

## Faculty of Engineering Department of Textile Engineering

#### Report on

## **Industrial Attachment**

A<sub>1</sub>

**Active Composite Mills Ltd.** 

**Course Title: Industrial Attachment** 

**Course Code: TE-431** 

#### **Submitted By**

Md.Shoharab Hossain ID: 152-23-4431

Shohel Mia ID: 152-23-4433

### Supervised By

### Mohammad Abdul Baset Assistant Professor

Department of Textile Engineering

Daffodil International University

This Report Presented in Partial Fulfillment of the Requirements for the Degree of

**Bachelor of Science in Textile Engineering** 

Advance in Apparel Manufacturing Technology

Duration Time: From January 31, 2018 to March 31, 2018

## **DECLARATION**

We hereby declare that, this report has been done under the supervisor of Engr. Mohammed Abdul Baset, Senior Lecturer, Dept. of TE, Daffodil International University. We also declare that, neither this report nor any part of this has been submitted elsewhere for award of any degree.

## **Submitted By:**

Md. Shoharab Hossain
ID: 152-23-4431
Department of Textile Engineering
Daffodil International University
Yours Sincerely
Shohel Mia
ID: 152-23-4433
Department of Textile Engineering
Daffodil International University
Yours Sincerely
This is to certify that the above declaration made by the candidates is correct to the best of our knowledge.





### LETTER OF APPROVAL

To

The Head

Department of Textile Engineering

102, Shukrabad, Mirpur Road, Dhaka 1207

Subject: Approval of Industrial Attachment Report of B. Sc. In TE Program

Dear Sir.

I am just writing to let you know that this Industrial Attachment in "Active Composite Mills Ltd" has been prepared by the student bearing ID: 152-23-4431 and ID: 152-23-4433 is completed for final evaluation. The whole report is prepared based on the proper investigation and information in Active Composite Mills Ltd. The student were directly involved in their Industrial Attachment Report Activities.

Therefore it will highly be appreciated if you kindle accept this Industrial Attachment Report and consider it for final evaluation.

Yours Sincerely

**Engr. Mohammed Abdul Baset** 

**Assistant Professor** 

Department of Textile Engineering

**Daffodil International University** 





#### **ACKNOWLEDGEMENT**

At first our gratefulness goes to almighty Allah to give us strength and ability to complete the industrial and this report.

Now we wish to take this opportunity to thank a lot of people who have assisted and inspired us in completion of our training period.

Mohammad Abdul Baset, Sr Lecturer Professor of Daffodil International University our supervisor, to whom we are extremely indebted for his tremendous support and guidance throughout our training period. Being working him we have not only earned valuable knowledge but also inspired by his innovativeness which helped enrich our experience to greater extent. His idea and way of working was truly remarkable.

We are also expressing our gratitude to Prof. Dr. Mahbubul Haque Head, Department of Textile Engineering, for his support and continuous guidance throughout our long journey in Daffodil International and industrial training.

We should like thank the management of Active Composite mills Ltd. or giving us opportunity to do the industrial training successfully and also their valuable suggestions.

It's a great pleasure to express our satisfaction to The Active Composite Mills Ltd. Authority for their sincere and cordial co-operation and we are very much indebted to MD. SHAFIQUL ISLAM (director), MD. Sallauddin Ahmed, AGM, merchandiser, for their association in completion of our training successfully. Our training would never been completed without his convenient helps and supports.

Finally, we must acknowledge our Parents with due respect for their constant support, patients and believe on our ability which drives us in the successful completion of this report.





## **DEDICATION**

At first we want to dedicate this Industrial Training report to almighty Allah for giving us a better opportunity to prove ourselves. Without his help nothing is possible.

And our parents who give us chance to study in Textile Engineering and support us all time.

Specially dedicate this report to **Md. Rafiqul Islam (Manik),** Sr. Merchandiser Of Active Composite Mills Ltd. and all the people who have helped us in the Active Composite mills Ltd. to complete this report.





## **Executive Summery**

This report is titled "Report on Industrial Attachment at Active Composite Mills Ltd". By achieving practical knowledge from the industrial attachment it is possible to apply the theoretical knowledge in the technical field. For any technical education, practical experience is almost equally necessary in association with the theoretical knowledge. The industrial attachment is the most effective process of achieving the practical experiences. It provides us sufficient practical knowledge about Production Management, Productivity, Evaluation, Work Study, Efficiency, Industrial Management, Production Planning & Controlling, Utilities and Maintenance of Machineries and their Operation Techniques etc. Active Composite Mills Ltd is a modern RMG industry of Rising group. based on knit garments production. Our approach was to know and work with all the parameters of each section and practice with technical experts. As our academic advance study was in Garment Manufacturing Technology our emphasis was in understanding and learning of apparel manufacturing and merchandising. Industrial attachment is an essential part of four years B.Sc. in Textile Engineering course of Daffodil International University. We had the opportunity to perform the industrial attachment with Active Composite Mills Ltd. During 2 Months long attachment, we studied the Man, Machine, Material and fabric inspection, sample making, pattern and marker making, spreading, cutting, sewing, finishing, pecking and the official job of merchandiser. According to our studies in the whole chain of the factory we have prepared the following report and would like to present as our internship report. B.Sc. in Textile Engineering is the combination of theoretical knowledge and the practical experiences. The main objective of this training is to comprehend our theoretical knowledge along with the practical knowledge. It also enabled us to orient ourselves with the practical environment which is our place of future work.





## **Table of Contents**

1.CHAPTER:1	1
1.1. Introduction	2
2.CHAPTER: 2	3
2. Information about factory	4
2.1. History of the factory	5
2.2. Founder and directors:	
2.3. General information about factory	6-7
2.4. Layout	8
2.5. Organogram	9-10
2.6. Sister Concerns	11
2.7. Export growth by graph	12
2.8. Product info	
2.9. Brief profile (numbers of worker, area, total machineries, etc)	14-15
2.10. Major buyers with their Logo	16
2.11. Certification	17
2.12. Mission and Vision of Active composite mills Ltd	18
3.CHAPTER: 3	
3. Description of the Factory	20
3.1 Sample Section	
3.1.1 Layout of Sample Section	21
3.1.2. Organogram of Sample Section	
3.1.3. Flow sequence of sample section	
3.1.4 Types of sample produce	
3.2. CAD section	27
3.2.1 Working sequence 0f CAD section	28
3.2.2. Pattern making	
3.3. Cutting section	30
3.3.1. Cutting Layout	30
3.3.3. Fabric Inspection	30
3.3.4. Fabric Relaxation	31
3.3.5. Fabric relaxation time	32
3.3.6. Fabric Spreading	33
3.3.7. Types of Fabric spreading	34
3.3.8. Ideal Lay height for cutting:	
3.3.9. Requirements of fabric spreading:	34
3.3.10. Spreading system in factory:	35
3.3.11. Marker making	35
3.3.12. Objects of marker making:	36
3.3.13. Types of marker making:	
3.3.14. Factors considered during marker making	
3.3.15. The factors which influence the Marker Efficiency	
3.3.18. Fabric cutting	38





3.3.19. Methods of Fabric Cutting:	38
3.3.20. Different Types of Cutting Machine:	39
3.3.21.Numbering	39-42
3.3.22. Bundling	
3.3.23. Machine & Equipment used in cutting section	
3.3.24. Limitation of Cutting Section:	
3.4. Sewing Section	
3.4.1. Lay out of sewing floor:	
3.4.3. Flow chart of sewing section	
3.4.4. Sewing thread:	
3.4.5. Sewing needle	
3.4.6 Sewing machine	46
3.4.7. Thread used in different Machine	
3.4.8. Different Sewing Machine	
3.4.10. Layout of a T-shirt:	
3.4.12. Sewing Quality checking points	
3.4.13. Sewing Line quality Check List:	
3.4.15Sewing Defects:	
3.4.16. Sewing problems in "factory":	53
3.5. Finishing Section	53
3.5.1. Finishing Lay Out:	54
3.5.2. Garments Finishing	54
3.5.3.Process Flow Chart of Garment Finishing:	55
3.5.4. Object of Finishing:	56
3.5.5. Work flow in the Finishing Room:	57
3.5.6. Machine Description of finishing section	58
3.5.7. Different types of Machine used	58
3.5.8. Materials used in garment finishing:	59
3.5.9. Spot removing	59
3.5.10. Ironing:	60
3.5.11.Garment Inspection:	60
3.5.12. Trims:	61
3.6. Quality Section	62
3.6.1. Quality objectives	63
3.6.2. Machines required for quality	63





3.6.3. Inspection Area	64
3.6.4. Faults Found in QC Department	64
3.6.5. Quality Assurance System	64
3.6.6 Online Quality control:	65
3.6.7. Off line quality control:	65
3.7. Merchandising Section	65
3.7.1. Merchandising:	65
3.7.2. Merchandising department:	66
3.7.3. Flow Chart of Garments Merchandizing:	67
3.8. Marketing Section	68
3.8.1. Marketing Activities:	68
3.8.2. Manpower:	68
3.8.3. Marketing strategy:	68
3.8.4. Product label:	68
3.8.5. Package size & label:	69
3.8.6.Duties & Responsibilities of Marketing Officer:	69
3.09. COMPLIANCE	69
3.09.1 COMPLIANCE:	69
3.10.2. HEALTH:	70
3.10.3 TOILET:	71
3.10.4 FIRE:	71
3.10.5 SAFETY GUARD:	71
3.10.6 OTHERS:	72
4. Impact of internship	73
4.1. Sample development	74
4.2. Cad section	74
4.3. Cutting	74
4.4. Sewing	74
4.5. Finishing	74





