



اوتورستيتي تكنولوجي مارا  
UNIVERSITI  
TEKNOLOGI  
MARA



**THUMBPRINTS Utd.**  
SEN IAITAN BERHAD

## **INDUSTRIAL TRAINING FINAL REPORT**

### **SESSION : FEBRUARY - AUGUST 2022**

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## ACKNOWLEDGEMENT

In the name of Allah, the most Beneficent and most Merciful, All praises to Allah, Lord of the universe and peace be upon His Messenger. I want to acknowledge Him on top of all for blessing me with patience, tenacity of mind, strength and encouragement throughout all the challenging moments of completing this Internship report. I am truly grateful for His unconditional and endless love, mercy, and grace. Apart from the efforts of me, the success of this thesis depends largely on the encouragement and guidelines of many others. I take this opportunity to express my gratitude to the people who have been instrumental in the successful completion of this report. It would be impossible to list all names but several people deserve sincere and special thanks.'

First and foremost, I am deeply indebted to Mrs Leow Chai Chin, who is the Human Resource Manager of Thumbprints Utd Sdn Bhd, for giving me such an opportunity to follow my internship at their company. She had the kindness to accept me in the company and guide me through my internship with advice and feedback despite her busy schedule.

Words cannot express my gratitude to my amiable, ever supportive and humble industrial training supervisor, Mr Hardinain Bin Mohd Dahlan for his voluminous and invaluable contributions and instructions throughout my internship. I also thank him for his guidance which was a remarkable force that enabled me to successfully complete the internship program. He helped and coached me during my internship by giving me feedback and tips on how to handle and approach situations. Many thanks to the rest of the Thumbprints staff and workers for their support and guidance which helped me to overcome the challenges I faced during the past 24 weeks in Thumbprints.

I would also like to express my deepest gratitude to my Industrial Training Coordinator, Ms Noor Hidayu Binti Abd Rani for her valuable guidance and advice. She always had time to answer all my questions concerning my internship. I must not fail to sincerely appreciate and acknowledge all the lecturers of the Faculty of Chemical Engineering, UiTM Pasir Gudang who helped me to successfully complete my Internship by fortunate enough to give me constant encouragement, support, guidance and experience sharing.

Finally, I would like to extend my sincere thanks to my dear parents, for their support and the roles they played on my behalf. Their belief in me has kept my spirits and motivation high during this process. I would be remiss in not mentioning my friends, especially my classmates for all the entertainment and moral support.

## **EXECUTIVE SUMMARY**

A student's life includes an important period called industrial training. Building a professional mindset benefits greatly from industrial training that is well thought out, well carried out, and assessed. It fosters a grasp of the industrial approach to problem resolution, built on a thorough knowledge of organisational procedures and modes of operation. The purpose and inspiration behind this industrial training is to provide me, a student studying chemical engineering, with the discipline, skills, teamwork, and technical knowledge I need to develop a responsiveness to the self-disciplinary nature of problems in information and communication technology. This report presents a summary of activities I was involved in during my internship under the Quality Control department. During a period of 24 weeks training at Thumbprints Utd, I was assigned some tasks which are developing Quality Control Checklist, handling Internal and Customer Quality Complaints (IQC & CQC), calibrate measuring equipment, improving QC process and also some indirect tasks. All these tasks were successfully done under supervision of my supervisor. Behind these successful achievements, there were some challenges and problems encountered that I faced. Luckily, I have my supporting supervisor and teammates to overcome those challenges. All the problems and solutions have been described in this report. I also made some suggestions and recommendations to other students based on my own experience. Despite all the challenges faced, for me it was such an amazing experience. Our life in university is incomparable with working life.

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## CHAPTER 1

### INTRODUCTION

#### 1.1 Overview

For some programmes at all levels of higher education at the Institute of Higher Learning, industry training is a requirement (IPT). The programme was introduced to enhance the industrial training competency necessary to raise the standard of the graduates' work. Students who take LI courses have the chance to study on the job and gain practical experience that will help them advance. In terms of technology advancement, effective teaming techniques, policies, processes, and regulations, professional perspective, and reporting, this course exposes and gives students experience in these areas. Students' enthusiasm and proactivity will be increased, and their confidence to be a great coach will grow as a result of this training. In general, Institute of Higher Learning fourth semester students will participate in industrial training. Six months of industry training are completed in a business or organization chosen by the student or someone assigned to him. Students must return to college for presentation of all activities during industrial training after completing their six-month industrial training programme.

Industrial Training (IT) is the process of exposing students to engineering work in the real world and involving them in Chemical Engineering projects before they graduate. One of the conditions for the award of a diploma in chemical engineering is that the student complete at least twenty-four (24) weeks and twelve (12) credit hours of industrial training within semester six (6) OR after passing all of the courses studied from semester one to semester five. The goal of Industrial Manship is to familiarize UiTM students to industrial culture and the workplace while also improving student employability by increasing their industrial abilities. They will also attend several briefings that serve as training for the trainee. This internship will be for 24 weeks, beginning on February 20 and ending on August 4, 2022. The student must report to the employer at the time and on the date specified at the Industrial Training briefing. Firstly, Lecturer Evaluation will be given to the student during the internship time in order to evaluate their performance. Two weeks after the

internship ends, the logbook and finalized report must be sent to the college both online and in print.

Courses in industrial training (IT) provide students with learning chances in the workplace so they can gain real-world experience and increase market trustworthiness. The industrial training aids in producing chemical engineering technician graduates with excellent technical skill and soft skill competency when it comes to preparing the students as engineering technicians. Since all core and elective theories can be utilized in industrial training, it is expected that students would be able to approach problems and projects given to them by supervisors in original and creative ways. Additionally, the industrial training boosts students' self-confidence and enhances their collaboration and communication abilities. Students are also required to practise engineering with a high degree of integrity, ethics, and accountability.

## **1.2 Objective of Industrial Training**

The goal of industrial training is to give students real-world work experience while also allowing them to learn through on-the-job training and observation. The students will gain expertise in work ethics, communication, management, and other areas from their industrial training. Additionally, this hands-on training programme enables students to connect their theoretical learning to how it is used in the manufacturing sector. The following are the goals of industrial training:

1. To give students the chance to gauge their interest in a particular job before making long-term commitments.
2. To improve one's ability to apply theory in real-world work settings.
3. To acquire knowledge and abilities that are specifically relevant to their employment.
4. A student's feeling of responsibility and ethical work practices will grow thanks to internships.
5. To give students experience working in a genuine workplace and to teach them how to write reports for technical projects.
6. Students doing internships will fare better academically.
7. Student earning potential after graduation will grow thanks to internship programmes.
8. To help pupils develop their strength, sense of collaboration, and self-confidence.
9. To increase the capacity for student innovation and idea sharing.
10. To develop effective communication with a group of employees and learn the right conduct of corporate life in the industrial sector.

### 1.3 Industrial Training Placement

|         |
|---------|
| Company |
| Address |
| Tel     |
| Fax     |
| Website |

#### 1.3.1 Industrial Schedule

**Table 1.2 Industrial Training Schedule**

|                      |  |
|----------------------|--|
| Normal working hours | 9 hours  |
| Day of working       | 5 days a week  |
| Work in              | 8.00 a.m   |
| Break hour           | Monday - Friday <ul style="list-style-type: none"><li>• 8.00 a.m to 1.00 p.m</li><li>• 1.00 p.m to 2.00 p.m</li><li>• 2.00 p.m to 6.00 p.m</li></ul> |
| Work out             | 6.00 p.m   |

#### 1.3.2 Company Supervisor Information

**Table 1.3 Company Supervisor Information**

|                |
|----------------|
| Name           |
| Position       |
| Department     |
| Contact Number |
| Email Address  |

## **CHAPTER 2**

### **COMPANY PROFILE**

#### **2.1 Company Background**

Thumbprints Utd Sdn Bhd is a company that offers one -stop printing and packaging solutions to local and global customers. Among the items produced by Thumbprints Utd Sdn Bhd are books, packaging boxes, stickers and labels. At Thumbprints, they believe in the power of partnerships and combine the strengths of their customers, colleagues, suppliers, and community. This means they grow from one strength to another as the partnership grows. This approach determines all their actions.

This company also is very caring for the welfare of the workers. They share every month profit to their workers up to 3 times a year. For example, like in the past month their sales are very profitable and they share their profit together with the worker up to RM1000. The company offers Long-Service Award to those who have been faithful for a long time with Thumbprints. Every year, Thumbprints have their own company trip and it's fully funded by the company. Their vacation is always locally spots, like this year they go to Pulau Redang. During tea breaks on a daily schedule, the company provides snacks for all the workers and sends it by department. They also held talk sessions every month open to those who wanted to join for those who want to release stress or work.

Despites all their benefits, they must have the daily challenge. This company really works under strict supervision. All work must be done perfectly right from the producing printing material until delivered to the client. Must be no mistake at all, otherwise they got a complaint which is Internal Quality Complaint (IQC) which internally complains among themselves or worst Customer Quality Complaint (CQC) where they receive complaints from the customer which can drop the reputation of their company image. Not to mention their working schedules are as tight as below.

|   |                   |                       |   |
|---|-------------------|-----------------------|---|
| Production Floor<br>(Isnin-Jumaat)                              | 8:00am - 1:00pm   | Waktu kerja           | <u>Cuti Setengah hari</u><br>Sesi pagi: 8:00am - 12:00pm<br>Sesi petang: 12:00pm - 5:00pm |
|   | 1:00pm - 2:00pm   | Waktu rehat           |   |
|   | 2:00pm - 5:00pm   | Waktu kerja           |   |
|   | 5:00pm - 5:15pm   | Tea Break             |   |
|   | 5:15pm - 7:15pm   | Overtime (OT)         |   |
| Production Floor<br>Night shift - (waktu 1)<br>(Isnin - Jumaat) | 5:00pm - 9:00pm   | Waktu kerja           | -   |
|   | 9:00pm - 9:45pm   | Waktu rehat           |   |
|   | 9:45pm - 1:45am   | Waktu kerja           |   |
|   | 1:45am - 2:00am   | Tea break             |   |
|   | 2:00am - 4:00am   | Overtime (OT)         |   |
| Production Floor<br>Night shift - (waktu 2)<br>(Isnin - Jumaat) | 7:15pm - 11:15pm  | Waktu kerja           | -   |
|   | 11:15pm - 12:00am | Waktu rehat           |   |
|   | 12:00am - 4:00am  | Waktu kerja           |   |
|   | 4:00am - 4:15am   | Tea break             |   |
|   | 4:15am - 6:15am   | Overtime (OT)         |   |
| Production Floor<br>(Sabtu)                                     | 8:00am - 12:30pm  | Waktu kerja           | <u>Cuti Setengah hari</u><br>Sesi pagi: 8:00am - 12:30pm                                  |
|   | 12:30pm - 1:00pm  | Overtime (OT)         |   |
|   | 1:00pm - 2:00pm   | Waktu rehat           |   |
|   | 2:00pm - 5:00pm   | Sambung Overtime (OT) |   |

Figure 2.1 Thumbprints working schedule

## 2.2 Company History

Thumbprints Utd. Sdn Bhd was founded in 1990 by a group of entrepreneurs who had worked in the printing industry for many years. Working funding was obtained by pledging land titles to the bank, and acceptance of the printing license took some time, thus the organization only purchased its first machine after one year in operation. Furthermore, the organization's financial situation was precarious, and stakeholders were not paid for 18 months save for food, lodging, and travel. The organization's grit and determination carry it through the first three difficult years when it is living hand to mouth.

Because the capital expenditures in the printing business are considerable, profits were reinvested in expansions and new technology acquisitions. The learning curve in terms of technological know-how, procedure, and management was steep, and methods were put in place to improve business management after many years. The company has steadily grown over the years to satisfy the increasing needs for high quality printing, using the Thumbprint to differentiate its

devotion. Thumbprints Utd, an offset printer specializing in multicolor printing, continues to remain at the forefront of print technology and tight quality control, with a high commitment to exceptional print quality and on-time production. The main values of Thumbprints Utd are honesty (no lying, cheating, or corruption) and integrity (doing the right thing without monitoring).

Nestlé Malaysia, Citibank, Maxis, CIMB, Creation for Children, International (C4Ci)-(Belgium), Hinkler Books Pty. Ltd (Australia), YOYO Books (Belgium), Scholastic Inc, Domino, Public Mutual, and others are among Thumbprints' long-term commercial partners. Thumbprints and loyal clients have developed a solid and positive business relationship. Thumbprints manufactures four types of print products: books and periodicals, point-of-sale materials, duplex boxes, and labels.

Thumbprints implemented ISO 9001 in 2002 and has seen significant gains in quality control and public trust. By achieving quality requirements in printed products and services, the company adheres to the ISO 9001 Quality Policy. To ensure client happiness, the company conducts a yearly customer satisfaction survey and a monthly OTIF (On time in full delivery). The company measures input of workman hours and machine hours against output and monitors improvement on a monthly basis to improve and achieve operational efficiency. To ensure that the organization's goals are realized, the organization constantly evaluates and improves its methods and technology.

Thumbprints places a strong emphasis on innovations (such as new goods, software, services, or marketing tactics) as well as research and development activities that have aided the organization's performance. Thumbprints uses a production schedule, work in progress, shipment timetable, and a record list of prior task reports to keep clients informed. The company also conducts ongoing research and development on new goods and design concepts to present to clients during the annual business review conference. The various awards won, such as Malaysia Star 2002 and Malaysia Star 2004, SMI-Maybank Rising Star, SMB Emerging Business Award, Sijil Penghargaan Anugerah Anugerah Kecemerlangan Industri, Malaysia-Canada Business Council Business Excellence Award for Customer Service Excellent, Enterprise 50, Industry Excellent for Environmental Business Excellence Award, Malaysia-Canada Business Council for Environment and Environmental Printer of the Year, demonstrate this successful outcome.



## 2.3 Vision and Mission



Figure 2.2 Vision and mission of the company

Based on figure 2.3, Thumbprints Utd has their own vision and mission of the company. Thumbprint's vision is a business which puts employees first, sharing profits and benefits with their employees. They believe in achieving growth through their continuous improvement program and partnership with their clients and suppliers, whilst maintaining the highest ethical standards. Meanwhile, they have 3 missions which are caring for and nurturing employees, continuous improvement in products, services and processes and growing business with partners.

