



اوتو سيني تيكنولوگي مارا
UNIVERSITI
TEKNOLOGI
MARA

ROYAL SELANGOR®

INDUSTRIAL TRAINING FINAL REPORT

SESSION: FEBRUARY-AUGUST 2022

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Duration (Date) : 22 February 2022 – 4 August 2022

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ACKNOWLEDGEMENT



I would like to praise my gratitude to the Almighty Allah SWT for easing my internship journey and giving me the chance to learn more during this internship. Even though, I have faced with a lot of difficulties along this task, He guided me to the right path, and I couldn't be any more grateful than I am right now. In fact, the internship opportunity I had with Royal Selangor International Sdn. Bhd. was a great chance for learning and professional development. I consider myself as a very lucky individual as I was provided with an opportunity to be a part of it. It took me quite some times to adjust myself in the new environment but Royal Selangor International Sdn. Bhd. family has made it easy for me and for that, I am very thankful and grateful for every second I spent during my internship at Royal Selangor International Sdn. Bhd.

This journey has brought me to meet amazing professionals such as Dr Yusri, the Head of New Product Development (NPD), and Logapriya, the Senior Executive in Industrial Engineering Department for their precious guidance, which were extremely valuable for my study both theoretically and practically. A special thanks to Nik Camelia for giving me her time to guide and keep me on track that made me play an active role in some projects under their supervision. The youthful and energetic yet professionalism vibe the project, is one of the joys that I appreciated while doing my internship at Royal Selangor International Sdn. Bhd. Next, my appreciation and gratitude extended to Industrial Engineering Department team for their willingness of accepting me as their part of family. Working together in a happy environment will always be a memorable moment for me and I will remember it for the rest of my life.

Universiti Teknologi MARA played a major role in giving the students a chance to experience how the industry works hands-on by providing an Industrial Training course. Huge thanks go to my Coordinator, Miss Hidayu and Mr. Haikal, who guided me and took a good care of everyone in completing their internship. Her guidance, encouragement and suggestions provided from the first

day until the end of our internship, as well as our report were extremely valuable for our study both theoretically and practically.

I would like to express my deepest thanks to my beautiful family who helped me out morally and financially as well as my friends who directly and indirectly helped me out to complete my internship and this report. I appreciate all of their efforts, constructive criticism and invaluable suggestions, which helped me to motivate myself to be better.

ABSTRACT

This industrial training report describes Nur Aneesa Najwa Binti Yuzi's training which consists of 24 weeks before completing the Diploma courses. The course was conducted at Royal Selangor International between February 22nd and August 4th, 2022, under the supervision of Nik Camelia binti Nik Omar Al-Haded, the Supply Chain Executive of Royal Selangor. This program aims to fulfill the requirements for completing the diploma and graduating from the university. Prior to graduation, the training refers to relevant work experience that will enhance professional development. In first chapter of this report, it defines the term of industrial training and description on industrial training objectives as well as some general industrial company information. The second chapter is the overview of the company and department meanwhile for the third chapter, it describes the summary of the projects and weekly activities throughout 24 weeks in industrial training. In chapter four, it explains in detail about the projects, the problems encountered during the training and approaches adopted to solve the problems. It also discussed about the professional and ethical issues in the company as well as in term of health, environment, and sustainable aspect. After all, it is concluded that after going through the industrial training, student is able to demonstrate acceptable social skills and responsibilities as well as being able to follow professional ethics in completing tasks. Student also have the ability to demonstrate a commitment to lifelong learning and independent learning as well as developing good verbal and written communication skills throughout the industrial training course.

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CHAPTER 1

INTRODUCTION OF INDUSTRIAL TRAINING

1.1 Overview

Industrial Training (IT) is a mandatory requirement for students in certain programs at all levels of the Institution of Higher Learning (IHL). To enhance the level of graduates' ability to work, an industrial training program was implemented to strengthen their competencies. The Industrial Training (IT) program offers students a chance to experience engineering work in real-life situations and to be involved in projects related to Chemical Engineering before they graduate. A student is required to complete at least twenty-four (24) weeks with twelve (12) credit hours of Industrial Training within semester six (6) or after passing all coursework from semester 1 to semester 5 in order to receive a Diploma in Chemical Engineering.

UiTM's Industrial Training program aims to introduce students to industrial culture and working environment and enhances their employability rate by strengthening their industrial skills. They also will undergo several briefings as guidance for the trainee. The duration for this internship is twenty-four (24) weeks and takes place from February 22nd, 2022 until August 4th, 2022. As stated in the Industrial Training briefing, students are required to report to the company according to the specified time and date. Throughout the internship period, students will undergo one Lecturer Evaluation to assess their performance. Two weeks after internship ends, the logbook and final report must be submitted online to the college, and hardcopies must be provided to the college after the internship ends.

