



Faculty of Engineering
Department of Textile Engineering

REPORT ON
Industrial Attachment
At
South East Textiles Pvt. Ltd.
Gorai, Tangail

Course Title: Industrial Attachment
Course Code: TE-410

Submitted By

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Supervised By

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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: From May 15, 2015 to July 14, 2015.



Acknowledgement

At first my gratefulness goes to Almighty Allah to give me strength and ability to complete the industrial training and this report. You have made my life more bountiful. May you name be exalted, honored and glorified.

We are grateful to and wish our profound indebtedness to **Mst. Murshida Khatun, Lecturer, Department of Textile Engineering**. Her 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 are very much thankful to our respected teacher **Prof. Dr. Md. Mahbubul Haque, Head, Department of Textile Engineering, Daffodil International University**, for his encouragement and valuable suggestions and necessary information delivery as well as for many technical help.

I would like to thank **Md. Jiaur Rahman, Sr. Manager, HR, Admin & the management of the South East Textile (Pvt.) Ltd.** for giving me the opportunity to do the industrial training successfully and also their valuable suggestions.

My gratitude also goes to all the employees of **South East Textile (Pvt.) Ltd.** for their sincere co-operation, support and valuable advice which they have provided us during the training period.



August 04, 2015

Mst. Murshida Khatun

Lecturer

Department of textile Engineering

Faculty of Engineering

Daffodil International University

Subject: Letter of Approval.

Dear Madam,

I am very glad to submit this industrial attachment report titled "**INDUSTRIAL ATTACHMENT AT SOUTH EAST TEXTILES PVT. LTD. .**" I have worked hard in the factory and have tried our best to make this report properly according to your instruction.

I hope that you would kindly consider any mistake on our part in preparing this report.

Sincerely yours

Afjal Hossain

Afjal Hossain

113-23-2782

Approved
04.08.15



DECLARATION

I hereby declare that, this report has been done by me under the supervisor of **Mst. MurshidaKhatun**, Lecturer, Department of Textile Engineering, Daffodil International University .I also declare that neither this report nor any part of this report has been submitted elsewhere for award of any degree.

Submitted by

AFJAL HOSSAIN

.....

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ID: 113-23-2782

Department of TE

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AS 04.08.15

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1. Executive Summary

Industrial attachment is the first step to professional life of student, especially of technical Side. It's an indispensable part of study a practically running processing technology of an industrial unit for a student. In our university, processing machines are not in continuous running condition, so it would only provide demonstration of mechanical features & processing technology of the material in accomplishment of the theory there of but not of the situational variables to achieve practical knowledge. So two months industrial attachment program in a dyeing mill was arranged for us.

Textile education can't be completed without industrial training. Because this industrial attachment program minimizes the gap between theoretical and practical knowledge and make me accustomed to industrial environment. I got an opportunity to complete two month long industrial training in **South East Textiles (Pvt.) Ltd.** a sister concern of **InterstoffGoup**. Which is a 100% export, oriented composite Knit Dyeing Industry. It has well planned & equipped fabric and Knit dyeing-finishing units in addition to facilitate Knitting and Knit wear manufacturing.

The rationale behind the existing structure and future expansion of **South East Textiles (Pvt.) Ltd.** is to capture value-added at each stage of the textile manufacturing process.

Despite Bangladesh's lack of indigenous cotton production capacity, **South East Textiles (Pvt.) Ltd.** has leveraged Bangladesh's labor cost advantage and export competitiveness to the Maximum.



2. Information about Factory

2.1 About South East Textile (Pvt.) Ltd.

South East Textiles (Pvt.) Ltd. has started manufacture and export of garments since 2010. The beginning **South East Textiles (Pvt.) Ltd.** has a very good reputation as a financially sound and ethical business house. It has a long term association with selected factories, some of them are certified in terms of social and quality compliance by world's highest rating bodies, and outstanding sourcing capabilities. Thus **South East Textiles (Pvt.) Ltd.** has been able to prove itself to be a reliable supplier for knit item in any style and design

Specializing in all kinds of knitted items. It is housed in its own building surrounding an area of 275000 sq. ft. and 3400 workers and stuff.

2.2 Company Profile of South East Textiles (Pvt.) Ltd.

COMPANY PROFILE

Name of the Project	: South East Textiles (Pvt.) Ltd.
Type of the Project	: 100% EXPORT ORIENTED KNITWEAR INDUSTRIES LTD
Year of Establishment	: It was established in the July 2010.
Investors	: Mr. Nazim Uddin, Chairman
Certification and Awards	: WRAP, ISO 9001:2008, CIPAT
Total Worker and Stuff	: 3400

Address

Factory Address : Gorai, Mirzapur, Tangail

Contact : jiaur@icl.bdrmg.com

Head Office Address: ROAD # 35/A New, HOUSE # 42,
Gulshan-2, DHAKA-1212

PHONE NO. : 01755-645271, 01755-629782

E-MAIL: jiaur@icl.bdrmg.com



2.3 Vision & mission of the project:

The mission and vision of **South East Textiles (Pvt.) Ltd.** is to manufacture and deliver high quality readymade garments (RMG) to its customers. The core objective is to attain and enhance customer satisfaction by providing on time delivery of desired quality readymade garments and also to increase efficiency of workforce.

To attain these objectives, the management of South **East Textiles (Pvt.) Ltd.** has decided to adopt the followings-

1. To increase awareness regarding customers requirements throughout the organization.
2. By providing training to develop efficiency of the employee.
3. To collect customer's feedback regularly to know about their conception about their company and to take timely appropriate action.
4. To reduce the percentage of wastage / rejection minimum by 2% per annum's implement and monitor ISO 9001:2008 quality management system within the organization.