4.6. Quality	74	
4.7, Merchandising	75	
4.8. Marketing	75	
4.9. Compliance	75	
CHAPTER: 5		76
5. Conclusion	77	

## CHAPTER-1 INTRODUCTION





#### **Introduction:**

Rising Group began its journey in 1997 as a very small apparel manufacturing & exporting unit in a rented building in Mirpur, Dhaka city and now a leading apparel, yarn and knit fabric manufacturer in the country at its own three complexes. The group is vertically integrated to provide with an one stop service like Yarn, Dyeing & Finishing, Stitching, Printing, Washing, Packaging, Button & Thread manufacturing facilities

All facilities ensures health and safety measures in terms of building structural, fire and electrical safety as well as environment friendly measures like waste disposal, WTP facility and BOD type Effluent Treatment Plant (ETP) as required by local laws and international standards

Active Composite Mills Ltd instigated its journey in the last quarter of 2009, with a vision of becoming the most recognized knitwear manufacturer of the country as well as to make the widely known reputation of Bangladesh as a global clothing leader to a new height by offering the best blend of quality and efficiency. Active Composite Mills Ltd (ACML) is equipped with the most advanced textile technology from the US, Europe, Hong Kong and Japan. We have not only ensured the best ever technology but also a band of highly skilled, professionally dedicated industrial manpower and management team to exclintune with our technology. This built-in composition is to ensure quality in producing levity textiles for onward manufacturing of ready-to-wear knit garments and knit fabrics-all under one group of company.





## Chapter-02 Information about factory





## 2.1. History of the factory:

A small manufacturing & exporting unit with only 120 sewing machines in the name of Rising Fashions Ltd started in 1997 in a rented building at Mirpur, Dhaka. The unit was meeting customer's demand of qualitative woven items like men's shirts, shorts, pants, etc. Things started to change dramatically over the years since 1999 when the second manufacturing unit was established and the Group committed to provide qualitative service as per needs of the various customers USA & EU markets

The Group owns five knit & woven manufacturing units in Mirpur and Ashulia in Dhaka city. The total floor spaces of apparel manufacturing units are roughly 249,000 Sq. Ft in four buildings where sewing, cutting, finishing and packaging performed

The Group also owns textile product units in two Spinning Mills having 66,240 ring spindles and 1,800 rotors covering a total area of 295,000 Sq. ft and an area of 155,000 Sq. ft for production of knit fabrics, dyeing, finishing, washing, printing, button and thread manufacturing along with WTP and ETP facilities.





#### 2.2. Founder and directors:

NARGIS MAHMUD CHAIRMAN, RISING GROUP

JOHNNY K. Y. LAM VICE CHAIRMAN, RISING GROUP

MAHMUD HASAN KHAN
MANAGING DIRECTOR, RISING GROUP

MD. ZULFIKER MAMUN KHAN DIRECTOR, SABARANG FASHIONS LTD.

MD. MASUM IQBAL KHAN (SUMON)
DIRECTOR, RISING SPINNING MILLS LTD.

MIR RAFIQUL ISLAM (RUBEL)
DIRECTOR, ARUNIMA APPARELS LTD.

MD. SHAFIQUL ISLAM DIRECTOR, ACTIVE COMPOSITE MILLS LTD.





## 2.3. General information about factory:

Active Composite Mills Ltd

**Factory Statistics** 

Year of Operation: 2009

Type of Factory: Knit Garments

Area of Factory: 81,700 sq. ft

Production Capacity: 800,000 Pcs/ Month

Total Workforce: 1370

Total Turnover Year USD in Million

2012-2013 : 12.93

2013-2014 : 12.70

#### **Contribution to National Economy:**

Year : USD in Million

2012-2013 : 2.06

2013-2014 : 2.50

#### **Factory Location:**

Name of Factory : Active Composite Mills Ltd.

Address : Dewan Idris Road, Zirabo, Savar, Dhaka,

City : Savar

Zip Code : 1341





Country : Bangladesh

Telephone No : +8809613111000

Fax No. : +8809007093

Distance from Airport/ Hotel: 40 Minutes

**Factory Contacts:** 

Contact Person: Md. Shafiqul Islam, Director, Production E-mail: sohel@rising-group.com

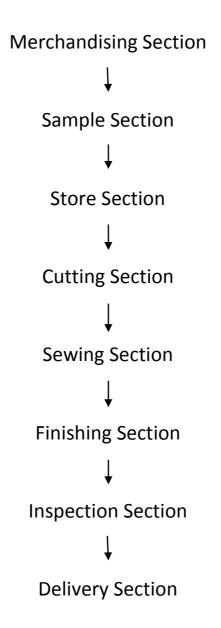
Syed Taifur Hossain, Director, Compliance, E-mail: hossain@rising-

group.com





## 2.4. Layout







#### 2.5. Sister Concerns

1. Rising Fashions Ltd. – 1997

Plot-I/16, Block-K, Rupnagar I/A, Mirpur-2, Dhaka-1216 Floor Area: 38,542 Sq. Ft.

2. Rising Apparels Ltd. – 1999

Plot-I/10, Block-K, Rupnagar I/A, Mirpur-2, Dhaka-1216 Floor Area: Unit-1: 46,333 Sq. Ft.

3. Arunima Apparels Ltd. – 2000

Plot-I/10, Block-K, Rupnagar I/A, Mirpur-2, Dhaka-1216 Floor Area: 43,966 Sq. Ft.

4. Sabarang Fashions Ltd. – 2002

Plot-85-88, Block-K, Rupnagar I/A, Mirpur-2, Dhaka-1216 Floor Area: 36,000 Sq. Ft.

5. Rising Spinning Mills Ltd. – 2004

Nayadingi Bus Stand, Saturia, Manikgonj. Floor Area: 1, 27, 063 Sq. Ft Cotton Spinning -30240 Spindle + 720 Rotor

6. Rising Knit Textiles Ltd. – 2008

Nayadingi Bus Stand, Saturia, Manikgonj.Floor Area: 1, 22,557 Sq. Fta) Knitting b) Dyeing & Finishing c) Garments Washing.

7. Active Composite Mills Ltd. – 2008

Dewan Idris Road, Zirabo Bazar, Ashulia, Savar, Dhaka. Floor Area: 81,700 Sq. Ft.





#### 8. Rising Industries Ltd. – 2011

Nayadingi Bus Stand, Saturia, Manikgonj.

Floor Area: 1,47,300 Sq. Ft

Cotton Spinning – 36000 Spindle + 1080 Rotor

#### 9. Popular packages & accessories Ltd. – 1994

Nayadingi Bus Stand, Saturia, Manikgonj.

Floor Area: 1,080 Sq. Ft (Cartoon Manufacturing)

#### 10. Fashion Accessories Ltd. – 2012

Nayadingi Bus Stand, Saturia, Manikgonj.

Floor Area: 30,645 Sq. Ft

a)Printing Unit b) Button Unit

#### 11. Aninda Printers Ltd. – 1997

5, Arambagh, Motijheel, Dhaka-1000.

Floor Area: 2,000 Sq. Ft (Printing)

#### 12. Rising Sourcing Service

Plot-I/10, Block-K, Rupnagar I/A, Mirpur-2, Dhaka-1216

All Kind Of Garments Accessories.

#### 13. Mahmuda Attires Ltd.

(Proposed)

#### 2.6. Export growth by graph

Total Turnover: Year	USD in Million
2014-2015	110
2013-2014	107.00
2012-2013	98.56
2011-2012	97.20





## 2.7 In Rising Group

RISING is professionally run spinning. We specialize in cotton knit yarn manufacturing having 66000 Spindles. We work for better quality.

Product Features: Natural Fibres
□ Cotton
☐ Organic Cotton
□ CMIA Cotton
Production Capacity (Monthly):
Ring Spun- 1000 M Tons
Open End- 200 M Tons
Brand- RISING
Yarn Description of "RISING BRAND"
Composition: 100 % Cotton Fibre, Organic & CMIA Cotton.
Material: Using High Quality Cotton Fibre.
Yarn Counts:
100% Cotton Ring Spun Carded (Knit & Woven) - Count Range 20/1 To 40/1
100% Cotton Ring Spun Combed (Knit & Woven) - Count Range 20/1 To 40/1
100% Cotton Ring Spun Slub (Knit & Woven) - Count Range 20/1 To 40/1
100% Organic Cotton Ring Spun Carded (Knit & Woven) - Count Range 20/1 To 40/1
100% Organic Cotton Ring Spun Combed (Knit & Woven) - Count Range 20/1 To 40/1
100% CMIA Cotton Ring Spun Carded (Knit & Woven) - Count Range 20/1 To 40/1
100% CMIA Cotton Ring Spun Combed (Knit & Woven) - Count Range 20/1 To 40/1

100% Cotton Open End (Knit & Woven) - Count Range 10/1 To 20/1





#### Garments (Woven)-

- Men's /Boy's Shirts
- Ladies Blouse/ Shirts
- Men's / Boy's Hoodie
- Men's Jacket
- Ladies Blazer
- Ladies Dress

#### Garments (Knit)-

- All kinds of Kids Item
- T-Shirt
- Polo Shirt
- Hoodie
- Tank Top
- Pajama

#### **Garment Wash-**

• All kind of light and heavy wash.

