



Faculty of Engineering

Department of Textile Engineering

Study on knit Garments Merchandising

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Submitted by

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Advance in Apparel Manufacturing Technology

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# LATTER OF APPROVAL

To,  
Lecturer  
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Subject: Apporval of Project Report of B.sc. in TE program

Dear sir,

We are just writing to let you know that this project report titled as “Role of a merchandiser in knit garments” has been prepared by the students Sohel Rana ID: 163-23-4845 and Faisal Sarker ID: 163-23-253 is completed for final evaluation. The whole report is prepared based on the proper investigation and interruption though critical analysis empirical data with required belongings. The students were directly involved in their project activities and the report become vital to spark of much valuable information for the readers.

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

Your sincerely

Mst. Sharmin Akter  
Lecturer  
Department of Textile Engineering  
Daffodil international university

# ACKNOWLEDGEMENT

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We hope their valuable information regarding to production process will help us a lot for our future carrier inshaAllah.

## **DECLARATION**

We hereby declare that, this project has been done by us under the supervision of **Mst. Sharmin Akter**, Lecturer, **Department of TE** Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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## **ABSTACT**

The Project on study on knit Garments merchandising it's based on the most important section in the knit garments industry. This section can compare with the hart of body. Without this section someone can not get any order, and then it is impossible to think about other things like as productin, delivery, shipment etc. Bangladesh is a developing country. The development and progress of the country largely depends on export performance. In case of Bangladesh among the export sectors the ready made garments (RMG) are the main earning source of foreign currency. In the garments and textile industry, merchandiserhave been playing a vital role for the execution of export order. There are large numbers of merchandising personnel who are working in the garments and tedtile subsectors. The goal of this projects is to know the role of a merchandiser step by step.

## Table of Contents

<b>LATTER OF APPROVAL</b> .....	<b>iv</b>
<b>ACKNOWLEDGEMENT</b> .....	<b>v</b>
<b>DECLARATION</b> .....	<b>vi</b>
<b>ABSTACT</b> .....	<b>vi</b>
<b>CHAPTER ONE</b> .....	<b>1</b>
<b>INTRODUCTION</b> .....	<b>1</b>
1.0 Background of study:.....	2
1.1 Objective of the study .....	2
1.2 Methodology .....	3
1.3 Limitation.....	3
<b>Chapter: 2</b> .....	<b>4</b>
<b>Literature Review</b> .....	<b>4</b>
2.1 Concept of Merchandising:.....	5
2.2 Merchandiser.....	5
2.3 A Merchandisers key responsibility is as follows: .....	5
2.4 Sampling .....	7
2.5 Role of merchandiser in garments business .....	7
2.5.1 Chronologies of events of merchandiser.....	8
2.6 Product package analysis .....	10
2.6.1 What all are there in the product package: .....	10
2.7 Samples .....	12
2.7.1 All sample and their implications.....	12
2.7.2 Proto sample.....	12
2.7.3 Counter Sample .....	12
2.7.4 Sealed Sample (Red-Sealed/Yellow-Sealed) .....	13
2.7.5 Size Set Sample .....	14
2.7.6 Pre-Production Sample.....	14
2.7.7 Production Sample .....	15
2.7.8 Bulk production Sample.....	15

2.7.9 Photo shoot sample.....	15
2.7.10 Salesman Sample.....	16
2.7.11 Shipment Sample.....	16
2.8 Consumption & Costing .....	17
2.8.1 Heading Of Costing.....	17
2.9 Factors Affecting Consumption & Costing .....	17
2.10 Different types of printings.....	18
2.10.1 Factors Affecting Cost of Printing .....	19
2.11 Should learn to differentiate and assess all types of Embroideries .....	19
2.11.1 Calculation of Embroidery Cost Per Dozen [3] .....	20
2.11.2 Factors Affecting Cost of Embroidery: .....	21
2.12 Accessories .....	21
2.12.1 Button.....	23
2.12.1 Button Measurement .....	23
2.13 Letter Of Credit.....	23
2.13.1 Types of Letters of Credit (L/C) .....	24
2.13.2 Assessment of commercial cost .....	24
2.14 Sea Freight .....	25
2.15 Air Freight.....	25
<b>Chapter 03 .....</b>	<b>27</b>
<b>Experimental Details .....</b>	<b>27</b>
3.0 Experimental Details.....	28
3.1 .3 Specification sheet .....	28
3.1.2 Polo Shirt .....	28
3.2 List of Sewing Machine use for Polo Shirt.....	29
3.3 Thread consumption.....	29
3.4 The Data Composite Knitting Ind. Ltd. ....	29
3.5 Cost Approval For Back To Back L/C .....	31

3.6 Marketing Cost Analysis For Approval.....	32
3.7 Costing of the Product .....	33
<b>Chapter-04 .....</b>	<b>34</b>
<b>Result and Discussion .....</b>	<b>34</b>
4.1 Consumssion of polo T-shirt 3.1.2 .....	35
4.2 Standard Rules: .....	35
4.3 Essential Requirement for Sewing Thread of 3.3.....	36
4.4 Zipper .....	36
4.5 calculate the Zipper Length of 3.7.....	36
4.6 CM calculation of 3.7 and 3.5 .....	38
<b>Chapter-05 .....</b>	<b>40</b>
<b>Conclusion .....</b>	<b>40</b>
5.0 Conclusion .....	41
*References:.....	42



# **CHAPTER ONE**

# **INTRODUCTION**

## **1.0 Background of study:**

We should first understand the term "garment merchandising". "Garments" means clothing or clothing that we have to wear every day, to everyone, every time, not just in our country, but around the world. "Merchandising" means buying, producing and selling any product or product or service for the local or international market. If we combine these two English words "garment merchandising", the meaning of "garment merchandising" becomes the following definition. Specific quantities for specific quantities involve the purchase of any garment exported to a particular design, with specific attention to the level of garment required for sequence analysis, requiring the export of that quantity within the garment production, production schedule and garment export. Deadlines can be called Merchandising. From the aforementioned definition of garment merchandising, it can be clearly deduced that the purchase of garment export, which is L / C export, is not so easy as the satisfaction of the buyer in the limited time. Garment merchandising activities are usually performed by a dynamic and expert person called Garment Merchandiser.

Person "Garment Merchandiser" is one of the most important key people in the garment export and garment export sector. Ultra modern technology is being used in the woven and knitwear industry in the outside world besides Bangladesh. To survive in the free market of ORLD, we need to use the latest technology in the world of readymade garments. Merchandiser practices, procedures and techniques will be covered in preparation for the shipment order of the study. Bangladesh is a developing country. The development and progress of the country depends largely on the export performance.

