

Report On  
TM Textiles & Garments Limited

By

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Post Graduate Diploma in Knitwear Industry Management (PGD-KIM)

Executive Development Center, BIGD

BRAC University

April 2021

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**TM Textiles & Garments Limited**

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An internship report submitted to the Executive Development Center, Brac Institute of Governance and Development (BIGD), Brac University in partial fulfillment of the requirements for the degree of Post Graduate Diploma in Knitwear Industry Management (PGD-KIM)

Executive Development Center, BIGD  
Brac University  
April 2021

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## **Declaration**

It is hereby declared that

1. The internship report submitted is my/our own original work while completing degree at Brac University.
2. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The report does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I/We have acknowledged all main sources of help.

**Student's Full Name & Signature:**

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**Mohammad Kamrul Islam Nahid**  
**19281167**

**Academic Supervisor's Full Name & Signature:**



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**Dr. Narayan Chandra Das**  
**Senior Research Fellow**  
**BIGD, BRAC University**

## **Letter of Transmittal**

Dr. Narayan Chandra Das  
Senior Research Fellow  
BIGD, BRAC University  
66 Mohakhali, Dhaka-1212

Subject: Letter of Transmittal.

Dear Sir

With great pleasure, as a student of BRAC University. I have prepared my internship report on “ TM Textiles & Garments Limited”. I have tried my level best to follow your guidelines in every aspect of the planning of this report. I have also collected what I believe to be the most important to make this report as specific and accurate as possible. I enjoyed the challenge of preparing the report as it provided me with an opportunity to enlarge my knowledge. I am honestly thankful for your guidance during the preparation of this report. I hope you will appreciate my effort. I have done the study in a complete form and I have tried my level best to conduct this in a professional manner. It is true that it could have been done in a better way if there were no limitations.

I hope you will assess my report considering the limitation of the study.

Sincerely yours,

---

Mohammad Kamrul Islam Nahid  
Student ID - **19281167**  
Executive Development Center, BIGD  
Brac University  
Date: April, 2021

## **Non- Disclosure Agreement**

This is clearance that Mohammad Kamrul Islam Nahid student of Post Graduate Diploma in Knitwear Industry Management, EDC, BIGD, BRAC University successfully completed his internship program in TM Textiles & Garments Limited. In this internship program he was supervised by me (Durjay Kumar Saha, Executive Director). During this internship program he is very serious about learning's new idea. This period we don't faced any kind of problems by him. The TMBD is very happy about his performance and I wish him good luck and successful life.

### **Student's Full Name & Signature:**

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**Mohammad Kamrul Islam Nahid**  
19281167

### **Industry Supervisor's Full Name & Signature:**

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**Durjoy Kumer Saha**  
**Executive Director**  
TM Textiles & Garments Limited

## **Acknowledgement**

At the very beginning, I would like to express my deepest gratitude to almighty Allah for giving me the strength and the composure to complete my Post Graduate Diploma in Knitwear Industry Management (PGD-KIM) courses and prepare this report within the scheduled time

I express my deepest thanks to Mr. Durjoy Kumer Saha, Executive Director – TM Textiles Garments Limited for taking part in useful decision & giving necessary advices and guidance and arranged all facilities to make life easier. I choose this moment to acknowledge his contribution gratefully.

I am grateful to my academic supervisor, Mr. **Dr. Narayan Chandra Das, Senior Research Fellow, BIGD, BRAC University**. He allowed me to encroach upon his precious time freely right from the very beginning of this research work till the completion of my internship. Her guidance encouragement and suggestions provided me necessary insight into the research problem and paved the way for the meaningful ending the work in a short duration.

I perceive as this opportunity as a big milestone in my career development. I will strive to use gained skills and knowledge in the best possible way, and I will continue to work on their improvement, in order to attain desired career objectives. Hope to continue cooperation with of you in the future.

Sincerely,

Mohammad Kamrul Islam Nahid

ID-19281167

Intake-4

Batch -12 B

## **Executive Summary**

This report summarizes my internship program from February 2021 to April 2021 covering 560 hours on going internship. This internship assisted me to have a practical idea about different department and factory of TM Textiles & Garments Limited which was not possible for me by working only my own department. TMBD is Knit Composite Garments & Textile Industries. Which is equipped with all kinds of modern machineries and other facilities. TMBD always try to provide their level best support to all of their Buyer with better Quality. It has not only a large production capacity but also has a smart quality team to provide quality product to their customers. They work closely with their clients to effectively manage quality assurance needs throughout their supply chain and mitigate risks in terms of quality, health, safety, social responsibility and environment, thus protecting brand reputation and minimize costs. This report has been presented based on my observation and experience gathered from the company. The organization has many divisions and departments but the internship focuses on Admin & HR. thereby I had to play a vital role as Admin & HR of the company. Throughout the whole report initially I have tried to portrait different department of our organization followed by the self-analysis and evaluation report.

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## List of Acronyms

TMBD TM Textiles & Garments Limited

RMG Ready Made Garments

PGD Post Graduate Diploma

KIM Knitwear Industry Management

CAD Computer Aided Design

PDC Computer Aided Design Center

HR Human Resource

TMBD TM Textiles & Garments Limited

RMG Ready Made Garments

PGD Post Graduate Diploma

KIM Knitwear Industry Management

CAD Computer Aided Design

PDC Computer Aided Design Center

HR Human Resource

TMBD TM Textiles & Garments Limited

RMG Ready Made Garments

PGD Post Graduate Diploma

# **Chapter 1: About Organization**

## **1.1 Overview of industry**

Starting the journey in 1980, the Ready-Made Garments industry become the main export in Bangladesh. RMG is the second leading sector in Bangladesh in terms of foreign currency earning.

TMBD started its journey in Bangladesh as an industrial venture in 1999 with its mother unit in TMHK in the outskirts of Hong Kong city and since then never looked back.

Bangladesh TMBD as a new base production for UNIQLO in Bangladesh mainly produces innerwear. TM Textiles & Garments Limited is a 100% export-oriented Manufacturer Company established in 2010. The short name is TMBD. It consists of all sections starting from knit fabric to finished garments. Toray (Japan) was established with advanced functions like HEATTECH. It employs approximately 5000 employees. It runs under Japanese management to ensure high-quality production. The factory has 52 sewing lines where 80000 pieces of garments are producing per day. The capacity of knitting and dyeing are 15 tones and 14 tons per day. TMBD is a direct shipment system and smoothly delivers products to Japanese retailers and thus successfully reduce logistic cost.

