



**Faculty of Engineering
Department of Textile Engineering**

REPORT ON

**Industrial Attachment
At
Turag Garments and Hosiery Mills Ltd.**

**Course Title: Industrial Attachment
Course Code: TE-431**

Submitted By

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A report submitted in partial fulfillment of the requirements for the degree of
Bachelor of science in Textile Engineering

Advance Apparel Manufacturing Technology

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DECLARATION

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

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Letter of Approval

December 15, 2018

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 “Turag Garments & Hosiery Mills Ltd” has been prepared by the student bearing **ID 151-23-4239** and **151-23-4225** is completed for final evaluation. The whole report is prepared based on the proper investigation and information in Turag Garments & Hosiery Mills Ltd. The student were directly involved in their industrial attachment report activities.

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

Yours Sincerely



.....
Mst. Murshida Khatun

Senior Lecturer

Department of Textile Engineering

Daffodil International University

ACKNOWLEDGEMENT

First we express our heartiest thanks and gratefulness to almighty God for His divine blessing makes us possible to complete this project successfully.

We fell grateful to and wish our profound indebtedness to **Mst. Murshida Khatun**, Senior Lecturer, Department of TE, Daffodil International University, Deep Knowledge & keen interest of our supervisor in the field of influenced us to carry out this report. His endless patience, scholarly guidance, continual encouragement, constant and energetic supervision, constructive criticism, valuable advice, reading many inferior drafts and correcting them at all stage have made it possible to complete this report.

We would also like to express our sincere gratuity to **Md. Emrul Kayes** Sr. officer (R & D) “**Turag Garments & Hosiery Mills Ltd.** Located at South panishail, Kashimpur, **Gazipur.**” For allowing us to complete our Two months industrial training in this factory and also for his useful guidance throughout the course. We also want to thank **Dr. Mahbubul Haque**, Professor and Head, Department of Textile Engineering in DIU for his kind help to finish our report and also to other faculty member and the staff of TE department of Daffodil International University.

We have gratitude the Chairman, managing directors, General Manager, Production manager, merchandising manager, Administration manager who gave us scope for doing industrial attachment in the factory as well as for giving scope to work in their respective section.

We would like to thank our entire course mate in Daffodil International University, who took Part in this discuss while completing the course work.

At last but not the least, we like to acknowledge our parents for their approval, support & love and all our friends for their help & support to complete the report.

DEDICATION

At first we want to dedicate this industrial report to almighty Allah for giving us this opportunity to prove ourselves. Without almighty's help nothing would be possible. Then we want to dedicate our report to our parents. We love them very much, for completing our study they play a vital role to complete. It's a great pleasure for us. Without their help it is quite impossible for us to complete this attachment so we are very grateful to them. Our parents were very helpful to ready this attachment. And we also want to dedicate this report to my honorable teacher & academic supervisor, Senior Lecturer, **Mst. Murshida Khatun**, department of Textile, Daffodil International Engineering, give us a very support & guideline to ready this attachment. We dedicate this report to my beloved my parents.

Table of Contents

CHAPTER -I	1
EXECUTIVE SUMMARY	1
CHAPTER -II	3
GENERAL INFORMATION ABOUT FACTORY	3
2.1. INTRODUCTION	4
2.2. HISTORY OF THE FACTORY	5
2.4. Main production	6
2.5. Number of machine:	6
2.6. Supporting Department:	6
2.7. Major Logo:	6
2.8. Our Certificates & Our Satisfied Clients:	7
2.9. Production Capacity Information of the factory:	7
2.10. Actual production Information of the factory:	7
2.11. ORGANOGRAM:	8
2.12. Mission and vision:	8
2.13. Location of Factory:	9
CHAPTER-III	10
DESCRIPTION ABOUT THE	10
ATTACHMENT	10
3.1. KNITTING SECTION	11
3.1.1. Knitting:	11
3.1.2. Knitting Section Layout:	11
3.1.3. Process Flow Chart of knitting in Turag:	12
3.1.4. Types of Knitting	13
3.1.5. Types of yarn Used	13
3.1.6. Products made in Turag's knitting section:	14
3.1.7. Source of Yarn for Knitting	14
3.1.8. Knitting Machine List	14
3.1.9. Different types of knitting in Turag	21
3.1.10. Sample from Knitting Section:	22
3.2. DYEING LAB	24
3.2.1. SEQUENCE OF OPERATION:	25
3.2.2. MRECIPE FORMULATION:	25
3.2.3. FLOW CHART OF RECIPE FORMULATION:	25

3.2.4. COTTON DYES IN DYEING LAB:.....	26
3.2.5. RECOMMENDED SALT & SODA CONCENTRATION.....	27
3.2.6 PHYSICAL SECTION:	27
3.2.7. DIFFERENT TYPES OF TEST	28
3.3 BATCH SELECTION	29
3.3.1 BATCH	30
3.3.2 FUNCTION OR PURPOSE OF THE BATCH:.....	30
3.3.3 PROPER BATCHING CRITERIA:	30
3.4 DYEING SECTION	31
3.4.1. DYEING ORGANOGRAM LAYOUT OF DYEING	32
3.4.2. LAYOUT OF DYEING:.....	33
3.4.3. Dyeing Machine	33
3.4.4. Machine Specifications of Dyeing Section	33
3.4.4. DIFFERENT PH FOR DIFFERENT PROCESS:.....	35
3.4.5. PRODUCTION PARAMETERS:	36
3.5 FINISHING SECTION.....	37
3.5.1 FINISHING SECTION:.....	38
3.5.2. TYPES OF FINISHING:.....	38
3.5.3. CONTROLLING OF FABRIC DIA, GSM, AND SHRINKAGE IN DIFFERENT MACHINE:	38
3.5.3.1. DEWATERING M/C	38
3.5.3.2. COMPACTOR (TUBE)	39
3.5.3.3. COMPACTOR (OPEN).....	39
3.5.3.4. STENTER M/C	39
3.5.3.5. Process Flow Chart of Finishing:	39
3.6 SAMPLE SECTION	40
3.6.1. Following Flow Chart in Turag for Garments	41
3.6.2. Sample section:	41
3.6.3. Types of sample:	42
3.6.4. Flow Chart of Sample Section	42
3.6.5. Sample section details in Turag:	43
3.4.6. Pattern:	43
3.7 CUTTING SECTION	44
3.7. Cutting Section:.....	45
3.7.1. Lay out of Cutting section in Turag:	45
3.7.2. Machine specification of cutting section in Turag.	45

3.7.3. CUTTING MACHINERIES IN TURAG:	46
3.7.4. MACHINE QUANTITY IN TURAG:	46
3.7.5. STRAIGHT KNIFE:	46
3.7.6. BAND KNIFE:.....	47
3.7.7. COMPUTERIZED CUTTING & SPREADING MACHINE:.....	47
3.7.8. PROCESS FLOW CHART OF FABRIC CUTTING DEPARTMENT:	48
3.7.9. EACH PROCESS OF GARMENTS CUTTING FLOW CHART IS	48
DISCUSSED SHORTLY IN THE BELOW TABLE:	48
3.7.10. RELAXATION & NO OF PLY CHART FOR CUTTING:	50
3.7.11. Place Marker:	50
3.7.12. MARKER RATIO CALCULATION:.....	51
3.7.13. MARKER EFFICIENCY	51
3.8 SEWING SECTION	52
3.8 Sewing:.....	53
3.8.1. Lay out of sewing section in Turag:.....	53
3.8.2. Machine specification of sewing section in turag:.....	54
3.8.3. Sewing sequence of T-shirt:	55
3.8.4. Various types of Faults and their figure:.....	56
3.8.5. DIFFERENT TYPES OF SEWING M/C:	58
3.8.6. DIFFERENT CLASSES OF SEWING M/C.....	58
3.9 PRINTING SECTION.....	62
3.9.1. Lay out plan of printing section in Turag:	63
3.9.2. Different Machine specification of printing Section in Turag:	63
3.9.3. Different Chemical use in Turag printing section:	65
3.9.4. Different Types of printing:.....	65
3.9.5. COLLECTED SAMPLE FROM TURAG:	66
3.10 FINISHING SECTION.....	70
3.10.1. Lay out plan of Finishing Section in turag:	71
3.10.2 Iron:.....	72
3.10.3 Packing	72
3.10.4. Carton.....	73
CHAPTER-IV	74
IMPACT OF INTERNSHIP.....	74
4.1. Sample Section:.....	75
4.2. Dyeing section.....	75

4.3. Knitting section	75
4.4. Cutting Section	75
4.5. Sewing section	75
4.6. Printing Section	75
4.7. Finishing Section	75
CHAPTER-V	76
CONCLUSION.....	76
5.1. Conclusion:.....	77

CHAPTER -I

EXECUTIVE SUMMARY

Executive Summery

Textiles and clothing will always be essential goods for human beings. Spinning and weaving were the main activities that drove the Industrial Revolution in the 18th century. Since then the textile industry has been a leading industry in the initial phase of industrialization in many countries in different periods of time in the world. Bangladesh is an important producer & exporter of knit RMG product. There are about 4500 garments factories running in Bangladesh. Growth of garments factories started in Bangladesh around 1980. But now nearly 80% of our foreign currency is earned from RMG export. At present Bangladesh is producing & exporting more than 60 items of garments. Garments are exported to USA, Canada, Japan, Australia, Middle East and many other countries in the world. Cheapest labor cost is the biggest advantage for Bangladeshi garments producers & exporters.

Education provides important leanings of the modern inventions and the theories and also gives us a combined knowledge over theoretical and practical studies. Literatures provide the right information which we have been learned through our university. On the other hand, practical knowledge increases the practice of theoretical perception clear and more efficient.

Internship has made this opportunity. Because we have learned theoretical knowledge last three years but due to lack of proper industrial knowledge on my course, we would not have been said a complete engineer. Industrial attachment did work for us. We have taken part in this industrial attachment in Turag Garments and Hosiery Mills Ltd. Turag Garments and Hosiery Mills Ltd. is one of the renowned 100% export oriented industry in Bangladesh. The factory is concern with the production in knitting, knit dyeing and finishing and knit garments. Due to the change in current scenario, the textile sector is facing a great challenge here.

Turag Garments and Hosiery Mills Ltd is completely prepared to face this situation. The goal of Turag Garments and Hosiery Mills Ltd. is to become the preferred partner for sourcing high quality fabrics and clothing from Bangladesh. Turag has highly developed advance technology and an emphasis on developing local human resources. The Textile Division has the potential to make an important contribution to the nation's growing RMG export sector.