#### Embroidery-

- 20 Head 9 Colors FEIYA Machine
- 20 Head 9 Colors YINHAI Machine
- WILCOME ES65 Designer Software

#### Screen Print-

• All Kind of Screen Print.

#### **Button-**

• All kind of Plastic Logo and Non-Logo Button.

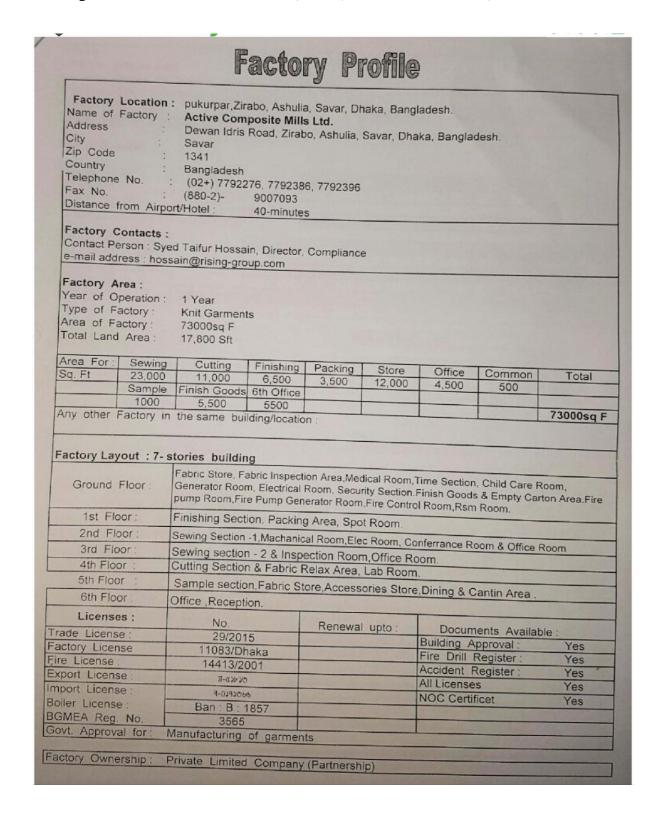
#### **Fabrics**

Lycra fake denim, Mesh fabrics, Mesh waffle, 60/40cvc burn out fabrics, Lycra sj crape fabrics, Flat back drop rib, Birds eye pique, Baby terry, Variegated rib, 2x1 rib ---- with or without lycra, Lycra twill look terry, Lock terry





#### 2.8. Brief profile (numbers of worker, area, total machineries, etc.) :







#### **Environment:**

- 1 Developed Environmental Policy Papers
- 2 Segregation & disposal of waste as per category
- 3 Appointment of Disposal Contractor
- 4 Follow-up on the end use of waste
- 5 Compliant with Government/buyers CoC
- 6 Introduction of issues on Conservation of Energy especially water/electricity

#### Factory Practices:

- 1 Inventory made of all incoming fabrics & accessories
- 2 Fabric inspected at 4-Point System
- 3 Shade Bands are made
- 4 Quality checks of fabrics & accessories
- 5 Quality checks of Cutting fabrics
- 6 Fabric relax records maintained
- 7 All cutting parts numbered and bundled before delivery
- 8 Pre-production Meetings organized
- 9 Test Production reviewed before bulk cutting
- 10 In-line inspection performed at AQL-2.5
- 11 End Table inspection recorded
- 12 Daily defects analysed and reduction goal set
- 13 Weekly defects records displayed
- 14 Daily meetings of Quality & Production Staff on the production
- 15 Repair & reject records maintained
- 16 Hourly/Lot Inspection before poly/Carton
- 17 Day Final Audit after cartoning
- 18 Daily Needle Check Records
- 19 Daily Fusing Check Records
- 20 Daily Machine maintenance records maintained
- 21 Broken Needle Records maintained
- 22 Daily Calibration Test performed
- 23 Fabric/Accessories stored on pallets
- 24 Export cartons stored on pallets





Wages :

Minimum Wages Paid

Tk. 5300/00

US\$ 68.88

Minimum Wages for Trained Workers: Tk. 5678/00 Overtime Rate : Double of Basic wages

Wages Paid : Cash

Wages Paid on : by the 7th Working Day.

US\$ 73.79

Payroll Records kept for 1-year

#### Health & Safety:

Medical Officer:	2 Person
Para-medics :	2 Person
# First Aid Box:	9 pcs
Trained First Aiders	18 Person

Toilets	Male	Female	Total
#	34	25	59

Drinking Water Station:

Fire Extinguisher				
ABC	150			
CO2	60			
Other	1			
Total:	211			

	Fire Hose	Fire Exit	Gong Bell	Bitter	Hook	Lock Cutter
	13	14	6	12	12	6
1	Stretcher	Bucket	Rope	Dust Musk	Gash Musk	Blanket
	12	36	6	26	60	36
	noke Detecto	Call Point	PA System	Fire Alarm	Trained Fire	Fighters
17		17	1	14	Charles of the later of the lat	304

All	Doors open out-wardly:	Yes
All	Doors fitted with EXIT Sign	Yes

Addressable S

Scissor/Cutter fitted with string	Yes
Scissor/Cutter identified by name	Yes

IPS Light	60
-----------	----

Machines fitted	with
Needle Guard	Yes
Eye Guard	Yes
Pulley Cover	Yes
Finger Guard	Yes

Emergency Lights: Yes

Documents maintained for review:

- 1 Daily Patient Register
- Accident Register
- 3 Accident Enquiry Repots
- 4 Re-imbursement Record of First Aid Box Items
- Expired Medicine Register 5
- Training Records of First Aid Workers
- First aid receivers Register
- 8 Fire Drill Records
- Machine Maintenance Records (Daily)
- 10 Training Records on PPE
- Training Records on Chemical Use
- Training Records on Health, Safety & Environment Issues 12
- 13 Follow-up Register of Pregnant Workers

#### Welfare:

Canteen Facility:	Yes
Dining Facility:	Yes
Dining Capacity:	30%
WPC:	Yes

	Maternity I	Benefit
112-days	leave with	average salary
Registered	maintained	as per Govt. Rule





## 2.9. Major buyers with their Logo:

Buyer Name	Major Markets	Logo
Aeropostale	USA	AÉROPOSTALE
LI & FUNG	USA	<b>100</b> LI & FUNG
TARGET	USA	<ul><li>Target</li></ul>
WALMART	USA	Walmart >
INDITEX (ZARA / BERSHKA	UK	INDITEX
KIABI	UK	KIABI
PRIMARK	UK	PRIMARK®
MAVI	UK	mavi
FAST FUTURE BRANDS LTD (VALLEY GIRL/MIRROU)	AUSTRALIA	FAST FUTURE BRANDS
K-MART (COLES	AUSTRALIA	kmart





#### 2.10. Certification:

**Rising Group** recognizes different cultural, legal and ethical systems that exist in countries in which goods are purchased by customers across the globe. The Group is committed to conduct their business in accordance with a high standard of business ethics, human rights and compliance with all legal applicable laws as well as code of Conduct requirements of all customers which fulfills following areas:

- Child Labor
- Forced Labor
- Discrimination
- Women's right
- Wages & benefits
- Working hours & day off
- Health & safety
- Environment
- Harassment & abuse
- Disciplinary practices
- Compliance with local laws
- Freedom of association
- Customs compliances
- Sub-contracting compliance
- Record keeping requirements
- Rights of inspection





#### **Certification received from the following Customers:**

- Aeropostele
- Coles/K-mart
- Inditex
- Kiabi
- Primark
- Target

#### **Third Party Factory Evaluators:**

- BSCI
- Bureau veritas
- Elevate/Level Works
- Intertek Testing Services/ ITS
- SGS
- WRAP

## 2.11. Mission and Vision of Active composite mills Ltd Mission

In quest of professionalism and perfection characterized by a relentless pursuit for innovations and a focus towards nurturing lasting customer relationship.

#### Vision:

Groups investment will continuously be directed at quality manpower, cutting edge information technology, product refinement and survive through the changes as the present century demands.





# Chapter-03 Description of the Attachment





## 3. Layout of Sample Section:







## 3.1 Description of the Sample Section:

Active Composite Mills Ltd Active Composite Mills has separate sample section which is located in 6 floors in the building.