### **1.1 Objective of the study**

- To know the way of order taken from buyer.

- To archive buyer requirement.
- Follow up the working procedure of a merchandiser
- To make the development sample

## **1.2 Methodology**

- Textile factory
- Book
- Internet
- Practical information from factory

## **1.3 Limitation**

- Time constraint
- Lack of experience
- Lack of sufficient guide from factory

# **Chapter: 2**

## **Literature Review**

## 2.1 Concept of Merchandising:

Merchandising is the division that mediates the marketing and manufacturing departments. It is the methodology, practice and management used to promote and maintain specific activities.

These include managing and overseeing product line development from beginning to end. Marketing and Merchandising Division: A group of merchandisers and marketers work together under the head of profit control. Merchandisers operate overseas buyers. Teams are created according to the way customers operate.

## 2.2 Merchandiser

The person who deals with merchandising is called merchandiser. Coordinates with the merchandiser design team to effectively present the product or product line. He develops color and specification and does market research to determine the most effective way of selling and promoting products per This person needs strong communication and negotiation skills and visual and analytical ability. He or she must also be a creative and innovative thinker.

## 2.3 A Merchandisers key responsibility is as follows:

- Product Development
- Sample Development
- Buyer Handling
- Production Follow up
- Booking Fabric
- Booking Accessories & Trims
- Meeting with buyer
- Selling the concept
- Booking orders
- Confirming Deliveries
- Designing and Sampling

- Costing
- Payments Follows
- Internal & external communication,
- Shipment Responsibility

## 2.4 Sampling

- Lab dips
- Accessories & Trims
- Preparing internal order sheets
- Preparing purchase orders
- Production consulting and production support
- Mediation Production and Quality Departments
- Suggestions from the quality department about the standard level
- Provide shipping instructions and the following shipping
- Help in the documentation section
- Following up the shipment
- Taking responsibility for inspection

## 2.5 Role of merchandiser in garments business

The main role of the Garment Merchandiser is to collect the Garment Export Order (Export L / C). Garment manufacturing, garment export and profits. A merchandiser requires a lot of knowledge, experience and a lot of effort in order to perform these functions successfully. To understand the role of the garment business merchandiser, we need to look at who the merchandiser has to deal with to handle any process or order of merchandising.

Source of fiber to make fabric

- Cultivator and farmer to produce natural fiber, chemist, miners and industrialist to produce artificial, synthetic and mineral fiber
- Processing industries to process fiber
- Marketing media and agents for marketing of fiber
- Spinning mills to produce yarn from fibers
- Fabric producing mills from yarn (weaving, knitting, felting, bonding mills etc)
- Marketing agents and media to do the marketing of fabrics
- Mills and industries to dye the fabrics
- Industries to produce dyes and chemicals for dyeing of yarns and fabrics
- Industries to give special effect to fabrics
- Various printing industries to do printing in fabrics and garments

- Accessories producing industries
- Garments manufacturing factories
- Washing industries to wash the garments and to give special washing effects on garments
- Lab testing units to do all lab test on various parameter of garments.
- Various international inspecting authorities

Cargo carrying transport land, sea and air

- Consolidators Freight Forwarder and Stuffing agent
- Various Courier services to carry documents and samples (some time also limited cargo)
- Various insurance agencies all over the world to cover insurance of cargo
- Main buyer for garments with chain stores or whole sell store
- Buying agent and local media
- Whole seller of garments
- Retailer of garments either as a chain store or as regular outlet for selling the garments
- Customer or the ultimate user of garments

Now it has become clear that in order to deal with all the above organizations, industries or individuals, a merchandiser has to be a special person with a lot of qualities such that a person cannot be a good merchandiser if he is not equipped with the qualities and knowledge of different topics. If one has to designate as a merchandiser, the word itself demands some qualities from that person.

## **2.5.1 Chronologies of events of merchandiser**

- Buyer Sourcing (webpage hosting, profile creation, home buying, etc.)
- Order sheet receive
- Discuss with the planning department for availability of production space.
- Discuss with Prodec Dir / GM about the ability to manage this national chain and the potential productivity per hour.
- Analyze product packages and space sheets for cost.
- Find out the consumption of fabric.
- the fabric content, knitting pattern, GSM Analyze and do fabric costing.



- Analyze printing, embroidery, value addition work washing for costing.
- Analyze productivity per Hr with machine and manpower requirement (may take help from production people).
- Assess cost of making per Dozen.
- Confirm price from component authority
- Quote price to buyer
- Negotiate price with buyer
- Confirm order with buyer
- Prepare time and action calendar (with available production lead time)
- Prepare Gantt chart (in support of T&A and incorporate all important issues and events with completion date)
- Receive size color breakdown and color standard.
- Prepare lab dip, strike off, yarn dip etc and arrange approval of the same.
- Receive art work and sample for printing, embroidery, value addition work, washing and get approval for the same.
- Develop all samples and submit the same to buyer for necessary approval.
- Obtain and ensure all approval as per T&A and Gantt chart to facilities production as per plan.
- Receive master L/C
- Prepare final cost approval sheet to facilitate opening of all BB L/C.
- Open BB L/C for yarn, accessories, printing, embroidery etc
- Arrange all fabric and accessories and ensure in house of the same as per T&A.
- Source for printing, embroidery, value add work, washing and complete deed of agreement with them.
- Ensure inventory of all items on arrival to store to confirm the qty, color, sizes and quality as per requirement
- Arrange all pre-production meeting and inspection on time.
- Arrange all lab test on time.
- Ensure dispatch and approval of all samples which may affect the final inspection and shipment
- Arrange final inspection on schedule date.
- Do load calculation and ensure booking of all load carrying transport well in advance.
- Ensure space booking with sea and air freight forwarder.

- Help commercial department to submit all documents to bank on time.
- Ensure realization of full payment as per shipped qty and price

## 2.6 Product package analysis

In order to execute any order, a merchandiser must understand the product package (order sheet) provided by the buyer. All merchandiser activities will be affected by product package details and information such as yarn requirements, fabric costs, cost of clothing, production plans, time and action calendar preparation, gantt chart preparation, collection of accessories, sample handling and array.

### 2.6.1 What all are there in the product package:

- Name of buyer
- Season
- Designed by and creation date.
- Any revision with date
- Size range for which the garments will be made.
- Order quantity
- Delivery date
- Size and color break down.
- Packing ratio
- Fabric contents
- Knitting patterns
- Fabric GSM
- Measurement sheet with pictorial description
- Accessories details
- Stitching details with all attachment, details of accessories and their source including lab test requirements.
- Packing details with carton size, carton mark, shipping mark, assortment ratio and Qty per ctn.
- Details of folding and placement of all finishing accessories.
- Details of printing (if there is any printing).
- Details of embroidery and appliquéés (if there is any embroidery and application).

