



Daffodil
International
University

Faculty of Engineering

Department of Textile Engineering

**Study on Quality inspection in a Hoodie jacket
manufacturing industry**

Course title: Project (Thesis)

Course code: TE4214

Submitted by:

Name	ID
Md. Reajul Islam	161-23-4600
Sajibul Islam	161-23-4597
Rayhan Feroz Pranto	161-23-4541

Supervised by:

Mst. Murshida Khatun

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 2019

ACKNOWLEDGEMENT

First of all we are grateful goes to Almighty “God” who gives us sound mind & sound health to accomplish this project successfully.


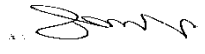

We are also grateful to our supervisor **Mst. Murshida Khatun**, Assistant Professor, Department of Textile Engineering, Faculty of Engineering, Daffodil international University. Her endless patience, scholarly guidance, continual encouragement, energetic supervision, constructive criticism, valuable advice, reading many inferior draft and correcting these at all stages have made it possible to complete this project.

We are also thankful to our all teachers, lab assistant, register sir, coordinators and all the employees of Daffodil International University. We are highly delighted to express our regards & gratitude to honorable Head **Prof. Dr. Md. Mahbubul Haque** for providing his best support to us.

Finally, we would like to express a sense of gratitude to our beloved parents and friends for their mental support, strength and assistance throughout writing the project report.

DECLARATION

We hereby declare that, this project has been done by us under the supervision of **Mst. MurshidaKhatun**, Assistant Professor, Department of Textile Engineering, Faculty of Engineering, Daffodil International University. We also declare that, neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

SL No.	Name	ID	Signature
1	Md. Reajul Islam	161-23-4600	
2	Sajibul Islam	161-23-4597	
3	Rayhan Feroz Pranto	161-23-4541	

Department of Textile Engineering

Faculty of Engineering

Daffodil International University

LETTER OF APPROVAL

14th December, 2019

To

The Head

Department of Textile Engineering

102, Shukrabad, Mirpur Road, Dhaka 1207

Subject: Approval of Project Report of B.Sc. in Textile Engineering Program

Dear Sir,

We are just writing to let you know that this project report titled as “**Study on Quality inspection in a Hoodie jacket manufacturing industry**” has been prepared by the student bearing ID’s 161-23-4600, 161-23-4597 and 161-23-4541 are completed for final evaluation. The whole report is prepared based on the proper investigation and interruption through critical analysis of empirical data with required belongings. The student were directly involved in their project activities and the report become vital to spark of many valuable information for the readers.

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

Yours Sincerely



.....
Mst. Murshida Khatun

Assistant Professor

Department of Textile Engineering

Daffodil International University

ABSTRACT

This report illustrates the manufacturing process of a Hoodie Jacket. To make a complete Hoodie Jacket, all the processes required and the activities of different sections are acquainted in this project. To make a garment, different data and information are required from different sections. This report deals with different data and information to explain different processes clearly. Quality is most concerned, issued to comply with buyers as consumers express satisfaction. To satisfy customer best quality goods should be delivered that's why. Manufacturers always try to deliver quality goods. Faults cannot be entirely controlled but can be minimized by taking specific precautions. This report represents how to minimize defects which arise from different sections. It represents different machine types to make a Hoodie Jacket. It depends on the design of the product. In aggregate, this project will be helped to manufacture a quality Hoodie Jacket that's can fulfill the buyer requirements and satisfy the ultimate consumers.

Contents

ACKNOWLEDGEMENT	i
DECLARATION	ii
LETTER OF APPROVAL	iii
1 Chapter-I	1
INTRODUCTION	1
1.1 Objectives	2
1.2 Limitations	2
2 Chapter-II	3
LITERATURE REVIEW	3
2.1 Hoodie Jacket	4
2.2 Different Types of Hoodies	4
2.2.1 Over-the-Head Hoodie	4
2.2.2 Zip-Up Hoodie	4
2.2.3 Shrug Hoodie	4
2.2.4 Baja Hoodie	5
2.2.5 Fur Hoodie	5
2.3 Fabric Used in Hoodie Jacket	5
2.4 A Few Popular Fabric for Making Hoodie Jacket	5
2.4.1 French Terry	5
2.4.2 Fleece-Back	6
2.4.3 Double-Face	6
2.5 Fabric Cutting	7
2.5.1 Flow Chart for Cutting to Manufacture a Garments	7
2.5.2 Fabric Relaxation	7
2.5.3 Fabric Relaxation Period	8
2.6 Marker Making	8
2.6.1 Methods of Marker Making in the Garment Industry	8
2.6.2 Manual Marker Making Method	8
2.6.3 Computerized marker making method	9

2.7	Fabric Cutting System	10
2.7.1	Straight Knife	10
2.7.2	Computer controlled knife cutting	11
2.8	Numbering	11
2.8.1	The Purpose of Layer Numbering	12
2.9	Sorting & Bundling	12
2.10	Process Flow Chart for Making a Hoodie Jacket	12
2.11	Machine Layout	13
2.12	Garments Sewing Faults	14
2.13	Finishing Faults	17
3	Chapter III	19
	EXPERIMENTAL DETAILS	19
3.1	Manufactured Hoodie Jacket	20
3.2	Fabric 4 point Inspection	23
3.3	Daily Cut Panel Rejection	25
3.4	Weekly Cut Panel Rejection	27
3.5	Size Measurement	30
3.6	Weekly Line Quality Report in Sewing	32
3.7	Breakdown and Layout Sheet	36
3.8	Fabric 4 Point Inspection	39
3.9	Daily Cut Panel Rejection	42
3.10	Size Measurement	45
3.11	Weekly Line Quality Report in Sewing	47
3.12	Breakdown & Layout Sheet of Hoodie Jacket	51
4	Chapter IV	54
	DISCUSSION OF RESULT	54
4.1	Discussion on Fabric 4 Point Inspection	55
4.2	Discussion on Fabric Cut Panel rejection	55
4.3	Discussion on Size Measurement	56
4.4	Daily Line Quality	56
4.5	Discussion on Breakdown and Layout of Hoodie Jacket	57

5 Chapter V	59
Conclusion	59
5.1 Conclusion	60

List of Table

Table: 2. 1 Machine Layout.....	14
Table: 3. 1 Summary Analysis.....	24
Table: 3. 2 Summary Analysis.....	26
Table: 3. 3 Summary Analysis.....	28
Table: 3. 4 Summary Analysis.....	31
Table: 3. 5 Summary Analysis.....	34
Table: 3. 6 Graphical Analysis	35
Table: 3. 7 Summary Analysis.....	38
Table: 3. 8 Summary Analysis.....	41
Table: 3. 9 Summary Analysis.....	43
Table: 3. 10 Summary Analysis.....	46
Table: 3. 11 Summary Analysis.....	49
Table: 3. 12 Graphical Measurement	50
Table: 3. 13 Summary Analysis.....	53
Table: 4. 1 SMV for different Garments	58

List of Figure

Fig: 2. 1 French Terry	5
Fig: 2. 2 Fleece-Back	6
Fig: 2. 3 Double-Face.....	6
Fig: 2. 4 Flow Chart for Cutting to Manufacture a Garments	7
Fig: 2. 5 Manual Marker Making Method	9
Fig: 2. 6 computerized marker	9
Fig: 2. 7 Straight Cut Knife	10
Fig: 2. 8 Computer controlled knife cutting m/c	11
Fig: 2. 9 Numbering m/c	12
Fig: 2. 10 Numbering Machine.....	12

Fig: 3. 1	Hoodie Jacket.....	20
Fig: 3. 2	Hoodie Jacket.....	21
Fig: 3. 3	Fabric 4 point Inspection	23
Fig: 3. 4	Daily Cut Panel Rejection	25
Fig: 3. 5	Weekly Cut Panel Rejection	27
Fig: 3. 6	Size Measurement	30
Fig: 3. 7	Weekly Line Quality Report in Sewing.....	32
Fig: 3. 8	Breakdown & Layout Sheet of Hoodie Jacket.....	36
Fig: 3. 9	Fabric 4 point Inspection	39
Fig: 3. 10	Daily Cut Panel Rejection.....	42
Fig: 3. 11	Size Measurement	45
Fig: 3. 12	Weekly Line Quality Report in Sewing	47
Fig: 3. 13	Breakdown & Layout Sheet of Hoodie Jacket.....	51

Chapter-I
INTRODUCTION

1.1 Objectives

- To know the manufacturing process of Hoodie jacket.
- To know about the cutting system of fabric.
- To know about the sewing machines required to make a hoodie.
- To know about different types of stitch and seam.
- To know about different types sewing faults.
- To know about the product quality.

1.2 Limitations

- Due to time limitation, operators could not relate different process elaborately.
- Operators occasionally expressed unwillingness to provide us required data without permission of higher authority.
- Due to some restriction not possible to collect all data related to specific order.
- Lack of long time accessibility in the production line.
- Lack of wide space, gathering of intern students created inconveniences.

Chapter-II
LITERATURE REVIEW

2.1 Hoodie Jacket

A hoodie jacket is a sweatshirt with a hood. The word hood infers from the Anglo-Saxon word hood eventually of the same root as English cap. The garment's style and frame can be followed back to Medieval Europe when the ordinary clothing for ministers included a hood called a cowl connected to a tunic or robes, and a chaperon or hooded cape was exceptionally commonly worn by any outside laborer. Its appearance was known in England at least as early as the 12th century. US Company Winner clearly made the primary hooded sweatshirt within the 1930s. The company turned to making sweatshirts once it had created strategies for sewing thicker materials. At first hoods were included to sweatshirts to keep laborers warm amid the biting winters in Upstate Modern York. In the blink of an eye from that point, Winner provided sports pack including sweatshirts to the US military for preparing works out and physical instruction classes [1].

2.2 Different Types of Hoodies

2.2.1 Over-the-Head Hoodie

The over-the-head hoodies are ordinarily worn in more casual settings and, so, they don't continuously have the plans that other sorts of hoodies do.

2.2.2 Zip-Up Hoodie

These hoodies permit to zip coat up half way in case you like, making it culminate for days that are cool and dry. In truth, since they are the zip-up sort, these hoodies are idealize in case it begins to urge warm and you need your coat to be open.

2.2.3 Shrug Hoodie

It is a sweatshirt hoodie which is inspired by the shrug designs for women. The hoodie is made by knitting wool with sleek designs giving dot, minor checks and lining designs in a single hoodie.

The hooded sweatshirts are made with soft woolen material.

2.2.4 Baja Hoodie

Baja hoodies started around 50 years ago and came from Mexico, where they were always made out of very soft materials. At first, they were shaped like basic pull-overs and ponchos, but nowadays they come in hoodie styles as well.

2.2.5 Fur Hoodie

This hoodies can be any fashion, plan, or color, but they are particularly made for the cold winter months and for individuals who need to remain warm whereas still looking alluring. The most contrast, of course, is that these hoodies have a thick layer of high-quality hide around the hood itself [2].

2.3 Fabric Used in Hoodie Jacket

Fabric type is one of the foremost imperative viewpoints to create a hoodie. Typically since their distinctive materials sorts manage their different employments. Choosing off-base texture sort will cruel that they will not be valuable for the reason.

2.4 A Few Popular Fabric for Making Hoodie Jacket

2.4.1 French Terry

Sometimes referred to as loopback cotton, this fabric is warp knitted with a flat face and loops on the underside, which serve the same purpose as the loops on a towel to absorb moisture and



Fig: 2. 1 French Terry

sweat. Most commonly offered in 100 % cotton, French terry can also include added elastin for stretch.

2.4.2 Fleece-Back

To form fleece-back textures, the underside of a sewn texture is brushed with sandpaper or wire brushes until the yarn gets to be delicate and fluffy. This procedure can be connected to a expansive run of weaved cotton textures and is utilized for its smooth hand feel.



Fig: 2. 2 Fleece-Back

2.4.3 Double-Face

This material is made up of two interlocking knitted fabrics. A double-knitted jersey, for example, is made up of two single jerseys knitted together so that both the underside and outside of the fabric are flat [3].



