Department of Textile Engineering

Study on Quality Control in Sewing Section of a Denim Garments Industry

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Advance in Apparel Manufacturing Technology

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Letter of Approval

January 25, 2017

To

The Head

Department of Textile Engineering

102, Shukrabad, Mirpur Road, Dhaka 1207

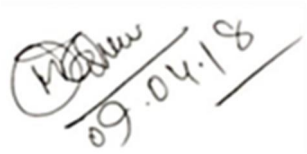
Subject: Approval of Project Report of B.Sc. in TE Program.

Dear Sir,

I am just writing to let you know that this project report titled as **"Study on Quality Control in Sewing Section of a Denim Garments Industry"** has been prepared by the student bearing IDs 142-23-3908 and 142-23-3944 is completed for final evaluation. The whole report is prepared based on the proper investigation and interruption through critical analysis of empirical data with required belongings. The students were directly involved in their project activities and the report 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



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At first we would like to express our deep appreciation to Allah for providing the opportunity to complete our Project on Study on Quality Control in Sewing Section of a denim garments industry.

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Finally yet importantly, thanks go to our precious families for their never-ending love and inspire at every stage of our life. Without their heartiest support & well wishes, completion would not have been possible.

DECLARATION

We hereby declare that the work which is being presented in this thesis entitled, **"Study on Quality Control in Sewing Section of a Denim Garments Industry "** is original work of our own, has not been presented for a degree of any other university and all the resource of materials uses for this thesis have been duly acknowledged.

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

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Abstract

This project is on **"Study on Quality Control in Sewing Section of a Denim Garments Industry".** Now a dayôs buyers donôt show any flexible behavior about the quality of the product. Thatôs why manufacturers are facing intensive global competition. So the key to competition in the international market place is to improve the quality of the products simultaneously. It is now essential to install right systems and processes so that only quality goods shall be produced. The major purposes of the quality control are to increase the production of quality full product to sustain in the competitive global market. This thesis clearly explains the quality control processes in sewing section. A clear study of quality control has been depicted in sewing section of a denim garments industry. Here ways of quality control parameters in a denim garments industry have been described for sewing section quality. To maintain the sewing qualities here have been described different ways of controlling quality in denim garments floor. This paper also addresses the defects found in denim garments industry with some information about proper way to produce good quality product.

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Chapter-I

Introduction

1.1Background of the Study:

The fast changing economic conditions such as global competition, declining profit margin, customer demand for high quality product, product variety and reduced leadï time etc. had a major impact on manufacturing industries. The demand for higher value at lower price is increasing and to survive, apparel manufacturers need to improve their operations through-Producing right first time quality and waste reduction.

Recently developed by CSIRO for quality control and assurance of fabrics, FAST, or fabric assurance by simple testing, consists of a series of instruments that are in expensive, robust, and simple to use, and their related test methods. FAST (Fabric Assurance by Simple Testing) is specifically designed for use by tailors and worsted finishers; it measures fabric properties that are closely related to the ease of garment making-up and the durability of worsted finishing.

The contribution presented here is the development of the system for qualitative prediction of garment appearance quality. The starting point for designing such a system is a qualitative evaluation of garment appearance quality, based on the study of relation of fabric mechanical properties and achieved quality level of garment appearance, as well as the definition of elements of a system for qualitative evaluation of garment appearance quality level, i.e. its fit.

Pakistan's readymade garments' industry is a key player in Pakistan's industry in general, and its textile industrial output and exports in particular. In a liberalizing international trade regime, quality will be a critical success factor in the international competitiveness of Pakistan's readymade garments. Research in quality management in Pakistan's readymade garments' industry was undertaken. It was found that while this industrial segment was in various stages of development, it needs to graduate fast to advanced quality management concepts of Kaizen and total quality management in order to maintain its competitive advantage in an environment that will soon be liberalized fully.

At the present time, industries like textile are in constant need of modernization. Thus, their presence in the high technology area of high performance computing (HPC) based inspection is of strategic interest. Textile manufacturers have to monitor the quality of their products in order to maintain the high quality standards established for the textile industry.

Now this time to sustain in a competitive global market quality has a great importance. Quality control in sewing section is one of the major to make garments with required quality.

We try to understand the importance of quality and about its controlling on based of some references. In this project report we try to bring up the quality control process in sewing section of a garments industry with our theoretical knowledge and experimental experience. We showed Input & Output report, In process inspection, In line QC check, End line inspection, Daily hourly production, daily style check and Measurement check of a denim garments in this report to mention quality control process during sewing section.

1.2 Objectives of the Project:

It is a long standing tradition of any organization to offer the customers first quality merchandise. The purpose of this control program is to assist manufacturers in meeting their high standards. The prime target of quality control is the fulfillment of consumers or buyers expectation to keep the product in demand.

The major objectives of this study were as follows:

1. To identify how to quality control in sewing section.
2. To identify how to improve quality control
3. To identify how to make faultless production during sewing

1.3 Limitations of the Project:

The main limitations of the project are as follows:

- Due to the shortage of time we could not get at depth knowledge of the quality controller operation and implementation practices in the company, as the period for which we was assigned to work as a quality controller was very short.
- The quality controllers of the company are always busy with their duty, so they could not provide us enough information due to the lack of time .
- Sufficient records, facts and figures are not available. These constraints narrowed the scope of the real analysis.
- There is no special training department for study.

Chapter-II

Literature Review

2.1. Introduction

Many experts predicted with rationale that Bangladesh could hardly stand in the apparel trade against all the fiercest competitors in apparel business due to the withdrawal of quota umbrella by the USA and the liberalization of international trade. But at present Bangladesh is one of the leading countries in exporting readymade garments of the world. There are about 5000 garments factories in the country, which was started from 1980 with exporting only $3.24 million. From this sector approximately 80% is earned of our total export income, due to the tremendous growth of garment factories as well as the productions. This field requires R&D, to make our RMG business more versatile, volatile, dynamic and effective. Quality is one of the important factors here, so quality control is required to make quality full products in this competitive world market.

Everybody understands the term ñQualityò but it is difficult to define. Quality refers the total features and characteristics of a product depending on customersô expectations of performance and durability of that product. Quality varies from people to people as their preferences. Quality is the agreed level of acceptance of any product between the two parties. Userôs satisfaction is the ultimate object of the garments quality.

According to the International Organization for Standardization (ISO) - ñQuality is the fulfillment of the specified requirements for a product or serviceò.

Quality also means ï

- The degree of excellence that a product possess
- Meeting a specification.
- There is no defect found.
- Fulfill the customer expectations.

The acceptable quality level of products is especially depending on consumers. They use that product which is able to fulfill their all or most of the demand. In general term quality encompasses important characteristics of a product for which it is in demand. From the customers point of view to achieve satisfied quality level manufacturers should provide the right Product of right Quality at right Time & Undamaged Condition.

2.2. Dimensions of Quality

In the view of David Garvin, a quality expert of Harvard, there is eight dimensions of quality. They are-

- **Performance**

  It refers to appropriate functionality of the product or whether the product performs satisfactory as desired or expected by the customer.

- **Conformance**

  Conformance means how well or accurately the product is designed as per specification.

- **Reliability**

  This refers to the ability of an item to perform a required function under stated conditions for a period of time.