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17

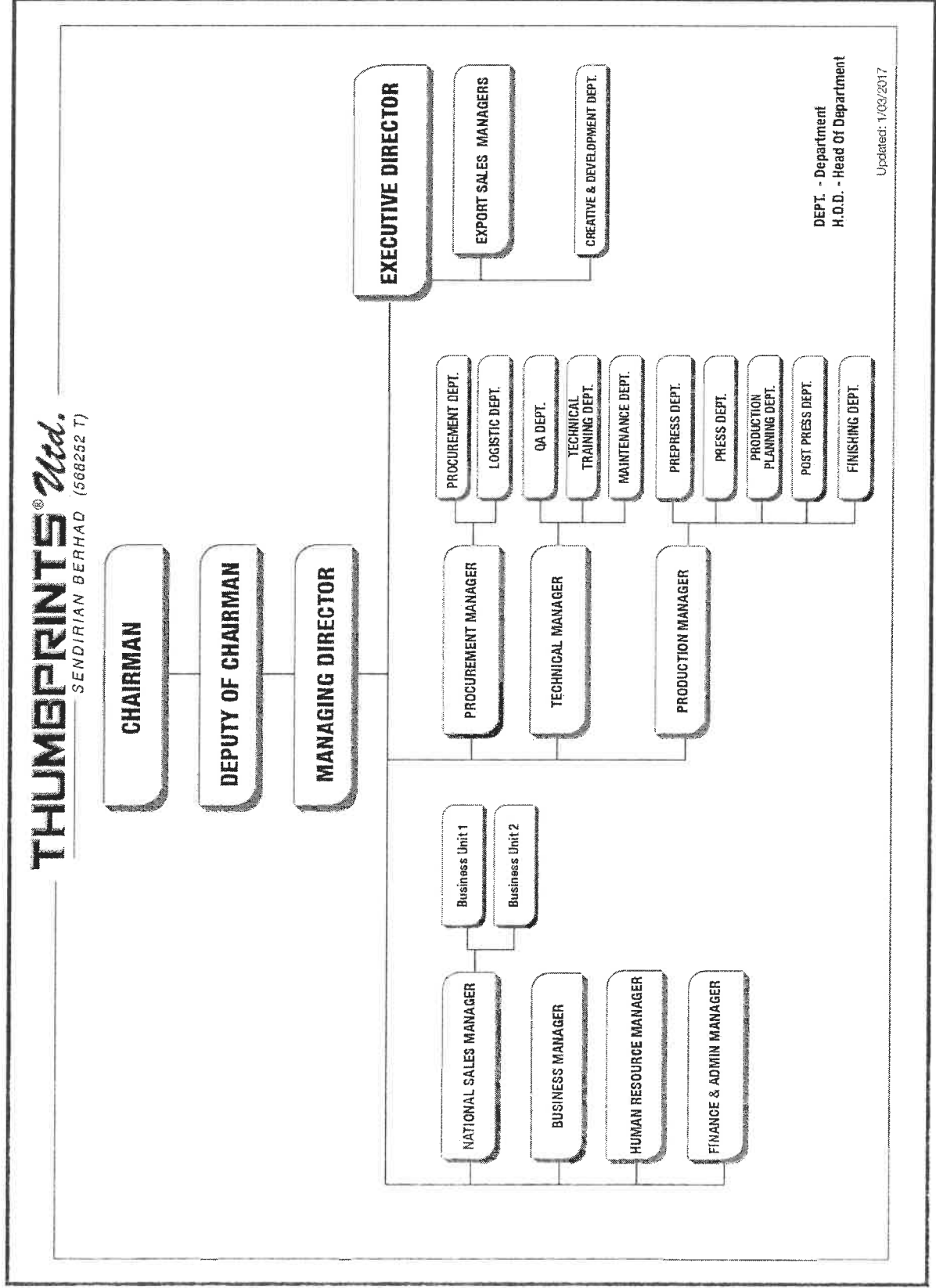


Figure 2.4 Thumbprints general organization chart

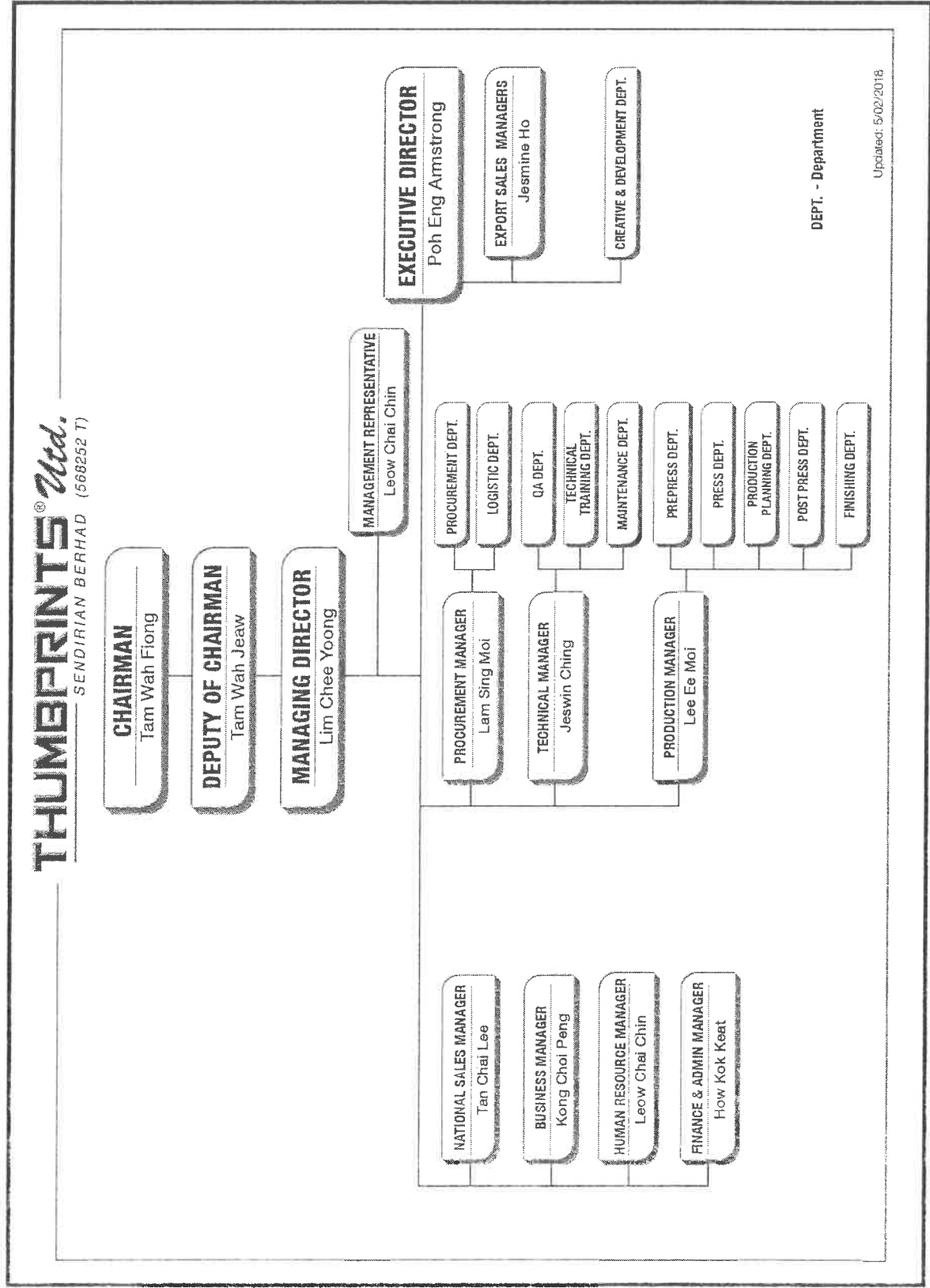


Figure 2.5 Thumbprints general organization chart with names

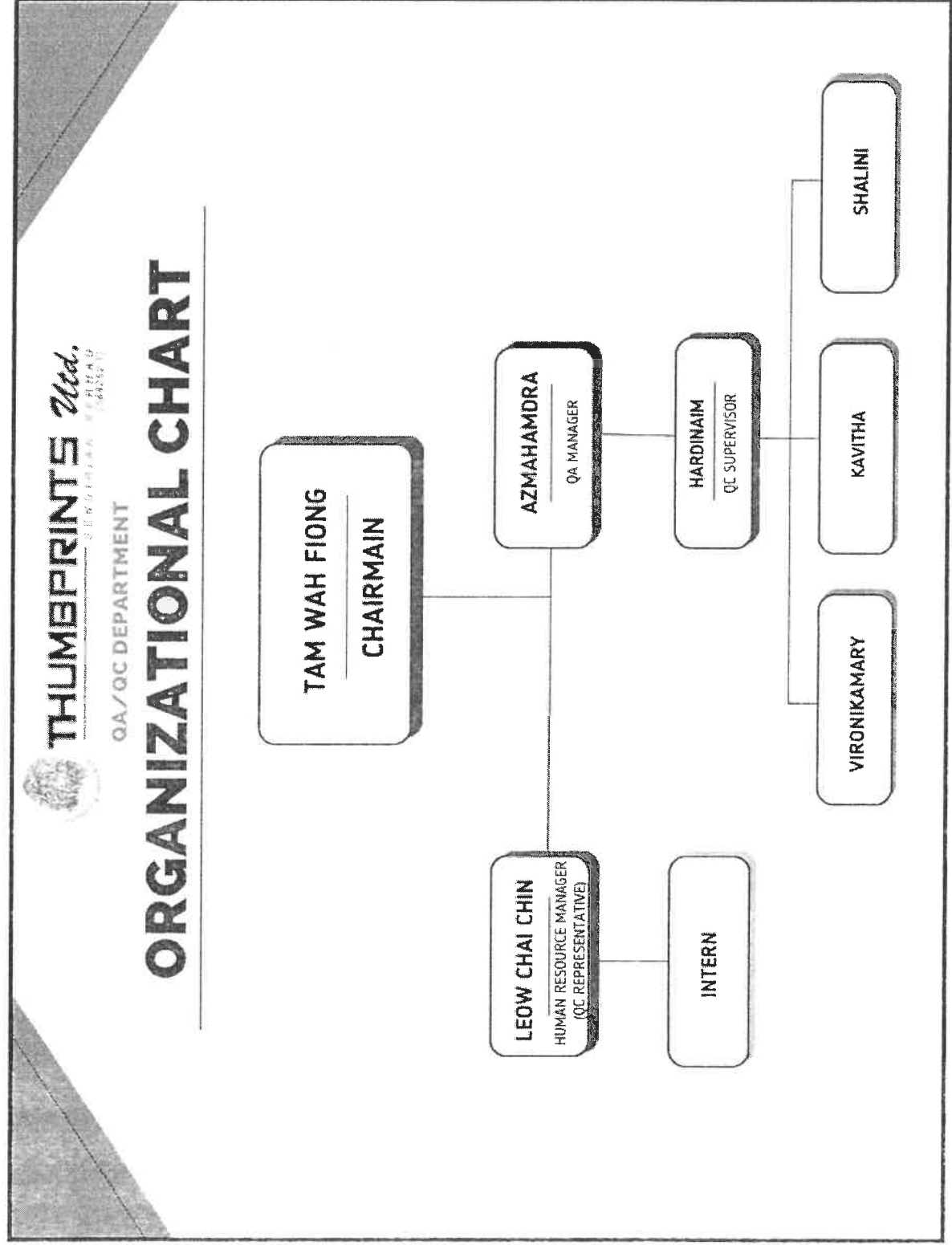


Figure 2.6 QA/QC Organization chart with names

2.5 Main Product/Service Provided to the Client

As mentioned before, Thumbprints Utd Sdn Bhd is a business that provides local and international clients with one-stop printing and packaging solutions. Books, packaging boxes, stickers, and labels are just some of the products made by Thumbprints Utd Sdn Bhd.

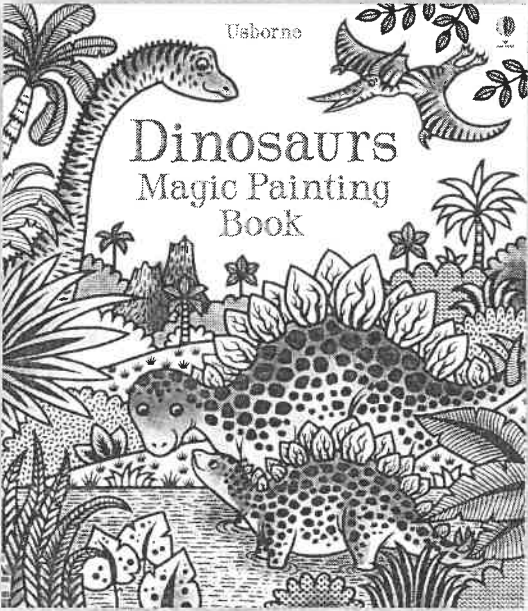
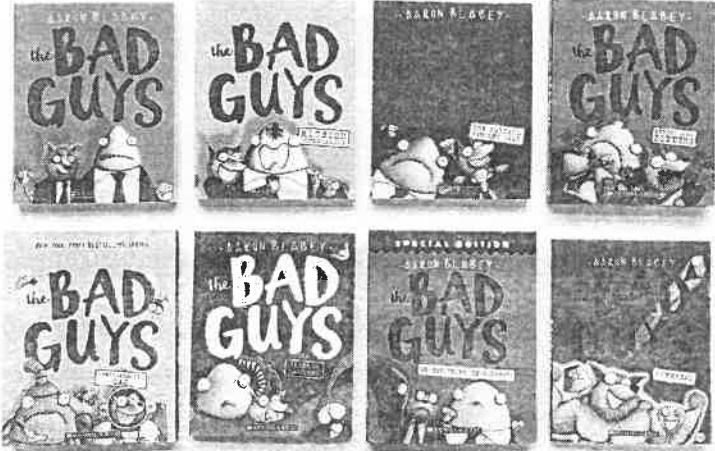
| Printing service provided | Examples   |
|---------------------------|--|
| Books                     |   |
|                           |  |

Figure 2.7 Magic Paint Book

Figure 2.8 Children Storybook

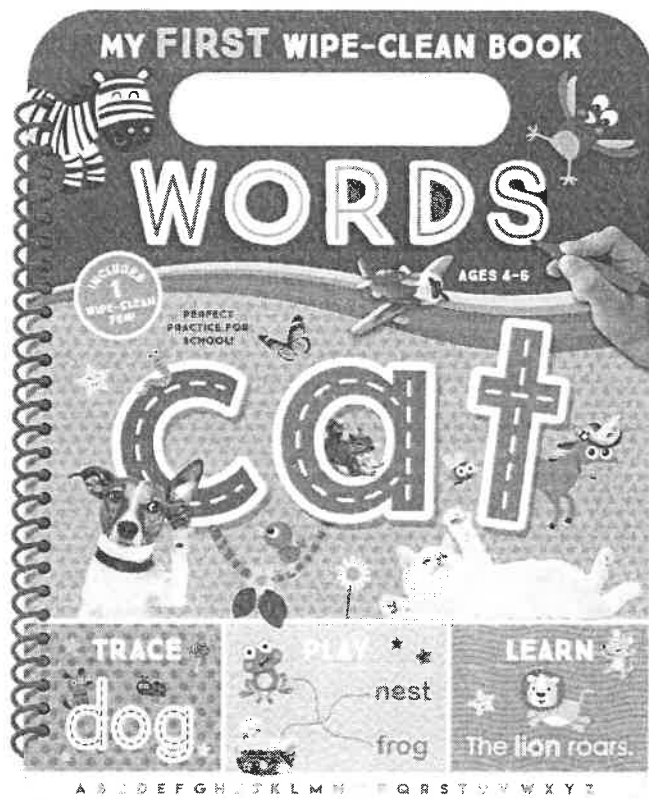
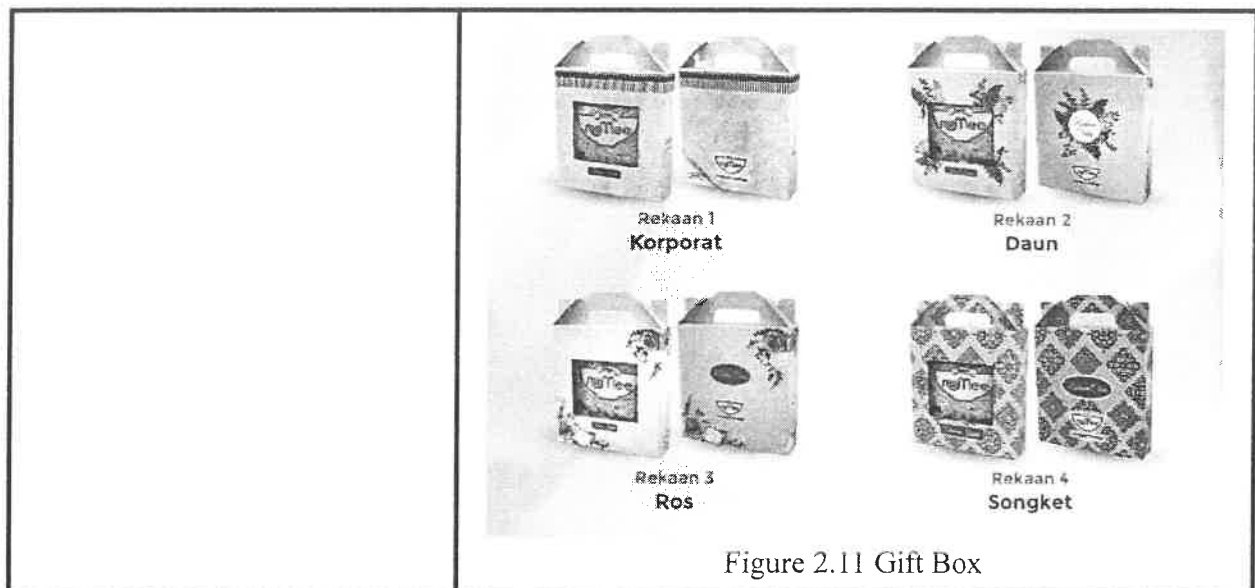


Figure 2.9 Activity Book

Packaging Boxes



Figure 2.10 Glove Box



Labels

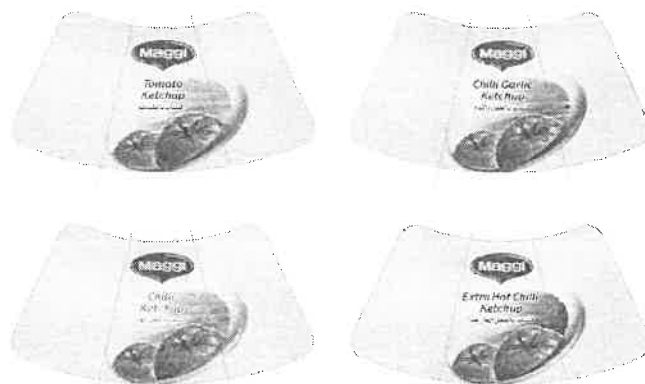






Figure 2.14 Card coupon

Stickers



Figure 2.15 Sticker

## **CHAPTER 3**

### **OVERVIEW OF THE TRAINING**

#### **3.1 Introduction**

Training is a planned activity that improves workers' technical proficiency so they can do specific tasks effectively. Edwin B. Flippo stated, "Training is the act of enhancing the knowledge and skills of an individual for performing a certain profession." Workers have the opportunity to learn new skills and acquire technical knowledge through training so they can do particular occupations. Training is crucial for both new hires and current staff. It allows new hires to acclimate to their positions and also broaden their knowledge and expertise in certain areas. Training is the process of transferring the knowledge, abilities, and skills needed to carry out the assigned tasks effectively with the goal of maximizing the worker's potential. Training is an organized activity intended to alter people's attitudes and behaviors. Because there is no end to learning and because people are constantly learning new technology, patterns, etc. Training is a two-way, ongoing process.