Through Industrial Training courses, students can gain practical experience in the world of work, thereby improving the market's reliability. During industrial training, students gain excellent technical skill competence and soft skill competency that will prepare them for careers as chemical engineering

technicians. It is expected that students will be able to learn the theories they have learned in all core and non-core courses in industrial training, and thus will be able to solve problems and projects assigned by supervisors in a creative and innovative manner. Students also benefit from industrial training by gaining more confidence, improving their communication skills, and working together more effectively. Additionally, students are expected to demonstrate integrity, ethics, and accountability throughout their practice of engineering.

1.2 Objective of Industrial Training

The main objective of Industrial Training (IT) is to give students learning opportunities in the world of work to receive practical experience in order to improve the reliability of the market. In preparing the students as an engineering technician, the industrial training helps to produce chemical engineering technician graduates with excellent technical skill and soft skill competency. The other objectives are:

- Achieving technical proficiency
- Achieving a solid understanding of the background
- Enhancing interpersonal skills (soft skills)
- Establishing a network of contacts

1.3 Industrial Training Placement

1.3.1 Industrial Schedule

Table 1.1: Industrial Schedule

Normal working hour	8 hours
Day of working	5 days a week
Working	8.00am
Break hour	12.00pm to 1.00pm
Work out	5.00pm

1.3.2

CHAPTER 2

COMPANY PROFILE

2.1 Company Background



Figure 2.1: Royal Selangor International Sdn Bhd Logo

Royal Selangor International Sdn Bhd was established in 1885 when Yong Koon, a young pewtersmith from Shantou, China, arrived in Kuala Lumpur, Malaysia. The discovery of tin in Malaya had enticed him and thousands of other mainland Chinese people, leading him to establish himself in a small business at No. 23 Cross Street, making simple household items out of tin. His determination to succeed and ingenuity eventually led Yong Koon to experiment with pewter – a metal alloy composed of tin mixed with antimony, copper, and bismuth. Along with other craftsmen, he became one of the first pewtersmiths in Kuala Lumpur – starting off with his two brothers who are working as tinsmiths in the tin mining town, they make ceremonial items for ancestral altars of Chinese temples. Just like how silver products are hallmarked, Yong Koon stamped each of his creations with “Yu He Zu Xi”, with “Yu He” meaning Jade Peace being the name of the shop, and “Zu Xi” stood for pure tin, reflecting the high quality of the material he used.

Table 2.1: Operating schedule of Royal Selangor International Sdn Bhd

Days	Working Time	Operating Period
Monday to Friday	8.00a.m. – 12.00p.m.	4 hours
	12.00p.m. – 1.00p.m (lunch hour)	1 hour
	1.00p.m. – 5.00p.m.	4 hours
		(Total: 9 hours)
Saturday & Sunday	8.00a.m – 12.00p.m	4 hours
	12.00p.m. – 1.00p.m (lunch hour)	1 hour
	1.00p.m. – 4.30 p.m.	3 hours 30 minutes
		(Total: 8 hours 30 minutes)

2.2 Company History



Figure 2.2: Selangor Pewter moves to modern factory in Setapak with 70 employees.

Yong Koon and his brothers lived and worked in a shophouse located at No. 23, Cross Street, now known as Jalan Tun Tan Siew Sin. The shop was known as Ngeok Foh in Hakka or Yu He in Mandarin Pinyin. The name meant Jade Peace. They made Chinese pewter altar paraphernalia and household items. When demand from his western customers increase, Yong Koon and his family expanded the production of western style items such as vases, figurines, cocktail shakers, and casserole stands. Yong Koon had four sons, Peng Pow, Peng Sin, Peng Kai and Peng Seong, who squabbled over how to run the business which led to the formation of other pewter companies, - Malayan Pewter, Tiger Pewter, Lion Pewter, and Selangor Pewter. Only Selangor Pewter, run by

Yong Koon's third son, Peng Kai, survived. He produced his pewter pieces from the factory at Pudu Road which had been in the family's possession since the 1930s. In 1962, he made a leap of faith and moved to a spacious modern manufacturing facility in Setapak., dropping 'pewter' from its company name as its product range had expanded to include items from other materials.



Figure 2.3: Peng Kai and his wife, Soh Eng

Fresh after World War II, Peng Kai was free to expand the retail side of his business. In 1945, he opens a modest retail outlet on Batu Road (now Jalan Tuanku Abdul Rahman) which was manned by his wife. A one-woman operation, she served customers and maintained the premises. Today, Royal Selangor stores are staffed by sales professionals and features beautiful product displays within elegant interiors that showcase the brand essence and makes use of pewter as a key design element. The company has a retail presence in major cities around the world including London, Hong Kong, Singapore and Sydney. The flagship store is located at Pavilion Kuala Lumpur. It features an all-encompassing retail experience. Its monotone look harmonizes different colors, materials and textures which include a showcase of tiles and coffee table using Royal Selangor's Metalesce technique, to provide immense visual and tactile

experiences. The overall look is enhanced with audio visual technology to keep customers engaged at every level.