## 3.1.1. Sample Section:

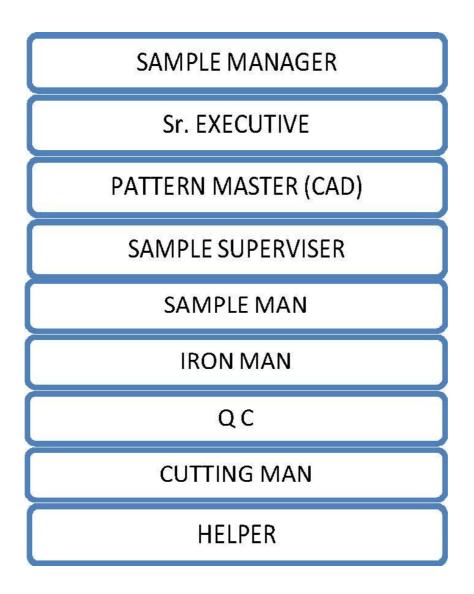








## 3.1.2. Organ gram of Sample Section:







## 3.1.3. Flow sequence of sample section:

Receive developed sheet from buyer
Develop the sample
Send the sample to buyer for approval
Approval of sample/comments
about the sample (if necessary)
Send pre-production sample to buyer
Start bulk production





## 3.1.4 Types of sample produce

#### 1. Design development:

- This is the main example which is made for any style by the vast majority of the purchaser.
- Design advancement is either done by purchaser or production line
- The principle reason for existing is to take the choice to continue with a similar line or not.

#### 2. Proto sample:

- This is the primary example which is made for any style by the vast majority of the purchaser.
- Design advancement is either done by purchaser or processing plant
- The principle intention is to take the choice to continue with a similar line or not.
- Proto test is produced at extremely introductory stage and typically arrange is affirmed to the manufacturing plant in view of proto example as it were.
- Normally, purchaser send proto example demand to 2-3 manufacturing plants.
- The manufacturing plant which presents the great quality and ideal cost will get affirmation from purchaser.
- Proto example are typically arranged in comparable texture if genuine texture isn't accessible.
- Substitute Trims can be utilized on proto.

#### 3. Fit sample

- Fit test is made and send to acclimate the attack of the piece of clothing on live models or on sham and for endorsement of development subtle elements.
- At this phase of inspecting, purchaser ensures that production line sees altogether the development and quality subtle elements and models The example sent for the most part in medium and substantial
- sizes specified by the purchaser
- The texture utilized for fit example creation is the genuine texture which will be utilized for mass creation or test yardage texture is utilized.





#### 4. Ad or photo shoot sample:

- In request to advance the new style in the market regularly purchaser requests AD test for photograph shoot.
- Buyer utilizes this photograph for promoting reason either on index or different media like, print, TV or sites to see the reaction of the shopper.
- This test essentially sends in medium to extensive or sizes determined by purchaser.

#### **5. Sales man / Marketing /Showroom sample:**

- The primary motivation behind salesperson test is to gather the request from the retailers.
- In Sales man test real embellishment, genuine texture is utilized or test yardage need to be utilized.
- This test additionally imperative phase of inspecting as the offers of purchaser depends upon this example introduction, look, feel of texture is essential.
- The nature of the example ought to be up to the sign of the purchaser; consequently merchandiser should mindful and ensure that item improvement group is very much aware about the test quality parameters..
- The cost of test creation is given by purchaser or now and then purchaser may give 150% of FOB. be utilized.

#### 6. Size set sample:

- This test additionally essential phase of examining as the offers of purchaser depends upon this example introduction, look, feel of texture is imperative.
- The nature of the example ought to be up to the characteristic of the purchaser; henceforth merchandiser should mindful and ensure that item improvement group is very much aware about the test quality parameters.
- . The tests can be made in the inspecting room or genuine generation floor, as required by the purchaser.
- Bulk cutting of texture for generation should begin simply after size-set example get endorsed.
- Normally, 1-2 tests (or amount determined by purchaser) of each size need to send to purchaser.
- If sizes are more in number then purchaser may request to avoid a few sizes, called bounce measure set example.





#### 7. GPT sample (Garment Performance Test):

- The fundamental motivation behind GPT is to play out the physical and compound testing on piece of clothing to guarantee the execution of the article of clothing.
- The tests done on articles of clothing are: Shrinkage, Color Fastness, Seam execution and so on.
- Garments for GPT test should be possible alongside Size Set example.
- Normally, GPT Sample is sent to outsider examination and results are sent to both processing plant and additionally purchaser.
- In the event that same style is having 3-4 unique hues then just a single shading test is tried totally and different hues tests are tried just with shading way test i.e. as it were shading speed tests are led.

#### **8. Pre- production sample: (PP sample)**

- The fundamental motivation behind GPT is to play out the physical and compound testing on piece of clothing to guarantee the execution of the article of clothing.
- The tests done on articles of clothing are: Shrinkage, Color Fastness, Seam execution and so on.
- Garments for GPT test should be possible alongside Size Set example.
- Normally, GPT Sample is sent to outsider examination and results are sent to both processing plant and additionally purchaser.
- In the event that same style is having 3-4 unique hues then just a single shading test is tried
- totally and different hues tests are tried just with shading way test i.e. as it were shading speed tests are led

#### 9. Wash sample:

- Wash test is made and submitted to purchaser for evaluation of feel and handle of texture in the wake of washing of Denim or shirt washing program, thus either at measure set stage or on the other hand PP organize washing test is sent to purchaser for endorsement and convey forward of washing program..
- If test isn't endorsed or affirmed with remarks, industrial facility needs to submit second test to get endorsement.
- After feel evaluation purchaser may propose the adjustments in washing program.





#### **10. TOP sample (Top of Production):**

- The best of generation is sent to the purchaser as soon introductory pieces are left Sewing line with proposal of QA division..
- In TOP example Buyer tries to assess the genuine assembling of the style.
- Buyer check whether mass creation is according to submitted test or not.

#### 11. Shipment sample:

- Few purchasers may request the shipment tests which plant needs to pull frame the genuine shipment and sent to purchaser.
- The fundamental motivation behind this example is to guarantee purchaser about the real shipment dispatch..

#### 3.2. CAD section:

- ➤ In CAD segment at first the example put on the digitizer to take clear picture of the example part inside the CPU.
- After making all required size examples utilizing the product design parts are adjusted in the smaller than usual marker. At that point it is sent to CPU of CAM segment for endorsement and checking the length and width of marker and example parts arrangement.
- After getting endorsement from CAM segment at that point.







Fig: Fig: CAD Section

Printer is used to print out the whole real marker then this marker as well as mini marker is provided to the CAM section for cutting the fabric.





# 3.2.1 Working sequence 0f CAD Section:

Receiving of pattern parts



Taking the image of pattern in CPU by Digitizer



Modernizing of all pattern parts by the software



Aligning all size pattern parts in the marker by the software



Completing the marker



Taking approval from CAM section



Bringing out the marker through plotter





### **Marker Making:**

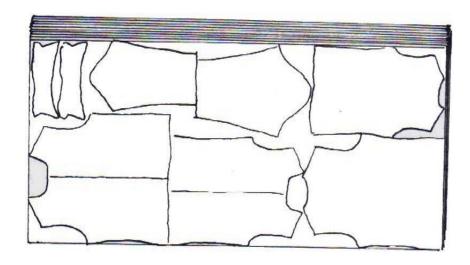


Fig: Computerized Marker Making

### 3.2.2. Pattern making:

In the wake of getting a request by and large purchaser gives them a total example and they influence test as per given to design. Yet, now and again they set up the example by possess when purchaser wear not give any example.

### 3.3.3. Cutting section:

The meaning of cutting is exceptionally mind boggling. In pieces of clothing businesses texture is cut from lay and spreading with precision and appropriately which is named as texture cutting. Marker plot is used to cut the texture. Texture cutting is essential as though something is cut in wrong way, can't be redressed.

### 3.3.1. Cutting Layout:

Active Composite Mills Ltd Active Composite Mills has separate sample section which is located in 5th floor in the building.





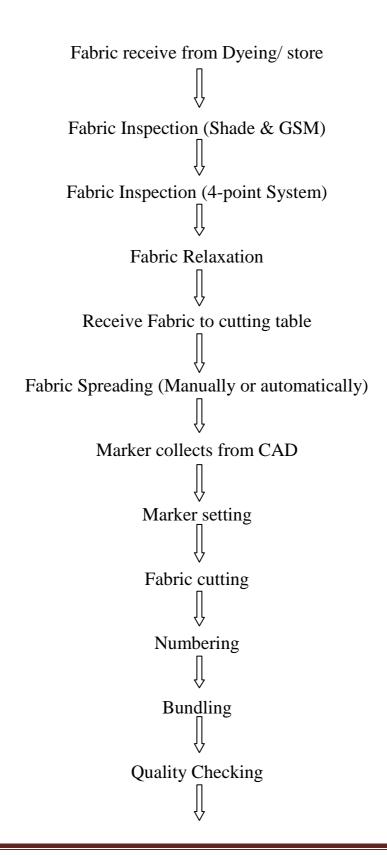


Fig 3.3.1: Cutting Layout



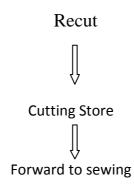


# 3.3.2. Process Sequence of a cutting Section:









# 3.3.3. Fabric Inspection:

Active Composite Mills Ltd Active Composite Mills has separate sample section which is located in 1st floor in the building.