During 24 weeks of the training, a variety of jobs are provided by Thumbprints Utd including developing QC checklist, IQC and CQC analysis, calibration and improving QC process.

#### **3.2 Summary of the training and experience gained**

These are the only duties and tasks that are done throughout my industrial training.

##### Task 1: Developing QC Checklist

QC checklists are prepared for the company to check the quality of items. During a training period, the task is assigned to prepare the QC checklist for them. Checklists for quality control inspections have two major objectives which are to describe the product specifications and quality standards that the supplier is required to adhere to and to establish objective standards for evaluating the product to make sure it lives up to client expectations. Even before they begin the production, it's beneficial to give their supplier a thorough quality assurance checklist. This offers the provider a chance to assess their needs and let them know if any are excessive or need to be changed before mass production.

### Task 2: IQC and CQC Analysis

In marketing industries, these days, it's more important to meet your customers' expectations than to have things available. Customers often complain when their needs are not satisfied, and occasionally they just share their opinions through reviews. In this company they called it Internal Quality Complaint (IQC) and Customer Quality Complaint (CQC) which can affect their reputation and income. During the training, I was trained to analyze complaints from internal and customer yearly and monthly in terms of root cause and actions taken.

### Task 3: Calibration

By checking against reference calibrating equipment and making any necessary adjustments, manufacturing calibration provides accuracy and consistency for measuring tools. The key benefit of calibration is that it preserves measurement precision, uniformity, and repeatability, ensuring trustworthy standards and outcomes. Equipment can become out of specification, generate erroneous data, and endanger quality, safety, and equipment longevity without routine calibration. During my industrial training, I was trained on how to calibrate the daily equipment used internally and externally.

### Task 4: Improves QC process

Enhancing employee engagement and motivation at work results in higher job satisfaction and staff retention for your business, not to mention a reduction in employee stress. A productive workplace atmosphere allows you and your staff the chance to exchange concepts for the growth of your business. Additionally, a healthy work environment can increase employee productivity and lower your risk of dealing with chronic absenteeism, as well as, in some professions, workers' compensation and medical claims. During my industrial training, I was assigned to improve the existing QC process and make changes for better improvement.

### Task 5: Indirect duties

Clerical works which are indirect such as answering phone calls, photocopy, printing, filing, handling emails and also helping the workers do their job were done during training.

The details of the task will be explained in chapter 4.

### **3.2.1 Weekly Activity (summary of each week)**

**Table 3.1 Summary of each week activity**

| Week | Activity   |
|------|--|
| 1    | Duty report to the company.  |
| 2    | Learning how to issue the certificate of analysis (COA).                         |
| 3    | Develop slide presentation for Management Review 2021 meeting.                   |
| 4    | Learn how to quality check on a sample.  |
| 5    | Learn how to scan and operate barcodes using Microscan Barcode Verifier.         |
| 6    | Review and analyze work instruction Inspection and Test Plan.                    |
| 7    | Develop QC checklist for every process.  |
| 8    | Tour of the printing department by online QC workers.                            |
| 9    | Learn how to update control samples received from the client into excel.         |
| 10   | Learn how to update data in the Pass Job Record 2022 excel.                      |
| 11   | Unattended to work due to annual leave (Eid Holiday)                             |
| 12   | Organize and return empty proof bags to the storeroom by color coding method.    |
| 13   | Monthly assembly with all staff and workers of Thumbprints.                      |
| 14   | Surveying information for calibration of measuring equipment in each department. |
| 15   | Improves ways of filing the Pantone Lab Color Proof (coated and uncoated) files. |
| 16   | Update the calibrations record.  |
| 17   | Learn how to compare pantone color code with bardown reference.                  |
| 18   | Prepare and organize files for audit.  |
| 19   | Learning how to issue Internal and Customer Quality Complaints.                  |
| 20   | Organizing and cleaning QC office by 5s method.                                  |
| 21   | Welcome and brief job to the new QA Manager.                                     |
| 22   | Assist QC members to do clerical jobs.   |
| 23   | Unattended to work for 5 days due to sick leave (diagnosed positive covid)       |
| 24   | Prepared report, logbook and slide presentation for internship.                  |



PF/QC STD - PF/QC.BIS QC Checklist (rev1)-testing [Compatibility Mode] - Microsoft Excel

THUMBPRINT'S UTD SDN BHD  
QC CHECKLIST (PRESS) PF/QC/010

MACHINE \_\_\_\_\_ DATE \_\_\_\_\_ JB NO. \_\_\_\_\_ PRINT QTY \_\_\_\_\_ START TIME \_\_\_\_\_ (AM/PM) SECTION \_\_\_\_\_

JOB TITLE \_\_\_\_\_

☐ From Side ☐ Back Side  Sample Size \_\_\_\_\_

| NO | PROCESS   | YES (GRADE) | NO (GRADE) |
|----|---|-------------|------------|
| 1  | Check thickness of paper (if applicable) with measurement gauge before start printing.  |             |            |
| 2  | Compare the color with color proof against sample printed sample; moist up or pantone color chart.  |             |            |
| 3  | Color density measurement - 50% for CMYK job.   |             |            |
| 4  | Printed material checked against Standard Art Card.   |             |            |
| 5  | Check with first printed colour for job in pack age.  |             |            |
| 6  | Check visual images & offset/SDN number.  |             |            |
| 7  | Barcode number against proof.   |             |            |
| 8  | Full and offset registration number, printing page and color.   |             |            |
| 9  | Scan the barcode if any (by QC personnel).  |             |            |
| 10 | Check front and back position (cut fold and double check with mock-up).   |             |            |
| 11 | Printing Registration: Normal job - 0.2mm / Margin; Plain - 0.1mm / 0.1mm; Reveal top layer - 0.2mm / 0.1mm; Reveal bottom - 0.1mm.   |             |            |
| 12 | No visible speckle, staining, dirt, ghosting, bubbling, water stain or other marks, scratches and so on.  |             |            |
| 13 | Check printing method, work and turn (left to right) work and number (up/down).   |             |            |
| 14 | Check the color against color proof after water is applied. Use a pen smooth with water or spray with water and apply over the area with magic blue. Print color bar and check color according to standard. |             |            |

Quantity Checked \_\_\_\_\_  
 Passed Checked \_\_\_\_\_  
 QC Inspector (Name) \_\_\_\_\_

Release to next process \_\_\_\_\_  
 (Printing) \_\_\_\_\_

Remark: \_\_\_\_\_

Approved by: QC Supervisor \_\_\_\_\_

Ready

Figure 4.2 QC Checklist

A technique or collection of procedures known as quality control (QC) is designed to make sure that a service or product is made in accordance with a specified set of quality criteria or that it satisfies the needs of the client or customer. Behind this successful inspection, they develop QC checklists as their guidance. As mentioned before, quality control inspection checklists are used primarily for two reasons which are to specify the product and quality criteria that the provider is expected to satisfy and to set up a system of objective standards to check the product and make sure it lives up to client expectations. Even prior to beginning production, it is beneficial to share a comprehensive quality assurance checklist with your supplier. The supplier will then have a chance to assess your specifications and let you know if any of them are excessive or need to be changed before mass production.

Given that QC checklists often specify dimensions tolerances and measuring techniques, they are likely to prevent the dimensional problems in the keychain example described earlier. This document and an authorized sample can be used by your supplier to help them comprehend your specifications throughout the production process. The quality control checklist should include a standard for inspection when it comes to inspecting the product before shipping. The checklist is crucial for you or any outside inspector you hire to inspect on your behalf, as well as for internal QC staff who are checking the product.

During the duty report day on 21st February 2022, the company's Human Resource Manager has already briefed list tasks and duties for me and one of the tasks is developing QC checklist. In the Quality Control department, they consist of 2 teams which are a sample team and an online QC team. For the sample team, they are incharges of collecting samples for client approval. After some processes are done, they collect some good samples from the bulk. For example, the current job is at the post press department for the binding process. After the process is finished, they send the job (bulk) to QC department for advance sample collection. The sample collection criteria was taken from the bulk and based on QC checklist. After they are done collecting, the rest of the job (bulk) will be sent to the next process which is finishing and logistic while the advance sample they collect earlier will be delivered to the client for approval. The samples must be in excellent conditions to fulfill the client's requirement otherwise they get complaints.

As for the online QC team, before releasing the final products to the clients, they did their checking at the last two processes which are at finishing department and logistic department. Their job is to final inspect the job already fulfilling the client requirement by referring to the QC checklist. All products must be in excellent condition. Next, they also double check whether the bulk has already been taken in advance or not. This is because, sometimes the sample team mistakenly checks whether they already took the advanced sample from that job (bulk) or not and sometimes they did not receive the bulk from the previous process. If not, they will alert the sample team. They also inspect the item perfectly before the job is released to the customer. During all the inspections, they use QC online checklist as their guideline.

Despite all the inspections being done using the QC checklist, there must be one person who makes the checklist for them to refer to. So during my internship, I was taught how to make the checklist for them. Every year, they make the checklist by referring to the Thumbprints Work Instruction Quality Control Inspection and Test Plan (TU.WI.QC.001) just like Figure 4.1 above. They teach me how to review and improve the QC checklist for every process from printing process until finishing process based on the Inspection and Test Plan. First thing first, I assist my supervisor in developing inspection tools. There are many parameters that need to be checked in each process. After the Inspection and Test Plan are reviewed and improved, my job is to transfer the information from the test plan to the QC checklist like Figure 4.2 above. The QC checklist will then be released to the QC personnel as their reference after it is done.

#### 4.2.2 IQC and CQC Analysis

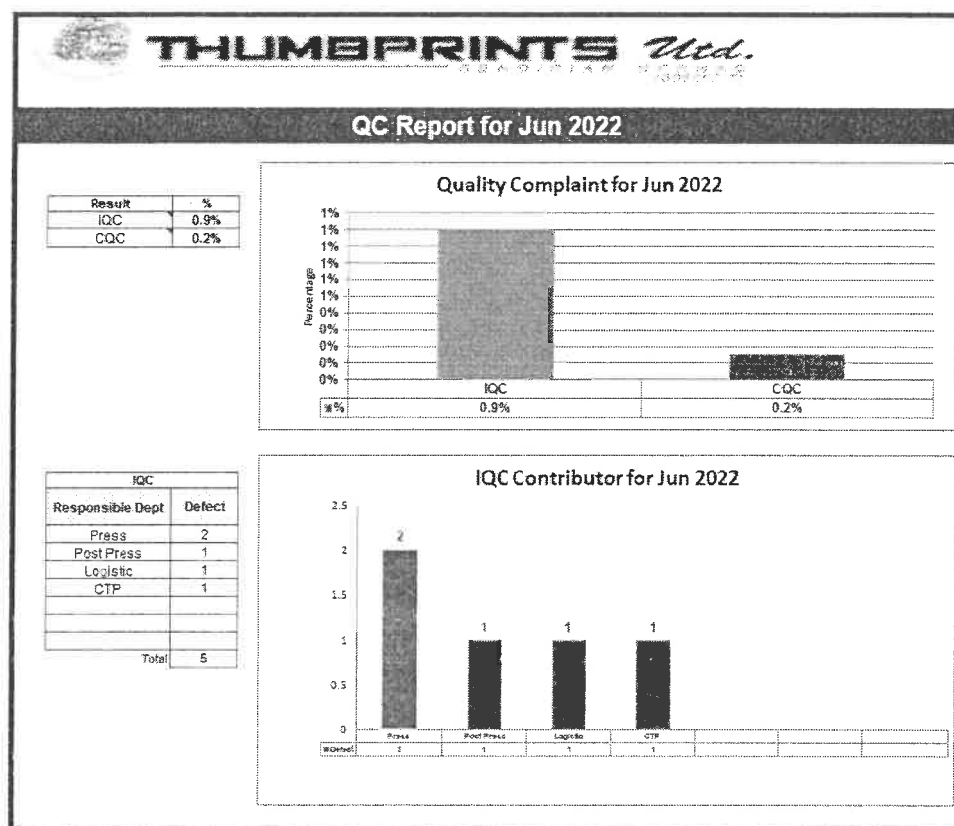


Figure 4.3 IQC and CQC monthly report

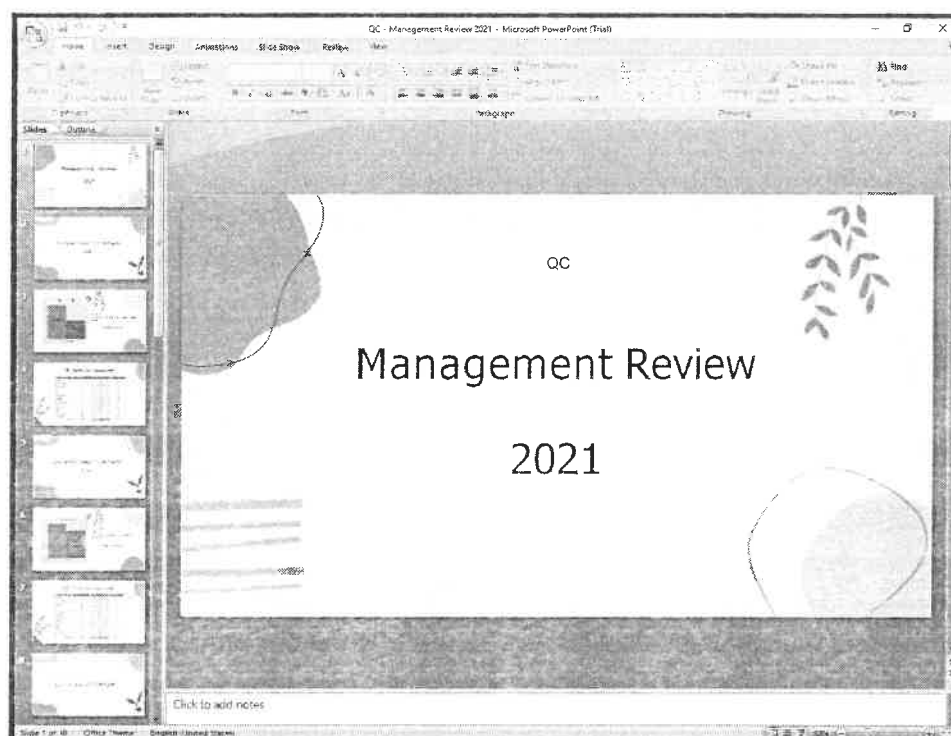


Figure 4.4 Management Review slide



Although handling complaints might be challenging, it is necessary in a professional setting. However, why should they consider altering their complaints management strategy? Because an efficient strategy for managing complaints may benefit them: Identify areas where their procedures, goods, and services may be improved; Instead than only addressing complaints as they arise, address the underlying causes of problems to prevent them from occurring again; Early resolution of a complaint can prevent further issues and escalation, enhance the reputation of the business, and increase customer satisfaction and loyalty. Consider their clients while creating their procedure for managing complaints. Make a mechanism for filing complaints that is user-friendly, convenient for the sort of clients they serve, and that inspires them to do so. Only 4% of dissatisfied customers file complaints, while the majority transfer to a rival, according to statistics, but 90% of those whose concerns have been satisfactorily handled continue to be clients.