- **Durability**

  This refers to useful technical life or longevity of performance of the product.

- **Features**

  Features refers to useful characteristics of the product more than the desired primary ones.

- **Serviceability**

  Maintenance and servicing of engineering products are of importance now a day to a large cross section of quality.

- **Aesthetics**

  Aesthetic Of product, especially in case of customer goods, is an utmost importance to a customer. Thus, aesthetic is also an important aspect of quality.

- **Perceived Quality**

  Perceived quality can be defined as the customer's perception of the overall quality or superiority of a product or service with respect to its intended purpose, relative to alternatives. Perceived quality is, first, a perception by customers.

2.3Factors Affecting Quality

The quality is affected by-

- **Customer**
  They are the ultimate users or beneficiaries of quality. As such, any quality management drive should focus on it while preparing a quality plan.
- **Processes**
  This element is responsible for transforming the inputs to quality outputs. Traditionally, people used to think that the process is only factor which is needs to be controlled for ensuring quality. Modern quality management views that employees and materials should be responsible for quality.
- **Employee**
  Now a day, role of employee in delivering quality product is valued highly. Employees are considered as internal customers, who need to be kept satisfied in order to deliver quality product. Thus, they should be trained regularly with high degree of motivation and skill.
- **Materials (suppliers)**
  Role of suppliers in delivering quality goods is now well recognized. A good manufacturing process does not have much to contribute to quality if supplied materials are not of good quality.

2.4. Quality Control

Quality is of prime importance in any aspect of business. Customers demand and expect value for money. As producers of apparel there must be a constant endeavor to produce work of good quality. The systems required for programming and coordinating the efforts of the various groups in an organization to maintain the requisite qualityò. As such Quality Control is seen as the agent of Quality Assurance or Total Quality Control.

2.5. Objective of Quality Control

It is a long standing tradition of any organization to offer the customers first quality merchandise. The purpose of this control program is to assist manufacturers in meeting their high standards. To achieve a satisfactory design of the fabric or garment in relation to the level of choice in design, styles, colors, suitability of components and fitness of product for the market satisfactory quality can only be ensured through:

1. Knowing the customers need.

2. Designing to meet them.

3. Faultless construction.

4. Certified performance and safety.

5. Clear instruction manual

6. Suitable packaging

Satisfaction quality can be ensured from the customerôs point of view by providing:

1. Right product.

2. Right quality.

3. Right time.

4. Undamaged condition.

2.6 Flow Chart of Quality Control in Sewing Section:

Input material checking

↓

Cut panel and accessories checking

↓

Machine is in well condition

↓

Thread count check

↓

Special work like embroidery, printing panel check

↓

Needle size checking

↓

Stitching fault should be checked

↓

Garments measurement check

↓

Seam fault check

↓

Size mistake check

↓

Mismatching matching of trimming

↓

Shade variation within the cloth

↓

Wrong placement of interlining

↓

Creased or wrinkle appearance control

2.7 Quality Level

To ensure the quality level of a garment we need to observe some specific sector

- Fault free fabric.
- Shade matching of the garments.
- Making the pattern as per buyer requirement.
- All the different parts of the garment should have the perfect size.
- Good stitching, seam formation should be perfect.
- Additional accessories such as button, zipper, tag, level is in right position.
- Packing and packaging.

2.8 Quality Staff in Sewing Department:

- Q.C general manager.
- Q.C Manager
- Q.C Officer
- Q.C. In Charge
- Quality Controller
- Line Q.C.
- Process Q.C.

2.9 Types of Quality Control

2.9.1 Product control

The control which is used to decrease defective items within different lots of produced good is known as product control. It is applied after product process.

2.9.2 Process control

Controlling of process sequence or steps to produce desired quality product is called process control.

2.9.3 Online quality control

This type of quality control is performed in process stage i.e. without stopping the production process. Checking & rectification of variation or fault in processing stage is known as online quality control.

2.9.4 Offline Quality Control

This type of quality control consists of laboratory tests which are done by stopping the production process. In garment manufacturing normally quality personnel are appointed in each section to ensure quality output at end of each processes. Under each department Quality heads section QAs are appointed. In the following diagram, an organization chart of a medium size shirt manufacturing company has been shown.

2.10 Quality Control in Different Area of Garments Industry

2.10.1. Fabric Quality Control

Fabric quality control are two types, one of them fabric inspection & another is fabric testing**.** Fabric Inspection is an important part of Fabric Quality Control, We can determine any kind of fault by fabric inspection & different kind of fabric test. Here is given below about fabric inspection & different kind of fabric test-

2.10.2Fabric Inspection

Fabric Inspection is an important aspect followed prior to garment manufacturing to avoid rejects due to fabric quality and facing with unexpected loss in manufacturing. Fabric inspection is done for fault/defect rate, fabric construction, fabric weight, shrinkage, end to end or edge to edge shading, color, hand feel, length/width, print defect and appearance. Fabric inspection ensures to minimize the rejection of cut panels or rejected garments due to fabric faults. Cutting inspected and approved fabric ensures not only finished garment quality but also reduces rejects, improves efficiency and timely deliveries.

2.10.3 Quality Control of Accessories and Trims

There are different types of Trims & Accessories Quality Control such as button, zipper etc.

Trims

The raw materials used in sewing room other than fabric are called trims. On the other hand we can say that which materials are directly attached with the fabric to make a garment are called trims. Like Threads, buttons, lining, interlining, zippers, labels and care labels etc.

Accessories

The materials which are used are used to make a garment attractive for sale and packing, other than fabrics and trims, are called accessories.

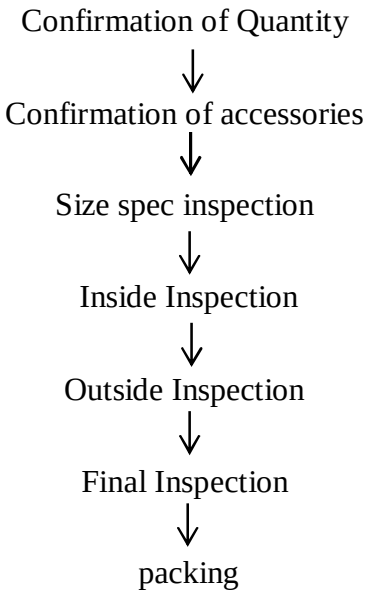
Table 2.10.3: Accessories and Trims

List of Trims :	List of Accessories:
Label (s): Main label, Size Label, Wash care label Button: Snap button, Plastic button, .Metal button. Zipper Ribbon Interlining Pocketing fabric Elastic Thread Twill Tape String/Draw Cord Piping /Cord Logo print Eyelet/Grommet	Poly Bag Elastic Bag Mini Poly Bag Master Carton Inner Cartoon Hang tag Price tag Tag Pin Defect indicator Gum Tape Arrow Sticker Scotch Tape Barcode Sticker Defect Indicator Tissue Paper

2.11 Garment Inspection

The inspections are done to control the quality is means by examining the products without the products any instruments. To examine the fabric, sewing, button,thread zipper, garments measurements and so on according to specification or desired standard is called inspection. There are so many facilities for inspection in every section of garments industries. The aim of inspection is to reduce the time and cost by identifying the faults or defects in every step of garments making.