The national behind the existing structure and future expansion of the Textile and fiber Division is to capture value-added at each stage of the textile manufacturing process. Despite Bangladesh is lack of indigenous cotton production capability, it is enjoying lower labor cost advantage and export competitiveness to the maximum.

This factory is fully complained and very much concern about the labor law and compliances. This factory is also concerned about environmental issues as they have well established Effluent Treatment Plant (ETP). In Turag Garments and Hosiery Mills Ltd, we have completed 2 months long industrial training in knitting, dyeing and finishing and garments section. During the training period we faced a lot of technical problems, which we have solved by consulting with the related persons. Whatever the knowledge we have gain during my training period, it will help us to build up our career as a Textile Technologist.

CHAPTER -II

GENERAL INFORMATION ABOUT FACTORY

INFORMATION OF THE FACTORY

2.1. INTRODUCTION

Bangladesh, a country of 160 million people. Once she was the proud producer of world famous muslin fabric. Bangladesh was the best in producing muslin. Our muslin was world famous from the beginning of the 17th century, however history fades away like many other things we lost our capability of muslin production. Then came jute the golden fiber, contributed a lot to our economy. From the late 70s Bangladesh started producing and exporting ready-made garments to Europe. Now we are one of the leading suppliers of ready-made garments of the world.

RMG, the large scale production of readymade garments is a relatively new phenomenon in Bangladesh. The hundred percent export-oriented RMG industry experienced phenomenal growth over the years. In 1978, there were only 9 export- oriented garment manufacturing units, which generated export earnings of hardly one million dollars. Some of these units were very small and produced garments for both domestic and export markets. Within a short period, Bangladeshi entrepreneurs acquired the expertise of mobilizing resources to export oriented RMG industries. Foreign buyers found Bangladesh an increasingly attractive sourcing place. To take advantage of this cheap source, foreign buyers extended, in many cases, suppliers' credit under special arrangements. In some cases, local banks provided part of the equity capital. The problem of working capital was greatly solved with the introduction of back to-back letter of credit, which also facilitated import of quality fabric, the basic raw material of the industry. Till the end of 1982, there were only 47 garment manufacturing units. The breakthrough occurred in 1984-85, when the number of garment factories increased to 587. The number of RMG factories shot up to 5440 in 2012-2013. The industry has grown at the rate of 59% comparing from 1998-1999 to 2012-2013. In 2012-2013, the export earning of the RMG sector was \$20 billion with 16.18 % growth than the previous year.

2.2. HISTORY OF THE FACTORY

Textiles and Clothing are the leading industry of Bangladesh. These sectors are earning country's major portion of foreign exchange and creating huge job opportunities every year since 1980. Keeping this prospect in mind, Turag Garments & Hosiery Mills Ltd. was established in 1998 in a small scale. With the passage of time, it has been expanded in a large scale with good facilities of Knitting, Dyeing- finishing and Sewing.

Now, the floor area is 426,500 Sq. feet

(39,623.3 Sq. meter). Our factory is located at the outskirts of Dhaka city. The location is South Panishail, Zirani Bazar, Kashimpur, Gazipur which is located 37 kms from the zero point of Dhaka and 26 kms from the Hazrat Shahjalal International Airport.

The main instruments of our success are the team work, skilled personnel and professionalism. The factory is designed to meet all compliances & human right requirements.

2.3. Company Profile:

Company name	Turag Garments and Hosiery mills Ltd.
Head Office	Serenity, House # 15, Road # 12, Sector # 1, Uttara Dhaka-1230, Bangladesh.
Fax	+88-02-8952589
E-mail	info@turagbd.net
Factory	South Panishail, Zirani Bazar, Kashimpur, Gazipur, Bangladesh.
Tel No	+88-02-8919815 +88-02-8931728
Fax No	+88-02-895289
Contacted persons	Hossain Bin M.A. Khaleque (Babu) Telephone: +88-02-8919815 E-mail: babu@turagbd.net (Managing Director)
Production Capacity	Knitting : 30 Tons/Day
	Dyeing & Finishing : 16 Tons/Day
	Garments : 32,000 Pcs/Day
	PC Printing : 12,000 Pcs/ Day
No. of Employees	420
No. of Workers	4000
Floor Space	426,500 Sq. Feet (39,623.3 Sq. meters).

2.4. Main production

- ✓ T- shirt
- ✓ Polo-shirt
- ✓ Jacket/Sweat Shirt
- ✓ Leggings
- ✓ Panty
- ✓ Boxer
- ✓ Tank-Top
- ✓ Pant
- ✓ Jumpsuit etc.


2.5. Number of machine:

1. Total number of knitting machine is 41.
2. Total number of dyeing machine is 10
3. Total number of machine in sewing section 1037
4. Cutting section 15 sets.

2.6. Supporting Department:

- ✓ Human Resource
(HR) Marketing
- ✓ R&D
- ✓ Finance Accounting
- ✓ Work study&
planning
- ✓ Compliance & Safety

2.7. Major Logo:

Buyer's Name	Origin	Logo
Best Seller	Denmark	
Teranova	Germany	Teranova
Ernstings Family	Germany	
Guelden penning	Germany	GÜLDENPFENNIG
TOMS	Germany	Toms

2.8. Our Certificates & Our Satisfied Clients:



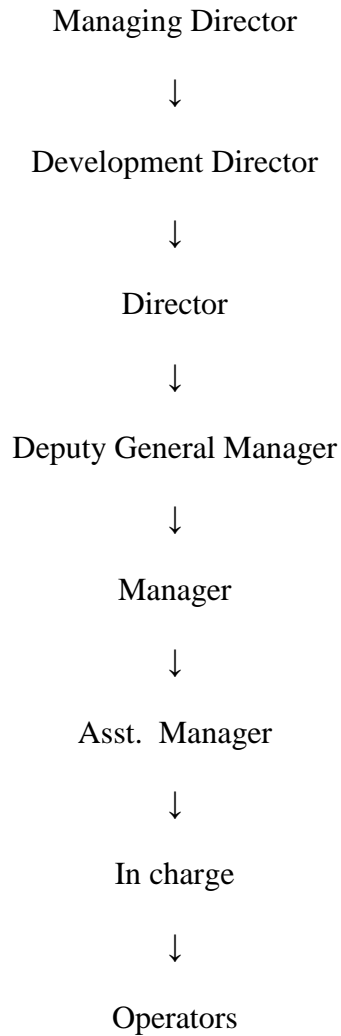
2.9. Production Capacity Information of the factory:

Garments	- 3.2 million Pcs /Month
Embroidery	- 8000 Pcs / day
Printing	- 30000 pcs /day
Knit Fabric	- 26 tons / day
Dye Fabric	- 32 tons / day
Washing	- 40000 wash / day

2.10. Actual production Information of the factory:

Garments	-2.6 million Pcs/month
Embroidery	-6500 Pcs /day
Printing	-25000 Pcs / day
Knit Fabric	-18 tons /day
Dye Fabric	-20 tons /day
Washing	-25000 pcs wash / day

2.11. ORGANOGRAM:



2.12. Mission and vision:

- ✓ Inspire Innovation and Sustainability
- ✓ Build strategic and long term relationship
- ✓ Achieve Customers Delight with profitable growth.
- ✓ To ensure greater prosperity, sustainability and fairness in a global economy.