2.4 Main Production

Basic T-Shirt, Tank top, Long Sleeve-Shirt, Polo Shirt, Shorts, Ladies and Kids Knitwear and all kinds of knit garments and Knit fabrics.

2.5 Location

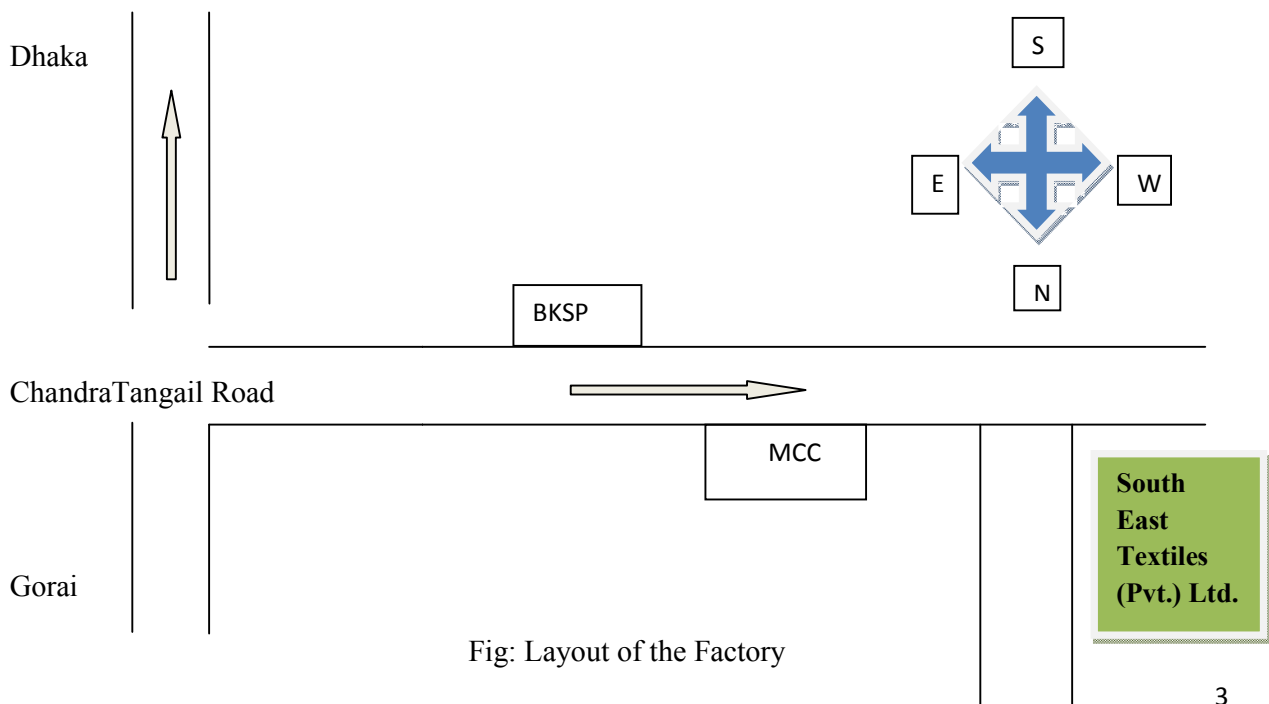


Fig: Layout of the Factory



2.6 Organogram of South East Textiles (Pvt.) Ltd

South East Textiles (Pvt.) Ltd. the Managing Director/ Chairman who controls the entire factory and the others respective department chief controls their department in this factory.

In this below the organ grams of administration and the others department is showing:

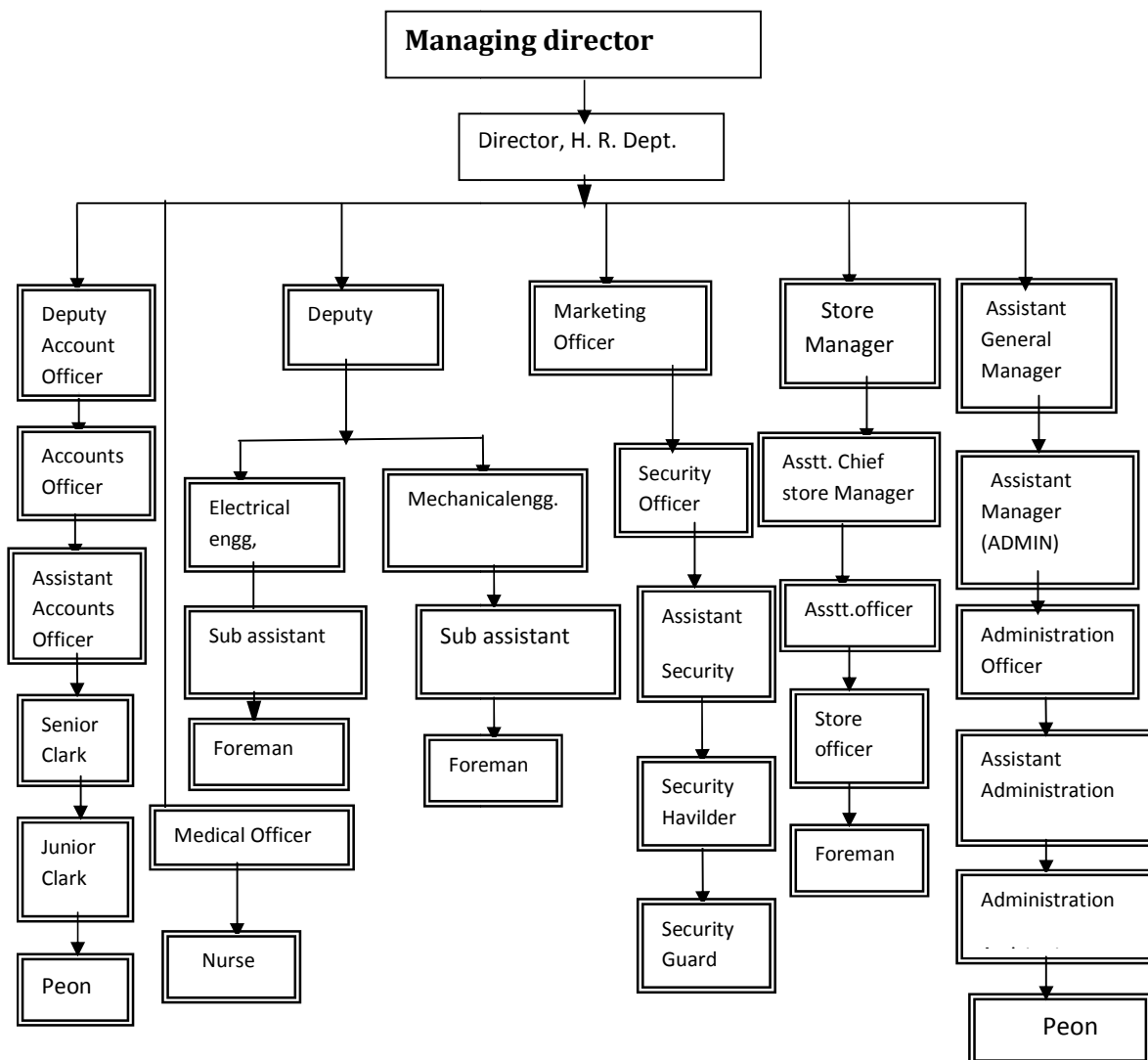


Fig: Organogram



2.7 List of Major Buyers

Buyers Name	Sign	Country
Tesco		UK
Sainsbury		UK
Zara		Spain
Mothercare		UK
H & M		USA
Debenhams		UK
LA HALLE !		France
RENNER		Brazil



O'STIN		Russia
Mister lady		Germany
Sainsbury's		UK
SPRINGFIELD		Spain
GEORGE		UK
SPORTS WORLD		UK
YSL		France

Fig: Buyers Name, Logo & Origin

2.8 Sewing m/c used in this factory

Name of the Machine	Nos	Origin
1. Single needle Plain Machine	436 nos.	Japan
2. 2-needle, 5-thread over lock	08 nos.	Japan
3. 2-needle, 4-thread, over lock	318 nos.	Japan
4. 2-needle, 4-thread, lap seam stitching	11 nos.	Japan
5. 3-needle, 5-thread, chain stitch	06 nos.	Japan
6. 1-needle Button Hole	19 nos.	Japan
7. 1-needle Button stitches	19 nos.	Japan
8. Snap button machine	04 nos.	Japan
9. Flat Lock Flat bed	78 nos.	Japan
10. Flat Lock Cylinder bed	162 nos.	Japan
11. Kansai Special(PMD)	02 nos.	Japan
12. Bar tack Machine	02 nos.	Japan
13. 3 Thread over lock	10 nos.	Japan
14. Rib cutting machine	14 nos.	Taiwan



15. Cutting machine	16 nos.	Japan
16. Thread winder (Re-conning)	06 nos.	Japan
17. Heater less steam iron	90 nos.	Japan
18. Vacuum Table	90 nos.	Indonesia
19. Strapping Machine, TOYO	04 nos.	Japan
20. Thread Sucking Machine	05 nos.	BD.
21. Metal Detector (SainTex)	01 nos.	Japan
22. Cutting Layer	01 nos.	Thailand
23. Thread recoating	04 nos.	Japan

.....
Total : 1306 nos.

Circular Knitting Machine

SERIAL NO.	MACHINE TYPE	MACHINE DIA	MACHINE GAUGE	TOTAL M/C QTY	OPEN DIA	BRAND & QUANTITY		ORIGIN	ATTACHMENT
1	S/J	16"	24G	1		FUKAHA	MA	TAIWAN	50% LYCRA
2	S/J	17"	24G	1		FUKAHA	MA	TAIWAN	50% LYCRA
3	S/J	18"	24G	1		FUKAHA	MA	TAIWAN	50% LYCRA
4	S/J	19"	24G	1		FUKAHA	MA	TAIWAN	50% LYCRA
5	S/J	20"	24G	1		FUKAHA	MA	TAIWAN	50% LYCRA
6	S/J	21"	24G/28G	2		FUKAHA	MA	TAIWAN	50% LYCRA
7	S/J	22"	24G/28G	2		FUKAHA	MA	TAIWAN	50% LYCRA
8	S/J	23"	24G/28G	2		FUKAHA	MA	TAIWAN	50% LYCRA
9	S/J	24"	24G/28G	2		FUKAHA	MA	TAIWAN	50% LYCRA
10	S/J	25"	24G/28G	1		FUKAHA	MA	TAIWAN	50% LYCRA
11	S/J	26"	24G	2	1	FUKAHA	MA	TAIWAN	100% LYCRA
12	S/J	27"	24G	1	1	FUKAHA	MA	TAIWAN	100% LYCRA
13	S/J /FLEECE	28"	24G/20G	4	1	FUKAHA	MA-1	TAIWAN	100% LYCRA
14	S/J	29"	24G/20	3	1	FUKAHA	JIUN	TAIWAN	100%