2.11.1 Flow Chart of Garment Inspection:



2.11.2 Stages of Apparel Inspection

Various stages of garments inspection are mentioned in the below:

- Raw material inspection,
- During production inspection,
- Finishing inspection,
- Final inspection.

All the stages have discussed in the following:

2.11.2.1. Raw material inspection:

A quality inspector should check various matters according to buyerôs instruction in Raw material inspection stage of garments. Those are-

- Yarn defects such as thick and thin,
- Fabrics shade matching,
- Fabric holes,
- Fabric defects,
- Sewing thread,
- Zipper,
- Fabric softness,
- Fabric width,
- Vertical stripes,
- Horizontal stripes,
- Fabric shrinkage,
- Defective printing,
- Defective embroidery,
- Defective buttons,
- Dirt and stains in fabric.
-

2.11.2.2. During Production Inspection:

A quality inspector should ensure different matters according to buyerôs instruction in production stage of garments. Those areé

- Sewing threads matching,
- Cutting patterns,
- Stitching,
- Absence of stitching,
- Needle holes & marks,
- Unbalanced placket,
- Puckering,
- Garment length,
- Cutting shapes,

- Stitching defects,
- Measurements,
- Buttons,
- Trims & Accessories,
- Labels.

2.11.2.3. Finishing inspection:

A quality inspector should check different issues according to buyerôs instruction in finishing stage of garments. Those areé .

- Poor Ironing,
- Dirtôs& Stains,
- Carton,
- Hang tag,
- Photo-in-lay,
- Price ticket,
- Poly bag,

2.11.2.4. Final inspection:

A quality inspector should confirm various matters according to buyerôs instruction in final inspection stage of garments. Those areé

- Shade variation from one part to another part of garments,
- Garments measurement with allowance from buyers provided measurement chart,
- Pockets correct,
- Absence of fabric faults and stains,
- Appearance correct,
- Patterns matching,
- Absence of miss stitching,
- Seams finished correctly,
- Accessories correctly applied and working,
- Correct labeling.

There are different types of inspection are done in garments industry following by inspectors as requirement of consumers.

1. Pre-Production Check (PPC)
2. Initial Production Check (IPC)
3. During Production Check (Du PRO)
4. Final Random Inspection (FRI)

1. Pre-Production Check (PPC):

This is done before production starts. Where then is a final verification of the material used; style, cut and workmanship of the garment or pre-production sample as per the customer Requirements.

2. Initial Production Check (IPC):

This is done at the start of production where a first batch of garments is inspected; to distinguish possible discrepancies/variation and to allow for the necessary corrections to be made bulk production. The inspection is a preliminary stage covering mainly style and general appearance, workmanship, measurements, quality of fabrics, components, weight, color and/or printing.

3. During Production Check (Du Pro):

This is done during production to ensure initial discrepancies/variations have been rectified. This inspection is in fact the follow up of the initial production check and is generally carried out a few days after the initial inspection, especially if discrepancies have been detected at that time.

4. Final Random Inspection (FRI):

This is carried out when the production of the total quantity of an order or partial delivery is completed. A sample lot will be selected from the order and a percentage of the garments will be inspected, this percentage usually being stipulated by the buyer. The AQL sampling inspection may be applied or another inspection system designed by the buyer.

Chapter-III

Experimental Details

3.1 Input Materials Checking:

Quality control in sewing section is very important to make garments with required quality. Input materials checking are the first thing for quality control in sewing section. All the input materials should be checked which are ready for sewing.

Input materials checking are done so that there are no faults found in the input materials. It has a great importance for quality control in sewing section

Table 3.1.2 Daily Input & Output:

Factory Name: Beats Fashion	Daily Input & Output Report		Buyer: JULES	Style: 711266	Line: 12	
Section Name	D/IN PUT	T/IN PUT	D/OUT PUT	T/OUT PUT	BALANCE	REMARKS
Front Part →	916	7242	1400	6800	442	
Back Part →	916	7242	1800	6900	342	
Out Put →	1400	6880	1700	6700	180	
Make Section →						
Embroidery →						
Print →						
TOTAL LINE BALANCE →				964		

Colour & Size	36	38	40	42	44	46	48						
BLUE	883	1220	1670	1670	902	450	56						7242
STORE ACCESSORIES													
Size label													

Main label		Velcro		TIL tape			
Care label		Elastic		P/O label			
Thread	BLUE						
30/3	160						
20/2	160						
40/2	200						
40/3							
TOTAL							

In above table daily input and output report is shown of JULES buyer of Style no is 711266 in line no. 9. Here, daily input of front part is 916, back part 916 and output 1400. Daily output of front part 1400, back part 1800 and output 1700.

Total input of front part and back part 7242 and output 6800 & 6900 respectively. Balance of front and back part is 442 & 342 respectively. Balance in output is 180. Total line balance is 964.

The color of the style is Blue color and different sizes are 36, 38, 40, 42, 44, 46 and 48. All thread is used of Blue color.

3.2 In Process Inspection Report:

In process inspection report is done during sewing in line. Here, inspector inspects the front part, back part and output/assembly individually.

Mainly in process inspect is done to find out the sewing fault during sewing in different parts.

3.2.1 Major Sewing Defects found in process inspection:

- Skipped stitch
- Broken stitch
- Thread breaks
- Seam pucker
- Pleat
- Uneven stitch
- Missing stitch
- Open stitch
- Uneven point
- Raw edge
- Tension loose etc.

Table 3.2.2 In Process Inspection (Front Part):

BS	Broken Stitch	E	Embroidery	IS	Incomplete Stitch	N	Needle mark
BB	Bubbling	FF	Fabric fault	UI	Uneven Inlay	PT	Pleat
BR	Bar Tack	G	Gathering	LM	Label mistake	O	Oil mark
D	Damage	HP	High low PKT	LS	Loop slanted	OP	Open stitch
D	Dirty	HW	High low waist	**M**	**Missing stitch**	OV	Over stitch

P	Pucke ring	SS	Skip stitch	TM	Thread mistake	VE	Visible edge
RS	Run off stitch	SP	Slanted pocket	US	Uneven Stitch	WZ	Weave Zipper
RE	Raw edge	T	Twisted	UP	Uneven Point	WM	Way mistake
RJ	Reject	TT	Tension tight	**UL**	**Uneven Lock**	WS	Width Stitch
S	Shading	TL	Tension loose	UW	Uneven width	DS	Down stich

Factory Name: Beats Fashion Ltd.			Buyer: OBAIBI		Style: 87092		Item: Boys Long Pant		Part: Front	Line : 09	Inspector: Julekha Akhter			
Operator	Process	Hour →	1	2	3	4	5	6	7	8	9	10	Total	Remarks
Card no	↓	Hourly checked →	70/70	60/130	80/210	80/290	110/400	100/500	90/590	100/690	N/L	N/L	690	
33799	Front PKT roller		UL-III	UL-III	UL-III	UL-III	UL-III		BS-III	BS-III			21	3.04 %
21488	J-stitch		UN-III	UN-X	UN-X	UN-V	UN-X	UN-IV	UN-V	UN-IV			51	7.39 %
28741	Singly fly top													
19441	Front pkt top stitch							M-III					03	0.43 %
	Total alter		6/6	13/19	13/32	8/40	13/53	7/60	8/68	7/75	N/L	N/L	75	10.86 %
	Alter rectify		6/6	0/6	0/6	0/6	17/23	7/30	8/38	7/45	N/L	N/L	45	6.52 %
	Supervisor/L.C/ APM													
	Line Q.C/Q.C INCP.													