2.13. Location of Factory:

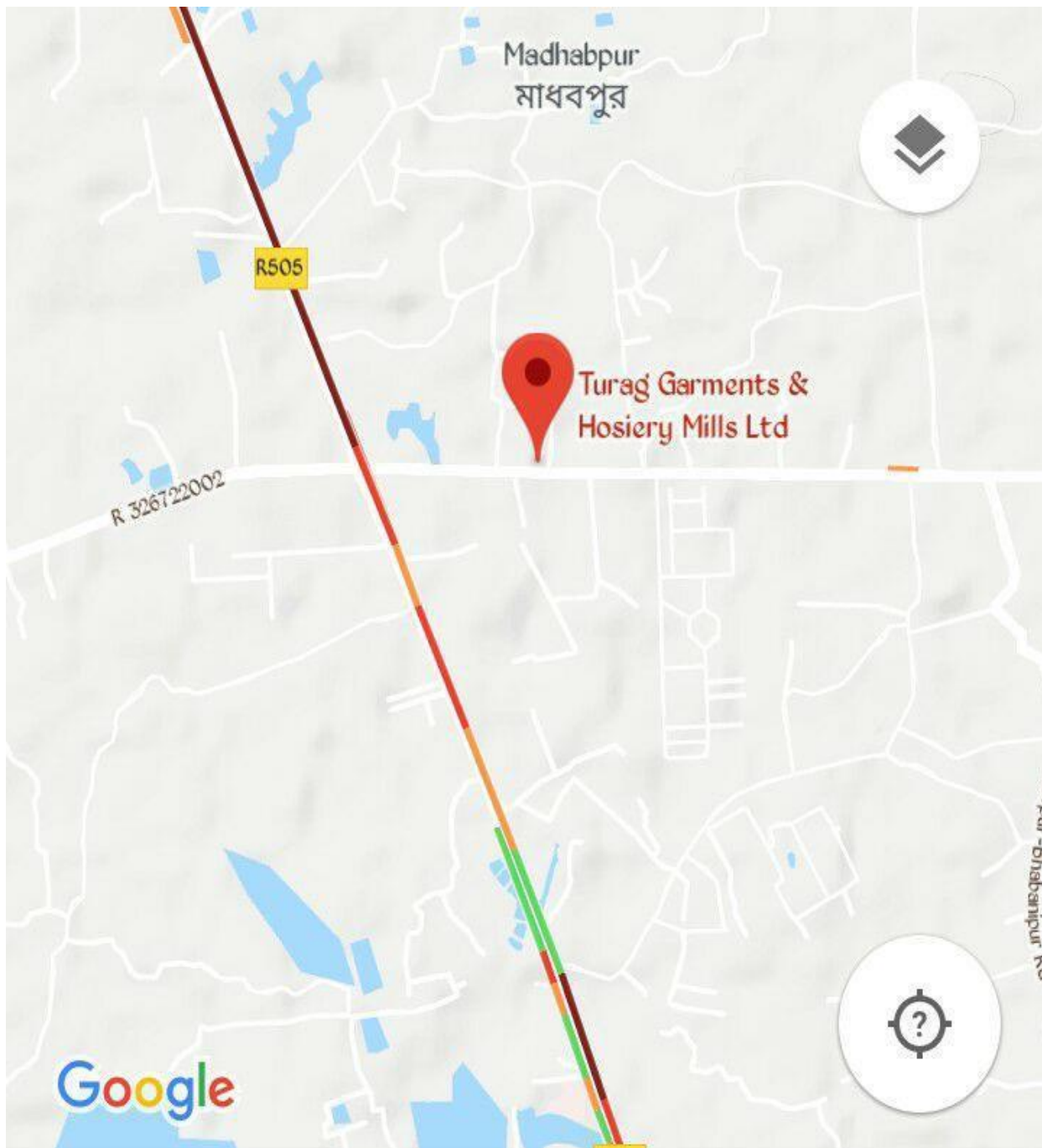


Fig: 2.13. Location of factory

CHAPTER-III

DESCRIPTION ABOUT THE

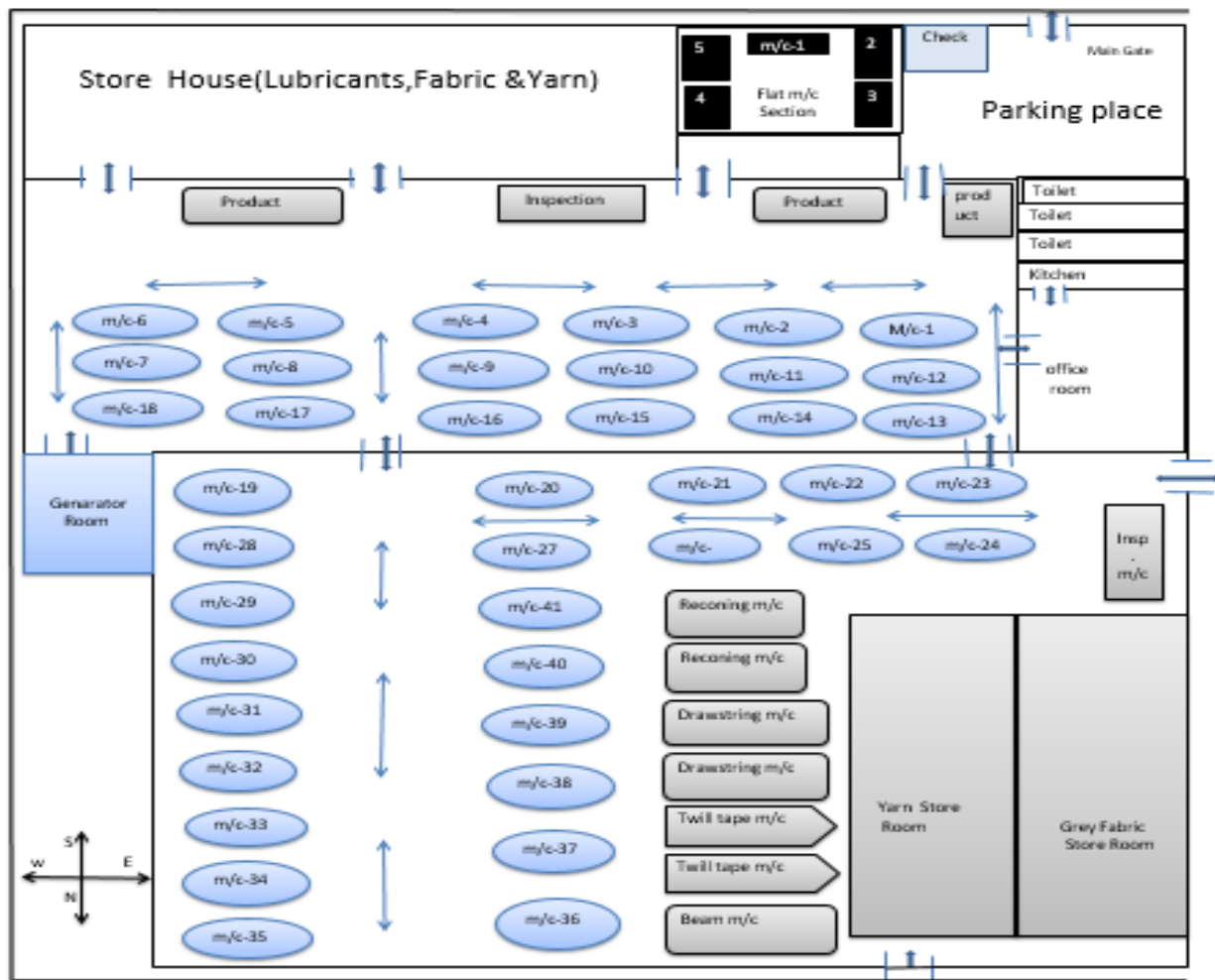
ATTACHMENT

3.1. KNITTING SECTION

3.1.1. Knitting:

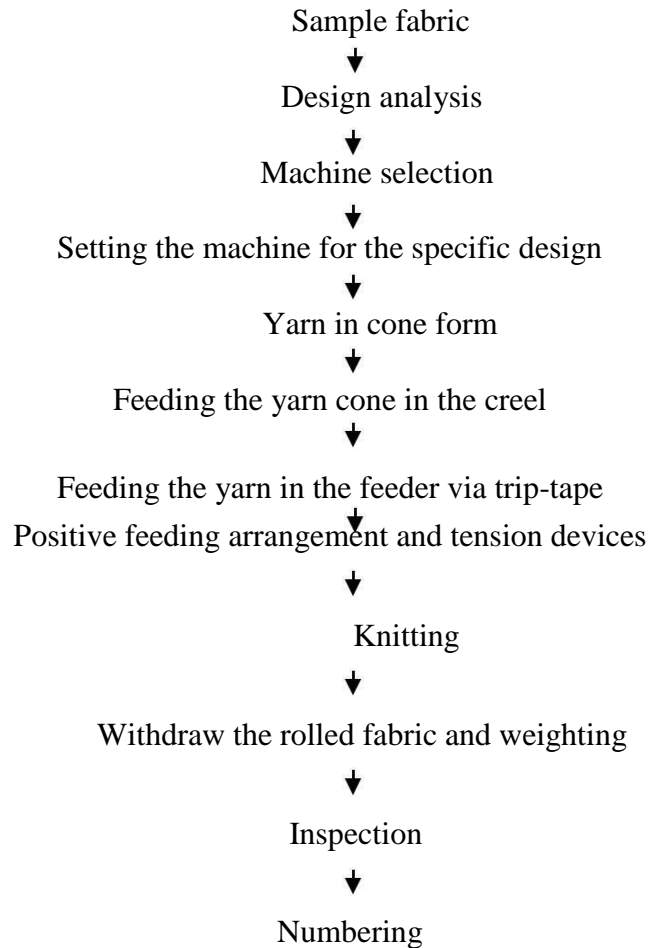
Knitting is a process of manufacturing of a fabric by intermeshing of loop of yarns. When one loop is drowning through another loop, a stitch is formed. Stitches may be formed in a horizontal and vertical direction.

3.1.2. Knitting Section Layout:



Knitting section: Turag garments & Hosiery mills Ltd. Has a sample section which is located outside of main factory. its located in madhobpur, zirani bazaar.

3.1.3. Process Flow Chart of knitting in Turag:



3.1.4. Types of Knitting

There are two types of Knitting

1. warp knitting
2. weft knitting

When fabric is produced by this method in weft direction then it is called **weft knitting** & warp direction then it is called **warp knitting**.

3.1.5. Types of yarn Used

Composition	Type	Yarn Count	Color	Ply
Cotton	Card	26 s, 30 s	Natural	Single
Cotton	Comb	24 s, 26 s, 30 s	Natural	Single
Spandex Yarn		20 D, 40 D, 70 D	Natural (white)	Single
Grey Mélange (C-90% V-10%)		20 s, 30 s	Dyed	Single
CVC		26 s		Single
Cotton	Dyed	26 s, 30 s		Single
PC (65% Polyester 35% Cotton)		24 s, 26 s, 30 s		Single
Viscose		30, 26, 40		Single
Knot less yarn cotton	Carded Yarn	20/2		Single

Table: 3.1.7. Types of yarn used in Turag

3.1.6. Products made in Turag's knitting section:

Single Jersey M/C	Double Jersey M/C
S/J Plain	1×1 Rib fabric
Single lacost	2×2 Rib fabric
Double lacost	Pointal Rib
Terry	Interlock
Fleece	Waffle
Single Pique	Mesh
Double Pique	Flat back rib
Knit denim	
Heavy jersey	

3.1.7. Source of Yarn for Knitting

Square spinning mill
Bushra Spinning mill
JK Spinning mill
Akij Spinning mill
K ader Spinning mill
NZ Spinning mill
Youth Spinning mill
Aman Spinning mill
Shamim spinning mill
Hanif Spinning mill

3.1.8. Knitting Machine List

Total number of machine in Turag is 41

Total number of single jersey knitting machine is 34 & number of Rib machine is 7.

Machine No-01

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : LISKY
Origin : Taiwan
Machine Gauge : 24
Machine dia :36
No of Fedder : 216

Machine no -2

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : LISKY
Origin : Taiwan
Machine Gauge : 18
Machine dia : 32
No of Feeder : 68

Machine no -03

Machine Name : Rib machine
Brand Name : LISKY
Origin : Taiwan
Machine Gauge : 18
Machine Dia : 34
No of feeder : 72

Machine no -04

Machine Name : Rib machine
Brand Name : LISKY
Origin : Taiwan
Machine Gauge : 18
Machine dia : 36
No of Feeder : 76

Machine no -05

Machine Name : Rib machine
Brand Name : LISKY
Origin : Taiwan
Machine Gauge : 18
Machine dia : 38
No of feeder : 80

Machine no 06

Machine name : Rib machine
Brand name : LISKY
Origin : Taiwan
Machine Gauge : 18
Machine dia : 38
No of feeder : 76

Machine no-07

Machine Name : Rib machine
Brand name : LISKY
Origin : Taiwan
Machine Gauge : 18
Machine dia : 40
No of feeder : 84

Machine no -08

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : LISKY
Origin : Taiwan
Machine Gauge : 20
Machine dia : 30
No of feeder : 96

Machine no 09

Machine Name : Single Jersey Circular Knitting Machine
Brand name : LISKY
Origin : Taiwan
Machine Gauge : 24
Machine dia : 34
No of feeder : 108

Machine no -10

Machine Name : Single Jersey Circular Knitting Machine
Brand name : LISKY
Origin : Taiwan
Machine Gauge : 20
Machine dia : 36
No of feeder : 114

Machine no-11

Machine Name : Single Jersey Circular Knitting Machine
Brand name : LISKY
Origin : Taiwan
Machine Gauge : 20
Machine dia : 38
No of feeder : 120

Machine no-12

Machine Name : Single Jersey Circular Knitting Machine
Brand name : LISKY
Origin : Taiwan
Machine Gauge : 24
Machine dia : 30
No of feeder : 180

