



Faculty of Engineering
Department of Textile Engineering

REPORT ON
Industrial Attachment
At

Esquire Knit Composite Ltd.
Kanchpur, Narayanganj

Course Code: TE-410 Course Title: Industrial Attachment

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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

Industrial Attachment at Esquire Knit Composite Ltd

Duration: From 02nd October'18 to 01st December'18.

LETTER OF APPROVAL

December 15, 2018

To

The Head

Department of Textile Engineering

Daffodil International University

102, Shukrabad, Mirpur Road, Dhaka 1207

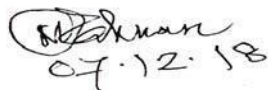
Subject: **Approval of Industrial Attachment Report of B.Sc. in TE Program** Dear

Sir

I am just writing to let you know that this report titled as “**Industrial Attachment at Esquire Knit Composite Ltd**” has been prepared by the student bearing ID 151-23-4219 and 151-23-4119 is completed for final evaluation. The whole report is prepared based on the factory data with required belongings. The students were directly involved in their industrial attachment activities and the report become vital to spark of many valuable information for the readers.

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

Yours Sincerely



Md. Mominur Rahman

Assistant Professor

Industrial Attachment at Esquire Knit Composite Ltd

Department of Textile Engineering

Faculty of Engineering

Daffodil International University

ACKNOWLEDGEMENT

First of all, we are grateful to Allah who gives us sound mind & sound health to accomplish **Industrial Attachment at Esquire Knit Composite Ltd.** successfully.

We are also grateful to our supervisor **Mominur Rahman**, Assistant Professor, Department of Textile Engineering, Faculty of Engineering, Daffodil International University. His endless patience, scholarly guidance, continual encouragement, energetic supervision, constructive criticism, valuable advice, reading many inferior draft and correcting these at all stages have made it possible to complete this project.

We would like to give special thanks to the supervisors, technicians, operators and all other staffs of **Esquire Knit Composite Ltd.** who were most cordial and helpful to us during internship.

We are also thankful to our all teachers, lab assistant, register sir, coordinators and all the employees of Daffodil International University. We are highly delighted to express our regards & gratitude to honorable Head **Prof. Dr. Md. Mahbubul Haque** for providing his best support to us.

Finally, we would like to express a sense of gratitude to our beloved parents and friends for their mental support, strength and assistance throughout completing industrial attachment.

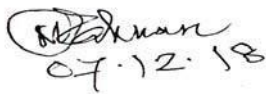
DECLARATION

We hereby declare that the work which is being presented in this report entitled, “Industrial Attachment at Esquire Knit Composite Ltd.” Is original work of our own, has not been presented for a degree of any other university and all the resources of collected information for this report have been duly acknowledged.

Name	ID
Redwan Ahmed	151-23-4219
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This is to certify that the above declaration made by the candidate is correct to the best of my knowledge.

Supervisor:



Handwritten signature of Md. Mominur Rahman, dated 07.12.18.

Md. Mominur Rahman

Assistant Professor

Department of Textile Engineering

Faculty of Engineering

Daffodil International University

Industrial Attachment at Esquire Knit Composite Ltd

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1. EXECUTIVE SUMMERY

1.1 Executive Summary

This report is titled “Report on Industrial Attachment at Esquire Knit Composite 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. Esquire Knit Composite Ltd is a modern textile industry based on knit garments production. Our approach was to know and work with all the parameters of each section and practice with technical experts. 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 Esquire Knit Composite Ltd. During 2 Months long attachment, We studied the Man, Machine, Material and Planning, Grey Fabric Inspection, Finished Fabric Inspection, 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.



2. INFORMATION ABOUT FACTORY

2.1 Introduction

Esquire knit composite Ltd. instigated its journey in 2001, 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. Esquire knit composite Ltd (EKCL) 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 telexing tune 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 roof.

2.2: History of the factory

Industrial Attachment at Esquire Knit Composite Ltd

Esquire Knit Composite Ltd has established nearly 13 years. Having the industrial knowledge over 18 years from its sister concern companies namely Esquire Dyeing Industries, Esquire Knitwear Ltd, Fashion Paradise and Synthia Multi Fiber Ltd. Esquire knit has focused on its business and successfully established the name as a world class garment manufacturer under one roof having a composite factory of yarn dyeing, knitting and fabric dyeing and finishing; printing up to garments making. Making it a right choice for one stop solution for all kinds of knitting garments. The group currently employs over 6800 people, serving customers in European and American chain stores, fashion brands and super market. Present capacity of production goes over 3 million pieces of garments per month. EKCL keep improving the quality of products and services and looking forward to introduce a wider range of products to their customers to meet their needs. Given the strength of leading position in the global market, with a comprehensive product portfolio, reputable and strong customer base, the aim is to consolidate factory position as one of the best garments manufacturer in Bangladesh. EKCL will continue to focus on strengthening business foundation to ensure a strong base on which to explore new business opportunities for the development of core business, broaden revenue base, increase the growth potential and thus enhance the customer satisfaction.

2.3: Founder and Directors

Esquire Team:

Another major asset to our sophisticated production facilities and technical expertise is our team of experienced and qualified people who are committed to achieve maximum customer satisfaction by delivering superior product value. The team works under the able guidance of our Chairman Mr. Mofazzal Hossain, under whose leadership, the company has reached so far in this business.

Our senior management includes:

- Mr. Mofazzal Hossain- (chairman) Esquire group

Industrial Attachment at Esquire Knit Composite Ltd

- Mr. Ehsanul Habib- Managing Director
- Mr. Ehsanul Karim Kaiser- General Manager
- Dr. Md. Ali Haider- G.M (R&D)
- Mr. A.S.M. Hafizur Rahman-GM (Fabric Dyeing)
- Mr. Nazrul Islam Khan – AGM (Garments)
- Mr. Faroque Rahman- AGM (Yarn Dyeing)

2.4: General information about factory

General Information about the Factory:

- **Name of Factory** : Esquire Knit Composite Limited
- **Type of Industry** : 100% Export Oriented Composite Knitwear
- **Year of Establishment** : 2001
- **Status (Legal Structure)** : Private Limited Company
- **Factory Location & Address** : 22/58, Kanchpur, Sonargaon,
Narayanganj, Bangladesh.
- **Management System** : Private Limited Industry

- **Company logo** :



- **Bank** : Dutch Bangla Bank Limited
Dilkusha C/A Dhaka. Bangladesh

2.5 Layout of the Factory

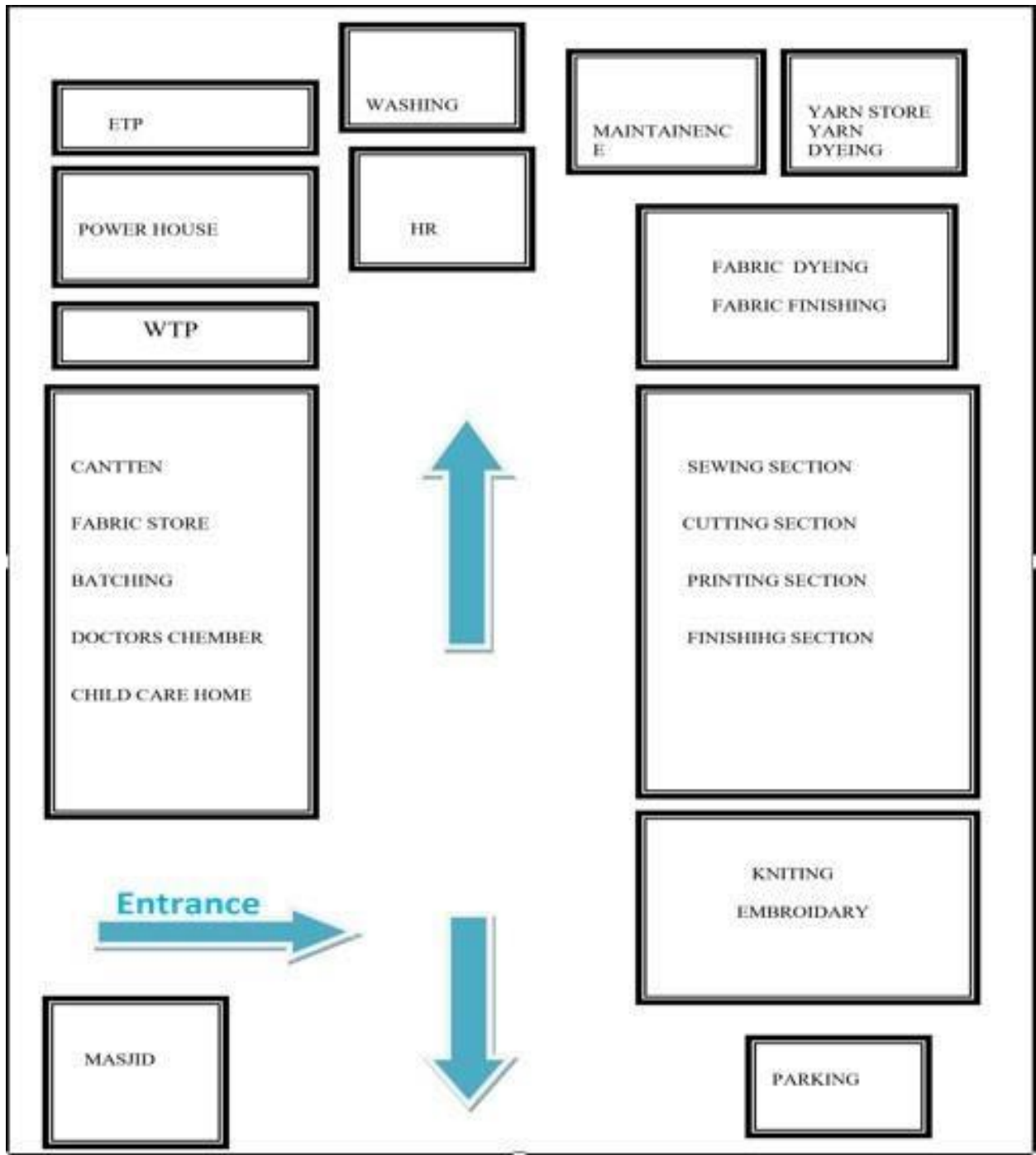


Figure 2.1: Layout Of EKCL

2.5.1 Location of Factory

Esquire Knit Composite Ltd is located in Kanchpur, Sonargaon about 18.5 kilometer distance from Daffodil international university Of Science & Technology, Dhaka. Communication system is easier by road.

