

Faculty of Engineering

Department of Textile Engineering

Study on

Different Types of Sewing faults

REPORT ON

Course Title: Project (Thesis) Course Code: TE- 4212

Submitted By

Jawad al adeeb ID: 182-23-5383

G.M Rejuanul Islam ID: 182-23-5416

Supervised By

Mohammad Abdul Baset
Assistant Professor
Department of Textile Engineering Faculty of Engineering Daffodil
International University

This Project Presented in partial fulfilment of the Requirement for The Degree of Bachelor of Science in Textile Engineering

Advance in Apparel Manufacturing Technology

LETTER OF APPROVAL

This project report prepared by Jawad al adeeb bearing **Id:** 182-23-5383 and G.M Rejuanul Islam bearing **Id:** 182-23-5416, is approved in Partial Fulfilment of the

Requirement for the Degree of BACHELOR OF SCIENCE IN TEXTILE ENGINEERING.

The said students have completed their project work under my supervision. During the research period I found them sincere, hardworking and enthusiastic.

Mohammad Abdul Beset Assistant Professor Department of Textile Engineering Faculty of Engineering Daffodil International University

ACKNOWLEDGEMENT

At First we express our heartiest thanks and gratefulness to almighty Allah for His blessing makes us possible to complete this project successfully. We completed the total thesis work at FARIHA KNIT TEXTILE Ltd.

We fell grateful to our Supervisor Mohammad Abdul Baset, Daffodil International University, Dhaka, Bangladesh. Deep Knowledge & keen interest of our supervisor in the field development of influenced us to carry out this project. His endless patience, scholarly guidance, constant and energetic supervision, valuable advice, and correcting them at all stage have made it possible to complete this project. We would like to express our heartiest gratitude to other faculty member of TE department of Daffodil International University. Especially thanks goes to one of our senior brother G.M Rejuanul Islam whom we collect the sample and data. We would like to thank our entire course mate in Daffodil International University, Who took part in this discuss while completing the course work.

Finally, we must acknowledge with due respect to our parents who was the main source of our energy.

DECLARATION

We hereby declare that the work which is being presented in this thesis entitled, "Study on

Sewing Faults". It has been done by us under the supervision of Mohammad Abdul Baset. It

has not been presented for a degree of any other university and all the resource of materials

uses for this thesis has been duly acknowledged.

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

and concern.

Submitted By:

Jawad al adeeb

Id: 182-23-5383

Department of Textile Engineering

Daffodil International University

G.M. Rejvanul Islam

G.M Rejuanul Islam

Id: 182-23-5416

Department of Textile Engineering

Daffodil International University

ABSTRACT

We have visited several Garments Industry and comes to know that sewing is one of the very important stage to make a Garment. Sewing faults have a very adhere effect on Garments quality. Some faults shows major defects and some shows minor. So controlling the faults sewing is very important. We have to eliminate those faults as much as possible. But it is almost impossible to eliminate all faults such as minor fault. We found most of the minor faults during our Internship period compare to Major faults such as(Missing yarn, thick thin stitch, Slub, open seam, size mistake, fabric hole, fabric shade, down stitch, without tack) Cutting Major faults such as (Crease mark, oil sport, missing yarn, hole, thick yarn, uneven dyeing, running shade). Minor faults can be eliminated by different process after sewing. Couple of minor faults gets penalty as Major faults by 4-point Inspection system.

After 1 day major faults is found 50% and minor faults found 25% and rejection is 3%.

Table of Contents

	LETTER OF APPROVAL	ii
	ACKNOWLEDGEMENT	iii
	DECLARATION	iv
	ABSTRACT	v
T	able of Contents	vi
	CHAPTER-1	1
	INTRODUCTION	1
	1.1Introduction	2
	1.2 Objective	2
	1.3 Methodology	2
	CHAPTER- 2	3
	LITERATURE REVIEW	3
	2.1 Introduction of sewing	4
	2.1.2 Flow chart of sewing	5
	2.1.3 Types of sewing machine	6
	2.1.4 Brand names of sewing m/c	6
	2.1.5 Types of sewing needle	7
	2.1.6 Different types of sewing defects or faults	8
	2.1.7 Defects of non–sewing	9
	2.1.8 Defects of sewing	9
	2.2.1 Skip stitch	. 10
	2.2.2 Slipped Stitch:	. 10
	2.2.3 Staggered Stitch:	. 11
	2.2.4 Unbalanced stitch	. 12
	2.2.5 Variable stitch density	. 13