Business Expansion

Marking its 135 years after weathering two world wars, family feuds and economic turmoil, Royal Selangor continues to stay relevant through its entrepreneurial spirit and knack for innovation. When demand for western-style items increased in the 1930s, Yong Koon and his sons shifted its focus to producing tankards, vases, and other items popular among western expatriates. It laid the foundation for an export market in future years. The company started exporting in the late 60s - firstly to Singapore and then later to Hong Kong, Germany, Denmark, Japan, Australia, and the UK. The company also began participating in international gift and tableware fairs. In the 1970s, the company began showing its products at the Frankfurt International Gift Fair, the most important one for the industry. It has since added Birmingham, Toronto, Melbourne, and Sydney to its annual fair circuit. Today, Royal Selangor exports to more than 20 countries, and has its own retail stores in Malaysia, Singapore, Hong Kong, and Australia.

Royal Warrant & Evolution of Touchmarks



Figure 2.4: Royal Selangor International Sdn Bhd logo evolution

In 1979, the company received a royal warrant from the Sultan of Selangor. To reflect the royal endorsement and the diverse nature of the company, Selangor Pewter changed its name to Royal Selangor in 1992. It continues to be run by the third and fourth generations of the Yong family.

Award Winning Designs

2018

Winner, Tableware International Awards of Excellence, Best Metals/Metalware Category for the Crystalline Collection.

2013

Finalist, International Design Excellence Award (IDEA) 2013 by the Industrial Designers Society of America (IDSA) for the Serenity collection

2008

Gold Award at the Point of Purchase Advertising International European Award for

Veuve Clicquot Ponsardin Champagne Refraichissor

2002

Red Dot Award: Product Design 2002 from Design Zentrum Nordrhein Westfalen, Germany for the Wine Celebration Funnel

Royal Selangor International Sdn Bhd is now the leading company in expanding the uses of pewter, exploring and discovering its countless possibilities – from timeless gifts, dining accoutrements to personal accessories. The family business has also produced commission pieces for international luxury giants such as the LVMH group and collaborated with leaders in pop culture such as The Walt Disney Company SEA and Marvel Comics. Royal Selangor continues to operate from the main factory based in Setapak, which also houses their award-winning Visitor's Centre – one of Kuala Lumpur's top tourist attractions that allows visitors to admire the fine craft of pewtersmithing and delve into exciting craft workshops.

2.3 Vision and Mission

Vision: Pewter is about possibilities

Mission: Our mission is to achieve excellence in design, manufacturing and marketing of high-quality home décor, gifts, and jewelry. We strive for continuous improvement in every aspect of our business and work toward minimizing the impact of our activities on the environment.

2.4 Organization Chart



Figure 2.5: Organization chart of New Product Development (NPD)

2.5 Main Product/Service Provided to the Client

In Royal Selangor International Sdn Bhd, the company offers a thousand tableware, drinkware, table accessory, home accessory, figurine, and gift items to the client. Most of them are made from a high-quality pewter with 92% to 97% tin, with a small proportion of copper and antimony. The design comes in standard Royal Selangor design, or it can be personalized according to client's taste. Either it is a corporate occasions or personal giving, clients can engrave their own name, date, logo, or message on the gift to give a beautiful expression of courtesy, gratitude, and respect of

personal touch. Royal Selangor also offers premium silverware items under a sister company called Comyns. Comyns is one of the oldest and most prestigious silversmiths from the United Kingdom. The WC hallmark can be traced to the 17th century. It specialized in interpretive work, especially Paul de Lamerie, one of the most prominent silversmiths of the 18th century. In addition, the company has another sister company which called as Selberan. Selberan, a Malaysian fine jewellery brand, was established in 1973, the result of a collaboration between the founders of Royal Selangor and two European master jewellers. With its headquarters in Kuala Lumpur and four boutiques spread across the city's metropolitan area, Selberan specializes in creating 18ct gold and diamond jewellery, infused with a European approach to craftsmanship and a distinct aesthetic that harks back to its origins. Selberan's quality of craft was given a royal seal of approval when it was entrusted with the restoration of the Sultan of Selangor's coronation crown, as gold, rubies and diamonds were added to this antique state regalia. For special order commissions, Selberan has created a wide range of items, from stamped coins and medallions for numerous institutions to a life-size birdcage for a World Gold Council design competition and elaborate haute joaillerie pieces, one of which is a diamond tiara with detachable sections that form a necklace, brooch, pendant, bracelet, or earrings.

