



**Daffodil**  
*International*  
**University**

Faculty of Engineering  
Department of Textile Engineering

**Topic: Study on Different Types of Washing Defect on  
Denim Garments**

Course code: TE 4214 Course title: Project (Thesis)

Submitted by:

Name: Md. Aminur Rahman ID: 163-23-4795

Name: Kazi Tazbi Ul Hasan ID: 163-23-4822

Supervised by:

Name: Mst. Murshida Khatun

Designation: Assistant Professor

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

**Bachelor of Science in Textile Engineering**

Advance in Apparel Manufacturing Technology

Summer, 2020

# Acknowledgement

At first our gratefulness goes to the Almighty “**ALLAH**” for giving us strength and ability to complete the project report at **Top Jeans Ltd** successfully.

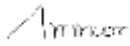
We also grateful to our supervisor **Mst. Murshida Khatun** Assistant Professor, Department of Textile Engineering, Faculty of Engineering, Daffodil International University. Her endless patience, scholarly guidance, continual encouragement, energetic supervision, constructive criticism, valuable advice, reading many inferior draft and correcting these at all stages have made it possible to complete this project report. I would like to give special thanks to the managements, supervisors, technicians, operators and all other staffs of **Top Jeans Ltd** who were most cordial and helpful to us during project report.

I thankful to my all teachers, lab assistant, registrar sir, coordinators and all the employees of Daffodil International University. I am highly delighted to express my regards & gratitude to Honorable Head **Mr. Md. Mominur Rahman** for providing his best support to us.

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

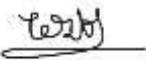
## Declaration

We declare that the work which is being presented in this report entitled, “Study on Different Types of Washing Defect on Denim Garments” is original work of our own, has not been presented for a degree of any other university and all the resources of collected information for this report have been duly acknowledged.



-----  
**Md. Aminur Rahman**

ID: 163-23-4795



-----  
**Kazi Tazbi Ul Hasan**

ID: 163-23-4822

Department of Textile Engineering

Faculty of Engineering

Daffodil International University

# Letter of Approval

January 03, 2020

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 Different Types of Washing Defect on Denim Garments in “Top Jeans Ltd” has been prepared by the student bearing ID 163-23-4795 and ID 163-23-4822 is completed for final evaluation. The whole report is prepared based on the proper investigation and information in Top Jeans Ltd. The student were directly involved in their project report activities.

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**

The paper is on “Study on Different Types of Washing Defect on Denim Garments”. Here 100% cotton denim fabrics were selected to carry out the experiment. Different dry process like Destroy, Tagging, Whiskering, Resin, 3D Wrinkle, Hand Scrapping, Grinding, White-Paste, PP-Spray used. Different wet process like Bleach Wash, Enzyme Wash, Pigment Wash, Normal Wash or Rinse Wash, Stone Enzyme Wash, Silicon Wash, Caustic Wash, Stone Wash and Acid wash used. Garments washing is getting used as a completely unique process to switch the looks, to impart worn-out look and to enhance the comfort ability of the clothes. But different washing are getting to express different defect on denim garments. Finding out the various defect of denim for various process is the major part of that research.

# Table of Content

<b>1. Introduction</b> .....	<b>1</b>
<b>2. Literature Review</b> .....	<b>3</b>
<b>2.1 Washing Information</b> .....	<b>4</b>
2.1.1 Garments Washing .....	4
2.1.2 Factory Involved in Washing .....	4
2.1.3 Country of Buyer .....	4
2.1.4 Buyer Types .....	5
<b>2.2 Washing Machine, Types and Chemical</b> .....	<b>6</b>
2.2.1 Machine Used in Washing Factory .....	6
2.2.2 Washing Types .....	6
2.2.3 Chemical Used in Washing Factory .....	7
<b>2.3 Washing Details</b> .....	<b>8</b>
2.3.1 Normal or Rinse Wash .....	8
2.3.2 Pigment Wash .....	8
2.3.3 Caustic Wash .....	8
2.3.4 Silicon Wash .....	8
2.3.5 Enzyme Wash .....	9
2.3.6 Stone Wash .....	9
2.3.7 Stone Enzyme Wash .....	9
2.3.8 Bleach Wash .....	10
2.3.9 Acid Wash .....	10
<b>3. Experimental Details</b> .....	<b>11</b>
<b>3.1 Quality Report 10<sup>th</sup> October 2020</b> .....	<b>12</b>
3.1.1 Data Collection .....	12
3.1.2 Report Chart .....	13
3.1.3 Description .....	14

<b>3.2 Quality Report 8<sup>th</sup> October 2020</b> .....	<b>16</b>
3.2.1 Data Collection .....	16
3.2.2 Report Chart .....	17
3.2.3 Description .....	18
<b>3.3 Quality Report 7<sup>th</sup> October 2020</b> .....	<b>19</b>
3.3.1 Data Collection .....	19
3.3.2 Report Chart .....	20
3.3.3 Description .....	21
<b>4. Discussion of Results</b> .....	<b>23</b>
<b>4.1 Report Analysis 10<sup>th</sup> October 2020</b> .....	<b>24</b>
4.1.1 Report Chart .....	24
4.2.2 Defect Chart .....	25
<b>4.2 Report Analysis 8<sup>th</sup> October 2020</b> .....	<b>26</b>
4.2.1 Report Chart .....	26
4.2.2 Defect Chart .....	27
<b>4.3 Report Analysis 7<sup>th</sup> October 2020</b> .....	<b>28</b>
4.3.1 Report Chart .....	28
4.3.2 Defect Chart .....	29
<b>5. Conclusions</b> .....	<b>30</b>
References .....	32

# List of Figures

Figure 2.1: Buyer Types .....	5
Figure 3.1: Report Analysis 10 <sup>th</sup> October 2020 .....	12
Figure 3.2: Report Analysis 8 <sup>th</sup> October 2020 .....	16
Figure 3.3: Report Analysis 7 <sup>th</sup> October 2020 .....	19
Figure 4.1: Report Chart 10 <sup>th</sup> October 2020 .....	24
Figure 4.2: Defect Chart 10 <sup>th</sup> October 2020 .....	25
Figure 4.3: Report Chart 8 <sup>th</sup> October 2020 .....	26
Figure 4.4: Defect Chart 8 <sup>th</sup> October 2020 .....	27
Figure 4.5: Report Chart 7 <sup>th</sup> October 2020 .....	28
Figure 4.6: Defect Chart 7 <sup>th</sup> October 2020 .....	29



