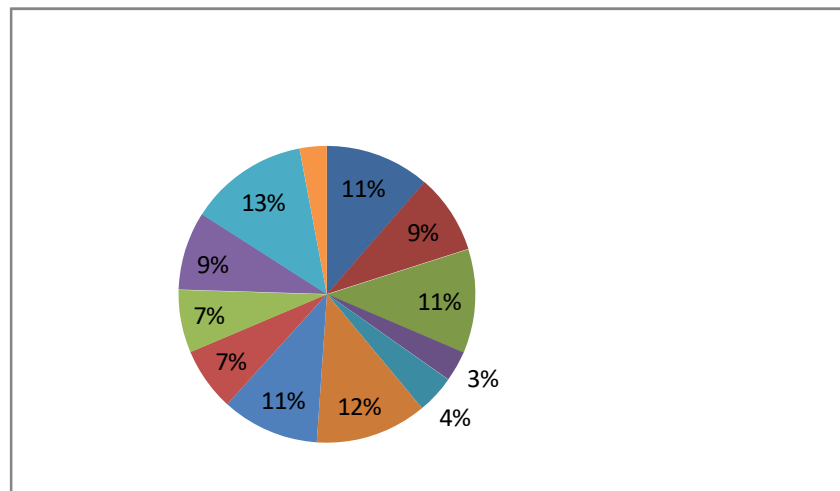
Individual finishing inspection errors per day are listed in Table 4.4. For three days 7266 pieces of cloth were inspected, with a total of 1919 defects discovered.

On the basis of this table, the following graph is provided:



In the finishing area, graph 4.4 displays finishing flaws with the greatest fault value of 233 (Poor ironing) and the lowest fault value of 57 (Others).

On the basis of this table, the following percentage **graph 4.4** is provided:



The largest percentage of faults is 12 percent (poor ironing) and the lowest is 3 percent (Needle Hole).

From the graph 4.4 and percentage graph 4.4 we can see that

- ❖ Faults were found in 7266 of the clothes. Uncut thread and poor ironing is the maximum and the value is 249 and 233 respectively. The percentage of the faults are 13% and 12 %.
- ❖ In 7266 pcs, Needle hole and others is the minimum and the value is 64 and 57 respectively. The percentage of the faults are 4% and 3%.

Discussion:

- In the measurement portion, the measurement check is crucial. After ironing, this step is completed. Dimensional instability or compressive characteristics are the main causes of these problems. Before cutting the knitted fabric, quality control must guarantee that it is in a pleasant or near-comfortable condition - that is, the fabric/garment will shrink slightly when it is in the customer's hands. Another major issue in the sewing industry is P spots. When oil and wax spots appear on the cloth surface, these flaws appear. For an ancient machine, stains are unavoidable. A particular sort of spray called 'spot lifter' and 'millet powder' are used to remove the stains from the fabric.
- When ironing, the upper part of the shoulder happens if the side of the shoulder is not supported properly. This isn't a major issue. Dressing can be used to correct this flaw.

CHAPTER – 5: CONCLUSION

In the manufacture of high-quality weaves, quality control is crucial. Nowadays, the client expects a high level of quality in all major components of the finished product. For increased quality and productivity, defect detection is critical throughout the manufacture of woven fabric. The conclusion of this paper is as follows:

- In the grey fabric inspection segment 2052 yards of fabric are examined, with 187 flaws discovered.
- From 7460 pcs inspected over three days, a defect percentage of 2.50 percent was discovered in the cutting region.
- Total flaws in the sewing area were 132 pieces, total QC passes were 2598 pieces, and the defect rate was 4.84 percent for three days.
- In the finishing portion, 7266 pieces of fabric are evaluated, and 1919 flaws are discovered.

I discovered the maximum error 1919 of all errors in the finishing section after reviewing the inspections of different sections. In 187 faulty gray fabric inspection quantities, the minimum faults were discovered.

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