2.2.6 frequent thread breaking	14
2.3 Damage of fabric on seam line	14
2.3.2 mechanical damages	15
2.3.3 needle heating damages	15
Chanter 02	16
Chapter 03	
Experimental Details	16
3.1 Data collection	17
3.2 End-Line Sewing Inspection Report	17
3.3 QC Pass Production Report of Sewing	28
CHAPTER	29
Discussion of result	29
4.1 analysis report from data of sewing inspection	30
4.2 Sewing Inspection Report Analysis:	30
CHAPTER- 5	33
CONCLUSION	33
5.1 Conclusion	34
Reference	35

List of figure

Fig 2.1.2.1 flow chart of sew- ing	5
Fig 2.1.5.1: Types of sewing	8
Fig 3.2.1: end-Line Sewing Inspection Report -1	18
fig: 3.2.2 end line sewing inspection report -2	19
Fig 3.2.3 end line sewing inspection report -3	20

Fig 3.2.4 end line sewing inspection	
report -4	21
Fig 3.2.5 end line sewing inspection	
	22
Fig 4.1.1 after 2 days inspection of	30
sewing	
Fig 4.2.1 defect measurement after 2	31
days of sewing	

List of table

Table 3.2.1: end line sewing inspection report -1	17
Table 3.2.2: end line sewing inspection report- 2	24
Table 3.2.3: end line sewing	
inspection report -3	25
Table 3.2.4 end line sewing	26
inspection report -4	
Table 3.2.5: end line sewing	27
inspection report -5	
Table 3.3.1: Qc pass production	28
report	

CHAPTER-1 INTRODUCTION

1.1 Introduction

Textile is a product that can be process. In a word, a material that can manufacture to product like apparel or garments product.

On other hand a process of making fibres into yarn. maximum number of textile arts being with twisting or spinning and plying fibres to make yarn. So there is faults in every processing of yarn. Most of time yarn braided, looped, knotted, or woven to make clothing. Those faults create problem in production.

1.2 Objective

- To know about sewing and sewing faults
- To know about the working procedure of sewing.
- To analysis the sewing quality control system.
- To collect the data of sewing faults inspection.
- To take idea on sewing faults and their remedies

1.3 Methodology

- Textile industry
- Internet
- Text Book and note book
- Class lecture sheet
- Garments factory

CHAPTER- 2 LITERATURE REVIEW

2.1 Introduction of sewing

Sewing is joining of different parts of garments with the use of needle and thread, generally sewing is gives a garments final look.

Sewing is every important section in factory. For huge production sewing create a massive impact. So that it is important to check quality of sewing. In textile production there is must have faults or defects. It depends on sewing quality.

Every times there is found faults in sewing inspection, its sometimes 4%,15% according the buyer requirement. sewing inspection vary to different textile industry.

Various types of sewing use in different purpose. Like as attaching bottom use bottom attaching sewing machine, making hole use bottom hole machine extra.