## List of Tables

Table 3.1: Report 10 <sup>th</sup> October 2020 .....	13
Table 3.2: Report 8 <sup>th</sup> October 2020 .....	17
Table 3.3: Report 7 <sup>th</sup> October 2020 .....	20

# Chapter 1

## Introduction

“Washing is the technology which is used to modify the appearance, outlook, comfort ability and fashion of the garments is called garment washing” [1]. Washing are two types, Dry or Mechanical process and Wet process. The process which is applied in the wet condition of garments is called wet process. Washing is extremely important process of garment products. We cannot wear garments without wet washing. “The wet washing process of garments to create a better look or effects by normal wash or rinse wash, pigment wash, caustic wash, silicon wash, enzyme wash, stone wash, stone enzyme wash, bleach wash and acid wash” [2]. Wet process is a chemical process which develop certain effect within the garments. We use different types of wet process to get the desired effect.

# Chapter 2

## Literature Review

## **2.1 Washing Information**

### **2.1.1 Garments Washing:**

The denim garments have tons of demand within the market of normal garments also as within the fashion market. People of all ages, especially the youth have an excellent interest on the denim. Different washing methods are often applied for denim fabric finishing. Like enzyme wash, bleach wash, stone wash, acid wash, detergent wash, silicon washes etc. As a result new outlook and appearance is produced within the garments, which isn't possible in the other method. Moreover, because of washing, starch present within the garments is removed. "As a result washed garments might be worn after purchase directly from the shop" [3]. "Some garments shrink after wash, hence washed garments might be purchased as per required size" [4].

### **2.1.2 Factory Involved in Washing:**

246 factory is involved with washing [6].

### **2.1.3 Country of Buyer:**

1. USA
2. Germany
3. UK
4. France
5. Japan
6. Spain
7. Italy
8. Sweden
9. Canada
10. Australia
11. Poland
12. Denmark
13. Netherland
14. Norway
15. Switzerland
16. Hong Kong

## 2.1.4 Buyer Types:



Figure 2.1: Buyer Types

## **2.2 Washing Machine, Types and Chemical**

### **2.2.1 Machine Used in Washing Factory:**

1. Washing machine (Side loading)
2. Sample washing machine (Horizontal or vertical)
3. Grinding machine
4. Tagging machine
5. Washing machine (Front loading)
6. Dryer machine (Steam or gas)
7. Steam chamber for crinkle
8. Spray gun and dummy
9. Chemical mixture machine
10. Hydro extractor machine
11. Screw compressor
12. Boiler
13. Submersible pump
14. Sand blasting chamber
15. Laser draw
16. Industrial oven (Gas or electric)
17. Generator
18. Sand blasting gun

### **2.2.2 Washing Types:**

1. Dry process
2. Wet process

### **Types of Dry Wash:**

1. Destroy
2. Tagging
3. Whiskering
4. Resin
5. 3D Wrinkle
6. Hand Scrapping
7. Grinding
8. White-paste
9. PP-spray

## **Types of Wet Wash:**

1. Pigment wash
2. Normal or rinse wash
3. Caustic wash
4. Bleach wash
5. Enzyme wash
6. Stone wash
7. Acid wash
8. Silicon wash
9. Stone enzyme wash

## **2.2.3 Chemical Used in Washing Factory:**

1. Detergent
2. Enzyme
3. Optical brightener
4. Micro emulsion silicon
5. Sodium bicarbonate
6. Caustic soda
7. Acetic acid
8. Salt (sodium chloride)
9. Catanizer
10. Soda ash
11. Buffer
12. Resin
13. Sodium metabisulphite
14. Cationic / Nonionic flax softener
15. Potassium permanganate
16. Desizing agent
17. Antistain
18. Hydrogen peroxide
19. Bleaching powder
20. Stabilizer
21. Sodium hyposulfite
22. Fixing agent



## **2.3 Washing Details**

### **2.3.1 Normal or Rinse Wash:**

Normal or rinse wash is the popular, simplest and common washing process with low cost. In this process detergent is used to remove the dust, dirt, oil and size material from the garments. Flax softener is used for soft feeling to wear the clothes. After washing the denim garments surface look clean and feeling comfortable to wear the clothes.

### **2.3.2 Pigment Wash:**

This wash is usually done on printed or pigment dyed Garments. In this process caustic soda, soda ash and detergent is used to color fading effect, breakdown of pigment dye and cleans the garments. After washing the denim garments achieve old look effect on the garments.

### **2.3.3 Caustic Wash:**

Caustic wash is usually done on Direct dyed, Sulphur dyed, Reactive dyed or Printed clothes. In this process caustic soda and detergent is used to color fading effect and cleans the garments. After washing the denim garments achieve old look effect and hairiness on the garments.

### **2.3.4 Silicon Wash:**

Silicon wash is most popular and common washing process. Silicon washes are usually done on all type of cloths i.e. Denim, Twill, Corduroy, Canvas and Knit. In this process silicon and softener are used. After washing process it gives elastic hand, more softness and silky feel.

### **2.3.5 Enzyme Wash:**

Enzyme wash usually cellulose enzyme are used. So they are bio chemical substances that behave as catalysts toward specific reactions. This washing process is applied heavy fabrics like denim and jeans. “The action of enzyme during enzyme wash is to hydrolyse the cellulose, at first it attacks the having projecting fiber and hydrolyzed them. Then it attacks the yarn portion inside fabric and partly hydrolyzed the yarn portion and faded effect is produced” [5]. Usually two types of enzyme are used:

1. Acid Enzyme (Liquid)
2. Neutral Enzyme :- a) Powder form and b) Liquid form

In acid wash enzyme effect comes within short time and use acetic acid to maintain pH in the range of 4.5-5.5. In neutral wash enzyme effect comes slowly and working pH 6 - 7.