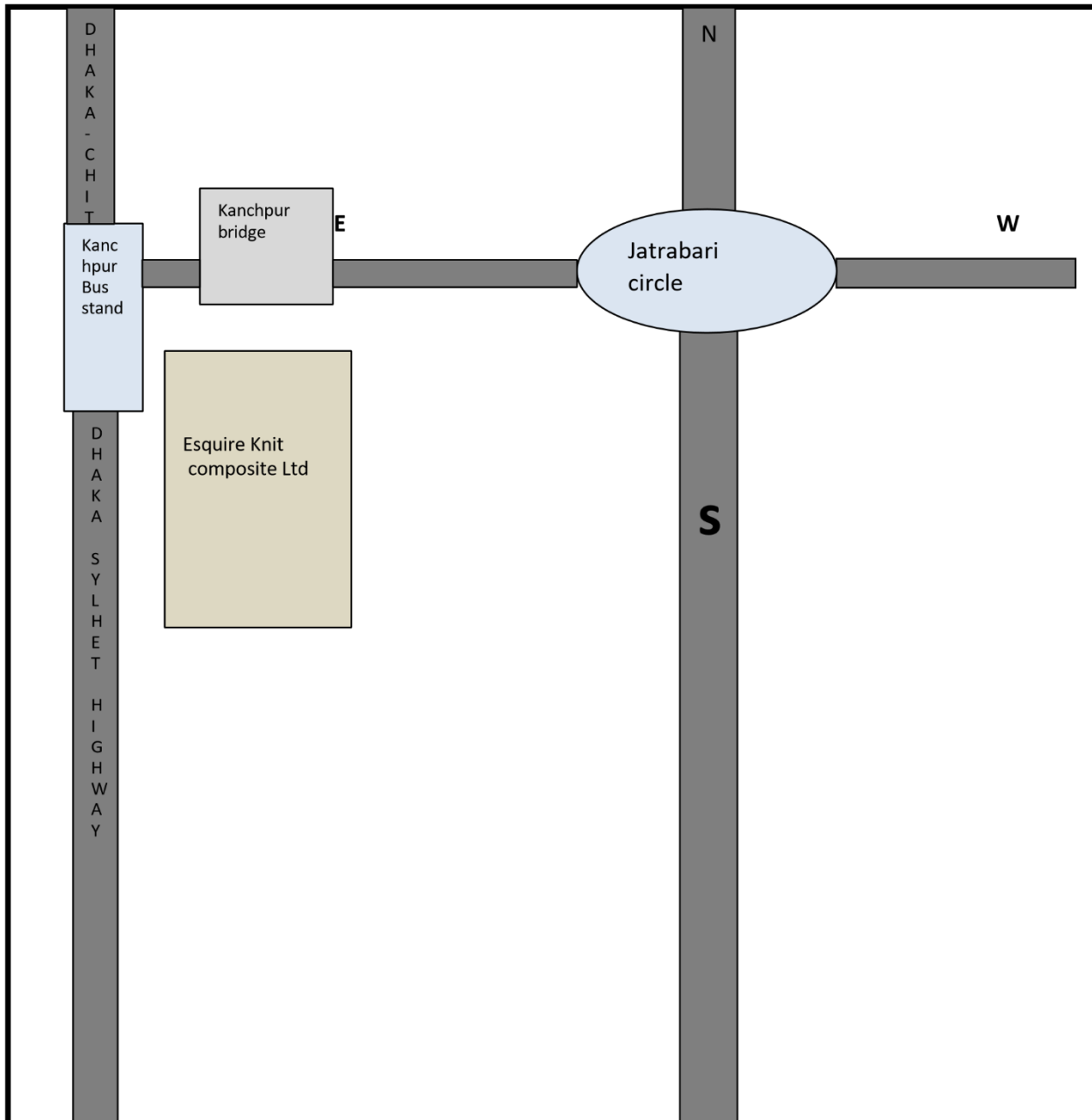
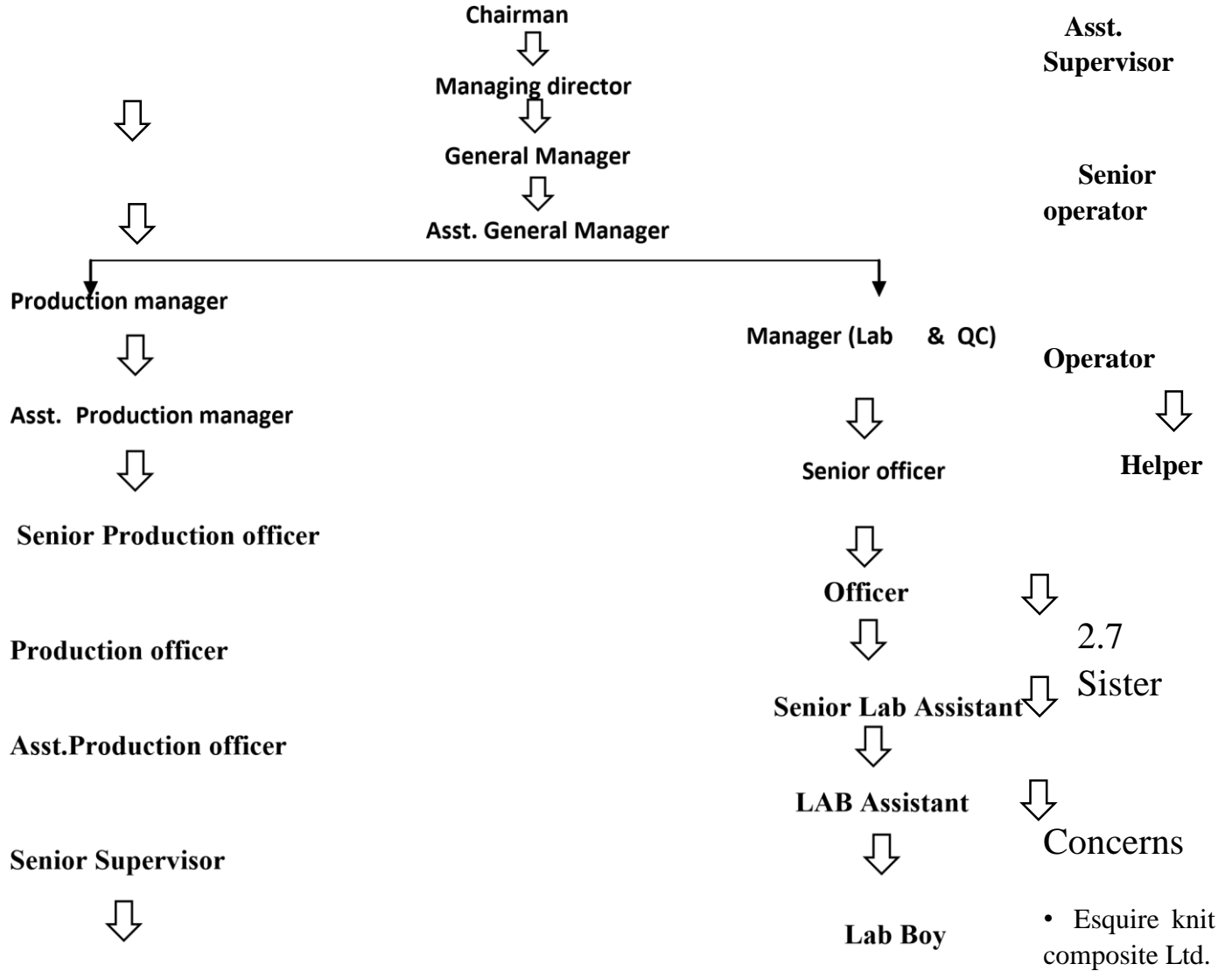


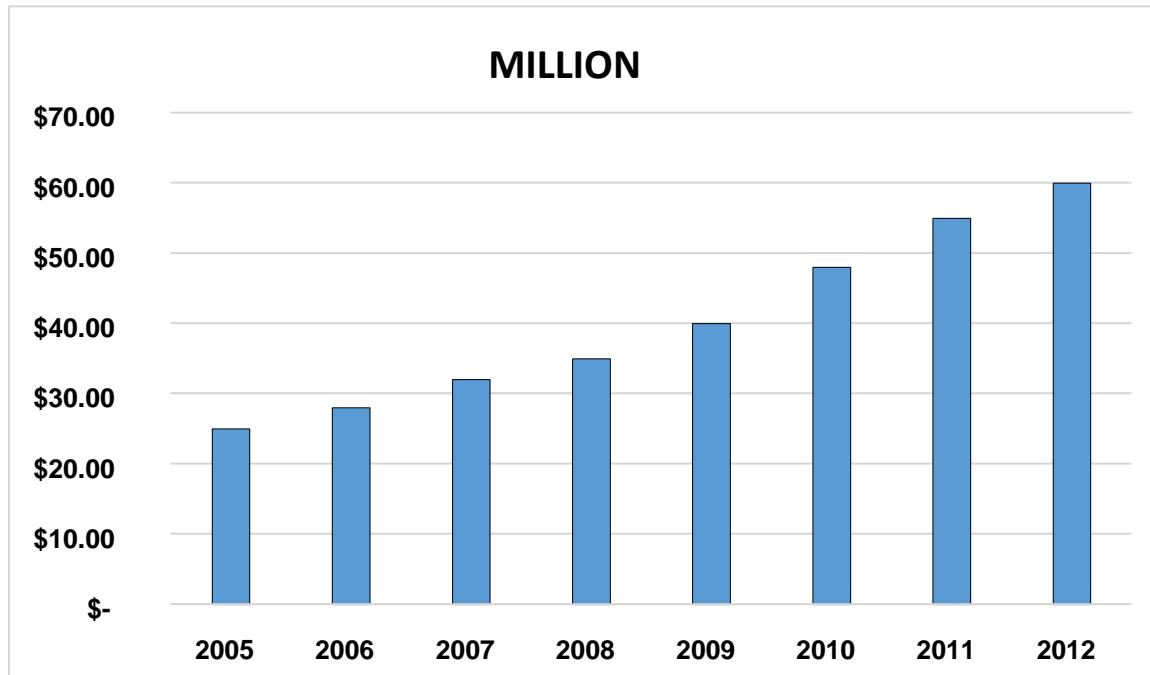
Fig: 2.2 Location of Factory

2.6 Organogram



- Esquire knit wear Ltd.
- Esquire dyeing inds Ltd.
- Esquire accessories Ltd.
- MMH Textiles limited.
- Fashion paradise Limited.
- Synthia Multi-fiber Ltd.

2.8 Export Growth by Graph



2.8 Product Mix

2.9.1: Product Range

- Polo shirts,
- Tee shirts,
- Tops ,
- Sweat shirts, □ Jogging sets,
- Night wear,



Fig: 2.3: Product Ranges

2.9.2 Fabric Range

- Jersey,
- Pique,
- Interlock,
- Ribs, □ Fleece,
- Terry
- Auto stripe Yarn Dyed – Jersey, Pique
- Feeder stripe Yarn Dyed - Jersey, Pique, Interlock and Rib

2.9.3 Production Capacity Products

- T-shirts 85,000doz/month
- Polo shirts 35,000doz/month
- Sweat shirts 35,000doz/month
- Solid dyed fabric 390tons/month
- Yarn dyed fabric 185tons/month

2.9.4 Lead Time

- Garment made of solid dyed fabric **60**days
- Garment made of yarn dyed feeder striped fabric **75**days
- Garment made of auto striped fabric **90**days
- Garment with wash **75**days
- Garment with manually done embellishment **90**days

2.9.5 Shift Changes

EKCL maintain 3 shifts at every day's work except sewing section. So the shifts are changed at every 8 hours. The shifting times are for dyeing and knitting section.

- Shift: 06:00 am – 02:00 pm
- Shift: 02:00 pm – 10:00 pm
- Shift: 10:00 pm – 06:00 am
- General shift and office time: 08:00 am – 05:00 pm

2.10 Brief Profile

- Daily fabric dyeing capacity -15 ton
- Total floor space - 19000 Sq. ft. □ Total worker - 301

YARN DYE HOUSE

- Daily yarn dyeing capacity - 7 ton on the basis of 100% Cotton
Total floor space - 24000 Sq. ft. Total worker 253

Industrial Attachment at Esquire Knit Composite Ltd

KNITTING DEPT

- Total number of knitting machines -67 Circular Knit
- Daily knitting capacity 18 ton to 20 ton
- Daily Auto striper knitting capacity – 1 ton
- Total worker - 232
- Total floor space 47000 Sq. ft.