Fig: 4- point system inspection





#### 3.3.6. Fabric Spreading:

Spreading implies the smooth laying out of the texture in superimposed layers of particular length. The cutting marker paper is laid in the highest point of the texture layer. Amid spreading number of the employs ought to be not in excess of three hundreds but rather it relies upon the thickness of the texture and the tallness of the cutting blade. For instance: if the thickness of the texture is higher than the quantity of utilizes specified above would not substantial and if there should arise an occurrence of straight blade cutting instrument the most extreme lay stature ought to be 70% of the edge tallness.

#### 3.3.7. Types of Fabric spreading:

- 1) Automatic Spreading.
- 2) Manual Spreading.

### 3.3.8. Ideal Lay height for cutting:



Fig: Cutting section





Fabric weight	Woven	Knits	
Heavy weight	4-5"	5-4"	
Medium weight	3-4"	3-3.5"	
Light weight	2.5-3"	2-2.25"	

### 3.3.9. Requirements of fabric spreading:

Spreading must achieve a number of specific objectives:

- 1. Alignment of fabric plies
- 2. Correct ply tension
- 3. Elimination of fabric faults
- 4. Correct ply direction and adequate lay stability.
- 5. Elimination of static electricity
- 6. Avoidance of fusion of plies
- 7. Avoidance of distortion in spread
- 8. Easy separation of the cut lay into bundles
- 9. Fabric must be flat
- 10. Matching checks or strips.

### 3.3.10. Spreading system in factory:

- ☐ Manual spreader group : 3 group
- ☐ Gerber Spreader: 5 pcs





#### 3.3.11. Marker making

Spreading implies the smooth laying out of the texture in superimposed layers of particular length. The cutting marker paper is laid in the highest point of the texture layer. Amid spreading number of the employs ought to be not in excess of three hundreds but rather it relies upon the thickness of the texture and the tallness of the cutting blade. For instance: if the thickness of the texture is higher than the quantity of utilizes specified above would not substantial and if there should arise an occurrence of straight blade cutting instrument the most extreme lay stature ought to be 70% of the edge tallness.

#### 3.3.12. Objects of marker making:

To reduce cost; To improve the quality of the garments;

To reduce the cutting time; To facilitate large scale production.

#### 3.3.13. Types of marker making:

Generally there are two methods by which marker can be made –

Manual Method of Marker: The man performs it independent from anyone else utilizing his hands. It is an ordinary framework and requires additional time. Physically two sorts of marker are made

Full size marker: Full size marker is made for creation reason.

Scaled down sort marker: Miniature write marker is at some point made and its motivations are to plan or plan and learn or think about i.e. for arranging and learning purposes.

Modernized Method: Now the ordinarily utilized arrangement of marker making is automated technique. In this framework, a man performs it independent from anyone else utilizing PC programming (CAD and CAM) and it requires extensively less time than manual framework. Two sorts of marker are by and large made utilizing automated framework –

1. Full size marker: Using 'Digitalizing Board' the example pieces are contribution to the PC. PC utilizes programming and a marker paper is printed out that will be utilized as a part of the creation.





2. Little write marker: Just to learn, honing, and arranging purposes this sort of marker is printed from the PC. To get the ideal effectiveness of markers and additionally to limit texture wastage they done marker by automated marker making framework (VEITH). It has the digitizer by which the examples are make review and with the assistance of the product to get yield as marker with the plotter. The VEITH framework is examined in underneath.

### 3.3.14. Factors considered during marker making

The important factors considered during marker making are -

- **1. Nature of the Fabric:** The texture might be either symmetric or lopsided. Consequently the idea of the texture ought to be considered amid marker making.
- **2. Lay arranging of examples:** Improper lay arranging of examples may make more wastage. In this manner it ought to be mulled over.
- **3.** Arrangement of the example pieces as indicated by the grain line: It is additionally another vital factor that must be considered. The twist course of a texture is especially imperative for a piece of clothing and the grain line demonstrates the twist or rib bearing.
- **4. Prerequisites of cutting:** Before putting the example pieces on to the marker or amid marker offering the cutting lenient gestures are thought about where vital and where isn't. It might create more wastage and may diminish the measurements of examples.
- **5. Creation arranging**: Different writes and sizes if pieces of clothing assembling may un at once in an industry. So amid marker making it ought to be considered.
- **6. Size of marker:** During marker influencing we to need to consider the table size, length of the texture, and so on.
- 7. Market Efficiency: The proportion between the aggregate regions of the example pieces to the aggregate territory of the creator paper is in fact named as Marker Efficiency. It is communicated in rate. On the off chance that it is meant by the image  $\acute{\eta}$  then –

Marker Efficiency ( $\acute{\eta}$ ) = (Total areas of the pattern pieces/Total area of the Marker paper) \* 100





# 3.3.15. The factors which influence the Marker Efficiency

- Manufacturers of the marker;
- Size of pattern pieces;
- Length of the marker;
- Pattern Engineering;
- Nature of the fabric;
- Method of marker making;
- Marker width;

### 3.3.18. Fabric cutting:

Active Composite Mills Ltd Active Composite Mills has separate sample section which is located in 5th floor in the building.



Fig: Cutting Section





#### 3.3.19. Methods of Fabric Cutting:

Fabric cutting methods are as follows:

#### **Manual Method:**

- Scissor
- Straight knife
- Band knife
- Round knife
- Die cutting
- Notches, and
- Drill etc.

#### Mainly two methods of manual cutting are used in factory

- Scissor
- Straight knife

### 3.3.20. Different Types of Cutting Machine:

#### Straight knife cutting machine

Machine name: K.M company cloth cutting m/c

Model: K.M KS\_AUV

Producer: made by K.M cutting m/c co, JAPAN

Type: Heavy duty industrial cloth cutting m/c self

Sharpening

Dimension: 8 inch width \* 11 inch length \* 24 inch height





Weight: 33.5 lb

Current: A.C (3.3/2.6 amps)

Speeds: 3000/3600

### Machine parts of Straight knife Cutting machine:

_	Base	$\mathbf{p}$	late

- Terminal block
- Plug
- Clamp washer
- Pressure foot
- Blade
- Sharpener pulley
- Pulley spring
- On/off switch

# Features of Straight knife cutting machine:

☐ Blade could be honed by connecting crushing offices
□ Blade tallness 10 to 33 cm
☐ Blade stroke 2.5 to 4.5 cm
☐ Special connection, for example, sew edge or serrated edge can be accommodated substantial texture,
for example, canvas or denim.
Could be utilized to cut for higher profundity of texture







Fig: Straight knife cutting machine

# Advantages of straight knife

☐ Comparatively modest and can be exchanged effortlessly starting with one place then onto the next.		
☐ Higher lay of tallness can be cut effortlessly.		
☐ Round corners can be cut all the more accurately at that point even round blade.		
☐ Production speed is great as up to 10 statures can be cut at once.		
☐ Garment segments can be straightforwardly isolated from texture lays.		
☐ Fabric can be cut from any point.		
Disadvantages of straight knife:		
$\square$ Sometimes diversion may happen because of the heaviness of the engine.		
$\square$ Knife diversion is high in hazard, when lay tallness is too high Sometimes mishap may happen.		





# **3.3.21.** Numbering

In this stage sticker is connected with all piece of cutting part for shade coordinating. The sticker number keeps up cutting number, estimate number, serial number. Numbering segment Striker machine: 13pcs.

<b>3.3.22.</b> Bu	naling
Prepare bundl	ing card according to fabric lay report this card maintain
□ Date	
☐ Style No	
☐ Size Number	er
☐ Card Serial	
☐ Quantity	
$\square$ Color	
☐ Lot Number	r
Feature of	a bundle card:
490-BE	(Style No.)
C-4	(Cutting No.)
B-29	(Bundle No.)
L-29	(Large size, 29 pcs)
638-657	(20 pcs in Bundle no. 29)
FR-6985	(Front part, batch no.)
Bundling acc	cording to card no.
In this stage a	ll number parts are bundled according to serial number.
<b>Quality Chec</b>	ek (Panel check)
a) Oil spot	
b) Dirty spot	

c) Crease mark

d) Needle mark





- e) Foreign yarn
- f) Slub
- g) Contamination
- h) Hole Then same numbers of sticker are matched fold & bundled.

#### **After cutting store**

All bundles are put in the input rack then send to sewing section.

### 3.3.23. Machine & Equipment used in cutting section

- Sl No. Machine & Equipment Name
- 01. Straight Knife Machine
- 02. Bend Knife Machine.
- 03. End Cutter Machine.
- 04. Spreading Machine.
- 05. Drilling Machine
- 06. Cutting Table.

#### 3.3.24. Limitation of Cutting Section:

- 1. Information issue
- 2. There is might be no gathering for any table
- 3. Setting up the package cards by composing on a bit of texture Check, variegated rib texture lay amount might be overabundance. Accordingly dismiss rate might be increment.
- 4. Texture spreading





# 3.4. Sewing Section:

The way toward joining of textures by the utilization of needle and sewing string or by different systems is called sewing.