CHAPTER 3

OVERVIEW OF THE TRAINING

3.1 Introduction

Throughout my 24 weeks industrial training in the Royal Selangor International Sdn. Bhd, variety of jobs are provided by the company includes cleaning cloudy glass with various method, experiment on candle and many other. Although I was not given the scope of work for students who undergo industrial training and pertinent to the course that I took which is Diploma in Chemical Engineering, however, supervisors who manage me in this company releasing their responsibilities by giving me assignments which I can take it as a work experience. In addition, to undergoing tasks or activities performed by each unit placed in my department, I was also given guidance on its scope of work for each project or even making a new product, according to client's specification.

3.2 Summary of the training and experience gained

These are the sequence and worksheets I underwent 24 weeks of industrial training at Royal Selangor International Sdn. Bhd.b

Task 1: Cleaning on cloudy glass

In order to reduce the cost, the company order product from the supplier in the bulk amount as it can minimize expenses cost. Hence, I was assigned to find a solution to clean the cloudy glass by using numerous methods and substances. Along my internship, this project has taken for a long time to complete the task. There are many methods that I use to overcome the problem on this task such as using vinegar, baking

soda, detergent, sulphuric acid, hydrochloric acid and many other. I also use abrasive method to categorize the cloudiness. After some trial run, I did manage to find a solution on this task which is by using detergent, hot water and water. This method also needs to repeat for a few times to get a better result.

Task 2: Technical Drawing of new product

One of the most task that I did during this internship is technical drawing using Rhinoceros 5.0 version. Technical drawing, drafting, or drawing is the act and discipline of composing drawings that visually communicate how something functions or is constructed. In Royal Selangor International Sdn Bhd, technical drawing is used to get the detail, precise diagram or plan that conveys information about how the product works. Technical drawing also being used to save as a drafting purpose for future usage.

Task 3: Candle making

During my first assignment at Industrial Engineering department, I had to develop a new product which was a scented candle that was released in July 2022. Countless research on how to make a well-made candle and reading about requirements the candle needs to pass to Europe. Hence, many experiments have been carried out on every composition of wax to make it. After all the candles have finished the process, a burning test of the product will be carried out to find out the properties of the burning area and other aspects. The last step is to choose the candle with the best composition and appearance after receiving approval from the head department.

3.2.1 Weekly Activity (summary of each week)

Table 3.1: Summary of Industrial Training Activities

DATE	ACTIVITIES
<p>Week 1 21/02/2022-25/02/2022</p>	<ul style="list-style-type: none"> i. Registered at Royal Selangor International Sdn. Bhd. ii. Introduced to the staff. iii. Given the disclosure of related tasks within the company. iv. Learn in using Rhinoceros software for technical drawing (TD) v. Learn to use photoset machine, printer and photobooth section. vi. Search various of methods on how to clean cloudy glass vii. Research on candle making
<p>Week 2 28/02/2022-04/03/2022</p>	<ul style="list-style-type: none"> i. Scanning document and transfer it to department file ii. Discussion on candle making <ul style="list-style-type: none"> a. Potential manufacturer that can supply bees wax and soy wax b. Composition of the ingredients iii. Preliminary experiment on candle making iv. Preliminary experiment on cloudy glass (Vinegar) v. Technical Drawing of Yoda, Wolverine and Obi

	<p>Wan</p> <p>vi. Remove alarm in clock system</p>
<p>Week 3</p> <p>07/03/2022-11/03/2022</p>	<p>i. Run a preliminary experiment of candle by using different amount of composition</p> <p>ii. Remove alarm in clock system</p> <p>iii. Quality check on mosque pewter</p> <p>iv. Clean cloudy glass by using vinegar</p> <p>v. Technical Drawing of Boba Fett</p> <p>vi. SOP of cloudy glass cleaning procedure</p>
<p>Week 4</p> <p>14/03/2022-18/03/2022</p>	<p>i. Clean cloudy glass by using vinegar, rinse with warm water and put silica gel inside it.</p> <p>ii. Research on Boba Fett fire sculpture:</p> <p style="padding-left: 40px;">a. Cost of resin sculpture</p> <p style="padding-left: 40px;">b. Coloring of red, white and orange on resin sculpture</p> <p style="padding-left: 40px;">c. How to get gradient color on resin sculpture</p> <p>iii. Preliminary experiment on Boba Fett fire sculpture by using Liquid Plastic and Aluminite Liquid</p> <p>iv. Technical Drawing of Thor, Black Widow, Wolverine, Daredevil and Joker (MARVEL)</p>
<p>Week 5</p> <p>21/03/2022-25/03/2022</p>	<p>i. Preliminary experiment on Boba Fett fire sculpture by using Epoxy Resin and Hardener:</p> <p style="padding-left: 40px;">a. Using different sizes and shapes of mould</p> <p style="padding-left: 40px;">b. Three different color (Orange, Yellow and</p>