Machine no-13

Machine Name : Single Jersey Circular Knitting Machine
Brand name : LISKY
Origin : Taiwan
Machine Gauge : 24
Machine dia : 38
No of feeder : 228

Machine no-14

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : LISKY
Origin : Taiwan
Machine Gauge : 24
Machine dia : 26
No of feeder : 84

Machine no-15

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : LISKY
Origin : Taiwan
Machine Gauge : 24
Machine dia : 28
No of feeder : 90

Machine no-16

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : LISKY
Origin : Taiwan
Machine Gauge : 20
Machine dia : 34
No of feeder : 108

Machine no-17

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : LISKY
Origin : Taiwan
Machine Gauge : 20
Machine dia : 40
No of feeder : 126

Machine no-18

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : LISKY
Origin : Taiwan
Machine Gauge : 20
Machine dia : 32
No of feeder : 102

Machine no-19

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : Sanda dask
Origin : Taiwan
Machine Gauge : 20
Machine dia : 30
No of feeder : 90

Machine no-20

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : Sanda dask
Origin : Taiwan
Machine Gauge : 20
Machine dia : 30
No of feeder : 90

Machine no -21

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : Jiunn lung
Origin : Taiwan
Machine Gauge : 20
Machine dia : 32
No of Feeder :96

Machine no -22

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : Jiunn lung
Origin : Taiwan
Machine Gauge :20
Machine dia : 34
No of Feeder : 102

Machine no -23

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : LISKY
Origin : Taiwan
Machine Gauge :20
Machine dia : 40
No of Feeder : 120

Machine no -24

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : Jiunn lung
Origin : Taiwan
Machine Gauge : 24
Machine dia : 30
No of Feeder : 90

Machine no -25

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : Jiunn lung
Origin : Taiwan
Machine Gauge : 24
Machine dia : 32
No of Feeder : 96

Machine no -26

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : Jiunn lung
Origin : Taiwan
Machine Gauge : 24
Machine dia : 34
No of Feeder : 102

Machine no -27

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : Jiunn lung
Origin : Taiwan
Machine Gauge : 24
Machine dia : 36

Machine no -28

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : Jiunn lung
Origin : Taiwan
Machine Gauge : 20
Machine dia : 36
No of Feeder : 108

Machine no -29

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : Jiunn lung
Origin : Taiwan
Machine Gauge : 20
Machine dia : 38
No of Feeder : 114

Machine no -30

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : Jiunn lung
Origin : Taiwan
Machine Gauge : 24
Machine dia : 38
No of Feeder : 114

Machine no -31

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : Jiunn lung
Origin : Taiwan
Machine Gauge : 20
Machine dia : 32
No of Feeder : 96

Machine no -32

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : LISKY
Origin : Taiwan
Machine Gauge : 24
Machine dia : 30
No of Feeder : 90

Machine no -33

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : LISKY
Origin : Taiwan
Machine Gauge : 24
Machine dia : 34
No of Feeder : 102

Machine no -34

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : LISKY
Origin : Taiwan
Machine Gauge : 24
Machine dia : 36
No of Feeder : 108

Machine no -35

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : LISKY
Origin : Taiwan
Machine Gauge : 24
Machine dia : 38
No of Feeder : 114

Machine no -36

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : LISKY
Origin : Taiwan
Machine Gauge : 24
Machine dia : 22
No of Feeder : 64

Machine no -37

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : LISKY
Origin : Taiwan
Machine Gauge : 24
Machine dia : 22
No of Feeder : 72

Machine no -38

Machine Name : Single Jersey Circular Knitting Machine
Brand Name : LISKY
Origin : Taiwan
Machine Gauge : 24
Machine dia : 36
No of Feeder : 108

Machine no -39

Machine Name : Rib machine
Brand Name : LISKY
Origin : Taiwan
Machine Gauge : 18
Machine dia : 36
No of Feeder : 76

Machine no -40

Machine Name : Rib machine
Brand Name : LISKY
Origin : Taiwan
Machine Gauge : 18
Machine dia : 30
No of Feeder : 60




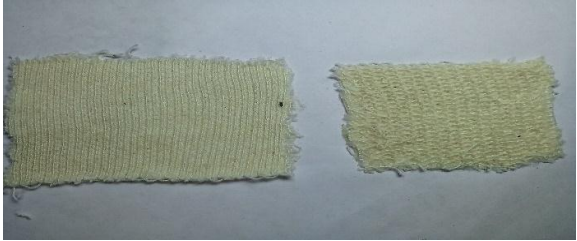
Machine no -41




Machine Name : Single Jersey Circular Knitting Machine
Brand Name : Jiunn lung
Origin : Taiwan
Machine Gauge : 24
Machine dia : 42
No of Feeder : 126

3.1.9. Different types of knitting in Turag

Fig: 3.1.9. Different types of Knitting M/C

3.1.10. Sample from Knitting Section:

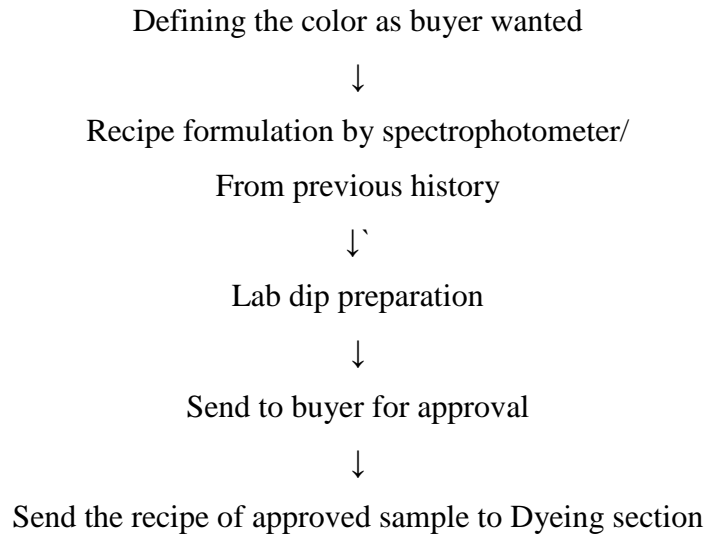
Sample Fabric Details	Fabric Sample
Fabric type : (1x1) Rib GSM : 170 Stitch length : 2.65 Dia x Gauge : 34x18	
Fabric type : (2x2) Rib GSM : 320 Stitch length : 2.90 Dia x Gauge : 32x18	
Fabric type : Flat back rib GSM : 320 Stitch length : 3.5 Dia x Gauge : 38x18	
Fabric type : FLEECE GSM : 280 Stitch length : 4.7 Dia x Gauge : 30x20	

<p>Fabric type : S/J Stripe</p> <p>GSM :170</p> <p>Stitch length : 2.9</p> <p>Dia x Gauge : 38x24</p>	
<p>Fabric type : S/J design</p> <p>GSM :170</p> <p>Stitch length :6.03</p> <p>Dia x Gauge :28x24</p>	
<p>Fabric types : S/J</p> <p>GSM :320</p> <p>Stitch length :3.5</p> <p>Dia x Gauge :38x18</p>	

3.2. DYEING LAB

DYEING LAB

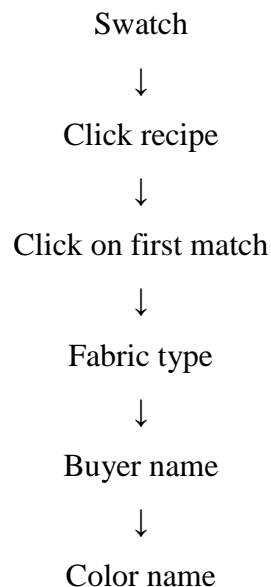
3.2.1. SEQUENCE OF OPERATION:

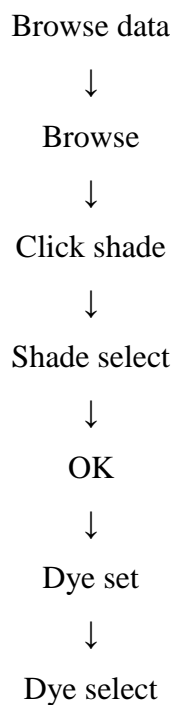


3.2.2. MRECIPE FORMULATION:

Buyer can give fabric sample or color code or pantone number. So at first the color is to identify if the buyer gives color code or pantone number. It is easier to formulate recipe by spectrophotometer from color code or pantone number because they are very specific. But if it is fabric sample then with the help of spectrophotometer several numbers of recipes are to formulate.

3.2.3. FLOW CHART OF RECIPE FORMULATION:





3.2.4. COTTON DYES IN DYEING LAB:

1. Remazol Br Blue BB 133%
2. Remazol Gld Yellow RGB
3. Remazol Navy RGB 150%
4. Remazol Orange RR
5. Remazol Red RR
6. RemazolTurquoise Blue G133%
7. Remazol Yellow RR
8. Levafix Amber CA
9. Levafix Blue CA
10. Levafix Fast Red CA
11. Levafix Orange CA
12. Levafix Blue RR
13. Kimsoline Black K-BD 130%
14. Kimsoline Black B 150%
15. Kimsoline Red KLL
16. Kimsoline Red L-E
17. 17.Kimsoline Red HF-6BN 150%
18. Kimsoline Red K-ED Conc.

3.2.5. RECOMMENDED SALT & SODA CONCENTRATION

Depth of shade	Glubar salt(g/l)	Soda ash(g/l)
Up to- 0.1	15	5
0.1-0.5	20	6
0.5-1.0	30.0	8.0
1.0-2.0	40.0	10.0
2.0-3.0	50.0	15.0
3.0-4.0	60.0	15.0
4.0-5.0	70.0	20.0
Above 5	80.0	5

3.2.6 PHYSICAL SECTION:

Machine Details-

Instrument	Makers Name	Code No.
Gyro Wash	James H.Heal	TTL/GW/001
Wascator	Electrolux	TTL/WC/002
Washing Machine	Siemens	TTL/TD/004
Tumble dryer-1	Whirlpool	TTL/TD/005
Balance-1	Ohaus	TTL/EB/006
Balance – 2	Ohaus	TTL/EB/007
Balance-3	AND	TTL/EB/007
GSM Cutter	James.H.Heal	TTL/GSM/009
Crockmaster	James.H.Heal	TTL/CM/010

ICI Pilling Tester	James .H.Heal	TTL/PT/011
Pilling Measurement	James.H.Heal	TTL/PAV/012
Incubator	James H.Heal	TTL/INB/013
Steal Scale	Local	TTL/PHM/015
PH Meter	Hanna	TTL/PHM/015
Light Box	Verivide	TTL/CL/016
Perspirometer	James H.Heal	TTL/PM/017
Conditioning Chamber		TTL/CC/018
Weight Box		TTL/WB/019

3.2.7. DIFFERENT TYPES OF TEST

- Dimensional Stability to Washing(Shrinkage)
- Spirality/Twisting
- Colorfastness to Water
- Colorfastness to Washing
- Colorfastness to Perspiration
- Colorfastness to Rubbing
- Colorfastness to Saliva
- Print Durability
- Fabric Weight
- Thread Count
- Pilling Resistance pH test
- Yarn Appearance
- Yarn count

3.3 BATCH SELECTION

BATCH SECTION

3.3.1 BATCH

Batch is the pre-plan of dying process. It can be defined as a group of units of products of the similar type, structure, color & finish, class & composition, manufacture under essentially the same conditions & essentially at the same time & submitted at any one time for inspection & testing & finally goes to dyeing.