## **1.2 Vision & Mission**

### **Company Vision:**

Since the foundation of company, TMBD tries to produce the high quality based product by utilizing the practical knowledge and modern technology. Day to Day Company dedicated to develop and improve to make not only mass simple product but also valuable product.

### **Company mission:**

To provide new value to our customers through high-quality products and superior services.

To provide employees with opportunities for self-development in a challenging environment.

To provide our shareholders with dependable and trustworthy management.

To establish ties and develop mutual trust as a responsible corporate citizen.

### 1.3 Goals & Objectives

- TMBD main goals & objective to conform 100% quality of the customer's product.
- Placing top priority on safety, accident prevention and environmental preservation and environmental preservation, ensuring the safety and health of our employees, our customers and local communities, and actively promoting environmental prevention.
- Providing customers with new values new values and solutions, and achieving sustainable growth together.

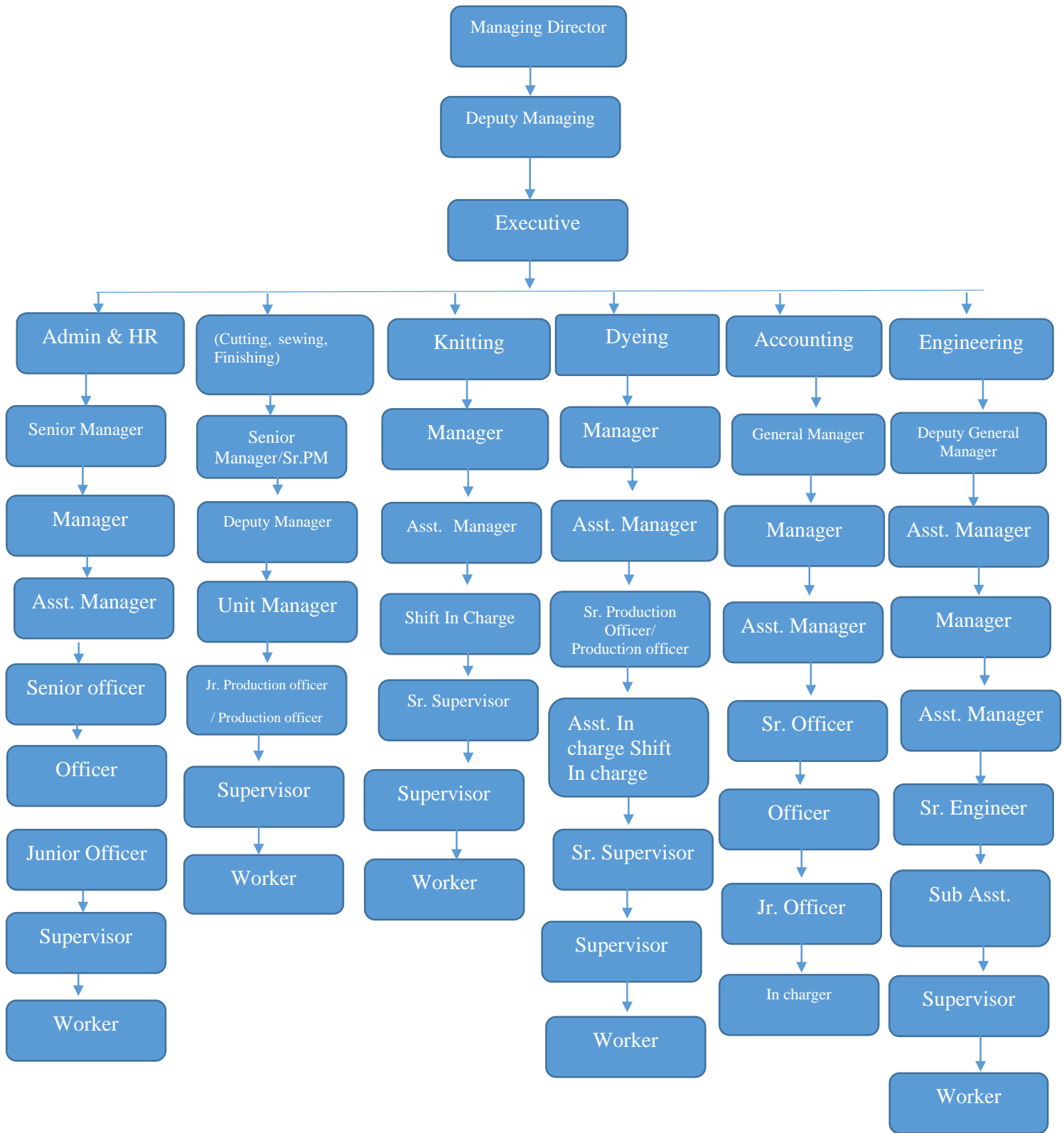
Providing an environment where employees find value in their work, and building positive, energetic relationships between people and the organization

### 1.4 Organization Structure, Organogram, Branches and departments

#### TM Textiles & Garments Limited organizational Structure:

Company Name	TM Textiles and Garments Limited
Type	100% export oriented composite knit garments industry.
Nationality of owner's	Japan, China
Nationality of Management	Japan, China, Bangladesh
Main Buyer	UNICLO -100% Japan
Dhaka office address	House # 541/3, (4 <sup>th</sup> FI) Road # 12, DOHS, Dhaka -1206
Factory Address	Kashor, Hobirbari Union, Bhaluka, Mymensingh
Telephone	+88028415520
Total employees	3936. Male- 2452, Female- 1485. (Toreey Enterprice)

## Organogram of TM Textiles & Garments Limited



## **Branches and departments:**

TMBD has single branch in Bangladesh. TM Textiles & Garments Limited (Expansion Unit).