Fig: Sewing Section





# 3.4.1. Lay out of sewing floor:



Fig: Lay Out of Sewing Floor

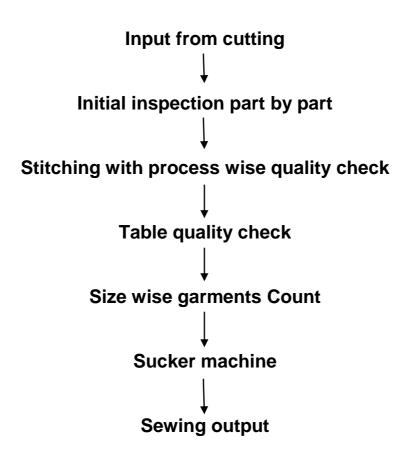
# 3.4.2. Element of sewing

- ☐ Sewing thread
- ☐ Needle and
- ☐ Sewing machine





### **3.4.3.** Flow chart of sewing section:







### 3.4.4. Sewing thread:

All pieces of clothing delivered have one segment in like manner, the sewing string. While sewing string is normally a relative a little level of the cost of articles of clothing, it has a to a great degree huge effect on the appearance and solidness of the completed item, the generation of sewing string is a broad and complex subject.

#### Sewing thread used in factory.

- Cotton.
- Flaming thread.
- Elastic thread.
- Lorex thread.

#### 3.4.5. Sewing needle:

A sewing needle is long thin instrument with a pointed tip. The principal needles were made of bone or wood, current ones are producing from high carbon steel wire, nickel or gold plated for erosion protection. The most astounding quality weaving needles are made of platinum. Needle sixe is meant by a number on the bundle. The tradition for sixing is that the length and thickness of a needle increments as the size number abatements. For instance, a size 1 needle will be thicker and more, while a size 10 will be shorter and better. The activity of needle directly affects crease quality and articles of clothing exhibitions.

#### Function of a needle:

The functions of a sewing needle are -

To deliver a gap in the material for the string to go through without making any harm material. To frame a circle that will be grabbed by the snare of bobbin case.

To pass the needle string through the circle framed by the looper instrument on machines other than bolt fasten.





# 3.4.6 Sewing machine:

Types of sewing machine
☐ Plain m/c (S/N)
$\square$ Double needle m/c (D/N)
□ over lock m/c
☐ Flat lock m/c.

# 3.4.7. Thread used in different Machine:

Machine type	Thread type
Plain/ Auto plain m/c	1 needle thread
	1 bobbin thread
Double needle m/c	2 needle thread
	2 bobbin thread
Over lock m/c 2 needle	2 needle threads
	2 lopper thread
Cylinder bed m/c	3 needle thread
	1 spreader thread
	1 lopper thread
Flat bed m/c	3 needle thread
	1 spreader thread
	1 lopper thread.





### 3.4.8. Different Sewing Machine:

Name of m/c: Plain machine.

Brand name: Juki.

Origin: Japan.

Model: DDL-9000 SS Needle type: DB×1

Stitch type: Lock stitch.

Motor type: servo motor.

Rpm: 400-4000

Name of m/c: Overlook machine.

Brand name: Juki.

Origin: Japan.

Model: MO-3914, TO-42.

Needle type: DC×1, DC×11, DC×14.

Stitch type: Chain stitch.

Motor type: Servo motor.

Rpm: 400-8000.

Name of m/c: Flat lock machine.

Brand name: Juki.

Origin: Japan.

Model: MF-7823, U-10-B-56.

Stitch type: chain stitch.

Motor type: clutch motor.Rpm: 2600.

Name of m/c: Button hole machine.

Brand name: Juki.

Origin: Japan

Model: LBH-1790SS







Needle type: DP×5

Stitch type: lock stitch.

Stitch design: 19. Rpm: 400-8000

Name of m/c: Button attach machine.

Brand name: Juki.

Origin: Japan.

Model: LK-1903A-SS.

Needle type: DP $\times$ 5, DP $\times$ 17.

Stitch type: lock stitch.

Needle: 01.

Rpm: 400-2700.

Name of m/c: KANSAI (special).

Brand name: Juki.

Origin: Japan.

Needle: Maximum 11.

Needle type: UO×128

Stitch type: Chain stitch.

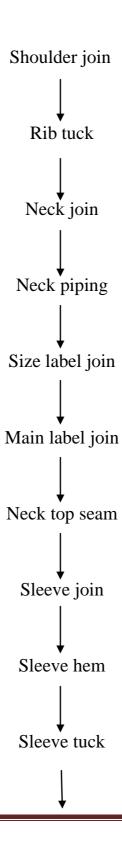
Motor type: Clutch motor.

Rpm: 260





# 3.4.10. Layout of a T-shirt:









# 3.4.12. Sewing Quality checking points:

☐ Skip/Drop/Broken stitch
□ Raw edge
☐ Size mistake
☐ Uneven hem
☐ Uneven cuff
☐ Uneven neck
☐ Uneven shoulder
☐ Uneven placket
☐ Uneven pocket
☐ Twisting
☐ Without care label
☐ Open tack
☐ Sleeve up-down
☐ Stripe up- down
☐ Open seam
☐ Four point up-down





#### 3.4.13. Sewing Line quality Check List:

- 1. Purchaser Approved Sample and Measurement Sheet Check.
- 2. Test Wise Input Check.
- 3. Purchaser Approved Trims Card Check.
- 4. Purchaser Approved Sample Wise Style Check.
- 5. All Machine Thread Tension Check.
- 6. Style Wise Print and Embroidery Placement Check.
- 7. All Process Measurement Check.
- 8. All Machine Oil Spot Check.
- 9. All Process S.P.I Check as Per Buyer Requirement.
- 10. Info Time Shading, Bundle Mistake and Size Mistake Check.
- 11. Purchaser Approved Wise Contrast Color Check.
- 12. According to Buyer Requirement Wise Styling Check.
- 13. All Machine Stitch Tension Balance Properly.

#### 3.4.14. Sewing Table Quality Check List:

- 1. Style Wise Garments Check.
- 2. All Process Measurement Check..
- 3. Front Part, Back Part, Sleeve and Thread Shading Check.
- 4. S.P.I check for all procedure.
- 5. Print/Embroidery Placement Check.
- 6. Fundamental Label, Care Label, Size Label & Care Symbol Check.
- 7. Estimate Mistake Check.
- 8. All Process Alter Check.





# 3.4.15Sewing Defects:

☐ Skip lines,
☐ Thread Breakages,
☐ Broken Stitches
□ Seam Grin
☐ Seam Puckering
☐ Pleated Seam
3.4.16. Sewing problems in "factory":
☐ Input issue
☐ Shortage of gifted administrator
☐ To accomplished the extra minutes, they worked gradually
1. In the event that any issue will make amid creation at that point
$\square$ Nobody will assume the liability,
□ Nobody will give the immediate arrangement.
2. Sewing line generation might be relies upon in control.
3. Needle gap because of contact, needle eye is to expansive, slip-up of needle determination.
4. Estimation issue from cutting area
5. Crease pucker
$\square$ Due to unequal strain of encourage puppy and weight foot on two utilizes of texture.
☐ Due to unequal string strain.
☐ Shrinkage of either texture or sewing string.
6. Broken join
Because of pressure variety between needle and bobbin string. Strain of needle string is more.
Low quality sewing thread.
Needle heating or hook heating. Sharp edge of throat plat, hook plate, bobbin cage, needle groove etc.
☐ Faulty fitting of bobbin confine.
Sharp edge of bobbin confine, looper eyes and spring.





#### 7. Skipped/Slipped join

☐ If the circle of needle winds up littler in measure, slipped fasten happens.

Unequal strain between sets of strings.

Redirection or vibration of needle.

#### 8. Variable join thickness

On the off chance that texture can't push ahead appropriately because of absence of weight foot. Because of broken nourish system.

### **3.5. Finishing Section:**

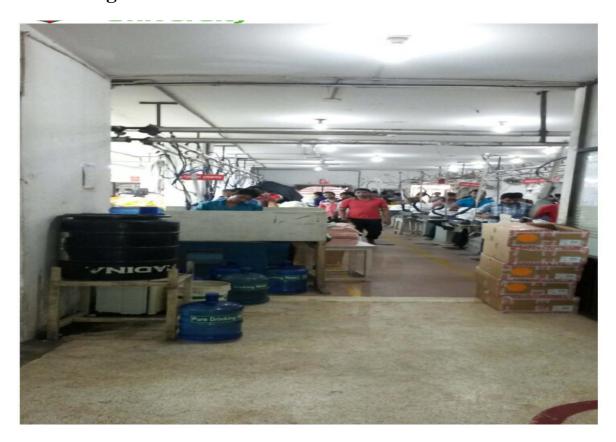


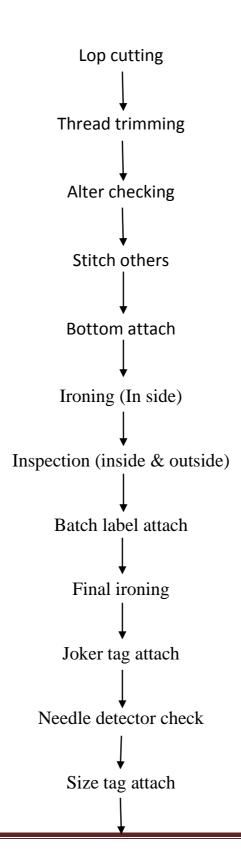
Fig: Finishing Section

Finishing is the final steps of Garments processing technology. A textile products either it is dye or printed it needs to add some finishing feathers before marketing.