After washing process it gives bio-polishing and faded effect on denim garments.

### **2.3.6 Stone Wash:**

Stone wash is applied on heavy fabrics like denim and jeans. The stone are call pumic stone and it produced since volcanic explosion. Pumic stone are used in different type of washing like stone, acid and stone enzyme wash. Mechanical friction occurred between stone and denim garments. For this reason discolor effect developed. After washing process it gives irregular fading effect on the denim garments. Various fading effect can be gained by changing by the stones size, cycle time, shape of stone and garments load.

### **2.3.7 Stone Enzyme Wash:**

Now a days stone enzyme wash is most popular washing process. Stone and enzyme are applied together in stone enzyme washing process. In stone enzyme washing process enzyme and stone treatment is done after hot wash. After washing process it gives bio-polishing and irregular color faded effect on denim garments.

### **2.3.8 Bleach Wash:**

Bleach wash is remove more color from dyed garments. It is also used with stone wash and stone enzyme wash. Bleach wash is done very carefully otherwise it can damage the denim fabric and yellowish problem shown in the garments. To avoid the problem Sodium hyposulphite is employed to neutralize the clothes from chlorine bleach. After washing more color faded effect shown on denim garments.

### **2.3.9 Acid Wash:**

Acid wash is generally done on the clothes from heavy fabrics like denim, course canvas, sweater & thick twill etc. Pumic stone are used in acid wash. In this washing process stone treated with acid. Then the denim garments and stone are load on washing machine and mechanical friction occurred between stone and denim garments. For this reason discolor effect developed. After washing process it gives irregular fading effect on the denim garments.

# Chapter 3

## Experimental Details

### 3.1 Quality Report 10<sup>th</sup> October 2020

#### 3.1.1 Data Collection:

Date# 10/10/20		Top Jeans Ltd		SHIFT @ Day										
Atipara, Uttarban, Uttara, Dhaka														
Q.C HOURLY REPORT AND DAILY REPORT														
BUYER	STYLE	COLOUR	CHACK QTY	S. Dark	S. Light	Tint more	Tint less	PP light/whicker less	Light/whicker light/less	Calsonit	Reject	Total ok	Total ok	Remarks
L.P.P	84/50	07X	1309	-	-	-	-	-	-	-	03	03	1306	
"	42-195	50J	184	-	-	-	-	-	-	-	-	-	184	
"	0289-8	99J	1668	40	-	-	-	-	-	-	-	40	1628	
"	5577-B	87X	1560	-	-	-	-	-	-	-	-	-	1560	
"	"	09X	200	-	-	-	-	-	-	-	-	-	200	
"	44-813	99J	56	-	-	-	-	-	-	-	-	-	56	
"	"	55J	107	-	-	-	-	-	-	-	-	-	107	
"	195	55J	284	-	2/60	(Buckch AREA only wash done) (swing T. out=26)				02	144	160		
			<del>5368</del>						<del>187</del>		<del>5302</del>			
GRAND TOTAL														

10-02  
 10/10/20  
 10/10/20  
 PM  
 F.MANAGER  
 A.G.M SR

Figure 3.1: Report Analysis 10<sup>th</sup> October 2020

### 3.1.2 Report Chart:

B u y e r	S t y l e	Col or	Chec k QTY	S. Da rk	S.L Igh t	Ti n t M ore	Tint Les s	P.P Light/ Less	Whi sker Lig ht/ Les s	C.M/ Spot	Re jec t	Total/ Not	Tota l/OK	R e m ar ks
L . P . P . P . C	8 4 1 5 C	07X	1309								03	03	1306	
L . P . P . P . 5	Y 3 - 1 9 5	50j	184										184	
L . P . P . P . B	0 2 8 3 - B	99j	1668	40								40	1628	
L . P . P . P . B	5 5 7 7 - B	07j	1560										1560	
L . P . P . P . B	5 5 7 7 - B	09x	200										200	

L . P . P	Y Y - 8 1 3	99j	56									56	
L . P . P	Y Y - 8 1 3	55j	107									107	
L . P . P	1 9 5		284		2% 60	(B ar Tack Area Over Stitch- 39)		(Was hing Dama ge 14)	(Se win g T.e xt- 26)		02	144	140
			5368								5P S	187PS	5181 PS

Table 3.1: Report 10<sup>th</sup> October 2020

### 3.1.3 Description:

Total Checked = 5368 Pieces

Total Rejected = 5 Pieces

Total Defected = 187 Pieces

Total Passed = 5181 Pieces

Buyer name L.P.P & its Style name 8415C. It required Color is 07x (0- White, x- Dyeing). Total quantity of this lot is 1309. After final wash we get 1306 pcs, Rejected 3 pcs & 3 pcs are not ok due to different types of washing fault. In this style dry & wet both types of washing faults are there. This faults are Shade Dark, Shade Light, Tint More, Tint Less, PP Light/Less, Whisker Light/Less, C.M/Spot.

Buyer name L.P.P & its Style name Y3-195. It required Color is 50j (50- Light, j- washing). Total quantity of this lot is 184. After final wash we get 184 pcs ok. In this style washing faults are not there.

Buyer name L.P.P & its Style name 0283-B. It required Color is 99j (99- Dark, j- Washing). Total quantity of this lot is 1668. After final wash we get 1628 pcs ok & 40 pcs are not ok due to washing fault. In this style wet type of washing fault is there. This fault is Shade Dark.

Buyer name L.P.P & its Style name 5577-B. It required Color is 07x (0- White, x- Dyeing). Total quantity of this lot is 1560. After final wash we get 1560 pcs ok. In this style washing faults are not there.

Buyer name L.P.P & its Style name 5577-B. It required Color is 09x (0- White, x- Dyeing). Total quantity of this lot is 200. After final wash we get 200 pcs ok. In this style washing faults are not there.

Buyer name L.P.P & its Style name YY-813. It required Color is 99j (99- Dark, j- Washing). Total quantity of this lot is 56. After final wash we get 56 pcs ok. In this style washing faults are not there.