	/FLEECE		G			MA-1	N LON G-2	AN	LYCRA
15	S/J /FLEECE	30"	24G/20 G/28G	9	4	FUKAHA MA-4	JIUN N LON G-5	TAIW AN	100% LYCRA
16	S/J /FLEECE	32"	24G/20 G/28G	11	4	FUKAHA MA-4	JIUN N LON G-7	TAIW AN	100% LYCRA
17	S/J /FLEECE	34"	24G/20 G	10	4	FUKAHA MA-5	JIUN N LON G-5	TAIW AN	100% LYCRA
18	S/J /FLEECE	36"	24G/20 G	10	4	FUKAHA MA-5	JIUN N LON G-5	TAIW AN	100% LYCRA
19	S/J /FLEECE	38"	24G/20 G	9	3	FUKAHA MA-2	JIUN N LON G-7	TAIW AN	100% LYCRA
20	S/J /FLEECE	40"	24G/20 G	7	3	FUKAHA MA-1	JIUN N LON G-6	TAIW AN	100% LYCRA
21	S/J /FLEECE	42"	24G/20 G	4	2	FUKAHA MA-1	JIUN N LON G-3	TAIW AN	100% LYCRA
22	RIB / INTERLOCK	30"	18G/24 G	2		FUKAHA MA-1	JIUN N LON G-1	TAIW AN	100% LYCRA
23	RIB / INTERLOCK	32"	18G/24 G	3		FUKAHA MA-1	JIUN N LON G-2	TAIW AN	100% LYCRA
24	RIB / INTERLOCK	34"	18G/24 G	3		FUKAHA MA-1	JIUN N LON G-2	TAIW AN	100% LYCRA
25	RIB / INTERLOCK	36"	16G/18 G/24G	3		FUKAHA MA-1	JIUN N LON G-2	TAIW AN	100% LYCRA
26	RIB / INTERLOCK	38"	18G/24 G	3		FUKAHA MA-1	JIUN N	TAIW AN	100% LYCRA



	OCK						LON G-2		
27	RIB / INTERL OCK	40"	18G/24 G	2		FUKAHA MA-1	JIUN N LON G-1	TAIW AN	100% LYCRA
28	RIB / INTERL OCK	42"	18G/24 G	4		FUKAHA MA-2	JIUN N LON G-2	TAIW AN	100% LYCRA
29	RIB / INTERL OCK	44"	18G/24 G	1			JIUN N LON G-1	TAIW AN	100% LYCRA
30	ENG. STRIPE	30"	24G/20 G	2		FUKAHA RA		JAPA N	100% LYCRA
31	ENG. STRIPE	34"	24G/20 G	2		FUKAHA RA		JAPA N	100% LYCRA
32	ENG. STRIPE	36"	24G/20 G	1		FUKAHA RA		JAPA N	100% LYCRA
		TOTA L KNITT ING M/C		110	28				

Fig: List of Circular knitting Machine

Flat Knitting Machine

SERIAL NO.	MACHINE TYPE	MACHINE DIA	MACHINE GAUGE	UNITS	BRAND	ORIGIN
33	FLAT KNIT	68"	14 G	2	JY-LEH	TAIWAN
34	FLAT KNIT	52"	14 G	4	JY-LEH	TAIWAN
35	FLAT KNIT	80"	14 G	4	KAUO HENG	TAIWAN
36	FLAT KNIT	40"	14 G	14	AROUND STAR	CHINA
37	FLAT KNIT	68"	14 G	4	AROUND STAR	CHINA
			TOTAL	28		