SEWING DEPT

- Total floor space 95000 Sq. ft.
- Total worker 1939
- Total sewing lines-35
- Total number of sewing machines- 1450 Pcs □ Daily sewing capacity- 85000 pcs

SAMPLE DEPT

- Total floor space- 17500 Sq. ft.
- Total worker- 23
- Total sewing lines 2
- Total number of sewing machines- 41 □ Daily sample capacity- 150 Pcs **EMBROIDERY DEPT.**
- Total floor space-10000 Sq. ft.
- Total worker- 37
- Total Embroidery machines- 8 for production, 1 Sample **PRINTING DEPT.**
- Total floor space 37500 Sq. ft.
- Total worker- 29
- Total number of Automatic printing machines 3 (16 colors).
- Daily printing capacity- 9000 pcs
- Types of print offered- Rubber, Foil, Pigment, Glitter

LAUNDRY DEPT.

- Total floor space 5000 Sq. ft.
- Total worker 4
- Total number of Automatic laundry machines: 4 Production 1 Sample Machine
- Daily laundry capacity- 8000 Pcs
- Types of wash offered- Silicon, Enzyme, sand

LAB & QC

- Total floor space -4500Sqft
- Total worker- 29
- Total machine: 35




AUXILIARY FACILITIES

- ETP
- Water treatment plant
- Doctors Room
- Child care Room

2.11 Major Buyers with Their Logo

Buyer Name	Major Markets	Logo
C&A	GERMANY	
CELIO	FRANCE	

Industrial Attachment at Esquire Knit Composite Ltd

MASCOT	DENMARK	
ZARA	SPAIN	
JACK & JONES	DENMARK	

PULL & BEAR	SPAIN	
HUNKEMÖLLER	NETHERLANDS	
TCHIBO	GERMAN	

2.12 Certification

- **OEKO-TEX STANDARD100** Certified (Product Class I & II)
- **ISO Certified** (ISO 9001:2000)
- **ORGANIC EXCHANGE** (OE 100 & OE BL)
- Fully compliant with frequent random evaluation by world renowned institutes like:

BSCI, CSCC, SOCAM, ITS, MTL, SGS



2.13 Mission & Vision

Vision

- Esquire vision is to work for continuous self-improvement to serve our customers with the best possible products and services and emerge as one of the most admired companies in the textile arena.

Mission

- Esquire mission is to ensure quality products and services to the customers within the shortest possible lead-time based on optimum utilization of the resources to achieve sustainable growth.
- We want to make sure that the overall purpose and scope of the business is meeting stakeholders.



3. DESCRIPTION OF THE ATTACHMENT

3.1 Sample Section



Figure 3. 1: Sample Section

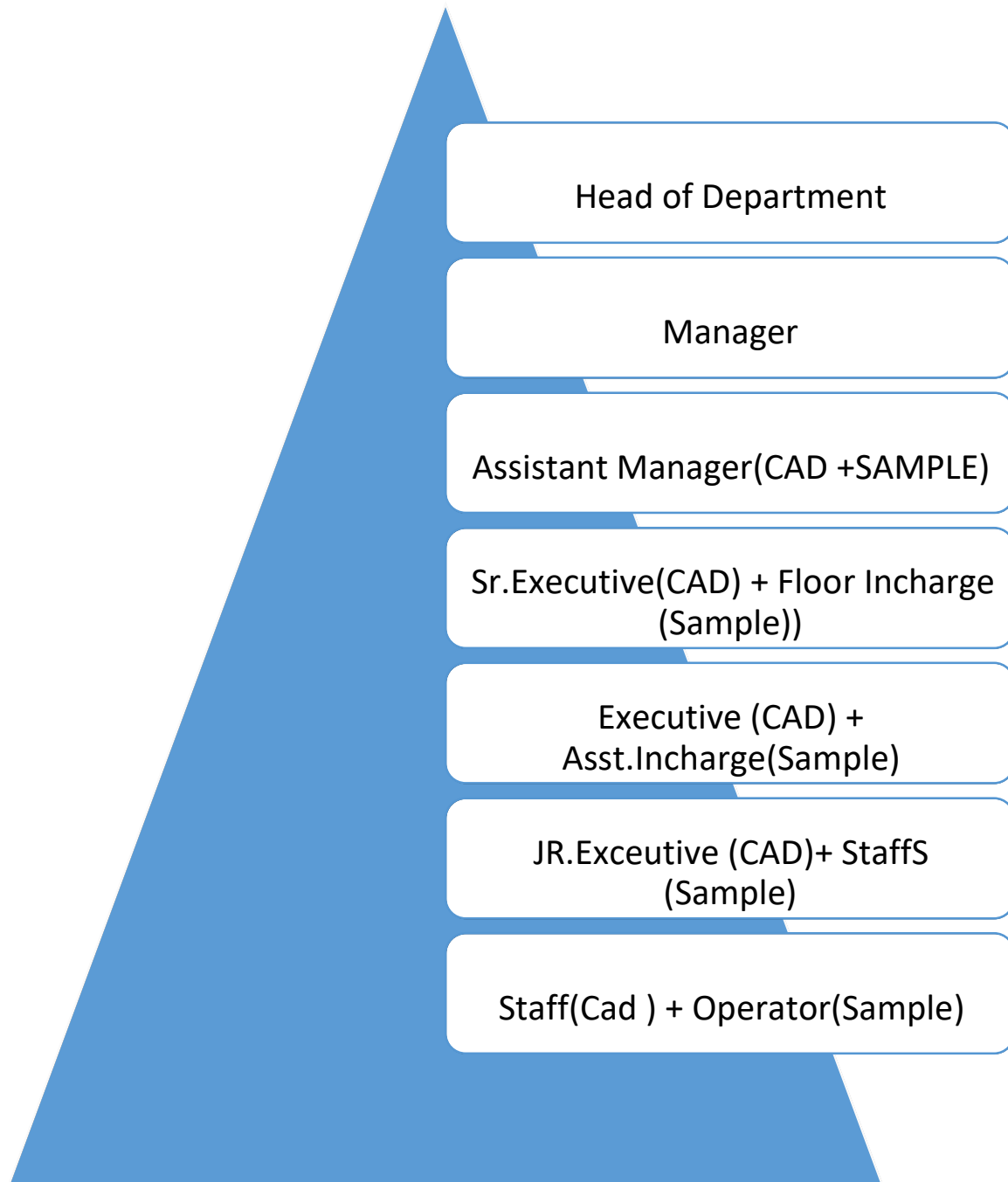
3.1.1 Layout

Industrial Attachment at Esquire Knit Composite Ltd

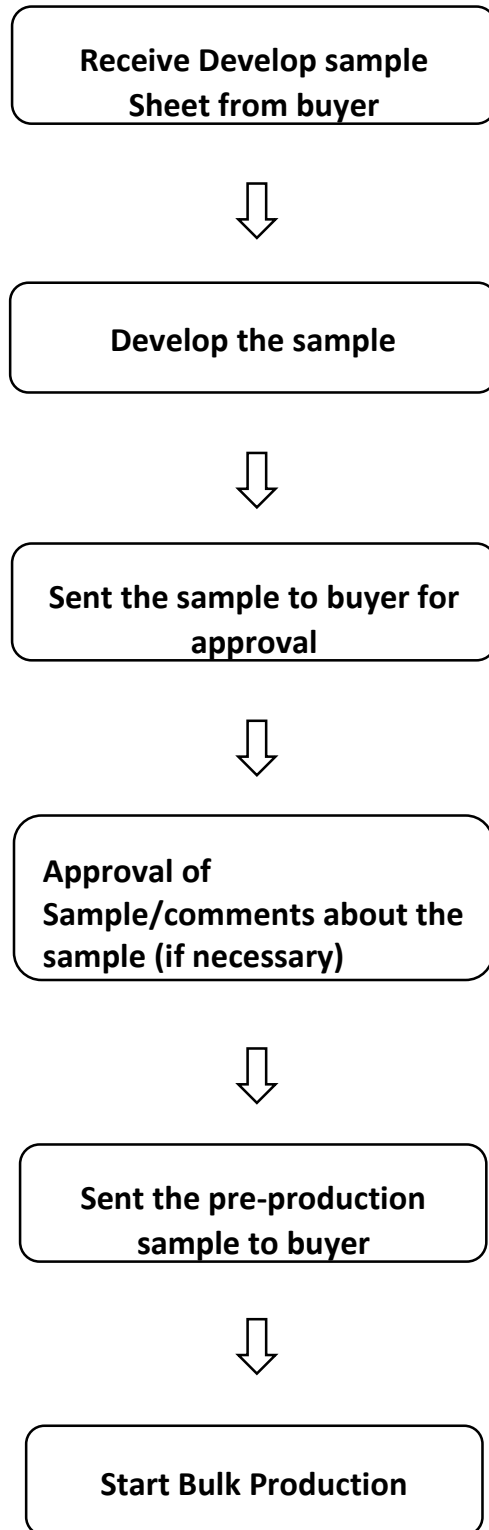


Figure 3. 2: Layout of Sample Section

3.1.2 Organogram



3.1.3 Flow Sequence of Sample Section



3.1.4 Different Types of Sample

1. design sample.
2. offer fit sample.
3. gold seal sample (pre-production sample).
4. proto sample
5. sms sample
6. black seal sample (size set sample)
7. production sample
8. Test sample
9. shipping sample
10. photo sample
11. top sample (top of production)

3.1.5 Machineries

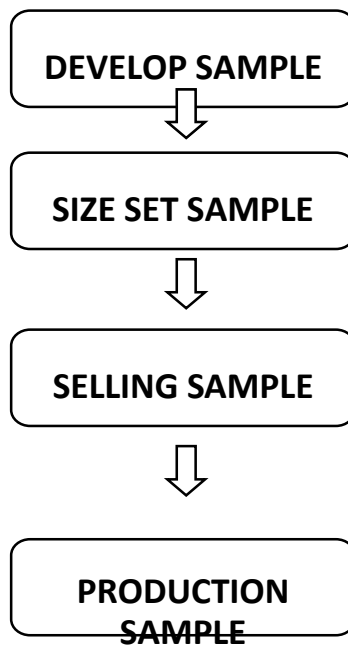
1. Plain machine
2. Over lock
3. Flat lock 4. Button attach machine
5. Feed of the Arm etc.