2.1.2 Flow chart of sewing

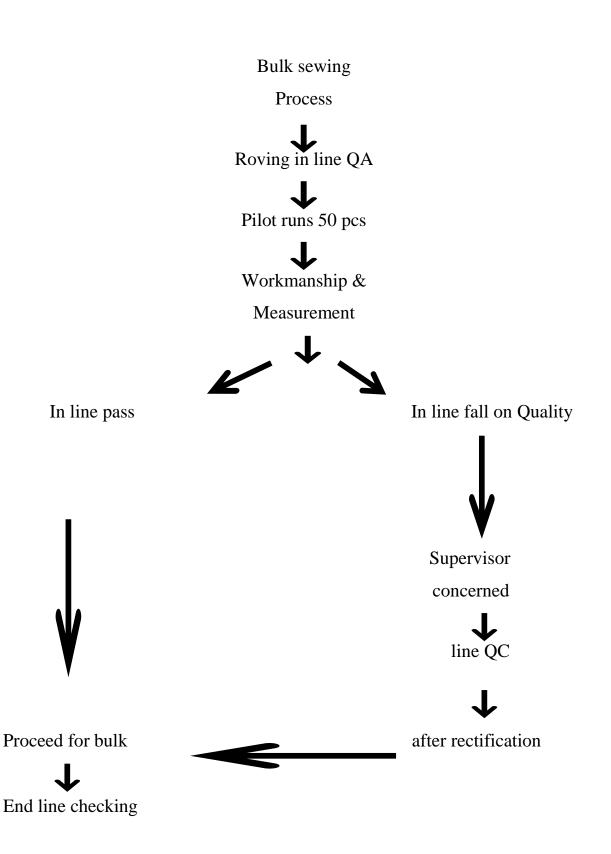


Fig 2.1.2.1 flow chart of sewing

2.1.3 Types of sewing machine

- Single Needle Machine (chain/Lock stitch)
- Double Needle Machine (chain/Lock stitch)
- Over lock Machine
- Kansai Special Machine
- Feed of the Arm
- Flat Lock
- Button hole Machine
- Button attach machine
- Bar tack m/c with automatic thread trimmer
- Ironing machine
- Piping machine
- Logo attach machine
- Fusing machine

2.1.4 Brand names of sewing m/c

- Juki
- Janome
- Elna
- Brother
- Merrow

- Sewmor
- Pfaff
- Bernette
- Kansai

2.1.5 Types of sewing needle

- Ballpoint
- Quilting
- Sharp
- Leather
- Denim
- Topstitching
- Stretch
- Serger
- Embroidery
- Metallic
- Wing
- Twin
- Triple
- Spring
- metafil

2.1.6 Different types of sewing defects or faults

There are basically two kinds of defects are found as they -----

- Non sewing thread
- Sewing defects.



Fig 2.1.6.1: Types of sewing faults

2.1.7 Defects of non-sewing

- Improper cutting and pattern
- bad handling of goods
- oil marks

2.1.8 Defects of sewing

Sewing defects can be classified as three groups----

- Problem of stitch formation
- Seam pucker
- Fabric damage along the seam line or stitch

2.2 Defects of stitch formation:

☐ Broken stitch.
☐ Skip Stitch.
☐ Slipped Stitch.
☐ Staggered Stitch.
☐ Unbalanced Stitch.
☐ Variable Stitch Density.
☐ Puckering.
☐ Uneven.
☐ Slanted.
☐ Uncut thread.
☐ Dirt marks.
☐ Open seam.

2.2.1 Skip stitch

A skipped stitch is one in which the top and bottom threads of the stitch are ne ither interlaced or overlapped.

In the case of chain stitch as opposed to lock stitch, this is more detrimental.

<u>Causes</u>

- Failure of hook and needle to properly enter loop.
- Uneven thread tension on either the upper or lower loop.
- As a result of needle deflection.
- If the loop size of the needle thread is too small.
- When fabric flagging occurs while being sewn.
- If the sewing thread cannot create a loop

Remedies

- Check the positioning and timing of the needle relative to the hook or lop per.
- Thread tension has to be changed.
- Needle has to be changed.
- Adjust the thread and needle sizes as necessary.
- The pressure on the pressure foot needs to be precisely calibrated.
- The thread needs to be modified.

2.2.2 Slipped Stitch:

Top and bottom are neither intertwined or interloper that is slipped stitch.

Causes

- Failure of the hook or needle to penetrate the thread loops at the proper time.
- Failure of the thread loop due to the wrong needle size.
- Fabric flagging as a result of a sizable throat plate hole.
- Improper needle tension during stitching

Remedies

- Check the timings and clearances of the machine.
- Verify that the needle is properly placed and positioned.
- The needle should be a different size.
- It is necessary to modify the throat plate's hole and needle size.
- Reset of the tensions.

2.2.3 Staggered Stitch:

Staggered stitches are created when the needle's stitches are not parallel to the s ewing line or become curved.