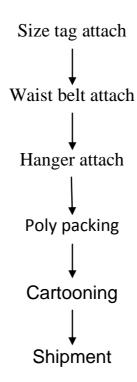


# 3.5.1. Finishing Lay Out:









### 3.5.4. Object of Finishing:

- $\square$  To enhance the suitability of the fabric for end use.
- ☐ To improve appearance and sale appeal for comport and utility.

To give desirable qualities to the fabric like-

- 1. Softness
- 2. Luster
- 3. Drape
- 4. Dimensional stability
- 5. Crease recovery
- 6. Soil repellence





# **3.5.5.** Work flow in the Finishing Room:

As mentioned earlier, workflow in the Finishing Department is shown here for reference:			
☐ Eliminate smaller scale tidy and lingering strin	ng from the article of clothing;		
☐ Press/press articles of clothing as determined b	by purchaser or according to prereq	uisites;	
☐ Fold the articles of clothing as required by clie	ent;		
☐ Fix fundamental tickets (Price tickets) or label	s (hang labels), and so on to the art	ticles of clothing at	
this stage;			
☐ Insert pieces of clothing into poly sacks;			
☐ Divide pieces of clothing according to size and	d shading (grouping);		
3.5.6. Machine Description of finishing	section:		
Machine	Number		
1. Heat Iron	06		
2. Steam iron	72		
3. Metal detector	02		
4. Neck press	02		
5. Thread sucker	05		
3.5.7. Different types of Machine used Metal detection machine:			
Thread sucker machine:			
3.5.8. Materials used in garment finishing:			
☐ Neck board			
☐ Back board			
☐ Collar stand			
□ Butterfly			
☐ Tie placket support			
□ Vanishing loop			

☐ Fit label





	M-clip
	T-clip
	Metal clip
	Cuff link
	Droop loop
	Cable tie
	Boa tie
	Full board
	Hand tag
	Tag pin
	Tissue paper
	Al pin
	Ball pin
	Elastic clip
	Hanger
	Poly bag
П	Size sticker

### 3.5.9. Spot removing

#### The General Rules of Spot Removing:

- **1.** The longer a stain remains, the tougher it is to remove.
- 2. Always treat a stain before laundering.
- 3. Blot gently never rub; and don't ever blot with hot water.





#### **Stain Removal:**

STAIN TYPE	USED CHEMICAL (COMMERCIAL NAME)
1. Oil stain	Spot lifter
2. General stain	Thinner
3. Turmeric stain	MRS
4. Ink stain	MR
5. Glue stain(Polymer based )	Heat gun
6. Rust stain	Markvill
7. Print mark	Printvill

### **3.5.10. Ironing:**

Pressing is the utilization of a warmed instrument (aniron) to expel wrinkles from texture. The warming is regularly done to a temperature of 180–220 °Celsius, contingent upon the texture. Pressing works by extricating the bonds between the long-chain polymer atoms in the filaments of the material. While the atoms are hot, the strands are fixed by the heaviness of the iron, and they hold their new shape as they cool. A few textures, for example, cotton, require the expansion of water to extricate the intermolecular bonds.

#### 3.5.11.Garment Inspection:

**Flow Chart of Garment Inspection** 

Confirmation of Quantity

Confirmation of accessories



3.5.12. Trims:

returned by the clients.

Zipper/Fastener:

Size: #3, #5, #8, etc.

**Sewing Thread:** 

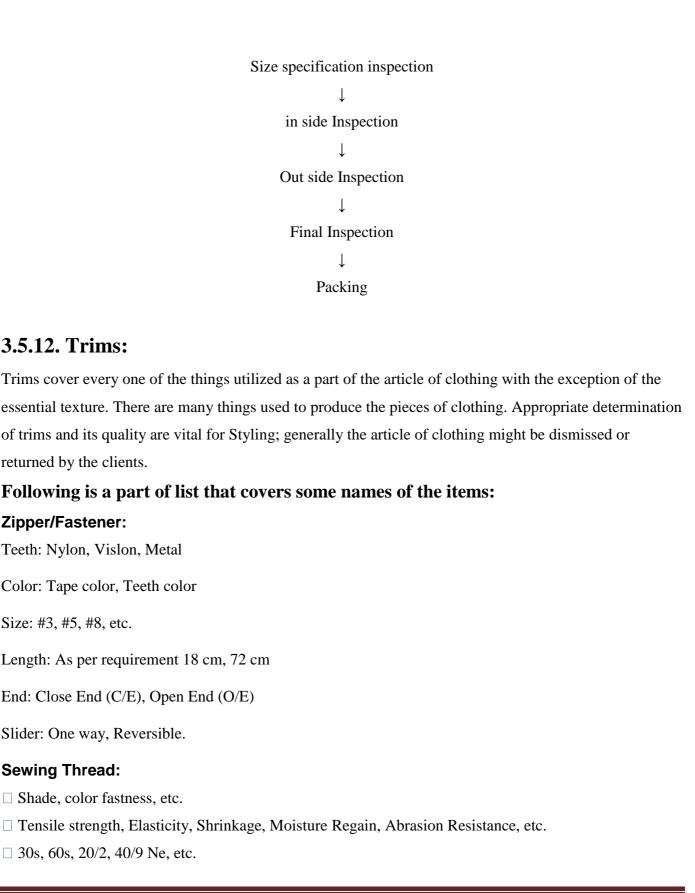
Teeth: Nylon, Vislon, Metal

Color: Tape color, Teeth color

Slider: One way, Reversible.

☐ Shade, color fastness, etc.





 $\square$  30s, 60s, 20/2, 40/9 Ne, etc.





Labels:
☐ Main label
☐ Size label
☐ Care label
□ Content
□ Price
□ Patch, etc.
Button:
☐ Horn and
☐ Metal buttons are very common in use.
□ ELASTIC:
□ Polyester, etc.
Eyelet:
□ Antique
☐ Matching, etc.
Velcro:
☐ Hook and Pile
String/Cord:
□ Polyester, etc.
Tags:
□ Price tags
☐ Hang tags, etc.
Polybag:
$\square$ Strength, Chemical mixture, Thickness (micron/mm; 1mm = 1000 micron).
□ Blister Bag:
$\square$ 0.05 mm in thickness;
☐ Loaded capacity is higher than poly bag.





Carton:
□ 3 ply
□ 5 ply
□ 7 ply Size (L, W, and H).
Sticker:
☐ Hook and Pile.
Plastic Clip
Tag pin
Scotch Tape
Hanger
Gum Tape
Etc.
3.6. Quality Section
This segment Control the nature of an item. It is resolved to give sufficient assets in wording of good
crude materials and prepared work force and constantly enhance/redesign its procedures and frameworks.
3.6.1. Quality objectives
☐ Overall material/item misfortune (Level of dismissal) for the organization amid the creation procedure
(in a year) should not surpass 1.5 %
☐ Defects amid coloring and weaving activities to diminished by 10%.
□ Process capacity should be amplified by amplifying the m/c breakdown time. M/c Breakdown time
ought to be lessened to 20 % from its present status/position
$\square$ To guarantee better workplace for the faculty working in the association.
3.6.2. Machines required for quality
☐ Wash Fastness Tester
☐ Light fastness tester
☐ Rubbing fastness tester





☐ Electronic balance
☐ G.S.M. cutter
☐ Fabric inspection table
☐ Light box
☐ Shrinkage (%) meter.
3.6.3. Inspection Area
☐ Shade match of texture
☐ Fabric distance across
☐ Wash speed
☐ Light speed
☐ Rubbing speed
☐ Faults: Dyeing deficiencies
3.6.4. Faults Found in QC Department
Dyeing faults:
□ uneven shade
☐ Running shade
☐ In fastness property
Finishing faults:
☐ GSM variation
□ Spirality
☐ Shrinkage control: Length wise
3.6.5. Quality Assurance System
Quality assurance system can be divided into following steps:
1. On line Quality assurance system and
2. off line Quality assurance system.
Again on line Quality assurance system can be divided into the following steps:
(a) Raw material control.
(b) Process control.





# 3.6.6 Online Quality control:

Crude material control: Cotton Club (BD) Ltd. continuously extremely worry about the nature of the Product. Along these lines, they weave dim texture from the best quality yarn and uses specialized assessment in each phase of the creation, as we probably am aware the quality item relies upon the crude material quality.

Process control: The technique decided for process must be furnished with the vital exact parameters. In the each stage pH ought to be looked after earnestly.

### 3.6.7. Off line quality control:

After dyeing the material is received by the finishing section. Before receiving the following things are checked:

- 1. Shade condition.
- 2. Wash fastness.
- 3. Condition of softening.
- 4. Condition of enzyme wash. Before delivery the finished fabric to the customer it should be passing against the requirements. The following tests are done:
- 1. GSM check.
- 2. Shrinkage test.
- 3. Shade check.
- 4. Rubbing test.
- 5. Wash fastness test.
- 6. Color fastness to perspiration.