	<p>Transparent)</p> <p>c. Different curing time of each color blending</p>
<p>Week 6</p> <p>28/03/2022-01/04/2022</p>	<p>i. Learn rattan weave and deal with rattan supplier regarding the measurement</p> <p>ii. Experiment on Boba Fett fire sculpture (4 different colors which is Red, Orange, Yellow and Transparent)</p> <p>iii. Buff the resin using Buffing machine to get a glass surface</p>
<p>Week 7</p> <p>04/04/2022-08/04/2022</p>	<p>i. Experiment on resin (mix the color and take time taken of every layer to harden)</p> <p>ii. Rattan weave in a cylinder weave (Need to get accurate step to attach it in pewter)</p> <p>iii. Clean cloudy glass by using Vinegar + Mr. Muscle + Baking Soda and swirl with crystal beads</p> <p>iv. Technical Drawing of Year of the Rabbit (Figure, Seal, Plaque and Bowl)</p>
<p>Week 8</p> <p>11/04/2022-15/04/2022</p>	<p>i. Clean cloudy glass by using some methods which are:</p> <p>a. Vinegar</p> <p>b. Detergent</p> <p>c. Baking Soda</p> <p>d. Salt</p> <p>e. Mr. Muscle</p>

	<ul style="list-style-type: none"> f. Hydrochloric Acid (HCl) g. Sulphuric Acid (H₂SO₄) ii. Experiment on Boba Fett fire sculpture (blend color like fire) iii. Update Technical Drawing of Boba Fett and Obi Wan <p>Measure 100 pieces of ice bucket diameter to be fitted with cast part</p>
<p>Week 9</p> <p>18/04/2022-22/04/2022</p>	<ul style="list-style-type: none"> i. Clean cloudy glass by using: <ul style="list-style-type: none"> a. Vinegar + Baking Soda b. Vinegar + Detergent c. Vinegar + Salt d. Vinegar Mr. Muscle <p>(2 packets of silica gel are put inside the glass)</p> ii. Technical Drawing of Vapour II (SKU:0160009) iii. SOP rattan weave on how to join the rattan in the pewter part) iv. Experiment on Boba Fett fire sculpture (comparison of curing time) v. Measure cylinder rod pewters to get an average diameter <p>Measure 100 pieces ice bucket diameter to get an average diameter to make a new cast part</p>
Week 10	<ul style="list-style-type: none"> i. SOP rattan weave:

<p>25/04/2022-29/04/2022</p>	<ul style="list-style-type: none"> a. Improve skills in using Excel b. Practice weaving the rattan and take time taken of overall process ii. Clean cloudy glass by using Alkaline iii. Learn to laminate paper by using laminate machine iv. Technical Drawing of Centerpiece Gilt, Vase, KOI Wine Jug, Shojiro Knife and Woodbox <p>Categorize glass for its cloudiness by eye-sight scanning</p>
<p>Week 11 30/04/2022-08/05/2022</p>	<p>Hari Raya Celebration Holiday</p>
<p>Week 12 09/05/2022-13/05/2022</p>	<ul style="list-style-type: none"> i. Clean cloudy glass by using Acid and dry in the fridge machine ii. Fitting on cast part of 100 pieces decanter glass size S/M/L (Need to find 30 pieces of clean and fitted glass) iii. Candle making of size M and L for photography shoot <p>Update Technical Drawing of KOI Wine Jug</p>
<p>Week 13 16/05/2022-20/05/2022</p>	<ul style="list-style-type: none"> i. Clean cloudy glass method listing: <ul style="list-style-type: none"> a. Vinegar + water b. Detergent + water c. Vinegar + detergent + water d. Baking Soda + water

	<ul style="list-style-type: none"> e. Vinegar + baking soda + water f. Vinegar + salt g. Vinegar h. Baking Soda + salt + water i. Vinegar + Mr. Muscle + water j. Mr. Muscle + salt k. HCl Acid + water l. H₂SO₄ Acid + water m. Mr. Muscle n. Alkaline + water o. Acid + water + dry in the fridge p. Small amount of detergent + hot water + tap water <ul style="list-style-type: none"> ii. Calculate the ratio of candle composition iii. Fitting on cast part of 100 pieces decanter glass size S/M/L (Need to find 30 pieces of clean and fitted glass) <p>Technical Drawing of Wall Clock (Hour/Minute/Second)</p>
<p>Week 14</p> <p>23/05/2022-27/05/2022</p>	<ul style="list-style-type: none"> i. Update SOP rattan weave (using new rattan sheet from the supplier) ii. Sort glasses of 3 different sizes (S/M/XL) to find 51 pieces more for achieve production target iii. SOP decanter on cleaning the cloudy glass iv. Clean cloudy glass by using method (p)