3.3.2 FUNCTION OR PURPOSE OF THE BATCH:

- ✓ To receive the grey fabric, roll from knitting section or other source.
- ✓ To prepare the batch of fabric for dyeing according to the following parameter:
- ✓ Order sheet (Received from buyer)
- ✓ Dyeing shade (Color or white, Light or Dark)
- ✓ M/C capacity
- ✓ Fabric structure
- ✓ Yarn type, etc.
- ✓ To send the grey fabric to the dyeing floor by trolley with batch card.
- ✓ To keep records for every previous dyeing.

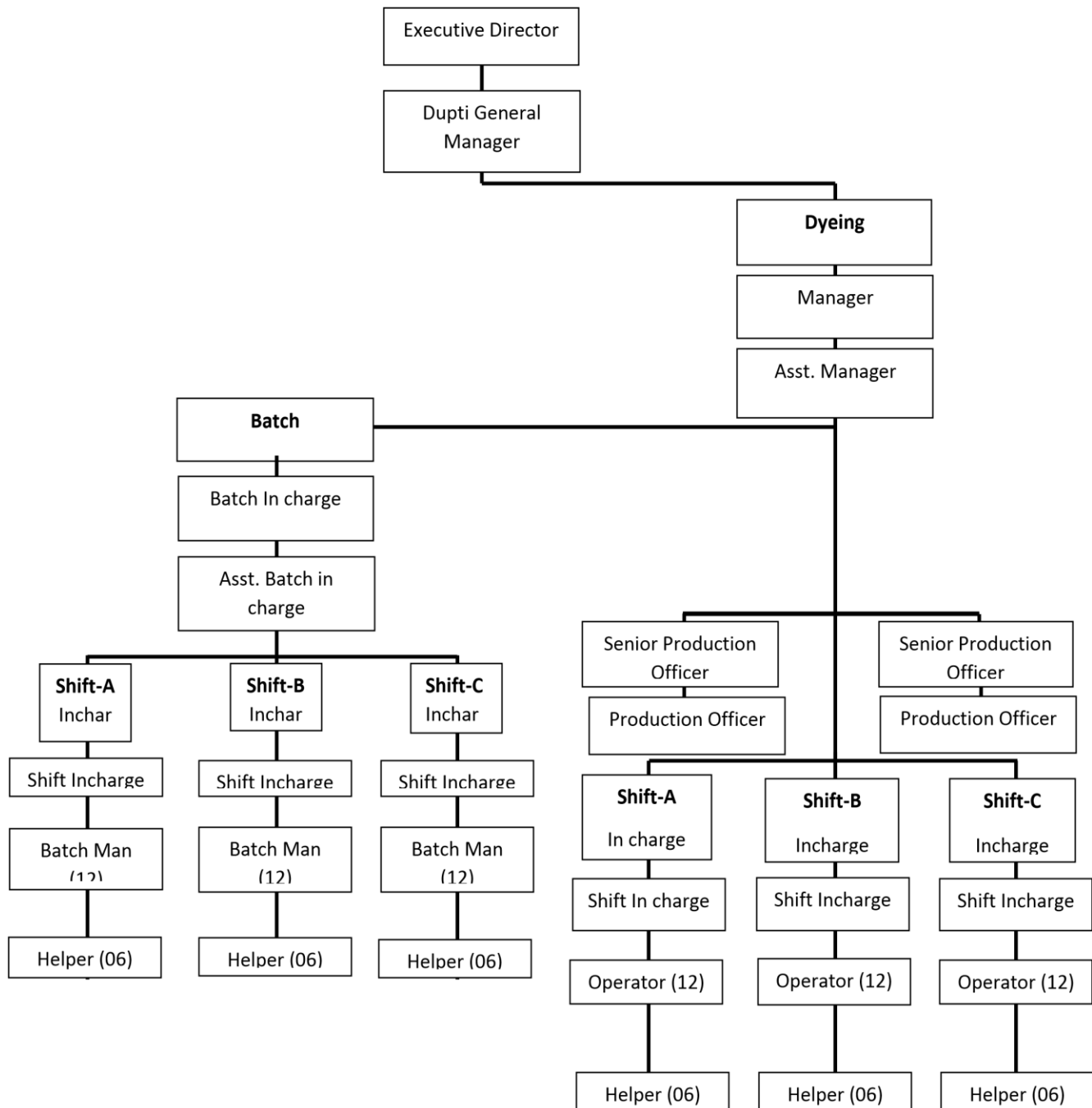
3.3.3 PROPER BATCHING CRITERIA:

- ✓ To use maximum capacity of existing dyeing m/c.
- ✓ To ensure every dyeing m/c running in full production.
- ✓ To minimize the m/c washing time or preparation time.
- ✓ To keep the no of batch as less as possible for same shade, etc.

3.4 DYEING SECTION

DYEING SECTION

3.4.1. DYEING ORGANOGRAM LAYOUT OF DYEING



3.4.2. LAYOUT OF DYEING:



3.4.3. Dyeing Machine

The Machine which is use to coloring different types of textile product like yarn, fabric and garments. it's called dyeing machine

3.4.4. Machine Specifications of Dyeing Section

Machine No -01

Machine Name : Sample Dyeing Machine
Brand Name : SCLAVOS
Origin : Greece
Year of Manufacturing : 2002
Capacity : 250 kg
No of Nozzle : 01
Maximum Operating Temp: 135° C

Machine No -02

Machine Name : Sample Dyeing Machine
Brand Name : SCLAV0S
Origin : Greece
Year of Manufacturing : 2002
Capacity : 250 kg
No of Nozzle : 01
Maximum Operating Temp : 135° C

Machine No -03

Machine Name : Sample Dyeing Machine
Brand Name : SCLAV0S
Origin : Greece
Year of Manufacturing : 2002
Capacity : 500 kg
No of Nozzle : 02
Maximum Operating Temp : 135° C

Machine No -04

Machine Name : Sample Dyeing Machine
Brand Name : SCLAV0S
Origin : Greece
Year of Manufacturing : 2002
Capacity : 500 kg
No of Nozzle : 02
Maximum Operating Temp : 135° C

Machine No -05

Machine Name : Sample Dyeing Machine
Brand Name : SCLAV0S
Origin : Greece
Year of Manufacturing : 2002
Capacity : 500 kg
No of Nozzle : 02
Maximum Operating Temp : 135° C

Machine No -06

Machine Name : Sample Dyeing Machine
Brand Name : SCLAV0S
Origin : Greece
Year of Manufacturing : 2000
Capacity : 500 kg
No of Nozzle : 02
Maximum Operating Temp: 135° C

Machine No -07

Machine Name : Sample Dyeing Machine
Brand Name : SCLAV0S
Origin : Turkey
Year of Manufacturing : 2000

Capacity :1000 kg
No of Nozzle :04
Maximum Operating Temp: 135° C

Machine No -08

Machine Name : Sample Dyeing Machine
Brand Name : J&X
Origin : China
Year of Manufacturing : 2002
Capacity : 1000 kg
No of Nozzle : 04
Maximum Operating Temp: 135° C

Machine No -09

Machine Name : Sample Dyeing Machine
Brand Name : J&X
Origin : China
Year of Manufacturing : 2003
Capacity : 1500 kg
No of Nozzle : 05

Machine No -10

Machine Name : Sample Dyeing Machine
Brand Name : J&X
Origin : China
Year of Manufacturing : 2000
Capacity :2000 kg
No of Nozzle : 06
Maximum Operating Temp: 135° C

3.4.4. DIFFERENT PH FOR DIFFERENT PROCESS:

Process	PH
Scouring & Bleaching	10.5-11
Acid Neutralize(Pretreatment)	6.5
Acid + Enzyme	4-4.5
Dyeing	6.5
Salt	6.5

Soda	10.5-11
Acid	5.5

3.4.5. PRODUCTION PARAMETERS:

Process	Temperature	PH	Time (Min)
Scouring-bleaching	100°C	10.5-11.5	40
Enzyme wash	55°C	4.5-5	60
Enzyme killing	80°C		10
Reactive dyeing light shade	60°C	10.5	60
Reactive dyeing medium to dark shade	60-65°C	10.5	90
Turquoise color dyeing	100°C	10.5	40
Polyester stripping	90°C	4.5	30-45
Cotton stripping	100°C	11	30
Polyester dyeing	130°C	4.5-5.5	60
Cotton whitening	100°C	-	20
Viscose dyeing	50°C	10- 11	30

3.5 FINISHING SECTION

FINISHING SECTION

3.5.1 FINISHING SECTION:

Textile finishing, in a restricted sense, is the term used for a series of processes to which all bleached, dyed, printed and certain grey fabrics are subjected before they are put on the market. In fact, finishing includes the final treatment of every kind of fabric made from every kind of fiber. After dyeing of knit fabric it's required to finish. During dyeing all knit fabrics are dyed in tubular form. According to buyer's requirement knit fabrics are finished in open form or tubular form.

3.5.2. TYPES OF FINISHING:

Chemical finishing:

- ✓ Chemical reaction of auxiliaries with fibers.
- ✓ Application of the handle modifying products / additives.

Mechanical finishing: (Mechanical treatment with machines.)

- ✓ Improving the appearance - Luster, whiteness, etc.
- ✓ Improving the feel, which depends on the handle of the mater GSM and its softness, suppleness' fullness, etc.
- ✓ Wearing qualities, non - soiling, antcrease, ant shrink, comfort, etc.
- ✓ GMS properties required for particular uses - water - proofing, flame -proofing, etc.
- ✓ Covering of the faults in the original cloth.
- ✓ Increasing the weight of the cloth.