3.1.6 Different Buyer Required Sample

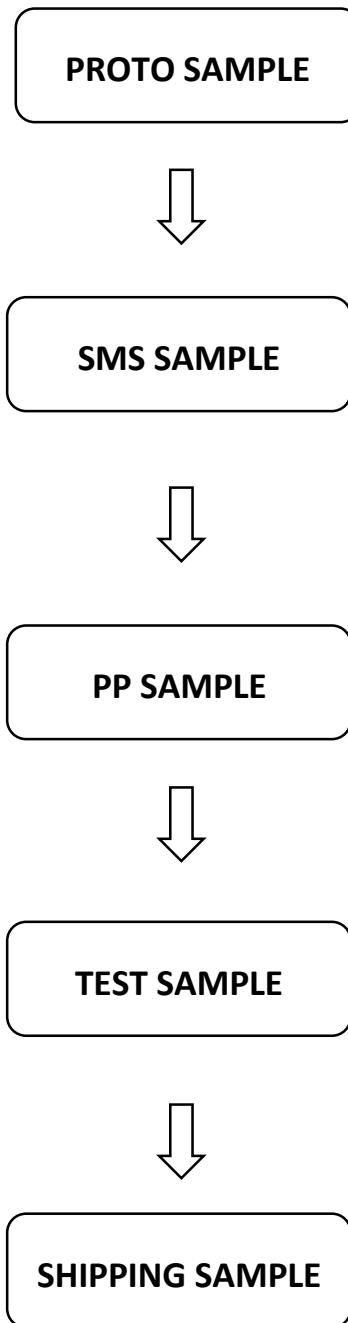
3.1.6.1 C&A



3.1.6.2 MASCOT



3.1.6.3 BESTSELLER DENMARK

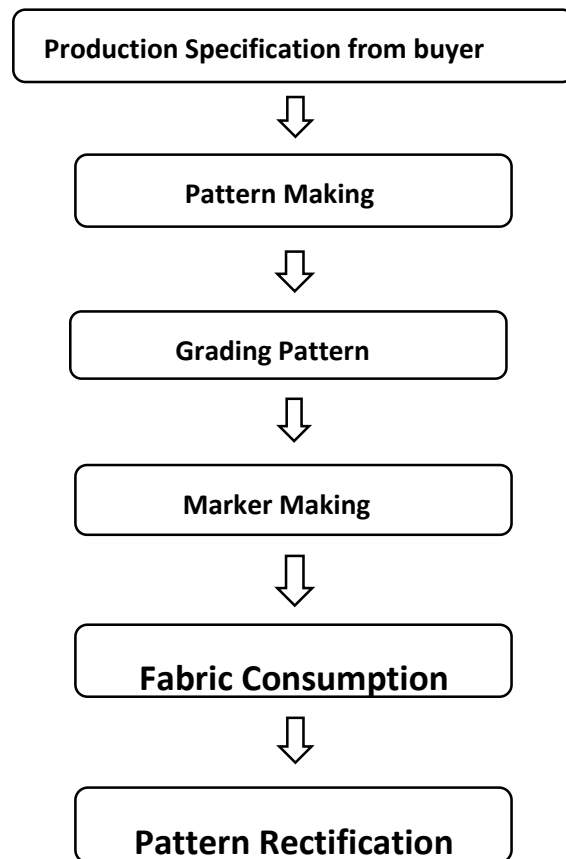


3.1.7 CAD Section

Industrial Attachment at Esquire Knit Composite Ltd

- Computer aided design are a computerized software .It is used to make a computerized garments pattern and marker.
- After making all required size patterns using the software pattern parts are aligned in the mini marker. Then it is sent to CPU of CAM section for approval and checking the length & width of marker and pattern parts alignment.
- After getting approval from CAM section then 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

3.1.7.1 Working Sequence of CAD Section



3.1.8 Pattern Making

Industrial Attachment at Esquire Knit Composite Ltd

Nowadays maximum industry pattern are made by CAD software. But for critical design pattern are made by pattern master.

Sometime buyer sent only design of garments. Then garments designer are made pattern in software or manually.

After receiving an order in most cases buyer gives them a complete pattern and they make sample according to given pattern. But in some cases they prepare the pattern by own when buyer don not give any pattern.

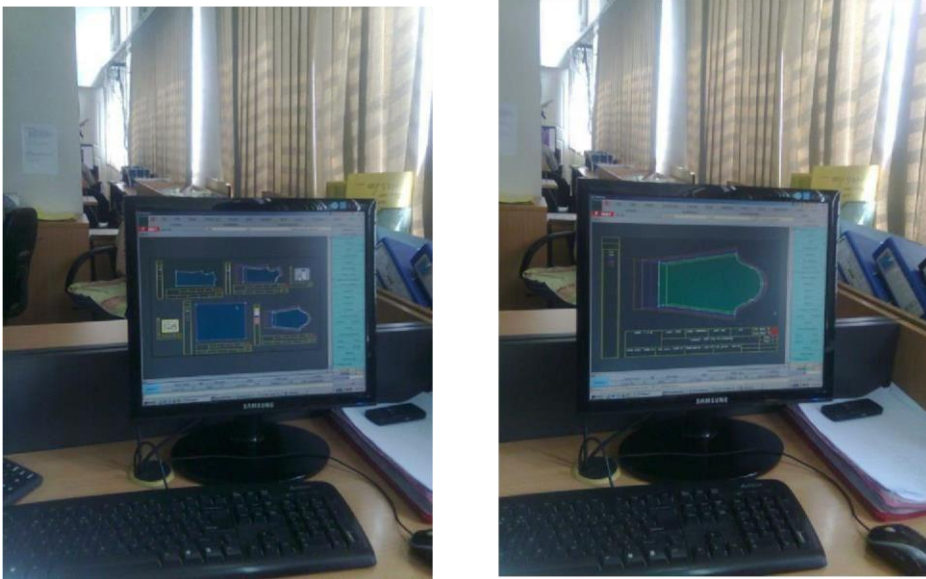


Figure 3. 3: Pattern Making

3.2 Cutting Section



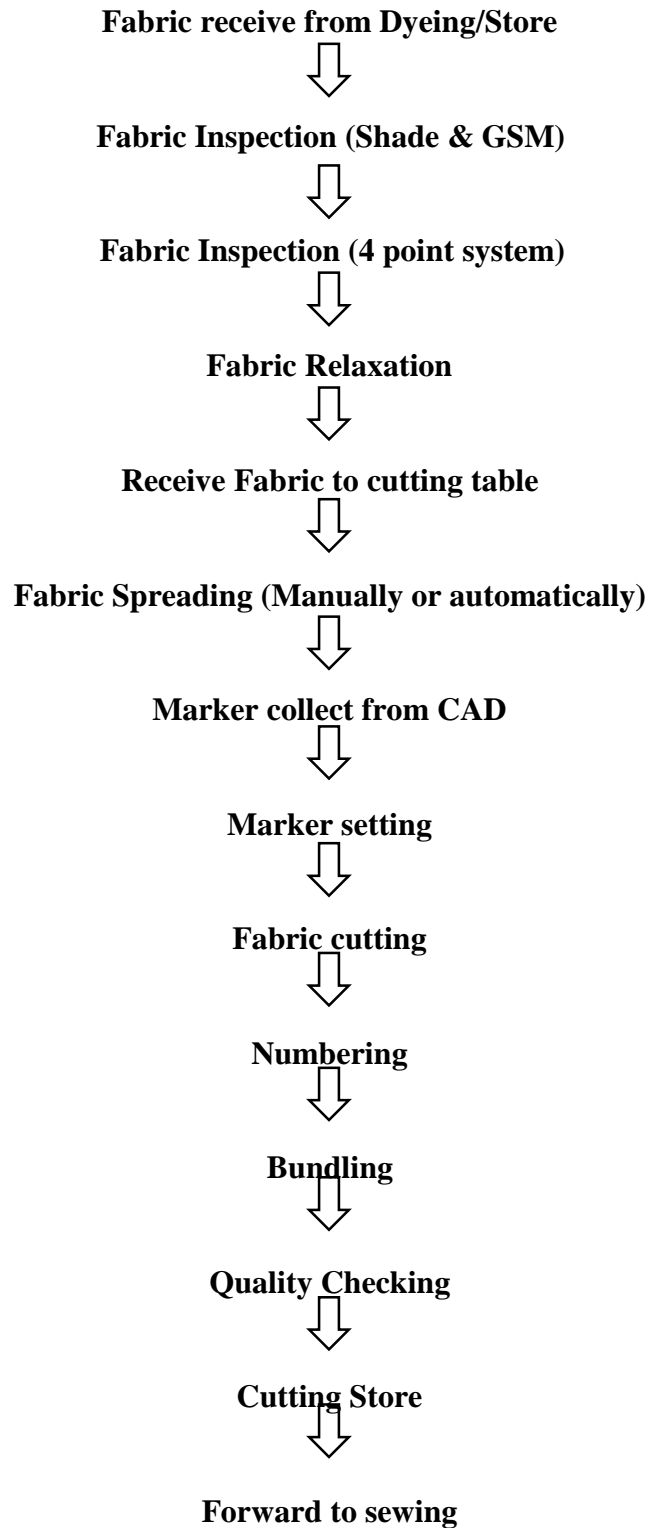
Figure 3. 4: cutting Section

3.2.1 Layout:



Figure 3. 5: Layout of Cutting Section

3.2.2 Process Sequence of Cutting Section



3.2.3 Machineries

1. Straight knife cutting machine
2. Auto cutter machine
3. Auto spreader
4. Marker printer etc.

3.2.4 Major operations carried out by that section

- a) Fabric relaxation
- b) Marker making
- c) Numbering
- d) Bundling
- e) Forward to sewing

Cutting Machine:

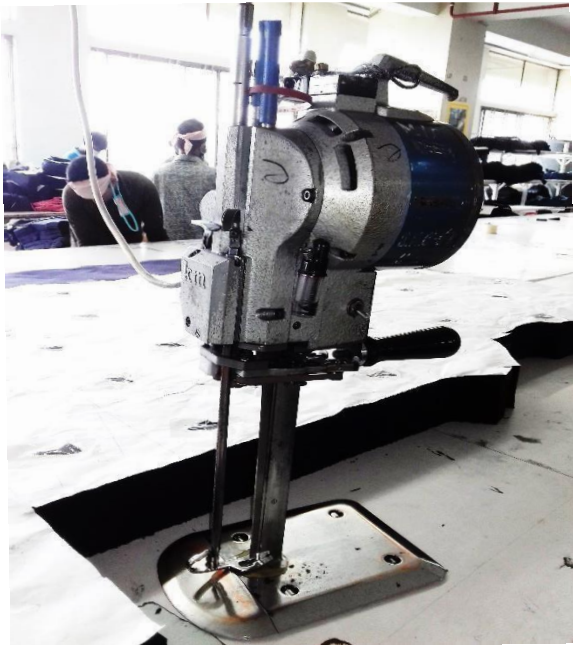


Figure 3. 6: Straight Knife



Figure 3.7: Auto Fabric Cutter



Figure 3.8: Fabric Spread



Figure 3.9: Plotter

3.3 Planning

In planning dept. we have learned the following things-

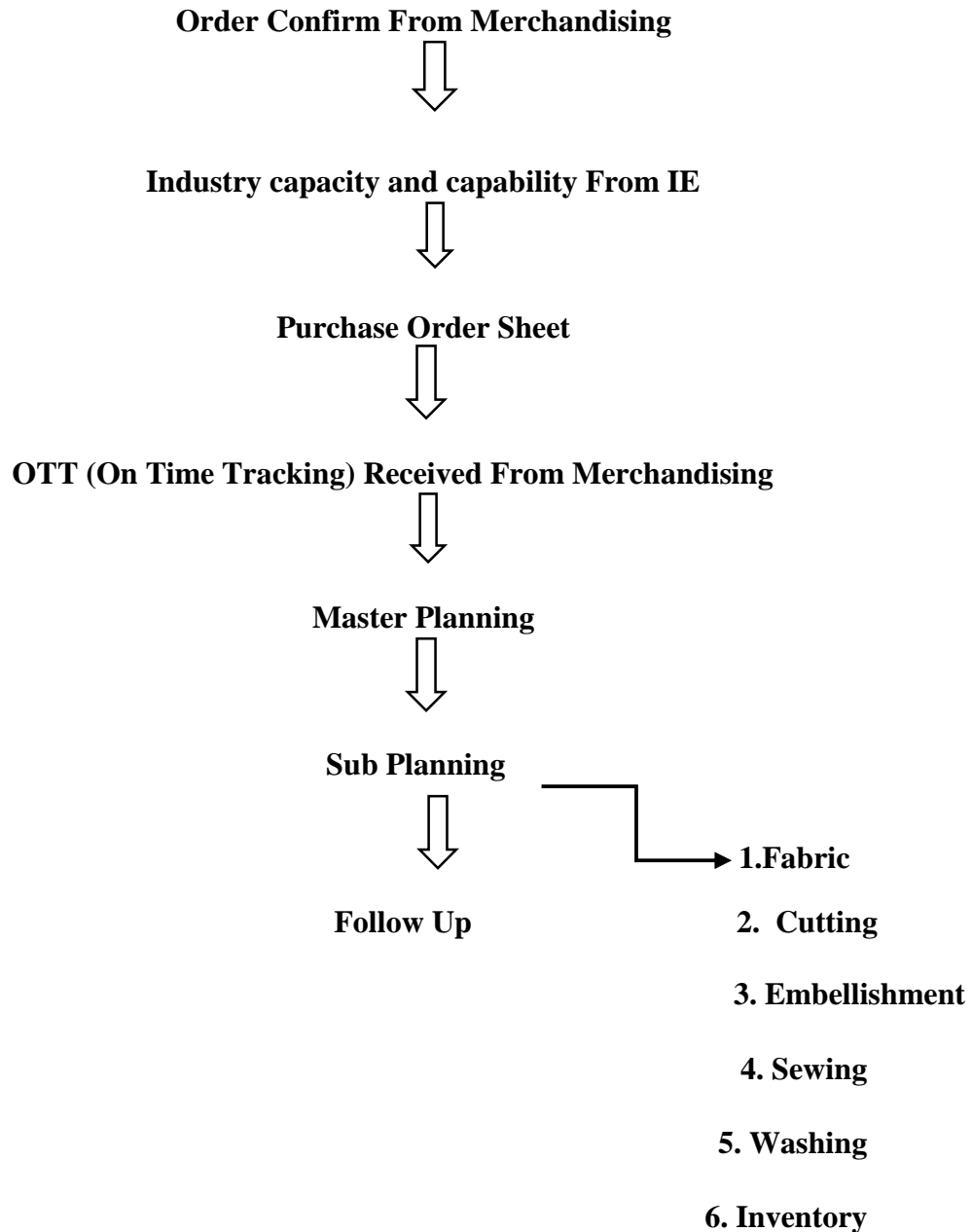
3.3.1 Area of planning:

Planning section are following all section of garments.

