

# Sonargaon University

Department of  
Textile Engineering

Report On  
Industrial Attachment with  
(GoldTex Garments Ltd.)  
98/100, DEPZ, Savar, Dhaka, Bangladesh.

Course Title: Industrial Attachment  
Course Code: Tex-442

A Report submitted to the department of Textile Engineering in partial fulfillment of the credit requirement for awarding the Bachelor Degree in Textile Engineering by the Sonargaon University.

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Department of Textile Engineering

Advance in Apparel Manufacturing  
Duration: From 14 November 2021 to 14 February 2022

## ACKNOWLEDGEMENT

My first gratefulness goes to Almighty Allah to give me the strength and ability to complete the industrial training and this report Who has made our life more beautiful, glorious and honored.

A number of people have made significant contributions to the preparation of this report. Their insights, advice and suggestions helped us a lot. Firstly, I am very much thankful to MD Selim, Lecturer, Sonargaon University (SU), for his encouragement and valuable suggestions for continual improvement of the report. My Internship Supervisor who offered me to do internship in GoldTex Garments Ltd. I got tremendous support and guidance throughout the internship period. Working with him I have earned not only valuable knowledge but also inspired by innovativeness which helped to enrich my experience to a greater extent. His ideas and way of working is truly remarkable.

I would like to thank the Chairman, Managing Director, General Manager, Deputy General Manager, Manager, Assistant Manager, Senior Production Officer, Production Officer, Assistant Technical Officer, Technical Officer who gave us scope & helped for doing industrial attachment in the factory as well as for giving scope to work in their respective section.

I would also like to express my gratitude to Mr. Aga Mohammad Shafiul Azam (General Manager), GoldTex Garments Ltd who helped us and give me his valuable time. Being involved with them we have not only earned valuable knowledge but was also inspired by their innovativeness which helped to enrich our experience to a greater extent. I believe this report could not be finished if they did not help us continuously.

I am also very much grateful to Sahaba Yarn ltd authority for giving us opportunity to do our internship work in their factory.

## DECLARATION

We hereby declare that, this project has been done by under supervision of MD Selim, Lecturer, Department of Textile Engineering, Faculty of engineering, Sonargaon University (SU). We also declare that, neither this project nor any part of this project submitted elsewhere for award of any degree.

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Submission Date:12 February, 2022



## Letter of Approval

12 February, 2022

The Head

Department of Textile Engineering  
Sonargaon University (SU),  
146, Mohakhali, Dhaka-1212

Subject: Approval of Industrial Attachment Report of B.Sc. in  
Textile Engineering Program.

Dear Sir,

We are just writing to let you know that this Industrial  
Attachment in GoldTex Garments Ltd.

has been prepared by the student bearing Tex- 1801013019 &  
Tex-1801013067 completed for final evaluation. The whole  
report is prepared based on the proper investigation and  
information in GoldTex Garments 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

.....  
Kamrul Hassan Bhuiyan  
Coordinator  
Department of Textile Engineering  
Sonargaon University (SU)

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# CHAPTER 1: EXECUTIVE SUMMARY

## 1.0 EXECUTIVE SUMMARY

The Industrial Attachment is that the only means for attire producing student to be achieved the information concerning the sensible field of the Textile producing. It brings a chance to all or any the learners to complement their educational information by active with the specialists of the sensible field of textile.

We performed our internship on **GoldTex Garment Ltd**, which is situated on Old EPZ, Savar, Dhaka. The length of our training period during two months. We were joining our training on October 01, 2018 and it finished on November 25, 2018. In a short. In this industry there are several sections such as, Sample Section, Cutting Section, Sewing Section, IE and Planning Section, Inventory Store, Zipper Store, Accessories Store, Packing and Delivery Section etc. All of the sections help us to improve our knowledge.

In this report we tried to cover a short profile of GoldTex Garments Ltd. and major customers of GoldTex Garments Ltd. and their different activities.

It is our pleasure that we had an opportunity to complete our two month internship at GoldTex Garments Ltd. which is one of the most modern industries of the country.

# CHAPTER 2: INFORMATION ABOUT FACTORY

## 2.0 Information about factory:

### 2.1 Introduction:

The industrial attachment is that the method, that builds understanding of the performer, which improves his knowledge in boosting productivity and services. University education immense theoretical data additionally as additional sensible attachment, in despite of these industrial attachment helps to be aware of technical support of recent machinery, skills concerning numerous process stages. It's additionally enough sensible data concerning production management, work study, efficiency, engineering, purchasing, utility and maintenance of machinery and their operation techniques etc.

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.

### 2.2 History of Project Development:

GoldTex Garments Limited was established in 2007 in DEPZ of Savar, Dhaka for meeting the demand of good quality garments worldwide. The unit started operations in 2007 and its production capacity fulfilled the expectations of the management and proved as a successful venture.

At early years GoldTex garments had to pass very difficult time. It still exists only for its honesty, integrity, moral scruples and for its business ethics. And for that reason now this organization is in a successful and stable situation in the subsequent years.

This organization is also adapting some important policies like getting official approval of ISO Quality Standard practices, ensuring total compliance of various Code of Conduct requirements of prestigious buyers across the world, prioritizing the need for creation of ideal work conditions for the workers and ensuring proper health care & safety for them.

GoldTex garments never miss to meet future challenges. This organization always tries to give its best to achieve professional competence and reliability.



It always tries to give something better than its customer's expectation. For this reason it's not only treated as a trusted supplier of readymade garments but also as a caring partner toward all its buyers and customers.

## 2.3 General Information about the Factory:

**Country:** China

**Products:** Garments

**Workforce:** 2800 (as on, December 2017)

**Sanction Date of BEPZA:** 21 August 2007

**1. Company Name:** Goldtex Garments Ltd.

**2. Type:** A

**3. Contact Details (Top Management):**

Name	Nationality	Designation	Mail ID	Contact No
Ngan Hung Tak	Chinese	President	<a href="mailto:ngant@gcheadwear.com">ngant@gcheadwear.com</a>	(852)29540915
Yu Way Ming Paul	Chinese	Executive Director	<a href="mailto:pauyu@sc.gcglobal.com">pauyu@sc.gcglobal.com</a>	+88-02-7789223~4
Tanvir Hossain	Bangladeshi	General Manager	<a href="mailto:tanvir@actor.gcglobal.com">tanvir@actor.gcglobal.com</a>	+88-02-7788505~6

## 04. Short information:

**Factory Space:** 1, 85,538 square feet

**Sewing Lines:** 21 Nos.

**Major Product:** Trousers, Short and long pant (woven)

**Production lead time:** 60-90days.

**Production capacity:** around 30, 00,000 per annum

**Production per year:** 3,000,000 pcs.

**Annual Volume:** USD 30,000,000.00

05. **Daily working hours:** 8:00 am to 8:00 pm (1 hour lunch break). 8:00 pm to 8:00 am

06. **Facility:** Own premises & transport facility, GSP Facility, Modern machinery and techniques, High quality production.

07. **Efficiency:** High skilled technician, staff & workers.

08. **Fabric Sourcing (Local) :** South China Bleaching and Dying Factory Ltd, EOS Textile, Shasha Denim, Hyopshin Bangladesh Ltd.

**Fabric Sourcing (Import):** China, India, Pakistan, Taiwan, etc.

**Fabric Inspection System:** 4 point system

**Garments Inspection System:** AQL 2.5

09. **Trade Term:** FOB.

**L/C Requirements:** Irrevocable L/C at sight.

**FOB Price Range:** USD 7 to 12 / pc.

**Bank Details:** 1) the Hong Kong and Shanghai Banking, Corporation Limited.

**SWIFT:** HSBCBDDH A/C # 050-000116-096

10. **Machineries:**

(a) **Sewing:** Basic, Double Needle, Over Lock, Barteck, Kansai special, Button Hole, Eyelet

Button Hole, Button stitch, Pocket welting, Hemming, Flat Lock, Feed of the arm, Top stitch, Velcro Attach, Blind Stitch.

(b) **Cutting:** Fusing Machine, Band Knife, Cutter Machine, Lay Cutter Machine.

➤ **Auto Spreading:** 6 Tables and 2 sets Cutter machine (Lectra -MH). Cutter Machine

➤ **Cutting Table (Manual):** 5 Nos.