A documented complaint handling process must be established, and pertinent and thorough records must be kept, for a management system to be effective. Additionally, the complaints handling method should be explained to all staff, who should also receive training on how to utilize it and be made aware of its significance and advantages. As mentioned before, in Thumbprints Utd they used the IQC and CQC system. IQC stands for Internal Quality Complaint while CQC stands for Customer Quality complaint. The workers of Thumbprints receive IQC if they receive complaints from the other departments. For example, during online QC they do their inspection, they detect that some of the bulk has printing defects on them and they highlight this matter to the Press department. Next week, the same job is reprint but they caught the same defect on the bulk even though they already highlighted the matter, therefore they issue IQC to the Press department. Same goes for other departments as well. They can complain to the QC department, and the QC department will issue IQC to the responsible department. In IQC form, the responsible department will answer all the questions regarding their defect.

Secondly, CQC which is a customer quality complaint. The procedure for this complaint is the same as IQC but they are slightly different in terms of the complainer. For CQC, the complaint is directly from the customer. When the customer already receives the sample or products, usually they go through inspection too and when they detect the products have some defect, they will complain. They will directly complain to the salesperson that is incharge of the product as a salesperson who is the only person that communicates and deals with clients. After that, the salesperson will normally email this matter to the QC department to investigate which department is responsible for the complaint. This is because the sales person does not know which department in the production floor is responsible for the defect so they pass it to the QC department to investigate it. Normally the QC department will hold small meetings with all the heads of department to help investigate it. After the

agreement is done, the QC department will issue CQC to the responsible department.

Every month, the company held IQC and CQC meetings with all the heads of department and also the managing director to discuss the problems that the IQC and CQC receive each month and the solutions to each problem. After the IQC and CQC form is emailed to the responsible department, they must fill in the form and send it back to the QC department before the next IQC and CQC meeting. Too many CQC receives from clients will affect the individual point and salary. To simply put, IQC is a complaint from the internal which is from among themselves while CQC is a complaint from the external which is from the customer. During my internship, I was taught on how to issue IQC and CQC to the responsible department. As we can see in the Appendix A was the IQC and CQC template. I also was assigned to analyze monthly IQC and CQC data whether the data achieved the target or vice versa. The targeted percentage for monthly IQC must be below or equal 1.2% while monthly CQC must be below or equal 0.4%. The targeted percentage must be compared with previous year to see the company's performance. After doing analysis, I must prepare a QC report in slides form for the yearly Management Review meeting. Refer Figure 4.4 above. I also participate in the internal audit (ISO 9001).

#### 4.2.3 Calibration

| THUMBPRINTS UTD SDN BHD  |                |                      |       |           |                       |               |           |                  |               |
|--------------------------|----------------|----------------------|-------|-----------|-----------------------|---------------|-----------|------------------|---------------|
| MEASURING EQUIPMENT LIST |                |                      |       |           |                       |               |           |                  |               |
| NO.                      | EQUIPMENT      | EQUIPMENT SERIAL NO. | MODEL | LOCATION  | CALIBRATION FREQUENCY | CALIBRATED BY | TOLERANCE | Calibration Date | Next Due Date |
|                          | Sqr 12"        | TUmnt00              | -     |           | Yearly                | Internal      | ±0.5mm    | 12/2/2022        | 12/2/2023     |
|                          | Measuring Tape | TUmnt01              | -     | TANDEM    | Yearly                | Internal      | ±0.5mm    | 12/2/2022        | 12/2/2023     |
|                          | Measuring Tape | TUmnt02              | -     | TANDEM    | Yearly                | Internal      | ±0.5mm    | 12/2/2022        | 12/2/2023     |
|                          | Measuring Tape | TUmnt03              | -     | MIT-R10   | Yearly                | Internal      | ±0.5mm    | 12/2/2022        | 12/2/2023     |
|                          | Measuring Tape | TUmnt04              | -     | MIT-R10   | Yearly                | Internal      | ±0.5mm    | 12/2/2022        | 12/2/2023     |
|                          | Measuring Tape | TUmnt05              | -     | MIT-16-1  | Yearly                | Internal      | ±0.5mm    | 12/2/2022        | 12/2/2023     |
|                          | Measuring Tape | TUmnt06              | -     | MIT-16-1  | Yearly                | Internal      | ±0.5mm    | 12/2/2022        | 12/2/2023     |
|                          | Measuring Tape | TUmnt07              | -     | MIT-16-3  | Yearly                | Internal      | ±0.5mm    | 12/2/2022        | 12/2/2023     |
|                          | Measuring Tape | TUmnt08              | -     | MIT-16-3  | Yearly                | Internal      | ±0.5mm    | 12/2/2022        | 12/2/2023     |
|                          | Measuring Tape | TUmnt09              | -     | PERFECTOR | Yearly                | Internal      | ±0.5mm    | 12/2/2022        | 12/2/2023     |
|                          | Measuring Tape | TUmnt10              | -     | PERFECTOR | Yearly                | Internal      | ±0.5mm    | 12/2/2022        | 12/2/2023     |
|                          | Measuring Tape | TUmnt11              | -     | MIT-15    | Yearly                | Internal      | ±0.5mm    | 12/2/2022        | 12/2/2023     |
|                          | Measuring Tape | TUmnt12              | -     | MIT-15    | Yearly                | Internal      | ±0.5mm    | 12/2/2022        | 12/2/2023     |
|                          | Measuring Tape | TUmnt13              | -     | V-3000    | Yearly                | Internal      | ±0.5mm    | 12/2/2022        | 12/2/2023     |
|                          | Measuring Tape | TUmnt14              | -     | V-3000    | Yearly                | Internal      | ±0.5mm    | 12/2/2022        | 12/2/2023     |
|                          | Measuring Tape | TUmnt15              | -     | KBA       | Yearly                | Internal      | ±0.5mm    | 12/2/2022        | 12/2/2023     |
|                          | Measuring Tape | TUmnt16              | -     | KBA       | Yearly                | Internal      | ±0.5mm    | 12/2/2022        | 12/2/2023     |
|                          | Measuring Tape | TUmnt17              | -     | DITIEN 1  | Yearly                | Internal      | ±0.5mm    | 12/2/2022        | 12/2/2023     |
|                          | Measuring Tape | TUmnt18              | -     | DITIEN 1  | Yearly                | Internal      | ±0.5mm    | 12/2/2022        | 12/2/2023     |
|                          | Measuring Tape | TUmnt19              | -     | DITIEN 2  | Yearly                | Internal      | ±0.5mm    | 12/2/2022        | 12/2/2023     |

Figure 4.5 Measuring Equipment master list

STEEL RULER STICKER LABEL 2021-23 (version 1) (Activated) (Compatibility Mode) - Microsoft Excel

|    | A   | B                                       | C                                       | D  | E   | F   | G   | H   | I |
|----|---|---|---|--|---|---|---|---|---|
| 1  | QC<br>Date: 12/2/2023<br>TU/SSR/03 (12)     | QC<br>Date: 12/2/2023<br>TU/SSR/13 (24) | QC<br>Date: 12/2/2023<br>TU/SSR/03 (36) | FINISHING<br>Date: 12/2/2023<br>TU/SSR/04 (12) | FD-1<br>Date: 12/2/2023<br>TU/SSR/05 (24) | FD-2<br>Date: 12/2/2023<br>TU/SSR/06 (36) | FD-3<br>Date: 12/2/2023<br>TU/SSR/07 (48) | PLATEN<br>Date: 12/2/2023<br>TU/SSR/08 (36) |   |
| 2  | PLATEN<br>Date: 12/2/2023<br>TU/SSR/09 (36) |   |   |  |   |   |   |   |   |
| 3  |   |   |   |  |   |   |   |   |   |
| 4  |   |   |   |  |   |   |   |   |   |
| 5  |   |   |   |  |   |   |   |   |   |
| 6  |   |   |   |  |   |   |   |   |   |
| 7  |   |   |   |  |   |   |   |   |   |
| 8  |   |   |   |  |   |   |   |   |   |
| 9  |   |   |   |  |   |   |   |   |   |
| 10 |   |   |   |  |   |   |   |   |   |

Page 1

Figure 4.6 Measuring equipment label

CALIBRATION SURVEY RECORD - Microsoft Excel

| CALIBRATION SURVEY RECORD |    |           |             |                  |          | CSR22/23     |
|---------------------------|----|-----------|-------------|------------------|----------|--------------|
| DEPARTMENT: PRESS         |    |           |             |                  |          |              |
|                           | NO | EQUIPMENT | MEASUREMENT | MACHINE/OPERATOR | QUANTITY | REMARKS      |
| 4                         | 06 | SSR       | 12"         | MX 1             | 1        | Hilang/Rusak |
| 5                         |    | MT        |             | MX 1             | 1        | Hilang/Rusak |
| 6                         | 1  |           |             |                  |          |              |
| 7                         | 2  |           |             |                  |          |              |
| 8                         | 3  |           |             |                  |          |              |
| 9                         | 4  |           |             |                  |          |              |
| 10                        | 5  |           |             |                  |          |              |
| 11                        | 6  |           |             |                  |          |              |
| 12                        | 7  |           |             |                  |          |              |
| 13                        | 8  |           |             |                  |          |              |
| 14                        | 9  |           |             |                  |          |              |
| 15                        | 10 |           |             |                  |          |              |
| 16                        | 11 |           |             |                  |          |              |
| 17                        | 12 |           |             |                  |          |              |
| 18                        | 13 |           |             |                  |          |              |
| 19                        | 14 |           |             |                  |          |              |
| 20                        | 15 |           |             |                  |          |              |
| 21                        | 16 |           |             |                  |          |              |
| 22                        | 17 |           |             |                  |          |              |
| 23                        | 18 |           |             |                  |          |              |
| 24                        | 19 |           |             |                  |          |              |
| 25                        | 20 |           |             |                  |          |              |
| 26                        | 21 |           |             |                  |          |              |
| 27                        | 22 |           |             |                  |          |              |
| 28                        | 23 |           |             |                  |          |              |
| 29                        | 24 |           |             |                  |          |              |

Page 1

Ready Recovered

Figure 4.7 Calibration Survey Record

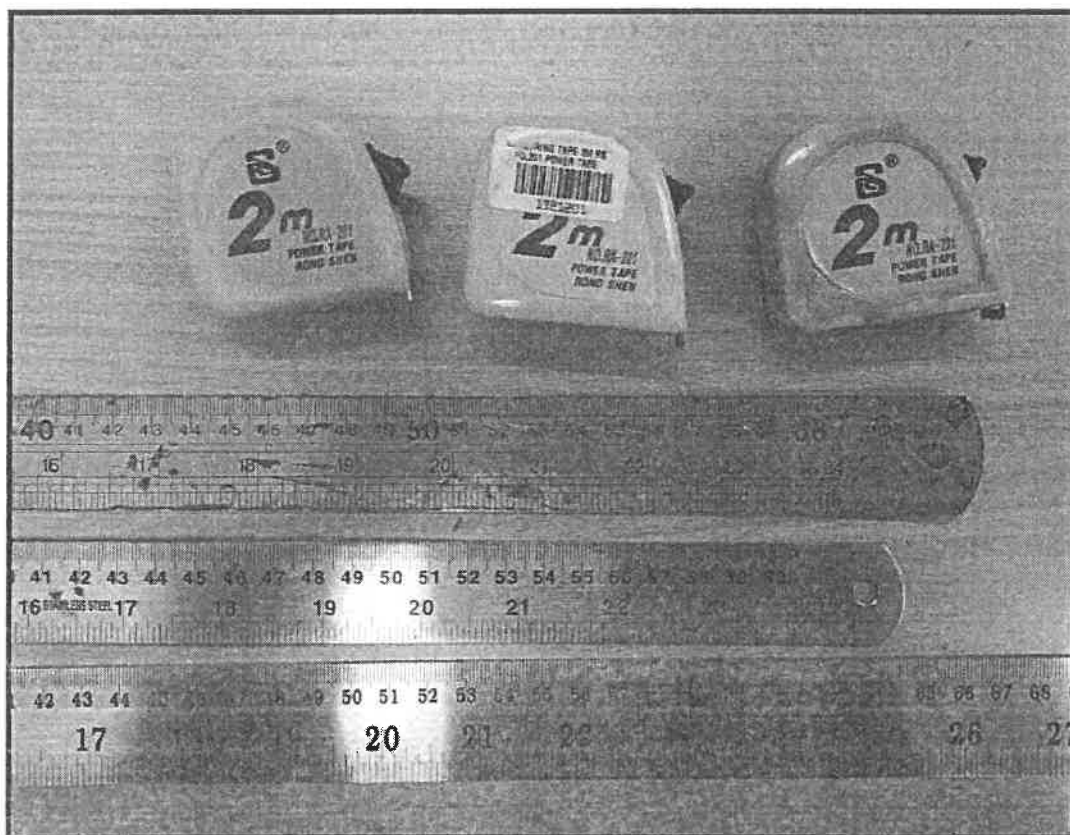


Figure 4.8 Measuring equipment

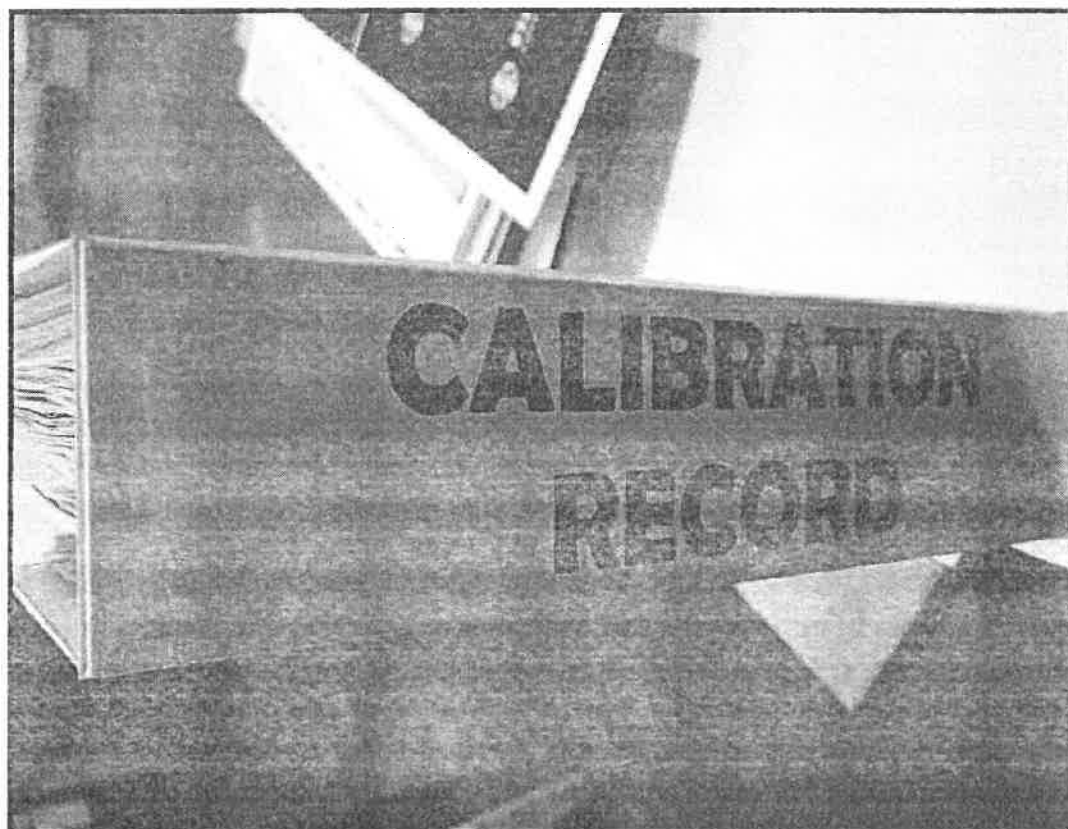


Figure 4.9 Calibration File

When evaluating the effectiveness and quality of a manufacturing process or completed product, accuracy is a crucial indicator. There will almost certainly be negative effects if a part is not made according to a customer's needed requirements, which are established by the product's application. Therefore, why is calibrating crucial? Since manufacturing equipment needs to be properly calibrated in order to function according to specifications, the significance of precision in manufacturing serves to highlight the significance of calibration as well. The requisite degree of precision and ISO quality criteria cannot be met without properly calibrated equipment. What role does calibrating play? The benefits of calibrating their gear and measurement equipment cannot be understated since calibration plays a significant role in preventing the creation of erroneous components.