3.5.3. CONTROLLING OF FABRIC DIA, GSM, AND SHRINKAGE IN DIFFERENT MACHINE:

3.5.3.1. DEWATERING M/C

Tubular fabric dia can be controlled here. For Interlock & Rib fabric, 11 inch dia& for another fabric up to 4 to 5 inch can be increased. To increase GSM, we have to increase over feed speed and then the dia should be kept in a normal condition & for the reduction of GSM we have to do the alternate process. For keeping less shrinkage in a fabric we have to keep the fabric tension free.

3.5.3.2. COMPACTOR (TUBE)

Fabric dia mainly controlled here. It's possible to control fabric dia up to (1 to 2) inch more or less. Steam is applied to the fabric by which the fabric dia is decreased & for this reason GSM of that fabric is increased.

3.5.3.3. COMPACTOR (OPEN)

In case of open compactor normally dia& GSM is not controlled but this is controlled in stenter m/c before.

3.5.3.4. STENTER M/C

✚ Width control

To increase fabric width, the distance between the rails should be greater and then the GSM of the fabric will be lowered. If the distance between the rails is decreased than the width of the fabric will be lowered and then the GSM of the fabric will be increased.

✚ GSM control

In case of Stenter m/c the GSM of fabric can be controlled.

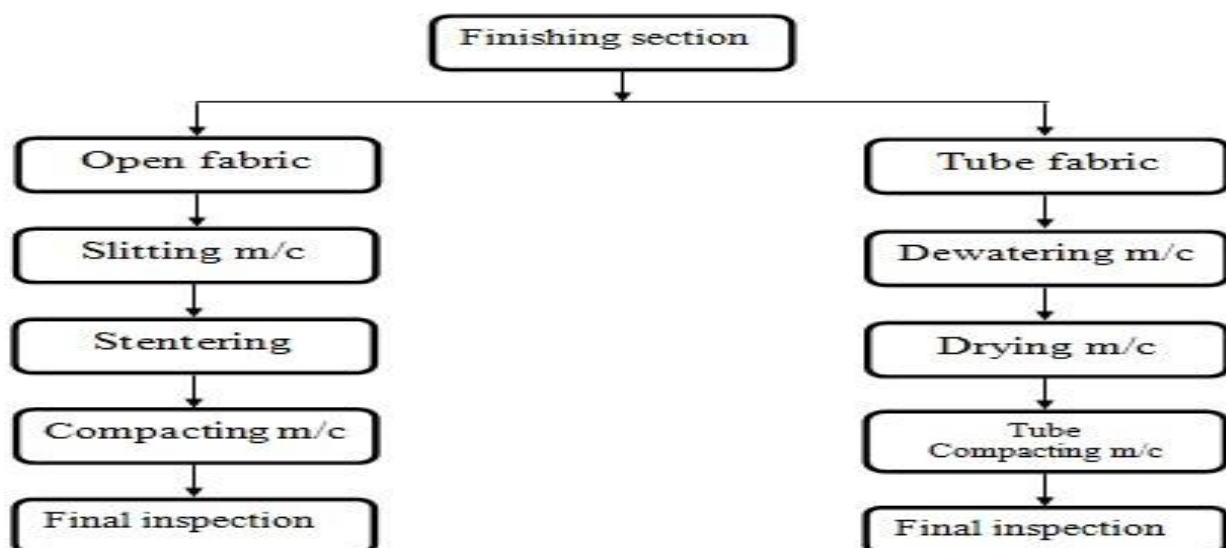
For example: if GSM of any fabric is reduced after dyeing than it can be easily increased by the help of Stenter m/c.

1st Step: Increase the over feed roller speed

2nd Step: Now decrease the distance between the rails

For decreasing the GSM, the alternate process should be followed.

3.5.3.5. Process Flow Chart of Finishing:



3.6 SAMPLE SECTION

SAMPLE SECTION

3.6.1. Following Flow Chart in Turag for Garments



3.6.2. Sample section:

Turag garments & Hosiery mills Ltd. Has a sample section which is located in 3rd floor in Admin building.

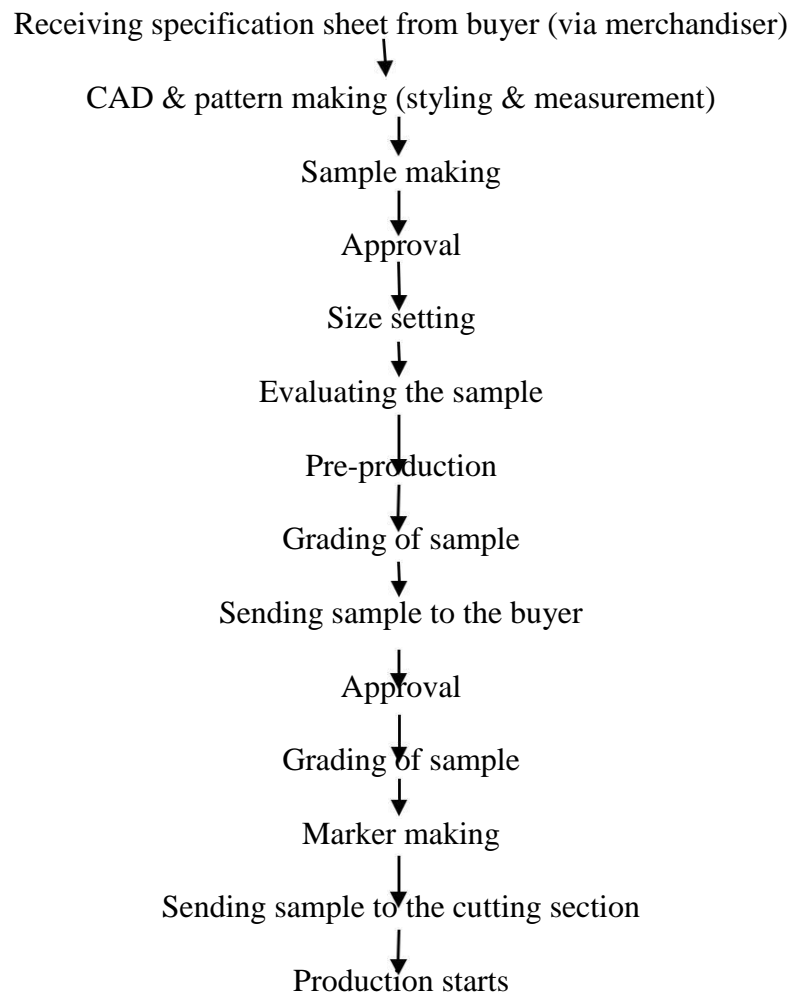


Fig: 3.3.2. Sample section

3.6.3. Types of sample:

Proto sample
Fit sample
Size set sample
Counter Sample
Salesman sample
Pre-Production
Sample Top over
Production Shipment
sample

3.6.4. Flow Chart of Sample Section



3.6.5. Sample section details in Turag:

Total number of sewing machine- 30
Total number of iron table -1
Total number of pattern -1
Total number of line -4
Total number of inspection table -1
Total number of packing table 1
Total number of fault removing table -1

3.4.6. Pattern:



The different part of garments which is shaped by a hard paper is called pattern.
There are two types of pattern.

Working pattern: it is used to make sample garments.

Production pattern: This pattern used bulk production.

Pattern grading: After developing pattern, pattern master decreases or increases master
Pattern stepwise, it is called pattern grading.

Mainly two methods follow to pattern making.

-  Manual construction of pattern
-  Computer aided construction of pattern

Both method are used to make pattern in Turag

3.7 CUTTING SECTION

3.7. Cutting Section:

Turag garments & Hosiery mills Ltd. Has a sample section which is located in 4th floor in dyeing building.

3.7.1. Lay out of Cutting section in Turag:



Fig- 3.7.1: Lay out Cutting section in turag

3.7.2. Machine specification of cutting section in Turag.

SL No	Machine Name	Brand/Model	Features	M/C Quantity
01	Cutting Machine	Eastman/ Model No 629		15 sets
02	Fabric Inspection		Made in USA with auto seed controller	2 sets
03	Dies cutting M/C		Made in USA	1 set
04	Dies Cutting M/C	MF 25 Atom Italy		2 sets
05	Band Knife	Eastman EC-700		5 sets
06	End Cutter	Eastman	Lay Cutting	8 sets
07	Laser light	Eastman		2sets
08	Inter lining Cutting	Local	52'' width	1 set
09	Cutting Gloves	Eastman		17 sets
10	Cutting Tables		60 X 6	1 set
11	Cutting Tables	China	52 X 6	6 sets
12	Cutting Tables	China	48 x 6	1 set

Table-3.7.2: Machine specification of cutting section in Turag.

3.7.3. CUTTING MACHINERIES IN TURAG:

- 1) Straight knife
- 2) Band knife
- 3) Computerized cutting machine
- 4) Computerized spreading machine

3.7.4. MACHINE QUANTITY IN TURAG:

Machine name	Quantity
Straight knife	11
Band knife	1
Sticker machine	1
Computerized cutting m/c	1
Auto spreading m/c	2