(c) **Finishing:** Vacuum Iron, Trousers Finisher, Thread Sucking, Cartoon Binding, Needle Detector, Button Pull Test, Auto Tag gun, Metal Detector, Trimming Machine.

**Wrinkle Free Process:** Pressing Machine (Topper- 17 sets & Legger-12 sets), Curing Oven (Nagi Shing -1 set, Sussman-1 set), Two (2) Cooling Room.

(d) **Fabric Inspection Machine:** Shiaw Tai Tong (Two Sets)

(e) **Computer Pattern & Marking Software Name:** Lectra

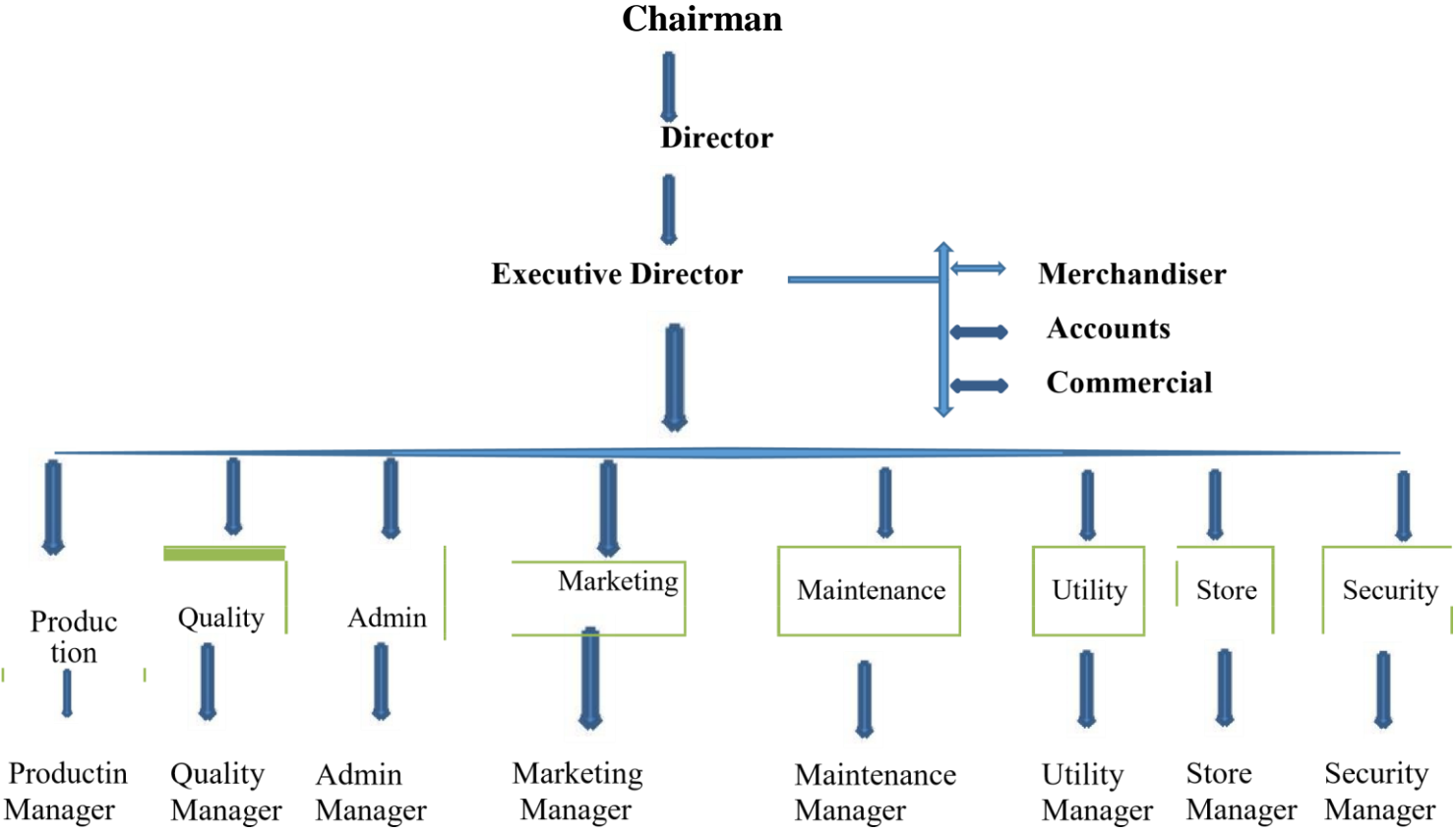
#### 11. Other sister Concern:

- South China Bleaching and Dying Factory,
- Goldtex Ltd. (Weaving Division),
- South China Washing Plant,
- Actor Sporting Ltd. (Garments Division)
- Actor Sporting Ltd. (Head Ware Division)
- Global Attire Ltd.

#### 12. Organizational Organogram:

- Goldtex Garments Ltd maintains several departments as follows:
- The Human Resources Department (HRD)
- Marketing Department
- Production Department
- Commercial/Shipping Department
- Accounts Department

2.4 Organogram:



## 2.5 Location:

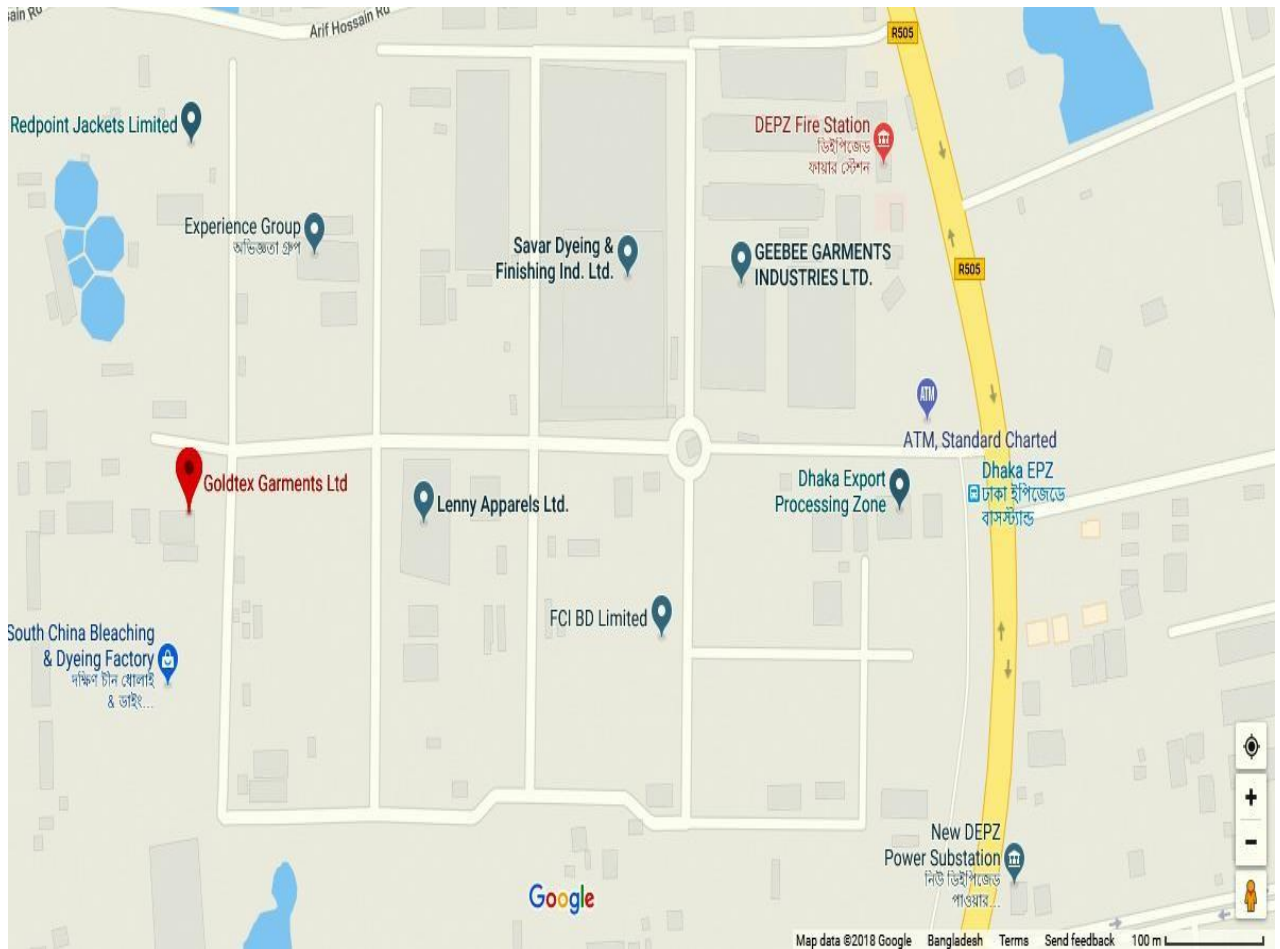


Figure: Goldtex Garments Limited Location Map.