Causes

- Vibration or deflection of the needle.
- A dull or incorrect needle point.
- Dog food sway
- Fabric control issues and presser foot bouncing.

Remedies

- Change to a reinforced or tapered needle, or increase the needle size.
- Swap out the needle.
- Reinforce the feed dog.
- The presser foot was reset.
- Modify the feeding system.
- Changes to be made to the thread and needle sizes

2.2.4 Unbalanced stitch

Improper thread interlacing, particularly in lock stitch machines.

Causes

- Inappropriate sewing thread tension.
- used the incorrect thread route.

- Incorrect needle thread path adjustment.
- If the threads aren't greased.
- Finger placement and snagging of needle with bobbin casing.

Remedies

- The threads used for stitching are given the right tension.
- Use of the correct thread route.
- It is necessary to utilize threads of higher quality.
- Smooth bobbin casing is required.

2.2.5 Variable stitch density

The number of stitches per unit length for a changing stitch density must be the same. Not at all. It is therefore referred to as variable stitch density.

Causes

- increased thread tension and thread twisting in the thread guide.
- Twisting the needle thread at the base of the package of thread.
- Thread fraying in the needle.
- Thread snarling in front of the tension disk.

Remedies:

- Proper threading of the needle during sewing;
- Use of high-strength thread or lower thread tension.
- Inspect the spring to be replaced.

- Increased thread winding in the thread guide while maintaining lower stress on the tensioning disk.
- Smooth edges are required, and the needle should be changed as necessary.
- The usage of premium needles is required.

2.2.6 frequent thread breaking

Frequent thread breaking slows down production since it requires more time and results in repeated thread breaks during stitching. When the problem must be solved by opening up sewing.

Causes:

- Inappropriate bobbin case fitment.
- Incorrect thread winding onto the bobbin.
- Increasing the bobbin's rotation or adding extra tension to the bobbin thread.

Remedies:

- Proper thread winding onto the bobbin
- Use of a pre-wound bobbin
- Smoothness of the edge

2.3 Damage of fabric on seam line

It happened as a result of damaged or poorly chosen needles. However, it might occur while using new or delicate needles. There are two different types of fabric damage, as listed below:

- Mechanical damage
- Needle heating damage

2.3.2 mechanical damages

The procedures that need to be done to prevent this type of fault from occurring in textiles are as follows:

- Use needles that are the ideal size, shape, and point quality;
- Lower sewing machine speed.
- By lubricant use.
- By practicing stitching before putting fabrics together

2.3.3 needle heating damages

Fabric was harmed as a result of friction between the needle and the fabrics. That temperature has the potential to harm fabric. When it comes to natural fibre materials, there is a lower chance of damage.

The following actions should be taken to prevent this type of fault from occurring in fabrics:

- By altering needle size and shape such that the needle generates less heat.
- By stitching shorter lengths more quickly.
- By lubricating the needle with a substance.
- Using needles with Teflon coating

Chapter 03 Experimental Details

3.1 Data collection

We gathered data for "fariha knit textile Ltd." for 24 - hour. Lastly, the percentage of flaws was computed using the various sewing department defects. For the benefit of the RMG industry, a plant should implement various contemporary quality methods and quality management techniques. The most frequent flaws found in the sewing section include broken stitches, skip stitches, drop stitches, gathering stitches, uneven seam allowances, overstitches, open seams, puckering, uneven shapes, raw edges, dirty stains, oil stains, incorrect measurements, shading, bad tension, incorrect SPI, twisted banding, incorrect size labels, missing trims, pleats, crooked labels, unmatched S lines, reverse attachments, needle holes, cross points up and down, without bar tack.

3.2 End-Line Sewing Inspection Report

REPORT -1

End line Sewing Inspection Report of fariha Knit textile Ltd.