Calibration in manufacturing has many different aspects, but generally speaking, calibration is significant in these two crucial areas. In order to verify that their quality control procedures are correct and that they are not accepting components that should be rejected, calibrate their measurement equipment. Manufacturing machine calibration makes the process more effective by ensuring that the equipment is performing as it should. Equipment that is not properly calibrated will produce items that are incorrect and with unexpected production outcomes. In Thumbprints, they also ensure all the measuring equipment used is calibrated every year internally and externally. During my internship, my task was to calibrate internally and the measuring equipment is measuring tape and steel ruler used in the production floor department.

To start with, I developed a calibration survey record template for me to easily collect the data. Refer Figure 4.7. After that, I visit each department to survey and collect all the measuring equipment they have to calibrate it. For measuring tape, I calibrate it by checking the function of the tape. Check whether the tape can be functionally used or defect on the scale. Meanwhile, for the steel ruler I calibrate it by checking the visibility of the scale number and the straightness of the ruler. If there are defects detected, I need to change to a new item. They have only one type of measuring tape they use which is 2 meter scale unlike the steel ruler which has 3 types which are 12, 24 and 36 inches ruler. Next, I ensure that every measuring item has a proper label after the calibration. The labels are made as shown in Figure 4.6.

After all the calibration is done, I need to update all the data gathered from the survey in the calibration records as in Figure 4.5. For external calibration, I assist my supervisor to do the calibration. Some equipment are Glossmeter, Ugra Abrasion Tester, Dial Thickness Gauges and many more. I was assigned to improve ways of filing calibration files including the certificate. Refer Figure 4.9. In many tasks assigned to me, this task I enjoyed the most.

#### **4.2.4 Improve QC process**

Enhancing employee engagement and motivation at work results in improved job satisfaction and staff retention for your business, not to mention a reduction in employee stress. A productive workplace atmosphere allows you and your staff the chance to exchange concepts for the growth of your business. Additionally, a healthy work environment may increase employee productivity and lower your risk of dealing with chronic absenteeism, as well as, in some professions, workers' compensation and medical claims. The individuals who work in them have a big impact on the work environments. Employing the proper people is the first step in creating a healthy work environment, as successful companies are aware of. The atmosphere in which workers work benefits when they are upbeat, diligent, and passionate about what they do.

One of the tasks assigned to me is to improve the existing QC process. One of the things I contribute to is their working spirits. For example, I suggest that they do a small exercise together during the daily morning call before they start the work. This is because I always saw them as not energetic and a bit lazy during work and this affected their work productivity. Secondly, I improve their working environment by rearranging the position of certain things. For example, I rearrange all files in one place for easy access by reapplying the concept of 5s, a methodology that results in a workplace that is clean, uncluttered, safe, and well organized to help reduce waste and optimize productivity. This to help build a quality work environment, both physically and mentally. Lastly, I improved the working environment by teaching them how to use computers easily. Sometimes they need to use computers to do some work like issuing IQC and CQC, issuing certificates of analysis (COA) and many more IT related things. What I am concerned about is that I detect that they are not using computers proficiently and that causes some problem and after effect the work result. I teach and assist them slowly, one by one until they make good progress.

#### **4.2.5 Indirect duties**

Despite all the official duties that are assigned to me, I also did some indirect duties throughout my internship at Thumbprints. I do clerical work such as keeping files and records current and accessible by maintaining them, prepare outgoing mail and sort and distribute receiving email, answer the phone to get messages or transfer calls to the proper coworkers, use computers and office equipment like photocopiers and printers to create spreadsheets and perform other office tasks like word processing, issue certificate of analysis (COA) as necessary, help with office organization and management processes, keep an eye on the supply of office supplies (such as paper clips and stationery) and report any shortfalls and carry out other administrative tasks as needed.

### 4.3 Problem encountered and approach adopted for solving problem

Every college student should participate in an internship since they offer up a lot of fantastic opportunities and provide an excellent opportunity to gain practical job experience. Unfortunately, there's a potential that we will encounter difficulties that seem impossible to overcome. We always hope that new circumstances will go well and live up to our expectations. The first time we intern for a firm or organization, it might be a daunting process. Students are in a pickle because of serious issues including first-time internship troubles and typical internship difficulties. From the start, we could have to deal with difficulties like unfamiliarity, a lack of prior job experience, being treated lightly, and many more. And these unforeseen issues and challenges can lead us to desire to end our internship. At times like this, it's normal to feel dismayed and frustrated. But the secret is to persevere. There are some problems that I encountered during my internship.

First and foremost, I was too afraid and shy to ask questions. Sometimes I don't want to bother anybody or get in the way, but if the assignment they've given me isn't clear at all, I need to question my supervisor about it. When I first started my internship, I was unsure whether to repeatedly ask my supervisor to clarify anything or to attempt to figure it out on my own. The thing I am most hesitant to do is ask questions. What if my queries make it seem like I don't know anything? I am not even sure which of my coworkers will assist me or act strangely. I am reluctant to cut them off. I find it challenging to ask inquiries in such a setting because I am worried about being judged. Asking inquiries and addressing uncertainties are acceptable. Make sure we don't have doubts all the time; attempt to come up with some on our own, but don't presume. One of my lecturers constantly stressed the importance of not assuming anything as an engineer. However, I reminded myself not to be scared to do so since, as I have learned, it may be simple for managers to overlook the fact that we are inexperienced and in need of assistance at times. I thus create a list of the questions I want answered. My self-esteem and confidence increase as a result of my queries.

Secondly, one of the main issues or hurdles for me during my internships is understanding cooperation since teamwork in the real world differs greatly from my projects in college. Miscommunication, incorrect perception of the goals, and divergent viewpoints among team members are all frequent and differ from the project group work I have completed. Internal communication errors also have an impact on my job. So my solution is to create a relationship with each team member. Teams will become more effective and productive as they get to know one another better and build mutual trust and confidence. During lunch time, create relationships by asking some personal questions. For example, ask where do they live, how many years they work at the company, what are the best and worst experiences they had during their time working there. They also ask me some questions. This way works really well. It improves our teamwork a lot.

Lastly, my challenges during the internship is lack of effective communication skills. It might be challenging for team members to communicate. This may be especially true for teams who have not previously worked together significantly. It is possible for assigned tasks, general objectives, and feedback to be misunderstood, which results in the loss of intended messages and a totally different final product from what was originally intended. What makes this become more challenging is when my teammates are from different races and cultures. My teammates are mostly from indians and sabahan. It makes it more difficult for me to understand when they speak Malay because of slang from their nature language. Sometimes I understand it more wrongly than what they mean. So my solution for this problem is to listen carefully to what they said and try to understand as correctly as possible. But if I still don't get it, I will ask them to repeat what they are saying.

#### **4.4 Professional and ethical issues**

Workplace ethics are a set of moral norms, beliefs, and obligations that both employers and workers must uphold. All employees at the company are required to abide by this set of guidelines. Employers put these ideals into practice to promote connections between employees and with customers. Whether or whether an organization chooses to put these ethics in paper, they must be observed. No matter if we go to work every day or work from home, having a strong work ethic is essential to developing a successful career. In order to boost productivity and preserve integrity, organizations are known to adopt ethical policies and behaviors, including a penalty for employees who violate workplace ethics. In thumbprints, all the workers and staff are very well mannered and have low professional and ethical issues as this company is so strict about ethical behaviors in the workplace.

One of the most things I like about Thumbprints is because they are so particular about corruption practice. Some typical sources of corruption can be observed in an organization's hiring procedure. They encourage a huge number of individuals to present their resumes and attend interviews, but only those who share their political affiliations get hired. This is also typical of businesses that request bids from contractors for a project, but the staff only gives them to their pals, who might not even submit a proposal. Thumbprints Utd practices this matter by a fair, honest and transparent conduct of business and prohibits bribery, satisfies and comply with applicable requirements, compliance obligations and anti-bribery laws that are applicable to the company, establish, review and achieve quality, environmental and anti-bribery objectives, establish Zero Corruption Committee that overseeing and reporting on the performance of the anti-bribery management system to the governing body and top management and also anti-bribery management system to avoid any nonconformity that may lead to disciplinary action, termination of employment or termination of service.



Secondly, this company practices professionalism. Every action an individual does at work must adhere to professional standards. It is quite improper to use casual language in a formal setting. These standards ought to be held in high regard and applied to all of an employee's work-related activities. This should cover their speech patterns, the type of work they do, and their interactions with clients and coworkers. Productivity will also be increased directly or indirectly by establishing professional connections with coworkers or other professionals outside the job. It will be simpler for ideas to be discussed and expertise to be transmitted to junior employees when there exist professional ties between low-level and high-level employees. With mentorship provided by more experienced staff, Thumbprints can comfortably assign an intern to work on a challenging project to achieve a pressing deadline. For example, in the sales department they need to develop external professional ties with professionals from other organizations particularly with individuals who are potential customers. These connections will make it easier to establish a contact within another organization in case they need to sell their product to them.

Next, the workers of Thumbprints Utd obey the company's rules and regulations. Companies may need the employee to sign a number of documents, including the corporate rules and regulation agreement form, at the beginning of an employee contract. A handbook may also be provided to the employee as a reference. Common restrictions in this company include punctuality, improper language, attire, and clothing. Some employees may not thoroughly understand these guidelines out of eagerness to start a new job and may wind up delaying them in the future. If they don't obey it, they get a Show Cause Letter form, refer to Appendix A. Once they get this form, their working performance will drop and affect their bonus. Workplace ethics must be governed by established norms and regulations inside organizations. Additionally, Thumbprints having the rules written down and placed in key locations throughout the office will aid in reminding everyone of the regulations. People often unwittingly adopt items they observe on a daily basis. To avoid violating these laws and regulations, it is crucial that new workers carefully understand them.

Last but not least, this company is free from verbal and sexual harassment. Thumbprints teaches their employees to refrain from insulting their coworkers both inside and outside of the office. This is crucial when working with clients. Due to a poor product, customers are known to become irate and may resort to verbal abuse. When they are at fault, they could even insult us. It is crucial that we refrain from using abusive language against clients as a salesman, or any other type of employee, regardless of how angry we may feel. Sexual harassment is a crime that does not just occur in the workplace. In thumbprints, when an employee who is accused of sexual harassment will be prosecuted with the board of director and facing repercussions at work. Making defaulters pay for their actions is the only way to prevent this from harming the company's image.

#### **4.5 Health, environment and sustainable aspects**

Given that employees spend approximately a quarter of their life at work, office surroundings have a significant role in the lives of the majority of people. For your physical safety, emotional health, and professional productivity, it's crucial that you work in a secure, healthy setting. The health and comfort of your employees may be jeopardized by sick building syndrome, which can be caused by poor ventilation, asbestos-filled buildings, and other factors. In addition to lowering productivity, studies have shown that unfavorable work conditions may also increase the risk of lung cancer, asthma, and other illnesses. Employers must take proactive measures to guarantee the health and wellbeing of their employees. Dealing with the issue makes financial sense due to reduced health management costs, minimal absenteeism, and controlled insurance premium.

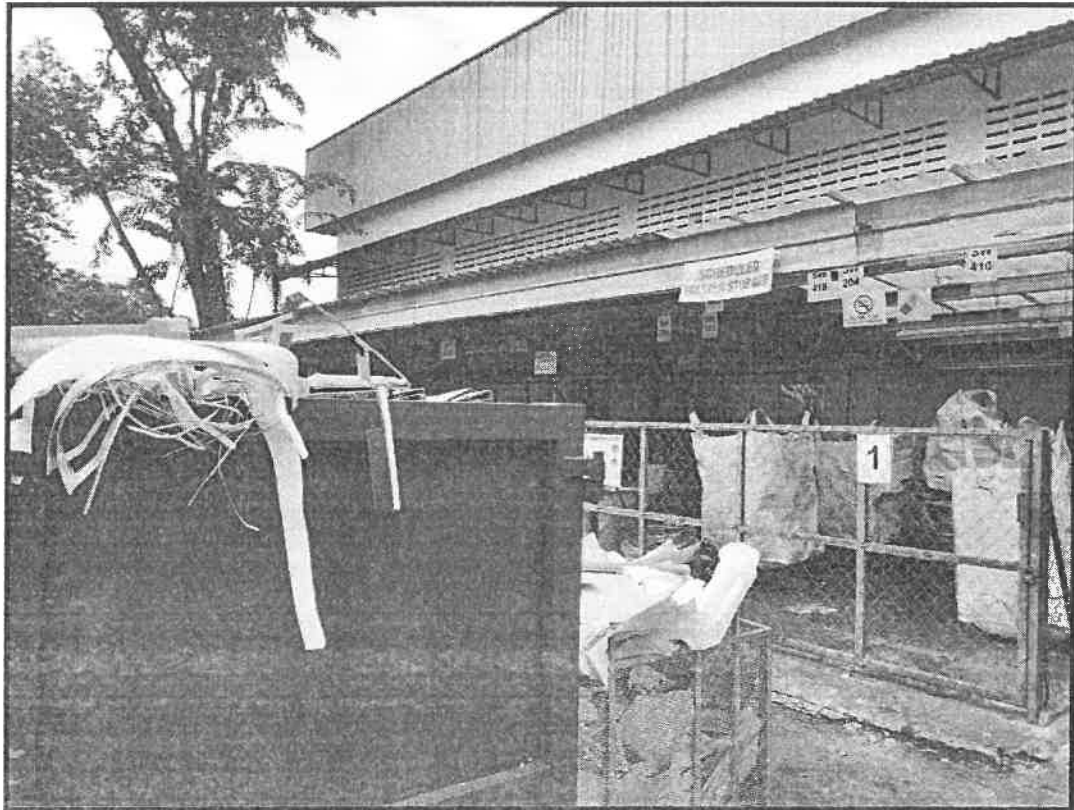
First and foremost, Thumbprints protect their employees from exposure to workplace hazards and the risk of injury through the use of personal protective equipment (PPE). All personal protective gear must be designed and built safely for the task to be done, and it must be kept in a dependable and hygienic state. Only protective gear and apparel that complies with NIOSH criteria shall be purchased or permitted for usage. Before being permitted to undertake work requiring the use of PPE, each worker who is obliged to wear PPE will get training in the correct use and maintenance of PPE. Users of PPE shall be provided with periodic retraining as necessary. This company kept all PPE clean and maintained correctly. For eye and facial protection, where dirty or fogged lenses might impede vision, cleaning is especially crucial. Employees are required to maintain, clean, and examine their PPE. Supervisors are in charge of making sure that users take adequate care of keeping their PPE in excellent shape.

Secondly, Thumbprints educate and encourage staff and employees to practice “5r” in their workplace. “5r” stands for repair, refuse, reduce, reuse or recycle materials or wastes. This is to reduce waste generation and conserve natural resources. It is also to establish operational control procedures related to the reduce, reuse and recycle of materials from the company’s activities, products or services that include office papers, reject materials and packaging materials. Example of their reduction of materials consumption practice is use both sides of the paper when photocopying, printing or writing unless otherwise specified and use rags to clean spillage or leakage instead of paper towels. Examples of their practice of reuse of materials are they reuse wooden pallets for internal storage and transfer. Meanwhile, whenever it is not practicable to reduce or reuse waste, segregating the recyclable materials from other general wastes for recycling purposes are their method to practice recycling of materials. Types of recyclable materials in the company include carton boxes, wooden pallets and used paper. Thumbprints also practice repair first before throwing or replacing them with new ones including pallets, machine and stationary. They also Refuse to buy

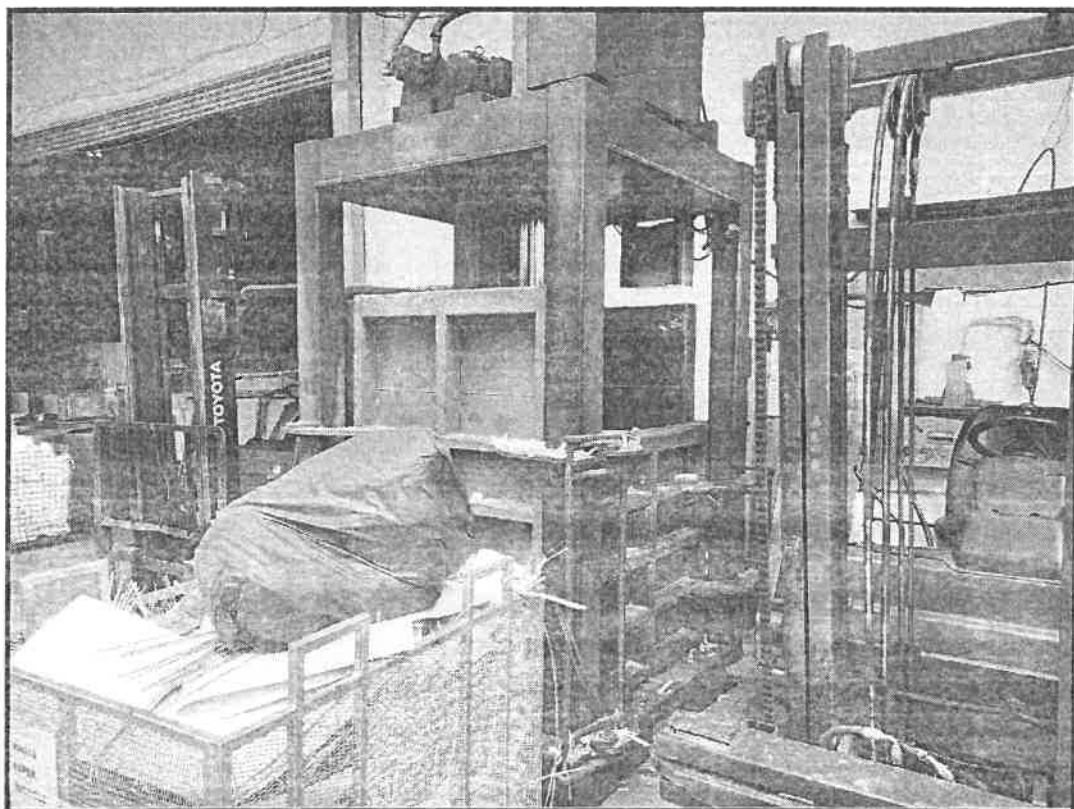
material harmful to the environment; refuse to do unnecessary purchase (always think green before deciding). For instance, they refuse or lessen the purchase of plastic bags and recycle kraft paper instead of virgin kraft.