In above table (3.2.2), Front part of boys long pant of 87092 style of OBABI buyer is inspected by the Inspector Julekha Akhter in the line no. 9

First we can see the faults name is mentioned with their short form. In the table, sewing faults of front part checked by hourly. There are fifteen uneven lock and six broken stitch in the front pocket roller bearing card no. 33799 and J Stitch was uneven in fifty four pieces. Three missing stitch in front pocket top stitch.

From the table we can see four types of fault found during sewing in front part

Table3.2.3 In Process Inspection (Back Part):

BS	Broken Stitch	E	Embroidery	IS	Incomplete Stitch	N	Needle mark
BB	Bubbling	FF	Fabric fault	UI	Uneven Inlay	**PT**	**Pleat**
BR	Bar Tack	G	Gathering	LM	Label mistake	O	Oil mark
D	Damage	HP	High low PKT	LS	Loop slanted	OP	Open stitch
DT	Dirty	W	High low waist	M	Missing stitch	OV	Over stitch

P	**Puckering**	SS	Skip stitch	TM	Thread mistake	VE	Visible edge
RS	Run off stitch	SP	Slanted pocket	US	Uneven Stitch	WZ	Weave Zipper
RE	**Raw edge**	T	Twisted	**UP**	**Uneven Point**	WM	Way mistake
RJ	Reject	TT	Tension tight	UL	Uneven Lob	WS	Width Stitch
S	Shading	TL	Tension loose	UW	Uneven width	DS	Down stich

Factory Name: Beats Fashion Ltd.			Buyer: OBAIBI		Style: 87092		Item: Boys Long Pant		Part: Back		Line: 09		Inspector: Md. Maruf	
Operator	Process	Hour→	1	2	3	4	5	6	7	8	9	10	Total	Remarks
Card no	↓	Hourly checked →	80/80	80/160	80/240	80/320	80/400	80/480	80/560	80/640	80/720	80/800	800	
32836	SLAP joint		UP-II	UP-I		UP-I		UP-II	UP-II		UP-II		10	1.25 %
30339	BON T/S		RE-I	RE-II	RE-I		RE-II	RE-I		RE-II		RE-I	10	1.25 %
33335	PK T/S		P-I	P-II	P-II	P-II	P-I	P-I	P-II		P-II	P-I	14	1.75 %
29265	BON PK O/L		PT-II		PT-II	PT-II	PT-II	PT-II		PT-II	PT-II	PT-II	16	2%
	Total alter		6/6	5/11	5/16	5/21	5/26	6/32	4/36	4/40	6/46	4/50	50	
	Alter rectify		6/6	5/11	5/16	5/21	5/26	6/32	4/36	4/40	6/46	4/50	50	6.25 %
	Supervisor/L.C/ APM													
	Line Q.C/Q.C INCP.													

In above table (3.2.3) Back part of Boys long pant of 87092 style of OBAIBI buyer is inspected by the Inspector Md. Maruf Hossain in the line no. 9

First we can see the faults name is mentioned with their short form. In the table, sewing faults of back part is checked by hourly. Ten uneven points in slap joint, ten raw edges in bon top stitch, fourteen puckering in pocket top stitch and fourteen pleat in bon pocket over lock were found. From the table we can see four types of fault found during sewing in Back part.

Table3.2.4 In Process Inspection (Output/Assembly):

.

P	Puckering	**SS**	**Skip stitch**	TM	Thread mistake	VE	Visible edge
RS	Run off stitch	SP	Slanted pocket	US	Uneven Stitch	WZ	Weave Zipper
RE	Raw edge	T	Twisted	**UP**	**Uneven Point**	WM	Way mistake
RJ	Reject	TT	Tension tight	UL	Uneven Lob	WS	Width Stitch
S	Shading	**TL**	**Tension loose**	**UW**	**Uneven width**	DS	Down stich

BS	**Broken Stitch**	E	Embroidery	IS	Incomplete Stitch	N	Needle mark
BB	Bubbling	FF	Fabric fault	UI	Uneven Inlay	PT	Pleat
BR	Bar Tack	G	Gathering	LM	Label mistake	O	Oil mark
D	Damage	HP	High low PKT	LS	Loop slanted	**OP**	**Open stitch**
DT	Dirty	HW	High low waist	M	Missing stitch	OV	Over stitch

Factory Name: Beats Fashion Ltd.			Buyer; OBAIBI		Style: 87092		Item: Boys Long Pant		Part: Output		Line: 09		Inspector: Sabul	
Operator	Process	Hour→	1	2	3	4	5	6	7	8	9	10	Total	Remarks
Card no	↓	Hourly checked →	100/ 100	100/ 200	100/ 300	100/ 400	100/ 500	100/ 600	100/ 700	100/ 800	100/ 900	100/ 1000	1000	
33778	Side O/L			UP-V	SS-I	SS-I		BS-II	SS-II	BS-II	BS-I	SS-II	16	1.6%
32658	Side T/S		OP-II		OP-II		OP-III			OP-II	OP-II	UP-II	13	1.3%
31924	Belt joint		UP-V	UP-III	UP-II	UP-III	UP-II UW-V	UP-III UW-III	UW-V	UP-V	UP-V	OP-V	46	4.6%
33109	Inside hem seam O/L			SS-II		SS-II			SS-I		SS-I		06	0.6%
32558	Inside hem seam T/S		SS-I		TL-I				TL-II	TL-I		TL-I	06	0.6%
	Total alter		8/8	10/18	6/24	6/30	10/40	8/48	10/58	10/68	9/77	10/87	87	8.7%
	Alter rectify		8/8	10/18	6/24	6/30	10/40	8/48	10/58	10/68	9/77	10/87	87	
	Supervisor/L.C/APM													
	Line Q.C/Q.C INCP.													

In above table (3.2.4) Output/Assembly of boys long pant of 87092 style of OBABI buyer is inspected by the Inspector Sabul in the line no. 9

First we can see the faults name is mentioned with their short form. In the table, sewing faults of output is checked by hourly. In every hour 100 pieces are checked. In 5th hour 10 faults have found, in which three is open stitch in side top stitch operation bearing card no. is 32658, two uneven points and three uneven width in Belt joint bearing the card no. is 31924. From the table we can see six types of fault found during sewing in output. Maximum faults found in belt joint operation. Minimum faults found in both inside hem seam O/L and inside hem seam T/S.

3.3 In Line QC Check Report:

In line QC check report is done on 10 pieces. 10 pieces may be taken from any operation. This QC check is done to find out that sewing of the parts are okay. If the parts are not sewing good or with requirements then the in line QC checker finds out what is the problem and note it. Then the problem is solved to make sure the parts are sewing accurately.

3.3.1What is checked by In Line QC?

- Sewing and non-sewing defects
- If there is any oil marks and stain marks
- If there are any defects due to machine
- Right Color, Thread, Button, Label & Zipper is used
- Right type of needle is used
- Machine, tables and operatorôs hand are clean or not.