	<p>v. Take video on how to weave the rattan and edit the video for production reference</p> <p>Prepare 30 rattan weaves for trial run</p>
<p>Week 15</p> <p>30/05/2022-03/06/2022</p>	<p>i. Sorting and clean the glass</p> <p>ii. Fitting Ice Bucket for size M and L using new cast part</p> <p>iii. Candle making trial experiment of size S/M/XL)</p> <p>iv. Technical Drawing of Wood Plate</p> <p>Learn to use buffing and sand blast machine</p>
<p>Week 16</p> <p>07/06/2022-10/06/2022</p>	<p>i. Clean cloudy glass by using detergent and hot water. Use soft span to clean inside the glass. Some glasses need to be cleaned for a few times.</p> <p>ii. Candle making of size XL</p> <p>iii. Take time of machine that being running. Need to take the data of how much pewter can be made. Try to minimize the timing as it takes time considering worker need to walk to another machine (3 machines) to complete the process.</p> <p>iv. Take measurement of Tea Caddy and Wooden Container to compare the sizes</p> <p>v. Sorting glass with new cast part of size S/M/L. Need to find 5 pieces of glass for every sizes</p> <p>vi. Discussion on abrasive method on cleaning the cloudy glass</p>

	Technical Drawing od wick position on XL size candle to make it center
Week 17 13/06/2022-17/06/2022	i. Candle making of size S/M/XL for trial and run (30 pieces for each size) ii. SOP candle Deal with supplier on wooden wick and wick holder
Week 18 20/06/2022-24/06/2022	i. Take result of candle making trial run of size S/M/XL: <ul style="list-style-type: none"> a. Has a crack on the candle surface b. Has a bubbles on the candle surface c. The color of the candle differs ii. Clean on cloudy glass by using the same method. Proceed the method and update SOP iii. Quality check on Bearbrick from the supplier iv. Sandpaper and spray the wooden part of Shojiro Knife v. Generate barcodes for shelf arrangement vi. Insert MP Code of Yoda Bust in Excel vii. Create knife sleeve of small and big size of Shojiro Knife viii. Measure the diameter of 30 pieces of shot glass to take an average diameter for making cast part Cut 100 pieces of grey foam by using laser machine.

<p>Week 19</p> <p>27/06/2022-01/07/2022</p>	<ul style="list-style-type: none"> i. Take time taken of Bearbrick molding process (Head, hand, leg part) ii. Scanning document and transfer it to department file iii. Make 30 pieces knife sleeve of small and big size of Shojiro Knife iv. Insert MP Code of Batman and Superman in Excel v. Calculate and key in the cost production on BOM of new products <p>Assemble body parts of Bearbrick that have been done sandblast scotch and air blow to show to the supplier</p>
<p>Week 20</p> <p>06/07/2022-08/07/2022</p>	<ul style="list-style-type: none"> i. Follow up with Battersea with production ii. Technical Drawing of Liliy Motif for make a sticker iii. Technical Drawing of Batman and Superman <p>Packing Bearbrick (Measure the carton box size and weight)</p>
<p>Week 21</p> <p>14/07/2022-15/07/2022</p>	<ul style="list-style-type: none"> i. Update Technical Drawing of Yoda Bust and Year of the Rabbit ii. Update technical Drawing of Liliy Motif for make a sticker iii. Technical Draw of Woodstand (4inch, 6inch, 8inch, and 10inch) <p>Take time taken of buffing process of head part of the Bearbrick</p>

<p>Week 22</p> <p>18/07/2022-22/07/2022</p>	<ul style="list-style-type: none"> i. Make master carton for Swan (packaging) ii. Trim Styrofoam of Bearbrick iv. Update Technical Draw of Woodstand (4inch, 6inch, 8inch, and 10inch) <p style="text-align: center;">Technical Drawing of list of 2000 LE Number pewter plate by following the specification requested</p>
<p>Week 23</p> <p>25/07/2022-29/07/2022</p>	<ul style="list-style-type: none"> i. Updating LE Number pewter plate ii. Technical Drawing of Batman and Superman iii. Technical Drawing of New Brass Rim iv. Take time taken of buffing process of Bearbrick (legs, fists and waist part) v. Technical Drawing of Tankard for making sticker (Scanning and Tracing) vi. Technical Drawing of Moulding Wood <p style="text-align: center;">Technical Drawing of Wood box</p>

CHAPTER 4

DETAILS OF EXPERIENCES

4.1 Introduction

The main goal of industrial training is to expose students to a real working environment and gain knowledge and experience which could not be achieved during a lecture session in the classroom. I gained valuable working experience by helping and contributing ideas from Nik Camelia, the staffs as well as the clients. Throughout 24 weeks of industrial training at Royal Selangor International Sdn Bhd, the internship has provided a lot of new knowledge and experience of working in a real-life environment. For instance, I learn how to deal with different kind of people and clients as well as critical thinking on how to solve problems in the workplace.