Buyer name L.P.P & its Style name YY-813. It required Color is 55j (55- Medium, j- Washing). Total quantity of this lot is 107. After final wash we get 107 pcs ok. In this style washing faults are not there.

Buyer name L.P.P & its Style name 195. It required Color is 55j (55- Medium, j- Washing). Total quantity of this lot is 284. After final wash we get 140 pcs ok, Rejected 2 pcs and 144 pcs are not ok due to different types of washing fault. In this style dry & wet both types of washing faults are there. This faults are Shade Light 60, Tint More / Tint Less (Bar Tack Area Over Stitch – 39), PP Light/Less (Wash Damage 14), Whisker Light/Less (Sewing T. ext- 26).



### 3.2 Quality Report 8<sup>th</sup> October 2020

#### 3.2.1 Data Collection:

Date: 08/10/20 Top Jeans Ltd SHIFT @ NIGHT

Alipara, Uttarkhan, Uttara, Chaka

**Q.C HOURLY REPORT AND DAILY REPORT**

BUYER	STYLE	COLOUR	CHECK QTY	S. Dark	S. Light	Int. Make	Int. Loss	PP. Gain/Loss	Uneven	Conknot	Reject	total not total	Remarks		
L.P.P	84/50	59X	300	-	40	Yellish	-150	-	-	-	-	190 110			
L	L	07X	900	-	300	Yellish	-300	-	-	-	-	600 300			
W	YY-813	55J	1222	-	30	50	-	PP. Gain 30	(P.P. Loss-02)	-	-	112 1110			
W	YK-195	50J	753	-	160	-	-	-	(Swing T. out-02)	01	-	168 590			
W	02830	99J	750	-	-	-	-	-	-	-	-	350			
W	5577B	87X	1237	-	-	-	-	-	-	Spot 36	02	38 1199			
<del>5162</del>				Granding Balance = 400 Rs.								<del>1103</del> = 3650 Rs.			
<b>GRAND TOTAL</b>															

30/10/20  
8-10-2020

I.MANAGER

Figure 3.2: Report Analysis 8<sup>th</sup> October 2020

### 3.2.2 Report Chart:

B u y e r	S t y l e	Col or	Chec k QTY	S. Da rk	S.L Igh t	Ti n t M ore	Tint Les s	P.P Light/ Less	Une ven	C.M/ Spot	Re jec t	Total/ Not OK	Tota l/OK	R e m ar ks
L . P . P . P . C	8 4 1 5 C	59x	300		40	(Y ell ow ish - 15 0)						190	110	
L . P . P . P . C	8 4 1 5 C	07x	900		300	(Y ell ow ish - 30 0)						600	300	
L . P . P . P . 3	Y Y - 8 1 3	55j	1222		30	50		P.P Light 30 P.P Less- 02				112	1110	
L . P . P . P . 5	Y z - 1 9 5	50j	753		160				(Se win g T. ext- 02)		01	163	590	
L . P . P . P . B	0 2 8 3 - B	99j	750									Grindi ng= 400 PS	350	

L	5	87x	1237							Spot -36	02	38	1199	
.	5													
P	7													
.	7													
P	-													
	B													
			5162								3P	1503P	3659	
											S	S	PS	

Table 3.2: Report 8<sup>th</sup> October 2020

### 3.2.3 Description:

Total Checked = 5162 Pieces

Total Rejected = 3 Pieces

Total Defected = 1503 Pieces

Total Passed = 3659 Pieces

Buyer name L.P.P & its Style name 8415C. It required Color is 59x (59- Dark, x- Dyeing). Total quantity of this lot is 300. After final wash we get 110 pcs ok & 190 pcs are not ok due to different types of washing fault. In this style wet types of washing faults are there. This faults are Shade Light 40, Tint More (Yellowish- 150).

Buyer name L.P.P & its Style name 8415C. It required Color is 07x (0- White, x- Dyeing). Total quantity of this lot is 900. After final wash we get 300 pcs ok & 600 pcs are not ok due to different types of washing fault. In this style wet types of washing faults are there. This faults are Shade Light 300, Tint More (Yellowish- 300).

Buyer name L.P.P & its Style name YY-813. It required Color is 55j (55- Medium, j- Washing). Total quantity of this lot is 1222. After final wash we get 1110 pcs ok & 112 pcs are not ok due to different types of washing fault. In this style dry & wet both types of washing faults are there. This faults are Shade Light 30, Tint More 50, P.P Light 30, P.P Less 2.

Buyer name L.P.P & its Style name Yz-195. It required Color is 50j (50- Light, j- Washing). Total quantity of this lot is 753. After final wash we get 590 pcs ok, Rejected 1 pc & 163 pcs are not ok due to different types of washing fault. In this style dry & wet both types of washing faults are there. This faults are Shade Light 160, Uneven (Sewing T. ext- 2).

Buyer name L.P.P & its Style name 0283-B. It required Color is 99j (99- Dark, j- Washing). Total quantity of this lot is 750. After final wash we get 350 pcs ok & 400 pcs are not ok due to different types of washing fault. In this style dry type of washing fault is there. This fault is Grinding = 400 PS.

Buyer name L.P.P & its Style name 5577-B. It required Color is 87x (87- Dark, x- Dyeing). Total quantity of this lot is 1237. After final wash we get 1199 pcs ok, Rejected 2 pcs & 38 pcs are not ok due to washing fault. In this style wet type of washing fault is there. This fault is C.M/Spot (Spot- 36).