Area:

1. Fabric.
2. Cutting.
3. Embellishment.
4. Wash plan.
5. Sewing plan.
6. Inventory.

3.3.2 Flow process of planning section



3.3.3 Aim of planning section:

1. The line of garments must be run.
2. The shipment date must be meet.

3.4 Industrial engineering

Industrial engineering (IE) =production↑ cost↓ proper use of all elements↑ efficiency↑ profit↑

3.4.1 Major operation carried out by this section

3.4.1.1 Observe time:

Observe Time is a time that a worker average time of completing a piece or part of garments

Process: Neck Top Stitch

$$\begin{aligned} OT &= \frac{\text{TOTAL CYCLE TIME}}{\text{NO OF CYCLE}} \\ &= \frac{29+32+29+30+32}{5} \\ &= 30 \text{ Sec} \end{aligned}$$

3.4.1.2 Individual performance rating

It is rating about working and performance ability of a worker in a day or shift.

$$\begin{aligned} &= \frac{\text{Production Capacity} \times \text{SMV}}{\text{Working Hour} \times 60} \times 100 \\ &= \frac{170 \times 3}{1 \times 60} \times 100 \\ &= 85 \% \end{aligned}$$

3.4.1.3 Basic time

Basic time is a time that a worker to completing a garments parts or piece with allowance time.

$$B.T = \text{Observable time} \times \text{Performance Rating}$$

$$= 0.5 \times .85$$

$$= 0.425$$

3.4.1.4 SMV :(standard minute value)

Standard minute value is the standard time, to complete any given task by using best possible methods at standard level of performance.

$$SMV = \text{Basic time} + (B.T \times \text{Allowance \%})$$

$$= 0.425 + (0.425 \times 15\%)$$

$$= 0.488$$

3.4.1.5 Line efficiency

It is measurement of line capacity of production for a shift or working hour.

$$= \frac{\text{Production} \times SMV}{\text{Man Power} \times \text{Working Hour} \times 60} \times 100$$

$$= \frac{1500 \times 10.10}{35 \times 11 \times 60} \times 100$$

$$= 65.58\%$$

3.5 SEWING SECTION



Figure 3. 10: Sewing Section

3.5.1 Layout:

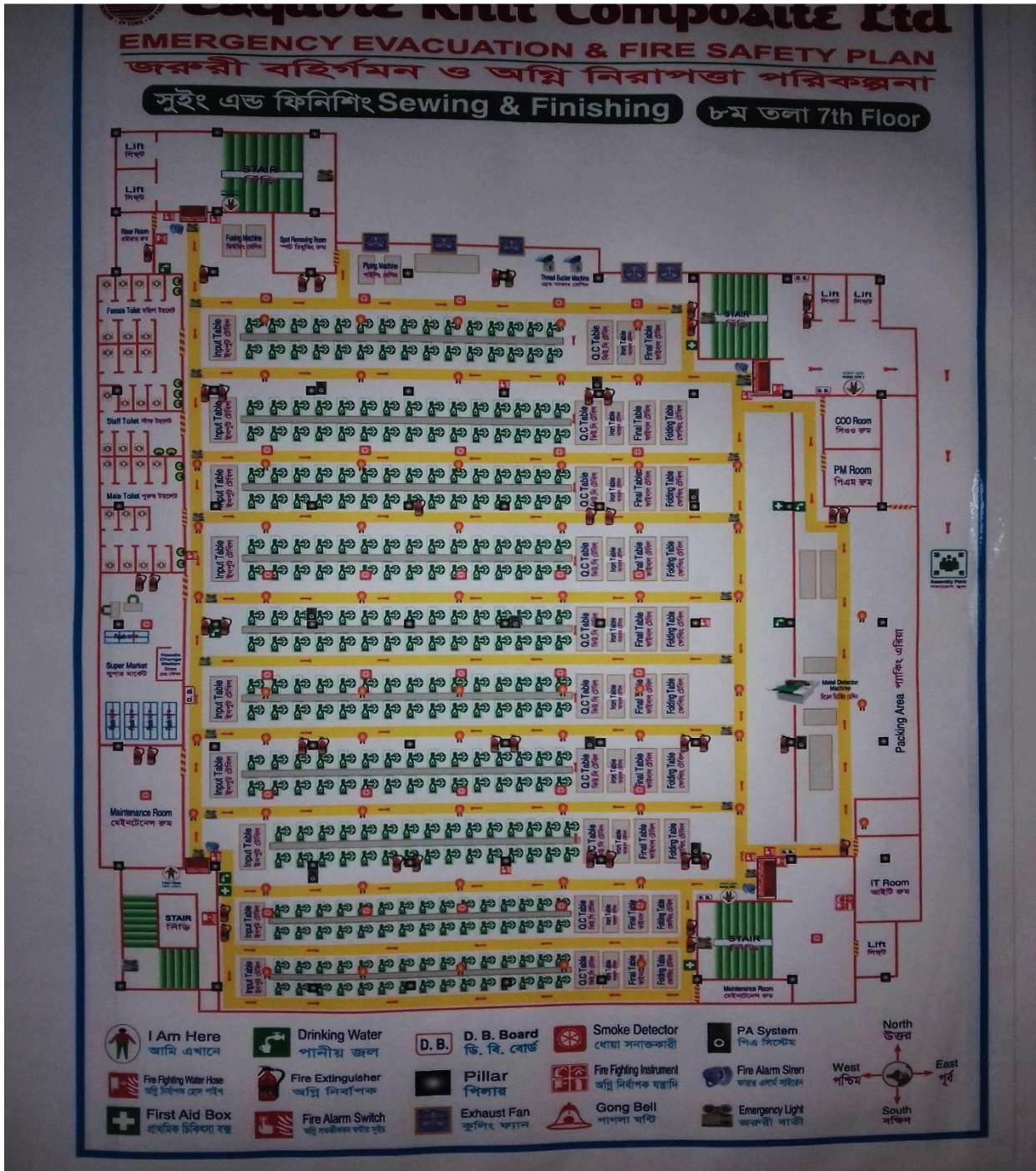
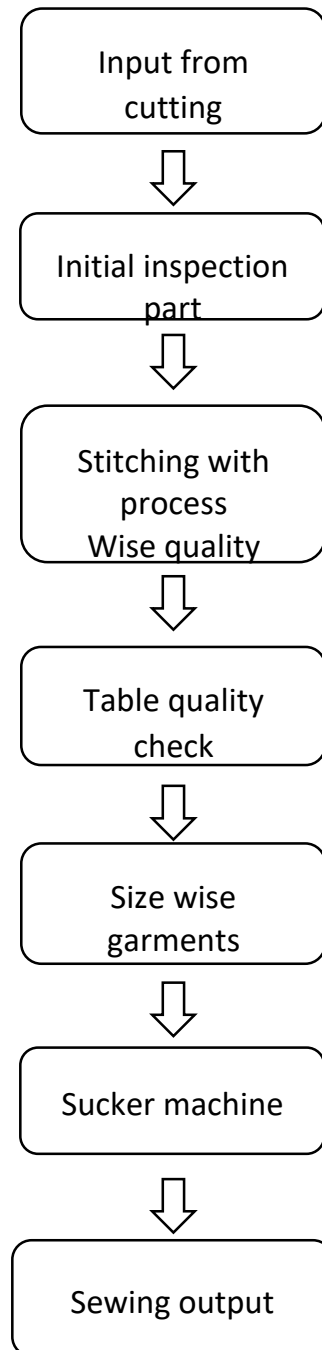


Figure 3. 11: Layout of Sewing Section

3.5.2 Flow chart of sewing section

Industrial Attachment at Esquire Knit Composite Ltd

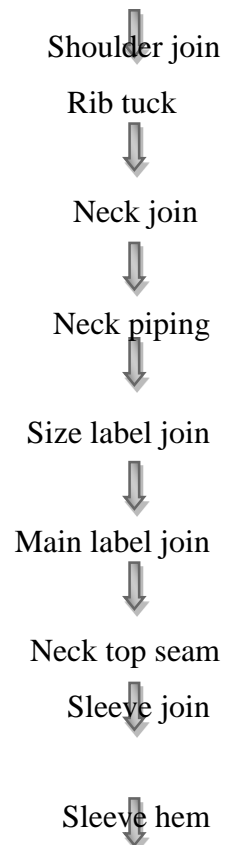


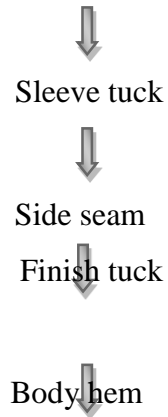
3.5.3 Machine used

1. Plain m/c (S/N)
2. Double needle m/c (D/N)
3. Over lock m/c
4. Flat lock m/c
5. Button hole m/c
6. Button stitch m/c □ Bar-take m/c
7. Feed off the Arm
8. Kanshai m/c

3.5.4 Operations carried out by this section

3.5.4.1 The flow process of a t-shirt





3.5.4.2 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
- Open seam
- Four point up-down
- Shading etc

3.5.4.3 Sewing defects

- Needle damage,

Industrial Attachment at Esquire Knit Composite Ltd

- Skip stitches,
- Thread Breakages,
- Broken Stitches
- Seam Grin
- Seam Puckering

3.6 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.