## 2.6 Activities of Administration:

- To monitoring the attendance sheet of the worker.
- To monitoring the register book where suggested workers' attendance & overtime. □  
Following the policies of the company to new recruited workers.
- Recruited new workers via following the guidelines of the company.
- Checking the various types of Bills
- Prepare salary sheet after end of the month.
- To problem ID Card.

## 2.7 Responsibility of Production Manager:

- To match production sample with target sample.

- To collect production sample matching for next production.
- To identify disputed garments & report to director.
- Also execute overall floor works.
- To maintain loading & unloading record.
- Any other assignment given by higher authority.

## **2.8 Mission:**

Goldtex Garments Ltd. aspires to achieve its vision through:

- Effective and efficient use of resources
- Adoption of modern management and production methods
- Ensuring high employee morale and loyalty
- Providing invaluable supply chain solution thus becoming irreplaceable to the customer
- Reducing risk to the business through diversification
- Increasing global exposure
- Rigorously following the market.

## **2.9 Vision:**

- Its visions to provide customers with the highest possible quality of service and product.
- To be an invaluable business partner with all counterparts.
- To achieve this through the most efficient and modern management practices.
- To be established as a leader in industrial production in diversified products and services.
- To make a positive global contribution.

2.10. Objectives of Quality control:

- Research
- Raw materials selection
- Process control
- Process development □ Product testing.

## 2.11 Equipment's:

Factory is totally equipped and conditioned to cover requirements for International and National Social Compliance, some features of which are as follows:

Stair Cases: Six feet wide spacious stair cases with one emergency evacuation.

Wash Room & Toilet: 1: 25 Persons.

Exit Signs: Exit signs are marked clearly for emergency evacuation.

Medical Facility: One M.B.B.S doctor caters to the health needs of the workers.

Emergency Medical: Trained team of staff & workers to take initiatives in case of emergencies. First Aid: Adequate First Aid Boxes/Kits are placed at different Places.

Emergency Tele No: Lists containing emergency Telephone numbers such as Fire Brigade, Hospitals & Police Stations hanged for emergency needs.

Fire Extinguisher: Fire extinguishers are placed in a very balanced manner.

Fire Drill: Weekly fire drills are initiated.

Emergency Light: Emergency lights are there to use in case of power failure.

Alternative Power: Power Generator (Cummins) is used in Garments unit as source for instant supply of sufficient power for smooth operation during the power cut from national power supply grid.

Work Environment: An excellent work environment exists in the Factory. Adequate ventilation & bright electric light is provided. Music & public address systems are always there inside the Factory.

Child Labors: No child labor is allowed to work as per company policy.

Day Care Center: The Company runs a day care center for workers children.

Weekly Holiday: The Company follows the 7th day rest policy for each and every day.

**2.12 Company Products:**



Women's long pant



Men's long pant





Men's short pant








**Women's short pant**

**2.13 Major Buyer's:**

Buyer's Name	Logo
Hagger	
Epic	

E-Land	
VF Asia	
Perry Ellis	

PVH	
Amazon	
Spao	

Jaytex	
JC Penney	
Academy	

**2.14 Major Export country:**

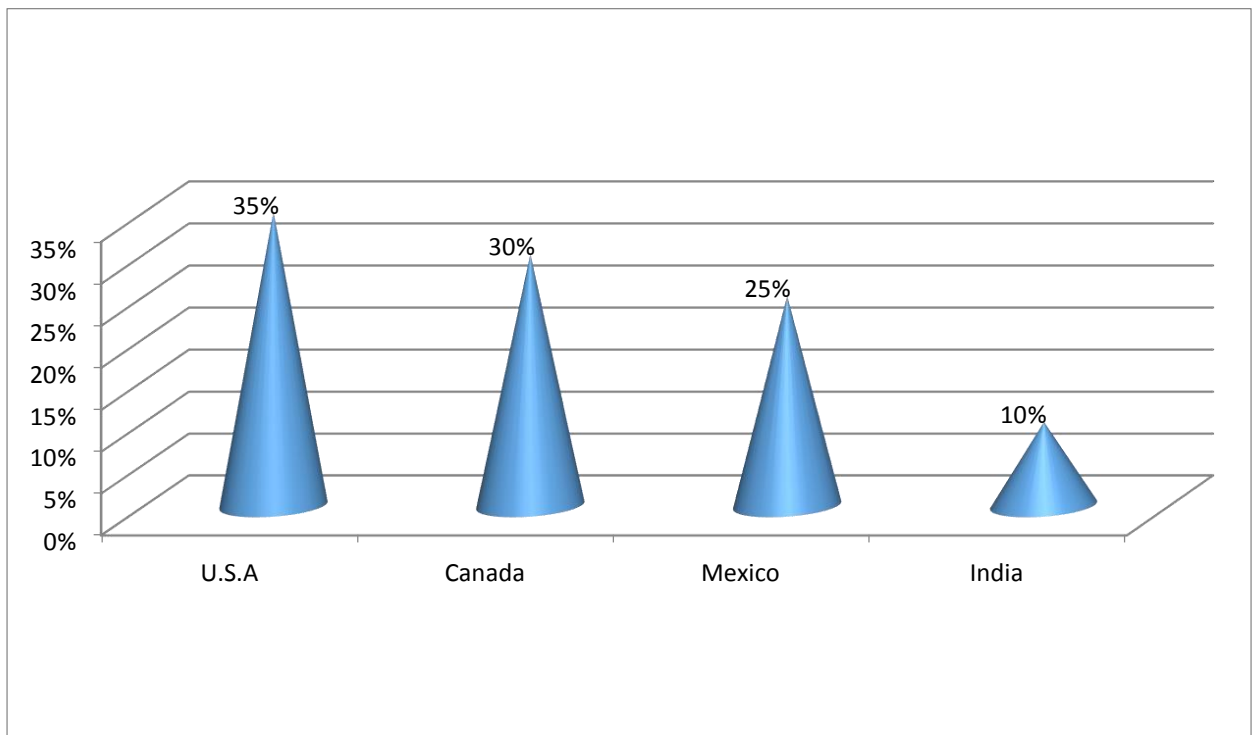


Figure-1: Major Export country

EPZ export their products in many places. They also export their products out of our country. Like they export their products in U.S.A 35% then they export products in Canada 30%, in Mexico 25% and then they export in India 10%. These exports are one of the main sources of their success