Fig: 2. 3 Double-Face

2.5 Fabric Cutting

2.5.1 Flow Chart for Cutting to Manufacture a Garments

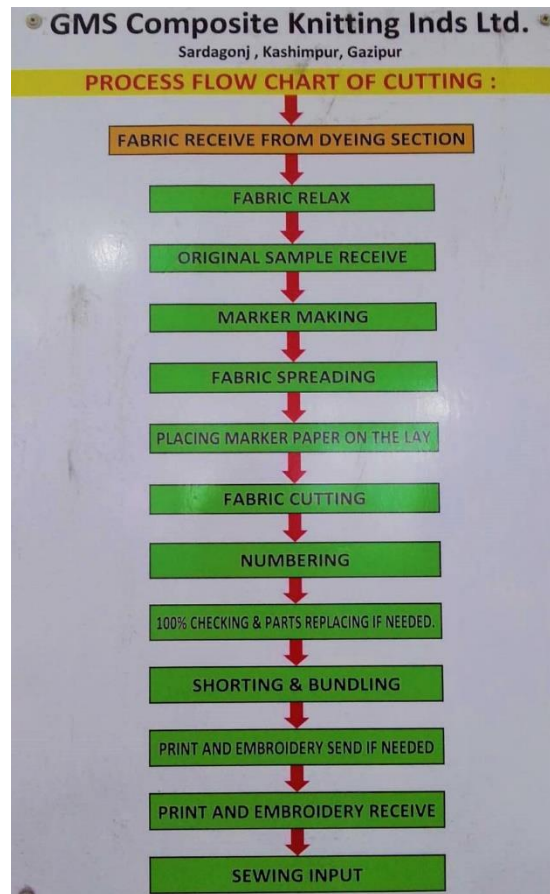


Fig: 2. 4 Flow Chart for Cutting to Manufacture a Garments

2.5.2 Fabric Relaxation

When the fabric comes from the dyeing & finishing, the fabric remains a slightly hot. In dryer, compactor heat is connected on fabric. So moisture is remove from the fabric & it isn't in real condition. But in case we keep the fabric in normal temperature & pressure for a certain time, the fabric absorbs moisture from the environment & recapture its original nature. This process is called fabric relaxation. Another cause of fabric relaxation is to maintain the dimensional stability of produced garments. When the fabric is being processed in different finishing machines, it goes

under certain heat & pressure to grant it appropriate shape. But when the heat & pressure is being withdrawn, the shape may alter. So, in case the measurement is became stabilized before cutting, no chance to strain in garments.so relaxation is exceptionally essential some time recently cutting.

2.5.3 Fabric Relaxation Period

Spandex fabrics will be relaxed at least 24 hour making unroll in cutting section. Others 12 hours. Relaxation date and time must be recorded. After spreading, will relax 2 hours some time recently cut [4].

2.6 Marker Making

It is an illustration of exact and precise arranging of patterns for a specific style of garment and the sizes to be cut from a single spread on a marker paper. To prepare an proficient marker, the width of the fabric to be spread in a lay as well as the number of pattern pieces to be included within the marker plan for all the specified sizes should be known prior to it.

2.6.1 Methods of Marker Making in the Garment Industry

There are two methods usually used for marker making in the apparel industry. They are

- Manual method
- Computerized method.

2.6.2 Manual Marker Making Method

In garments industry, manual marker making is the oldest, conventional and ordinarily used method. In this forms design producer make the all pattern pieces physically and after that fabrics are spread on cutting table and set up all pattern pieces directly onto the marker paper. At that point check by chalk, pencil or pen.

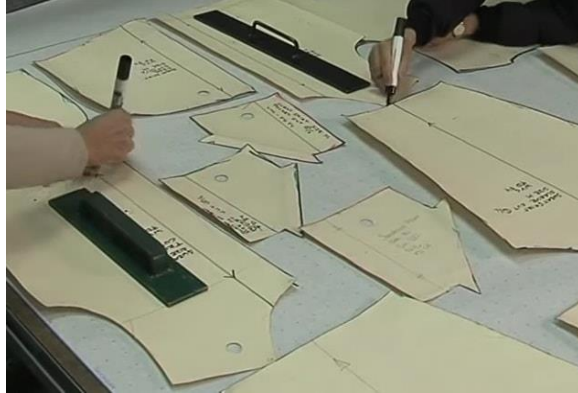


Fig: 2. 5 Manual Marker Making Method

2.6.3 Computerized marker making method

Computerized method is the most excellent and most well-known method of marker making. For the most part it gives higher effectiveness. During this marker making method each particular style and part of the patterns are kept within the computer memory and grade rule is also said. To do this marker making, computerized marker paper directly set on fabric layer. At that point the computer makes the marker by its programming techniques. Computer Helped Plan (CAD) system are used to form marker. Comparison between manual and CAD marker making is huge [5].



Fig: 2. 6 computerized marker

2.7 Fabric Cutting System

Cutting is one of the essential operation to make a garment. Fabric cutting is done by different prepare. Fabric cutting is done by manual cutting machine and automatic cutting machine. Different fabric cutting system are used

2.7.1 Straight Knife

Most cutting room which cut garments in bulk, but not in sufficient bulk to legitimize the buy of computer controlled cutters, makes use of straight blades.

A knife is the most excellent choice for proficient fabric cutting. The most commonly used fabric cutting machine is straight knife cutting machine. Straight knife fabric cutting machine is the world's most popular and most flexible which is broadly used in apparel industry.



Fig: 2. 7 Straight Cut Knife

Machine Description

The elements of a straight knife consists of –

- A base plate – Usually in rollers for easy movement.
- An electric motor.

- Handle – for the cutter to direct the blade.
- Knife (Reciprocating motion).
- Knife guard.
- Grinding wheel – used to sharp the knife during cutting.
- Stand.
- Roller wheel – to move the machine over cutting table easily [6].

2.7.2 Computer controlled knife cutting

This method gives the most precise and precise cutting at high speed. It also allows section of air through the table to deliver a vacuum for decreasing the lay height. The frame/carriage supporting the cutting head has two synchronized servo-motors, which drive it on tracks on the edges of the table. A third servo-motor keeps the cutting head at an precise position on a pillar through the width of the carriage. The cutting head includes a knife, sharpener and a servo-motor to turn the cut to position it at a digression to the line of the cut on curves.



Fig: 2. 8 Computer controlled knife cutting m/c

An operator spreads the fabric lay on a ordinary cutting table or cutting table prepared with air flotation cutting table. Perforated paper is spread below the bottom fabric ply to support it during cutting as well to maintain a strategic distance from twisting during moving to the cutting table. After loading the plate having the marker arrange into the computer, the operator positions the cutting head's root light over the corner of the spread [7].

2.8 Numbering

Layer numbering is one of the cutting room forms which is taken put after cutting a marker. In this process, each garment component is checked with a serial number of the layer within the cut.

Ordinarily the numbering code contains article of clothing estimate (e.g. Small, Medium, Large), Marker number and layer sequence.

2.8.1 The Purpose of Layer Numbering

To identify the right garment components of a garment (size, color, and shade) when operators om



Fig: 2. 9 Numbering m/c

stitch the garment. In case, sewing operator fastens a garment taking components from different layers, there might a chance of shade variety within the finished garment. This process makes a difference factory to decrease quality issue related to shade variation. Most of the times, more than one sizes of the garment is stacked within the production line. When bundles are open and move on the machines, there could be a chance of taking garment parts from different bundles of article of clothing sizes. This layer number makes a difference an operator to recognize rectify size of the component [8].

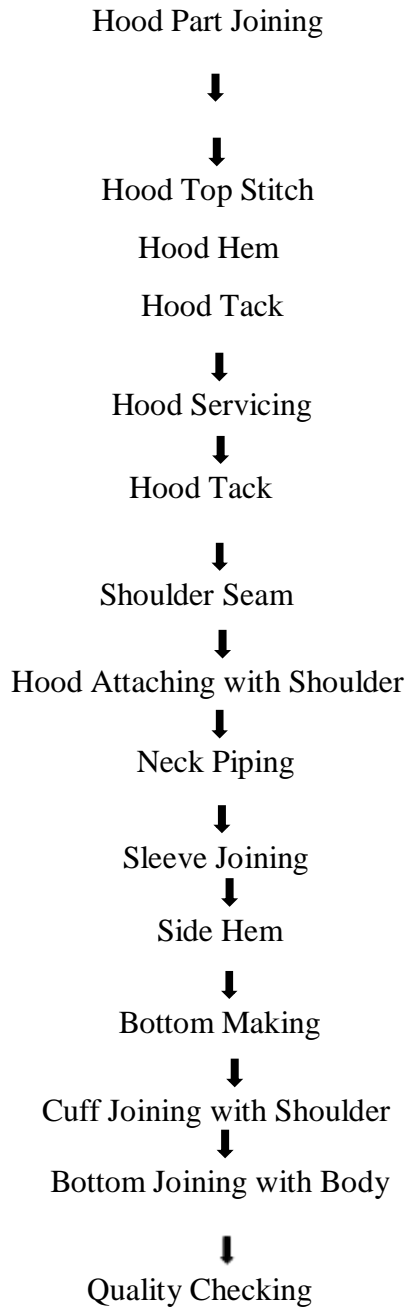
2.9 Sorting & Bundling

After quality checking faults are gathered separately and all individual parts of a garments are assembled for a style then sorted and numbering and finally bundled [9].

2.10 Process Flow Chart for Making a Hoodie Jacket

Hood Making





2.11 Machine Layout

Operation Name	Machine Name
Hood Making	Plain
Hood Part Joining	Over lock
Hood Top Stitch	Plain
Hood Hem	Flat Lock

Hood Tack	Plain
Hood Servicing	By Scissor to cut extra yarn
Hood Tack	Plain
Pocket Making	Plain
Pocket Joining with Body Front Part	Plain
Shoulder Seam	Over lock
Shoulder Seam Top Stitch	Plain
Hood Attaching with Shoulder	Over lock
Neck Piping	Feed of the Arm
Sleeve Joining	Over lock
Sleeve Top Stitch	Plain
Side Seam	Over lock
Bottom Making	Plain
Cuff Joining with Shoulder	Over lock
Cuff Top Stitch	Plain
Bottom Joining with Body	Over lock
Bottom Top Stitch	Plain

Table: 2. 1 Machine Layout

2.12 Garments Sewing Faults

Slipped stitch

Missing of interloping or interlacing between top and bottom threads.

Causes

- Loper or snare and needle are not appropriately placed.
- Irregular thread tension.
- Needle deflection.
- Needle threads loop measure as well small.

Remedies

- Proper situation of needle and looper or hook.
- Accurate tension maintaining.
- Needle can be changed.

Unbalance Stitch

Improper interlacement of threads especially in lock stitch machine.

Causes

- Wrong pressure of sewing thread.
- Used wrong thread path.
- Snagging of needle with bobbin case.

Remedies

- Setting of suitable tension to the sewing threads.
- Use of right thread path.
- Bobbin case to be smooth.

Variable stitch density

Number of stitch per unit length is not equal.

Causes

- Improper releasing up of thread from bundle amid sewing.
- Twisting of needle thread inside the foot of thread package.
- Snarling of string a few time as of late pressure disk.
- Use of broken check spring.
- Fraying of thread inside the needle.

Remedies

- The position of thread guide must be 2.5 times higher than the position of string package.
- Foam cushion must be used to the foot of thread package.
- Winding of more threads within the thread guide.
- Check spring have to be be changed.
- Finer threads must be used or to be utilized heavy needle.

Frequent thread breakage

Thread breaking frequently during sewing.

Causes

- More tension to the bobbin threads or more rotating of bobbin.
- Wrong fitting of bobbin case.

Remedies

- Proper winding of threads on to the bobbin.
- The tension must be balanced to the bobbin threads.
- Checking out the damaging case.

Skip Stitch

Stitches within the seam are display in a standard wise. If interloping or interlacing between best and bottom thread of stitch isn't take put or missed is known as skipped stitch. Typically more destructive in case of chain stitch than lock stitch.

Causes

- Failure of hook or looper and needle to enter loop at correct time.
- Irregular thread tension on upper or lower loop
- Due to needle deflection
- If needle thread loop size is too small
- If sewing thread is unable to form

Remedies

- Test the setting and timing between needle and hook or looper.
- The tension of thread should be adjusted.
- Needle ought to be changed.
- Needle size and thread should be adjusted.
- Thread should be changed.

Seam Puckering

When the smooth fabric appearance turned wrinkled by the way of wrinkle is called Pucker. It is for the foremost part happened when there's as well much fabric and not sufficient thread inside the wrinkle. Pucker is one of the foremost over and over happening sewing defects on fabric. Seam puckering in garments is the combination of various causes. Generally seam puckering in cloth is seen after sewing and washing.

.Causes

- Higher thread tension.
- Improper thread balance.
- Incorrect thread type.

Remedies

- Bobbin tension should be kept as possible.
- Proper thread balance should be ensured between top and bottom thread.
- Have to maintain tension guides properly.