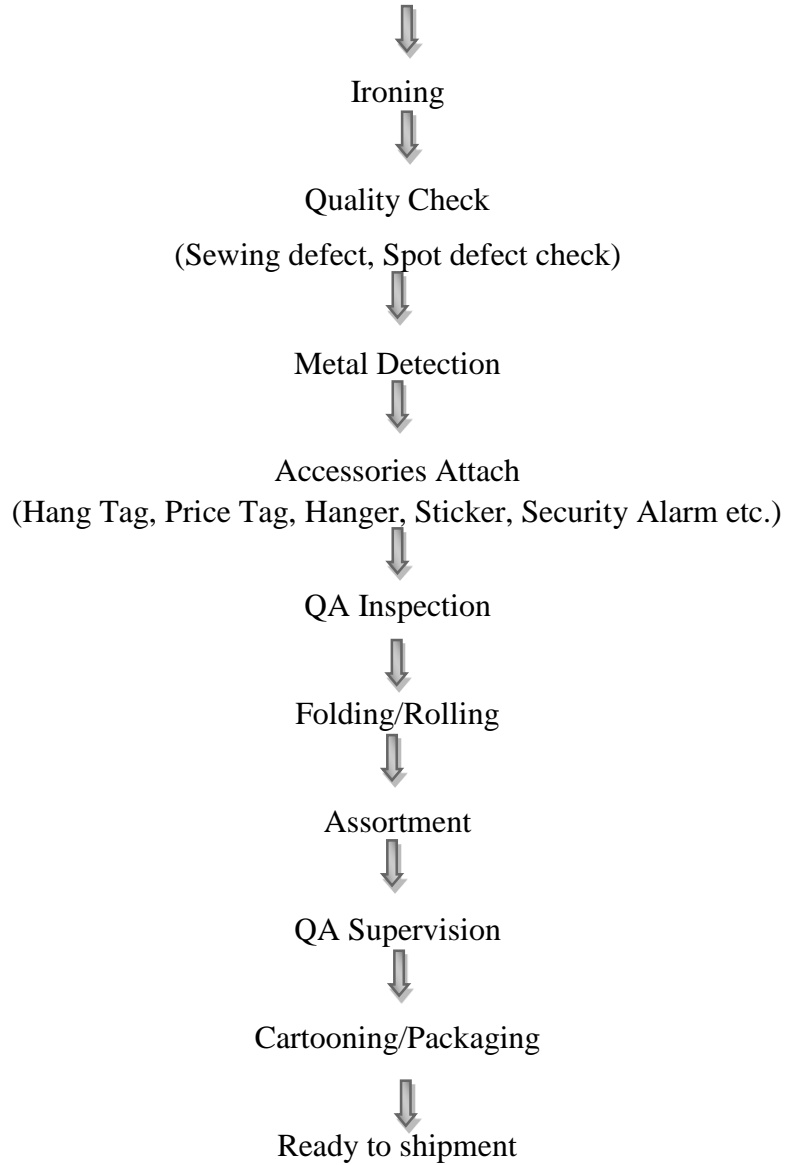


Figure 3.11: Finishing section

3.6.1 Process flow chart of garment finishing

Thread Suction (Thread Sucker M/c)

Industrial Attachment at Esquire Knit Composite Ltd



3.6.2 Materials used in garment finishing

- board
- T-clip

Industrial Attachment at Esquire Knit Composite Ltd

- 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
- Size sticker

3.6.3 Major operations

3.6.3.1 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.

STAIN TYPE	Chemical Used (Commercial Name)
Oil stain	Spot lifter

General stain	Thinner
Ink stain	Thinner

3.6.3.2 Ironing

3.6.3.3 Flow chart of garment inspection

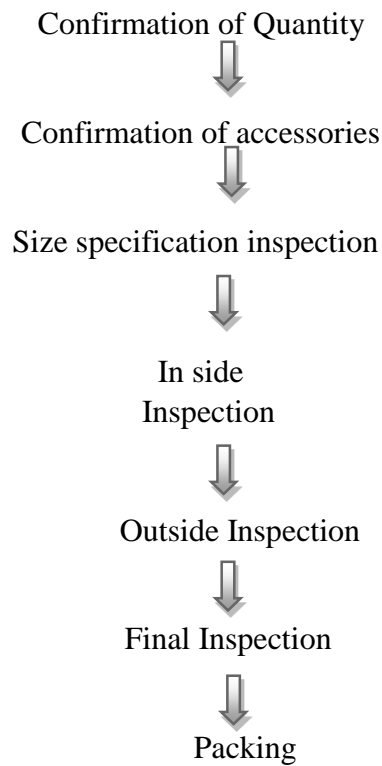




Figure 3.12: Spot Lifter & Acetone



Figure 3. 13: Thread Sucker

3.7 Embroidery



Figure 3. 14: Embroidery Section

3.7.1 Machine specification

Machine 1:

1. brand name: tajima
2. model name: tfgn-(920)
3. country: japan
4. rpm: 750
5. no of head: 20
6. no of needle per head: 9
7. no of color thread per head: 9



Figure 3.15 : Embroidery Machine

3.7.2 Different types of embroidery





Figure 3.16: Different Types of Embroidery

3.7.3 Embroidery stitching type

- Shirting stitch
- Run stitch
- Zigzag Stitch

3.7.4 Embroidery faults

- Stitch gap
- Bobbin out
- Oil spot
- Miss thread
- Measurement up-down
- Needle

3.8 PRINTING



Figure 3.17: Printing Section

3.8.1 LAYOUT:

Industrial Attachment at Esquire Knit Composite Ltd

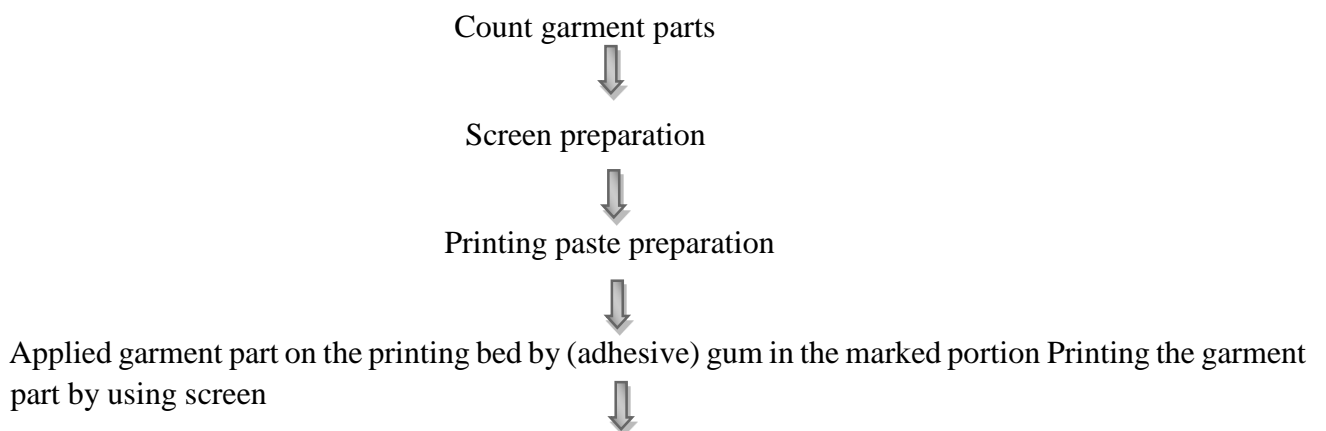


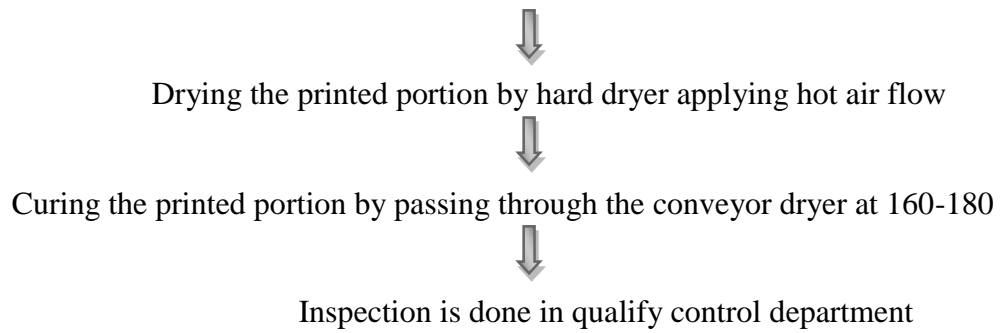
Figure 3.18: Layout Of Printing Section

3.8.2 Types of printing:

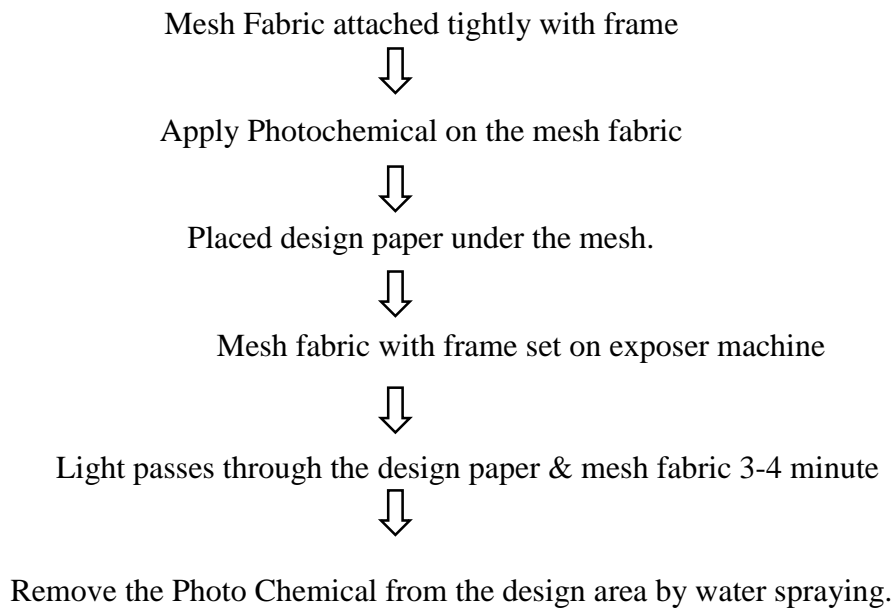
1. Screen Printing
2. Rubber Printing
3. Glitter Printing
4. Pigment Printing
5. Foil Printing
6. Crack printing
7. Photo Printing
8. Sticker Printing
9. Emboss Printing
10. Engraving Printing
11. Stone Printing
12. High Density Printing
13. Puff Printing

3.8.4 The flow process of printing





THE FLOW PROCESS OF SCREEN PREPARATION



Printing Machine



Figure 3. 29: Auto printing



Figure 3. 20: Exposer Machine



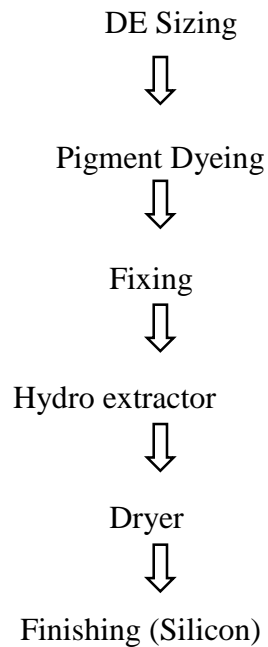
Figure 3. 21: Curing Machine

3.9 Garment washing

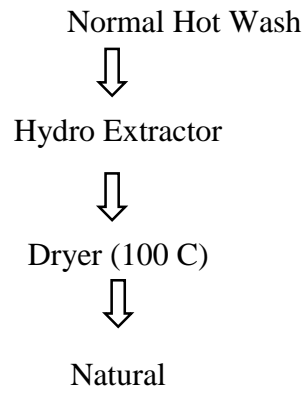
3.9.1 Types of Garment Wash:

1. Normal wash/ garment wash/rinse wash
2. Pigment wash
3. Caustic wash
4. Enzyme wash
5. Stonewash
6. Stone enzyme wash
7. Tinting (Tie) & Over Dyeing(Dip Dyeing)
8. Super white wash
9. Bleach wash
10. Acid wash
11. Silicon wash