### **1. HR & Admin department**

- Human Resources
- Administration
- IT
- Security

### **2. Garments**

- Sample
- Merchandising
- Planning
- Cutting
- Cutting Quality
- Sewing
- Sewing Quality
- Finishing
- Finishing Quality
- Industrial Engineering
- FQC (Final Quality Control)

### **3. Knitting**

- Knitting
- Knitting Quality

### **4. Dyeing**

- Dyeing
- Dyeing Quality

### **5. Accounts**

- Purchase
- Commercial
- Store

### **6. Engineering**

## 1.4 Product produce by Industry:

### Production Capacity

Department	Quantity Par day
Knitting	15 Ton Per day
Dyeing	14 Ton Per day
Cutting	90000 Per day
Sewing	90000 Per day
Finishing	90000 Per day

**Product: TMBD product item as below.**

<b>Knitted Fabric</b>	<ul style="list-style-type: none"><li>• Single Jersey</li><li>• Cross Terry</li><li>• 1X1 Rib</li><li>• Fleech</li></ul>
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<b>Garments</b>	<ul style="list-style-type: none"><li>• Men's Knit Polo/T-Shirt Bottom</li><li>• Lady's T-Shirt, Knitted Bottom</li><li>• Kids T- Shirt/ Bottom</li></ul>
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## Chapter 2: Description about task accomplishment

This part of this report is based on my activities during internship. I have start my internship program from 1<sup>st</sup> February 2021 under PGD-KIM. In Internship period, I visited many section.

In the below, I mention working days in the respective section.

Section	Days
Knitting section	4 days
Dyeing Section	9 days
Merchandising product development	12 Days
Cutting Section	5 Days
Sewing Section	4 Days
Finishing Section	4 Days
Industrial Engineering	7 Days
Admin & HR	9 Days
Quality Assurance Department	12 Days
Store	4 Days
Total	70 Days

### 2.1 Knitting section:

The term knitting describes the technique of constructing textile structure by forming a continuous length of yarn into columns of vertically intermeshed loops. It relies heavily on the

availability of fine strong, uniformly spun yarn. In internship period I follow is all knitting process. Knitting section main activates as below

- ❖ Received fabric order sheet from TMBD
- ❖ Setup knit fabric manufacturing plan
- ❖ Produce required fabric within due time

**Operation activates:** I have observed closely knitting section work follow. I discuss some point.

**Work order for starting fabric knitting form buyer:** TMBD textile department made fabric for own production. At first, Buyer send order sheet.

**Yarn selection:** Yarn selection is very informant for fabric. Different type of yarn are use TMBD.

**Machine selection:** Selecting your knitting machine should be done carefully. Just as there are different knitting sizes and crochet hook sizes for different sizes of yarns, there are various gauges of knitting machines. Take your time to learn what models knit the size yarns you want to use. Often the requests I get are "I want to do hats." Hats can be knit in any size yarn. There are hats knit out of thick yarn, and there are hats knit out of thin yarn.

List of Knitting Machineries

Machine Category	Brand Name	Machine Model No	Diameter * Gauge	Number of Feeder	Number of Needle	Number of Machine
Single Jersey	Panda	JC 3.Open 245	34*28	102	2976	33
Single Jersey	Panda	PLKR 2B/CF	34*32	102	3840	33
Single Jersey	Zenit	HS Open	30*20	90	1880	14
Rib	Panda	PLKR 2B/CF	34*18	60	2000	1

### Knitting Quality:

In Knitting quality section is involved to check the quality of the knit fabric before dyeing. After collecting fabric rolls from different machines then need to inspect by quality inspector required quality. Here are some of them. In knitting quality section I learned this type of knitting fault.

- Lycra Exposed
- Broken Spandex
- Tuck Stitch
- Crease mark
- Yarn Tuck stitch
- Foreign Yarn
- Fly
- Dirty
- Roving (Thick) Yarn
- Spun (Thin) Yarn
- Yarn Dirty
- Oil Spot (White, Yellow)
- Needle Oil (White, Black)
- Needle Mark- Sinker Mark
- Needle Broken
- Cross line
- Straight Needle
- Broken Hole

**2.2 Dyeing Section:** Dyeing section have three sub section. Dyeing batch section, Dyeing production, Dyeing lab. I discuss some points.

#### **Dyeing Batch Section:**

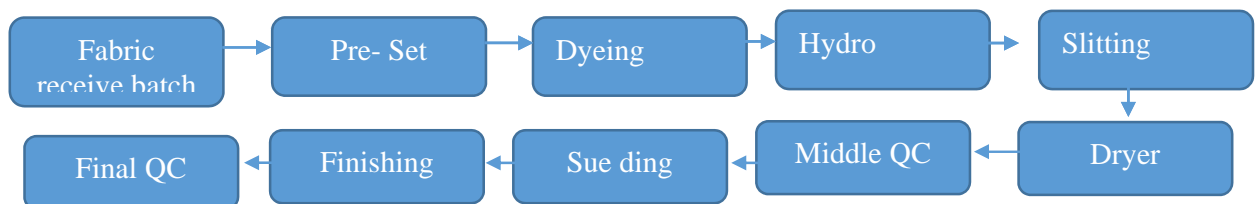
The dyeing batch section receives grey fabric from the knitting section. The batch section is prepared to batch the card. They are also responsible for turning the fabric from the roll. Most of the fabric is dyed on the backside. Tuck stitch is given in the batch section. Dyeing batch section do following activities:

Basic Tasks: Main point of dyeing batch section below. I closed this work with them and prepare batch card.

- To receive grey fabric from knitting section or other source.
- To turn the fabric.
- To give tuck stitch to open width fabric.
- To send the grey fabric to the dyeing floor.
- To prepare batch card for dyeing according to following criteria:
  1. Order sheet
  2. Types of Fabric
  3. Emergency order
  4. Dyeing Shade
  5. Machine Capacity
  6. Machine availability

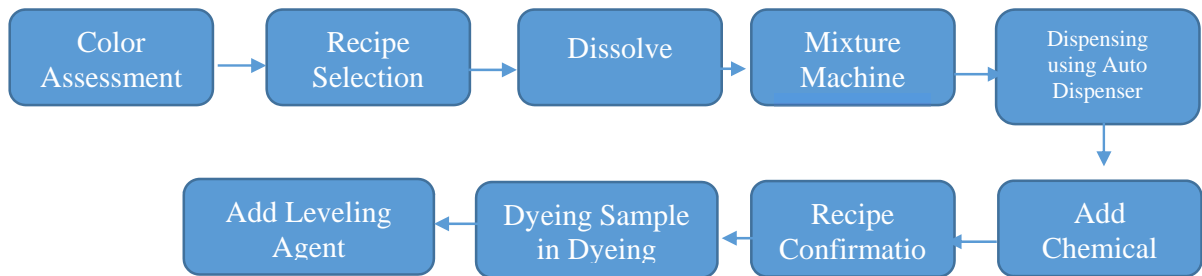
Dyeing is the process of coloration of fiber, yarn, fabric or garment. In dyeing section of TMBD, only fabric is dyed in rope form. The dyeing section of the factory consists of a formulation lab as well alongside the dyeing floor. Mostly Cotton, Polyester, Lycra, etc. fabric is dyed using reactive and disperse dye.