Fig: List of Flat knitting machine



2.9 Factory Lay Plan

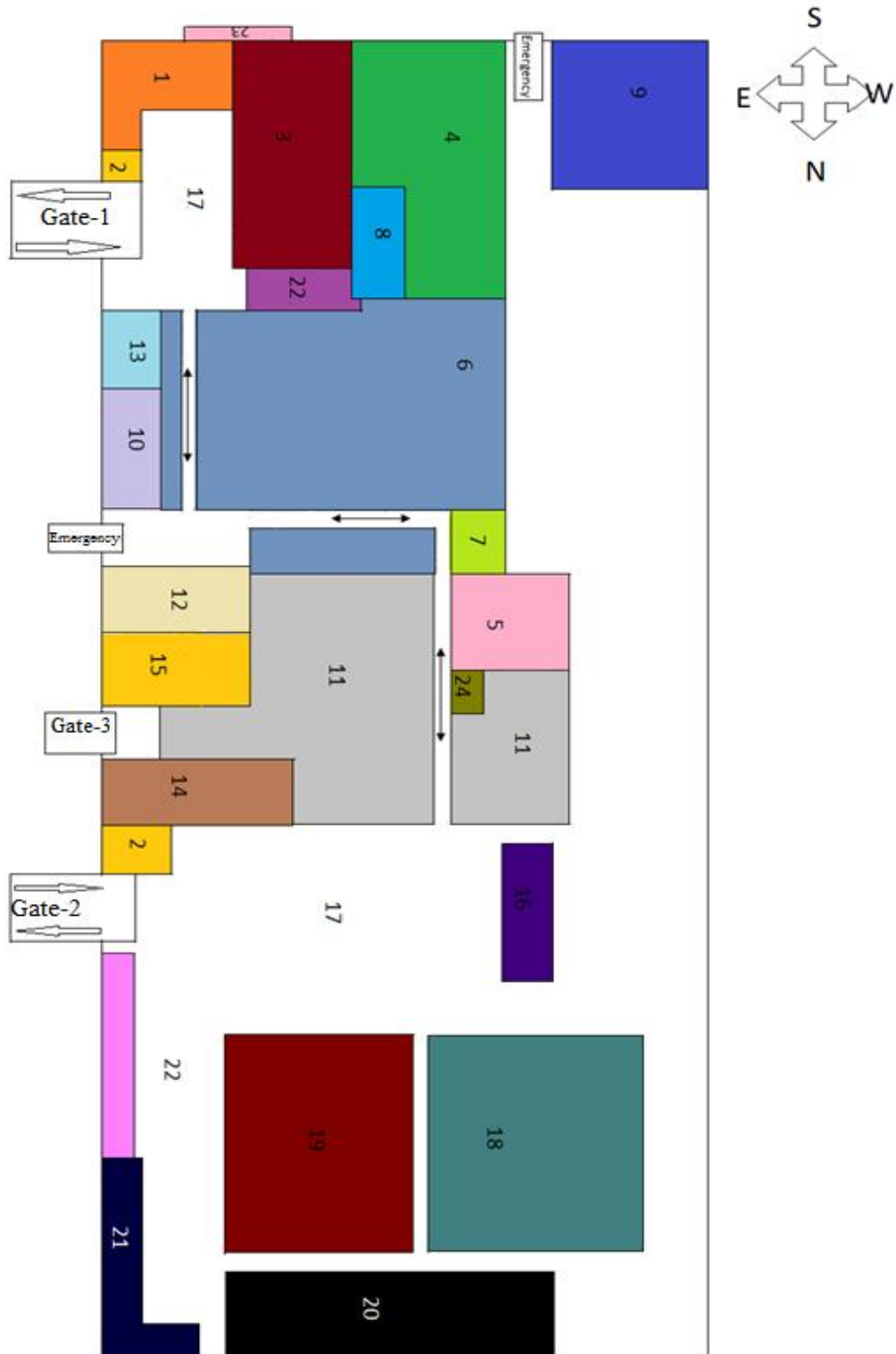


Fig: Factory Layout



Factory Layout Description

1. Administration and Account.
2. Security.
3. Garments, Finished garments store, Medical and child care.
4. Under construction for garments.
5. Knitting, Cutting and Canteen .
6. Finishing.
7. Sub-section and Generator room.
8. Finish fabric store and waste fabric store.
9. Chemical store.
10. Dyeing lab.
11. Dyeing floor.
12. Dyeing office.
13. Finished fabric inspection.
14. Maintenance and WTP.
15. Garments finishing.
16. Construction store.
17. Assembly.
18. Garments, Fabric and Yarn store.
19. Knitting and Finishing.
20. ETP.
21. Knitting office.
22. Loading and unloading.
23. Car parking.
24. Dyeing Batch.



3. Description of the Attachment

3.1 Raw Material

Raw material is a unique substance in any production oriented textile industry. It plays a vital role in continuous production and for high quality fabric.

3.1.1 Yarn

The raw material for knitting is the yarn. Different types of yarn of wide range of different count are used. The sources of yarn are also found. Both carded and combed yarn is used for knitting.



Cottonpolyester



The required supplied from yarns are

Yarn type	Sources
Cotton	Paradise spinning mill, Delta spinning mill, Jamuna group
Polyester Yarn	India
Lycra	Singapore, Indonesia, Korea, Japan



3.2 Knitting Section

3.2.1 Process flow of Knitting

Take buyer order sheet
Analysis of order sheet
Analysis of compatibility of machine
Analysis of amount of raw material
Collect raw material
Distribute raw material to specific machine
Make batch card according to the buyer requirement
Adjust machine pulley according to the F.GSM
Run machine
Inspect the fabric time to time
Finding out the fabric faults and take remedies
Cutting the fabric and batching
Inspection
Weighting
Sending to store
Transport to buyer

Fig: Process flow of Knitting



End products of Circular Knitting Machine

Single Jersey M/C:

- a) S/J Plain
- b) Single Lacoste
- c) Double Lacoste
- d) Single pique
- e) Double pique
- f) Terry.

End products of Flat Bed Knitting Machine:

- a) Tripping collar
- b) Plain collar/ cuff
- c) Emboss collar/ cuff

3.2.2 Faults and their causes in Knitting

Hole Mark

Causes:

- Holes are the results of yarn breakage or yarn cracks.
- During loop formation the yarn breaks in the rejoin of the needle hook.
- If the yarn count is not correct on regarding structure, gauge, course and density.
- Badly knot or splicing.
- Yarn feeder badly set.

Remedies:

- Yarn strength must be sufficient to withstand the stretch as well as uniform.
- Use proper count of yarn.
- Correctly set of yarn feeder.
- Knot should be given properly.

Needle Mark

Causes:

- When a needle breaks down then needle mark comes along the fabrics.
- If a needle or needle hook is slightly bends then needle mark comes on the fabrics.

Remedies:

- Needle should be straight as well as from broken latch.



Sinker Mark

Causes:

- When sinker corrode due to abrasion then some times can not hold a new loop as a result sinker mark comes.
- If sinker head bend then sinker mark comes.

Remedies:

- Sinker should be changed.