## 2.15 Buyer Majority:

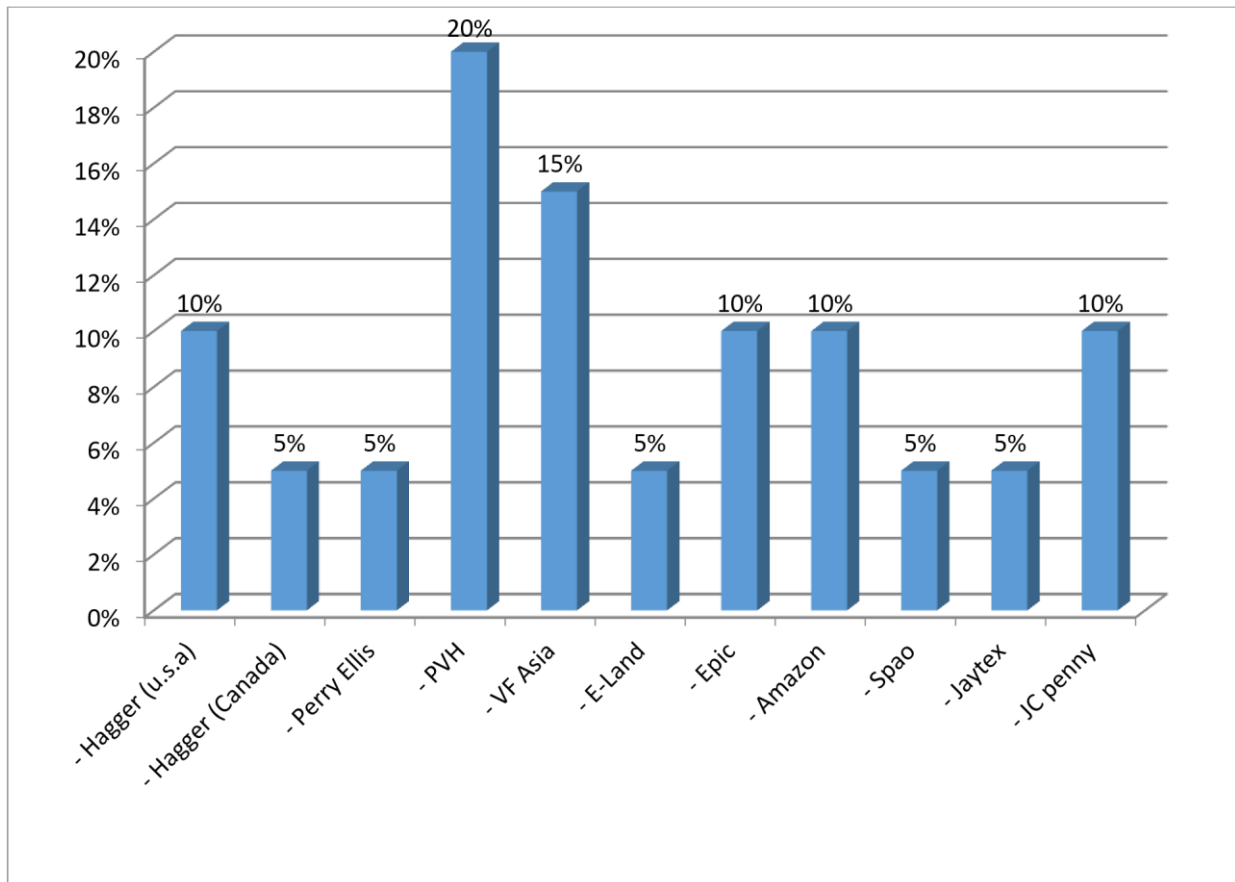


Figure-2: Buyer Majority.

Here, PVH, VF Asia has maximum export percentages from Goldtex Garments Ltd.

## **2.16 Compliance & HRD:**

The company is very much aware of and maintaining the buyer's as such:

- Adequate working area.
- Well ventilated and well lighted.
- Provision of hygienic toilets facilities.
- Adequate supply of filtered drinking water.
- Adequate fire equipment's are provided in all working area.
- Adequate safety exits are provided.
- Maintain the local labor laws, rules and regulations for payment of wages as well as we provide other facilities.
- To keep pace with ever-changing global market demand and make the best use of updated technologies we regularly arrange training on upgrading skill.
- They have achieved WRAP certificate and are maintaining its all principles to uphold the rights of workers.

# CHAPTER 3: DESCRIPTION OF THE ATTACHMENT

## 3.1 Overall production:

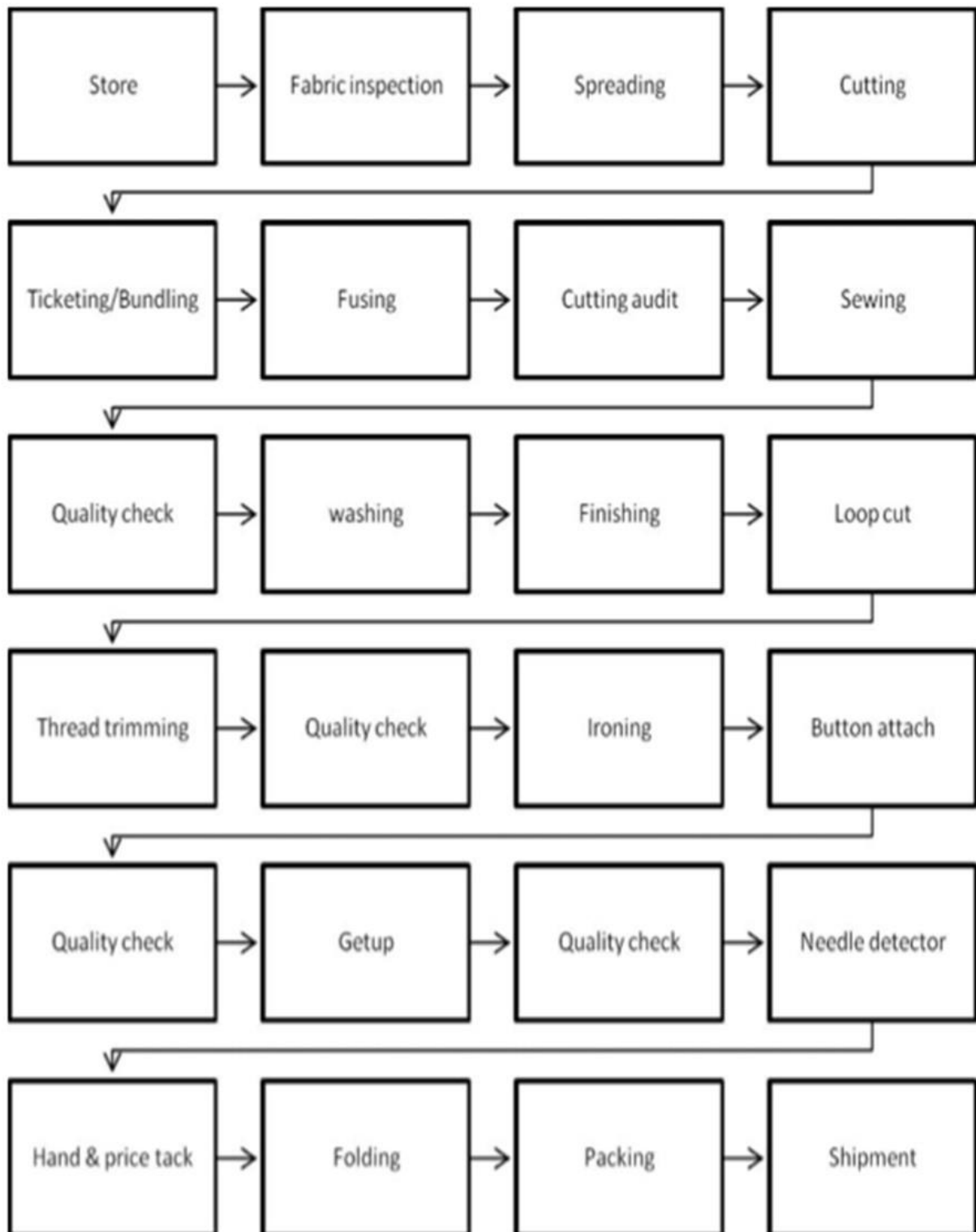


Figure-3: Overall Layout

### 3.2 Store Department:

Goldtex Garments Ltd. Store department has a separate area located in the 2nd floor. Goldtex Garments Ltd. have a large and modern store department such as different type of fabric, accessories and yarn storage.

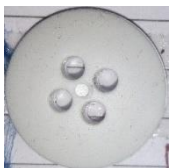


Figure-4: Store Department

#### 3.2.1 Different types of accessories:

##### Button:

1. Plastic: clear (2 & 4 holes), Horn (2 & 4 holes), chock.
2. Metal: 4-hole metal or Alloy button, shank button, snap button, press button, Ring snap, Rivet button.



Rubber Button



Clear Button (plastic)



Plastic Button

**Label:**

- Main label
- Name label
- Care label
- Size label



ash  
label

are  
label

atch

label

- Regular label etc.