3.7.5. STRAIGHT KNIFE:

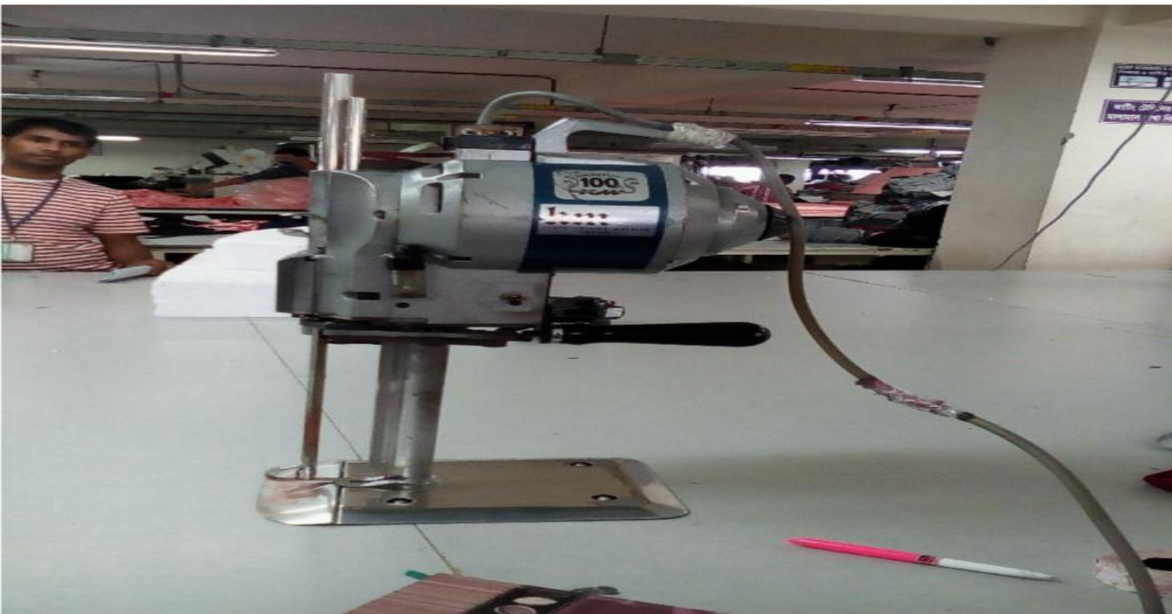


Fig-3.7.5: Straight Knife

3.7.6. BAND KNIFE:



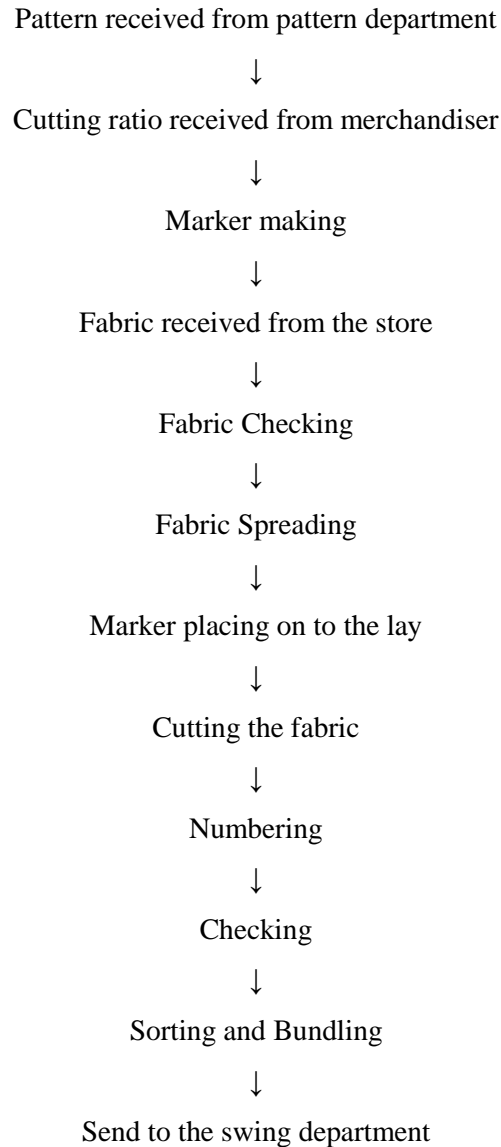
Fig-3.7.6: Band Knife

3.7.7. COMPUTERIZED CUTTING & SPREADING MACHINE:



Fig-3.7.7: Computerized Cutting & Spreading M/C

3.7.8. PROCESS FLOW CHART OF FABRIC CUTTING DEPARTMENT:



3.7.9. EACH PROCESS OF GARMENTS CUTTING FLOW CHART IS DISCUSSED SHORTLY IN THE BELOW TABLE:

S/L	Process	Job
01	Pattern received from pattern department	At first you have to received different sizes pattern for each style garments from the pattern department.
02	Garments cutting ratio received from merchandiser	Cutting ratio for each style garments should be received from merchandiser
03	Marker making	To complete cutting process in easy way, you have to make marker for each style garments.

04	Fabric received from the store	At the meantime, you have to receive fabrics from the store for each style of garments.
05	Fabric Checking	Here, fabrics have to checked and confirm the shade variation free fabrics in cutting table.
06	Fabric Spreading	When the above process is completed, then you have to spread the fabric with correct lay height and ply tension.
07	Marker placing on to the lay	After that, marker have to place on the top layer of the lay.
08	Cutting the fabric	Here, fabrics have to cut by maintaining marker.
09	Numbering	After cutting the fabrics, each parts of different style fabrics should be numbered to avoid mixing with the others style fabric parts.
10	Checking	Checking the cutting fabrics accurately by comparing with its marker.
11	Sorting and Bundling	Cutting parts should be sorting and bundling here to send easy into the next process.
12	Send to the next process.	Cutting fabric parts have to send into next process (where required) like printing, Embroidery, sewing etc.

3.7.10. RELAXATION & NO OF PLY CHART FOR CUTTING:

FABRIC CONSTRUCTION	COMPOSITION	RELAX TIME	NO OF PLY
Single Jersey	100% cotton	8	140
Single Jersey	Cvc/pc	10	140
Single Jersey	Lycra mix	20	90
Interlock	100% cotton	12	80
Interlock	CVC /PC	12	80
Interlock	Lycra mix	20	80
Pique(S/J)	100% cotton	24	80
Pique(D/J)	100% cotton	8	80
Pique(Honey comb)	100% cotton	8	80
Pique	CVC/PC	10	80
Pique	Lycra mix	20	80
Fleece (Brushed)	100% cotton	8	60
Fleece	CVC	10	60
Fleece	Lycra Mix	12	60
Rib	100% cotton	8	80
Rib	Lycra Mix	16	80

3.7.11. Place Marker:

Marker place is most important of cutting section. When fabric spreading is completed then marker is placing. If the marker placing is not properly fabric cutting is not proper so it is very important.



Fig-3.7.11: Place marker

3.7.12. MARKER RATIO CALCULATION:

DATE	Lot/Cutting	Kg/lay	Mm/dia	size	size	size	size	size	size	Total r
	147/2	196/60	16/66	98	104	110	116	122	128	
				1805	2172	2317	2506	3193	3919	15912
				120/195	120/170	120/170	180/220	180/280	240/340	960/1385

Dividing by the smallest quantity of order.

Size no 98: 1805/1805: 1

Size no 104: 2172/1805: 1.2

Size no 110: 2317/1805: 1.2

Size no 116: 2506/1805: 1.3

Size no 122: 3193/1805: 1.7 Size no 128:3919/1805: 2.1

3.7.13. MARKER EFFICIENCY

Marker efficiency is defined as a ratio of area of marker used in a garment and area of total marker.

calculate Marker Efficiency

Calculation method of marker efficiency has been explained below with formula.

Formula: -1

Marker efficiency% = (Area of marker used for garments / Area of total marker) * 100

Area of marker used for garments: In case of CAD marker, CAD system automatically calculates total area of garment pattern pieces placed in a marker. So you get area of marker that is consumed by garments from CAD system.

Total Marker Area: To calculate total marker area simply multiply marker length by marker width.

3.8 SEWING SECTION

SEWING SECTION

Turag garments & Hosiery mills Ltd. Has a sample section which is located in 3rd floor in Dyeing building and, 3rd, 4th, floor in ETP building.

3.8 Sewing:

Sewing means two or more fabric attached by using needle and thread is called sewing. sewing is main functional work to made garments.

3.8.1. Lay out of sewing section in Turag:



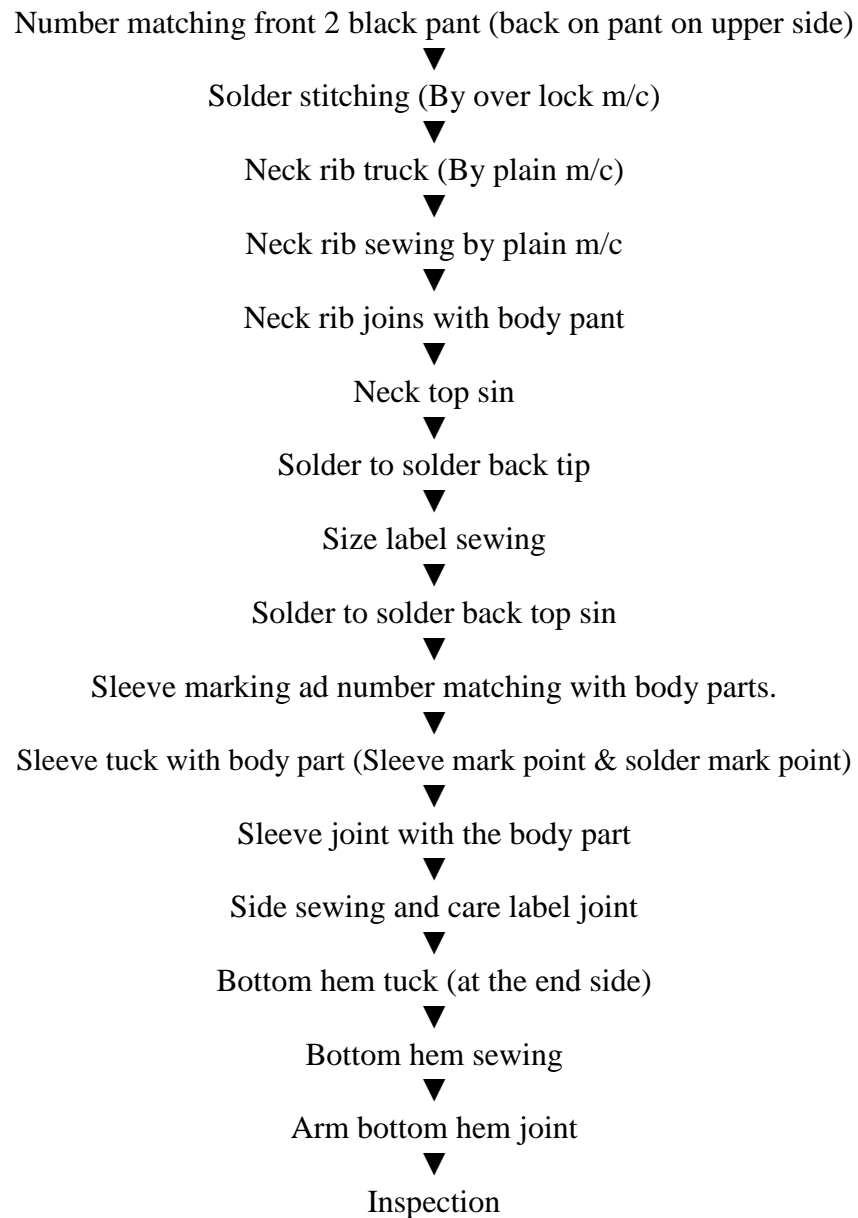
Fig-3.8.1: Lay out plan sewing section in turag