- Details of ornamentation and their placement/attachment details.
- Details of shipping marks and carton marks.
- Details of destinations.
- Details of freight forwarder and freight payment terms.
- Details of shipping lines and port of entry and port of discharge (may be in also).
- Details of lab test requirement and testing organization.
- Details of samples and their destinations.
- Details of inspection and quality level (AQL)
- Details of carton size, ply, color and restriction on use stapling pin, PP band, poly (PP or PE)

## 2.7 Samples

In garments industry, the sample which is come from buyer and it is followed for bulk production called sample.

### 2.7.1 All sample and their implications

- Allowed samples
- Counter sample
- Proto sample
- Sealed/Red/Yellow label sample
- Size set sample
- Pre-production sample
- Trial production sample
- GFE sample
- Lab-test sample
- Flammability test sample
- Photo shoot sample
- Sales man sample
- Shipment sample
- Top of the product sample (TOP)

### 2.7.2 Proto sample

- The preliminary sample can only be made to this factory to see if the factory is capable.
- Fabric (should be same material and construction but may not be the same color)
- Accessories (available but similar if good).
- Embroidery (simulation of only one size and width with no embroidery, but placement should be accurate)
- Printing (simulation with the same size / print type but may not be of the same pattern and color) Attachment of Value Added Items / Omamenation (may be simulated with like items)
- Washing (Proper fabrication can be done if fabric construction and materials are true see the effect of high/low, abrasion, hand feel, softness and drivability)

### 2.7.3 Counter Sample

Usually the duplicate sample retained by the future reference for the sample room is known as the

counter sample but for the H&M buyer the counter sample means all the actual, with no witch approval can be processed as such the counter sample for H&M is very important and carries a different meaning all together.

- Fabric (Actual)
- Accessories (All actual)
- Printing (All actual)
- Attachment of Value Added Items (Actual)
- Washing (Actual with all effect of high/low, abrasion, hand feel, softness and drapability in acceptable quality)
- Finishing and folding (As instructed by buyer)
- Finishing accessories (As instructed by buyer)
- Packing (As instructed by buyer)

## **2.7.4 Sealed Sample (Red-Sealed/Yellow-Sealed)**

Different buyers have different types of protection seals that they attach to the garment after check. These seals are given as an endorsement of styling, measuring, printing and embroidery and confirmation of all sewing details. This sample must be handled with a charge so that the seal does not break. When purchased QC clothing comes in to inspect, they will ask for sealed samples and at that time if they see the seal being tampered or broken, they may refuse to monitor it as it should be stored carefully and whoever conducts this sample must Understand the importance of these samples.

- Fabric (Actual)
- Accessories (All actual)
- Printing (All actual)
- Attachment of Value Added Items (Actual)
- Washing (Actual with all effect of high/low, abrasion, hand feel, softness and drapability in acceptable quality)
- Finishing and folding (As instructed by buyer)
- Finishing accessories (As instructed by buyer)
- Packing (As instructed by buyer)

## 2.7.5 Size Set Sample

Usually a medium size is taken into account when making a sample. However the garment is graded for all sizes once the details of all measurements and fittings are confirmed. Grading-down is done for similar shapes and grading-up is done for upper shapes. With this grade measure, garments of all sizes are made and the accuracy of their suitability is evaluated. Without a full-size set, bulk production cannot proceed because it is also very important and will be prepared and submitted in a timely manner to begin bulk production by the due date.

Fabric (Actual)

- Accessories (All actual)
- Printing (All actual)
- Attachment of Value Added Items (Actual)
- Washing (Actual with all effect of high/low, abrasion, hand feel, softness and drapability in acceptable quality)
- Finishing and folding (As instructed by buyer)
- Finishing accessories (As instructed by buyer)
- Packing (As instructed by buyer)

## 2.7.6 Pre-Production Sample

They are very important as such production cannot be started without the approval of the sample. There is nothing to be confused with the size-set sample as the size-set sample only covers the size where the pre-production sample can have all the colors of the fabric as different colors can have different types of compression and cross-staining character which can be treated with special care.

- Fabric (Actual)
- Accessories (All actual)
- Printing (All actual)
- Attachment of Value Added Items (Actual)
- Washing (Actual with all effect of high/low, abrasion, hand feel, softness and drapability in acceptable quality)
- Finishing and folding (As instructed by buyer)
- Finishing accessories (As instructed by buyer)
- Packing (As instructed by buyer)

## 2.7.7 Production Sample

Such samples are taken from the production of floors to determine the overall quality of the clothing being produced.

Fabric (Actual)

- Accessories (All actual)
- Printing (All actual)
- Attachment of Value Added Items (Actual)
- Washing (Actual with all effect of high/low, abrasion, hand feel, softness and drapability in acceptable quality)
- Finishing and folding (As instructed by buyer)
- Finishing accessories (As instructed by buyer)
- Packing (As instructed by buyer)

## 2.7.8 Bulk production Sample

Such samples are taken from the production of floors to determine the overall quality of the clothing being produced.

- Fabric (Actual)
- Accessories (All actual)
- Printing (All actual)
- Washing (Actual with all effect of high/low, abrasion, hand feel, softness and drapability in acceptable quality)
- Finishing and folding (As instructed by buyer)
- Finishing accessories (As instructed by buyer)
- Packing (As instructed by buyer)

## 2.7.9 Photo shoot sample

Sometimes buyers want to do the advertising well with the clothing before it is the same in the store / market, and then they ask for nicely sewn clothing. The photo of the garment puts some models in the same picture and it is displayed in retail stores or advertised to attract customers and in papers, magazines, brochures, etc.

- Fabric (Actual)
- Accessories (All actual)
- Printing (All actual)

- Washing (Actual with all effect of high/low, abrasion, hand feel, softness and drapability in acceptable quality)
- Finishing and folding (As instructed by buyer)
- Finishing accessories (As instructed by buyer)
- Packing (As instructed by buyer)

### **2.7.10 Salesman Sample**

These samples are meant to be provided to the buyer to help drive promotions for item marketing. These are displayed in chain stores / retail stores before the bulk amount received by the store.

- Fabric (Actual)
- Accessories (All actual)
- Printing (All actual)
- Attachment of Value Added Items (Actual)
- Washing (Actual with all effect of high/low, abrasion, hand feel, softness and drivability in acceptable quality)
- Finishing and folding (As instructed by buyer)
- Finishing accessories (As instructed by buyer)

### **2.7.11 Shipment Sample**

There may be three instances for the shipment sample with different requirements from the buyer (after inspection before buyer approval for final inspection, but hold the invoice and wait for buyer's comment, after the inspector sends the buyer inspected and shipped for presentation of the shipment).