4.2 Details of the training and experience gained

4.2.1 Cleaning on cloudy glass

Problem Statement

When businesses struggle to break even, they begin to amass debt. And when this persists, the company will fold up before the owners realize it. As much as profit is significant, many companies are concerned about staying afloat due to the global economic crisis. Additionally, they have to invest money into tools, expertise, and resources to make money in today's times. Royal Selangor International Sdn Bhd also aiming to apply saving-cost in their business to ensure it runs efficiently. One of the best ways is to cut cost in their business. There are plenty of ways to do that without impacting the company culture or making employees feel their work habits are hampered by some version of extreme couponing. It is not only possible to cut costs and

continue working as normal, but this cost reduction effort can bring new light to company priorities. Such efforts may bring phrases like “work smarter, not harder” to life. In order to reduce the cost, the company order product from the supplier in the bulk amount as it can minimize expenses cost. Unfortunately, this way lead to another problem which is the glass that they ordered in pass 3 to 4 years ago had become cloudy and foggy. The main cause of cloudy glass is because it has been left in warehouse for a long period. Hence, I was assigned to find a solution to clean the cloudy glass by using numerous methods and substances.

Objective

The main objective of this project is to reduce the cost of the purchasing order for a new glass. In addition, the project aims to find a method to clean the cloudy glass.

Methodology

- Come up with various chemical substances to clean the cloudy glass
- Use abrasive method to categorize the cloudiness of the glass

Result

Table 4.1: List various substances used on cleaning the cloudy glass

Week	Methods/Substances used	Result
1	Isopropyl alcohol/acetone	Failed
2-6	Vinegar + rinse with tap water	Failed
7	Baking soda	Failed
	Mr. Muscle	Failed
8	Baking soda + rinse with tap water	Failed
	Mr. Muscle +rinse with tap water	Failed
	Salt + tap water	Failed
9	Hydrochloric Acid +rinse with tap water	Failed
	Sulphuric Acid +rinse with tap water	Failed
	Detergent + tap water	Failed
10	Vinegar + Detergent + rinse with tap water	Failed
	Vinegar + Baking soda + rinse with tap water	Failed
	Vinegar + Salt + rinse with tap water	Failed
	Vinegar + Mr. Muscle + rinse with tap water	Failed
11	Alkaline + rinse with tap water	Failed
12	Acid + rinse with tap water	Failed
13-15	Detergent + rinse with distilled water	Failed
16-17	Detergent + rinse with hot water then tap water (one time cleaning)	Some glass can be used this method and some glass cannot
18	Abrasive method (split the glass into two)	Success

19-23	Detergent + rinse with hot water then tap water (few times cleaning)	Success
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On the first week of internship at Royal Selangor International Sdn. Bhd., I was given a task to search for various method that commonly use to clean a foggy or a cloudy glass. I did some research and found out that cloudy glass can be cleaned by using chemical substance. I found out that cloudy glass is an industry term describing glass that has calcium deposits, which causes a light, foggy appearance in glassware. Cloudiness is caused by consistent contact with hard water (water that contains calcium, lime, or other minerals) and this cloudiness can be difficult to get rid of.



Figure 4.1: Two types of cloudy glass that I need to clean during my internship

Based on what I found I list down all the methods that I found on the internet which are by using isopropyl alcohol/acetone, vinegar, toothpaste, and lemon juice. I joined the meeting with my supervisor and Dr. Yusri and discussed with them about my research. Dr. Yusri asked me to proceed with method that using isopropyl alcohol and vinegar to clean the cloudy glass. In the first week, I tried cleaning the cloudy glass with isopropyl alcohol which I get them in Tools and Die Department. I tried to clean the cloudy glass by swirling the IPA liquid inside the glass and rinse it with tap water. After that, I let it dry in the office. In the next day, I found out that the glass is not fully clean and there is water vapor inside it. I tried again with the same method but use a paper towel to wipe the entire inside of the glass. The result showed that the method is failed as the glass turn out cloudy after a day of drying process.