Next, Thumbprints practice energy conservation to ensure efficient usage of energy. Energy conservation is fundamentally the act of using less energy to save money and lessen the impact on the environment. This might entail using less gas, electricity, or any other energy source that you purchase from your utility company. Since our world has limited energy supplies, it is advantageous for both individuals and our larger energy systems to actively save energy when we can. Thumbprints maintain monthly records on energy consumption and fuel (diesel, petrol) consumption and report to their Environment Management Representative. They monitor the consumption at least on a quarterly basis. For example, they use energy efficient light bulbs and fluorescent tubes in each department, they always turn off lights when not needed and when they leave the office and they service vehicles as per schedule to reduce fuel consumption due to poor maintenance. Their upcoming 2023 project is to use solar panels as their backup energy.

Last but not least, they develop Schedule Waste Management policy. This to establish operational control procedures related to the management of scheduled waste generated from the company's activities, products or services. Their respective departmental HOD shall identify and notify management in case of any new generation of schedule waste. A Scheduled Waste competent person shall be overall responsible to implement scheduled waste activities including notification, inventory, storage, and disposal and reporting. Maintenance personnel shall assist in inventory, storage and disposal of scheduled waste. Types of scheduled wastes they generated include spent lubricating and hydraulic oil, waste developer and empty containers contaminated with paints, ink, organic, solvents, oil & grease or hazardous residues. Upon received the scheduled wastes from the relevant department, scheduled waste personnel shall keep accurate and up-to-date inventory of schedule waste in the Inventory of Scheduled Waste, in accordance with the Fifth Schedule of the Environmental Quality (Scheduled Wastes) Regulations 2005, Refer Appendix C, of the quantities and categories of scheduled wastes being generated, treated, and disposed off.



**Figure 4.10 Scheduled Waste Storage**



**Figure 4.11 Waste Paper Press Machine**



Figure 4.12 Empty recycle bin



Figure 4.13 Full storage recycle bin

## CHAPTER 5

### CONCLUSIONS

#### 5.1 Conclusions

Overall, I learned a lot from this internship. After completing my industrial training, I was exposed to an engineering working life. Throughout my internship, I could understand more about the definition of a chemical engineer and prepare myself to become a responsible and innovative engineer in future. This internship has given me fresh perspectives and the will to pursue a local career in chemical engineering. Furthermore, I learned the value of objective education and the necessity of understanding other people's perspectives. Additionally, the internship helped me identify my strengths and flaws. This made it easier for me to identify the information and abilities I need to develop going forward.

Overall, I thought the internship programme was excellent and would suggest it to my friends. It aids in the improvement and development of my knowledge, skills, and talents. It was a nice experience and gave me good memories since I learned new things and made new friends in addition to gaining experience. Due to the many advantages and perks it offers to the practical trainees, Thumbprints is another excellent site to complete an internship. They give us our own space in addition to other amenities including a laptop, Wi-Fi and high allowances. The firm treated me fairly, justly, and professionally. I have gained knowledge from many groups and people.

Along my training period, I realize that observation is a main element to find out the root cause of a problem. Not only for my project but daily activities too. During my project, I cooperate with my colleagues and operators to determine the problems. Moreover, the project indirectly helps me to learn independently, discipline myself, be patient, self-trust, take initiative and the ability to solve problems. Besides, my communication skills are strengthened as well when communicating with others. During my training period, I have received criticism and advice from my supervisor when mistakes were made. However, that advice is useful guidance for me to change myself and avoid making the same mistakes again. In sum, the activities that I had learned during industrial training really are useful for me in future to face challenges in a working environment.

## 5.2 Suggestions and Recommendations

There are also some recommendations I want to suggest for other students based on my industrial training experience.

First of all, students should do a deep research of their company before applying and after they get an offer letter. Some of the basic things they need to do research is about their salary, accommodation (if they lived far from the company), address and the most important is the company related to their field of study. If possible I suggest choosing the most relatable with your studies. This is because it is easier to learn since it is most relatable to us. Do not forget to look at our job description after we get accepted. Make sure you are capable of using the talents that are expected of you and that you are aware of what they are. A little online research never hurts, and it never hurts to review the abilities you haven't used in a while. At the very least, be aware of where to get internet how-to videos. Most essential, go through the fundamentals of Excel. Excel and the other components of the Microsoft Office Suite will be used in your employment, whether you are accustomed to them or not.

Secondly, students should learn to commute. Practicing your commute is the quickest and, perhaps, most effective method to feel ready on the first day of work. Before we are going 30 minutes late to orientation, find out precisely where your office is, how long it will take you to get there, and where you can park. If you don't want anybody to see you trying it out, go at night or on the weekend when no one is in the office. I advise doing this at the same time you would on your first day. Simply remember to factor in traffic on your first day. If you are unable to rehearse your commute, be sure you Google map it the night before so that you can allow plenty of time for it. Not to forget to not be afraid to ask any question. This is because this is the time we want to learn in the real industry situation. So take as many opportunities as possible and do not make any assumptions.

Last but not least, students should pack some necessary items in their bag for their first day of internship. Normally on the first day, we will be presented with a tonne of knowledge, and we will forget 90% of it in only ten minutes if we don't have a notebook and a pen. Write it all down so you can review it later and ask as few questions again. Next is identification documents. On our first day, we will fill out a lot of paperwork. We will need our identity card, bank account routing number, and some college documents. Bring all of the required information with you to demonstrate to them that you are ready. Be sure to drink plenty of water. Bring a reusable water bottle. It's important to bring lunch on our first day. Because we don't know whether the company provides food or not. On the first day, we will be able to figure out your office's lunch culture. Lastly, I suggest bringing some candy because on our first day there are not many tasks and that can make us sleepy while slacking.

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- 15 energy saving strategies. EnergySage. (n.d.). Retrieved August 4, 2022, from <https://www.energysage.com/energy-efficiency/101/ways-to-save-energy/>
- Bruce, S. (n.d.). Quality Control Inspection Checklists and how to use them. Manufacturing and QC blog. Retrieved August 4, 2022, from <https://www.intouch-quality.com/blog/quality-control-inspection-checklists-and-how-to-use-them>
- How to improve your work environment for long-term success. The 6Q Blog. (2021, December 29). Retrieved August 4, 2022, from <https://inside.6q.io/improve-your-work-environment/>

### 2. Individual

- Mr Hardinain Bin Mohd Dahlan (Internship Supervisor)
- Mrs Leow Chai Chin (Human Resource Manager)
- Mrs Nor Fadilah Binti Mohd (Academic Advisor)



## APPENDIX A


**THUMBPRINTS**

FF/QC/005/06

| INTERNAL QUALITY COMPLAINT       |  |                   |                  |              |  |
|----------------------------------|--|-------------------|------------------|--------------|--|
| Ref No:                          |  |                   |                  |              |  |
| Date of issue                    |  | Reported by       |                  | To Dept.     |  |
| Job sheet                        |  |                   | Order Qty        |              |  |
| Particulars                      |  |                   | Total defect     | % Defect     |  |
| Defect Area & Disposition Action |  | Quantity reprint: | Quantity rework: | Qty release: |  |
| Defect                           |  |                   |                  |              |  |
| Issued by                        |  |                   |                  |              |  |

| ACCOUNTABLE DEPARTMENT REPLY   |  |
|--|--|
| Investigation:   |  |
| a) Why defect happen?  |  |
| b) Why (a) can happen?   |  |
| c) Why (b) can happen?   |  |
| d) Why (c) can happen?   |  |
| e) Why (d) can happen?   |  |
| Root Cause:<br><input type="checkbox"/> Human errors <input type="checkbox"/> Machine Problem <input type="checkbox"/> Lack of skill <input type="checkbox"/> Failed to follow WI <input type="checkbox"/> Technical Problem |  |
| Shift:<br><input type="checkbox"/> Day Shift <input type="checkbox"/> Night Shift <input type="checkbox"/> Day/Night   |  |
| The responsible employee:<br><input type="checkbox"/> Name:<br><input type="checkbox"/> Emp No.:   |  |

Page 1 of 2

Figure A.1 IQC Form (1st page)



PF/QC/005/06

Corrective Action:

Reply by (HCOs)

Agreed completion date

## JUDGEMENT

Contributor

- ☐ Root cause contributor
- ☐ Subsequent cause contributor

QC Accountabilities

- ☐ QC-Related IQC

Note: If QC personnel overlooked/misled out on following occurrences:

- i. If there is a 100% rejection
- ii. If there is a 100% rework
- iii. Missed out a defect on customer advance sample
- iv. If rejection exceed sampling size of the Inspection and Test Plan

Approved by  
Managing Director

## FOR QC USE ONLY:

Verification of Documented Evidence &amp; Nonconformities Effectively Closed:

Verified by:

Date:

Page 2 of 2

Figure A.2 IQC Form (2nd page)

**THUMBPRINTS**

PF/SM-003/12

| CUSTOMER QUALITY COMPLAINT           |  |                      |           |  |  |
|--------------------------------------|--|----------------------|-----------|--|--|
| Date of issue                        | CQC No.                                  | Reported By          | To Dept.  |  |  |
| Job sheet                            | Order Qty                                |                      |           |  |  |
| Client                               | Complaint by                             |                      |           |  |  |
| Particulars                          | Total defect                             | % Defect             |           |  |  |
| Defect                               | Qty reprint:                             | Qty replace (extra): |           |  |  |
|                                      | Qty rework:                              | Qty short:           |           |  |  |
|                                      | Qty release:                             | Compensation:        |           |  |  |
| Issued by                            |  |                      |           |  |  |
| Approval for Customer Demand/ Claim  |  |                      |           |  |  |
| Customer Demand (choose accordingly) | Replace / Rework / Compensation / Claim: |                      | / Others: |  |  |
| Approval by Executive Director / MD  | Remarks:                                 |                      |           |  |  |

| ACCOUNTABLE DEPARTMENT RESPONSE   |  |
|---|--|
| Investigation   |  |
|   |  |
| a) Why defect happen?   |  |
| b) Why (a) can happen?  |  |
| c) Why (b) can happen?  |  |
| d) Why (c) can happen?  |  |
| e) Why (d) can happen?  |  |
| Root Cause:   |  |
| <input type="checkbox"/> Human errors <input type="checkbox"/> Machine Problem <input type="checkbox"/> Lack of skill <input type="checkbox"/> Failed to follow WI <input type="checkbox"/> Technical Problem |  |
| Shift:  |  |
| <input type="checkbox"/> Day Shift <input type="checkbox"/> Night Shift <input type="checkbox"/> Day/Night  |  |
| The responsible employee:   |  |
| <input type="checkbox"/> Name:  |  |
| <input type="checkbox"/> Emp.No.:   |  |

Page 1 of 2

Figure A.3 CQC Form (1st page)



THUMBPRINTS

PF/SM/003/12

Corrective Action:

Reply by (HODs)

Agreed completion date

**JUDGEMENT**

Contributor

- ☐ Root cause contributor  
☐ Subsequent cause contributor

QC Accountabilities

- ☐ QC-Related CQC

Note: If QC personnel overlook/missed out on following circumstances:

- i. If there is a 100% rejection
- ii. If there is a 100% rework
- iii. Missed out a defect on customer advance sample
- iv. If rejection exceed sampling size of the Inspection and Test Plan

Approved by  
Managing Director

**FOR QC USE ONLY**

Verification of Documented Evidence & Nonconformities Effectively Closed:

Verified by:

Date:

**For Business Executive (BE) Use Only**

Product Claim / Compensation Action:

Amount (state currency)

- ☐ Issue Credit Note  
☐ Issue payment / cheque  
☐ Reprint / Rework / Replacement  
☐ Others:

Page 2 of 2

Figure A.4 CQC Form (2nd page)



## Show Cause Letter

(PF/HR/013/03)

Name of Employee : \_\_\_\_\_ Date : \_\_\_\_\_

Department : \_\_\_\_\_ Emp. No : \_\_\_\_\_

Position : \_\_\_\_\_

### Details of Incident

Reported by : \_\_\_\_\_ Date & Time : \_\_\_\_\_

Position : \_\_\_\_\_ Place : \_\_\_\_\_

**Incident** *(Specify work rule which was violated, or why performance or behavior has been sub-standard)*

\_\_\_\_\_  
Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

In view of the seriousness of the offence, you are hereby required to submit your written explanation within 24 hours from the date of receipt of this form by completing the section below and returning this form to your Head of Department.