Work Process: Its dyeing flowchart. This work do step by step.



**Dyeing Lab:** Formulation lab is the core of dyeing where fruitful recipe for conducting dyeing process is provided before going for bulk production. Small amount of sample fabric is dyed using sample dyeing machine.

Dyeing Lab Work Process Flow: I tried to understand dyeing lab work follow. I work with them very closely every step.



### 2.3 Product development Center & Merchandising:

Product Development center is one of the important section in the garments industry. Product development center is responsible for preparing different type of sample according to the buyer recommendation. They have a complete forward linkage unit under their supervision in miniature from just to produce different types of sample and get approval against to go for bulk production.

#### Key Tasks:

- Received inspection sheet from buyer
- PDC is responsible for all sort of sampling work according to buyer
- PDC is also responsible all sort of pre- Production work

Sub Section of product development section:

- Merchandising Department:
- CAD Section
- Pattern Section

Different Type of Sample Prepared By Product Development Center:

- Buyer/Development Sample
- Red Teg Sample
- Size Set Sample
- Gold Seal Sample

- Color Sample
- Advertisement Sample
- PP or Pre-Production Sample
- Marketing Sample/Design Studio Sample

Challenges for product development Center:

- Short Lead Time
- On Time Delivery
- Fabric Consumption
- Sample Approval

Merchandising:

Merchandising means to sold the product. In other words, the purpose of income is to buy a product and sell it again is called merchandising, And who does this work is called a merchandiser.

The merchandising is e-mail communication with the buyer. The buyer send a mail with inspection sheet to merchandiser prepare the sample. Then the merchandiser prepare sample and costing with sample department and sending to the by buyer. If the sample is approved by buyer then they will negotiate costing. After conform price the buyer send order sheet, delivery time and way. During the time conferring order, buyer opens L/C and the merchandiser is developing sample and important tasks.

**CAD (Computer –Aided Design) Section:** Sample section follows the requirement of sample which are approved from buyer. Sample section of TMBD see and do the following activates very sincerely

- Various sample making as per buyer instruction
- Measurement and other issues ensuring
- Pattern making by CAD
- Easy technique sample making for bulk
- OTM meeting arrange

I worked closely this TMBD team and I have learned many things. I learned how to do fabric costing, thread costing in short and easy way on practical way. Beside I learned CAD activities, Pattern knowledge, Grading from this team in easy and effective way.

**Pattern Section:**

This department provides patterns of different designs. 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 buyers don't provide any pattern. In this case, patterns are produced according to design for sample preparation.

This pattern goes for Buyer approval. After the sample is approved, final pattern is made with approximate allowance & other parameters. Then grading is preferred for the further process.

**Marker:** It is an illustration of accurate and precise planning of patterns for a particular style of garment and the sizes to be cut from a single spread on a marker paper. To prepare an efficient marker, the width of the fabric to be spread in a lay as well as the number of pattern pieces to be included in the marker plan for all the required sizes should be known prior to it. Marker width that is less than fabric width leads to more fabric wastage while marker width that is wider than fabric results in incomplete cut components. The individual marker has to be prepared for linings and interfacing materials. The most commonly used system of marker making is computerized method. In this system, a man performs it by himself using computer software (CAD and CAM) and it requires considerably less time than manual system.

**Requirements of marker planning:** Marker planning is more of a creative, intuitive and conceptualizing process rather than a technical one and there is no final result for a marker planning. The main purpose is to produce a shortest marker by considering all the practical and technical constraints. The constraints in making a shortest marker are related to

- Fabric characteristics and the design requirement in the finished garment
- Cutting quality
- Production planning

**Different Techniques of Marker Making:**

There are two different methods of marker making followed in TMBD. Those are-

- (a) Manual method,
- (b) Computerized method.

**Factors of Marker Efficiency:**

1. Fabric Characteristics
2. Characteristics of Pattern Pieces
3. Grain Line Orientation
4. Standards of Fabric Utilization

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

**Factors which Effecting on Marker Efficiency:**

The factors which influence the Marker Efficiency –

- Manufacturers of the marker;
- Size of pattern pieces;
- Length of the marker;
- Pattern Engineering;
- Nature of the fabric;
- Method of marker making;
- Marker width;
- Kinds or design of garments

**2.4 Cutting Section:**

Cutting is the process of cutting out the pattern pieces from specified fabric for making garments. Using the markers made from graded patterns and in accordance with the issued plan, fabrics are cut to prepare garment assembly. This is the major operation of the cutting room. Cutting section is responsible for cutting fabrics and feeding the sewing department with cut panel. The cutting section's capacity is planned on the basis of daily feeding required for sewing line. Internship period I work this type of work:

**Fabric lay for cutting:**

- Received fabric from store
- Received cutting plan sheet / marker plan sheet.
- Received Marker & hard Pattern from sample section.
- Determine length from marker measurement & paper spreading on cutting table/lay table following Determine length from marker. As if fabric lay doesn't corrugate when cutter man cutting fabric.



- Set up lay cutting machine. Fabric lay or spreading. When fabric spreading thread use end of the spreading roll for roll segregation which easy to bundling roll wise.

**Bundling:** In bundling time I see following activates sincerely.

- Cutting info Install into ETS bundle cards from daily cutting lay chart.
- Received ETS bundle cards & stickers group wise according cutting No.
- Attach stickers in ETS bundle cards.
- Received Group wise cutting body parts & sleeve parts pair.
- Cutting body Parts bundling with ETS bundle cards Group wise &roll wise.  
Bundle send to panel Inspection group wise.

**Panel Inspection:** Panel inspection is another important part of cutting section. I work this type of work during time.