Main label

Size  
label

& content label

Content

& Care

Hang

tag

Price tag



**Zipper:**

- Nylon zipper
- Metal zipper





Metal zipper

Invisible or Hidden zipper

Nylon or coil zipper

**Elastic:**

- Adjustable elastic
- Plain elastic



Elastic

**Other accessories:**



Hook & Stopper  
pin



Buckle



Metal tape



Lock

**Sewing Threads:**



Req: No: 18832<sup>12018</sup>  
 Buyer: SS35 ZAND  
 POG: SS35  
 Colour: BLACK  
 Cutting No: (X)

Date: 5/11/18  
 Style: SP7A 944107-00  
 PO:  
 Line No: B1-01

Size:	78	78	82	86	90	Total
Qty:	421	630	1051	843	420	3365
Size Label	421	630	1051	843	420	3365

ITEM NAME	SAP CODE	COLOUR	SIZE	ISSUE QUANTITY
Care/Size label		BLACK-		3365 PCS.
Main Label		"		3365 PCS.
PO-Label	CARE LAB!			3365 PCS.
Twill Tape	HOOK BAB-	BK-NICKEL-		3365 PCS.
Sewing Thread	ELASTIC-	BLACK-	4cm-	2000 Y
	SILICONE BAND-			9226 PCS.
Zipper	NYLON ZIPPER - #580		14cm-	421 PCS.
			14.5cm-	630 PCS.
			15cm-	1051 PCS.
			15.5cm-	843 PCS.
			16cm-	420 PCS.

Sewing: \_\_\_\_\_  
 Cutting: \_\_\_\_\_  
 Store: 05-11-18

Cutting or Accessories Report

GoldTex Garments Ltd.  
 Plot No. 96-100, DEPZ, Savar, Dhaka, Bangladesh. Tel: 88 09611-55113

Style: HM885506. HARBAR<sup>12018</sup>  
 THREAD RECEIVE REPORT  
 PRO. ORDER: 8579

REC DATE	PURCHASE ORDER	COLOR	SAP CODE	SIZE	QTY	REMARK
16/10/18	820 48742	C7727	TE00079	19	37	
"	821 48742	C7927	TE00064	"	85	
"	" 27	C7927	TE00077	T.10	01	
"	" 81	C8304	TE00064	19	84	
"	" 1204	C8304	TE00077	T.10	01	
"	" 14	C8304	TE00077	19	38	
"	" 820 48742	C9760	"	"	38	
"	" 14	C9760	TE00064	"	10	
"	" 820 48742	C9760	TE00077	T.10	01	
"	" 14	C2712	TE00064	19	32	

Thread Received Report

### 3.2.2 Fabric Storage:

Goldtex Garments Ltd. has a large fabric store. Capacity of fabric storage is 250000 yards. Above 40 people work here to receive and handling fabric roll. Responsibility of fabric stores in-charge to store the fabric safely & correctly. Fabric stores in charge records every day fabric stock and Register.



Figure: Fabric Storage

#### Fabric types:

- Cotton Poplin
- Cotton Yid Check
- Cotton Twill
- Cotton Canvas
- Cotton Denim
- Single Jersey
- 2×2 Rib
- Place
- Linen Fabric
- Various types of pocketing Fabric
- Knitted/ Interline Cotton Fusing etc.

### 3.3 Fabric Inspection:

Fabric inspection is the most important in garments sector. Fabric inspection section has separate area is located in the ground floor. There are 2 fabric inspection machine in fabric inspection section.

They inspect the fabric according to 4 point system. After inspection fabric is wound on roller.

Defect length	Penalty Point
Less than 3 inch	01
Less than 3-6 inch	02
Less than 6-9 inch	03
More than 9 inch	04
Hole any	04



Figure: Fabric inspection

### 3.4 Sample Section:

Goldtex Garments Ltd. Sample section has a separate area located in the ground floor. Goldtex Garments Ltd. have a large sample section. The sample production capacity 30-35 pcs Par day.

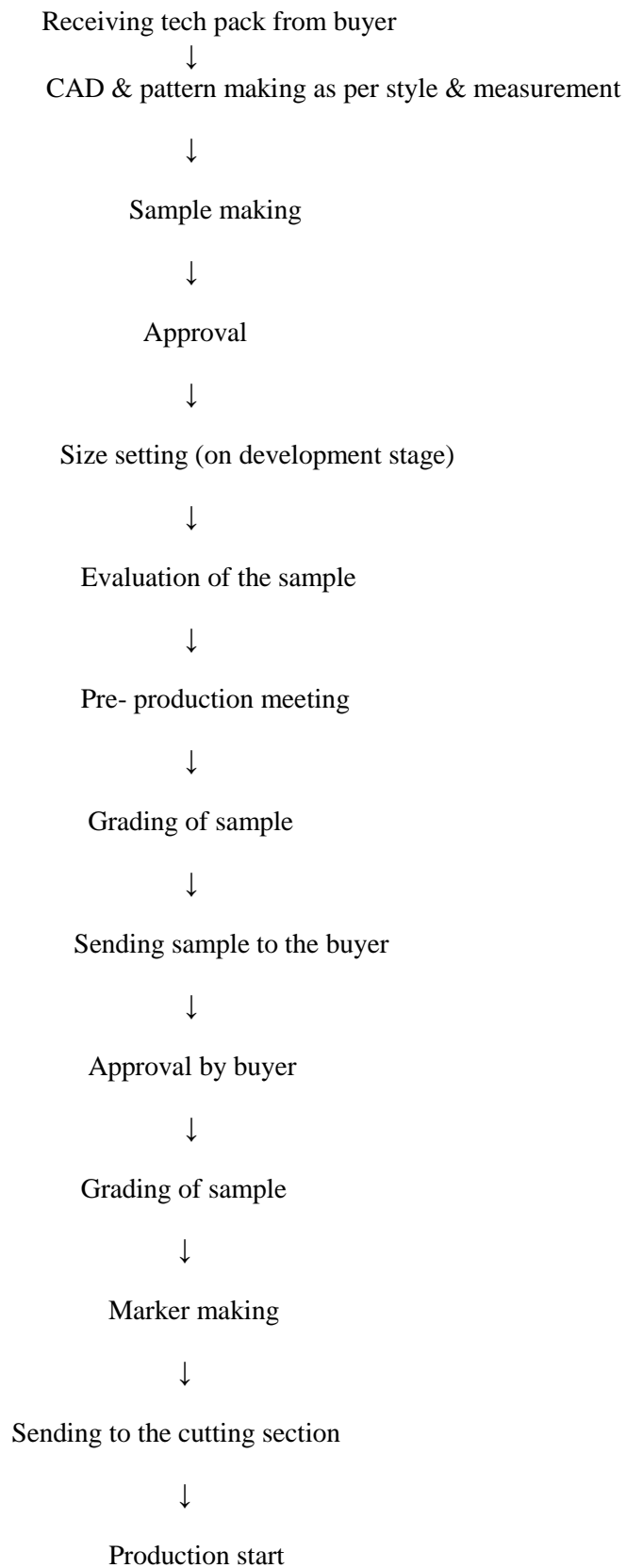


Figure: Sample Section



Figure: Sample Section Layout.

### 3.4.1 Flow chart of sampling process:



### **3.4.2 Different Types of Sample:**

- Original Sample
- Counter Sample
- Proto Sample
- Advertising/Photo Shoot Sample
- FIT Sample
- Size Set Sample
- Pre-Production Sample
- Top Sample
- Shipment Sample

#### **Proto Type Sample:**

This is the first sample given to the buyer. The sample is prepared according to requirement of buyer and this is the rough sample. The range of sample is about 1-2 to vary according to the requirement of buyer.

#### **Counter Proto Sample:**

This sample is based on the received from the buyer. For this sample, 2-3 pieces are required.

#### **Salesman Sample:**

Buyer sends the samples in market by salesman to get market feedback from customers it is done may exceed depending on season and customer. Buyer has to sell these garments to check and view.

#### **Photo type Sample:**

Actual fabric and the accessories used to make this fabric then it is send to the buyer. It is only one size Like “M”.

#### **Fit Sample:**



The sample made by the following only the measurement chart. Then the sample is called fit sample.

#### **Size Set Sample:**

When all size of samples are included in a set those sample is called is size set sample.

#### **Counter Proto Sample:**

This sample is based on the received from the buyer. For this sample, 2-3 pieces are required.

#### **Production Sample:**

During production some of the sample garments collecting from the production line then send to the buyer these are called production sample.

#### **Shipping Sample:**

After final inspection, when shipment the goods to the buyer destination some sample should be send to buyer air advanced this sample are called shipment sample.

#### **Approved Sample:**

The sample is approved by buyer.