Star Mark

Causes:

- Yarn tension variation during production.
- Buckling of the needle latch.
- Low G.S.M fabric production.

Remedies:

- Maintain same Yarn tension during production.
- Use good conditioned needles.

5. Drop Stitches

Causes:

- Defective needle.
- If yarn is not properly fed during loop formation i.e. not properly laid on to the needle hook.
- Take-down mechanism too loose.
- Insufficient yarn tension.
- Badly set yarn feeder.

Remedies:

- Needle should be straight & well.
- Proper feeding of yarn during loop formation.
- Correct take up of the fabric & correct fabric tension.
- Yarn tension should be properly.

Oil stain

Causes:



- When oil lick through the needle trick then it pass on the fabrics and make a line.

Remedies:

- Ensure that oil does not pass on the fabrics.
- Well maintenance as well as proper oiling.

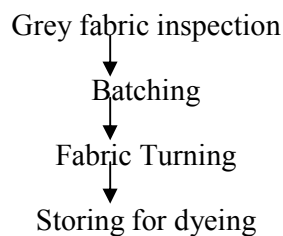
3.3 Batching Section

Batching is the process to get ready the fabrics that should be dyed and processed for a Particular lot of a Particular order.

Batch Management

Primarily Batching is done by dyeing manager taking the above criteria under consideration. Batch section in charge receives this primary batch plan from dyeing Manager. Some time Planning is adjusted according to m/c condition.

Sequence of Operation



Purpose of Batch Section

- To receive the grey fabrics roll from knitting section or other source.
- To turn out the tubular fabric in its grey stage and to safe the face side of the fabric from any type of friction during the time of dyeing.
- To prepare the batch of fabric for dyeing according to the following criteria-
 - Order sheet (Receive from buyer)
 - Dyeing shade (Color or white, light or Dark)
 - M/c available
 - Type of fabrics (100% cotton, PC, CVC)
 - Emergency
- To send the grey fabric to the dyeing floor with batch card.
- To Keep records for every previous dyeing.



Fig: turning m/c



Fig: sewing m/c

3.4 Laboratory

Lab Dip: Lab dip is a process by which buyers supplied a swatch is matched with the varying dyes percentage in the laboratory with or without help of “DATA COLOR”

Lab dip plays an vital role in shade matching and detaching the characteristics of the dyes and chemicals are to be used in the large scale of production so this is an important task before bulk production.

Available Stock Solutions:

- Red – 0.1%, 0.5%, 1.0%, 2.0% (very common)
- Yellow – 0.1%, 0.5%, 1.0%, 2.0% (very common)
- Blue - 0.1%, 0.5%, 1.0%, 2.0% (very common).

List of Machine in Lab Section:

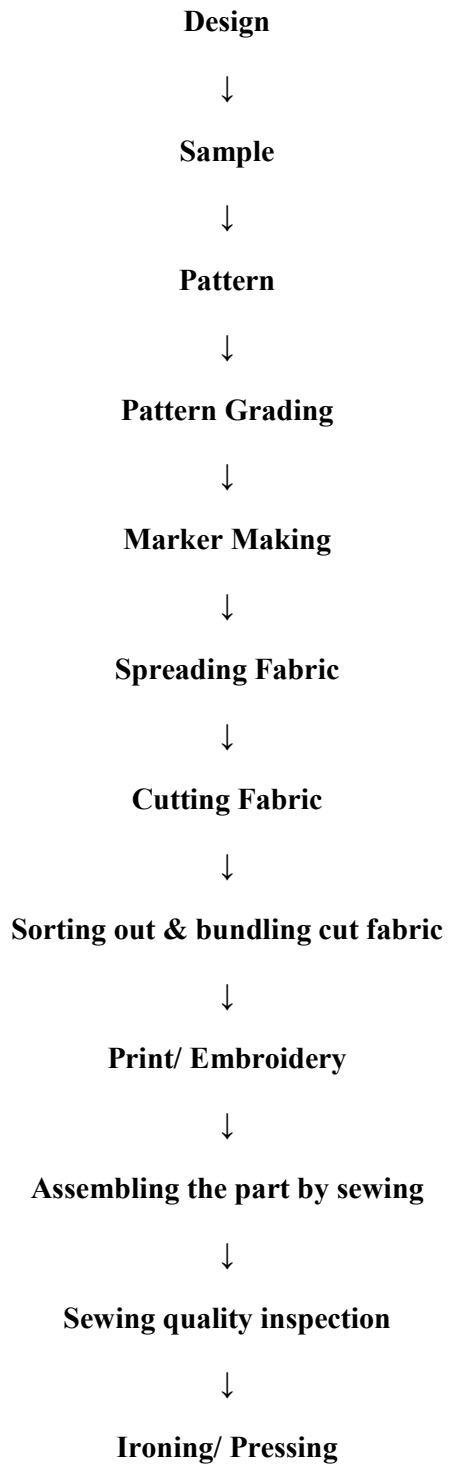
Machine Type	Quantity
Spectra Photo meter	1pcs
Lab Dyeing Machine	4pcs
Lab Washing Machine	1pcs
Dryer	2pcs
Weight Balance Mc	2pcs
Crock Meter	1pcs
ICI Pilling Tester	1pcs
Perspirometer	4pcs