- Received bundle group wise/cutting No wise after group short out.
- Panel Inspection system is Roll to toll wise inspection, replace & recut system. ( per table manpower=6, lighting capacity 800 LUX)
- After inspection Panel good quantity & C-grade quantity posting in ETS BY ETS terminal.
- Segregate good quantity & C grade quantity.
- Line wise cutting panel inspection report.
- Make book keeping total cut quantity, good quantity & defect quantity according to style & cutting No.
- Panel good quantity keep into trolley Car for input sewing.
- PC good report.
- Panel C-grade quantity count and segregate by defect nature for loss count, and send to dying.
- Loss report/loss percentage count report.
- Input at sewing.

**Cutting Quality Check:**

Cutting quality section important area cutting section. During time I learned how to check cutting quality properly. Cutting quality section is checking roll by roll 100%. Segregation of

fabric grading as per defect point based on 4 point system. Defect point “28 or below 28” ---A Grade, “29 to 40” --- B Grade, “41 to 60” --- C Grade. Then prepared line wise inspection report.

I have observed closely cutting & cutting quality activities and at the same time lots of new things from TMBD cutting team.

### **3.5 Sewing Section:**

The process of joining of fabrics by the use of needle and sewing thread or by other techniques is called sewing. The sewing process is the attachment of different parts of the cut pieces. In this work place there are many operators who perform single operation. There are total 52 sewing line in TMBD. Product categories become different in swing line. In the following the point sewing section is figured out.

- Make a sewing line layout according to style after purchased order/delivery order received.
- Machine set up in sewing line according to layout. (Machine, operator chair, bench, QC-table should keep in ice mark.) Will have machine No. at machine.
- Process set up in machine by mechanics according to speck sheet/instruction sheet.
- According to layout manpower arranged. Sit in machine for work.
- Line set up, Operator setup, process setup in ETS machine.
- Input instruction received from production officer. Then Cutting parts of garments input into sewing line from cutting section. As per SKU (when cutting parts keep in sewing line in input box keep it cover by fabric.)
- Country board, style board, Size board & process wise thread use instruction board hang up at input table in sewing line.
- Sewing thread collect from thread provider. And set up in machine according to process.
- Other accessories collect from store, delivered to sewing line.
- Daily line production target received from IE & daily target set up into line target board. (Daily target has given based on SMV. (One target board for one sewing line).
- Process wise target gives to Operator. Process wise target has given based on SMV.

- Sewing start. (Operator must be wear gown, cap, musk, scarf etc. before sit in machine.) Needle must protection by needle guard when operator sewing garments, use gum board/basket for loose thread, thread cutter must tie by rope with machine/table and use ID number into cutter. After completing every process, operator should must punch bundle cards in ETS terminal.”)
- Sometimes hang up operator skill cards in machine to motivate them. As very good, good, good/bad.
- Keep machine maintains record by mechanics. In this regard mechanics checks cleanliness, oil, tension, SPI, Electric, Noise, Needle change before beginning of the work).
- If machine disable for sewing in working time operator/supervisor calls to mechanics through machine break down lamp to repair the machine/to change the machine. (One machine break down lamp for one sewing line.)
- If idle machine has remained in sewing line must be hang-up insert card including writing “Temporary stop”. And paper will have to use under feed. Needle must have on feed of idle machine.
- If needle has broken in working time. Search up to surrounding three meters from needle broken point to find out the broken needle parts through magnet. After find out the broken needle parts, these broken portion will have to deposit needle man. To collect new needle for sewing. After then that garments are brings to needle detection to be ensure that harmful aluminums things have or not. Then re-start work. Broken needle parts finding instruction must be hang up in sewing line.
- Every day machine is clean four times. Machine cleaning equipment keep in mentioned bag. After machine cleaning operator must should wash her hand for clean. Every day hand wash is four times.
- Line QC checked operator’s work/process machine to machine. Also create “process wise stitching count report & process wise dust check list”.
- After complete the inline process garments given to 59 process to checked label, shoulder sleeve & sleeve opening.
- Then given to 58 process checked neck shape. In this situation segregate between good garments and alter garments. Good garments send to outline for sewing and alter garments send to inline for rework. Also made a alter report as a name of “hourly inline inspection report”

- After completing the End line inspection or 63 Operation and 64 operation. Good products keep in box to send to iron and alter garments send to sewing line for rework. In this situation make a report as “outline inspection report. (check layout. thread for alter garments tie, lighting B-grade & C-grade Operation code chart, capacity 800 LUX)
- Alter man collect alter garments from finishing Then send to sewing outline.
- Received alter garments with child card from alter man through assigned to 64 operation for rework. (Which alter products carry in from finishing). Then alter garments send to sewing line for rework.
- After completing the alter garments rework. It send to end line for inspection for checked.
- After completing the end line inspection, it send to special table for checked. They are record in a register about this issue, then checked & repair confirm and send to special table of finishing for poly.

This internship period I prepared some report of sewing section.

- Line wise oil controlling report.
- Operation wise spot remove report.
- Line wise bottom rework report.
- Line wise critical defect report.
- Line wise process measurement report
- Daily unit and line wise C-grade report

Lots of practical knowledge I have learned from sewing section. TMBD have skilled operator and I learned new idea introduce with many machine. In the practical way I have learned those point.

### **3.6 Finishing Section:**

Finishing section is the last part of production. When sewing completed then finishing and packing started. Thread cutter workers are cutting loose thread. Ironman workers are ironing

goods. Then Packing-man workers are putting goods into polybag and export carton. But there should have balance process from thread cutting to carton process. Boiler should be always in normal condition because steam is necessary for ironing. TMBD finishing section flowing this activities. I learned many knowledge about finishing section.

**Steamed & Ironing: To steamed & ironing this type of task.**

- Garments collect for ironing after sewing complete. (Per unit 2 person.)
- Collected garments keep in box for steaming & ironing.(Style, color, size wise)
- Steaming & ironing. ETS entry (Total iron line 10, iron man =80, iron table=80, for sewing=12 table, for finishing=72 table, Use iron shoo for HEATTEACH iron. Lighting capacity=LUX 550). After complete iron garments keep in trolley for send DRY room. Keeping garments in cover by fabric.