### 3.3 Quality Report 7<sup>th</sup> October 2020

#### 3.3.1 Data Collection:

Date # 07/10/20		Top Jeans Ltd		SHIFT @ NIGHT											
Atpara, Uttarban, Uttara, Dhaka															
Q.C HOURLY REPORT AND DAILY REPORT															
BUYER	STYLE	COLOR	CHECK QTY	S.Dark	S.Light	Tint more	Tint Less	AP/Unven/loss	Unven	Imp/RA	Reject	Total net ok	Total	Remarks	
L.P.P	845C	59X	1010	-	150	(yellow)	-150	(S.Blue-150)	-	-	-	450	560		
"	0283-B	99J	600	-	-	-	-	(Send for (sparking-500)	-	-	-	-	600		
"	YY-823	55J	600	-	40	100	-	(PP/AL/150)	-	-	-	140	460	PP tin less Priority 150 P/s.	
"	YR-95	55J		-											
"	"	50J	330	05	05	05	-	(Send for (sparking-240)	-	-	-	90	x	(280 G. balance)	
"	5577-B	87X	1580	-	-	-	-	-	-	-	-	-	1580		
Contractor	98J	LT.Blue	554	-	35	20	-	-	-	SP/2	07	64	490	All body PP Priority	
			=4574P/s.												
													(Remaining balance-240P/s. = 744P/s. = 3690 P/s.)		
GRAND TOTAL															

Figure 3.3: Report Analysis 7<sup>th</sup> October 2020

### 3.3.2 Report Chart:

B u y e r	S t y l e	Col or	Chec k QTY	S. Da rk	S.L Igh t	Ti n t M ore	Tint Les s	P.P Light/ Less	Une ven	C.M/ Spot	Re jec t	Total/ Not OK	Tota l/OK	R e m ar ks
L . P . P . P	8 4 1 5 C	59x	1010		150	(Y ell ow ish - 15 0)	(S. Blu e- 150 )					450	560	
L . P . P . P . B	0 2 8 3 -	99j	600						Gri ndi ng- 500				600	
L . P . P . P	Y Y - 8 1 3	55j	600		40	10 0		(P.P Tint Less 150)				140	460	P. P Ti nt L es s 1 5 0 P S
L . P . P . P	Y z - 1 9 5	50j	330	05	Blu e Lig ht 80	05			Gri ndi ng- 240			90		G ri ndi ng 2 4 0

L . P . P - B	5 5 7 7 -	87x	1580									1580	
C e n t r o T e x L t d	9 8 1	LT. Blu e	554		35	20			Spot -02	07	64	490	A l l B o d y P. P
			4674 PS							7P S	984PS	3690 PS	

Table 3.3: Report 7<sup>th</sup> October 2020

### 3.3.3 Description:

Total Checked = 4674 Pieces

Total Rejected = 7 Pieces

Total Defected = 984 Pieces

Total Passed = 3690 Pieces

Buyer name L.P.P & its Style name 8415C. It required Color is 59x (59- Dark, x- Dyeing). Total quantity of this lot is 1010. After final wash we get 560 pcs ok & 450 pcs are not ok due to different types of washing fault. In this style wet types of washing faults are there. This faults are Shade Light 150, Tint More (Yellowish- 150), Tint Less (S. Blue).

Buyer name L.P.P & its Style name 0283-B. It required Color is 99j (99- Dark, j- washing). Total quantity of this lot is 600. After final wash we get 600 pcs ok. In this style washing faults are not there.

Buyer name L.P.P & its Style name YY-813. It required Color is 55j (55- Medium, j- Washing). Total quantity of this lot is 600. After final wash we get 460 pcs ok & 140 pcs are not ok due to washing fault. In this style dry & wet both types of washing faults are there. This faults are Shade Light 40, Tint More 100.

Buyer name L.P.P & its Style name Yz-195. It required Color is 50j (50- Light, j- Washing). Total quantity of this lot is 330. After final wash we get 330 pcs are not ok due to washing fault. In this style dry & wet both types of washing faults are there. This faults are Shade Dark 5, Shade Light (Blue Light 80), Tint More 5, Grinding 240.

Buyer name L.P.P & its Style name 5577-B. It required Color is 87x (87- Dark, x- Dyeing). Total quantity of this lot is 1580. After final wash we get 1580 pcs ok. In this style washing faults are not there.

Buyer name Centro Tex Ltd & its Style name 981. It required Color is LT. Blue. Total quantity of this lot is 554. After final wash we get 490 pcs ok, Rejected 7 pcs & 64 pcs are not ok due to washing fault. In this style wet type of washing fault is there. This faults are Shade Light 35, Tint More 20, C.M Spot (Spot 2).

# Chapter 4

## Discussion of Results



## 4.1 Report Analysis 10<sup>th</sup> October 2020

### 4.1.1 Report Chart:

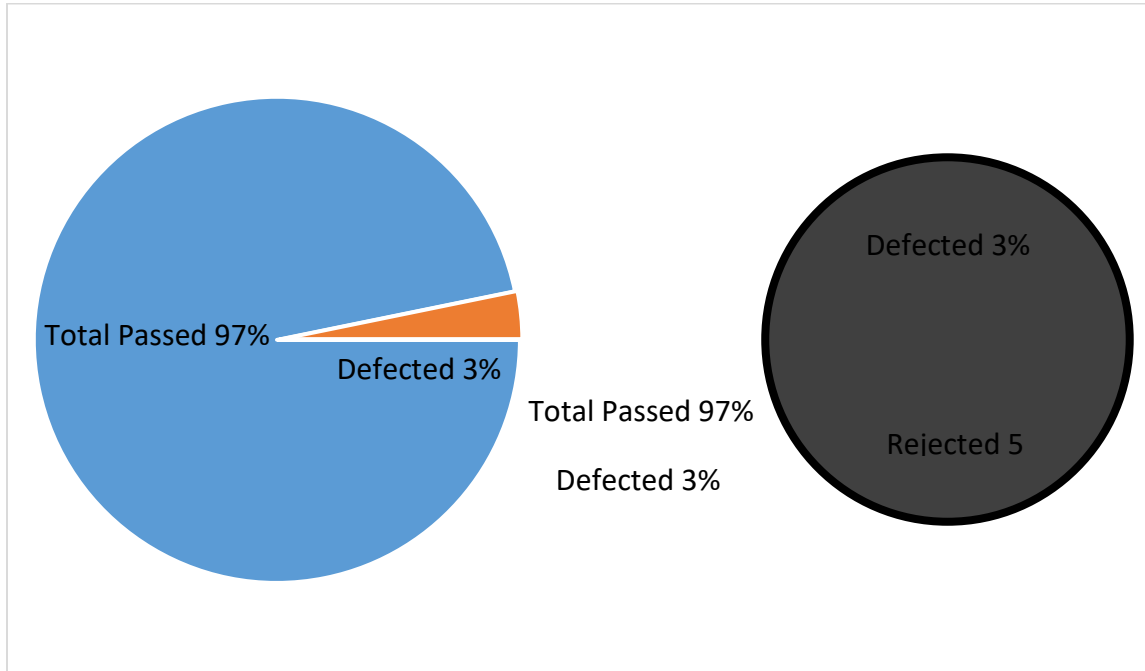


Figure 4.1: Report Chart 10<sup>th</sup> October 2020

#### Description:

This chart is a Q.C Hourly Report and Delivery Report of **Top Jeans Ltd.** Here Buyer, Style, Color, Check QTY, S. Dark, S. Light, Tint More, Tint Less, P.P Light/Less, Whisker Light/Less, C.M/Spot, Reject, Total/Not OK, Total OK, Remarks are there.