Fig: List of Machine in Lab Section



3.5 Garments Section

3.5.1 Garments Manufacturing Process



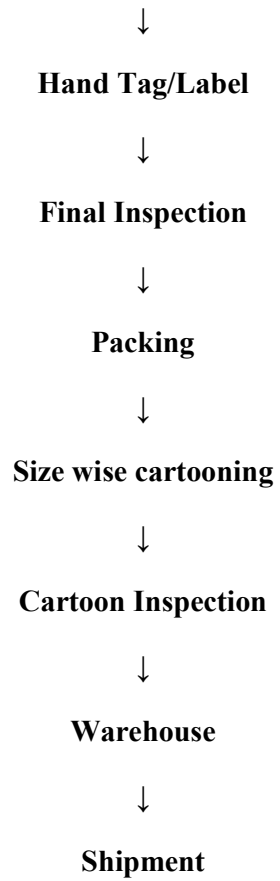


Fig: Garments Manufacturing Process



3.5.2 Sample Section

Types of sample

- 1st pattern sample
- Development sample
- 2nd pattern sample
- Counter sample
- Salesman sample
- Photo sample
- Approval sample
- Pre-production sample
- Production sample
- Shipment sample

Types of Sampling & Their details:

First Pattern

Defined as the first physical version of any garment as per the artwork done by designer and/or developer.

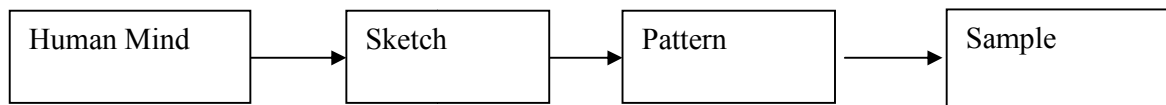


Fig: Sequence of First Pattern Sampling

Second Pattern



Usually designer/ developer always ask for some changes to the first pattern. Second pattern is made as per comments.

Counter Sample

Where first pattern is made on designers artwork, Counter sample is to make not on designer's artwork, has to follow another sample given by the merchandiser

Salesman Sample

Sample is made when PRICE is confirmed and order are on speculation, usually in 'L size in all color combination of expected order. Buyer held a meeting with its customer and records their response on order quantity per COLOR, SIZE etc. and finally place order to their vendor.

Photo Sample

Samples are made with actual color and material to be worn by models on the event of SHOOTING for catalog.

Approval Sample

In any discrete period of time, whenever it required any revision in the sample, a new sample is made (sometimes make-up is workable too) as per new specification. It is sent to buyer for his APPROVAL of the conformity that the revision is done correctly.

Size Set

Consists of 1 piece from each size for each color combination

Mock Up

Any PART of the garment to make for PARTICULAR purpose, not complete garment.

Pre-Production Sample

When material for bulk production arrived, factory makes a sample with the actual material and sends to buyer.

Production Sample

It is a reference to the buyer that the bulk is being produced as per specifications. Buyer wants to be assured that correct MATERIAL is sourced and LINE WORKMANSHIP confirmed to the quality level.

Shipping Sample

A sample is kept from every pre shipping inspection to be referred, if required, after the order has been delivered. Usually for any disputes (e.g. claim) shipping sample is important.



Sample making procedure

Sample making process includes the following stages

- Studying working sketch, specifications, and construction details of the garment to be made.
- Material selection and making the first pattern.
- Sewing the first sample garment or prototype – proto sample to see if a design is successful; sending sample to the buyer.
- Solving construction problems according to buyer's comments; fabric changing if needed.
- Sewing the first fit sample; fitting the garment on a model or a dummy, and sending the first fit sample to the buyer.
- Making pattern correction based on buyer's comments.
- If the first fit sample is rejected the garment must be remade with all the necessary corrections done.
- After the fit sample is approved by a buyer, the pre-production sample must be made using all the actual fabrics and trims.
- Once the pre-production sample is approved by a buyer, the sealed sample must be sent to the garments production factory along with graded pattern and CAD marker. Embroidery or print placement must be marked.
- Sewing the lab test sample and sending it to an independent laboratory (test house). The sample garment must meet minimum performance standards to ensure the product is suitable for customers use.
- Sewing the production size-set sample using all the actual fabrics and trims. If there is embroidery or print on the garment, approved artwork design must be followed strictly.
- Specification sheet is a record of finished garment measurements for all the sizes in which the garment will be made. It is used by pattern master, supervisor, sample operator, and quality controller to ensure that the garment meets company standards.

3.5.3 Pattern Making Section

Pattern making is an art. It is the art of manipulating and shaping a flat piece of fabric to conform to one or more curves of the human figure . Pattern making is a bridge function between design and



production. A sketch can be turned into a garment via a pattern which interprets the design in the form of the garment components.

In South East Textile group the development of a garment comprises of different process. Fit is the most important factor leading to the final acceptance or rejection of a garment. Fit must be designed into the original pattern through subtleties in the pattern that provide fullness unobtrusively at appropriate locations to accommodate body bulges in a flattering manner (Hudson). Good customized fit is dependent on the pattern drafting incorporating various shapes and proportions of the individual customer. With the onset of the Industrial Revolution, standardized patterns were essential to the success of ready-to-wear clothing.



Fig: Pattern Making

3.5.4 Marker Making Section

Marker is a thin paper which contains all the pattern pieces of a garment. It is made just before cutting and its purpose is to minimize the wastages. The width of a marker is equal to the width of the fabric and it should not be greater than the width of the fabric i.e. the width of the marker is kept less than or equal to the width of the Fabric.



Types of marker making

- Manual Method of Marker
- Computerized Method



Fig: Marker making section

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

3.5.5 Fabric Spreading Section



Spreading means the smooth laying out of the fabric in superimposed layers of specific length. The cutting marker paper is laid in the top of the fabric layer. During spreading number of the plies should be not more than three hundreds but it depends on the thickness of the fabric and the height of the cutting knife.