2.13 Finishing Faults

Oil spot

Causes for different reason sewing machine parts may be stuck or in require of cleaning or support. The machine ought to oiled or greased up. Sewing machine needle moreover be greased up by oil for decreasing grinding. If the machine at that time, there can be get an oil stamp. For this, have to be run a test thread and fabric through the machine to expel overabundance oil. Remedies At to begin with, pretreated with the pre-wash recolor remover, fluid clothing detergent. After that, wash the pieces of clothing by utilizing most smoking water secure for fabric.

Needle heating damage

The damage of fabric due to friction happened between the needle & fabrics. The fabric can be harmed with that temperature. There's a less possibility of damaging in case of fabrics made from characteristic fibers.

The following are the steps to be taken to keep the fabrics free from this type of

- By changing needle Size & so that there is less generating of heat to the needle and fabric
- By sewing smaller length at higher
- By using lubricant to the needle.

By using Teflon coated needle.

Mechanical damage

It is happened due to wrong needle choice or needle harm. But it may be happened in case of unused or fine needles. The followings are the steps to be taken to keep the fabrics free from this type of defects

- By using perfect size & shape of the needle & needle point without any defect
- By reducing the of sewing machine
- By using lubricant [9].

Chapter III
EXPERIMENTAL DETAILS

3.1 Manufactured Hoodie Jacket



Fig: 3. 1 Hoodie Jacket



Fig: 3. 2 Hoodie Jacket

3.2 Fabric 4 point Inspection

Buyer: Esprit

GMS QA - 008K

GMS Composite Knitting Ind. Ltd.
Sardaganj, Kashimpur, Gazipur-1346.

4 Point System Grey Fabric Inspection Report

Formula : $\frac{\text{Roll Points} \times 100}{\text{Roll Length} \times \text{Fab. width}}$

Penalty Points are assign according to size of defect

Length of Defect	Penalty Points
Less than 3 Inch	1 Points
3 Inch to 6 Inch	2 Points
6 Inch to 9 Inch	3 Points
More than 9 Inch	4 Points
Hole must be Penalty	4 Points
A Maximum of 4 Points is scored to 1 linear Yards	
Acceptable points individual roll 28 points	

Date of Inspection :

Supplier Name	Buyer Name: ESPRIT	Order No. 129CC2J001
Fab. Description fleece	Yarn Count/Lot No.	Color NAVY

Fabric Defects Description & Code	M/C No.: 1109				M/C No.: 1109				M/C No.: 1109						
	Roll No. 3				Roll No. 7				Roll No. 12						
	FL.	Defect Point				FL.	Defect Point				FL.	Defect Point			
	1	2	3	4	1	2	3	4	1	2	3	4			
A Oil Spot															
B Fly Yarn	10	A''			N''	10	B''			D''	10	A'			
C Black Spot		B''			U'		A'				20	A''			
D Knots	20											B''			
E Think & thin yarn															
F Contamination	30														
G Lycra out / Damage															
H Missing Yarn	40														
I Pin Hole															
J Sinker Mark	50														
K Needle Mark															
L Wheel Mark	60														
M Star Hole															
N Slub	70														
O Stripe Height Unequal															
P Yarn Patta	80														
Q Machine Patta															
R Yarn Mistake	90														
S Neps / Hairiness															
T Color Spot	100														
U Other Defect															
Grey Swatch	Ttl.	17				Ttl.	15				Ttl.	18			
		17 x 100					15 x 100					18 x 100			
		81.50 x 2.28					82.66 x 2.28					81.60 x 2.28			
		Points/100 sq Meter= 74					Points/100 sq Meter= 73					Points/100 sq Meter= 97.5			
		Qty. Rolls in This Lot 12													
		Qty. Rolls Checked 3													
		Average Points 8.38													
		Inspection Result Pass													
		Comments													

Inspected by Sahel Officer (Q.A.D.) M.G.R. Knitting M.G.R. Q.A.D.

Fig: 3.3 Fabric 4 point Inspection

3.3 Daily Cut Panel Rejection

		22.8.19	27.8.19	26.8.19	25.8.19	DATE
						CUTTING NO
						LOT NO
		5000	5000	5000	5000	CUTTING QTY
		45	50	55	55	SLUB/NEPS
		42	45	40	46	STRIPE/BARRE/THICK & THIN
						YARN CONTAMINATION
		87	95	95	101	SUB TOTAL
		48	45	42	40	LINE STAR/KNOT
		7	6	11	14	SINKER/DIA/NEEDLE MARK
		18	21	15	12	KNITTING HOLE/LOOP
		7	5	2	7	LYCRA/YARN MISSING
		16	13	12	7	DROP NEEDLE/PATTA
		96	90	82	80	SUB TOTAL
		11	9	8	6	DYEING HOLES/TRON
		32	30	30	45	DYEING SPOT/SOFTNER SPOT
		6	2	10	8	CREASE MARK/ABRASION
						BAIS/OFF GRAIN
		32	30	30	35	UNEVEN DYEING/RUNNING SHADE
		8	4	8	11	OIL/GREES SPOT
		14	12	9	12	DIRTY/SOIL SPOT
		103	87	95	117	SUB TOTAL
						MISS PRINT / DOT PRINT
						PRINT SHADE CHANGE
						SALVAGE SIDE NOT CUT
						AOP IN SIDE COLOUR PASS
						UNEVEN AOP
						SUB TOTAL
		10	8	10	12	UNEVEN SHAPE
		17	14	15	17	MEASUREMENT LESS & PLUS
		25	21	20	24	BOTH SIDE NOT EVEN
						UNEVEN PARTS
		9	7	6	5	ANY MISTAKE
		61	50	51	58	SUB TOTAL
		5000	5000	5000	5000	TOTAL CHECK QTY
		4653	4678	4677	4644	TOTAL QC PASS
		347	322	323	356	TOTAL REJECT QTY
		6.94%	6.44%	6.46%	7.12%	TOTAL REJECTS WITH %

QA Department:
BUYER: KARBAN

STYLE: K-489

S/R:

COLOUR:

DIA:

GSM:

Daily Cut Panel Rejection Monitoring List

GMS Composite Knitting Ind. Ltd.
Sardagonj, Kishimpur, Gazipur

Order Qty.:

QA SUPERVISOR

QA INCHARGE

QA OFFICER

APM/PM

AQM/QM

Fig: 3.4 Daily Cut Panel Rejection

Summary Analysis

DAILY CUT PANEL REJECTION																																					
		YARN FAULT				KNITTING FAULTS				DYEING AND FINISHING						AOP				CUTTING DEFECT																	
DATE	CUTTING NO	LOT NO	CUTTING QTY	SLUB/NEPS	STRIPE/BARRE/THICK& THIN	YARN CONTAMINATION	SUB TOTAL	LINE START	SINKER/DIA/NEEDLE MARK	KNITTING HOLE/LOOP	LYCRA/ YARN MISSING	DROP NEEDLE/PATTA	SUB TOTAL	DYEING HOLES/TRON	DYEING SPOT/ SOFTNER SPOT	CREASE MARK/ ABRASION	BAIS/OFF GRAIN	UNEVEN DYEING/RUNNING	OIL SPOT	DIRTY/ SOIL SPOT	SUB TOTAL	MISS PRINT/DOT PRINT	PRINT SHADE CHANGE	SEL VEDGE SIDE NOT CUT	AOP IN SIDE COLOR PASS	UNEVEN AOP	SUB TOTAL	UNEVEN SHAPE	MEASUREMENT LESS & PLUS	BOTH SIDE NOT EVEN	UNEVEN PARTS	ANY MISTAKE	SUB TOTAL	TOTAL CHECK QTY	TOTAL QC PASS	TOTAL REJECT QTY	TOTAL REJECT WITH%
25.08.19			5000	545	46	101	440	144	127	77	77	80	66	458	88	35		31	11	12							22	17	24	5	58	00	4444	3566	7122	7.12%	
26.08.19			5000	540		95	422	115	122	22	22	22	88	308	100			308		99							00	150	20		61	5077	3267	333	6.46%		
27.08.19			5000	540	5	95	455	66	215	53	33	00	99	309	202			304	12	22						88	44	21	77	5000	0088	7222	344	6.44%			
28.08.19			5000	445	42	87	487	77	187	77	166	96	111	312	66			328	14	44							00	175	99	6100	0533	5447	344	6.94%			

Table: 3. 2 Summary Analysis

3.4 Weekly Cut Panel Rejection

GMS COMPOSITE KNITTING IND, LTD.
Shardagonj, kashimpur, Gazipur.

Weekly Rejection Status of Cam:-01+02 Cutting:

FLOOR:- AB CUTTING					
DAY	Total Prod.	Q.C Check	Alter	Spot	Reject
SAT	56244	42052	1355	312	1622
SUN	55452	42020	1300	293	1580
MON	55596	42000	1298	300	1520
TUES	56009	45008	1300	450	1409
WED	55495	45002	1450	508	1505
THURS	54982	48806	1392	504	1496
G.TOTAL	335889	262065			

DAY	Yarn Fault		Knitting Fault						Dyeing Fault						Aop		Cutting Defect				Total				
	Slub/Keps	Stripe/Thick/Thin	Yarn Contamination	Line Star/Knot	Sinker/Dia/Needle Mark	Knitting Hole/Drop	Layers/Yarn Missing	Drop Needle/Patta	Dyeing Hole Tron	Dyeing Spot/Sepner Spot	Crease Mark/Abdation	Blas/Off Grain	Un-Even Dyeing/Running Shade	Oil/Grease Spot	Dirty/Soil Spot	Miss Print/Dot Print	Print Shade Chagge	Salvage Side Not Cut	Aop Inside Color Pass	Un-Even Aop		Un-Even Shape	Measurement Less/Plus	Bothside Not Even	Un-Even Parts
SAT	225	26	205	206	06	209	96	19	98	108		95		229						17	26	48	9		1692
SUN	290	30	200	208	100	208	20	5	11	15		21		26					5	5	9	19	6		1018
MON	158	39	210	208	111	195	81	25	40	130		110		259					49	89	130	35			1890
TUES	255	66	229	246	120	214	119	49	67	160		75		170					5	5	8	19	2		1800
WED	201	25	200	226	120	205	100	21	38	112		190		155					25	25	30	35	10		1648
THURS	170	15	140	176	66	130	55	8	11	56		73		105					14	14	21	43	13		1606
G.TOTAL																									

Date:.....TO.....


Fig: 3. 5 Weekly Cut Panel Rejection

Summary Analysis

GMS Composite Knitting Ind. Ltd.																				
WEEKLY REJECTION STATUS OF CAM 01+02 CUTTING																				
Floor AB CUTTING																				
DAY	Total Prod.	Q.c Check	Alter	Spot	Reject															
SAT	56344	42052	1355	317	1672															
SUN	55452	42020	1300	293	1580															
MON	55596	42000	1296	300	1500															
TUES	56009	45005	1300	450	1409															
WEB	55495	45092	1452	508	1505															
THURS	54987	45896	1392	504	1496															
G. TOTAL	333883	262065	8095	2372	9162															
Floor																				
DAY	Yarn count			Knitting					Dyeing fault						Cutting Defect					Total
	slub	stripe	yarn contamination	knot	needle mark	knitting hole	yarn missing	drop needle	Dyeing hole tron	Dyeing spot	Crease mark	Bias	Uneven dyeing	Greese spot	dirty	Uneven shape	Bothside not even	Uneven Parts	Any Mistake	
SAT	225	26		205	226	126	203	96	19	38	108		95		229	13	26	48	9	1592
SUN	200	30		200	203	100	208	20	5	11	15		21		26	5	9	19	6	1018
MON	198	39		210	208	111	195	81	25	40	130		110		259	43	89	130	35	1890
TUES	255	66		229	246	120	210	119	49	67	160		75		170	5	8	19	2	1800
WED	201	25		200	226	120	205	100	21	38	112		145		155	25	30	35	10	1648
THURS	170	15		140	176	66	130	55	8	11	56		73		105	14	21	43	13	1096


Table: 3. 3 Summary Analysis

3.5 Size Measurement


GMS Composite Knitting Ind. Ltd.