In this pie chart total checked quantity is 5368 pieces of garments. After washing 5181 pieces of garments are ok & 187 pieces of garments are not ok.

## 4.1.2 Defect Chart:

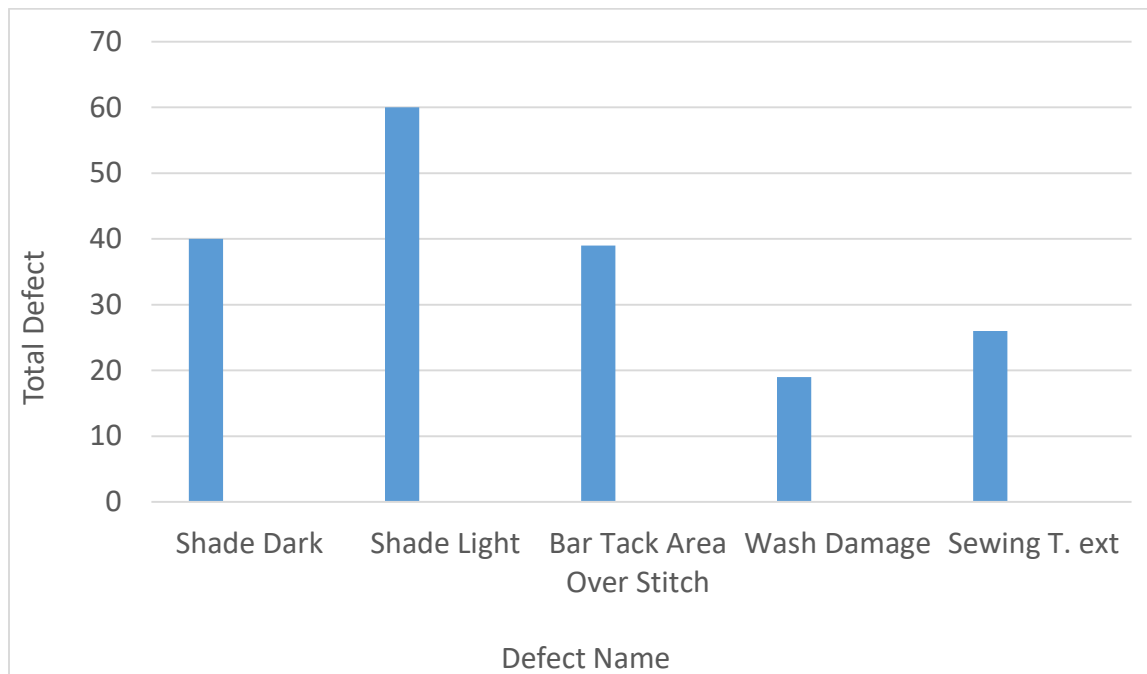


Figure 4.2: Defect Chart 10<sup>th</sup> October 2020

### Defect Solution:

We are collected this quality control hourly report and delivery report sheet in **Top Jeans Ltd.** We collected data on 10<sup>th</sup> october 2020. We done our report by flow the several step wet & dry washing fault.

If it is dark shade, we have to do bleach wash or potash wash.

If there is light shade, we have to increase the color by understanding the shade.

If the tint is more, it should be reduced with red brightener.

If the tint is less, we have to give more color.

If P.P is light, it has to be deepened after silicon wash.

If the whisker is less then we have to understand the place and use emery paper.

If the spot is in dark shade, detergent should be given.

There is nothing to do if the spot in light shade.