### **3.4.3 Sample production capacity:**

The sample department produces 30-35 pcs of average sample everyday together with SMS.

### **3.5 CAD section:**

CAD has introduced a revolution inside the Textile business. The time overwhelming and cumbersome method of material coming up with has been created easier through CAD. Currently thoughtful and innovative patterns rectangular measure presented to the cloth designers and fabric makers at the clicking of a mouse. As soon as the merchandise in premanufacturing stage rectangular measure designed with the assistance of computer-based tools, it is termed as CAD. Normally the acronyms like CAD additionally are used that indicate

"Computer-aided fashion and drafting" and "Computer-aided Industrial Design" severally. These terms square measure mainly utilized in the sectors pertaining to the producing of engineering merchandise. As way as fabric enterprise is said, CAD is normally used for

decoding computerized coming up with. It consists of each, computer code and usually specialpurpose hardware. Sparrow Apparels Ltd has its own CAD department. They use LECTRA software for making marker and pattern.

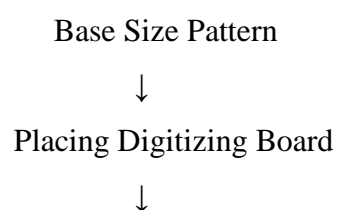


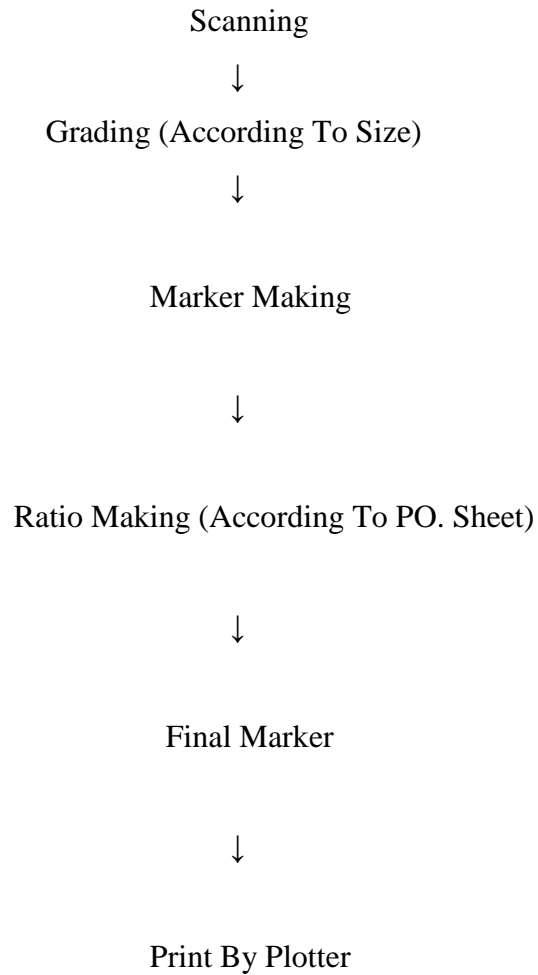
Figure: plotter

### 3.5.1 Objectives of CAD:

- Make guiltless pattern.
- Save the time factor.
- Reduce wastage.
- Make marker planning in best way.
- Maximum output in a short time.

### 3.5.2 CAD Flow Chart:





### **3.5.3 CAD Executive Activities:**

- Pattern Making & Booking.
- All Pattern Grading For Booking & Costing.
- Production Pattern Grading For Size Set.
- Size Grading Pattern for Printing Plotter Cutting Machine.
- All Kinds Of Wash Added.
- Pattern Adjustment.
- Emails Send/Received.

### 3.6 Marker Making:

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 limit the wastages. The width of a marker is equal to the width of the fabric and it need to not be larger than the width of the fabric i.e. the width of the marker is saved much less than or equal to the width of the Fabric. The pattern pieces should be positioned very carefully in such a way that it will obviously limit wastages.

#### 3.6.1 Types of marker:

1. Normal marker
2. Line marker
3. Block marker

#### 3.6.2 Objectives of Marker Making:

- To reduce cost.
- To enhance the satisfactory of the garments
- To limit the reducing time;
- To facilitate large scale production.

#### 3.6.3 Good Marker depends on:

- Type of garments,
- Garments design,
- Fabric size and width; if fabric size or table length is high marker efficiency is additionally high, □ Fabric characteristic, □ Quality of garments etc.

So, good marker plan reduce the wastage of fabric. Therefore, right marker plan is very important.

#### 3.6.4 Marker Efficiency:

$$\text{Marker Efficiency} = \frac{\text{All pattern on the marker}}{\text{Total area of the marker}} \times 100\%$$

If marker efficiency is more, then fabric wastage % is low.

If marker efficiency is low, then fabric wastage % is more.

### **3.6.5 Factors affecting Marker Efficiency:**

- Size of pattern pieces.
- Length of the marker.
- Pattern Engineering;
- Method of marker making;
- Marker width;

# GARMENTS UNIT OF CUTTING SECTION

## 3.7 Cutting:

Godtex Garments Ltd. cutting section has separate area is located in the ground floor. Cutting is a method to cut the garments according to marker planning. Example: Front part, back part, pocket etc. Godtex Garments Ltd. has a large and modern cutting department.



Figure: Cutting Section Layout.



Figure: Cutting machine/section

The fabric is then cut with the help of fabric cutting machines appropriate for the type of the cloth. These can be band cutters having comparable work technique like that of band saws, cutters having rotary blades, machines having reciprocal blades which saw up and down. Computerized machines use both blades and laser beams to cut the cloth in favored shapes.

### 3.7.1 Details of cutting section:

There are 5 cutting table (Manual0 of Goldtex Garments Ltd.

#### 1st cutting table:

- Length – 50 feet
- Width - 7 feet

#### 2nd cutting table:

- Length -50 feet
- Width - 7 feet

#### 3rd cutting table:

- Length – 51 feet
- Width – 7.5 feet

**4th cutting table:**

- Length -48 feet
- Width – 7 feet

**5th cutting table:**

- Length -50 feet
- Width – 7.5 feet

**And 2 sets auto cutter machine (Lectra-MH)**



**Figure: auto cutter machine (Lectra-MH)**

### **3.7.2 Fabric Spreading:**

With the help of spreading machines, fabric is stacked on one another in reaches or lays that may go over 100 ft. long and hundreds of plies (fabric pieces) thick.



### 3.7.3 Equipment of Fabric Spreading:

- Spreading surface.
- Spreading machines.
- Fabric controlling device.
- Fabric cutting devices.



Figure: Auto Fabric Spreading Machine

### 3.7.4 Cutting room Activities:

- Planning / cut plan according to shipment schedule.
- Fabric, Interlining receives from store room as per order.
- Approved pattern receive from PDS section.
- Marking & copying/ Marker receive from CAD.
- Spreading fabric as per cut plan.

- Cutting.
- Bundling.
- Numbering.
- Racking.
- Fusing / Embroidery / Printing.
- Issue / Supply to sewing floor.
- Maintain receiving & Issue register.
- Keep all record perfectly



Figure: Bundling



Figure: Numbering

### 3.7.5 Process Sequence of Cutting Section:

Received approved pattern



Marker Making



Fabric Spreading



Placing Marker Paper On To the Lay



Fabric Cutting



Numbering



100% Checking and Parts Replacing If Needed



Sorting and Bundling



Sewing

# GERMENTS UNIT OF SEWING SECTION



Figure: Sewing Layout

### 3.8.1 SEWING SECTION:

Sewing section is the most important section of a garment manufacturing industry. This sewing section is placed on 3<sup>rd</sup> and 4<sup>th</sup> floor. Total number of sewing line 21. Sewing machines of different types are arranged as a vertical line to assemble the garments. Sequence of types of sewing machine arrangement depends on sequence of assembling operations.