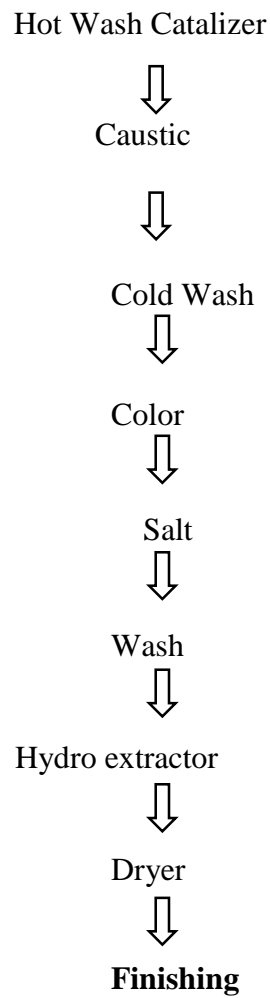
3.9.2 The flow process of pigment dyeing



3.9.3 The flow process of burn out

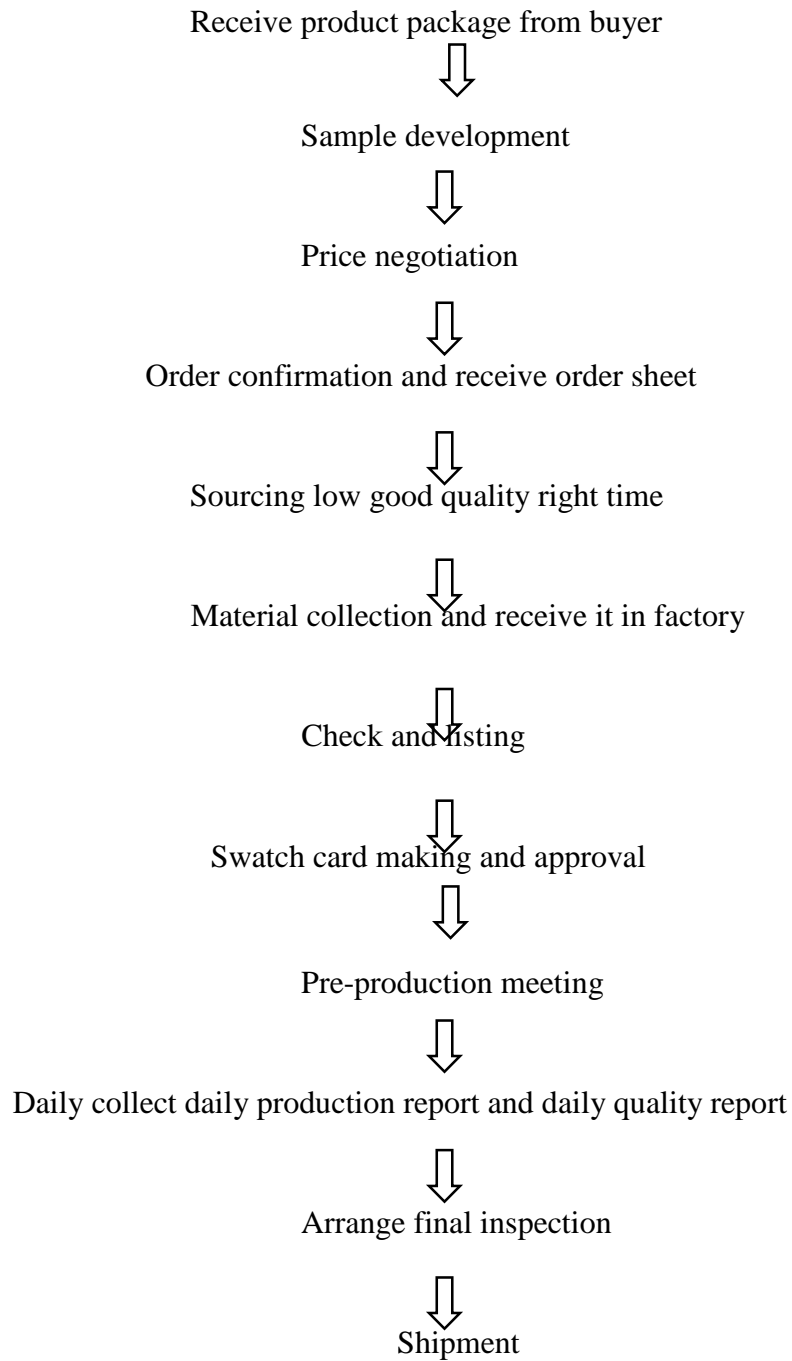


3.9.4 The flow process of reactive dye



3.10 Merchandising section

3.10.1 Flow Chart of Garments Merchandizing



3.10.2 Merchandising Calculation:

3.10.2.1 Fabric or body calculation:

$$= \frac{(\text{Body length} + \text{Sleeve Length} + \text{Allowance}) \times (\text{Chest} + \text{Allowance})^2 \times \text{GSM} \times 12}{10000000} + 10\% \text{ waste}$$

=Result kg/dozen **NB:**

- (BL+SL) Allowance= 10 cm. Allowance.
- When keep the chest allowance then body width, chest width and bottom width which are big (cm) with (4 cm+) Added.
- 10% overall Process Loss.
- 1 dozen= 12 pcs.

3.9.2.2 Sewing thread consumption:

M/C & Garments	Thread Consumption
Plane Lock Stitch	1 inch Body stitch required thread 7 inch.
Over Lock M/C:	1 inch Body stitch required thread 17 inch.
Flat Lock M/C	1 inch Body stitch required thread 19 inch.
Normal T- Shirt	180 M Sewing Thread.
Polo shirt	120M Sewing Thread.
Suit Shirt (Hoody)	300-400 M sewing Thread.

3.11 KNITTING SECTION



Figure 3.22: Knitting Section

3.11.1 LAYOUT:

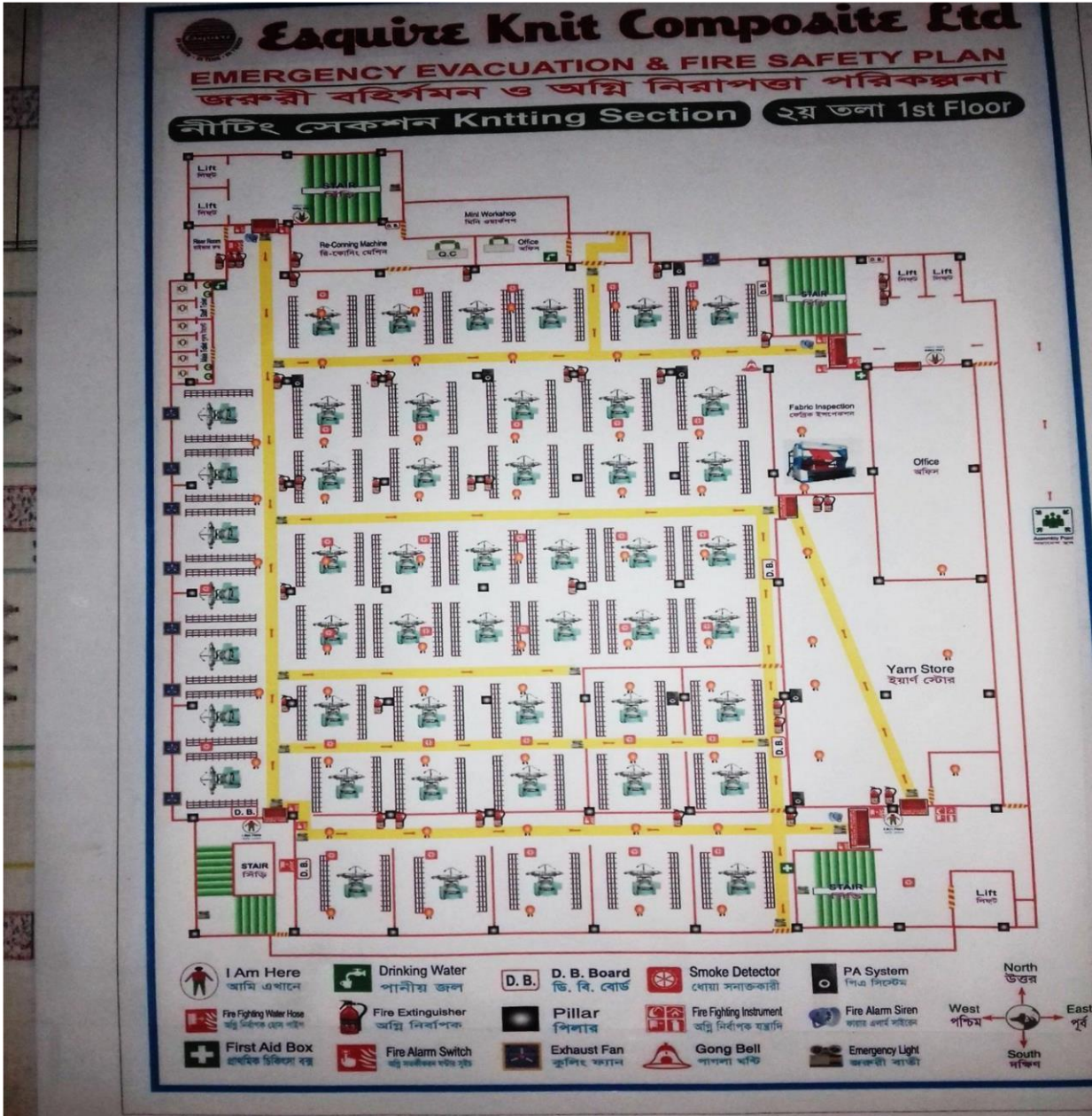
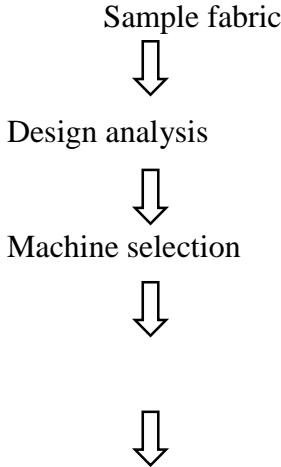


Figure 3.23: layout of knitting section

3.11.2 Flow chart of knitting section



Setting the machine for the specific design

Sample Knitting

Sample approval

Start bulk production

Grey fabric inspection

Sent to Grey fabric store

3.11.3 Machineries used in knitting section

- Circular knitting machine.
- Fabric Inspection machine.
- GSM cutter.
- Electric balance
- Flat knit machine.