**Dry Room:**

- Garments carry in from Iron & ETS entry.
- Garments short out & Keeping following SKU. (Keeping garments always uncover in dry room, end of the working hours keeping garments cover in fabric. When garments kept in dry room provided in time. Garments keeping time 1 hour & Required garments humidity level below 10 for removed mold.)
- Dry room Humidity level below 40%, temperature level below 35.
- Out time provide when garments delivered at finishing line.(One output man for two dry room)

**Final QC:**

- Received garments from Dry room. Garments checked following checking layout by getup man as per SKU. (Hang up country flag card, size card & check layout in final QC table. Use divider when checked more color & more size. Use size scale. Inspector must should be wear gown, scuff, cap & musk. Lighting capacity above 800 LUX.
- Completed checked garments audit by audit man.
- Created hourly production & Quality report & random audit type of defect.
- After completed garments check segregate between alter garments & good garments.

- Good Garments posting into ETS & created child card & red card for alter garments against mother card. Good garments send to folding & poly.
- Alter garments send to predetermine alter table.
- Alter garments segregate between cuttings alter & sewing alter. Cutting alter send to cutting section & sewing alter send to sewing section.
- Alter man collect alter garments from alter table for assigned to rework to Sewing production line. After completed garments rework send to special table to checked, confirm repair & dispatch finishing for poly.

### **Folding & Poly:**

- Received garments from final QC table after audit. Matched quantity with ETS bundle cards and label checked.
- Poly bag collected from production supervisor by assistant folding man.
- Given same quantity garments & poly bag for folding to folding man.
- The garment is folded according to the instructions given to the buyer.
- Use insert card for white color white other color gray.
- After folding complete garments insert into poly.
- After poly had completed, then 7 point checked.

### **7 points Check:**

- Brand name checked.
- Size checked
- Garments picture checked.
- Package code checked.
- Size, Color, Style checked of Barcode sticker.
- Then garments send to needle detector.

### **Different Type of Tag Used In Finishing Section:**

- Brand tag
- Size tag
- Price tag/Ticket
- Bar code

- Hang tag
- Extra organic tag

Different Types of Folding Used In Finishing Section:

- Half Folding
- Full Folding
- Board Folding
- Hanger Folding
- Flat Folding

Different Types of Carton uses in Finishing Section:

- 3 ply
- 5 ply
- 7 ply

### **3.7 Industrial Engineering (IE):**

Industrial Engineering is a branch of engineering which deals with the optimization of complex processes, systems or organization. Industrial engineer work to eliminate waste of time & and make the work more easy to perform. Industrial Engineering is concerned with the development, improvement and implementation of integrated systems of people, money, knowledge, information, equipment, energy, materials, analysis and synthesis as well as the mathematical physical and social sciences together with the principles and methods of engineering design to specify, predict and evaluate the results to be obtained from such systems or processes.

Industrial engineering is a branch of engineering, concern with the optimization of complex systems or process.

Industrial engineering deals with the design, improvement and installation of integrated system of man, machine and equipment.

The TMBD IE team mainly follows the follow activities:

- Daily Target set up
- Line capacity & line loading plan Follow up

- Time Study & production study record
- Operator Assessment & work load follow up
- Style line Balancing & zero Feeding layout Follow up
- Operator motion study & work method follow up
- Machine cleaning & dirty reasons Analysis follow up
- Process Operation analysis & implementation
- Production loss time Analysis & record follow up
- DHU% Defect Per hundred unit reduce & judgment improved
- Machine breakdown loss time record & back plan follow up
- Style analysis& SAM Calculation
- 5s Follow, All implemented method Tools follow
- working to reduce to SAM of the Style
- Working to Improved Factory Efficiency%
- working to SOP Standard operation procedure of process work
- working to operator skill matrix & grade follow up
- Efficiency & KPI Follow
- Balancing improve
- Root cause of bottle neck area
- Training & workshop Arranged

Industrial Engineering is very essential for every apparel industry. Basically, the KPI of TMBD is the given below:

- Eliminate waste
- Eliminate Cost
- Productivity enhancement
- Finding the bottleneck
- Increase of production and efficiency
- Implication of process
- 5S maintain



### **3.8 Human Resource Management:**

Effective implementation and monitoring the principles of management throughout the organization with compliant of the national & international law / legislation and standard to improve relation between employees. During internship period I learned many process HR knowledge. I discuss some point below.

#### ➤ Recruitment and Selection:

In this time learned how to prepare staff requisition slip and approve top management. When staffs and worker leave the organization then need new staffs and worker. After getting staff requisition from any department, HR department takes approval by the Executive Director. After that all the recruitment and selection procedure are done by HR department. Some of the activities that are performed here are job advertisement design and placement, CV collect, CV sorting, interview call and scheduling, interview process, selecting salary, and benefits and so on.

#### ➤ Transfer

Transfer means moving or shifting staffs from one place to another place for job purpose. TMBD have another project TMBD (Expansion unit). Sometimes need transfer in and transfer out when management need. All the transfer related activities are performed by HR department in TMBD. In TMBD two types of transfer are seen. One is voluntary transfer and another is professional transfer. Sometimes staffs move from one department to another department for personal or physiological problem. It is voluntary transfer. Besides, staffs moves from one location to another location and it is decided by the management from where to from and where to place. It is called professional transfer.

After getting the staff's request or department head request for transfer, HR department is responsible for doing all the activities of transfer such as transfer approval from department head and director, prepare transfer order, issue transfer order and file, and so on.

#### ➤ Attendance

I always taking about attendance of every regular staff punching machine is used. Sometimes by mistake staffs do not punch the punching machine and sometimes due to finger problem (cut in the finger and so on) the machine doesn't accept attendance. Moreover, sometimes due to technical problem, the machine does not work. Besides, sometimes software problem occurs

and attendance is not recorded in the Troyee (Troyee Enterprise) software. In addition sometimes staffs become late because of late car arrival due to traffic jam. In this case the respective worker takes attendance approval from his department's head and submits it in the HR department. It is a common problem for the staffs.

➤ **Leave:**

When the staffs are going to take leave they have to fill up leave form. Staffs are not sincere of filling up the form and don't fill up the form properly. Even they would go to the leave without filling up the leave form. And without the approval of the respective department's head's approval, the staffs submit the leave form which is not according to rule. Sometimes the staffs take the leave form and submit the form after returning from leave. It creates problem in counting leaves and calculating salary of the respective staff.