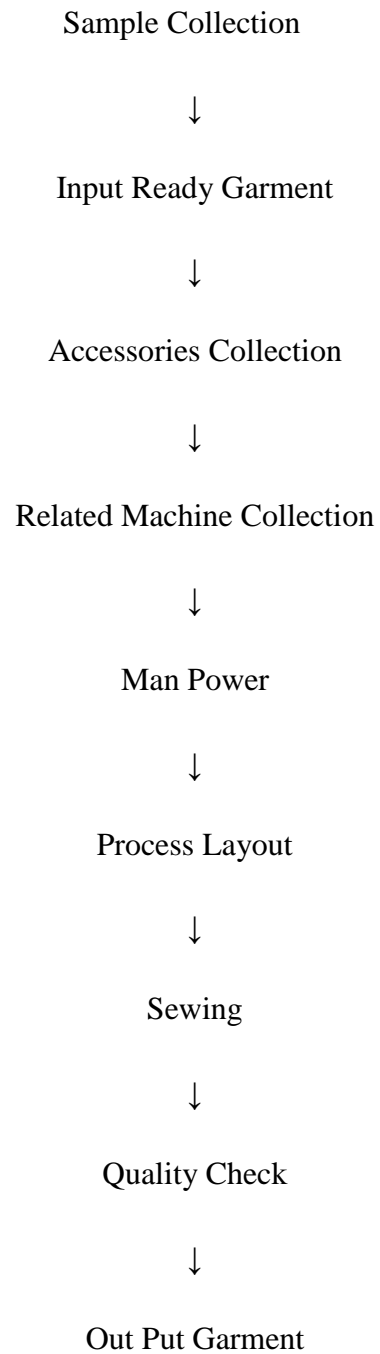


**Figure:** Sewing section

### 3.8.2 Total machineries:

- Single Needle: 513
- Double Needle Lock Stitch: 103
- Chain Stitch: 122
- Over Lock: 125
- Bar tack /Button Attach/Button Hole: 94
- Automatic Sewing Machine: 81
- Cutting Section: 66
- Finishing Section: 89

### 3.8.3 Flow Chart for Sewing Section:



### **3.8.4 Different types of sewing machine:**

- Plain sewing machine ( lock stitch )
- Chain stitch machine
- Over lock stitch machine
- PMD sewing machine (KANSAI)
- Button attaching machine
- Flat lock stitch machine
- Eyelet hole machine
- Normal button hole machine
- Snap button machine
- Bar tack machine
- Blind stitch machine
- Feed of the machine
- Pin Eyelet machine
- Shuttle stitch machine
- Waist band attaching machine with chain stitch
- Zigzag machine



Figure: lock stitch Machine



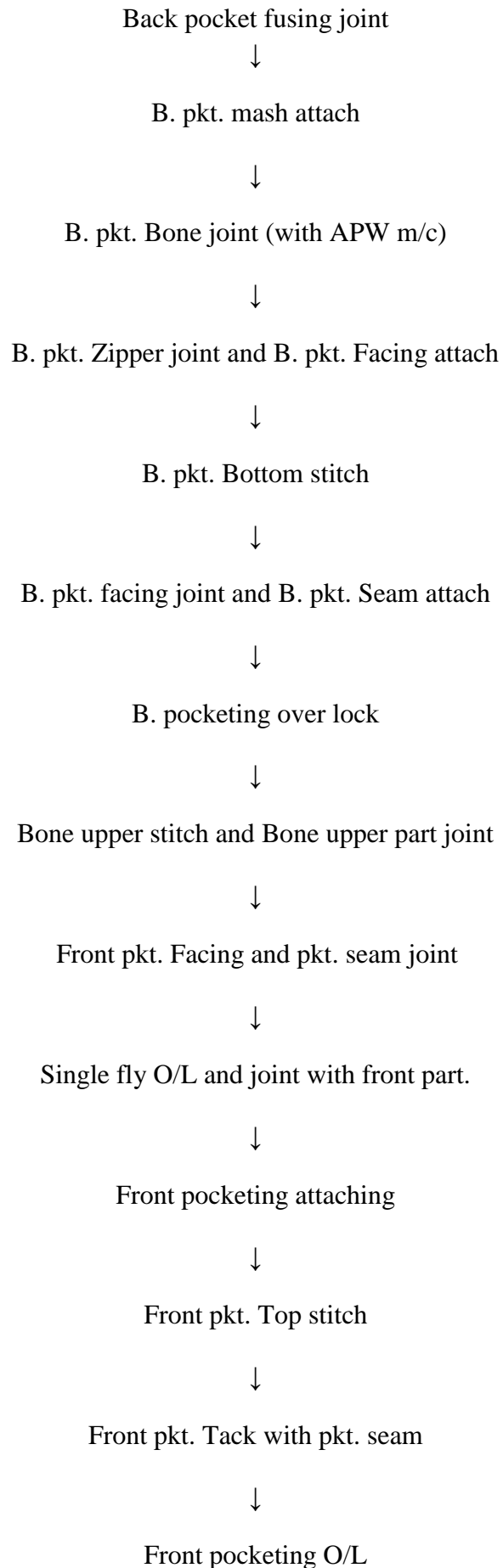
Figure: Over Lock Machine.

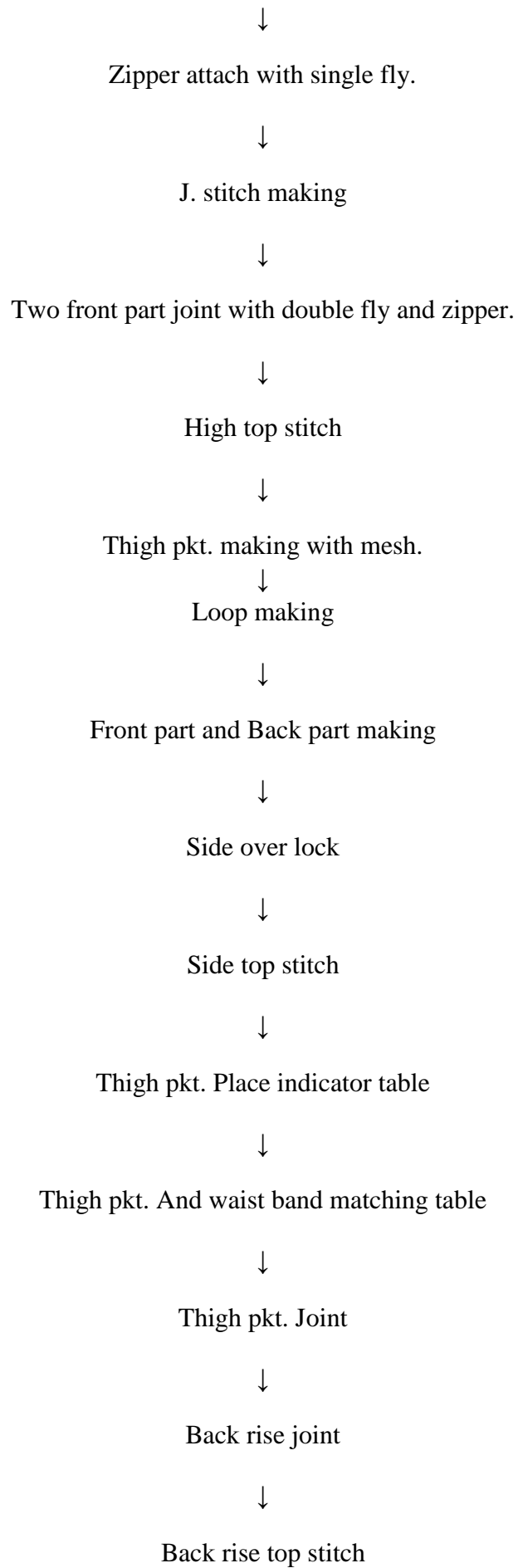


Figure: Bar tag lock stitch Machine.



### 3.8.5 Sequence of sewing of a Basic pant:







Loop joint



Belt joint with size label joint



Mouth tack



Belt elastic joint



Inseam O/L



Hem joint



False tack



Belt joint with Elastic (bottom stitch)



Belt joint center stitch



Mouth close top stitch (tack)



Bar tack: Loop, Front pkt., J. stitch, Crotch point.



Figure: Front view



Figure: Side view

# GERMENTS UNIT OF SECTION

# FINISHING

## 3.9 Finishing

Finishing the last step of the garment production and last section of Goldtex Garments Ltd. It is placed on 2th floor. Total man power of finishing section 350person.



Figure: Finishing Section Layout.