- Fabric (Actual)
- Accessories (All actual)
- Printing (All actual)
- Attachment of Value Added Items (Actual)
- Washing (Actual with all effect of high/low, abrasion, hand feel, softness and drapability in acceptable quality)
- Finishing and folding (As instructed by buyer)
- Finishing accessories (As instructed by buyer)
- Packing (As instructed by buyer)



## 2.8 Consumption & Costing

This is the primary and important task for the merchandiser to know how to use and spend any garment fabric. The most important factor is the cost that must be done by a merchandiser that has to be adjusted to the existing market prices, otherwise the buyer will not be acceptable to the buyer because he or she will turn to such a factory so that the cost is more realistic and the price is paid for the conventional market. Equal to the price. The resonant garment is now more in need of heated merchandise, with surplus tools and techniques for casting raznables.

### 2.8.1 Heading Of Costing

Cost of Fabric	: US\$ 30.00
Cost of Accessories	: US\$ 3.00
Cost of Printing	: US\$ 2.00
Cost of Embroidery	: US\$ 3.5
Cost of Washing	: US\$ 1.5
Cost of Value addition work	: US\$ 3.0
Up charge for C & F order	: US\$ 1.0
Commercial cost	: US\$ 0.50
Up charge for deferred L/C	: US\$ 0.10
Cost of making	: US\$ 12.00
Charges for miscellaneous expenses	: US\$ 0.05
Total Cost (Per Dozen)	: US\$ 56.65
Buyer's Commission	: 2%
Local Commission	: 5%
Total Commission	: 7% ( US\$ 4.26)
Final cost (Per dozen)	: US\$ 60.91
Final cost (per piece)	: US\$ 5.08
Quoted price per pc	: US\$ 5.10
Revised price per pc	: US\$ 5.00
Confirmed price per pc	: US\$ 4.95

## 2.9 Factors Affecting Consumption & Costing

- ❖ Yarn / fiber material
- ❖ Type of yarn count (carded or combed)
- ❖ Pattern of knitting
- ❖ Fabric finishing
- ❖ Requirement of lab test
- ❖ Must use dyes and chemicals of various kinds
- ❖ Tolerance for varieties of die lot and shade
- ❖ Any restrictions on the use of dyes and chemicals
- ❖ Assortment and Packing type
- ❖ Garments pattern and design
- ❖ Matching instruction in case of Y/D and printed Fabrics
- ❖ The number of garments packed per poly, blister and carton
- ❖ Type of ply and thickness of carton ply and poly
- ❖ Details of shipping marks and carton marks
- ❖ Details of the accessories and their sources
- ❖ lab test requirement of Details printing
- ❖ embroidery Details
- ❖ AQL Level
- ❖ lead time of Production
- ❖ Quantity of garments
- ❖ Number of color and size of sequence, including lab test requirements for all colors
- ❖ Size and color ratio
- ❖ Tolerance in measurement and color shade variation
- ❖ Inspection authority
- ❖ Any hidden losses

## **2.10 Different types of printings**

- Allover print
- Screen print
- Reactive print
- Print with plastisol dye-stuffs

- Discharge print
- Pigment print
- Flock print
- Foil print
- Lurex print
- Embossed print
- Heat transfer print
- Hi-density print
- Dip-dye print

### **2.10.1 Factors Affecting Cost of Printing**

- Type of printing
- Size of printing
- Number of color of printing
- Any grading of size of printing from size to size
- Any restriction/selection of use of dyes and chemicals
- Lab test requirement
- Wash sustainability
- Tolerance in placement of print art-work
- Tolerance in color shade variation
- Place of printing

### **2.11 Should learn to differentiate and assess all types of Embroideries**

- Plain embroidery with one color
- Plain embroidery with multi color
- Embroidery with lurex thread
- Embroidery on printing
- Embroidery with application
- Embroidery with application over application
- Embroidery with laser-cut design
- Embroidery with sequin setting

## 2.11.1 Calculation of Embroidery Cost Per Dozen [3]

We know that the embroidery stitch unit is 12000 stitches but will not always accept any orders of embroidered factory stitch if the total handling time is too long due to the combination of work with applications, patches, wording, etc. Determine how much time is spent to complete such a batch. Will be

12000 Stitch= 1 unit in embroidery

For calculating the price of embroidery we need to know the following information

1) Stitch quantity of the design. Say, it is 8000

2) Rate of per unit. (its may vary depends on the design, also avail ability of factory). Say, it is \$0.25/unit

At first we will find out the unit per dozen. (Stitch qty X 12 / 12000)

Rules:

= (Stitch quantity X 12 ) / 12000 X Rate per unit

= 8000 X 12 / 12000 X \$0.25

= 96000 / 12000 X \$0.25

= 8 X \$0.25

= \$2.00/dozen

## 2.11.2 Factors Affecting Cost of Embroidery:

- Number of stitch
- Type of embroidery
- Time require to complete one batch
- Color of thread
- Cutting of appliqué (Dice or Laser cutter)
- Place of embroidery
- Resource and hand involves in doing embroidery
- Any restriction on selection on embroidery machine
- Any compliance requirement
- Any restriction on use of embroidery thread
- Any lab test requirement

## 2.12 Accessories

<b>Accessories</b>	<b>Selling Unit</b>
Woven main label	Doz
Woven care label	Doz
Woven size label	Doz
Printed main label	Doz
Printed size label	Doz
Printed care label	Doz
Hang tag (1 clr/ multi clr)	Doz
Price tag	Doz
Barcode	Doz
Swing thread	4000 m
Velcro tape	Yard
Eyelet (10-20mm w/washer)	Gross
Metal snap button (4 parts)	Gross
Poly bag (20 X 10)	Doz
Gum tape	Roll
Scotch tape	Roll
Metal clip	Box
P.P. Belt ( 120 Yd/ roll)	Roll
Cotton drawstring	Yard

Tissue paper	Doz
Tag pin	Doz
Shoulder pad	Pair
Plastic/metal stopper	Doz
Plastic/metal buckles	Doz
Polly button (12-18L)	GG
Horn button (12-18L)	GG
Polly button (20L – above)	Pc
Shank button (10L – above)	Pc
Rivet	Gross
Twill tape	Yard
Collar stand	Doz
Neck board	Doz
Back board	Doz
Butterfly	Doz
Plastic/Metal D-ring	Doz
Interlining (woven-fusible)	Yard
Interlining (woven-non fusible)	Yard
Interlining (nonwoven-fusible)	Yard
Interlining (nonwoven-nonfusible)	Yard

## 2.12.1 Button

Button use for functional or decorative purposes.