Table 3.3.2 In Line QC Check:

Factory Name: Beats Fashion Ltd.		Buyer: OBAIBI		Style: 87092		Line: 09		In line QC check (10 Pcs)			
		OK	ALTER	YELLOW	RED	SPI	NDL	NDL	NDL	Operator	Signature
TIME CHECK PART	FINDING THE POINT	QTY	QTY	CARD	CARD	FOUND	RQD	FOUND	S/NESS	SIGN	QI/SV/LC
BACK PART											
BACK YOUK											
BACK RISE	Poor Up Down	9	1	✓		14	16	16			
BACK PKT											
BONE PKT											
PKT MEASURE											
BONE PKR MEASURE											
FLAP MEASURE	Ok Flap Length Flow	8	2		✓			16			
ANY UP DOWN											
FRONT PARTS											
PKT ROLLING											
PKT TUCK											
BAG TOP STITCH											
BLY MEASURE											
FLY SHAPE	J Stitch Shape Poor	8	2		✓	9		16			
PKT MEASURE											
ASSEMBLE											
KNEE MARK MATCH											
PKT MARK MATCH											
LOOP PLACEMENT	Loop Joint Displace	9	1	✓		9		16			
USE 5 MARK IN BELT											
MARK MATCH IN BODY											
ANY MOUTHEN SHAPE											
ANY UP DOWN											
ANU MISTAKE											
OUTPUT											
MOUTH LOOSE STRIGHT	Mouth Close V Shape	9	1	✓		9		16			
JOIN STITCH U/LOOP											
BTM ROLLIN EVEN											
INLAY EVEN IN BTM	Wrong Width Hem	8	2		✓			16			

In above table (3.3.2) we can see 10 pieces of Back Rise operation have taken for QC check. Here, 9 pieces found OK and alter found in 1 piece. In Flap Measure operation 8 pieces are OK alter found in two pieces. In Fly shape operation 8 pieces are OK and alter found in2 pieces. In Loop attachment 9 pieces are okay Alter founds in 1 piece.

Here Alter can be occurred due to some technical problem. Such as needle defect,

Here, Red card means two defects and Yellow card means one defect.

3.4 End Line Inspection:

End line inspection is very important to quality control in line products. End line inspection is done to ensure the products of each line meets the required level of quality when they are send to next level. Inspector of end line should be better to control the quality. End line inspection rejects the low quality product to delivery for next process. To make sure that the products made by line met the required quality, end line inspection has a great importance.

Table 3.4.1 End Line Inspection:

P	Puckering	SS	Skip stitch	TM	Thread mistake	VE	Visible edge
RS	Run off stitch	SP	Slanted pocket	US	Uneven Stitch	WZ	Weave Zipper
RE	Raw edge	T	Twisted	UP	Uneven Point	WM	Way mistake
RJ	Reject	TT	Tension tight	UL	Uneven Lob	WS	Width Stitch
S	Shading	TL	Tension loose	UW	Uneven width	DS	Down stich

BS	Broken Stitch	E	Embroidery	IS	Incomplete Stitch	N	Needle mark
BB	Bubbling	FF	Fabric fault	UI	Uneven Inlay	PT	Pleat
BR	Bar Tack	G	Gathering	LM	Label mistake	O	Oil mark
D	Damage	HP	High low PKT	LS	Loop slanted	OP	Open stitch
DT	Dirty	HW	High low waist	M	Missing stitch	OV	Over stitch

Factory Name: Beats Fashion Ltd.		Buyer: OBAIBI		Style: 87092		Item: Boys Long Pant		Line: 09		End Line Inspection	
Description	1	2	3	4	5	6	7	8	9	10	Total	Remarks
Total received	50/50	50/100	40/140	40/180	60/240	50/290	40/330	40/370	50/490	60/480	480	
OK	46/46	44/90	47/137	35/172	56/227	46/274	37/311	35/346	45/391	56/447	447	
Alter	02/03	04/06	03/09	05/14	03/17	03/20	03/23	02/25	04/29	04/33	33	6.875%
Alter Rectified	02/02	04/06	03/09	05/14	03/17	03/20	03/23	02/25	04/29	04/33	33	6.875%
Total ok	50/50	50/100	40/140	40/180	60/240	50/290	40/330	40/370	50/420	60/480	480	
PROCESS Mouth close	UN-I		UN-I	UN-I			UN-I			DS-I	05	1.04%
PROCESS W/B top stitch		DS-II	DS-I	DS-II	RE-II	DS-I RE-I	DS-II	RE-I	DS-II	RE-I	15	3.125%
PROCESS Side top stitch		OP-I	OP-I			OP-I			OP-I		04	0.83%
PROCESS Loop tuck	LS-I			LS-I				LS-I		LS-I	04	0.83%
PROCESS Side + Insea m over lock					BS-I				BS-I		02	0.41%
PROCESS Insea m top stitch		SS-I									01	0.20%
PROCESS Hem				OP-I						DS-I	02	0.41%
Line chief sign												
Chief controller												

Remarks Formula:

$$\text{[illegible]} \; \frac{\text{[illegible]} \; 100}{\text{[illegible]}} \; \%$$

In above (Table 3.4.1) End Line Inspection is done. Firstly the sewing faults are mentioned with their short form. End line inspection is done in every hour of completed garments in line. Faults found in operations like mouth close, w/b top stitch, side top stitch, loop tuck, side with inseam over lock, inseam top stitch and hem. Uneven in mouth close, open stitch in side seam, loop slunded in loop tuck, broken stitch in side with in seam over lock, skip stitch in inseam top stitch, open & down stitch in hem were found.