## 4.2 Report Analysis 8th October 2020

### 4.2.1 Report Chart:

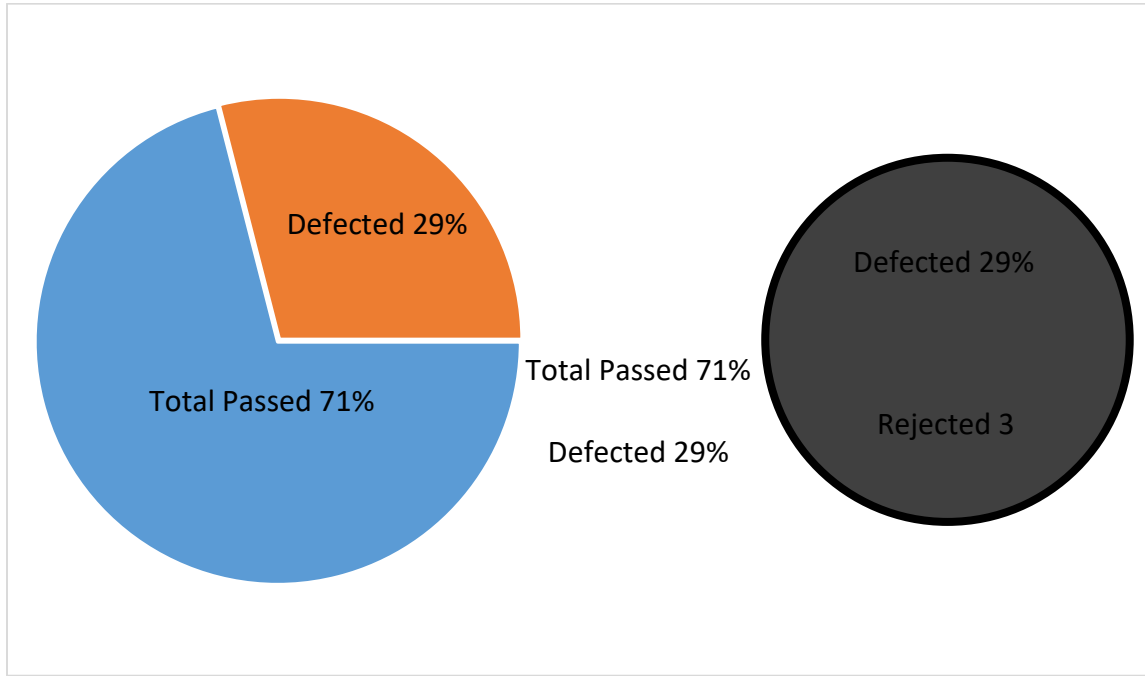


Figure 4.3: Report Chart 8<sup>th</sup> October 2020

#### Description:

This chart is a Q.C Hourly Report and Delivery Report of **Top Jeans Ltd.** Here Buyer, Style, Color, Check QTY, S. Dark, S. Light, Tint More, Tint Less, P.P Light/Less, Whisker Light/Less, C.M/Spot, Reject, Total/Not OK, Total OK, Remarks are there.

In this pie chart total checked quantity is 5162 pieces of garments. After washing 3659 pieces of garments are ok & 1503 pieces of garments are not ok.

## 4.2.2 Defect Chart:

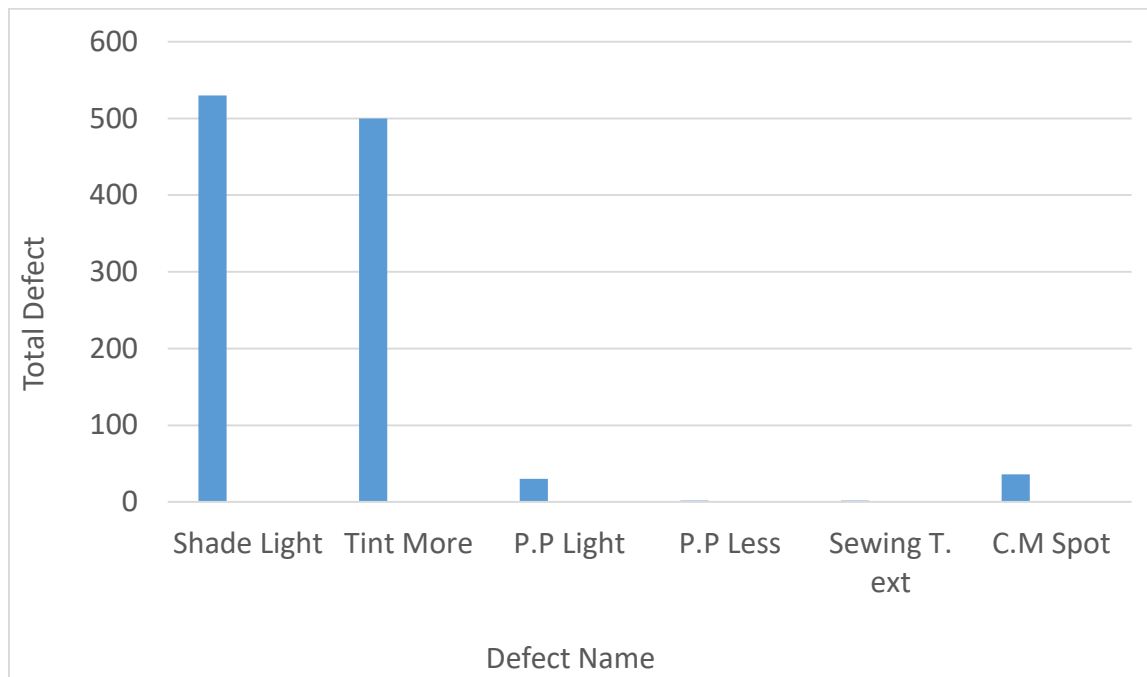


Figure 4.4: Defect Chart 8<sup>th</sup> October 2020

### Defect Solution:

We are collected this quality control hourly report and delivery report sheet in **Top Jeans Ltd.** We collected data on 08<sup>th</sup> october 2020. We done our report by flow the several step wet & dry washing fault.

If it is dark shade, we have to do bleach wash or potash wash.

If there is light shade, we have to increase the color by understanding the shade.

If the tint is more, it should be reduced with red brightener.

If the tint is less, we have to give more color.

If P.P is light, it has to be deepened after silicon wash.

If the whisker is less then we have to understand the place and use emery paper.

If the spot is in dark shade, detergent should be given.

There is nothing to do if the spot in light shade.