Figure 3.24 : Circular Knitting Machine



Figure 3.25: Flat knitting Machine

3.12 Dyeing Section

There are two types of dyeing namely Yarn dyeing and Fabric dyeing in dyeing section which are describe below-

3.12.1 YARN DYEING



Figure 3.26: Operation of Yarn dyeing

3.12.2 Layout:

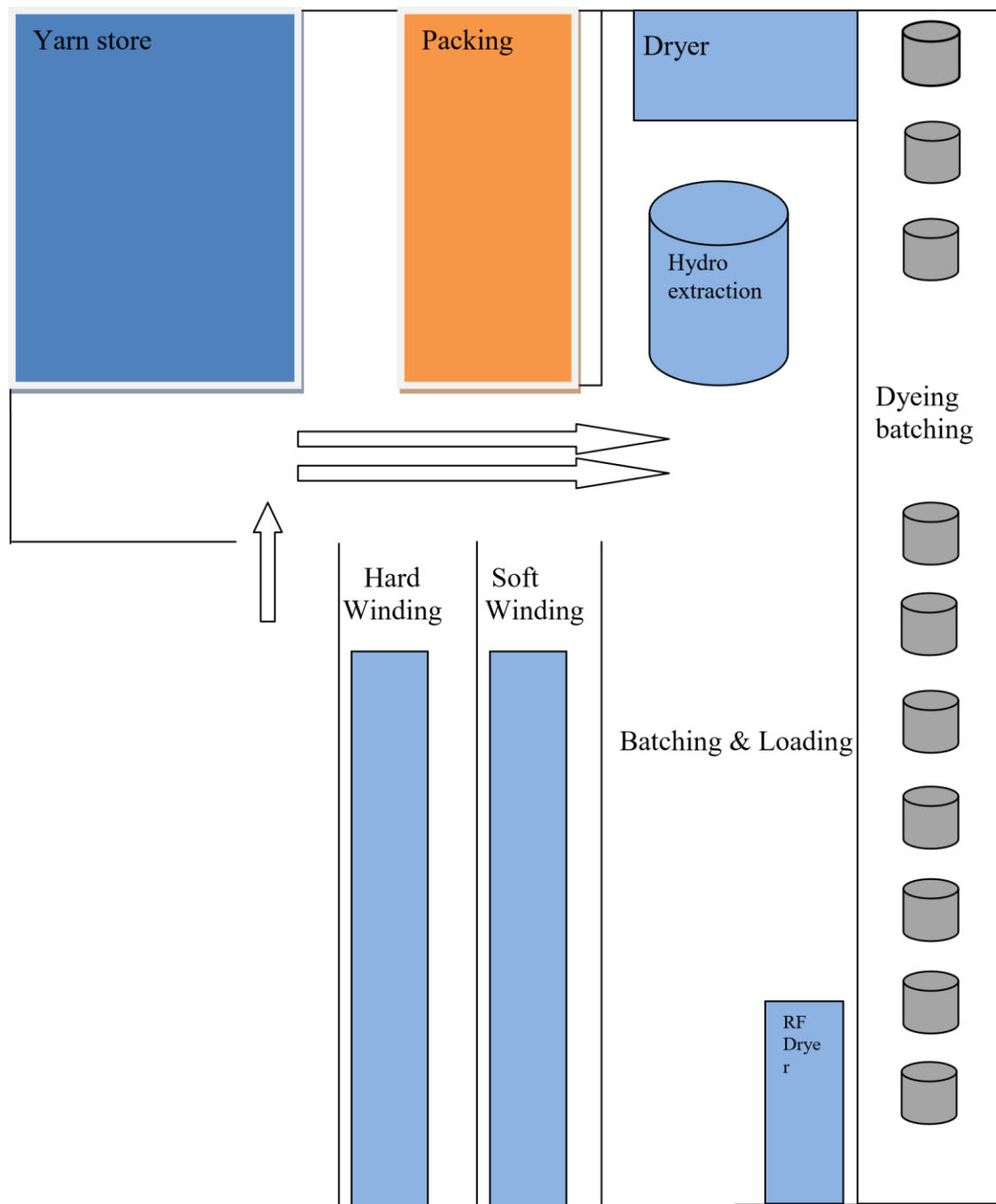
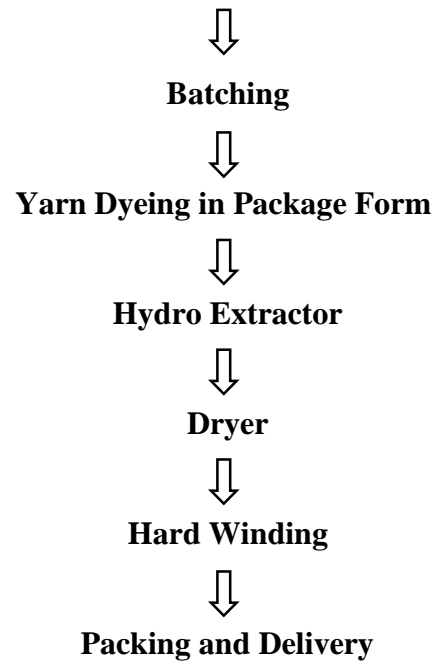


Figure 3.27: Layout Of yarn dyeing

3.12.3 The Flow Process of Yarn Dyeing

Soft Winding



3.12.4 FABRIC DYEING



Figure 3.28: Fabric Dyeing Section

3.12.5 LAYOUT:

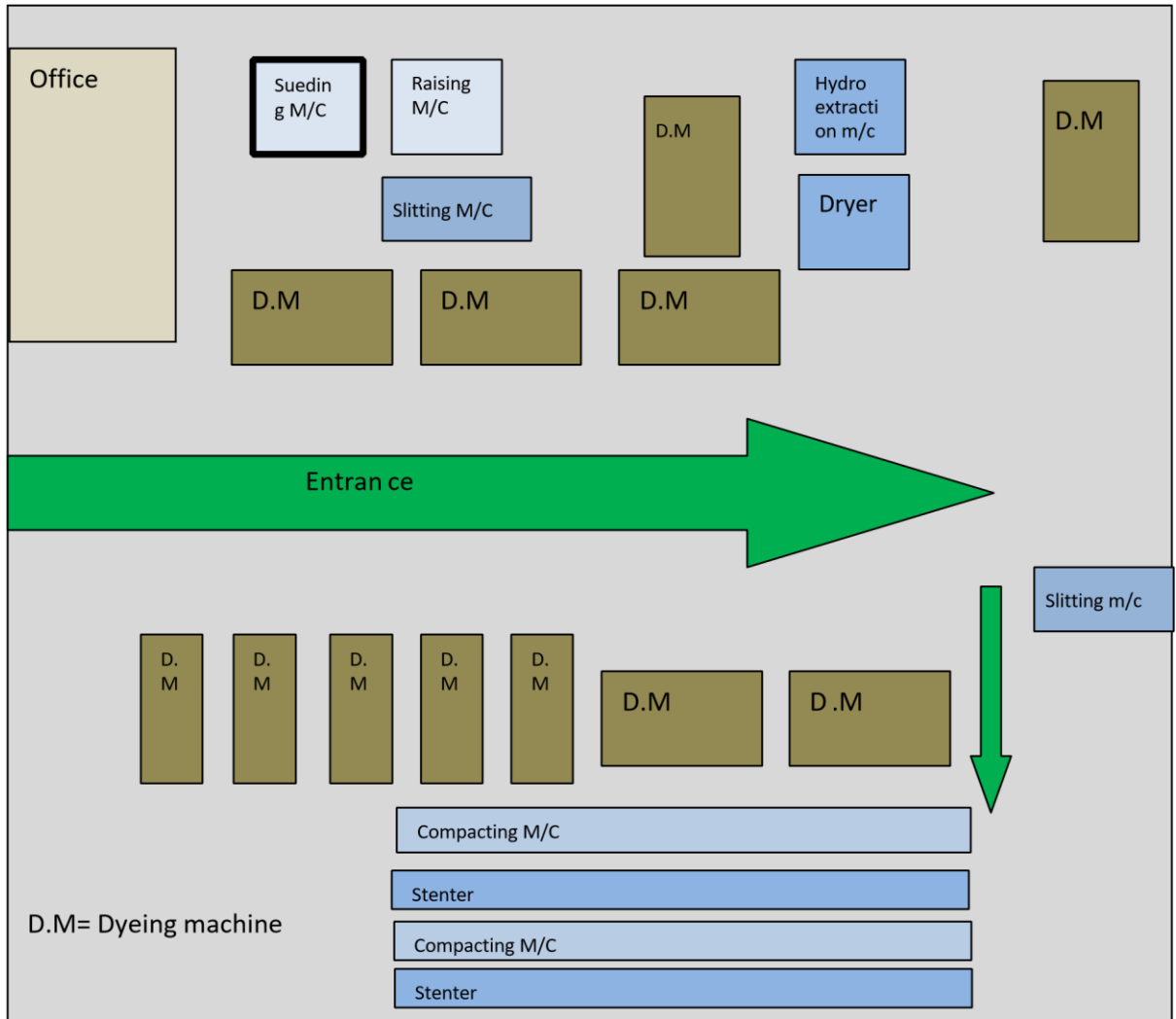


Figure 3.29: Layout Of Fabric Dyeing

3.12.6 FLOW CHART FOR FABRIC DYEING

Grey fabric receive from knitting section



Batching



Select m/c no



Fabric loading



Select production program



Pre treatment



Select recipe for dyeing recipe



Dyeing



Post treatment



Unload



Figure 3.30: Dyeing machine

3.12.7 List of machine at finishing section

Name of m/c	No. of m/c
Hydro extraction m/c	02
Slitting m/c	02
Dreyer	01
Calender m/c	01
Stenter m/c	03
Compacting m/c	03
Sueding m/c	01
Raising m/c	01



Figure3.31: Stenter machine



Figure 3.32: Dryer machine



Figure 3.33: Raising Machine



Figure 3.34: Seuding Machine

4. IMPACT OF INTERNSHIP

4.1 Sample Section

From sample section we have learnt about-

- Flow chart of sample making
- Sample making procedure
- Pattern making procedure
- Marker making procedure
- Types of sample used.

4.2: Cutting Department

From cutting section we have learnt about-

- Requirements of Fabric Cutting
- Method of fabric Spreading
- About ply Height
- About cutting machine
- How to numbering & bundling the cutting parts.

4.3 Planning

From planning section we have learnt about-

- Master plan of garments order
- Process of plan making and follow-up

4.4 Industrial Engineering Department

From IE section we have learnt about-

- Learn about IE • IE related calculation
- Operation breakdown.
- Process Flow

4.5: Sewing Department

From sewing section we have learnt about-

- Working flow chart of sewing section.
- Different types of sewing machine name.
- Function of sewing machine.
- Different parts of sewing machine.
- Different types of stitch.
- Know about different sewing fault.

4.6: Finishing Section

From finishing section we have learnt about-

- Flow Chart of Finishing.
- Finishing Procedure.
- Finishing machine and chemical.

4.7: Embroidery Department

From embroidery section we have learnt about-

- Machine name of embroidery.
- Different types of embroidery.
- Working process of embroidery

4.8: Printing Department

From Printing section we have learnt about- •

Different types of printing name

- Flow chart of printing
- Lists of machine used in printing
- Chemical used in printing

4.9: Washing Department

From washing section we have learnt about-

- Flow chart of washing section
- Different machine name used for washing
- Know about types of washing process
- Different types of washing fault

4.10 Merchandising

From merchandising section we have learnt about- • We

can learn the activities of merchandising.

- How they follow up production.
- Different consumption formula.

4.11 Knitting Department

From Knitting section we have learnt about-

- Knitting Machine
- Fabric Production.
- Parts of knitting machine.
- Key Accessories used for circular knitting Production
- Knitting faults.

4.12: Dyeing Department

From dyeing section we have learnt about-

- How the yarn is soft wending.
- How the yarn is prepare for batching.
- What type of dyes is used for yarn dyeing? □ How to maintain the temperature and time.
- Flow chart of fabric dyeing
- Fabric dyeing process □ How to finishing the dyed fabric
- Name of chemical used in fabric dyeing.

- Finishing Machine
- After dyeing fabric fault.



5. CONCLUSION

Conclusion

EKCL is one of the leading organization in garments exporting field. It is well- organized knit composite factory. They have initiated new projects with new technology round the year. EKCL us determined to ensure worker's right and this a promising company who tries their best to give maximum facility to their workers. They also provide medical facilities and a training school used for training. The factory transfers their file and other documents by using software and they have taken proper step to train their employee properly. Health and safety issue is very important factor.

Workers motivation is very important for IE department at present days. Workers are highly plasticized with negative thoughts. EKCL recently starts a new project for betterment of production and workers which is called Lean set-up.

Supply chain management is very important in growing market area. Getting materials in right time in right hand is very essential for factory to go for production. They have own supply chain system and they tried their best to reach their goal on time. EKCL can give emphasize on their store management. It is an old trend to keep goods randomly, although they used different shelves for different buyers. But this is not enough to maintain an international standard.