Buyer Name: Impulse Date: 03/09/2022

Style No: Remesa 57619

Order QTY:1000 pcs

Styling: long pant

Fabrication: 95% cotton and 5% lycra

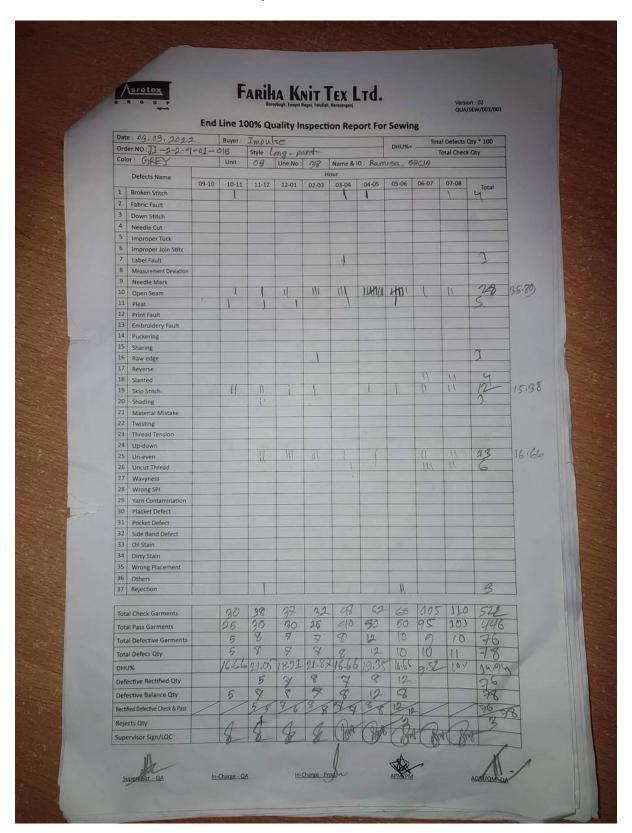


Fig 3.2.1 End-Line Sewing Inspection Report -1

REPORT -2

Date 7/09/22 style: S.T.S

Buyer: LIDL

Style no: GOLADI

ORDER QTY:2200PCS

COLOUR: GREEN

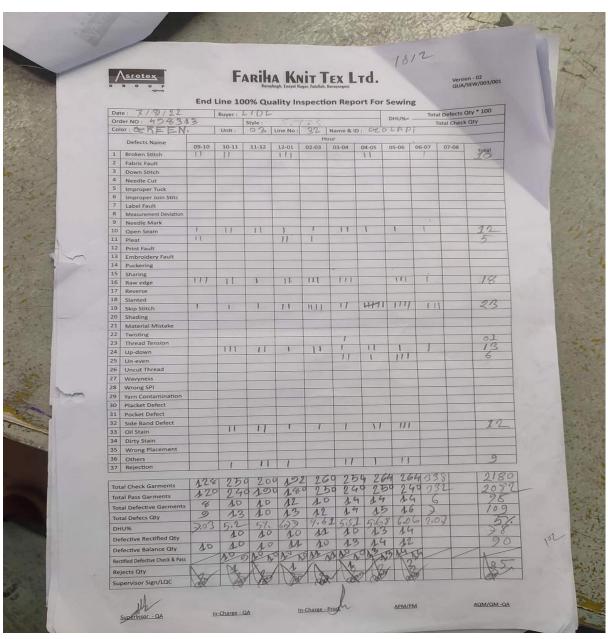


Fig 3.2.2 end line inspection of sewing report -2

REPORT-3

BUYER: LIDL style no: ELA

Style: t-shirt

For 2200pcs

Colour: beige

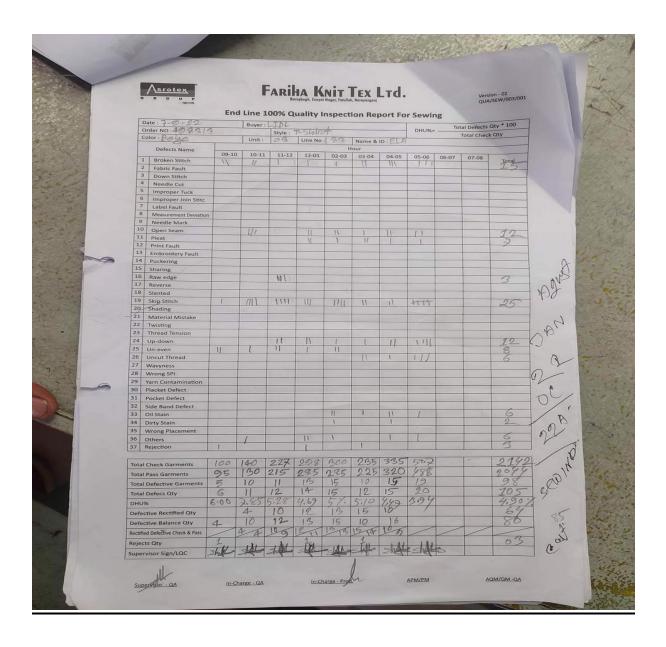


Fig 3.2.3 end line sewing inspection report -3

REPORT-4

Buyer: NKD

Date:07/09/22

Style: night wear

Colour: mult red

For 800 pcs

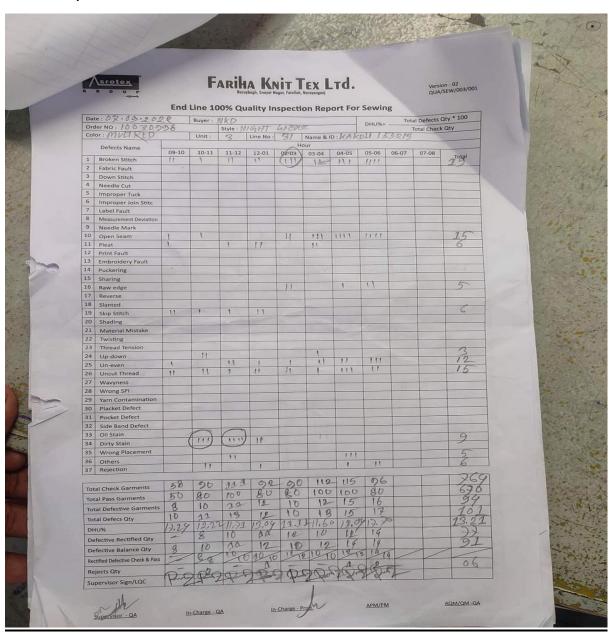