**Employee's Comments on the Incident** *(To be completed by Employee)*

\_\_\_\_\_  
Employee's Name

\_\_\_\_\_  
Employee Signature

\_\_\_\_\_  
Date

Figure A.5 Show Cause Letter Form (1st page)

|  |                      |      |
|--|----------------------|------|
| <b>Disciplinary Action</b> <i>(To be completed by HOD/Supervisor)</i>  |                      |      |
| <div style="display: flex; flex-direction: column; gap: 5px;"> <div><input type="checkbox"/> Coaching &amp; Counseling</div> <div><input type="checkbox"/> Verbal Warning</div> <div><input type="checkbox"/> Written Warning</div> <div><input type="checkbox"/> Final Warning</div> <div><input type="checkbox"/> Dismissal or other sanction</div> </div> |                      |      |
| <b>Desired State</b> <i>(Performance expected of Employee, action plan &amp; time-frame, consequences if necessary)</i>  |                      |      |
|  |                      |      |
| Name   | Signature            | Date |
| <b>Employee's Acknowledgement</b>  |                      |      |
|  |                      |      |
| Employee's Name  | Employee's Signature | Date |

Upon completion, this form shall be forwarded to HR department immediately.

|                                     |  |
|-------------------------------------|--|
| <b>For Human Resources Use Only</b> |  |
| Received by:                        |  |
| Signature                           |  |
| Name                                |  |
| Date                                |  |

c.c : HOD/Supervisor  
Personal file

Figure A.6 Show Cause Letter form (2nd page)