3.5 Faults Found During Sewing:

Figure3.5.1: Skip Stitch

Figure3.5.2Uneven Lock

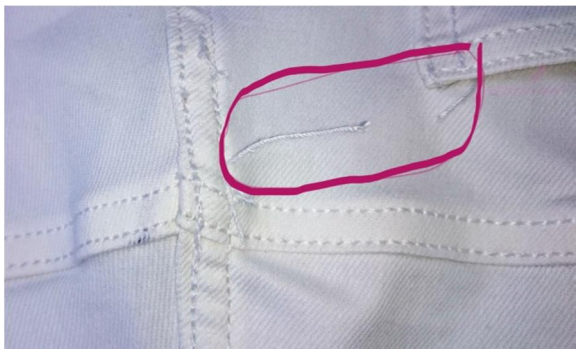


Figure3.5.3:Uncut Thread

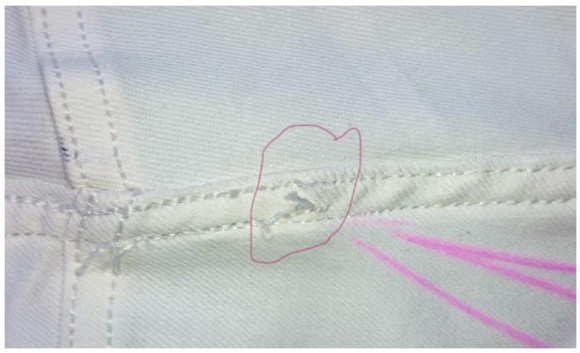


Figure3.5.4:Tuck Show

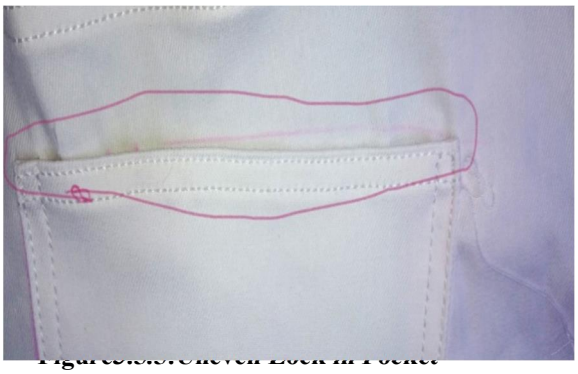


Figure3.5.5:Uneven Lock in Pocket

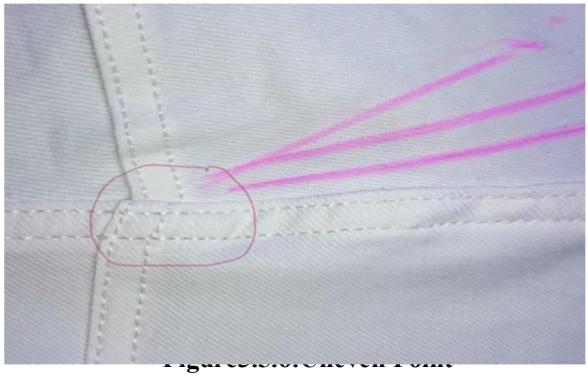


Figure3.5.6:Uneven Point

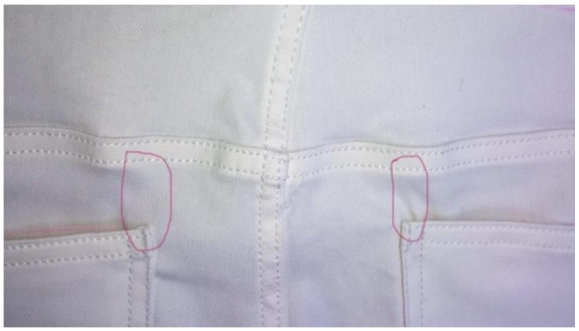


Figure3.5.7:High Low Pocket

Figure3.5.8:Reject

Figure3.5.9:Spot

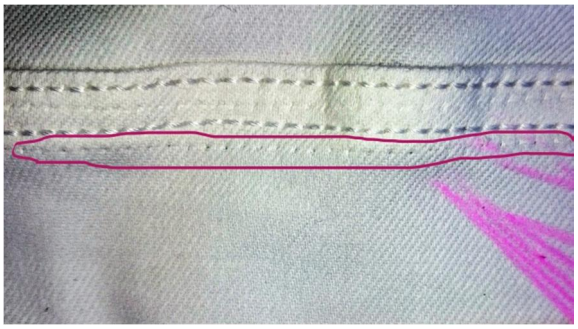


Figure3.5.10:Needle Mark

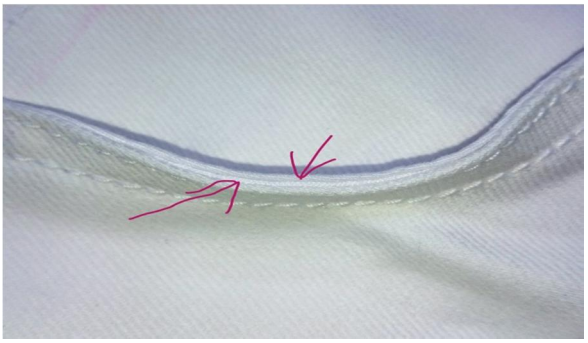


Figure3.5.11:Lock Show

Figure3.5.12:Raw Edge Out

Figure3.5.13 Pleat

Figure3.5.14:Loose Tension

Figure3.5.16:Loop Slunded

3.6 Daily Hourly production:

In this report the production target per hour by operator and the target achieved per hour by the operator are mentioned.

3.6.1 Formula:

Daily Production Target: (No. of m/c * Working Hours in Minute)/ SMV

Daily Hourly Production Target: (Total Daily Production Target / Total Hours)

For Example:

No. of machine = 50

Working Hours = 8 Hours

= 480 minutes

Standard Minute Value (SMV) = 17.87

Daily Production Target = (50 * 480) / 17.87

= 1343 pieces

Daily Hourly Production Target = 1343 / 8

= 167 pieces

Table 3.6.2: Daily Hourly Production (Front Part)

Factory Name: Beats Fashion Ltd.			Buyer: OBAIBI		Style: 87092		Line: 09		Daily Hourly Production				
Date	Operator name	Target	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	L/C SIN
1	Sharmin	150	130	120	130	140	130	120	130	140	140		
2	Tahamina	150	100	130	130	130	130	130	130	130	130		
3													
4	Jaminur	150	130	150	150	130	130	130	130	130	130		
5	Julekha	150	130	130	150	150	150	150	150	150	150		
6													
7	Layza	150	130	130	130	130	130	130	130	130	130		
8	Parvin	150	110	100	110	110	110	110	110	110	110		
9													
10	Amena	80	60	70	60	60	70	60	60	60	60		
11	Alpona	80	60	60	70	60	70	60	60	60	60		
12													
13	Alomgir	130											
14	Mazidul	130	100	100	100	100	100	100	100	100	100		
15													
16	Alpona	150	120	130	12	120	120	120	120	120	120		
17	Bobita	150	130	130	120	120	120	120	120	120	120		
18													
19	Rohima	150	140	140	120	120	120	130	12	130	130		
20	Tahomina	150	150	140	120	120	120	120	120	120	120		
21													
22	Monira	150	120	120	120	120	120	150	130	130	130		
23	Falguni	150	120	120	120	80	80	130	130	130	130		
24													
25	Rozina	150	130	130	130	130	130	120	120	120	120		
26	Mahamudul	150	130	130	130	130	130	120	130	130	130		
27													
28	Q.C PASS	150	130	130	130	130	130	120	120	120	120		
29													

In above (Table 3.6.2) daily hourly production report of front part has showed. A target had fixed for every operator per hour. Here, For Sharmin target was 150 pieces per hour but she made per hour 130, 120, 130, 140, 130, 120, 130, 140 and 140 respectively. For a single hour she could not fill up his target.

Here, take a look for Julekha her target was also 150 pieces. She could fill up her target for seven times which was maximum for any operator we can see. Maximum operator could not fill up the target in every hour. So we can the Line efficiency was not good for this line.

In every hour QC pass was 150, 130, 130, 130, 130, 130, 120 120 and 120 pieces respectively.