Measurement Chart
মেজারমেন্ট চার্ট

Buyer: ESPRIT Style: 129CC2J001 Order: 129CC2J001 Date: _____
 Colour: NAVY Factory: GMS Item: HOODIE

Measure Points	SIZE: XS				SIZE: S				SIZE: M				SIZE: L				SIZE: XL				TOLERANCE
	SPEC	GMT	GMT	GMT	SPEC	GMT	GMT	GMT	SPEC	GMT	GMT	GMT	SPEC	GMT	GMT	GMT	SPEC	GMT	GMT	GMT	
Back Length	65.9	64.75	65.9	65.96	67.6	67.8	67.6	66.7	69.3	68.35	69.00	69.3	71.0	71.0	70.0	71.5	72.9	72.9	72.5	73.3	1.00
Front Length	67.75	67.75	68.0	67.0	69.5	69.5	69.5	69.5	71.25	71.25	70.25	71.50	73.0	73.5	73.0	72.5	75.0	75.5	75.0	74.5	1.00
Chest	50	50.5	50	49.5	52	52	52.5	52.5	54	53.5	54	54.5	60	60.5	60	55.6	64	64	64	64	1.00
Bottom Width	43.5	42.5	43.5	44.0	45.5	45.0	46.0	45.5	47.5	48.0	47.0	47.5	49.5	49.5	48.5	50.0	53.5	54.5	53.5	52.5	1.00
Across Shoulder	42.00	42.5	42.0	41.5	43.5	42.5	43.5	44.0	45.0	45.0	44.5	45.5	46.5	46.5	45.5	47.0	47.5	47.5	47.5	47.5	1.00
Shoulder Width																					
Sleeve Length	65.8	66.5	65.8	64.9	66.2	67.1	66.2	65.5	66.6	66.6	66.6	66.6	67.0	67.5	67.0	66.5	67.8	68.5	67.8	66.9	1.00
Sleeve Opening(RLX)	9.25	9.25	8.25	10.25	9.5	9.5	8.5	10.5	9.75	10.0	9.75	9.0	10.0	10.0	10.0	10.0	10.5	10.0	11.0	10.5	0.5
Waist (L.S.W)	20.10	21.6	20.1	19.6	20.6	20.6	20.6	20.6	21.1	21.1	22.1	20.1	21.3	22.3	21.3	20.3	22.6	23.9	22.6	21.7	0.5
Arm Hole	21.9	22.9	21.9	20.9	22.4	23.4	21.4	22.4	22.9	23.5	22.9	22.5	23.4	24.4	23.4	22.4	24.4	25.4	24.4	23.4	0.5
Neck Circumference																					
Collar Point (P. STE)																					
Front Neck Drop																					
Neck Width	19.8	20.5	19.8	19.5	20.2	20.2	20.2	20.6	20.6	21.6	19.6	24.0	24.5	24.0	23.5	21.8	22.5	21.9	21.5	21.5	0.5
Side-Slit Height (CF)	58.5	58.5	58.5	57.5	56.0	61.5	60.0	59.5	64.5	62.5	61.5	60.5	63.0	64.0	62.5	63.0	64.5	64.5	64.5	64.5	1.0
Pocket Length (LRS)	63.9	64.9	62.9	63.9	65.6	66.6	65.6	64.6	67.3	67.3	67.3	67.3	69.0	68.5	62.0	67.0	70.9	70.5	71.5	70.9	1.0
Pocket Width																					
Placket Width																					
Placket Length																					
Neck Rib/Collar Width																					
Cuff Width (C.W)	37.5	38.5	37.0	37.5	39.0	39.0	38.5	38.5	40.5	41.5	40.5	39.5	42.0	42.5	41.5	42.0	45.0	46.5	45.0	44.5	0.5
Front Rise (H.H)	31.8	34.8	34.8	34.8	35.2	34.2	35.2	36.2	35.6	36.6	35.6	34.6	36.0	37.5	36.0	35.5	36.8	37.8	35.8	36.8	0.5
Back Rise (H.W)	27.3	28.3	27.3	26.3	27.7	27.7	27.7	27.7	28.1	29.1	27.1	28.1	28.5	29.5	28.5	27.5	29.3	30.3	29.3	28.3	0.5
Hip Depth (B.W)	37.5	38.5	37.5	36.5	39.0	39.5	38.5	39.0	40.5	40.5	40.5	40.5	42.0	42.5	41.5	42.0	45.0	46.5	44.5	45.0	0.5
Hip Width																					
Remarks	<div style="text-align: right; margin-right: 50px;">  </div>																				

INSPECTOR _____
SUPERVISOR _____
A.P.M./P.M _____
Q.A INCHARGE _____
Q.A MANAGER _____

Fig: 3. 6 Size Measurement

Summary Analysis

GMS Composite Knitting Ind. Ltd.																						
Measurement Chart																						
Buyer ESPRI T			STYLE 129CC2J001					ORDER 129CC2J001					FACTORY GMS									
COLO R NAVY															ITEM HOODIE							
Measur e points	SIZE XS				SIZE S				SIZE M				SIZE L				SIZE XL				TOLE RANC E	
	SP E C	G M T	G M T	G M T	SP E C	G M T	G M T	G M T	SP E C	G M T	G M T	G M T	SP E C	G M T	G M T	G M T	SP E C	G M T	G M T	G M T		
Back Length	65 .9	64 .9	65 .9	65 .9	67 .6	67 .8	67 .6	66 .7	69 .3	68 .3	69 .70	68 .3	69 .3	71 .71	71 .70	70 .70	71 .5	72 .9	72 .9	72 .5	73 .3	1
Front Length	67 .7	67 .7	68 .68	67 .67	69 .5	69 .5	69 .5	69 .5	71 .2	71 .5	71 .5	70 .70	71 .5	73 .73	73 .73	73 .73	72 .5	75 .75	75 .75	74 .5	74 .5	1
Chest	50 .5	50 .5	50 .5	49 .49	52 .5	52 .5	52 .5	52 .5	53 .5	54 .5	54 .5	54 .3	54 .3	60 .60	60 .5	60 .6	64 .64	64 .64	64 .64	64 .64	64 .64	1
Bottom Width	43 .5	42 .5	43 .5	44 .44	45 .5	45 .45	46 .46	45 .45	48 .48	47 .47	47 .47	47 .5	49 .3	49 .5	48 .5	50 .50	53 .5	54 .5	53 .5	52 .5	52 .5	1
Across Should er	42 .42	42 .5	42 .42	41 .41	43 .43	42 .42	43 .43	44 .44	45 .45	44 .44	45 .45	45 .45	46 .46	46 .46	45 .45	47 .47	49 .49	49 .49	49 .49	49 .49	49 .49	1
Sleeve Length	65 .8	66 .5	65 .8	64 .9	66 .2	67 .1	66 .2	65 .5	66 .6	66 .6	66 .6	66 .6	67 .5	67 .5	67 .67	66 .5	67 .8	68 .5	47 .8	47 .9	66 .9	1
Sleeve Openin g	9. 2	9. 25	8. 25	10 .2	9. 5	9. 5	8. 5	10 .5	10 .10	10 .10	9. 7	9. 9	10 .10	10 .10	10 .10	10 .10	10 .5	10 .10	11 .11	10 .5	10 .5	0.5
U.S.W	20 .1	21 .6	20 .1	19 .6	20 .6	20 .6	20 .6	20 .6	21 .1	21 .1	22 .1	20 .1	21 .3	22 .3	21 .3	20 .3	22 .6	23 .4	22 .6	22 .7	21 .7	0.5
Arm hole	21 .9	22 .9	21 .9	20 .9	22 .4	23 .4	21 .4	22 .4	23 .5	22 .9	22 .9	22 .5	23 .4	24 .4	23 .4	22 .4	24 .4	25 .4	24 .4	23 .4	23 .4	0.5
C.F	58 .5	59 .5	58 .5	57 .5	61 .60	60 .5	60 .5	59 .5	62 .5	60 .5	61 .5	60 .5	63 .5	64 .64	62 .62	63 .63	64 .64	64 .64	64 .64	64 .64	64 .64	1
L.P.S	63 .9	64 .9	62 .9	63 .9	65 .6	66 .6	65 .6	64 .6	67 .3	67 .3	67 .3	67 .3	68 .69	68 .5	69 .69	69 .69	70 .9	70 .5	71 .5	71 .9	70 .70	1
Cuff Width	37 .5	38 .5	37 .37	37 .5	39 .39	39 .39	38 .5	38 .5	41 .5	40 .5	40 .5	39 .5	42 .42	41 .5	41 .5	42 .42	45 .45	46 .5	45 .5	44 .5	44 .5	0.5
Hood Height	34 .8	34 .8	34 .8	34 .8	35 .2	34 .2	35 .2	36 .2	36 .6	35 .6	35 .6	34 .6	36 .36	37 .37	36 .36	35 .35	36 .8	37 .8	35 .8	36 .8	36 .8	0.5
Hood Width	27 .3	28 .3	27 .3	26 .3	27 .7	27 .7	27 .7	27 .7	29 .1	28 .1	27 .1	28 .1	28 .5	29 .5	28 .5	27 .5	29 .3	30 .3	35 .8	36 .8	36 .8	0.5