**Figure: Finishing Section**

**List of Accessories used in Finishing:**

- Main Level
- Size Level
- Care Level
- Hang Tag
- Bar code Sticker
- Poly Bag
- Tag Pin
- Carton

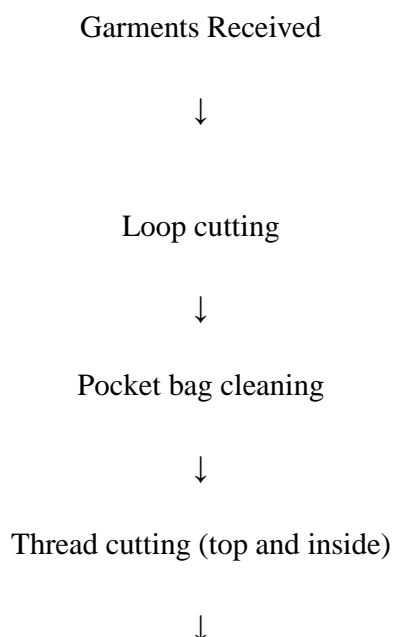
- Hang Tag String
- Clip
- Paper Gum Tape
- Silica Jell
- Tissue Paper

### 3.9.1 Ironing:

This is a finishing process done by subjecting a cloth to heat & pressure to remove unintended creases and to impart a flat appearance to the garments .pressing is done to introduce creases in the garments, pressing is called Ironing.

- Remove of unwanted creases and impurities.
- To apply creases where necessary.
- Shaping.
- Final pressing

### 3.9.2 Finishing Flowchart:



Pocket bad iron



Inside (back and front) check



Thread sucking



Top side iron



Measurement



Auditor



Waist tag, Hand tag attaching



Folding



Poly



Cost tape



Poly sticker attach



Packing





## Carton



**Figure : Needle Detector machine.**



**Figure: Folding and Packing section.**

## **Machines**

- Heat Transfer Machine
- Iron Machine.

## **Types of Folding**

- Hanger Folding
- Solid Folding
- Blister Folding
- Ratio Folding

## **Type of Packing**

- Solid Size Packing
- Ratio Packing
- Assort Packing

## **Types of Carton**

- Box Carton
- Plain Carton
- Master Carton
- Inner Carton

## **Types of Poly**

- Single
- Ratio
- Assort

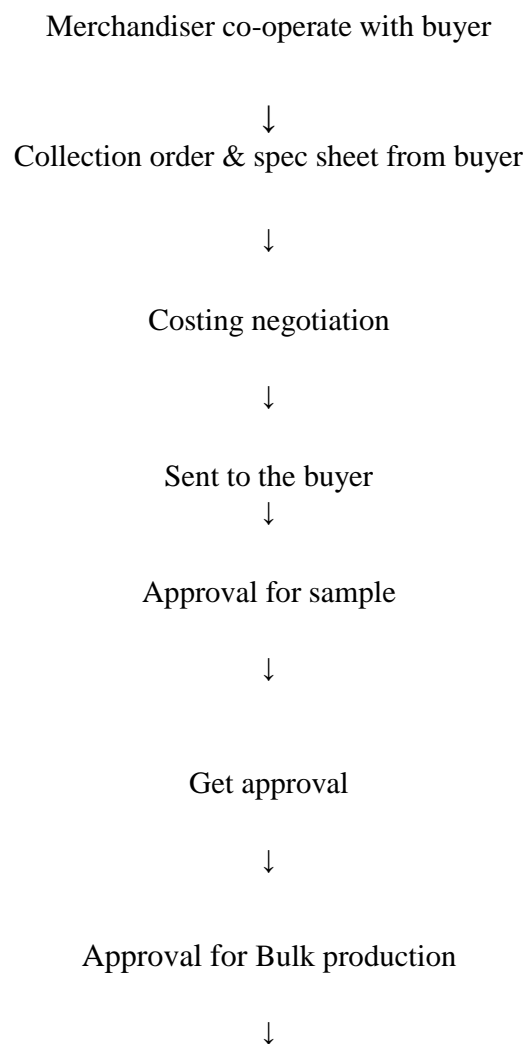
## 3.10 MERCHANDISING DEPARTMENT

### 3.10.1 Merchandising:

Merchandise means goods bought and sold; and trading of goods. Merchandising is an activity of selling and promoting the goods.

A garment export unit normally has many departments like stores, cutting, production, packing, checking etc. Merchandising department is the star of the department among all the working departments in the Export concern, because Merchandising is the only department having maximum control over the departments and whole responsible for Profit and loss of the company.

### 3.10.2 Process Flow chart of Merchandising:



Production follows up



Inspection



Finishing & delivery



Banking procedure



Shipment

# CHAPTER 4: IMPACT OF INTERNSHIP

## 4.0 IMPACT OF INTERNSHIP:

### 4.1 Impact of fabric inspection section:

- Learned about machine use in fabric inspection.
- How to use 4 point system.
- Different types of fault on fabric.
- How to check shading.
- Woven and knitting fabric inspection system.

### 4.2 Impact of Cad section:

- How to make pattern. □ Side size making/grading □  
Marker making. □ Drawing board
- Printing machine.

### 4.3 Impact of Sample Section:

- Sample section is called a mini-industry.
- Know Different types of sample.
- Skilled worker works in sample section.
- Introducing with cad and the digitizing board in CAD room.
- Preparing a pattern for an individual size & design.
- Understood how to make marker from a pattern by software in CAD room.

### 4.4 Impact of Cutting Section:

- Different types of cutting machine use in the cutting section (i.e. Straight knife cutting machine, Round knife cutting machine, Band knife cutting machine etc.).
- Learned the process of fabric spreading.
- Fabric cutting according to the marker.
- Well sharpened blade.
- Use of anti-fusion paper.
- Less cutting speed.

- Understood different process of fabric lay.
- Use of metal gloves for fabric cutting process with different cutting machines.
- The panel check process for different type of fabric of different style and design.
- Understand how numbering and bundling is done.
- The role of input man in the industry.

#### **4.5 Impact of Sewing Section:**

- Different types of sewing machine.
- Different parts of a Pant.
- Different body parts sewing or joining process of a pant.
- Learned about different type of machines used in a sewing floor (i.e. Single or double needle lock stitch machine, Multi needle chain stitch machine, over lock machine, bar tag lock stitch machine etc.).
- Observed the ironing and fusing process for different body parts (i.e. single fly, double fly etc.).
- Different types of stitch.
- Learned about Standard Minute Value (SMV) of different sewing process.
- The process of determining operator's efficiency in an individual process for a pant.
- Cleared the conception about production of a sewing floor.
- Line inspection and table inspection.
- The importance of final inspection at the end of every sewing line.
- Also got experienced in making capacity graph of a sewing line of a definite style and design.
- Maintenance sewing section working process.

## **4.6 Impact of Finishing Section**

- Various type of finishing process after sewing and washing.
- Different type of machines used in finishing section (i.e. iron machines, Metal detector machine etc.).
- Different type of iron machines Use in finishing section.
- Learned about various type of accessories used to attach to the garment (i.e. Hang tag, Price tag, Name label, Care label ,Size label, Care label, Barcode label etc.).
- Observed the application of different chemicals for the removal of various type of stain.
- Different type of folding process (i.e. Standard fold, Semi-standard fold, Hanger fold, Solid Folding, half fold, Full fold etc.).
- Cleared the conception about different packing type (i.e. Master pack, Blister pack, Solid Size Packing, Semi stand up pack, Coffin pack etc.) and packing ratio.
- Finally realized why finishing section is unavoidable in garments industry for making the garment attractive and decorative for selling purpose.

## **4.7 Impact of Merchandizing department:**

- Swatch card making.
- Fabric consumption.
- Learnt about thread consumption.
- Shipment consumption and container measurement

## **CHAPTER 5: CONCLUSION**

### **5.0 CONCLUSION:**

Industrial training sends us to the expected destiny of practical life. The completion of the two month Industrial training at the “Goldtex Garments Ltd” have got the impression that factory is one of the modern export oriented complex in Bangladesh. It has earned “very good reputation” for its best performance over many other export oriented textile mills.

During my training period, talking with the production Director of this factory we know that the factory fulfilling the countries best export oriented finished garments due to its modern machinery & good management system. I am enough fortunate that I have got an opportunity of having an industrial training in this factory. During the training period I received cooperation and association from the authority full & found all man, machines & materials in appreciable working condition. All staffs & officers were very sincere & devoted to their duties to achieve their goal.