➤ **Performance Appraisal**

TMBD puts a lot of importance on performance appraisal and try to ensure fair procedure in the evaluation procedure. But The HR department of TMBD has to face lots of problem at the time of evaluating the performance of staffs. All the departments do not fill up the performance evaluation form within the time frame that means time management problem occurs. The performances of staffs are not rated properly, the ratings are not added and sometimes there is no explanation. Besides, the performance evaluation form is not filled up properly and the form is submitted without the sign of the respective department's head. For these reasons performance appraisal procedure becomes lengthy.

➤ **Confirmation**

Confirmation depends on staff's performance. If one staff's performance is satisfactory, she/he will be confirmed after six months after performance evaluation. And in case of workers he/she will be confirmed after three months for satisfying performance. Sometimes it is seen that the evaluators do not evaluate properly or they do not fill up the performance evaluation form in a proper way. So the confirmation of staffs becomes late.

➤ **Job Separation:**

Job separation means ending the job or termination of employment. In TMBD job termination can be voluntarily done by the staff or involuntarily done by the employer or organization's policy. Here four types of job separation: resignation, termination,

dismissal and retirement. Resignation means voluntarily termination of job by the employee him/herself. Termination and dismissal are by the employer due to dissatisfactory performance, conducting illegal activities (theft, sexual harassment etc.) or something that is beyond organization's policy, absent in the workplace for many days without taking leave and unable to complete the period of probation. Retirement is termination of job according to organization's policy. The retirement age for TMBD is 60 years. HR department handles the job termination procedures. HR department provides application form, termination document approval, investigation in case of termination and dismissal; update all the information and other activities of the procedures.

➤ **Grievance Management:**

Grievance management is one of the job responsibilities of HR department. TMBD puts a lot of emphasis on grievance management. The steps in the procedure of grievance management are submission of written complaint/incident report or accusation from the victim to the HR department, issuing show cause letter to the accused person or form an investigation committee, accepting show cause reply within three to seven days or preparing investigation report, making decision based on the organization's policy or according to the recommendation of the investigation committee. The decisions can be taking no action if there is no guilt, warning letter issue, transfer, suspension, penalty, termination, dismissal and demotion. After the decision making, HR department inform the decision to the respective person through a letter and file all the documents. HR department ensures proper investigation and judgment for giving justice to both victim and accused person.

During internship period I prepared some important policy

**3.9 Quality Assurances:**

Quality means a standard which is accepted by a buyer or customer. Quality Assurance is one of the major section in a Garment Factory. The TMBD quality team is also big and strong team. Their working area has defined as below. I show some defect in garments industry.

	Cause	c
<b>Barre mark</b>	Count variation in the lot	-The average Count variation in the lot should not be more than +0.3
	Shade variation in the dyed yarn	Ensure that the yarn being used for Knitting is of the same Lot.

	-Needle is too loose or tight in trick	Ensure that the hardness of all the yarn packages is uniform using a hardness tester
<b>Hole</b>	This is a fabric fault	-Ensure uniform yarn tension on
	which could be due to machine or yarn	all the feeders with a Tension Meter.
	-Thick thin place in the yarn	-Rate of yarn feed should be strictly regulated as per the required Stitch Length.
	-Too much tension of yarn causes friction	-The fabric tube should be just like a fully inflated balloon, not too tight or too slack.
	-Too much speed of the machine	-The yarn being used should have no imperfections like; Slubs, Neps & big knots etc.
	-Defective needle	-The gap between the Cylinder & the Dial should be correctly adjusted as per the knitted loop size.
<b>Sinker mark</b>	-Faulty sinker use in the machine	-Replace all the worn out or bent sinkers causing Sinker lines in the fabric.
	Combination of old & B20new sinker in the machine	-Remove the fibers clogging in the
	-Due to dust in the needle	Sinker tricks (Groove).
<b>Crease mark</b>	-Due to tension of take up roller & take down roller; diagonal line appears	-Proper timing of the machine.
		-Uniform tension during take down should be maintained
<b>Pressure mark</b>	-Due to less space between two take up roller	-Proper space have to be given according to fabric
<b>Oil mark</b>	This is a mark in the fabric due to oiling in the machine. Reasons are-	-Remove all the Needles & the Sinkers of the machine periodically.
	-Too much oiling in the machine	-Clean the grooves of the Cylinder

	-Leakage in the oiling system.	& Dial of the machine thoroughly with petrol.
	-Bad quality lubricant is used	-Blow the grooves of the Cylinder Dial & Sinker ring with dry air after cleaning.
	-Mixing of one quality lubricant with another one	
<b>Needle mark</b>	This is a fabric fault which is found in the wales wise due to needle. The reasons are	-Inspect the grey fabric on the Knitting machine for any Needle lines.
	-Breakage of hook of needle	-Check the Needle filling sequence in the
		Cylinder / Dial grooves (tricks)
	-Breakage of latch of needle	-Change the needle after a period of time
	-Change of alignment of latch	
	-Due to improper schedule maintenance	
	-Due to old needle	
	-Due to dust in the needle	
	-Less for combed yarn & more for carded yarn due to quality.	
<b>Slubs</b>	This is a fabric fault due to projected fibers	-Fabric area have to be covered.
		-Yarn quality should be good.
	-More formation of fly from the yarn	
	-Bad quality of yarn use	
	-Due to thick thin place;	
	thick part more appears	
<b>Count variation</b>	-Different count of yarn package in the same lot	-Yarn quality have to be same during the operation.

	-Different quality of yarn use in the same order	-Yarn should be from one company during an operation.
	-Variation of count in the same package in different places	-Yarn count have to be measured for all the package.
	-Use yarn of another company for the same production	
<b>GSM variation</b>	Variation in the Stitch Length	-Make sure that all the fabric rolls
	Wrong position of the VDQ pulley	in a lot, are processed under the same process parameter.
	-Improper tension of the fabric during production	-The Knitting Machine settings, like; the Quality Pulley diameter etc. should never be disturbed
	-Wrong selection of yarn count	

**Cutting Defects:** I learned how to found cutting defect. TMBD quality team very easily understand me how to find cutting quality. When I found any defect then I sent responsible person to take action.

- Hand feel
- Running shade
- Bowing/Skewness/ Spirality
- Thick & thin places
- Hole
- Slub/Knot
- Crease mark
- Oil Spot/Dirty spot
- Needle line /Drop stitch
- Miss yarn

- Lycra out
- Pin holes
- Joints
- Uneven brush effect
- Uneven dye effect

**Sewing Defects:** Another important area is sewing defect check. In this time, I check all input material to complete all the sewing processes accurately. All cutting panel and accessories should be checked here to avoid mismatching with the other cutting parts. Following area I work in internship time:

- Input material check
- Cutting panel and accessories check
- Checking the sewing machine
- Sewing thread checking
- Sewing needle checking
- Stitching fault checking
- Measurement checking
- Shade variation and size mistake check.