Fig 3.2.4: end line sewing inspection report -4

REPORT-5

DATE: 7/09/22

BUYER: PERRY ELLIS

For 700 pcs

Style: jacket

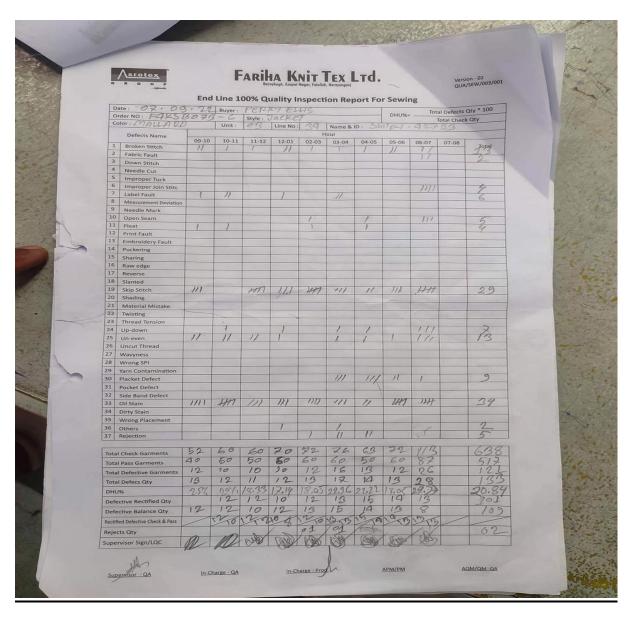


Fig 3.2.5: end line sewing inspection report -5

Table 3.2.1 End- line sewing inspection report -1

Defects/faults	In 24 hours
Broken stitch	4
Label stitch	1
Open seam	28
Pleat	5
Raw edge	1
Skip stitch	12
Slanted	4
Shading	1
Un even	13
Uncut thread	6
Total	75

Table 3.2.1: End-Line Sewing Inspection Report -1

<u>Result</u>

- We discovered and flowing issue as below,
- Bad Shading formation.
- Un even and un cut thread found during sewing.
- Obtained some label faults
- Discovered some uncommon faults like slanted, pleat.
- And also found broken and skip stitch formation.