Ligne No.: 12 L, 14 L, 16 L, 18 L, 24 L, 30 L, 40 L

Button Size = Diameter of Button = Ligne No.

Button Use for T-Shirt / Polo Shirt = 16 L, 18 L (Common Use)

### 2.12.1 Button Measurement

1. Button Set on Paper / Button
2. Marking
3. Measure by Scale or Measurement Tape

Button Requirement for One Lac Pcs T-Shirt

1 Pcs T-Shirt = 3 Pcs Button

1 Lac Pcs Polo-Shirt = 1, 00,000 × 3 Pcs Button

= 3, 00,000 Pcs Button × 10% Plus

= 3, 30,000 Pcs Button / 1728 Pcs Button = 190.97 G.G. = 191 G.G.

- 12 Pcs = 1 Dzn
- 12 Dzn = 1 Gross = 144 Pcs
- 12 Gross = 12 × 144 = 1728 Pcs
- 12 Gross = 1 G.G.
- 1 G.G. = Great / Grand Gross

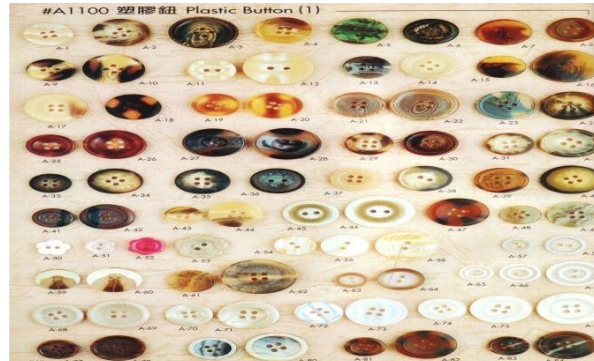


Fig: Button

## 2.13 Letter Of Credit

L/C A binding document that a buyer can request from his bank in order to guarantee that the payment for goods will be transferred to the seller. Basically, a letter of credit gives the seller reassurance that he will receive the payment for

the goods. In order for the payment to occur, the seller has to present the bank with the necessary shipping documents confirming the shipment of goods within a given time frame. It is often used in international trade to eliminate risks such as unfamiliarity with the foreign country, customs, or political instability.

### **2.13.1 Types of Letters of Credit (L/C)**

- Revocable Letter Of Credit.
- Irrevocable Letter Of Credit
- Confirmed Letter Of Credit.
- Confirmed And Irrevocable Letter Of Credit
- Transferable Or Divisible Letter Of Credit
- Back To Back Letter Of Credit
- Red Clause Letter Of Credit
- Sight Letter Of Credit
- Usance Letter Of Credit
- Revolving Letter Of Credit
- Stand-By Letter Of Credit

### **2.13.2 Assessment of commercial cost**

To execute any order there are lot of expenses other than making, like charges in banking documentation, expenses in custom, EPB port etc as such if this cost is not taken into consideration in garments costing then the same will be drained out from CM in your ignorance. Usually the expense is considered to be 1 to 2% of total L/C value. In case of big volume, the percentage may be less. Sometimes, we consider 35 to 65 cents per dozen considering the garments quantity. Nowadays buyer is taking garments on deferred L/C as such the bank who is helping us with BB L/C for arranging yarn, dyes/chemicals, printing, embroidery etc are not getting payment on shipment of garments rather had to wait for a certain period get the payment from the L/C opening bank as such bank will charge interest for such period for the BB L/C amount.



## 2.14 Sea Freight

Sea freight is charged based on volume as a quantity per CBM (cubic meter), rarely by weight as "density cargo". In fact, Arena (Asia North America Eastbound Rate Contract) designed freight tariffs based on the normal value of the goods; they should be given a lower freight rate for lower-priced merchandise, so that importers can buy goods overseas. However, for higher priced merchandise, they should charge a higher freight rate, as it is believed that buyers can pay more on goods. They designed the freight tariffs in such a way that everyone could do business and there was enough profit for the shipping line.

FCL: Full container Loading

LCL: Loose container Loading

If we ship very heavy goods as loose cargo because the size of the shipment is very small, the shipping lines will charge by weight or by volume whichever is higher. 1 CBM (100 cm X 100 cm X 100 cm) = 1000 Kg

20' container- 228''× 84''× 94'' (L-W-H), can load 27 CBM

40' container-474''× 84''× 94'' (L-W-H), can load 54 CBM

40' high cube container-474''× 84''× 106'' (L-W-H), can load 68 CBM

45' high cube container-45'× 8.4'× 9.5' (L-W-H), can load 76 CBM

## 2.15 Air Freight

Unlike sea transportation, airlines have decided to charge heavy merchandise (high density products) through weight and light weight merchandise (low density products) volume. However, planes can carry less weight than sea lines, the way they set the standard in the clothing industry, when you transport goods by air, you have a 70% chance of being charged by weight, about 30% chance by volume. The following are the relationships between weight and volume as determined by the IATA (International Airlines Association).

a. From most shipping locations in the Far East to the U.S. destinations and Canada 7000 cubic cm = 1 kilo.

b. From certain locations in the Far East to the U.S. destinations and Canada 6000 cubic cm = 1kilo.

Therefore, when you have low density products for transport by air, you should try to make your cartons as small as possible to save that cargo. First, check with a local air forwarding agent by asking him / her in the country where you are in, how many cubic centimeters is considered to weigh 1 kg. They will tell you 7000 or 6000. This is the answer you need. Then physically check the weight and measurements of the wells you pack for air shipment. For example, we now have 3 answers:

1. The country is Bangladesh and the formula is 6000 cubic cm = 1 kilo
2. The measurements of the cartons are 50cmX 60cmX 40cm
3. The gross weight of the cartons is 16 kilo per carton.

To save aviation with the following calculation, let us now try to make the cartons smaller, multiply 50 by 60 kilos by  $50 \times 60 \times 40 = 120000$  cubic centimeters by 120000 cubic cms Now you know, a carton of volume 2 Kilo, but by actual weight the carton is only 16kg. You also know that the airlines charge more than anyone else, in that case they will charge you with 20kg volume. If the air freight rate is 2.5 per kilo, your price for this carton will be \$ 56.00. Now, let's save some money, we usually try to cut the carton's height smaller. Let's say we were able to cut 5 cm high and see how much money we could save.

Note:

Original size of the carton: 50 X 60 X 35 cm (=20 kilo)

Now cut down to 50 X60 X 35 cm= 105000 cubic cm.  $105000 / 6000 = 17.5$  kilo

Now by using the new carton, we have saved 2.5 kilo and this carton will cost only \$ 49.00 (17.5Kilo X 2.80) .