# 3.7. Merchandising Section

### 3.7.1. Merchandising:

This part bargains Merchandizing Department. It gives some data of merchandizing, at that point it examines about the prerequisite of various materials of making articles of clothing. It closes with the current cost of various sewed texture.





### 3.7.2. Merchandising department:

Promoting division is the star of the office among all the working offices in the Export concern, since Merchandising is the main office having greatest control over the offices and aggregate in charge of Profit and loss of the organization. After LPG (Liberalization, Privatization and Globalization) the business gets more critical and now marketing is on its hot seats. Along these lines, it is important to comprehend the everyday happenings of the star division. Stock means products purchased and sold; and exchanging of merchandise. Marketing is an action of offering and advancing the merchandise.

### Merchandiser in garment industries:

In the field of promoting and administrations, Merchandiser is at a place of most extreme significance, He is the individual who co-ordinates with different divisions for a uniform business.

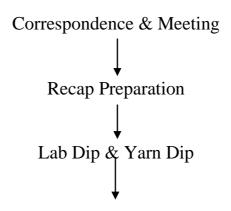
## **Objects of Merchandising:**

compulsory.

Promoting means all the arranged exercises to execute and dispatch the stock on time, contemplating of the 4 Rs to recharge the client.

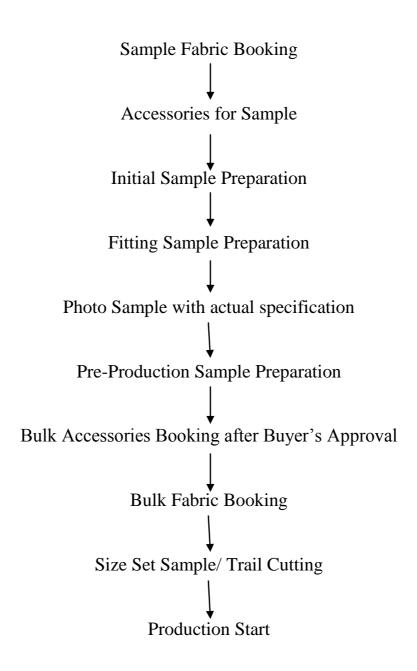
□ Right Quantity: To dispatch right amount of item what purchaser requested?
□ Right Quality: It ought to be with right quality as acknowledged the two gatherings.
□ Right Cost: Everybody needs more from what they are paid.
□ Right Time: No one needs to hold up sit out of gear even in a Restaurant. Keeping conveyance plan is

# 3.7.3. Flow Chart of Garments Merchandizing:













### 3.8. Marketing Section

### 3.8.1. Marketing Activities:

This part manages the promoting exercises, advertising designs, and obligations of showcasing work force of Rising gathering.

# 3.8.2. Manpower:

Promoting assumes a fundamental part in the field of showing/demonstrating the great criteria of the items to the purchaser and to correspondence with the purchaser. There are around 7 people groups in the promoting segment of the business.

### **Importing countries:**

Following countries mainly imports products from CCL through many internationally well recognized buyers.

□ Europe countries like UK, France, Germany, etc.

### 3.8.3. Marketing strategy:

 $\square$  USA

Promoting procedure is an imperative components to deal the items to the purchasers. On the off chance that the Marketing technique isn't so created, it will be difficult to achieve the objective. If there should be an occurrence of articles of clothing advertising the dealings with the purchaser is a vital factor. In MKC for the most part General Manager, Marketing Executives, Merchandisers and higher authorities manage the purchaser. There is some settled purchaser of the business. The purchaser gives their requests persistently everywhere throughout the year. The showcasing officers and the merchandisers speak with the purchasing houses to gather the requests. By both side understanding the rate and the request amount are settled.

#### 3.8.4. Product label:

There are following labels used by this mill:

- 1) Care Label: It contains washing in hot or cool water, substance cleaning, drying conditions and so forth
- 2) Size Label: It contains size of articles of clothing.





3) Composition Label: It contains the texture arrangement of various fiber write. 4) Decorative Label:
Decoration is as purchaser or shopper decision savvy.
5) Flag name: it shows bringing in nation.
6) Barcode name: it shows concealed personality of item.
7) Price name: it shows cost of item.
3.8.5.Package size & label:
Most common sizes are
S -Small
M -Medium
L -Large
XL -Extra-large
XXL -Very very large
3.8.6. Duties & Responsibilities of Marketing Officer:
Managing the purchaser and persuade the purchaser is the primary obligation of the showcasing officer.
Advertising officer additionally has some different obligations. The primary obligations duties of a
promoting officer are given underneath:- $\square$ To plan cost sheet by managing the purchaser.
$\square$ To make distinctive strides by talking about with the high authorities and merchandisers.
$\ \square$ To keep up a general and great connection between business officer and merchandisers.
$\square$ To keep up a general correspondence with the purchaser and purchasing houses.
☐ Communicate with the new purchasers.
☐ Display the better criteria of the item
3.09.1 COMPLIANCE:
Consistence implies similarity of certain standard. PPC keep up a direct working condition for their
representatives. In spite of the fact that it is entrenched venture, there is some missing of legitimate
consistence issues. Here is rundown of consistence in which a few focuses are kept up completely and
some are incompletely   Compensation for occasion
☐ Sexual provocation strategy
☐ Child work abrogation strategy
☐ Anti-segregation strategy
☐ Zero dishonor strategy





☐ Working hour strategy
☐ Hiring/enlistment strategy
☐ Environment strategy
☐ Security strategy
☐ Buyers set of accepted rules
☐ Health and security advisory group
□ Canteen
☐ Equal compensation
☐ National celebration occasion
☐ Overtime enroll
☐ Labor welfare
☐ Weekly occasion finance
☐ Time mind
☐ Accident enroll
3.10.2. HEALTH:
☐ Drinking water at least 4.5 L/day/employee
☐ Cup availability
☐ Drinking water supply
☐ Water cooler ,heater available in canteen
☐ Drinking water signs in Bangla and English locate min. 20 feet away from work place
☐ Drinking water vassal clean at once in a week
☐ Water reserve at least once a week
☐ Water center in charge person with cleanliness
☐ Suggestion box register
3.10.3 TOILET:
☐ Separate latrine for ladies and men
$\square$ A seat with appropriate protection and bolt office
☐ Effective water sewage framework
☐ Soap latrine





□ Water tap
□ Dust canisters
☐ Toilet white washed one in each four month
☐ Daily cleaning log sheet
□ No-smoking signs
☐ Ladies/gentlemen can signs both in bangle and English
☐ Deposal of squanders and gushing
3.10.4 FIRE:
☐ Effective water sewage framework
☐ Sufficient fire douser and dynamic
☐ Access region without prevention
$\Box$ Fire signs in the two dialects
☐ Fire ensured individual photograph
☐ Emergency exit
3.10.5 SAFETY GUARD:
☐ Metal glows on good conditions
☐ Rubber mats & ironers
☐ First aid box one
☐ Ironers wearing sleepers
☐ First trained employees
☐ Motor/needle guard
☐ Eye guard
□ Doctor
□ Medicine
☐ Welfare officer





# **3.10.6 OTHERS:**

	Room	tem	pera	ture
--	------	-----	------	------

☐ lighting facilities





# Chapter-4 Impacts of internship





# 4. Impact of internship:

### 4.1. Sample development

- ❖ We comprehend what kind of test delivered here
- System of test endorsement
- ❖ We comprehend what kind of machine here

### 4.2. Cad section

- 1 We see the process of pattern making from measurement sheet.
- We learn the marker making procedure.
- We see the printing of marker and pattern by automatic machine

### 4.3. Cutting

- ❖ We know about cutting fabric
- ❖ We know about method of cutting
- Defect of cutting section
- ❖ How to remove fabric wastage

### 4.4. Sewing

☐ We think about numerous sort of sewing machine	
☐ We think about capacity of sewing machine	
☐ I think about sewing deficiency and their cures	
☐ We think about aggregate generation of this segmen	t

### 4.5. Finishing

- ❖ We know about total production of this garments
- ❖ To know about price tag, hang tag
- ❖ To know about how to quality assurance

### 4.6. Quality

- ❖ We learn about the fault of garments
- ❖ We learn how to maintain quality.
- ❖ We know about quality check point





## 4.7. Merchandising

☐ We think about P.O sheet.
☐ We about utilization of texture and frill
☐ learn about the bundle data
$\square$ We find out about the booking system.
☐ We think about P.O sheet.
☐ We record look after system. We record look after system.

## 4.8. Marketing

- \* We know about the contracting procedure to buyer.
- ❖ We learn the procedure of justifying a buyer

# 4.9. Compliance

- \* To know about their compliance system.
- ❖ We know about medical facilities





# **Chapter-05 Conclusion**





## 5. Conclusion

Industrial attachment program send us to the expected destiny of practical life. Through The completion of Two Month industrial attachment at Active Composite Mills Ltd, we have got the impression that the factory is one of the most knit wear manufacturing projects in Bangladesh. Though it was established in 2009, it has earned very good reputation for its best performance over any other knit manufacturing project. During our industrial attachment program we had tried to our best to do our duty. Our supervising officer also satisfied to us & offer co-operation in every steps. It is completely a new experience in our life, which will be very effective in our service life. During our training period we realized that practical experience is valuable for service life.