Table: 3. 4 Summary Analysis

3.6 Weekly Line Quality Report in Sewing

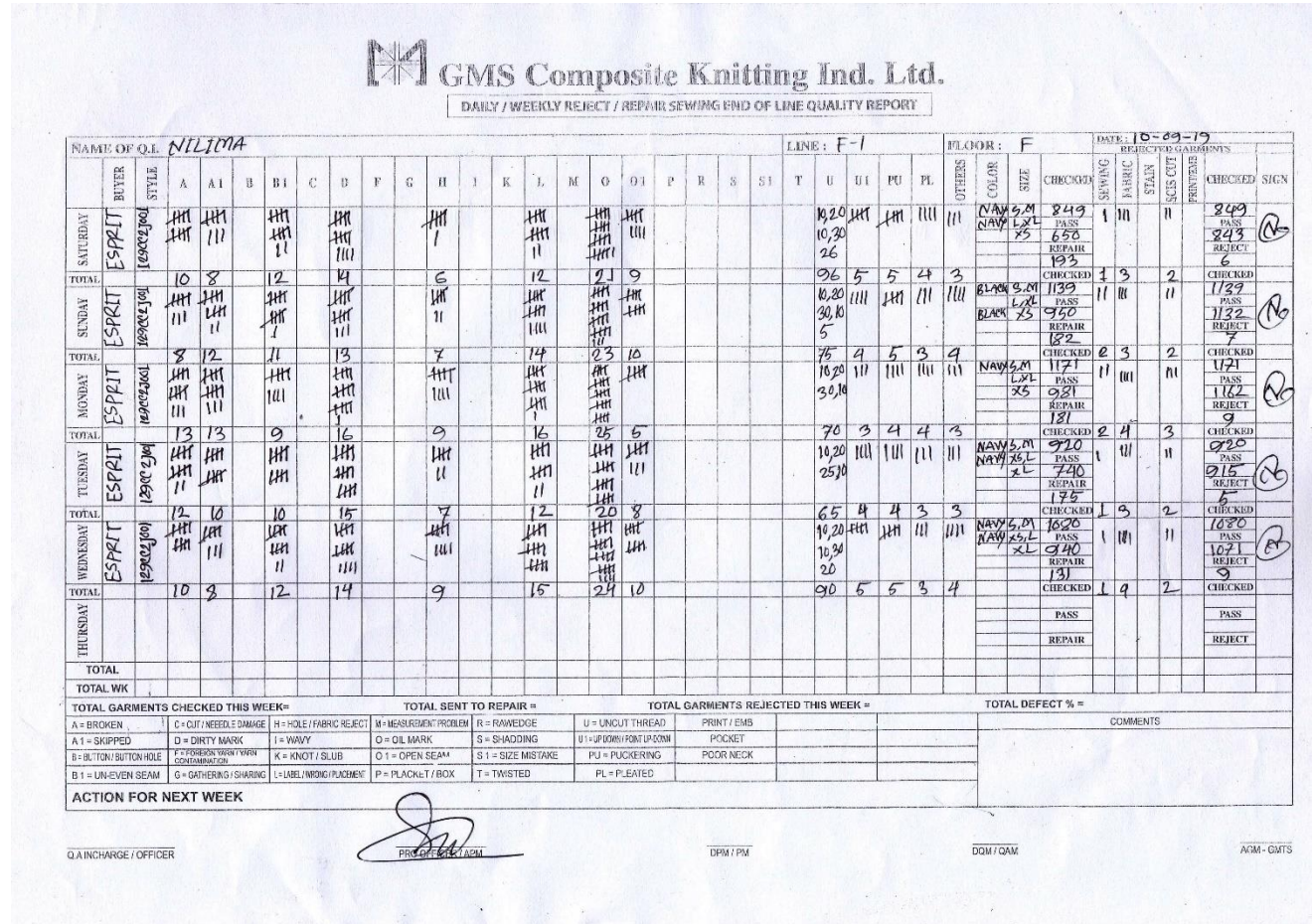


Fig: 3.7 Weekly Line Quality Report in Sewing

Summary Analysis

GMS Composite Knitting Ind. Ltd.																								
DAILY/WEEKLY/REPAIR SEWING END OF LINE QUALITY REPORT																								
NAME OF Q.I NILIMA											LINE F1				FLOOR F			REJECTED GARMENTS DATE 10-09-19						
	BUYER	STYLE	A	A1	B1	D	H	L	O	O1	U	U1	P	P1	OTHERS	COLOR	SIZE	CHECKED	SEWING	FABRIC	STAIN	SCISSOR CUT	CHECKED	SIGN
SATURDAY	ESPRIT	129CC2J001	10	8	12	14	6	12	21	9	96	5	5	4	3	NAVY	S,M,L,X,L,X,S	CHECKED 849, PASSES 650, REPAIR 193	1	3		2	CHECKED 849, PASSES 843, REJECT 7	
TOTAL			10	8	12	14	6	12	21	9	96	5	5	4	3				1	3		2		
SUNDAY	ESPRIT	129CC2J001	8	2	11	13	7	14	23	10	75	4	5	3	4	NAVY	S,M,L,X,L,X,S	CHECKED 1139, PASSES 950, REPAIR 182	2	3		2	CHECKED 1139, PASSES 1132, REJECT 7	
TOTAL			8	2	11	13	7	14	23	10	75	4	5	3	4				2	3		2		
MONDAY	ESPRIT	129CC2J001	13	3	19	16	9	16	25	5	70	3	4	4	3	BLACK	S,M,L,X,L,X,S	CHECKED 1171, PASSES 981, REPAIR 181	2	4		3	CHECKED 1171, PASSES 1162, REJECT 9	
TOTAL			13	3	19	16	9	16	25	5	70	3	4	4	3				2	4		3		
TUESDAY	ESPRIT	129CC2J001	12	0	10	15	7	12	20	8	65	4	4	3	3	NAVY	S,M,L,X,L,X,S	CHECKED 920, PASSES	1	3		2	CHECKED 920, PASSES	

																			740; REP AAI R 175					S 915' REJ ECT 5											
TOT AL			1 2	1 0	1 0	1 5	1 7	1 2	2 0	8	6 5	4	4	3	3						1	3		2											
WE DNE SDA Y	ES P RI T	129 CC 2J0 01	1 0	8	1 2	1 4	1 9	1 5	2 4	1 0	9 0	5	5	3	4			N A V Y	S,M, L,X L,X S	CHE CKE D 1080 ,PA SS 940, REP AIR 131	1	4		2						CH EC KE D 108 0,P ASS 107 1,R EJE CT 9					
TOT AL			1 0	8	1 2	1 4	1 9	1 5	2 4	1 0	9 0	5	5	3	4						1	4		2											
THU RSD AY																																			
A BROKEN, A1 SKIPPED,B1 UNEVEN SEAM, D DIRTY MARK, H HOLE, L LABEL, O OIL MARK, O1 OPEN SEAM, U UNCUT THREAD, U1 UP DOWN, PU PUCKERING, PL PLEATED																																			

Table: 3. 5 Summary Analysis

Graphical Analysis

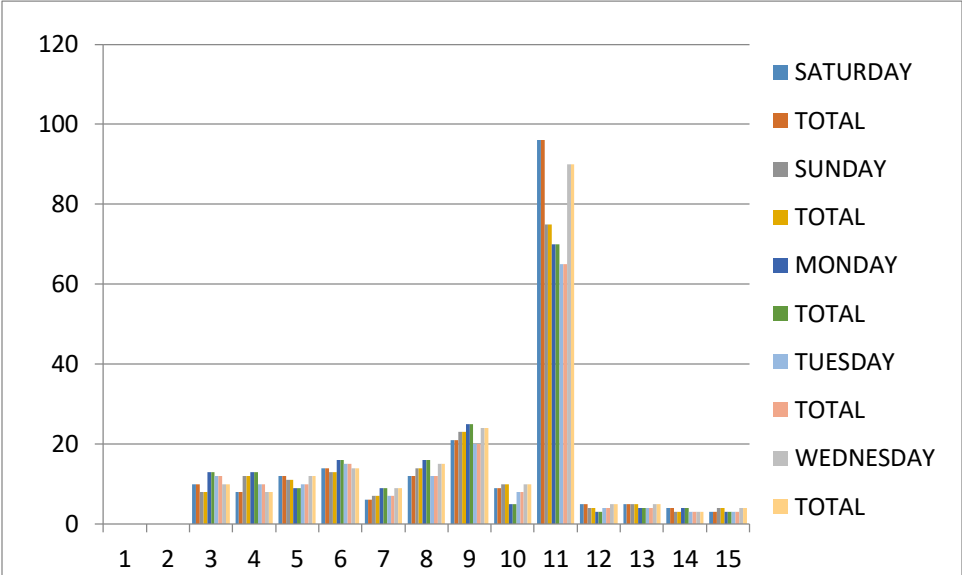


Table: 3. 6 Graphical Analysis

3.7 Breakdown and Layout Sheet



Fig: 3. 8 Breakdown & Layout Sheet of Hoodie Jacket

Summary Analysis

GMS Composite Knitting Ind. Ltd.										
BREAKDOWN AND LAYOUT SHEET										
S/L NO	OPERATION DESCRIPTION	M/C TYPE & HP	SMV	HOURLY POTENTIAL 100%	HOURLY TARGET REQUIRED MANPOWER	DAILY POTENTIAL 100%	THEORICAL REQUIRED 100%	OP	HP	REMARKS
1	POCKET HEM	3FL	0.3	200	200	2000	0.6	1		
2	MARK FOR POCKET JOIN	HP	0.3	200	200	2000	0.6		1	
3	BODY IRON	HP	0.25	240	240	2400	0.5		1	
4	POCKET JOIN,MATCH & HEM	SN	1	60	120	600	2	2		
5	POCKET RAW EDGE CUT	HP	0.6	100	200	1000	1.2		2	
6	POCKET BARTACK	BT	0.45	133	133	1333	0.9	1		
7	HOOD OUTER PART JOIN	4OL	0.3	200	200	2000	0.6	1		
8	HOOD INNER PART JOIN	4OL	0.3	200	200	2000	0.6	1		
9	INNER & OUTER PART JOIN	4OL	0.5	120	120	1200	1	1		
10	HOOD1/16T/S	SN	0.45	133	133	1333	0.9	1		
11	HOOD HOLE POSITION MARK	HP	0.3	200	200	2000	0.6		1	
12	HOOD HOLE 4 POINT	BH	0.5	120	120	1200	1	1		
13	HOOD HEM	SN	0.65	92	185	923	1.3	2		
14	DRAWSTING INSEAT	HP	0.7	86	171	857	1.4		2	
15	DRAWSTING 4 POCKET BARTACK	BT	0.5	120	120	1200	1	1		
16	HOOD INNER TACK	SN	0.25	240	240	2400	0.5	1		
17	HOOD SERVISING & MARK	3OL	0.4	150	150	1500	0.8	1		
18	BACK AND FRONT PART MATCH & SIZE STICKER ATTACH	HP	0.35	171	171	1714	0.7		1	
19	SHOULDER JOIN & FOLD	4OL	0.35	171	171	1714	0.7	1		
20	SIZE LABEL ATTACH WITH FOLDER	SN	0.22	273	273	1727	0.4	1		
21	SLEEVE PAIR & MATCH WITH BODY	HP	0.45	133	133	1333	0.9		1	
22	SLEEVE JOIN, STICKER REMOVE & FOLD	4OL	0.7	86	171	857	1.4	2		
23	HOOD MATCH WITH BODY	HP	0.22	273	273	2727	0.4		1	
24	HOOD TACK	SN	0.3	200	200	2000	0.6	1		
25	HOOD JOIN	4OL	0.5	120	120	1200	1	1		
26	BACK TAPE PIPING & CUT	SN	0.35	171	171	1714	0.7	1		
27	BACK TAPE CLOSE	SN	0.45	133	133	1333	0.9	1		
28	MAIN LABEL ATTACH	SN	0.3	200	200	2000	0.6	1		
29	CARE LABEL MAKE	SN	0.22	273	273	2727	0.4	1		
30	FLAG LABEL ATTACH	SN	0.23	261	261	2609	0.5	1		


31	SIDE SEAM	4OL	0.8	75	150	750	1.6	2		
32	CHECK & THREAD CUT	HP	0.2	300	300	3000	0.4		1	
33	CUFF MAKE	SN	0.3	200	200	2000	0.6	1		
34	CUFF SCISSORING & FOLD	HP	0.3	200	200	2000	0.6		1	
35	BOTTOM SCISSORING, MARK & FOLD	SN	0.25	240	240	2400	0.5	1		
36	BOTTOM MAKE	HP	0.35	171	171	1714	0.7	2	1	
37	BOTTOM JOIN, THREAD CUT & FOLD	4OL	0.7	86	171	857	1.4	2		support cuff join
38	CUFF JOIN, THREAD CUT	4OL	0.7	86	171	857	1.4			
39	FINAL THREAD CUT & FOLD	HP	0.3	200	200	2000	0.6		1	
						Total		33	14	

Table: 3. 7 Summary Analysis

3.8 Fabric 4 Point Inspection

Buyer: Kariban

GMS QA - 008K



GMS Composite Knitting Ind. Ltd.
Sardaganj, Kashimpur, Gazipur-1346.

4 Point System Grey Fabric Inspection Report

Formula : $\frac{\text{Roll Points} \times 100}{\text{Roll Length} \times \text{Fab. width}}$

F.Dia - 2.28
F.GSM - 250

Penalty Points are assign according to size of defect

Length of Defect	Penalty Points
Less than 3 Inch	1 Points
3 Inch to 6 Inch	2 Points
6 Inch to 9 Inch	3 Points
More than 9 Inch	4 Points
Hole must be Penalty	4 Points
A Maximum of 4 Points is scored to 1 linear Yards	
Acceptable points individual roll 28 points	

Date of Inspection :

Supplier Name		Buyer Name:	KARIBAN	Order No.	K-489
Fab. Description	Fleece	Yarn Count/Lot No.		Color	NAVY

Fabric Defects Description & Code	M/C No.: 12134 Roll No. 9				M/C No.: 10934 Roll No. B				M/C No.: 12134 Roll No. 6						
	FL.	Defect Point				FL.	Defect Point				FL.	Defect Point			
		1	2	3	4		1	2	3	4		1	2	3	4
A Oil Spot															
B Fly Yarn	10	A'				10	A'				10	B'			
C Black Spot		A''					B''								D''
D Knots	20	B''				20					20	A''			I''
E Think & thin yarn											30	A'			
F Contamination	30				M''	30				I'					
G Lycra out / Damage											40				
H Missing Yarn	40				U'	40				N''					
I Pin Hole															
J Sinkers Mark	50					50									
K Needle Mark															
L Wheel Mark	60					60									
M Star Hole															
N Slub	70					70									
O Stripe Height Unequal															
P Yarn Patta	80					80									
Q Machine Patta															
R Yarn Mistake	90					90									
S Neps / Hairiness															
T Color Spot	100					100									
U Other Defect															
Grey Swatch	Ttl.	17				Ttl.	16				Ttl.	16			
		17 x 100					16 x 100					16 x 100			
		83.66 x 2.28					80.86 x 2.28					83.66 x 2.28			
		Points/100 sq Meter=8.9					Points/100 sq Meter=9.62					Points/100 sq Meter=8.98			
		Qty. Rolls in This Lot 12:													
		Qty. Rolls Checked 9:													
		Average Points 8.65:													
		Inspection Result:													
		Comments part:													

Inspected by

Sohel
Officer (Q.A.D)

M.G.R. Knitting

M.G.R. Q.A.D.