# **Chapter 03**

## **Experimental Details**

### 3.0 Experimental Details

For completing thesis, we have visited garments factory active composite mills LTD. We collected information from the factory. We completed this inspection report by following several steps and they are in line inspection, end line inspection, finishing and sample development to shipment.

#### 3.1 .3 Specification sheet

Item	Point to measure	Size (Medium)
A	Body Length	82.75
B	½ Chest or width	54.52
C	Sleeve Length	25.51
D	Arm Hole	58.26
E	Collar Width	22.5
F	Collar Height	7.25

Figure: 3.1.3 specification sheet

#### 3.1.2 Polo Shirt



Figure: 3.1.2 Polo Shirt

## 3.2 List of Sewing Machine use for Polo Shirt

- Over Lock Machine
- Flat Lock Machine
- Plain Sewing Machine
- Buttonhole Machine
- Button Sewing Machine

## 3.3 Thread consumption

Serial No	Machine	Unit Proportion
01	PM Lock Stitch	2.5 to 3
02	Single chain stitch	4
03	Double needle (Chain stitch)	5.5
04	Lock Stitch (Zigzag)	7
05	Fagot	20
06	Over Lock 2 Thread	12
07	Over Lock 3 Thread	14
08	Over Lock 4 Thread	17.5
09	Over Lock 5 Thread	20
10	Over Lock 6 Thread	24
11	Flat Lock	32
12	Button Hole	20
13	Button Attach	5

Figure: 3.3 thread consumption

## 3.4 The Data Composite Knitting Ind. Ltd.

**Fabric Booking**

**Revised 01**

Note: Revise due to color change.

Job number : DCKIL/  
Buyer : TRITON  
Buyer agent : KIABI  
Style No : JRMW03POLOU  
Order No : 679419 & 679420  
Order Qty : 9000 Pcs  
Item : Men's polo shirt  
Fabric : 100 Cotton pique Super Combed 220 GSM  
Ship date : 03/10/2011

No need new yarn booking, Qty will be deduct from 100000pcs

Fabric wash for shrinkage control

Note: Each color contrasted herring bone tape at back neck as previous order



Colour	S	M	L	XL	XXL	Total
Bleu Fall (Ld-19451)	84	219	246	279	301	1129
Gris Corde (Ld-19274)	0	330	516	597	489	1932
Gris Perle (Ld-18885)	0	343	426	440	430	1639
Noir (19-4005 TCX)	2	759	1135	1161	1243	4300
<b>Total</b>	<b>86</b>	<b>1651</b>	<b>2323</b>	<b>2477</b>	<b>2463</b>	<b>9000</b>

**Body Fabric**

Dia	76"	Collar cuff	Total finish	Process loss	Total yarn Requirement
	<b>4.00</b>	0.75			
Bleu Fall (Ld-19451)	376	71	447	12%	500
Gris Corde (Ld-19274)	644	121	764	12%	856
Gris Perle (Ld-18885)	546	102	649	12%	726
Noir (19-4005 TCX)	1433	269	1702	12%	1906
	0	0	0	12%	0
<b>Total</b>	<b>2999</b>	<b>563</b>	<b>3561</b>		<b>3989</b>

**Collar**

Size	Length	width	Qty
S	40 CM	9 CM	95 Pcs
M	42 CM	9 CM	1734 Pcs
L	44 CM	9 CM	2439 Pcs
XL	46 CM	9 CM	2601 Pcs
XXL	48 CM	9 CM	2586 Pcs

**Cuff**

Size	Length	width	Qty
S	35 CM	3 CM	189 Pcs
M	36 CM	3 CM	3467 Pcs
L	37 CM	3 CM	4878 Pcs
XL	38 CM	3 CM	5202 Pcs
XXL	39 CM	3 CM	5172 Pcs

Also Note: We need 76" dia & 220 GSM after wash

Merchandiser

DOB(Marketing)

GM(Commercial)

Executive Director

Figure: 3.4 the data of composite knitting industry Ltd.

### 3.5 Cost Approval For Back To Back L/C

#### Cost Approval For Back To Back L/C

JOB NUMBER	: BKCL/	Date	: 11.02.2011
Buyer	: TRETON	Buying Agent	: KEABE
Style / Ref	: JRMWSPOLDO	Order Number	: 9.000
Description Of Garments	: Men's polo shirt	Order Quantity	: 9.000
Fabric's Description	: 100 Cotton pique Super Combed 220 GSM	Unit Price In USD	: 4.20
Color Of Fabric	: Average	L/C Number & Date	: 27.800.00
Quantity	: 9000/2011	L/C Value In USD	: 37.800.00

Order Value In USD	KLAB Bank charge	Freight	Charman	Comm.	Total M/E	Actual Value
37,800.00	2.0%	756.00	-	0.12/62	846.00	36,954.00

Yarn						
Descriptions	Consumption	Unit Price In USD	Value In USD	Made Of Payment	Approval	Acceptance
100% cotton combed 24/1	3,989 Kgs	4.65 /Kgs	18,547.25			
Grey melange		/Kgs	0.00			
		/Kgs	0.00			
		/Kgs	0.00			
			Total Cost In USD	18,547.25		50.19%

Knitting, Dyeing & Finishing						
Knitting	3,989 Kgs	0.25 /Kgs	899.66			
Dyeing	3,989 Kgs	1.65 /Kgs	6,581.28			
Grey melange	0	/Kgs	0.00			
			Total Cost In USD	7,480.95		20.08%

Accessories								
Sl	Item Description	Consumption Per Dozen	Total Requirements	Unit Price In USD	Value In USD	Made Of Payment	Approval	Acceptance
01	Button	0.03 /Doz	18.75 GG	12.00 GG	225.00	Local		
02	Care label	1.06 /Doz	79.500 /Doz	0.06 /Doz	47.70	VTS Label		
04	Twist Tape	16.80 Yds	12.600 Yds	0.07 Yds	882.00	VTS Label		
05	Hang tag	1.06 /Doz	79.500 /Doz	0.10 /Doz	79.50		New hang tag	
08	Hang tag	1.06 /Doz	79.500 /Doz	0.25 /Doz	198.75	Avery denison		
09	Tagpin	0.00 /Doz	2.25 Box	1.75 Box	3.94	Local purchase		
10	Sewing thread	0.98 /Doz	73.238 /Doz	0.95 /Doz	695.76	Delta sewing thread		
11	Poly	0.04 /Doz	30.00 /Doz	2.50 /Doz	75.00	Delta accessories		
12	Carton	0.48 /Doz	36.000 /Doz	1.40 /Doz	504.00	Delta tag		
13	Carton sticker2	0.04 /Doz	30.00 /Doz	0.35 /Doz	10.50	Avery denison		
13	Carton sticker2	0.05 /Doz	37.50 /Doz	0.35 /Doz	13.13	Local purchase		
14	Gumtape	0.10 /Doz	72.00 Roll	0.81 Roll	58.79	Local purchase		
15	Interlining	0.01 /Doz	5 Roll	60.00 Roll	270.00	Local		
					Total Cost In USD	3,042.06	\$4.06 Per Dozen	8.28%