## 4.3 Report Analysis 7<sup>th</sup> October 2020

### 4.3.1 Report Chart:

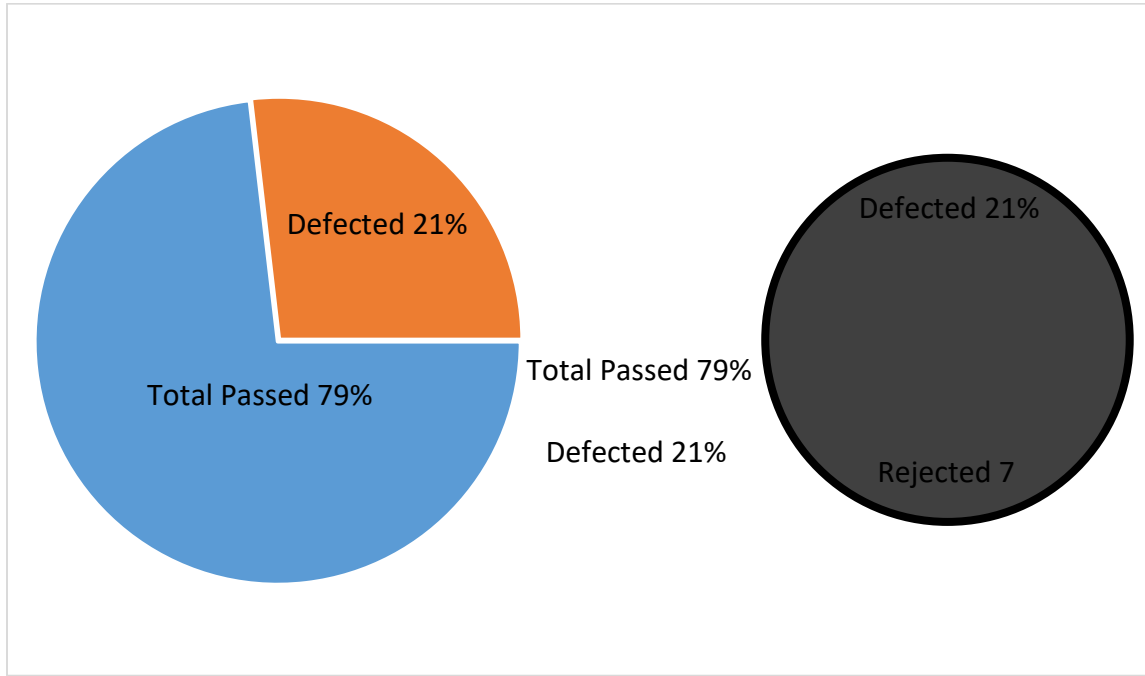


Figure 4.5: Report Chart 7<sup>th</sup> October 2020

#### Description:

This chart is a Q.C Hourly Report and Delivery Report of **Top Jeans Ltd.** Here Buyer, Style, Color, Check QTY, S. Dark, S. Light, Tint More, Tint Less, P.P Light/Less, Whisker Light/Less, C.M/Spot, Reject, Total/Not OK, Total OK, and Remarks are there.

In this pie chart total checked quantity is 4674 pieces of garments. After washing 3690 pieces of garments are ok & 984 pieces of garments are not ok.

### 4.3.2 Defect Chart:

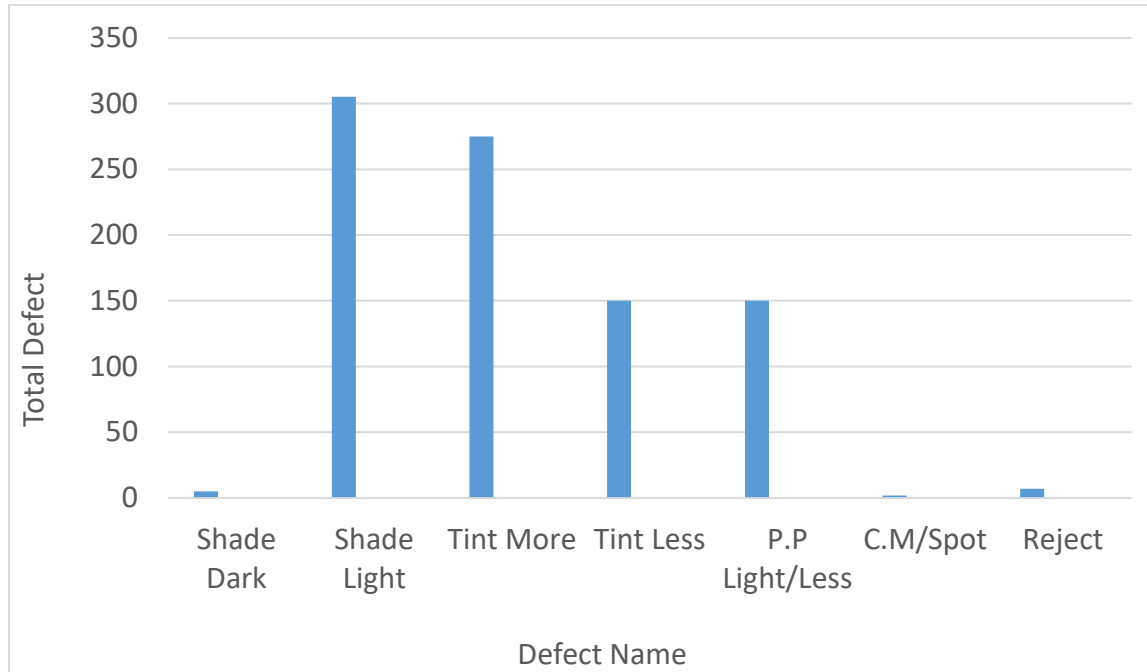


Figure 4.6: Defect Chart 7<sup>th</sup> October 2020

#### Defect Solution:

We are collected this quality control hourly report and delivery report sheet in **Top Jeans Ltd.** We collected data on 07<sup>th</sup> october 2020. We done our report by flow the several step wet & dry washing fault.

If it is dark shade, we have to do bleach wash or potash wash.

If there is light shade, we have to increase the color by understanding the shade.

If the tint is more, it should be reduced with red brightener.

If the tint is less, we have to give more color.

If P.P is light, it has to be deepened after silicon wash.

If the whisker is less then we have to understand the place and use emery paper.

If the spot is in dark shade, detergent should be given.

There is nothing to do if the spot in light shade.

# Chapter 5

## Conclusion

By doing this project we learned about different washing defect in denim washing process. Different washing process gives various type of defect on denim garments. Under this investigation it is clear that after washing garments are gathered some properties like appearance, softness, comfort and strength because unwashed garments are almost stiff and rough. Fashion are changed very quickly. But dry and wet wet wash gives defect on denim garments. So proper Quality Control needed. To achieve the ultimate destination more research and development on garments washing are mandatory.



## References:

- [1] <https://textilelearner.blogspot.com/2012/04/garment-washing-objects- of-garment.html>
- [2] [http://www.ivyunion.org/index.php/ajaphy/article/download/1101/pdf\\_1](http://www.ivyunion.org/index.php/ajaphy/article/download/1101/pdf_1)
- [3] <http://www.iosrjournals.org/iosr-jpte/papers/Vol1-issue3/G...>
- [4] <http://www.iosrjournals.org/.../papers/Vol1-issue3/G0134649.pdf>
- [5] <https://diutestudents.blogspot.com/2018/05/enzymes-and...>
- [6] <https://textilelearner.blogspot.com/2014/10/list-of-garments-washing-mills-in-bangladesh.html>