Fig: 3.9 Fabric 4 point Inspection

Summary Analysis

GMS Composite Knitting Ind. Ltd.																			
4 POINT SYSTEM GREY FABRIC INSPECTION REPORT																			
FORMULA=ROLL POINTS*100/ROLL LENGTH*FABRIC WIDTH																			
BUYER KARIBAN								ORDER K489											
FABRIC FLEECE								COLOR NAVY											
Fabric Defects Description & Code		Machine no 1109				Machine no 1109				Machine no 1109									
		Roll no 1				Roll no 5				Roll no 6									
		FL.	Defect point			FL.	Defect point			FL.	Defect Point								
A	Oil spot		1	2	3	4		1	2	3	4		1	2	3	4			
B	Fly Yarn		A^3					B^3					B^1						
C	Black Spot		B^2					A^1					A^3						
D	Knots															D^2			
E	Thick & Thin Yarn																		
F	Contamination																		
G	Damage																		
H	Missing Yarn																		
I	Pin Hole										I^1					I^1			
J	Sinker Mark																		
K	Needle Mark																		
L	Wheel Mark																		
M	Star Hole					M^2													
N	Slub										N^2								
O	Stripe Height Unequal																		
P	Yarn Patta																		
Q	Machine Patta																		
R	Yarn Mistake																		
S	Neps																		
T	Color Spot																		
U	Other Defect					U^1													
		Total	17						Total	16						Total	16		
		17*100						16*100						18*100					
		83.66*2.28						80.86*2.28						81*2.28					
		Points/100 sq Meter=8.9						Points /100 sq meter=8.65						Points/100 sq meter=9.75					
		Qty. Rolls in This lot 12																	
		Qty. Rolls Checked 3																	

		Average Points 8.65												
		Inspection Result pass												

Table: 3. 8 Summary Analysis

3.9 Daily Cut Panel Rejection

					DATE
					4.9.19
					3.9.19
					2.9.19
					1.9.19
					CUTTING NO
					LOT NO
					CUTTING QTY
					SLUB/NEPS
					STRIPE/BARRE/THICK & THIN
					YARN CONTAMINATION
					SUB TOTAL
					LINE STAR/KNOT
					SINKER/DIA/NEEDLE MARK
					KNITTING HOLE/LOOP
					LYCRA/YARN MISSING
					DROP NEEDLE/PATTA
					SUB TOTAL
					DYEING HOLES/TRON
					DYEING SPOT/SOFTNER SPOT
					CREASE MARK/ABRASION
					BAIS/OFF GRAIN
					UNEVEN DYEING/RUNNING SHADE
					OIL/GREES SPOT
					DIRTY/SOIL SPOT
					SUB TOTAL
					MISS PRINT / DOT PRINT
					PRINT SHADE CHANGE
					SALVAGE SIDE NOT CUT
					AOP IN SIDE COLOUR PASS
					UNEVEN AOP
					SUB TOTAL
					UNEVEN SHAPE
					MEASUREMENT LESS & PLUS
					BOTH SIDE NOT EVEN
					UNEVEN PARTS
					ANY MISTAKE
					SUB TOTAL
					TOTAL CHECK QTY
					TOTAL QC PASS
					TOTAL REJECT QTY
					TOTAL REJECTS WITH %

QA Department:
BUYER: ESPRIT

STYLE: 1290027001

S/R:

COLOUR:

DIA:

GSM:

Daily Cut Panel Rejection Monitoring List

BOI GMS Composite Knitting Ind. Ltd.
Sardagoni, Kashimpur, Gazipur

Order Qty.:

QA SUPERVISOR

QA INCHARGE

QA OFFICER

APM/PM

AQM/QM

Fig: 3.10 Daily Cut Panel Rejection

Summary Analysis

DAILY CUT PANEL REJECTION																																					
		YARN FAULT				KNITTING FAULTS				DYEING FINISHING				AND		AOP				CUTTING DEFECT																	
DATE	CUTTING NO	LOT NO	CUTTING QTY	SLUR/NEPS	STRIPE/BARRE/THICK&THIN	YARN CONTAMINATION	SLUR TOTAL	LINE START	SINKER/DIA/NEEDLE MARK	KNITTING HOLE/LOOP	LYCRA/YARN MISSING	DROP NEEDLE/PATTA	SLUR TOTAL	DYEING HOLES/TRON	DYEING SPOT/SOETNER SPOT	CREASE MARK/ABRASSION	BAIS/OFF GRAIN	LINEVEN DYEING/RUNNING SHADE	OIL SPOT	DIRTY/ SOIL SPOT	SLUR TOTAL	MISS PRINT/DOT PRINT	PRINT SHADE CHANGE	SEL WEDGE SIDE NOT CUT	AOP IN SIDE COLOR PASS	LINEVEN AOP	SLUR TOTAL	LINEVEN SHAPE	MEASUREMENT LESS & PLUS	BOTH SIDE NOT EVEN	LINEVEN PARTS	ANY MISTAKE	SLUR TOTAL	TOTAL CHECK QTY	TOTAL OC PASS	TOTAL REJECT QTY	TOTAL REJECT WITH%
1 . 0 9 . 1 9			3 7 5 0	4 4	3 5		7 9	3 4	3 5	1 6		9 5	9 9		3 3		4			3 0	7 6						9	1 4	1 6		4 4	3 3	5 5	3 2	3 7	7 . 9 2 %	
2 . 0 9 . 1 9			4 0 0 0	4 0	3 6		7 6	3 2	3 4	1 4		9 6	2 2	3 1	1 1	3 3				2 7	6 4						7	9 3	1 3		3 3	0 3	0 3	4 6	3 4	7 . 6 7 %	
3 . 0 9 . 1 9			4 0 0 0	4 6	3 2		7 8	3 6	3 1	1 0		5 5	8 5	4 4	2 8	4 4	3 3			2 5	6 4						7	1 1	1 4		3 3	0 0	0 1	4 6	3 6	6 . 8 6 %	
4 . 0 9 . 1 9			3 8 0 0	4 8	3 2		8 0	3 3	3 0	1 2		4 1	8 6		2 8	3 3	2 2			2 0	5 9						8	9 3	1 3		3 1	8 0	0 2	3 5	1 1	6 . 9 1 %	

Table: 3. 9 Summary Analysis

3.10 Size Measurement

GMS Composite Knitting Ind. Ltd. GMS QA 0354 SE

Measurement Chart
মেজারমেন্ট চার্ট

Buyer: KARIBACH Style: K-489 Order: K-489 Date: _____
 Item: NAVY Factory: GMS Item: HOODIE

Measure Points	SIZE: <u>X S</u>				SIZE: <u>S</u>				SIZE: <u>M</u>				SIZE: <u>L</u>				SIZE: <u>XXL</u>				TOLERANCE
	SPEC	GMT	GMT	GMT	SPEC	GMT	GMT	GMT	SPEC	GMT	GMT	GMT	SPEC	GMT	GMT	GMT	SPEC	GMT	GMT	GMT	
Back Length	65.90	65.90	64.95	65.96	67.60	66.70	67.60	67.80	69.30	67.30	69.00	68.31	71.00	70.00	71.00	71.50	72.90	72.50	72.90	73.90	1.00
Front Length	67.75	67.00	67.75	68.00	69.50	69.50	69.50	69.50	71.25	70.25	71.25	71.50	73.00	72.50	73.00	73.50	75.00	74.50	75.00	75.50	1.00
Chest	50	49.5	50	50.5	52	52	52.5	52.5	54	53.5	54	53.5	60	55.50	60	60.5	64	64	64	64	1.00
Bottom Width	43.50	44.00	43.50	42.5	45.5	46.00	45.5	45.0	47.50	47.00	47.5	48.00	49.50	50.00	49.5	48.5	53.5	52.5	53.5	54.5	1.00
Across Shoulder	42.00	41.5	42.00	42.5	43.5	44.00	43.5	42.5	45.00	44.5	45.00	45.5	46.50	45.5	46.5	47	49.5	49.5	49.5	47.5	1.00
Shoulder Width																					
Sleeve Length	65.8	64.9	65.8	66.5	66.2	65.5	66.2	67.5	66.6	66.6	66.6	66.6	67.00	66.5	67.00	67.5	67.8	66.9	67.8	68.5	1.00
Sleeve Opening (RLX)	9.2.5	8.2.5	9.2.5	10.2.5	9.5	8.5	9.5	10.5	9.7.5	9.0	9.7.5	10.0	10.0	10.0	10.0	10.0	10.5	10.0	10.5	11.0	0.5
Waist (L.S.W)	20.10	10.6	20.10	21.6	20.6	20.6	20.6	20.6	21.1	20.1	21.1	22.1	21.3	20.3	21.3	22.3	22.6	21.7	22.6	23.4	0.5
Arm Hole	21.9	20.9	21.9	22.9	22.4	21.4	22.4	23.4	22.9	22.5	22.9	23.5	23.4	22.4	23.4	24.4	24.4	24.4	23.4	24.4	0.5
Neck Circumference																					
Neck Point																					
Neck Drop																					
Chest Width	19.8	19.5	19.8	20.5	20.2	20.2	20.2	20.2	20.6	19.6	20.6	21.6	24.00	23.5	24.0	24.5	21.8	21.5	21.8	22.5	0.5
Sleeve Blt Height	58.5	58.5	58.5	59.5	60.0	59.5	60.00	61.5	61.5	60.5	61.5	62.5	63.00	62.00	62.5	64.00	64.5	64.5	64.5	64.5	1.00
Pocket Length	63.9	63.9	63.9	64.9	65.6	64.6	65.6	66.6	67.30	67.30	67.3	67.3	69.00	69.00	68.5	70.0	70.9	70.5	70.9	71.5	1.00
Pocket Width																					
Placket Width																					
Placket Length																					
Neck Rib/Collet Width																					
Cuff Width	37.5	37.5	37.0	38.5	39.0	38.5	39.0	39.5	40.5	39.5	40.5	41.5	42.00	42.00	41.5	42.5	45.0	44.5	45.0	46.5	0.5
Front Rise	34.8	34.8	34.8	34.8	35.2	35.2	34.2	36.2	35.6	34.6	35.6	36.6	36.0	35.5	36.0	37.5	36.8	36.8	35.8	37.8	0.5
Back Rise	27.3	26.3	27.3	28.3	27.7	27.7	27.7	27.7	28.10	28.1	27.1	29.1	28.5	27.5	28.5	29.5	29.3	29.3	29.3	30.3	0.5
Hip Depth	37.5	36.5	37.5	38.5	39.00	39.0	38.5	39.5	40.5	40.5	40.5	40.5	42.00	42.0	41.5	42.5	44.5	44.5	44.5	46.5	0.5
Hip Width																					
Remarks																					

[Signature]

INSPECTOR SUPERVISOR A.P.M./P.M Q.A INCHARGE Q.A MANAGER


Fig. 3. 11 Size Measurement

Summary Analysis

GMS Composite Knitting Ind. Ltd.																							
Mesurement Chart																							
Buyer KARIB AN			STYLE K489					ORDER K489					FACTORY GMS										
COLOR NAVY																							
Measure points	SIZE XS				SIZE S				SIZE M				SIZE L				SIZE XL				TOLE RANC E		
	SP E C	G M T	G M T	G M T	SP E C	G M T	G M T	G M T	SP E C	G M T	G M T	G M T	SP E C	G M T	G M T	G M T	SP E C	G M T	G M T	G M T			
Back Length	65 .9	66	65	66	67 .6	67	68	67 .8	69 .3	69	69	68	71	70	71	72	73	73	73	73	1		
Front Length	67 .7 5	67	.8	68	69 .5	70	70	69	71 .2	70	71	72	73	73	73	74	75	75	75	75	1		
Chest	50	50	50	51	52	52	53	52 .5	54	55	54	54	60	56	60	61	64	64	64	64	1		
Bottom Width	43 .5	44	.5	43	45 .5	46	46	45	47 .5	47	48	48	50	50	50	49	54	53	54	55	1		
Across Shoulde r	42	42	42	43	43 .5	44	44	42 .5	45	45	45	46	47	46	47	47	50	50	50	50	1		
Sleeve Length	65 .8	65	.8	67	66 .2	66	66	67 .1	66 .6	67	67	67	67	67	67	68	68	67	68	69	1		
Sleeve Opening	9. 2	8. 3	9. 25	10	9. 5	8. 5	9. 5	10 .3	9. 75	9	9. 7	10	10	10	10	10	11	10	11	11	0.5		
U.S.W	20 .1	20	.1	22	20 .6	21	21	20 .6	21 .1	20	21	22	21	20	21	22	23	22	21	23	0.5		
Arm hole	21 .9	21	.9	23	22 .4	21	22	23 .4	22 .9	23	23	24	23	22	23	24	24	23	24	25	0.5		
C.F	58 .5	58	.5	60	60 .5	60	60	61 .5	61 .5	61	62	63	63	63	63	64	65	65	65	65	1		
L.P.S	63 .9	64	.9	65	65 .6	65	66	66 .6	67 .3	67	67	67	69	69	69	70	71	71	71	72	1		
Cuff Width	37 .5	38	37	39	39 .5	39	39	39 .5	40 .5	40	41	42	42	42	42	43	43	45	45	47	0.5		
Hood Height	34 .8	35	.8	35	35 .2	35	34	36 .2	35 .6	36	35	36	36	36	36	38	37	37	36	38	0.5		
Hood Width	27 .3	26	.3	28	27 .7	28	28	27 .7	28 .1	28	27	29	29	28	29	30	29	28	29	30	0.5		