Print/Embroidery/Wash							
Sl	Item Descriptions	Consumption	Unit Price In USD	Value In USD	Made Of Payment	Approval	Acceptance
01	Test	787.50 Dzs	0.20 /Dz	157.50			
02	Print	787.50 Dzs	0.50 /Dz	393.75			
03	Collar cuff knitting	826.88 Dzs	1.05 /Dz	868.22			
04	ITS Inspection	787.50 Dzs	/Dz	0.00			
				1,419.47	\$1.89 Per Dozen		3.84%

Total Accounts	Total Value	36,954.00		
	Total Expenditure	30,429.78	Yarn & Accessories Cost	58.42%
	Total C/M	6,524.27	Expenditure	22.84%
	C/M Per Dozen	8.70	Total CM	17.66%
	Productivity Per Hour	120 Pcs	Process Loss	12%

Merchandiser

GM(Marketing)

GM(Commercial)

Executive director

### 3.6 Marketing Cost Analysis For Approval

#### Marketing Cost Analysis For Approval

<b>Buyer : Group Carrifoure</b>		<b>Job-</b>		<b>Date : 25/10/2009</b>	
Style/Ref	I436617 (Dep-Zaman)	Fabrics	100% Cotton Carded Pique		
Order No	Winter/2010	Weight	200-220 GSM		
Item	Baby's S/Siv Polo shirts (2 pcs set)	Color	Average		
Approx Order Qty	85,000 Sets   Cost On Size	L	Shipment Date : 30/03/2010		
				%	
Yarn Quality & Cost	100% Cotton Carded, 26/s				\$2.60
Elastane/Lycra Quality & Cost	Elastane, 20D	\$0	0.00 %		\$0.00
Yarn Dyed Feeder Stripe Knitting	Pique				\$0.40
Yarn Dyeing			\$0.00		\$2.50
Brushing					\$0.00
Open Width Finishing					\$0.00
All Over Printing					
<b>Total Cost Of Fabrics With Out Process Loss</b>					<b>\$5.50</b>
<b>Finished Fabrics Cost With Process Loss</b>				<b>1.15 %</b>	<b>\$6.33</b>
<b>Garments Consumption With Wastage In Kgs For One Dozen</b>				<b>1.10 %</b>	<b>1.40/Dz</b>
Fabric Cost Per Dozen	a) 100% cotton Y/D Pique Feeder stripe				\$8.86
Fabric Cost Per Dozen	b) 100% cotton Single Jersey Carbon Finish		\$5.20		\$7.28
		0	\$0.00		\$5.00
Collar & Cuff Knitting					\$4.50
Accessories					\$0.00
Special Accessories					
Print					
Embroidery/ Applique					
Pigment Dyeing / Wash					
Fabric Testing					\$0.10
Claim Per Dozen					
Handling Charges Per Dozen					
Freight Per Dozen					
<b>Bank &amp; Commercial Charges</b>					<b>\$0.72</b>
<b>CM per Doz Set</b>					<b>\$23.00</b>
<b>Buyer Commission Per Pcs</b>				\$0.00	
<b>Buyer Commission %</b>				<b>8.00 %</b>	<b>\$0.93</b>
<b>Total FOB Price per Doz Set</b>					<b>\$50.39</b>
<b>Style</b>		<b>FOB Cost Per Set In USD</b>			<b>\$4.20</b>
Basic	Yes				
Semi Critical					
Critical					
Consumpt. Per Dozen	<b>1.40/Dz</b>	Yarn & Accessories Cost		5.16%	
Production Per Hour	<b>180 PCS</b>	Expenditure		54.35%	
		Total CM		45.65%	
		Process Loss			
		<b>R. M. C</b>		<b>49.39%</b>	
Order Nature	REPEAT	<b>NEW</b>			

DGM Marketing

Executive Director

Chairman



## 3.7 Costing of the Product

Fabrication :

Yarn Price 26's	Knitting	Dyeing/Finis	Spandex	Act Price	Westage	Act Prize With Westage
3.80	0.30	1.70		5.80		5.80

Description	Qty in Dz	U/Price	Ttl
Fabric : 100% Cotton Pique Polo 180 gsm			
Conz/Dz : 3.16 @ 5.80			\$ 18.33
Fabric : 100% Cotton Pique Polo 180 gsm			
Conz/Dz : - @			\$ -
Fabric : 100% Cotton Pique Polo 180 gsm			
Conz/Dz : 0.53 @ 5.80			\$ 3.05
			<b>\$ 21.38</b>
Main label			\$ 0.12
Size label			\$ 0.08
Care label			\$ 0.08
Hang tag			\$ 0.15
Button Plastics	96	\$ 0.02	\$ 0.21
Interlining(Non Fuseable)			\$ 0.20
Single Poly Pp 0.8.5 mm			\$ 0.70
Carton 7 ply			\$ 0.40
Collar Felt			\$ 0.40
Gum tape, tag pin & others			\$ 0.10
Sewing thread, 50/2, 4000m/cone			\$ 0.60
Total Accessories cost =====>			<b>\$ 3.04</b>
AOP			\$ 3.00
Emb Stitch			\$ 1.50
Sequence			\$ -
Test			
Wash			
			<b>\$ 4.50</b>
Commercial and Transportation Charge			\$ 1.10
Factory Cm			<b>\$ 9.00</b>
	Total Price/Dz ----->		<b>\$ 45.75</b>
	Total Price/Pc ----->		<b>\$ 3.81</b>
	Total Price/Pc @ 5% S/c --->		<b>\$ 4.00</b>

Figure: 3.7 costing of the product

## **Chapter-04**

### **Result and Discussion**

## 4.1 Consumssion of polo T-shirt 3.1.2

$$\begin{aligned} \text{A) Cpd( Body)} &= \text{Body Length X Width X2 X12 X GSM/10000000} \\ &= 82.75 \times 54.52 \times 2 \times 12 \times 180 / 10000000 \\ &= 2.019 \end{aligned}$$

$$\begin{aligned} \text{B) Cpd (Sleeve)} &= \text{Length x Width x 2 x 12 X GSM / 10000000} \\ &= 25.51 \times 58.25 \times 2 \times 12 \times 180 / 10000000 \\ &= 0.641 \end{aligned}$$

$$\begin{aligned} \text{C) Cpd (Neck)} &= \text{Length x Width X2 x12 X GSM / 10000000} \\ &= 7.25 \times 22.5 \times 2 \times 12 \times 220 / 10000000 \\ &= 0.086 \end{aligned}$$

$$\begin{aligned} \text{Total Cpd} &= (\text{A} + \text{B} + \text{C}) \\ &= 2.091 + 0.641 + 0.086 \\ &= 2.819 \end{aligned}$$

$$\begin{aligned} \text{Actual Cpd} &= \text{Total Cpd} + 12\% \text{ wastage} \\ &= 2.819 + 12\% \text{ wastage} \\ &= 3.16 \text{ kg/doz} \end{aligned}$$

So the fabric consumption for a men's Polo Shirt is in 3.16kg/doz.