Table 3.2.2 End- line sewing inspection report -2

Defects/faults	In 24 hours
Broken stitch	10
Twisting	1
Open seam	12
Pleat	5
Raw edge	18
Skip stitch	23
Up-down	13
Oil stain	12
Un even	6
Thread tension	1
Total	101

Table 3.2.2: end line sewing inspection report -2

Result:

- Found oil stain
- Few thread tension

DHU found is 4.59%

Table 3.2.3 End- line sewing inspection report -3

Defects/faults	In 24 hours
Broken stitch	15
Others	6
Open seam	12
Pleat	7
Raw edge	3
Skip stitch	25
Up-down	12
Oil stain	6
Un even	8
Un cut thread	6
Dirty strain	2
Total	102

Table 3.2.3: end line sewing inspection report 3

<u>Result</u>

- Discovered new faults dirty stains
- And others faults are found

DHU found 4.63%

Table 3.2.4 End- line sewing inspection report -4

Defects/faults	In 24 hours
Broken stitch	19
Others	5
Open seam	15
Pleat	6
Raw edge	5
Skip stitch	6
Up-down	3
Oil stain	9
Un even	12
Un cut thread	15
Dirty strain	9
Total	104

Table 3.2.4: end line sewing inspection report -4

<u>Result</u>

Obtained same faults

DHU is found

Table 3.2.5 End- line sewing inspection report -5

Defects/faults	In 24 hours
Broken stitch	13
Fabric faults	2
Open seam	5
Pleat	4
Placket defect	9
Skip stitch	29
Up-down	7
Label faults	6
Oil stain	34
Un even	13
Un cut thread	15
Dirty strain	9
Others	2
Improper join stitch	4
Total	152

table 3.2.5: end line sewing inspection report-5

Result:

- Obtained Placket defects
- Found some improper join stitch
- And discovered some fabric faults

DHU percentage found is 21.7%

3.3 QC Pass Production Report of Sewing

In Qc pass report we calculated total production after 2 days . report 1,2,3,4,5 we got idea about total Qc production of sewing line.

Table 3.3.1 QC Pass Production Report of sewing

Total Productions	In 24 hours
garments check	6236
Pass garments	5835
Defective garments	489
Defects Qty	526
DHU%	58.89
Defective rectified Qty	396
Defective balance Qty	448
Rectified defective check and pass	76/78
Rejects Qty	102

Table 3.3.1.: QC Pass Production Report of Sewing

Result

_From QC pass production report of sewing there is granted garments 5835 out of 7000pcs and rejects Qty 102pcs and checked 6236 pcs in total 2 days.

CHAPTER -04 DISCUSSION OF RESULT

4.1 Analysis report from data of sewing

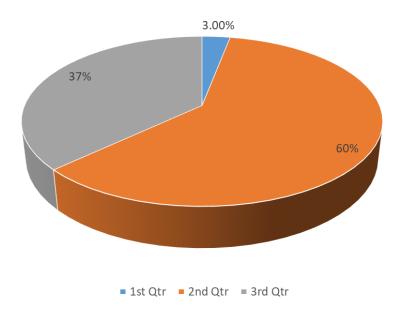


fig: 4.1.1 After 2 day inspection report of sewing

After 24 hour sewing inspection total 7000 pcs garments pattern 5235 of them quality passed.

Reject 3 of them. Total checked pcs in percentage 60% and total defect 37% and 3% rejects.

4.2 Sewing Inspection Report Analysis:

Report on the sewing inspection conducted by fariha knit textile Ltd. This figure 3 based on table of end line sewing faults inspection.

This data analysis after 2days proper inspection of sewing.