During internship time I prepared daily sewing defect report responsible person.

**Major Faults of Finishing:**

- Stenter pin hole
- Loop out
- Crease mark
- Harsh handle feel
- Wrong slitting
- Brush problem
- Yellow spot
- Shining mark
- Compaction mark
- Fabric burn
- Grease spot
- Color spot

- Wrinkle mark
- Dirty spot

**Quality In Sewing:** The process of Joining of fabric by the use of needle and sewing thread or by other techniques is called sewing. Some important checking points given blow:

- Skip/Drop/Broken stitch
- Raw edge
- Size mistake
- Uneven hem
- Uneven cuff/neck/shoulder
- Twisting without care label
- Open tack
- Sleeve up-down
- Open seam
- Four point up down
- Shading

**Sewing line quality check list:**

- Buy approved sample & Measurement sheet check
- Sample wise input check
- Buyer approved trims card check
- Buyer Approved sample wise style check
- All machine thread tension check
- All process measurement check
- All Machine oil sport check
- All process check as per Buyer requirement
- Input time sheading, Bundle mistake & Size mistake check
- Buyer approved color Check
- All machine stitch tension balance properly

**Sewing table quality check list: during internship time I checked in sewing table following things**

- Style wise garment check



- Sewing process measurement check
- Front part, Back part, Sleeve & Shading check
- Main label, Care Label, Size Label & Care Symbol check
- Size mistake check
- All process alter check

**Quality of Garments Finishing:** TMBD finishing quality suggest how to found finishing quality check. During time, garments come from then quality inspector check all body by the bundle. So I learned finishing quality check by the quality team.

- As Per Buyer Requirement Wise Iron Check.
- Buyer Approved Sample Wise Style Check.
- Front Part, Back part, Sleeve, Rib Thread & Contrast Color check.
- Print/Embroidery Quality & Placement Check
- All process S.P.I check.
- Oil Spot/Dirty Spot Check.
- Main Label Care label & Care Symbol Check.
- Any Fabric Fault & Fabric Reject Check.
- Assortment Every Carton Pcs Quantity Check.
- All process Measurement Check
- Blister Poly & After Poly Getup Check.
- Hang tag & Price Sticker Check.
- Assortment Every Carton Pcs Quantity Check.

## Chapter 3: Critical assessment of internship work

### 3.1 Application of generic and industry specific courses:

During my academic period in PGD-KIM program, I have educated many vital themes in generic and industry specific course. Generic knowledge provides me subjective knowledge which is essential to improve our technical knowledge. Those courses have helped me understand my workplace very deeply. I find the following applications of generic and Industry specific course during internship-

Application of generic course:

- a) HR Skills and competencies ( course code: KIM- 101)
  - I gained knowledge of the organization behavior. Organizational complexity and culture dynamic.
  - To learned knowledge on HR practices.
  - I have clear understanding about administrative works and updating employee's performance reports.
- b) Analytical Skills and Competencies (Course code: KIM-102)
  - I learnt about cost benefit analysis, statistical analysis, profit and loss interpretation, develop my computer skills
  - Its help me to analytical skills for decision making.
- c) Communication Skills (Course code: KIM-103)
  - Team work and strong interpersonal skills, Self- reliance and initiative and time management
  - Understand the importance of conflict management
- d) Business Operation skills (Course code: KIM-104)
  - I learned from this courses what are the main issues of trade, how to manage business, how to develop ethical and sustainable business.
  - I have gathered knowledge supply chain management and business environment.

Application of industry specific course:

- a) Industrial Engineering (course code KIM-202)

- I have gathered knowledge about the total history of garments industry.
  - Its helped gathered knowledge the ongoing situations of garments industry.
- b) Industrial Engineering (KIM- 202)
- I have learned about the whole production process of garments industry.
  - It's helps adven

### **3.2 Suggestion for industry for industry improvement (Based on Internship)**

While working I have face many problem in this industry. I think this factory should change some administrative system, rules and regulations. These can be as follow:

- Need to ensure balance workload round the year
- Responsible person or department should response on time
- Improve automation
- Effective line planning
- Good quality fabric made and input
- In grievance handling there need to change in complaint system, when a complaint arises, it should be justified properly.
- Some training documentation shall be update so that our employees can easily understand and develop themselves in their respective work place.
- Counselling program should be increased and diversified such as wearing ID card, uniform, any kinds of misconduct, company's rules regulation will be increased more
- Motivation should be provided to employees through various financial and non-financial rewards in order to make them more efficient work.

### **3.3 Learning for self-improvement**

Here I have erudite many valuable skills and lessons on experience working with different department of TM Textiles & Garments Limited. This experience will help in my career. Here I share some important point that helps for my self- improvement-

- Design the career growth tree with the organization
- Communication skills have improved, especially how to communicate with different personality.

- Create team with subordinates & train up them regarding company's requirement.
- The clear understand duties and responsibilities of the different departments
- Analyze critical point & take corrective measure perfectly.
- Understand the working procedure of the different departments.
- Enrich the role of industrial Engineering department activities.
- I have expanded clear information about readymade garments industry
- Improve self- confident to creative decision for generic knowledge.
- I can directly apply the knowledge and skills gained through this training in training in my job.

## **Chapter 4. Conclusion**

RMG sector earns the prime share of foreign currency in Bangladesh. In this regard, development of this sector should be one of nation concerns. TMED is standing for the purpose of expansion of this sector & their main spirit is unveil human spirit. After having this training textile graduates could give their sincere effort to the future advancement of RMG sector. TMED is a well maintained organization with modern machineries, technologies, good management of course with 100% compliance.

In internship period, I involved most important section where are very needful and operation's eight sections. Now I have concept gathered in my account on knitwear industry operation through working with TM Textiles & Garments Limited. When a company get a order and finished goods I covered by doing lots of activates and going different departments. I think business main objective is to gain profit. But profit comes when the finished goods come through right process and quality level is satisfactory. This full area I covered by this internship program in different section. I am very confident that in all side, now I can do.

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