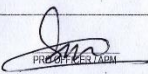
Table: 3. 10 Summary Analysis

3.11 Weekly Line Quality Report in Sewing


GMS Composite Knitting Ind. Ltd.
 DAILY / WEEKLY REJECT / REPAIR SEWING END OF LINE QUALITY REPORT

NAME OF O.I.		LINE: F-2																				FLOOR: F		DATE: 22-10-19												
BUYER	STYLE	A	A1	B	B1	C	D	F	G	H	I	K	L	M	O	O1	P	R	S	S1	T	U	UI	PU	PL	OTHERS	COLOR	SIZE	CHECKED	SEWING	FABRIC	STAIN	SCAS CUT	FRONT/BACK	CHECKED	SGN
SATURDAY	KARIBAY K489																					2,3					NAVY S.M	XL	834	1					834	
TOTAL		9	16	9	18				6			12	20	11								20,5	4	3	3	4	CHECKED		1	3	2			834		
SUNDAY	KARIBAY K489																					20,5					NAVY S.M	XL	854	1			1		854	
TOTAL		12	19	13	24				5			9	26	9								10,6	3	3	5	4	CHECKED		2	2	1			854		
MONDAY	KARIBAY K489																					10,30					NAVY S.M	XL	824	1			1		824	
TOTAL		11	9	11	15				7			9	22	11								10,30					CHECKED		1	4	2			824		
TUESDAY	KARIBAY K-489																					20,5					NAVY	XL	800	1			1		800	
TOTAL		16	15	10	20				6			10	20	10								10,30	3	4	4	3	CHECKED		2	3	2			800		
WEDNESDAY	KARIBAY K-489																					10					NAVY S.M	XL	600	1			1		600	
TOTAL		9	18	9	24				5			10	20	11								20,20					CHECKED		2	3	1			600		
THURSDAY																																				
TOTAL																																				
TOTAL WK																																				
TOTAL GARMENTS CHECKED THIS WEEK =		TOTAL SENT TO REPAIR =										TOTAL GARMENTS REJECTED THIS WEEK =										TOTAL DEFECT % =		COMMENTS												
A = BROKEN		C = CUT / NEEDLED DAMAGE			H = HOLE / FABRIC REJECT			M = MEASUREMENT PROBLEM			R = RAWEDGE			U = UNCUT THREAD			PRINT / EMB																			
A1 = SKIPPED		D = DIRTY MARK			I = WAVY			O = OIL MARK			S = SHADING			U1 = UPDOWN / PORT / DOWN			POCKET																			
B = BUTTON / BUTTON HOLE		F = FOREIGN / WAX / WAX / COOL / MARKER			K = KNOT / SLUB			O1 = OPEN SEAM			S1 = SIZE MISTAKE			PU = PUCKERING			POOR NECK																			
B1 = UN-EVEN SEAM		G = GATHERING / SHARING			L = LABEL / WRONG PLACEMENT			P = PLACKET / BOX			T = TWISTED			PL = PLEATED																						
ACTION FOR NEXT WEEK																																				

QA INCHARGE / OFFICER


 PROOF / MERTAM

DPM / PM

DQM / QAM

AGM - GMTS

Fig: 3. 12 Weekly Line Quality Report in Sewing

Summary Analysis

GMS Composite Knitting Ind. Ltd.																							
DAILY/WEEKLY/REPAIR SEWING END OF LINE QUALITY REPORT																							
NAME OF Q.I RASEL										LINE F2				FLOOR F				REJECTED DATE 22-10-19		GARMENTS			
BU YE R	S T Y L E	A	A I	B I	D	H	L	O	O I	U	U I	P U	P L	OT HE RS	CO LO R	SIZ E	CHE CKE D	SE WI N G	F A B R I C	S T A I N	S C I S C U T	CH EC KE D	S I G N
SAT URD AY	KARIBAN	K489	9	16	9	18	6	2	0	1	6	4	3	3	4		NAVY	S,M,L,X				CH EC KE D 834, PAS S 650, REJ EC T 6	
TOTAL			9	16	9	18	6	2	0	1	6	4	3	3	4			1	3		2		
SUN DAY	KARIBAN	K489	12	19	3	24	5	9	6	9	7	0	5	3	5	4	NAVY	S,M,L,X			1	CH EC KE D 854, PAS S 650, REJ EC T 5	
TOTAL			12	19	3	24	5	9	6	9	7	0	5	3	5	4		2	2		1		
MON DAY	KARIBAN	K489	11	9	1	19	7	9	2	1	8	0	4	4	4	3	OXFORD GREY	S,M,L,X			1	CH EC KE D 594, PAS S 400, REJ EC T 7	
TOTAL			11	9	1	19	7	9	2	1	8	0	4	4	4	3		2	2		1		
TUE SDA Y	KARIBAN	K489	10	15	1	20	6	0	0	1	6	5	3	4	4	3	NAVY	S,M,L,X			2	CH EC KE D 920,	
TOTAL			10	15	1	20	6	0	0	1	6	5	3	4	4	3		2	3		2		

																	PASS 800; REP AAI R 115					798, PAS S 791' REJ EC T 7								
TOTAL			10	15	10	20	6	10	20	10	65	3	4	4	3				2	3			2							
WEDNESDAY	KARIBAN	K489	9	19	9	24	5	10	20	10	80	5	5	3	4	N A V Y	S,M, L,X L,X S	CHECKED 798, PAS S 600, REP AIR 191	2	3			1				CHECKED 798, PAS S 791, REJ EC T 7			
TOTAL			9	18	9	24	5	10	20	10	80	5	5	3	4				2	3			1							
THURSDAY																														
A BROKEN, A1 SKIPPED, B1 UNEVEN SEAM, D DIRTY MARK, H HOLE, L LABEL, O OIL MARK, O1 OPEN SEAM, U UNCUT THREAD, U1 UP DOWN, PU PUCKERING, PL PLEATED																														