Table3.6.3: Daily Hourly Production (Back Part)

Factory Name: Beats Fashion Ltd.			Buyer: OBAIBI		Style: 87092		Line: 09		Daily Hourly Production				
Date	Operator name	Target	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	L/C SIN
1	Lili	150	130	130	130	130	130	130	130	130			
2	Rani	150	120	10	120	120	120	120	120	120			
3													
4	Jarin	150	120	120	120	120	130	120	120	120			
5	Sabina	150	130	120	120	120	120	120	120	130			
6													
7	Alamin	150											
8	Zarin	150	120	140	130	50	50	100	100	100			
9													
10	Rana (Ass)	150	80	140	120	130	100	130	120	120			
11													
12	Deluar	150	110	120	120	120	120	120	110	110			
13	Tarikul	150	120	120	110	120	120	120	120	110			
14													
15	Resma	150	120	110	110	110	110	110	110	110			
16	Nayon	150	110	110	110	110	110	110	110	110			
17													
18	Parvin	150	120	100	100	110	110	110	110	110			
19													
20	Khaleda	150	100	100	100	100	100	100	100	100			
21													
22	Honufa	80	30	50	50	60	60	55	50	50			
23	Sonia	120	30	50	50	60	60	55	50	50			
24	Gostum	120	50	50	50	60	60	55	50	50			
25	Razia	120	50	50	50	60	60	55	50	50			
26													
27	Kalpona	150	50	50	50	60	60	55	50	50			
28													
29	Q/C PASS	NO	NO	NO	100	120	120	100	100	100			

In above (Table3.6.3) daily hourly production report of front part has showed. A target had fixed for every operator per hour. Here, For Lili target was 150 pieces per hour but she made per hour 130 pieces. For a single hour she could not fill up his target. But she was the only operator who did best of all operators.

Here, take a look for Kalpona her target was also 150 pieces. She couldnôt only fill up her target.In first three hour no QC passed. From 4th to 9th hour QC pass was 100, 120, 120, 100, 100 and 100 pieces respectively.

Table3.6.4: Daily Hourly Production (Output)

Factory Name: Beats Fashion Ltd			Buyer: OBAIBI		Style: 87092		Line: 09		Daily Hourly production				
Date	Operator name	Target	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	L/C SIN
1													
2	Rimi	180	180	180	180	140	150	170	140				
3													
4	Rubel	180	180	180	180	160	180	170	170				
5													
6	Moinul	100	75	80	80	80	80	75	80				
7													
8	Sohidul	100	65	80	90	90	80	90	80				
9													
10	Rozina	180	150	160	160	160	170	160	160				
11	Zabed	180	150	160	160	160	170	160	160				
12													
13													
14	Nu alom	100	80	85	85	85	85	85	85				
15													
16	Raihan	100	65	30	80	85	80	85	80				
17													
18	Nargis	140	100	100	100	100	110	110	110				
19	Rohima	60	30	30	50	55	50	60	60				
20													
21	Forida	180	140	150	160	160	160	165	170				
22													
23													
24													
25	Korban	180	125	125	132	20	125	128	130				
26	Samim		125	125	130		125	130	130				
27													
28													
29	Zohura	110	90	90	100	100	100	100	100				

In above (Table3.6.4) daily hourly production report of front part has showed. A target had fixed for every operator per hour. This report showed us the working activity for seven hours. Here, For Rimi target was 180 pieces per hour, she could fill up the target for first three hour from 4th to 7th hour 140, 150, 170 and 140 pieces respectively was made by her.

Rubel, could fill up his target in first three hour and in 5th hour. Moinul could not fill up his target in a single hour.

3.7 Daily Style Check Report:

Table3.7.1 Daily Style Check Report:

Factory Name: Beats Fashion Ltd.	Buyer: OBAIBI	Style: 87092	PO. No. 322409	QTY: 2830 pcs	Reporter: Profullo Roy

FRONT SIDE		
***Main label position stitch		OK
***Care label composition & placement		After wash
1	Mouth close ,V shape	OK
2	Front PKT opening length & width	OK
3	Coin PKT placement & stitch	Not found
4	Fly stitch ,Crotch point & HI close top stitch	OK
5	Zipper size tape colour & attach	Not found
6	Side youk height & side top stitch	Not found
7	Inseam stitch ,Length & Twisting	Not found
8	Front loop position & Bar tack	OK
9	Bottom rolling width & stitch	OK
10	All top stitch S.P.I equal	OK
11	Any needle mark damage & stitch	Not found
12	Any oil spot , feed mark & shading	Not found
13	Any twisting/blowing & fabric fault	Not found
14	Missing any bar tack, Thread & Number	OK
15	Top stitch margin buyer requirement	OK
BACK SIDE		
1	Back waist band shape & loop position	OK
2	Loop length width & Bar tack measurement	OK
3	C.B yoke ,Crotch point& Back rise	OK
4	Back PKT measurement & position	OK
5	Back PKT embroidery, Print & Other	OK
6	Back PKT rolling height & Panel join	Not found
7	Any needle mark damage & spot	Not found
8	Any oil spot , feed mark & shading	Not found
9	Any bar tack position color measurement	OK
10	Any raw edge out raw stitch visible	Not found
INSIDE		
1	All over lock stitch as buyer requirement	OK
2	Use reinforcement as buyer requirement	Not found
3	ALL INALY/ ALL OWNCE as requirement	Not found
4	Zipper safety bar tack as requirement	Not found
5	Bar tack catch any fabric or FAMEG fabric	OK
6	Any down stitch found & Any skip stitch found	Not found
7	Any spot, Uncut thread , Loose thread	Not found

In above (3.7.1)daily style check report has shown. Style check has done for front side, back side and inside. Main label position stitch was OK. Care label composition and position will be checked after wash. In most of the check we can see OK and Not Found.

Here for some checking we can see in front side mouth close, v shape, front loop position and bar tack, all top stitch S.P.I equal, Front pocket length and opening were ok. Any needle mark damage and stitch had not found.

In back side back waist band shape and loop position, loop length width, nack pocket measurement and position were ok. Any needle mark damage, oil spot, raw edge out, raw edge visible were not found.

In inside all over lock stitch as buyer requirement was ok. Use reinforcement as buyer requirement, any down stitch, any skip stitch, any spot, uncut thread and loose thread were not found.

3.8 Measurement Check

Table3.8.1 Measurement Check:

Factory Name: Beats Fashion Ltd.		Buyer: OBAIBI				Style: 87092				Item: Boys Pant				Color: BLUE			
Point of measurement	Total +/-	Size 3M				Size 6M				Size 12M				Size 18M				Size 24M			
		Spec	Def	Def	Def	Spec	Def	Def	Def	Spec	Def	Def	Def	Spec	Def	Def	Def	Spec	Def	Def	Def
½ relaxed waist round		22				24				25.5				26.5	+1	+1		27.5	+1	+1	
Hips position under w/b		9.5				10				10.5				11	=	=		11	=	=	
½ hips round		24				27				28				29	+1	+1		30	+1	+1	
½ thigh round		14.4				16.2				16.8				17.4	+.5	+.5		18	+.5	+.5	
½ knee round		11.5				12				12.5				13	+.8	+.8		13.5	+.8	+.8	
½ bottom leg		9				9.5				10				10.5	+.5	+.5		11	+.5	+.5	
Total length		31				35				38				44	+1	+1		50	+1	+1	
Belt height		3				3				3				3		✓		3			
Fly height		7				7.5				7.5				8	✓	✓		8			
Fly width		2.5				2.5				2.5				2.05	.3	+.3		2.5	+.3	+.3	
Loop width		4				4				4				4	+.5	+.5		4.5	+.5	+.3	
Loop height		1.2				1.2				1.2				1.2				1.2			
Front opening pocket height		7.75				8				8.5				8.75		✓		9	✓	✓	
Front opening pocket width		4.25				4.5				5				5.25	✓	✓		5.5	✓	✓	
Piping width		0.3				0.3				0.3				0.3	✓	✓		0.3	✓	✓	
Back pocket height		1				1				1				1	✓	✓		1	✓	✓	
Back pocket width		5.5				5.75				6				6.25	+.5	+.5		6.5	+.5	+.5	

From above measurement check (Table3.8.1) we can see point of measurement is given for all the operations of a boys pant of OBAIBI buyer of style no. 87092. The colour of pant is Blue. One specific size is given for all operations like ½ relaxed waist round, Hips position under w/b , ½ hips round, ½ thigh round, ½ knee round, ½ bottom leg, Total length, Front crotch with w/b, Back crotch with w/b, Belt height, Fly height, Fly width, Loop width, Loop height, Front opening pocket height, Front opening pocket width , Piping width, Back pocket height, Back pocket width.