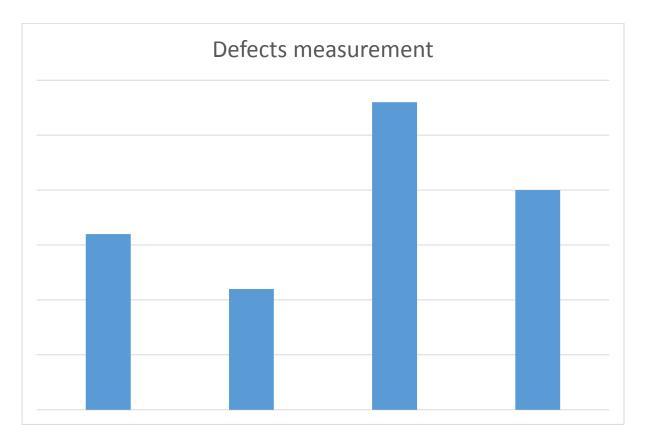


Fig 4.2.1 Defect Measurement after 2 days of sewing

Result

After 24 hours end line sewing inspection inspector inspected that total 543 defects found.

Here, 1st highest defect is seams defects found 205.

2nd highest defects is others defects found 151.

3rd highest defect is stitch defects found 98.

4th lowest defect is uncommon defects found 89.

CHAPTER- 5 CONCLUSION

5.1 Conclusion

We finished our project by having fariha knit textile Ltd. take it after an inspection. This activity is crucial to us because it teaches us how to conduct inspections and identifies sewing errors. This project has taught us a variety of things that will aid in the advancement of our careers. in order to initially satisfy the texture review process. That relates to the evaluations in the texture, trimmings, and other regions here because texture is the primary component in the production, it is excellent at the point where excellent quality clothes was produced. After we analysis of different faults and data of fariha knit textile.

Reference

- http://www.garmentsmerchandising.com/8-sewing-faults-with-causes-and-remedies/
- http://www.google.com
- http://www.fashion.com
- https://asrotexgroup.com
- http://textilelearner,net

Turnitin Originality Report

Processed on: 13-Sep-2022 12:45 +06

ID: 1898676920 Word Count: 3544 Submitted: 1

182-23-5383, 182-23-5416 By Jawad Al Adeeb G.m Rejuanul Islam Similarity Index 22%

Internet Sources: 19 %
Publications: 0 %
Student Papers: 17

Similarity by Source

3% match (student papers from 31-Mar -2019)

<u>Submitted to Daffodil International Univ ersity on 2019-03-31</u>

3% match (Internet from 07-Jun-2022) http://dspace.daffodilvarsity .edu.bd:8080/bit-stream/handle/123456789/8124/182-23507%20%2813%25%29.pdf?isAllowed=y &sequence=1

2% match (student papers from 10-Apr -2018)

<u>Submitted to Daffodil International University on 2018-04-10</u>

2% match (Internet from 12-Jun-2022) http://dspace.daffodilvarsity .edu.bd:8080/bit-stream/handle/123456789/8142/182-23493%20%284%25%29.pdf?isAllowed=y &sequence=1

1% match (student papers from 13-Apr -2018)

<u>Submitted to Daffodil International Univ ersity on 2018-04-13</u>

1% match (student papers from 13-Apr -2018)
Submitted to Daffodil International Univ ersity on 2018-04-13

1% match (student papers from 17-Apr -2018)

<u>Submitted to Daffodil International Univ ersity on 2018-04-17</u>

1% match (student papers from 07-Apr -2018)

<u>Submitted to Daffodil International University on 2018-04-07</u>

1% match (student papers from 05-Apr -2018)
Submitted to Daffodil International Univ ersity on 2018-04-05

1% match (student papers from 16-Apr -2018)
Submitted to Daffodil International Univ ersity on 2018-04-16

1% match (student papers from 12-Apr -2018)
Submitted to Daffodil International Univ ersity on 2018-04-12

1% match (Internet from 29-Mar-2019) htt p://etd.aau.edu.et/bitstream/han-dle/123456789/5907/5.%20Hailemichael%20Nigusu%20Ha sequence=1

1% match (student papers from 08Sep-2015)

<u>Submitted to Asian Institute of Technolo g y on 2015-09-08</u>

< 1% match (student papers from 17-Apr -2018)

<u>Submitted to Daffodil International Univ ersity on 2018-04-17</u>