Table: 3. 11 Summary Analysis

Graphical Measurement

X = Days

Y= Number of faults

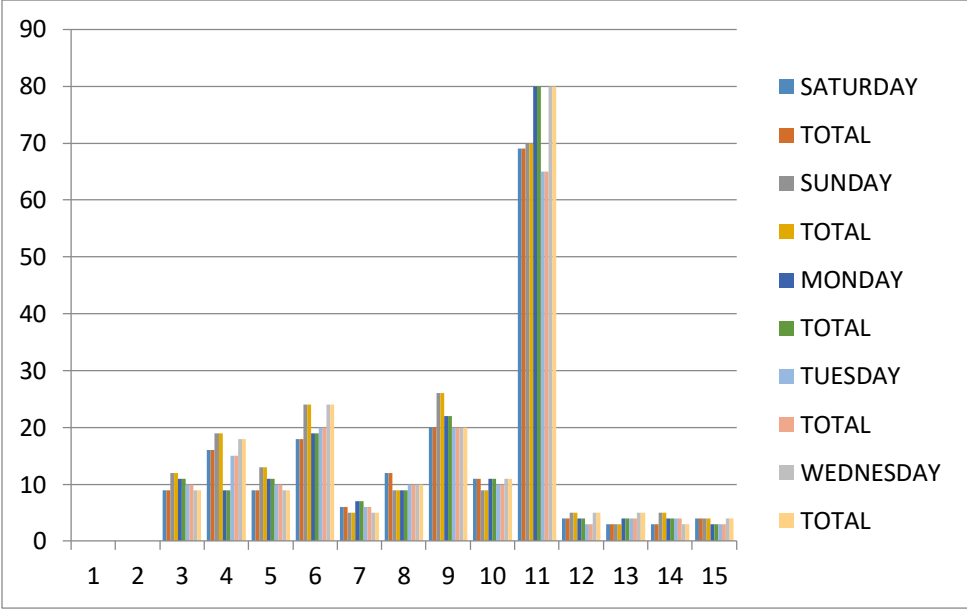


Table: 3. 12 Graphical Measurement

3.12 Breakdown & Layout Sheet of Hoodie Jacket

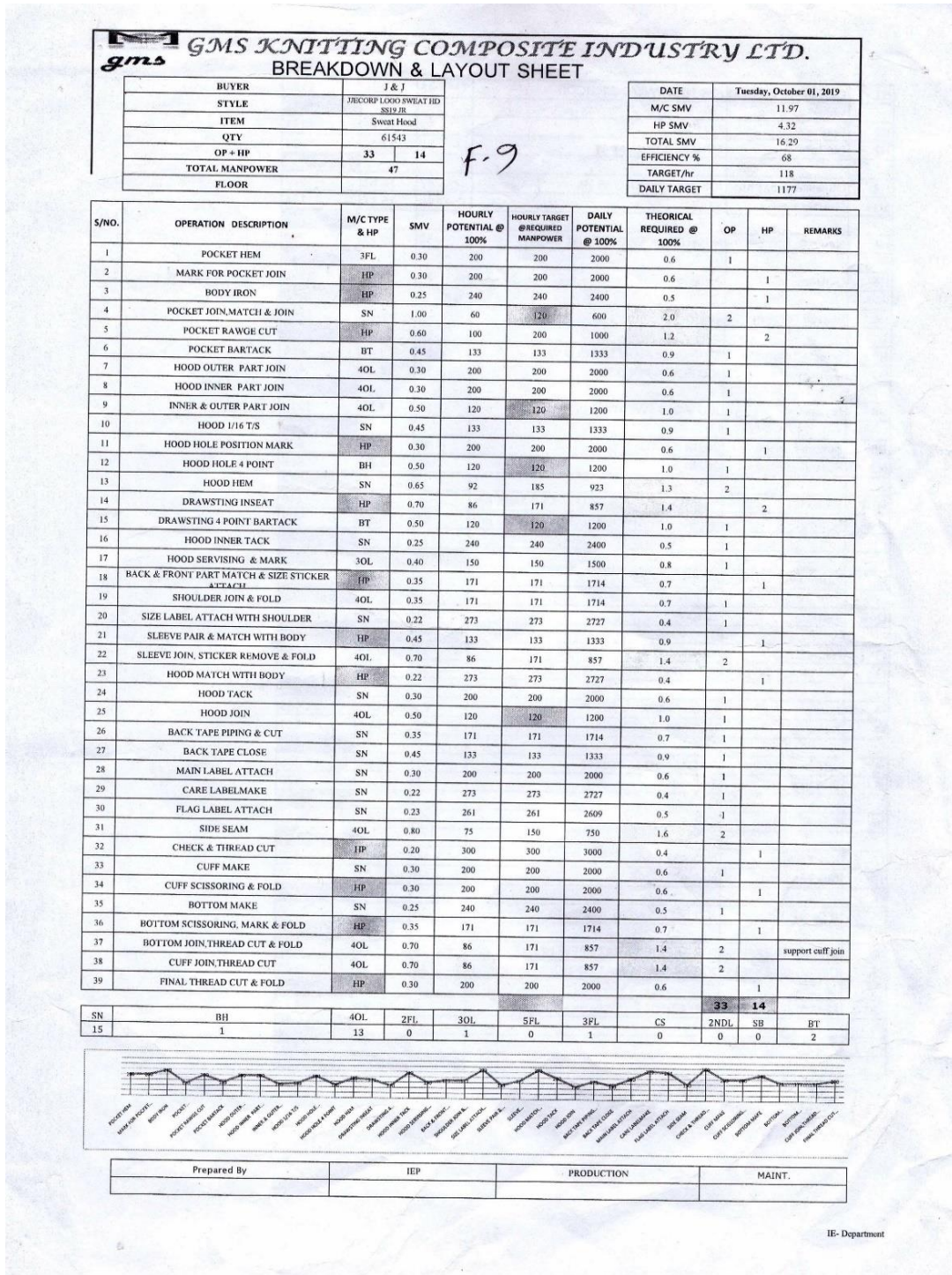


Fig: 3. 13 Breakdown & Layout Sheet of Hoodie Jacket

Summary Analysis

GMS Composite Knitting Ind. Ltd.										
BREAKDOWN AND LAYOUT SHEET										
S/L NO	OPERATION DESCRIPTION	M/C TYPE & HP	SM V	HOURLY POTENTIAL 100%	HOURLY TARGET , REQUIRED MANPOWER	DAILY POTENTIAL 100%	THEORETICAL REQUIRED 100%	O P	H P	REMARKS
1	POCKET HEM	3FL	0.3	200	200	2000	0.6	1		
2	MARK FOR POCKET JOIN	HP	0.3	200	200	2000	0.6		1	
3	BODY IRON	HP	0.25	240	240	2400	0.5		1	
4	POCKET JOIN, MATCH & HEM	SN	1	60	120	600	2	2		
5	POCKET RAW EDGE CUT	HP	0.6	100	200	1000	1.2		2	
6	POCKET BARTACK	BT	0.45	133	133	1333	0.9	1		
7	HOOD OUTER PART JOIN	4OL	0.3	200	200	2000	0.6	1		
8	HOOD INNER PART JOIN	4OL	0.3	200	200	2000	0.6	1		
9	INNER & OUTER PART JOIN	4OL	0.5	120	120	1200	1	1		
10	HOOD1/16T/S	SN	0.45	133	133	1333	0.9	1		
11	HOOD HOLE POSITION MARK	HP	0.3	200	200	2000	0.6		1	
12	HOOD HOLE 4 POINT	BH	0.5	120	120	1200	1	1		
13	HOOD HEM	SN	0.65	92	185	923	1.3	2		
14	DRAWSTING INSEAT	HP	0.7	86	171	857	1.4		2	
15	DRAWSTING 4 POCKET BARTACK	BT	0.5	120	120	1200	1	1		
16	HOOD INNER TACK	SN	0.25	240	240	2400	0.5	1		
17	HOOD SERVICING & MARK	3OL	0.4	150	150	1500	0.8	1		
18	BACK AND FRONT PART MATCH & SIZE STICKER ATTACH	HP	0.35	171	171	1714	0.7		1	
19	SHOULDER JOIN & FOLD	4OL	0.35	171	171	1714	0.7	1		
20	SIZE LABEL ATTACH WITH FOLDER	SN	0.22	273	273	1727	0.4	1		
21	SLEEVE PAIR & MATCH WITH BODY	HP	0.45	133	133	1333	0.9		1	
22	SLEEVE JOIN, STICKER REMOVE & FOLD	4OL	0.7	86	171	857	1.4	2		
23	HOOD MATCH WITH BODY	HP	0.22	273	273	2727	0.4		1	
24	HOOD TACK	SN	0.3	200	200	2000	0.6	1		
25	HOOD JOIN	4OL	0.5	120	120	1200	1	1		
26	BACK TAPE PIPING & CUT	SN	0.35	171	171	1714	0.7	1		

27	BACK TAPE CLOSE	SN	0.4 5	133	133	1333	0.9	1		
28	MAIN LABEL ATTACH	SN	0.3	200	200	2000	0.6	1		
29	CARE LABEL MAKE	SN	0.2 2	273	273	2727	0.4	1		
30	FLAG LABEL ATTACH	SN	0.2 3	261	261	2609	0.5	1		
31	SIDE SEAM	4OL	0.8	75	150	750	1.6	2		
32	CHECK & THREAD CUT	HP	0.2	300	300	3000	0.4		1	
33	CUFF MAKE	SN	0.3	200	200	2000	0.6	1		
34	CUFF SCISSORING & FOLD	HP	0.3	200	200	2000	0.6		1	
35	BOTTOM SCISSORING, MARK & FOLD	SN	0.2 5	240	240	2400	0.5	1		
36	BOTTOM MAKE	HP	0.3 5	171	171`	1714	0.7	2	1	
37	BOTTOM JOIN, THREAD CUT & FOLD	4OL	0.7	86	171	857	1.4	2		support cuff join
38	CUFF JOIN, THREAD CUT	4OL	0.7	86	171	857	1.4			
39	FINAL THREAD CUT & FOLD	HP	0.3	200	200	2000	0.6		1	
						Total		3 3	1 4	

Table: 3. 13 Summary Analysis

Chapter IV
DISCUSSION OF RESULT

4.1 Discussion on Fabric 4 Point Inspection

Fabric 4 point inspection is a widely used method for inspection fabric in garments industry. Different types of fabric defects are found in different types of fabric. For producing better quality garments fabric should be fault free. To identify fabric faults and proper steps for minimizing fabric faults this process is done after fabric production. Fabric defects in woven fabric Slubs, hole, missing yarn, conspicuous yarn variation, end out, soiled yarn, wrong yarn. Fabric defects in knitted fabric Mixed yarn, yarn variation, runner, needle line, barre, slub, hole etc. It is named 4 point system because no more than 4 penalty points is assigned in this method. After weaving or knitting fabric rolls are considered pass or fail under 4 point fabric inspection method.

In this method penalty points are calculated by the following formula

Points / 100 sq. yd. = (Total points in roll * 36 * 100)/ (Fabric length in yards * Fabric width in inches)

After calculation of total defects point per 100 square yards then decision is taken whether the rolls will be passed or rejected.

Normally fabric roll containing 40 points per 100 square yard are acceptable and the fabric roll contains more than 40 points considered as rejected roll.

4.2 Discussion on Fabric Cut Panel rejection

Cutting is the first process for garments manufacturing. The purpose of cutting is to cut the different parts for making a specific garments. In garments manufacturing process for making a garment different parts of a garments are cut separately and attached them by sewing. Fabric is cut both manual and mechanical methods. During cutting of fabric different types faults are found which come from different process like knitting, dyeing, printing etc. Some faults can be rectified and some faults considered as rejection. In cutting section these faults are called as cut panel rejection. Cut panel rejection is calculated on the basis of daily or weekly report. Different rolls of fabric are cut to produce specific style of garments. After cutting different parts of garments different parts are checked by quality checking operators. Then different faults are marked which come from different section. In daily cut panel rejection sheet daily rejected faults are listed.

According to number of faults it is calculated the rejection percentage on basis of total fabric piece are cut. To know the accuracy, weekly cut panel rejection sheet is prepared to compare among different rolls of fabric. If the rejection rate is excess then the authority try to find out the reasons for excess amount of rejection

4.3 Discussion on Size Measurement

To make a complete fit garment size is very important. For this reason perfect measurement guidelines must be needed. Measurement specification mainly comes from the buyer. Measurement is also needed to reduce production cost. Measurement is taken on the basis of standard body measurement of specific governments.

Important measurement points

Back Length: The measurement from high point shoulder to bottom end of garment.

Shoulder: The measurement from shoulder point to shoulder point.

Chest: The measurement 2cm below under arm, width from one end to other end.

Waist: The measurement across front, from one end to other end.

Bottom: The measurement straight across bottom edge of garment one end to other end

Center Back Sleeve Length: The measurement from center back neck to shoulder point.

After producing a complete garment size measurement is checked. Buyers provide some tolerance in different operations. This tolerance is applicable for different joining. If the measurement of manufactured parts fail the tolerance these parts are tried to rectified. If rectification is not possible it is considered as reject product.

4.4 Daily Line Quality

Quality of garments is very important to consumers. For this reason buyers want best quality within their offering price. Quality means standard which is accepted by customers. Quality goods satisfied customers that's why buyers always keep focus on quality goods. To have quality the goods should have proper durability, reliability, aesthetic properties etc. To ensure quality goods manufacturer follows some inspection that's why they are able to find out different types of faults

during manufacturing of a specific garments. Inspection is defined as visual check after different process. Inspection is done to control the quality of garments by checking different types of operations. Inspection is done by checking of the fabrics of garments, sewing, button, thread, zipper, measurements of garments etc. At first defect should be identified then have to inform the concerned authority then the causes of defects are identified and finally the defects are rectified. In sewing floor daily quality report are made by authorized people. Different types and number of faults are recorded on this report.

4.5 Discussion on Breakdown and Layout of Hoodie Jacket

It means appropriate approximate value of different operation include of machine type, SMV, approximate power manpower required to make a Hoodie Jacket. It shows different operation SMV separately. It is followed to calculate the number of manpower, number of required line based on daily working hour etc. SMV is most important to make the specific garments within scheduled time.

SMV: It refers to Standard Minute Value. It is a well-known term in sewing floor. Production rate is calculated by SMV. It provide estimate value for making a garment.

SMV is calculated by the following formula

$$\text{SMV} = \text{Basic time} + \text{Allowance}$$

$$\text{Basic time} = \text{Observed time} \times \text{Rating} / 100$$

Rating= the pace or speed of operation at which the operator is performing the job.

Standard Minute Value varies from garments to garments. It depends on types of fabrics, garments size, garments design, types of machine, types of technology etc.

SMV for different Garments

Garments	SMV
Hoodie Jacket	16-20'
Jeans pant	12-15'
Athletic knit shirt	2-3'
T-shirt	4-5'

Men's polo shirt	12-15'
Men's brief	2-3'

Table: 4. 1 SMV for different Garments

In breakdown, what types of machine required for sewing of different parts of specific garments is shown. In garments manufacturing various types of sewing machines are required for various operation.

Chapter V

Conclusion

5.1 Conclusion

This project deals with the manufacturing process of Hoodie Jacket. To make this project different data and information are collected from GMS COMPOSITE INDUSTRIES LTD. To make Hoodie Jacket generally fleece or terry fabric are used. Generally 250 to 300 GSM are used in Hoodie Jacket Manufacturing. Here we have discussed the processes to make Hoodie Jacket like knitting, cutting, sewing data and information. Fabric inspection, sewing inspection are also discussed here. For fabric inspection generally 4 point inspection system are used here we have discussed about 4 point inspection system and we discussed how a fabric roll get pass or reject. It is done in knitting section. The fabric rolls which get pass in 4 point inspection system are sent to dyeing section and printing section if required. Then fabric are sent to cutting section. In cutting section fabric is cut both manual and mechanical process. In cutting section, cut panel rejection are counted. Cut panel rejection may occur due to various reasons here we have discussed how to minimize cut panel rejection. By taking some specific precautions it can be controlled to minimize cut panel rejection. Different requirements should be taken in both manual and mechanical system. After cutting of different parts cut fabric are sorted and bundled. Checking is done before bundling as any faulty parts are not sent to sewing section, it may cause serious defects which is more difficult to rectify. Different parts of Hoodie Jacket are checked under quality checking operators. Checking is done on every parts. Then same sticker is attached with fabric for specific style. Otherwise shade variation may occur. After quality check of different parts then bundling is done. Then the fabric is sent to swing section to make a complete Hoodie Jacket. In sewing section all parts of a jacket are attached by sewing with specific sequence. Different machines are used for different operation. Different sewing machines are used for different seam. To complete the products within scheduled time a breakdown is followed. Information like SM, machine types, hourly target etc. are shown on breakdown sheet. Checking is done after every operation. After making a complete Hoodie Jacket final inspection is done to check sewing and other faults. If any faults are found then it is sent to a specific operator who had made the operation. Then rectification is done on rejected items. If rectification is not possible it is considered as rejected product. Then all products are sent to finishing section for pressing and packing and finally the products get ready for shipment.

References

1. [https //en.wikipedia.org/wiki/Hoodie](https://en.wikipedia.org/wiki/Hoodie)
2. [https //www.popoptiq.com/types-of-hoodies/](https://www.popoptiq.com/types-of-hoodies/)
3. [https //gearpatrol.com/2018/02/06/three-sweatshirt-fabrics-explained/](https://gearpatrol.com/2018/02/06/three-sweatshirt-fabrics-explained/)
4. [https //ordnur.com/tag/fabrics-relaxation-procedure-sop/](https://ordnur.com/tag/fabrics-relaxation-procedure-sop/)
5. [https //fashion2apparel.blogspot.com/2017/03/marker-making-methods-apparel.html](https://fashion2apparel.blogspot.com/2017/03/marker-making-methods-apparel.html)
6. [https //textileapex.blogspot.com/2014/03/straight-knife-cutting-machine.html](https://textileapex.blogspot.com/2014/03/straight-knife-cutting-machine.html)
7. [https //clothingindustry.blogspot.com/2018/01/methods-fabric-cutting.html](https://clothingindustry.blogspot.com/2018/01/methods-fabric-cutting.html)
8. [https //www.onlineclothingstudy.com/2017/12/layer-numbering-process-and-equipment.html](https://www.onlineclothingstudy.com/2017/12/layer-numbering-process-and-equipment.html)
9. i) <http://textilemerchandising.com/common-faults-sewing-section-apparel/>
ii) [https //textilelearner.blogspot.com/2015/11/causes-and-remedies-of-sewing-problems.html](https://textilelearner.blogspot.com/2015/11/causes-and-remedies-of-sewing-problems.html)
iii) [https //clothingindustry.blogspot.com/2018/03/major-sewing-defects-garments.html](https://clothingindustry.blogspot.com/2018/03/major-sewing-defects-garments.html)