For example: if the thickness of the fabric is higher than the number of plies mentioned above would not valid and in case of straight knife cutting instrument the maximum lay height should be 70% of the blade height.

Types of Fabric spreading

- 1) Automatic Spreading
- 2) Manual Spreading

Automatic Spreading

When fabric is spread automatically by using machine then it is called automatic spreading.



Fig: Automatic Spreading

Manual Spreading

When fabric is spread manually by human hand then it is called automatic spreading.

In South East Textile both automatic & manual system is used.

3.5.6 Cutting Section

Cutting is the operation by which fabric lay is cut with accuracy and properly to be used as different



parts of garments. The company provides straight knife and bend knife for cutting. Fabric lay are cut rendering the outline of the parts drawn on the marker by the straight knife. Bend knives are used to cut more sharp corner parts like collars and cuff. Sometime hand scissors are used for cutting when some parts are missing or lack in quality.

Cutting flow Process

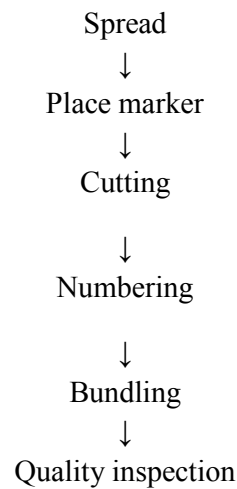


Fig : Cutting flow process



Fig: Straight knife cutting machine

Sorting & Numbering

After cutting the cut pieces are sorted out size and shade wise. All the components of the same size are brought together. And they are numbered with



- Tokai machine or
- Numbering machine.

This numbering process is an important factor. As it prevents the garments parts from mix up. The sorted pieces are now ticketed. Ticketing is the process of marking the cut components for shade matching precision and sequence identification.

Quality Check

The following terms will be check after Cutting.

- Oil spot
- Dirty spot
- Crease mark
- Needle mark
- Foreign yarn
- Slub
- Contamination
- Hole

Bundling

Checked components of one style & in one size are now clubbed & bundled using ties. The size of bundle depends upon the requirement of the production plant. Each bundle will contain pieces of same style & same size only.



3.5.7 Sewing Section

The process of joining of fabrics by the use of needle and sewing thread or by other techniques is called sewing.

Element of sewing

- Sewing thread
- Needle and
- Sewing machine



Fig: Sewing Section

Basic types of sewing machines for Knit Garments

- Plain m/c
- Over lock m/c



- Flat lock m/c
- Kanshai m/c
- Button hole m/c
- Button join m/c
- Bar take m/c

Sewing Defects

Some basic sewing defects are

- Needle damage,
- Skip stitches,
- Thread Breakages,
- Broken Stitches
- Seam Puckering

3.5. 8 Finishing

Finishing department is the department which comes after all the department & it plays an equal important role in the final appearance of the garments. This department includes majorly of the following steps.

Thread Sucking

This involves the removal of the extra threads from the garments of the stitch area.



Fig: Thread Sucking

Ironing

Ironing is the use of a heated tool (an iron) to remove wrinkles from fabric. The heating is commonly done to a temperature of 180–220 °Celsius, depending on the fabric. Ironing works by loosening the bonds between the long-chain polymer molecules in the fibers of the material. While the molecules are hot, the fibers are straightened by the weight of the iron, and they hold their new shape as they cool. Some fabrics, such as cotton, require the addition of water to loosen the intermolecular bonds.



Fig: Ironing

Packing

The packing is always done in the carton boxes & there are several criteria for a packing of the garments.



Fig: Packing

3.6 Merchandising

Merchandising is the department which mediate marketing & production department. It is Space optimization through effective Brand/Package allocation, focusing on gaining first position, providing greatest exposure of brand to all consumer, creating a consistent, orderly & clean appearance for the products, maximizing the use of POS to increase consumer awareness of brand & promotion.

A merchandiser key responsibility is as follows

- Product development
- Market & product analysis
- Selling the concept
- Booking orders
- Confirming deliveries
- Designing & Sampling
- Costing
- Raw material



- Flow monitoring
- Production flow Ups
- Payments Follows
- Internal & external communication
- Sampling
- Lab dips
- Accessories & trims
- Prepare internal order sheet
- Advising & assisting production
- Advising quality department about quality department
- Prepare purchase order
- Giving shipping instruction & following shipping
- Helping documentation department
- Taking responsibility for inspection &
- Following up the shipment



4. Impacts of Internship

4.1 Knitting

- We know about different type of fabric
- Design of fabric
- Type of knitting fault

4.2 Sample development

- We know what type of sample produced here
- System of sample approval
- We know what type of machine here

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 know about many type of sewing machine
- We know about function of sewing machine
- I know about sewing fault and their remedies
- We know about total production of this section

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



5. Conclusion

Textile technology education is based on industrial ground. Theoretical background is not sufficient so, industrial training is an essential part of study to make a technologist technically sound in this field. Industrial training provides us that opportunity to gather practical knowledge. For every person who is fresher in the field of textile, industrial training works like learning route. This course given me the opportunity to move liberally in every section of the industry to learn the industrial work & follow the process sequence virtually. From my two months observation of the industry along with research & development section specially, I can say that in the woven section in this industry has very strong possibility because the industry is running with all modern machineries & very knowledgeable persons are working all the time with their maximum power. I just think the capacity of the industry should be developed with the amount of order the industry is being taking.