3.8.2. Machine specification of sewing section in turag:

S/L	Type of Machine	Brand	No of m/c	country of origin
1	Single Needle lock stitch	JUKI	278	JAPAN
2	Single Needle lock stitch	JUKI	160	JAPAN
3	Over lock 4 thread	JUKI	225	JAPAN
4	Over lock 4 thread	JUKI	10	JAPAN
5	Over lock 4 thread Top down	JUKI	2	JAPAN
6	Over lock 4 thread Back latch	JUKI	10	JAPAN
7	Over lock 4 thread Cylinder	JUKI	5	JAPAN
8	Over lock 6 thread	JUKI	5	JAPAN
9	Cylinder Bed Flat lock	PEGASUS	47	JAPAN
10	Cylinder Bed Flat lock	PEGASUS	25	JAPAN
11	Cylinder Bed Flat lock	PEGASUS	6	JAPAN
12	Cylinder Bed Flat lock	PEGASUS	9	JAPAN
13	Flat Bed Flat lock	PEGASUS	18	JAPAN
14	Flat Bed Flat lock	PEGASUS	15	JAPAN
15	Flat Bed Flat lock	PEGASUS	5	JAPAN
16	Feed of the Arm	YAMATO	8	JAPAN
17	Button Hole	JUKI	12	JAPAN
18	Button Stitch	JUKI	12	JAPAN
19	Bar Tack	JUKI	5	JAPAN
20	Picoating	KANSAI	3	JAPAN
21	Needle Detector	CINTEX	2	ENGLAND
22	Fusing Machine	HASHIMA	2	JAPAN
23	Rib Cutter (3 way)	CALIFORNIA	2	USA
24	Rib Cutter (Single)		2	TAIWAN
25	Band Knife	EASTMAN	2	JAPAN
26	Cutting Machine	KM	10	JAPAN
27	Vacuum Table	NAOMOTO	50	JAPAN
28	Heater less Iron	NAOMOTO	50	JAPAN
29	Label Cutter and Folder		1	TAIWAN
30	Snap Button Machine	YKK	10	GERMANY
31	Thread Sucker	NAOMOTO	2	THAILAND
32	3 Needle, 5 Thread Cylinder bed Interlock Machine with Fabric Trimmer	PEGASUS	44	SINGAPORE
	TOTAL=		1037	

Table-3.8.2: Machine specification of sewing section in turag

3.8.3. Sewing sequence of T-shirt:



3.8.4. Various types of Faults and their figure:

Fault Name: Oil mark



Fig-3.8.4.1: Oil mark

Fault Name: Stitch Gathering



Fig-3.8.4.2 : Stitch Gathering

Fault Name: Level missing



Fig-3.8.4.3: Level missing

Fault Name: Shade variation



Fig-3.8.4.4: Shade variation

Fault Name: Open seam or broken seam



Fig-3.8.4.5: Open seam

Fault Name: Cutting hole



Fig-3.8.4.6 : Cutting Hole

Fault Name: Skipped stitch



Fig-3.8.4.7: Skipped stitch

3.8.5. DIFFERENT TYPES OF SEWING M/C:

- F/L machine
- P/m machine
- Overclock m/c
- Bar take machine
- Button hole machine
- Button attaching machine etc.

3.8.6. DIFFERENT CLASSES OF SEWING M/C

FLAT LOCK M\C:

Yamata flatlock m/c auto	Yamata short clindered m/c
Yamata narrow clindered m/c	Yamata flatlock Bangla
Yamata flat lock compressor m/c V.G.S	Yamata flat lock samsable m/c auto
Juki flat lock rowse cutter m/c	Juki flat lock flatbed m/c
Suruba flat lock m/c	Pegasus flat lock m/c

OVER LOCK M\C:

Yamata 4thread O\L m\c	Yamata 4thread O\L samsable m\c
Yamata 6thread O\L m\c Yamata 4thread O\L roller m\c	Juki 4 thread O\L rowse cutter m\c

PLAIN M\C:

Brother plain m\c	Juki plain m\c Bangla
Brother plain m\c Bangla	Juki 2needle plain m\c
Juki plain m\c auto	Juki zigzag plain m\c
F.D.M plain m\c auto	Hikari zigzag plain m\c

Brother H\S m\c auto	Juki B\T m\c auto
Brother B\S m\c auto	Kansai P.M.D
Brother B\T m\c auto	Pequting m\c kansai
Juki H\S m\c auto	Rib cutter m\c
Juki B\S m\c auto	Fusing m\c
Juki B\S m\c auto	
Level cutter m\c	

FLAT LOCK M/C



Fig-3.8.6.1: Flat lock m/c

PLAIN M/C:



Fig-3.8.6.2: Plain M/C

O/L MACHINE:



Fig-3.8.6.3: O/L M/C

BUTTON ATTACHING MACHINE



Fig-3.8.6.4: Button attaching M/C

BAR TAKE MACHINE



Fig-3.8.6.4: Bartake machine

3.9 PRINTING SECTION

PRINTING SECTION

Turag garments & Hosiery mills Ltd. Has a printing section which is located in 6th floor in ETP building.

3.9.1. Lay out plan of printing section in Turag:



Fig-3.9.1: lay out plan of printing section in turag

3.9.2. Different Machine specification of printing Section in Turag:

Machine no – 01

Machine name	-MHM printing M/C
Brand	-Tesoma
Origin	- Australia
Capacity	-600 pcs/hours
No of machine	- 1 set

Machine no – 02

Machine name	-Heat press M/C
Brand	-Metalnox
Origin	-
Capacity	-
No of machine	-2 sets

Machine no – 03

Machine name	-Heat press M/C
Brand	-Wagen
Origin	-Germany
Capacity	-
No of machine	- 1 set

Machine no – 04

Machine name	-label Washing M/C
Brand	-Shanghai
Origin	-China
Capacity	-
No of machine	-1 set

Machine no – 05

Machine name	-Flock M/C
Brand	-Germany
Origin	-
Capacity	-
No of machine	-2 sets

Machine no – 06

Machine name	-Flock M/C
Brand	-Local
Origin	-
Capacity	-
No of machine	-2 sets

Machine no – 07

Machine name	-Color Mixing
Brand	-H.S.C Kiddzigri
Origin	-Thailand
Capacity	-
No of machine	-1 set

Machine no – 08

Machine name	-Spray Gun M/C
Brand	-Germany
Origin	-
Capacity	-
No of machine	-2 sets






3.9.3. Different Chemical use in Turag printing section:

- ✓ Thickener Fixer
- ✓ Binder Pigment

3.9.4. Different Types of printing:

- ✓ Rubber printing
- ✓ Pigment Printing
- ✓ Crack printing
- ✓ Flocking printing
- ✓ Glitter Printing
- ✓ Foil printing
- ✓ Pub printing

3.9.5. COLLECTED SAMPLE FROM TURAG:

Printing Style	Sample
Pigment + Glitter	
Semi Rubber	
Radium Print	
Metallic	
Rubber (high Density)	

Rubber + Jell Print



Rubber + Glitter







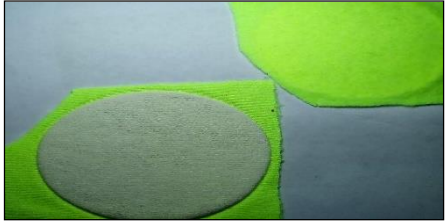

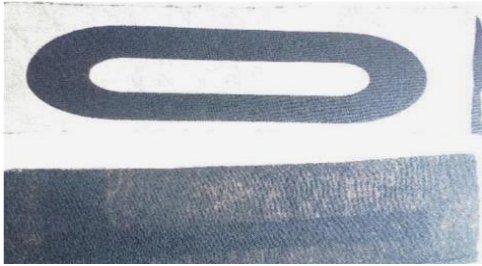
Rubber Print



Apson + Diamond



<p>Pigment Print</p>	
<p>Jell Print</p>	
<p>Foil Print</p>	
<p>Flock Print</p>	

<p>Puff Print</p>	
<p>Ambush Print</p>	
<p>Discharge Print</p>	

3.10 FINISHING SECTION

Turag garments & Hosiery mills Ltd. Has a printing section which is located in 6th floor in ETP building.

3.10.1. Lay out plan of Finishing Section in turag:



Fig-3.10.1: Lay out plan of Finishing Section in Turag

3.10.2 Iron:

Pressing or ironing is the most important finishing process in readymade garments sector which is done by subjecting a cloth to heat and pressure with or without steam to remove unwanted creases and to impart a flat an appearance to the garments. Pressing or ironing also done to introduce creases in the apparel. In the garments manufacturing industries, pressing is termed as ironing.



Fig -3.10.2: ironing

3.10.3 Packing

Different types of packing accessories are available in store room in turag garments such as polybag, packing board, tissue paper, hanger, scotch tape, gum tape, carton etc.



Fig-3.10.3: Packing

3.10.4. Carton

Cartons are made according to buyer instruction and length wise it contains the buyer name, widthwise it contain the measurement, net & gross weight. Carton contain the information are printed by screen print style.



Fig: 2.7.5 carton

CHAPTER-IV

IMPACT OF INTERNSHIP

4.1. Sample Section:

We know about sample section if turag garments & hosiery mills Ltd.

We also know how to work in sample section.

We showed work of CAD.

We know how to make pattern.

We know marker grading.

4.2. Dyeing section

We know about the different machine specification of dyeing section in turag garments & hosiery mills ltd.

We know recipe of dyeing.

We observed how to work in dyeing section.

We know about of dyeing chemicals.

We showed different types of dyeing fabric.

We observed machine capacity of dyeing section.

4.3. Knitting section

We know all kind of machine specification in turag garments.

We know how to produce knit fabric.

We showed different type of knit fabric.

We observed how to work knitting section.

We know about GSM.

We know about m/c gauge, m/c diameter.

4.4. Cutting Section

We know about cutting machine.

We observed about fabric spreading.

We observed different type of fabric lay.

We observed the process of fabric cutting.

4.5. Sewing section

We showed the all kind of sewing machine in turag garments.

We observed how to workers work in sewing section.

We showed sequence of sewing line in sewing section.

We observed of different type of sewing faults.

4.6. Printing Section

We know about printing process of turag garments.

We know about chemicals.

We learned about different type of printing machine.

4.7. Finishing Section

We know how to work done by finishing section.

We showed all type of packing.

We learned how to make a fabric cartooning.

We learned Different various type of accessories used to attach to the garments.

We observed different type of iron machines.

CHAPTER-V

CONCLUSION

5.1. Conclusion:

We have completed our Industrial Training successfully by the grace of Allah. Industrial Attachment sends our expected destiny of practical life. **Turag Garments and Hosiery Mills Ltd** is a well know factory in the Textile field of Bangladesh. The completion of the almost **two** months' industrial attachment at this industry gave me the inspiration that factory is one of the appropriate destiny to implement the theoretical knowledge. From this industrial attachment we got the details idea about the factory environment, production process, total management, store & inventory process, maintenance, utility etc.

Turag Garments and hosiery mills Ltd is well equipped and the working environment is excellent. The relation between top management to bottom level is so nice. We are very lucky to get opportunity having training in this industry.