Chapter-IV

Discussion of Results

4.1 Daily Input and Output:

Daily input output report shows how many front parts, back parts and assemble daily inputs in a line and how many outputs from a line. This report also shows the total daily input and output. By this report we can see the balance or imbalance of input and output. If any imbalance happens we can learn through this report and can take necessary steps.

In the report we saw daily total input of front part was 7242 pieces but the output was 6880 pieces that means imbalance of output was 342 pieces. It means, in that day 342 pieces front part could not be make within the shift. Also in front part input was 916 pieces but the output is 1400 pieces that means in previous day 484 pieces was remains incomplete in shift. In back part also 884 pieces was remains incomplete in previous day. These incomplete parts will be completed with extra working hours.

In 7242 pieces input, 883 pieces is of 36 size, 1220 pieces of 38 size, 1670 pieces of 40 & 42 size, 902 pieces of 44 size, 450 pieces of 46 size and 56 pieces of 48 size. The maximum number of input is of 42 & 46 size and the minimum input is of 48 sizes.

4.2 In Process Inspection:

In process inspection is done in front part, back part and output/ assembling. There are four quality inspector inspect in process inspection. One is in front part, one is in back part, one is in assembling and one is in final inspection.

We saw, during in process inspection many sewing faults have found, which hampered in the quality of products. Most of the time, some common faults are found in process inspection.

In front part total 690 pieces inspected. In front pocket rooling, faults as uneven lock and broken stitch is 3.04%, in front pocket top stitch missing stitch fault is 0.43%, Total alter is 81 pieces as 10.125% is of total inspected pieces. Alter rectified pieces are 45 pieces as 6.52% of total inspected garments.

In back part total 800 pieces garments inspected in ten hours. In slap joint uneven point fault is 1.25%, raw edges are 1.25% in bon top stitch and pleat is 2% in bon pocket top stitch. Total alter is 60 pieces and all are rectified which is 7% of total inspected garments.

In assembling 1000 pieces garments are inspected. Total fault found in side over lock is 1.6% as uneven point, skip stitch, broken stitch. Open stitch and uneven point found in side top stitch is 1.3% and 4.6% fault found in belt joint which is maximum and 0.6% fault found in

inside hem over lock and inside hem top stitch which is minimum. Total alter is 8.7% of all inspected garments and all are rectified.

To reduce the making of faults during sewing we can inform the operator that he is doing such types of fault and should guide them to be aware that these faults can be reduced. Quality can be controlled.

4.3 In Line QC Check:

When operation is running in sewing line, In Line QC inspector inspect 10 pieces of any operation. Sometimes inspector finds that some operation is doing in wrong way. He/she also checks that is there any problem with machine, needle or operatorôs personal problem. He/she confirm that the operation is doing with right colour, right thread, button, label etc. and right type of needle is used.

In back rise, fault found in one piece. Here, S.P.I is 14. J stitch shape is poor. One pool is displaced. Wrong hem width found in two pieces.

To make sure the quality control in sewing section we need In Line QC check to confirm that the operation is doing in the right way with right things. If mentioned problems are found, the problems should be solved immediately.

4.4 End Line Inspection:

End line inspection confirms that the line products are producing with requirements. This is very important for quality control.

In end line total 480 pieces garments inspected. Total alter found 6.875% and all the garments rectified. And the total ok garments are 480 pieces after rectify. Faults found 1.04% in mouth close as uneven and down stitch. Maximum 3.125% faults found in w/b joint which are down stitches and raw edges. Open stitch found and loop slunded found as .83% in side top stitch and loop tuck respectively. 0.41% Broken stitch found in side along with inseam over lock and in hem. Minimum faults 0.20% in seam top stitch which is skip stitch.

In report we saw some common faults have found in end line inspection. This should be reduced for quality control. To reduce these types of faults we should focused in In Process Inspection and In Line QC check. If problems can be reduced in those processes, the faults will be found less in end line inspection.

4.5 Daily Hourly Production:

Target was fixed for every operator per hour. We saw in the table, in front part, back part and output/assemble most of the operator couldnôt fill up their target. The operator and helper werenôt skilled. The operatorôs couldnôt fill up the target so the QC pass per hour as target was not possible. This hampered the line efficiency and as well as reduced the productivity. The line efficiency wasnôt good, so the line target per hour cannot be achieved.

To increase the line efficiency and to achieve the target per hour, we need to apply skilled worker to meet up the line target. We need to follow up the operator why they couldnôt fill up the target per hour. If there any problem found with operator or bottleneck found in the line then IE team should work with the operator. With the help of IE team if the problem of operator can be reduced and if the bottleneck can be removed, then target can be achieved by the operator and also it can be understood that if the target should be achieved by them or not.

4.6 Daily Style Check:

Daily style has done in front side, back side and inside. By the daily style check it is confirmed that the requirement is fulfilled which is expressed as OK and if no style is found then it is expressed as not found. Is there any missing or and any faults are found or not found.

In style check we found maximum operation was ok and there is no needle damage mark, oil spot, shading, fabric fault, raw edge out, uncut thread, loose thread, down stitch and skip stitch were not found. Some requirements also not found like any reinforcement werenôt found as buyer requirement. To make sure the quality control in sewing section during sewing all requirements as buyer style should be fulfilled.

4.7 Measurements Check:

In measurement check measurements are checked that all measurements after sewing are maintained as buyer requirements, which is very important for quality control.

For 18M and 24 size, maximum difference in measurement +1 and +.5 for four times with the specific length. Hips position under waist belt has to be equal as specific length. Minimum difference is +.3 in fly width.

No measurement variation or the accepted differences have to be maintained for quality control of the products.

Chapter-V

Conclusion

5.Conclusion:

Quality control in sewing section plays a great role in quality of garments. The processes are involved in quality control like Input and output, In process inspection, In line QC check, End line inspection, Daily hourly production and Daily style check and Daily measurement check. All the processes should be under in quality control to make sure the quality of garments.

- In process inspection in front part, back part and assemble has done to find out faults during sewing.
- In line QC check confirmed that the operation is doing in the right way with no machineries, needle and operator fault.
- End line inspection detects the faults in end line products and make ready for next process.
- Daily hourly production helps to find out that the target is achieving or not by operator and helps to take necessary steps.
- Daily style check confirms that the style is Ok or no defects found.
- Measurement check confirms all measurements are according to buyer requirements.

6. References:

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