## 4.2 Standard Rules:

**Standard Rules of Polo Shirt for Net Sewing Thread Consumption = 120 Meters. (Add Wastage 20% to 30%)**

## 4.3 Essential Requirement for Sewing Thread of 3.3

- Sew Ability: 100 Yards = No Breakage
- Durability: Seam Strength



**Fig: Sewing Thread**

## 4.4 Zipper



**Fig: Zipper In Pique polo shirt**



**Fig: Zipper**

## 4.5 calculate the Zipper Length of 3.7

Body length (From HPS) - 73 cm

Front Neck drop (CB) - 8 cm

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Back Neck drop - 2 cm

(Use the below rule if the body length measure from HPS)

Rules : Body length - (Front neck drop + Back neck drop) - 2% to 3%

$$= ( 73 - (8 + 2)) - 2\%$$

$$= ( 73 - 10 ) - 2\%$$

$$= 63 - 2\%$$

$$= 61.5 \text{ cm}$$

OR

Body length (From CB) - 71 cm

Front Neck drop(CB) - 8 cm

(Use the below rule if the body length measure from CB)

Rules : (Body length - Front neck drop ) - 2% to 3%

$$= ( 71 - 8 ) - 2\%$$

$$= ( 71 - 8 ) - 2\%$$

$$= 63 - 2\%$$

$$= 61.5 \text{ cm}$$

B) If the garments is high neck and the zipper goes up to to of high neck drop from bottom then the rules will as under -

Say,

Body length (From CB) - 65 cm

Front Neck drop - 6 cm

Height of high neck - 6 cm

Rules : (Body length - Front neck drop) - 2% to 3% + Height of high neck

$$= ( 65 - 6 ) - 2\% + 6$$

$$= ( 59 ) - 2\% + 6$$

$$= 57.82 + 6$$

$$= 63.82 \text{ cm} = 64 \text{ cm}$$

Moreover, the rules is not always remain fixed, its may vary depends on practical situations.

However, I always advise that you must confirm the zipper measurement with your cutting master & production manager before place an order.

## 4.6 CM calculation of 3.7 and 3.5

- Here Total Cost include both fixed and variable Cost of your garments factory for one month
- Monthly total Production is the output produced by the factory.

### Factory Costing Related Information are;

- Salary and Wage Expenditure Rs. 20,000,000
- Monthly interest on bank loans is Tk. 100,000
- Depreciation expense is Tk. 50,000
- Building Rental Expense is Tk. 200,000
- Cost of Transportation is Tk. 150,000
- Maintenance & Repair Expense is Tk. 50,000
- Utility expenditure is Rs. 10,00,000 whereas electricity expenditure is Rs. 200,000, water expenditure of Rs. 1,3,3, Chiller Price 1,3,3, Compressed Air Cost Tk. 100,000.
- Machine is 150
- Production Capacity of Each Machine 30
- The total Working hour is 8 hours per day
- working days in a month is 26 Days.

$$\text{Total Cost} = 20,000,000 + 100,000 + 50,000 + 200,000 + 150,000 + 50,000 + 1,000,000 = 21,550,000$$

$$\text{Total Production} = 150 * 30 * 8 * 26 = 936,000$$

$$\text{Cost of Garments Making Per Piece of Garments} = (21,550,000/936,000) = \text{Tk. } 23.02 \text{ (Piece)}$$

- Total Machine Number = 180 Unit
- Workers Required = 200 Person
- Total Working Hours a Day = 8 HOURS
- Number of Working Days for a Given Month = 26 Days

- Workers Efficiency = 65%
- SMV of Trouser = 35 Minute
- Available Minute = (200 Workers x 8 Hours x 26 Days x 60 Minute) X 65%
- **Available Minute = 16,22,400 Minutes in a Month**

# **Chapter-05**

## **Conclusion**



## **5.0 Conclusion**

We completed our project by collecting the authentic information from active composite mills LTD. This project helps us to know about the inspection procedure not only that but also able to know about merchandising and merchandiser. We also able to know how the working procedure of these section and the inspection procedure of this section is been done. At last we can say that by the knowledge from this project which will help us in our help us in our job life to take challenge in hard working as a textile engineer.

## \*References:

- [1]. [www.google.com](http://www.google.com), Wikipedia, of Merchandsing (retrieved: June 20, 2012 at 11.35pm)
- [2]. [www.google.com](http://www.google.com) , Wikipedia, what is Merchandiser June 20, 2012 at 12.07am
- [3]. [www.google.com](http://www.google.com)  
GARMENTS MERCHANDISER AND ENGINEERING MANAGEMENT IN AUSTRALIA  
By Professor John W H Price PhD, FIEAust Mechanical Engineering Department, Monash University, Australia. June, 22, 2012 at 12.39am
- [4]. [www.google.com](http://www.google.com) , flow-chart-merchandiser-lecture-02 ppt, June 21, 2012 at 7.02pm
- [5]. [www.google.com](http://www.google.com), Function-Merchandiser-lecture-02 ppt, June 21, 2012 at 7.02pm
- [6]. Zeleny,M.: The Innovation Factory: On the Relationship Between Management Systems, Knowledge Management and Production of Innovations. Innovations 2005, Zilina 2005
- [7]. Guidelines for, KSA Technopak.
- [8]. Method of analyzing the actual status 4-Time Study Chapter two (page E-1, E-10) and Chapter three Production Design (page F-1, 2, 3, 6, 8, 9, 12, 13)  
Seminar on Sewing Production Control, Textbook on the Management Development Course, ASSOCIATION FOR OVERSEAS TECHNICAL SCHOLARSHIP (AOTS), Sewing Research Institute, JUKI Corporation.
- [9]. [www.google.com](http://www.google.com), Wikipedia, Operation Breakdown in Garments, July 09, 2012 at 9.33pm