## APPENDIX B

### 1. Press Department



Figure B.1 Press room

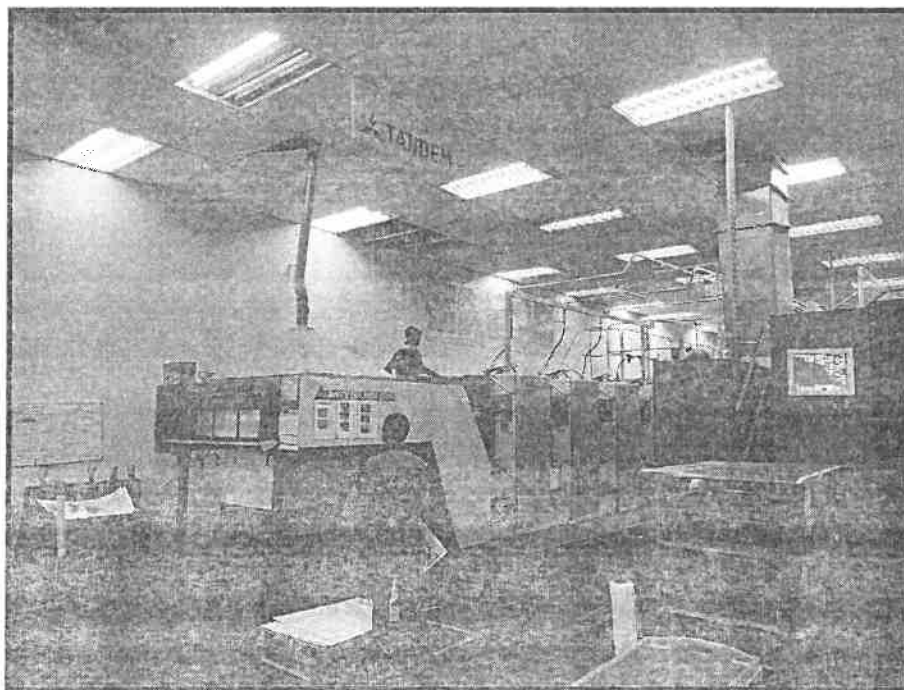


Figure B.2 Printing Machine (Tandem) in Press room

## 2. Post Press Department

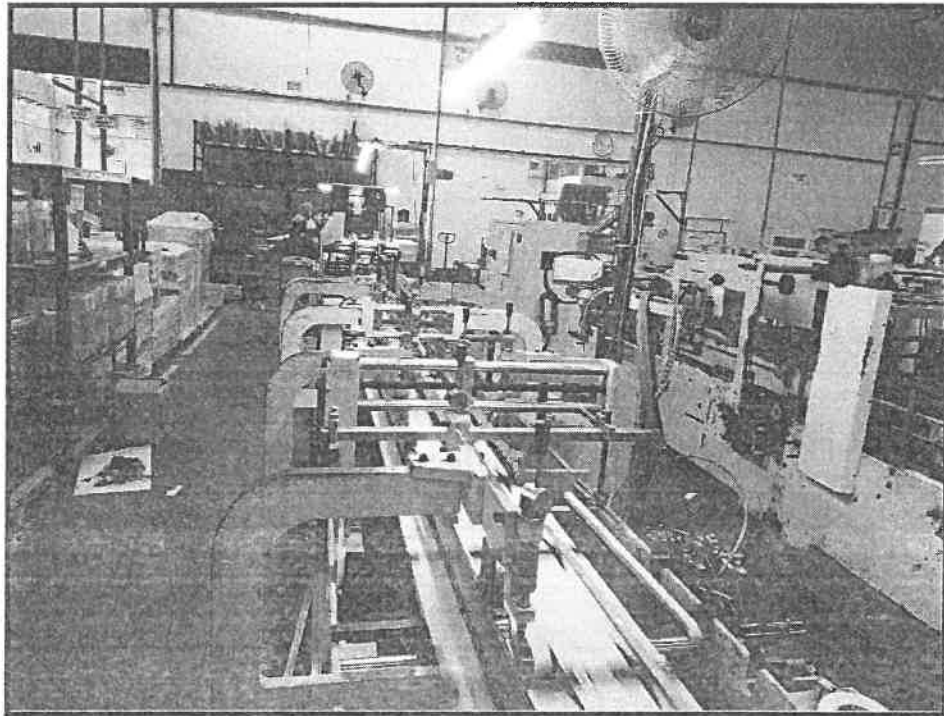


Figure B.3 Folder Gluing machine in Post Press Department

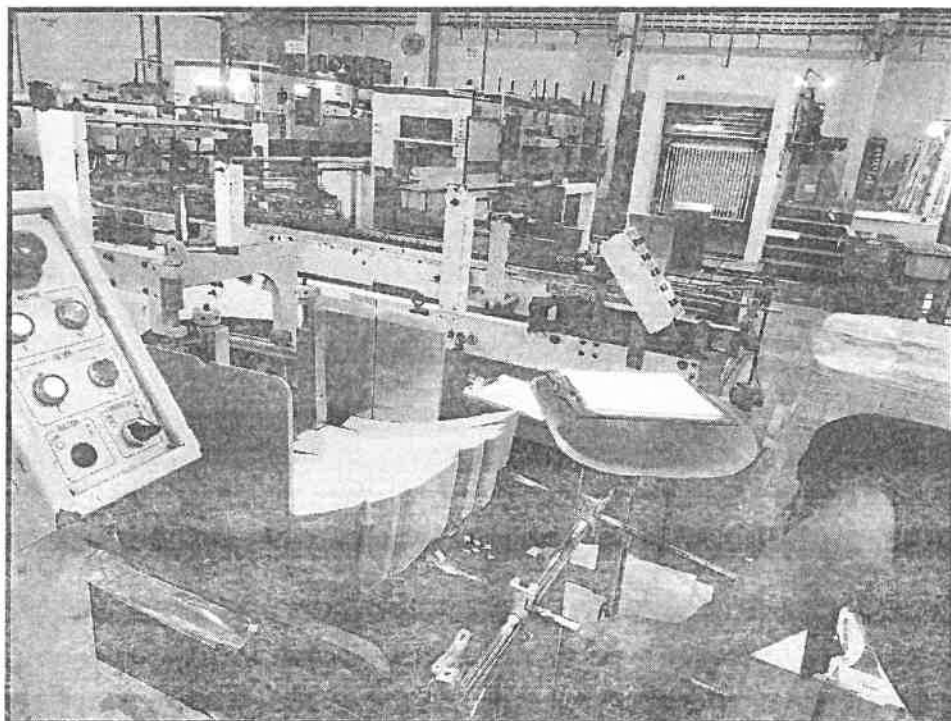


Figure B.4 Collecting section in Folder Gluing machine





Figure B.5 Folding machine in Post Press Department



Figure B.6 Collecting section in Saddle Stitcher machine

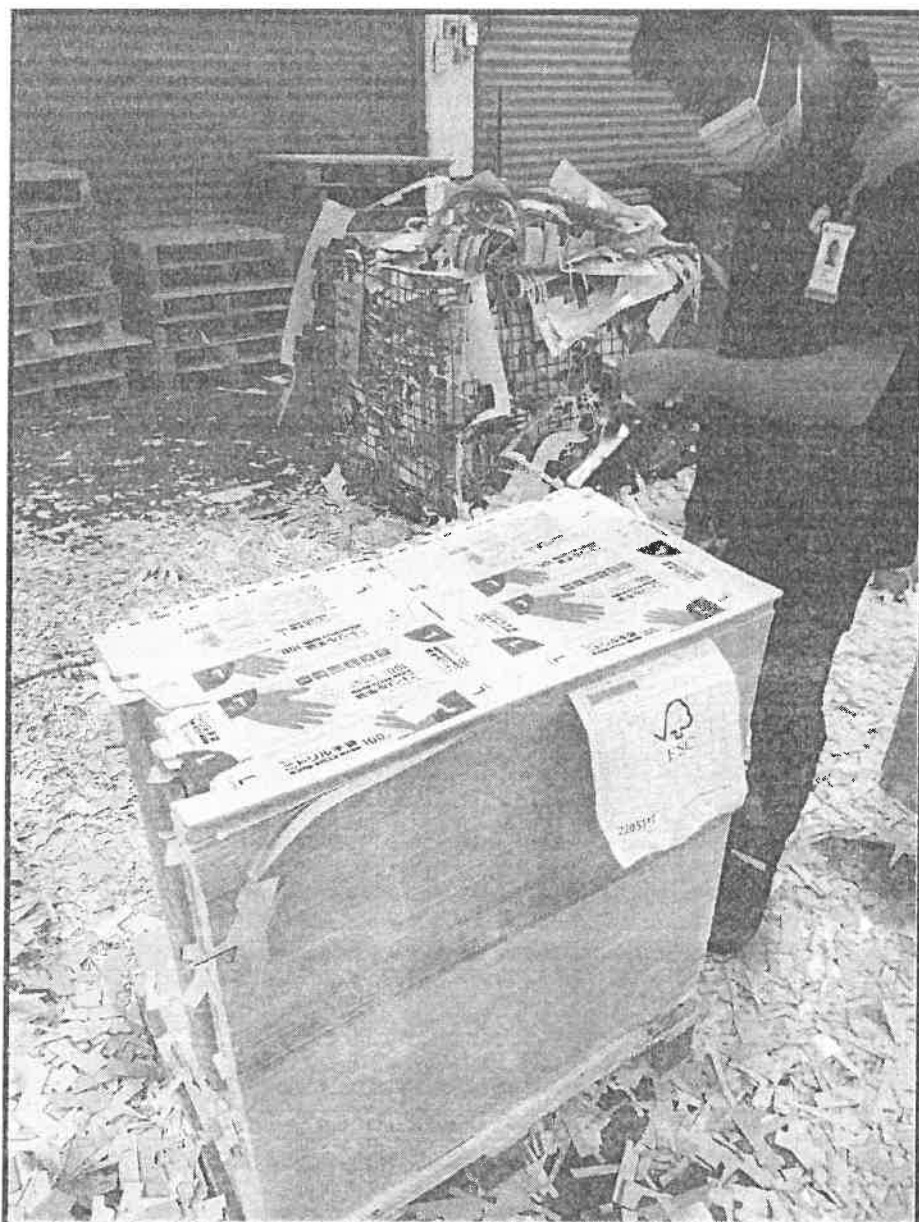


Figure B.7 Hand cutting machine

### 3. Quality Control (QC) Department



Figure B.8 QC Department

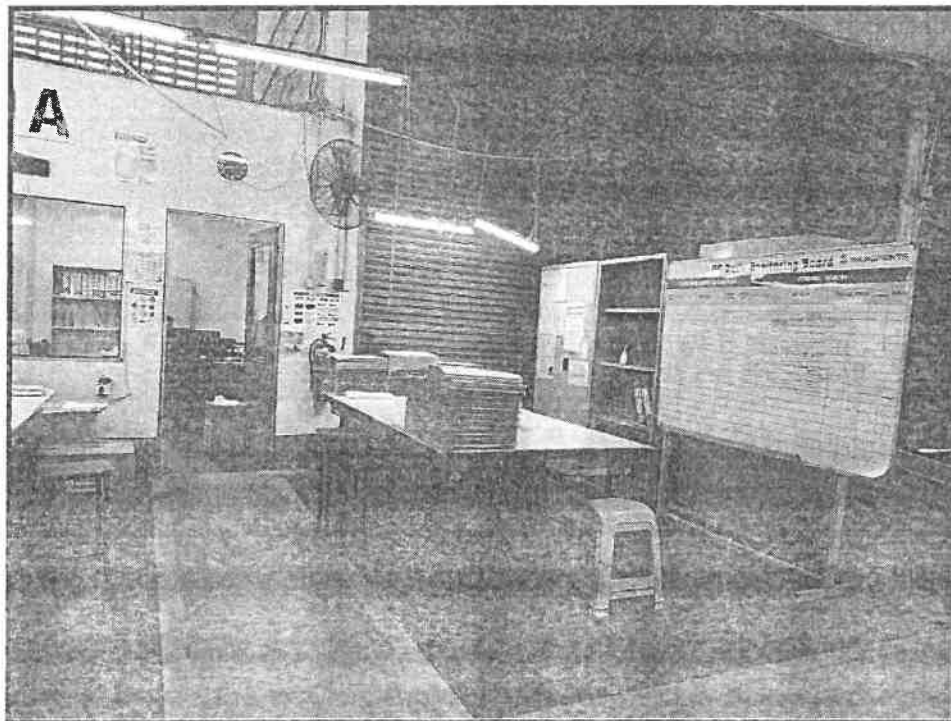


Figure B.9 QC Department working area



Figure B.10 QC Department office

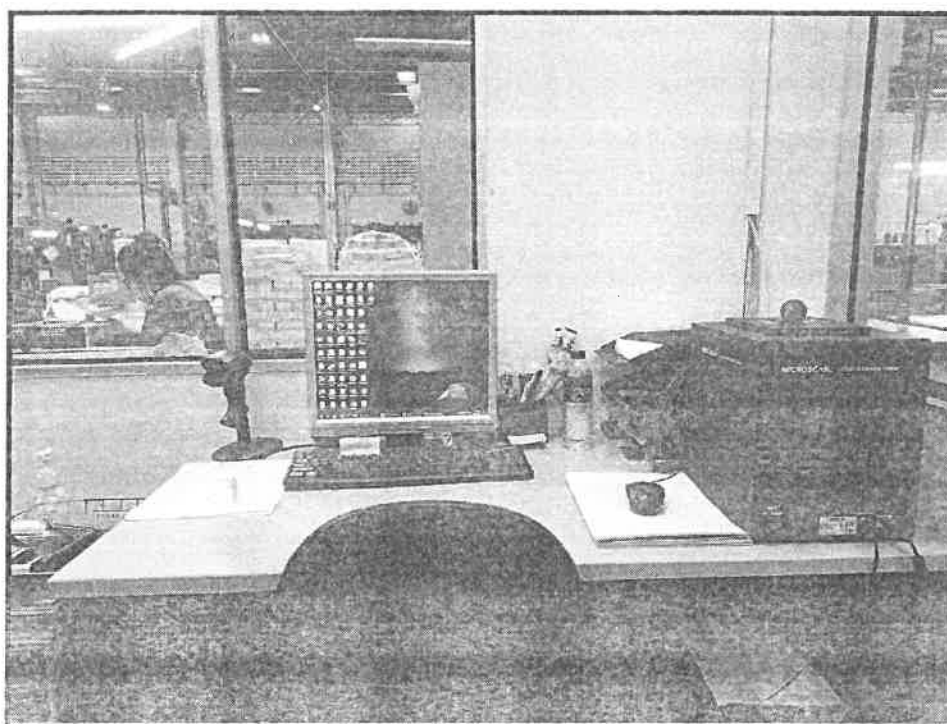


Figure B.11 My working area at QC Department office

#### 4. Finishing Department



Figure B.12 Finishing Department



Figure B.13 Finishing Department working area



## 5. Warehouse Department



Figure B.14 Warehouse Department

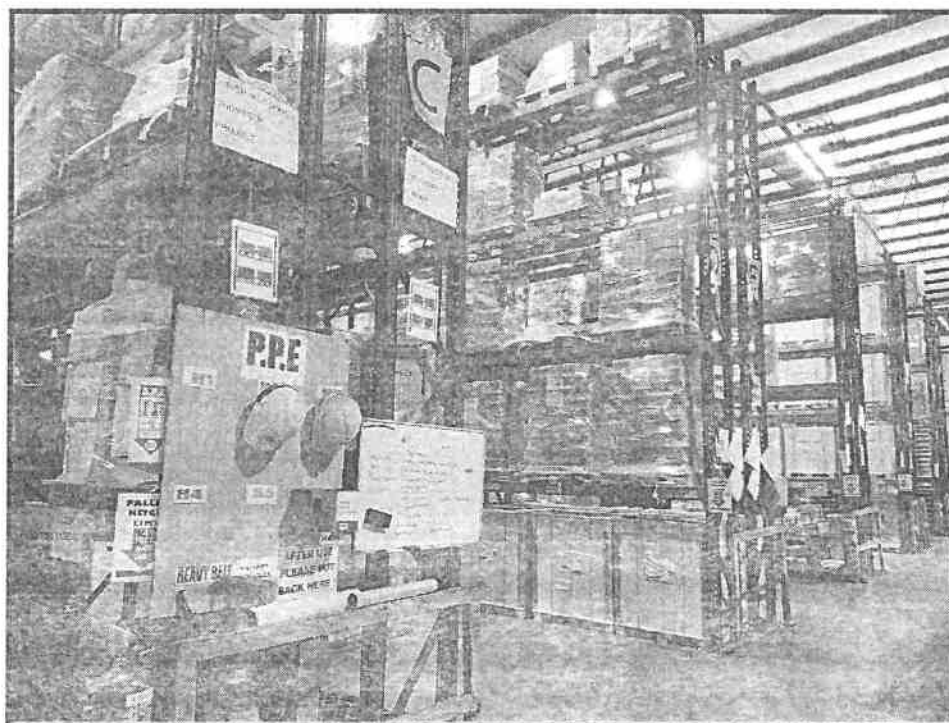


Figure B.15 Storage of job done before deliver to client

## 6. Logistic Department



Figure B.16 Logistic Department

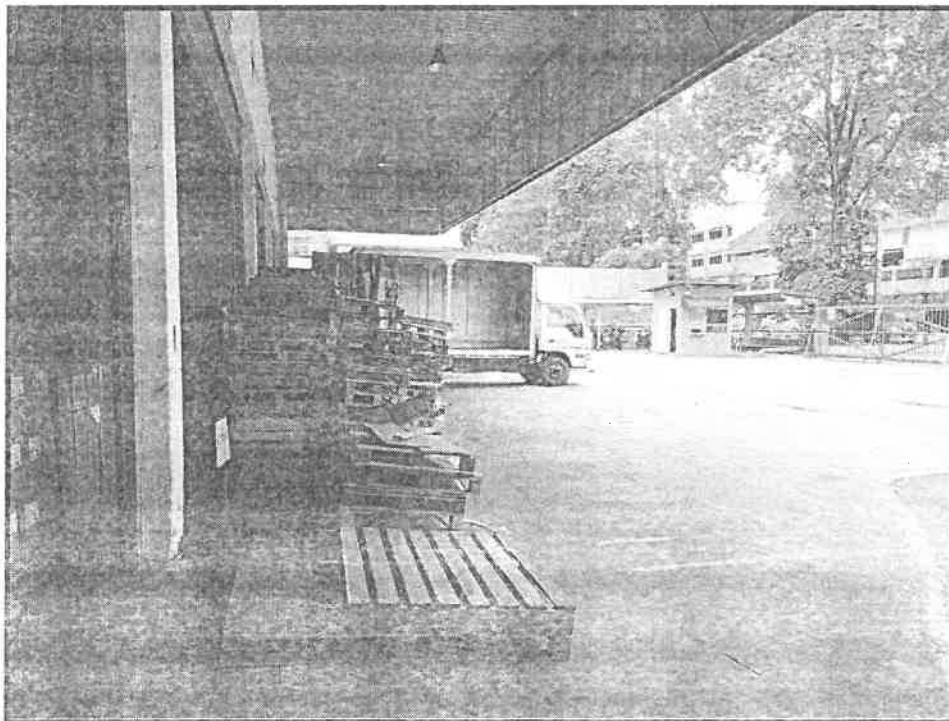


Figure B.17 Loading area

## 7. Store Department



Figure 18 Store Department



Figure B.19 Storage of all supply for production used





Figure B.20 Chemical storage room

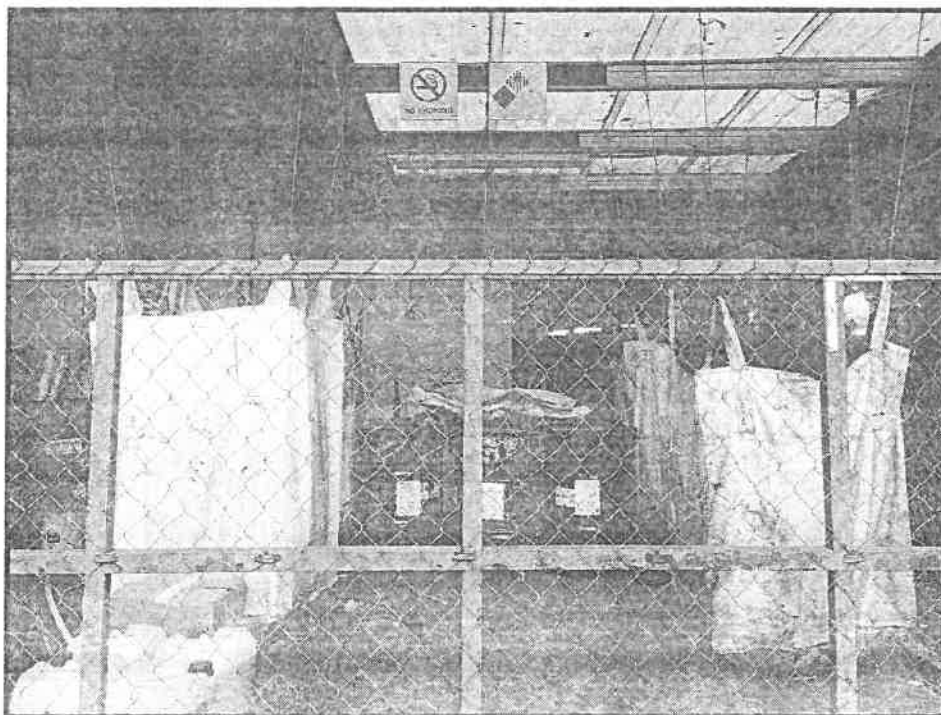


Figure B.21 Schedule waste storage room

## 8. Thumbprints Utd

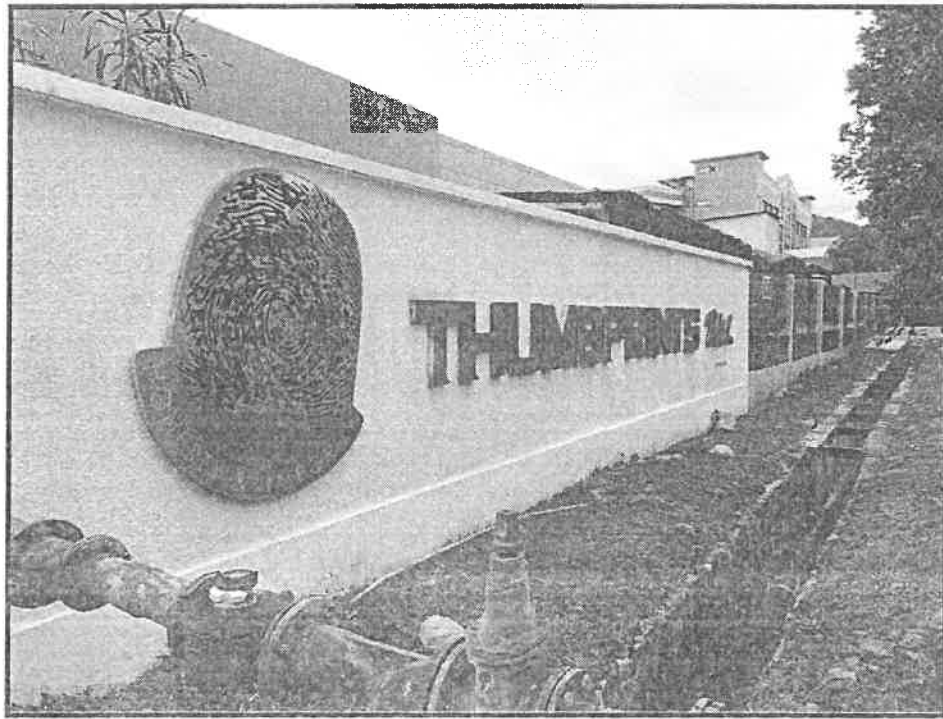


Figure B.22 Thumbprints landmark

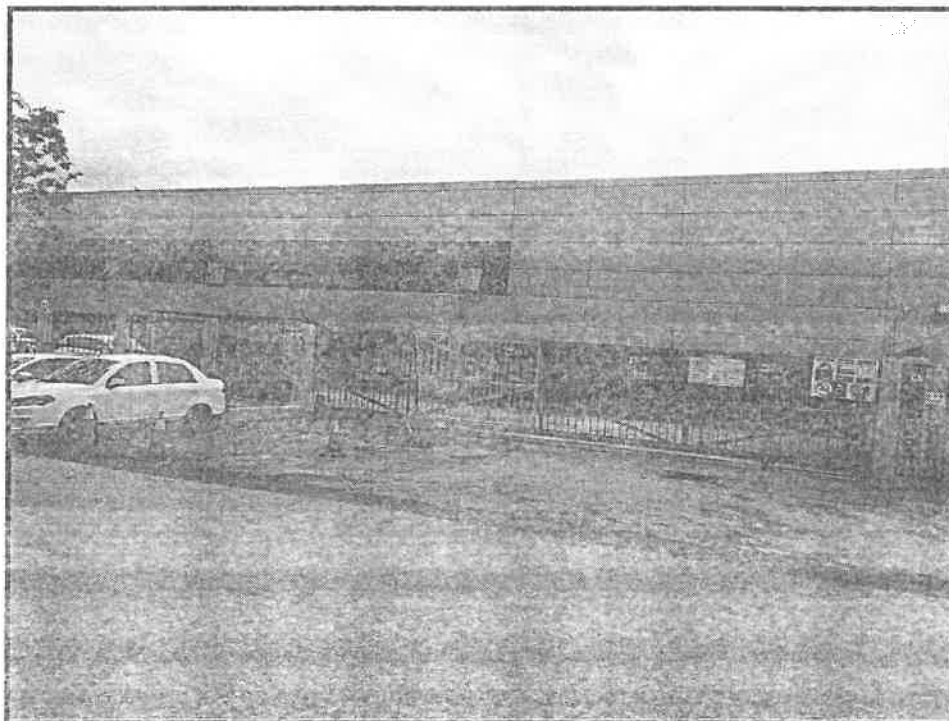


Figure B.23 Thumbprints Utd Sdn Bhd



Figure B.24 Guard House



Figure B.25 Motorcycle parking area

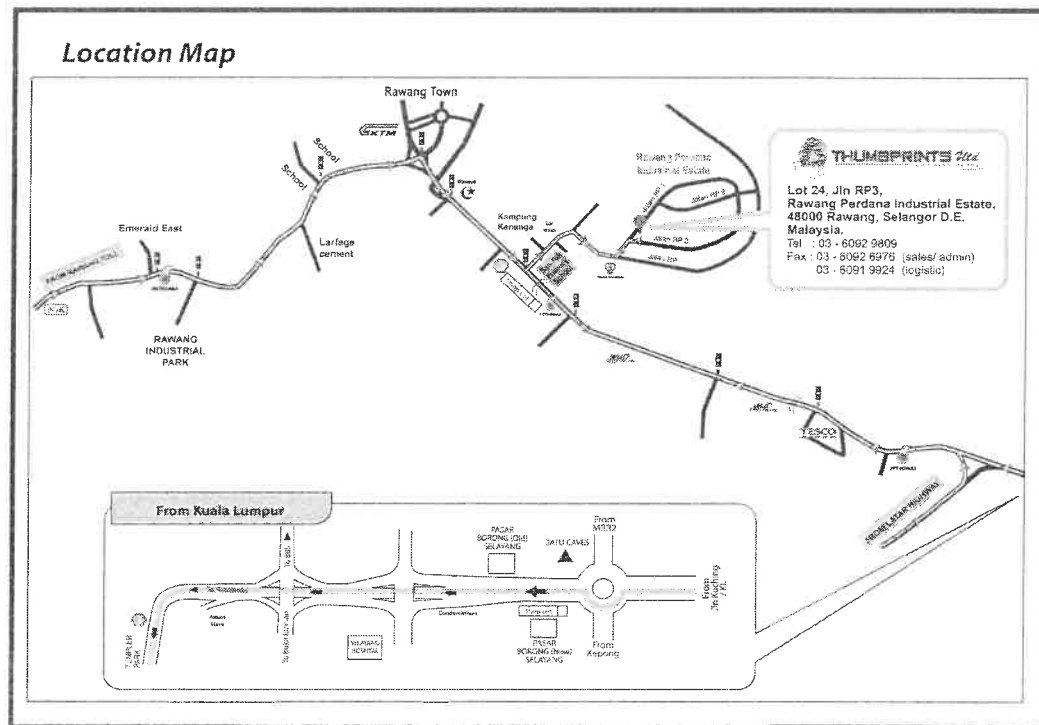


Figure B.26 Thumbprints Location Map

## APPENDIX C

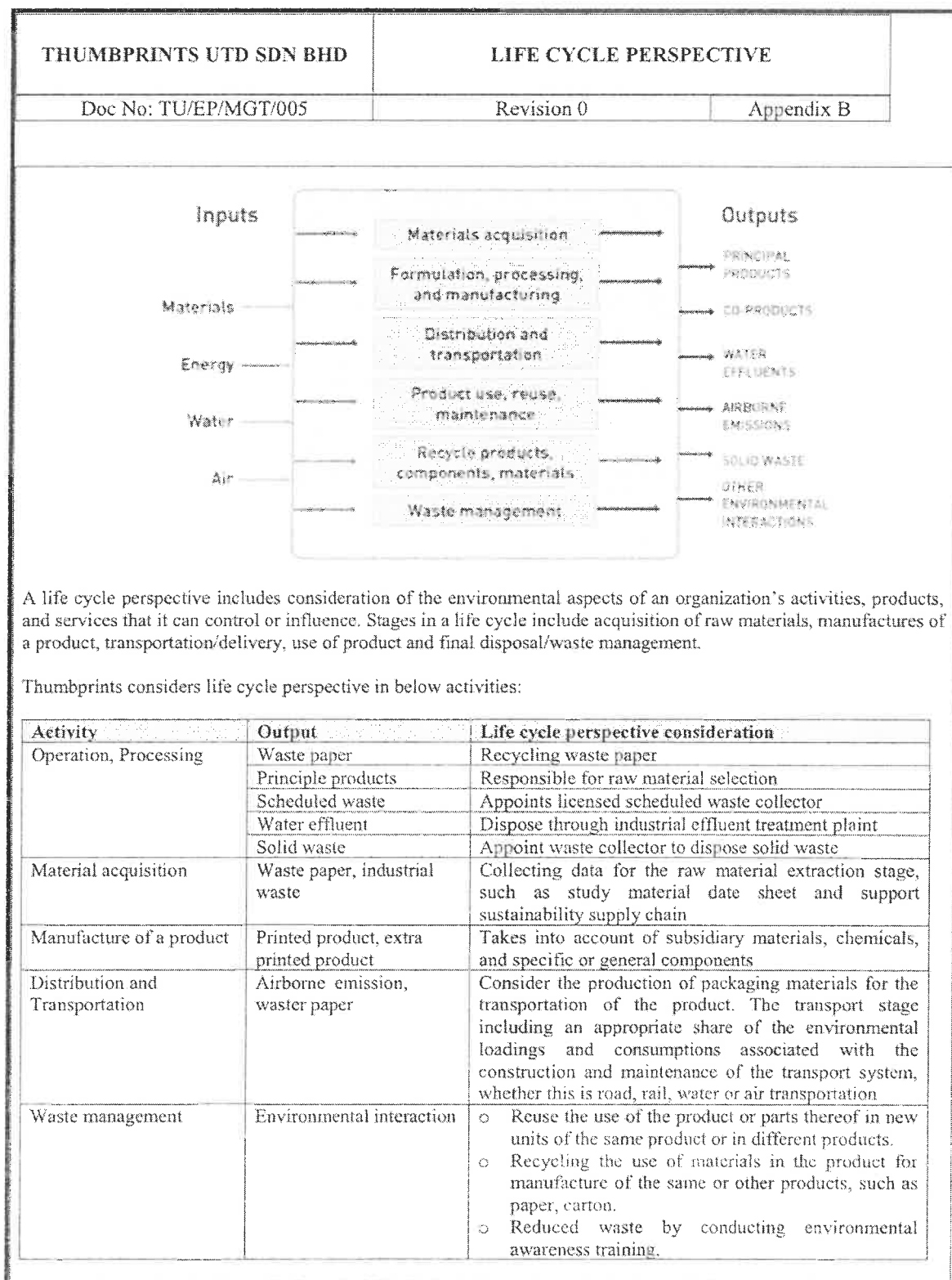


Figure C.1 Fifth Schedule of the Environmental Quality (Scheduled Wastes) Regulations 2005

|                                     |                                |  |
|-------------------------------------|--------------------------------|--|
| Solar Photovoltaic Energy System    | Solar photovoltaic panel waste | <ul style="list-style-type: none"> <li>○ Appointed solar panel manufacturers to collect and dispose of solar waste at the end of their useful lives.</li> <li>○ Solar panels can be recycled but the cost of recycling is generally more than the economic value of the material recovered, so this will keep as consideration.</li> <li>○ The used panels can sell to developing world countries that want to purchase them inexpensively despite their reduced ability to produce energy.</li> </ul> |
| Recycled product, reuse maintenance | Solid waste                    | <ul style="list-style-type: none"> <li>○ Practicing 5R in daily work activity.</li> <li>○ Go Green committee to promoting green awareness</li> </ul>   |

Figure C.2 Fifth Schedule of the Environmental Quality (Scheduled Wastes) Regulations 2005