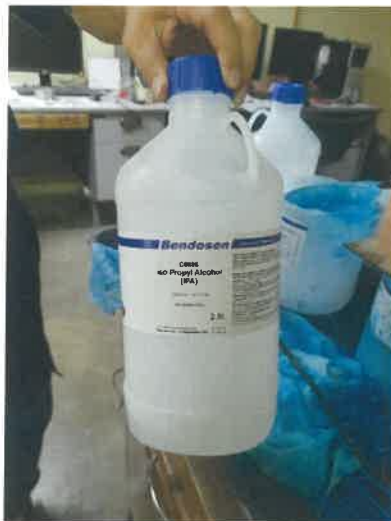


Figure 4.2: IPA that being used to clean the cloudy glass

Next, I tried using vinegar and then rinse it with tap water. I use natural dry to dry the cloudy glass. It turns out that the glass became clear after a day. I proceed with the same method for almost 5 weeks and get to clean almost 50 glasses. In week 7, my supervisor told me that the glass that I am being clean has become cloudy back after sometimes and I need to find another method to clean the glass. I found another method which are clean by using baking soda and Mr. Muscle. Unfortunately, the result is still not satisfied yet. There are numerous substances that I tried in between week 8 until week

15 as stated in Table 4.2.1.1 and it turns out that the glass is still cloudy and not clean enough. We did abrasive method in week 18 to categorize the glass cloudiness. The glass will be broken into 2 pieces, and we will try to clean it using sandpaper and detergent. Sandpaper makes the surface of the glass scratches and we do not proceed with this method. The result proof that the cloudy glass can be cleaned using detergent and hot water, but it needs to clean more than 1 time to get a clean glass. In week 16, with guidance from Encik Zainal, one of the workers who work under Research and Development Department (R&D), I managed to find solutions to clean the cloudy glass. The best way to clean the cloudy glass is by using detergent and rinse it with hot water then with tap water. But this method needs to do repeatedly to get a better result. Furthermore, we used some tools to help the surface to get a fully contact with the detergent as the glass mouth is thin. After some try and error of tools that can be used to clean the glass, we found out that soft sponge is the best tools to use as it won't leave any scratches on the glass surface. As a result, the cloudy glass can be saved and at the same time can save the company's cost on buy the new glass.



Figure 4.3: Some tools that being used to clean the cloudy glass



Figure 4.4: Result of clean glass after using detergent, hot water, tap water and some other tools

4.2.2 Technical Drawing of new product

Problem Statement

Technical drawing, drafting, or drawing is the act and discipline of composing drawings that visually communicate how something functions or is constructed. Technical drawing is essential for communicating ideas in industry and engineering. In Royal Selangor International Sdn Bhd, technical drawing is used to get the detail, precise diagram or plan that conveys information about how the product functions or is constructed. Technical drawing also being used to save as a drafting purpose for future usage.

Objective

The main objective of technical drawing is to convey how the new product is being constructed with details and real measurement.

Methodology

- Draw the details of the product with specific details and dimension

Result

Throughout my internship in Royal Selangor International Sdn Bhd, I learn how to do the technical drawing of a new product that being requested by the client. I also do a drawing for product that will be given to the supplier for example like tracing a pewter motif to order sticker from the supplier. Sometimes I need to redraw old product and add some details into it for a new product. The software that I am being used is Rhinoceros version 5.0. As it is my first experience in using Rhinoceros in technical drawing, I learn how to use it. Luckily, it has not much different with AutoCAD. I face some problems in my first drawing task especially in tracing line of Yoda Bust, which is a new product that has not been released yet. Fortunately, my supervisor helps me to overcome the problems in the easiest and fastest way. I manage to complete technical drawing within a week and learn technical drawings' step from taking picture of the product from different angle, which is from front view, side view, back view, top view, and bottom view. Next, I need to measure the actual size of the Yoda Bust by taking measurement of length, width, and height of certain view. Then, the picture will be transferred to Rhino and need to trace the line before trim unselected background. Arrange the picture with suitable paper size to make it organize and neat. Some details will be inserted in the drawing for example like screw, plate, or Royal Selangor's logo. Dimension also need to be included in the drawing. Some other details such as components list that used in the product, CAT number, date, and title need to be included as well.



Figure 4.5: Examples of roughly drawing of wood stand with actual dimension before transferred to Rhinoceros

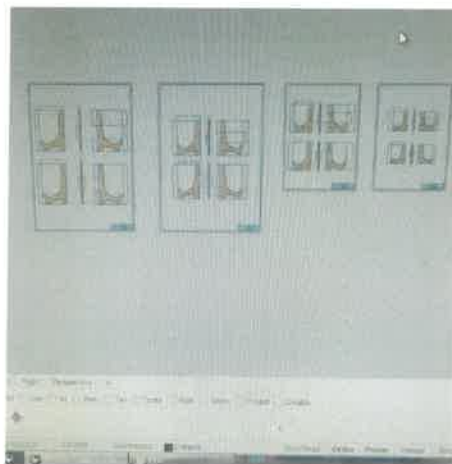


Figure 4.6: Technical drawing of wood stand using Rhinoceros

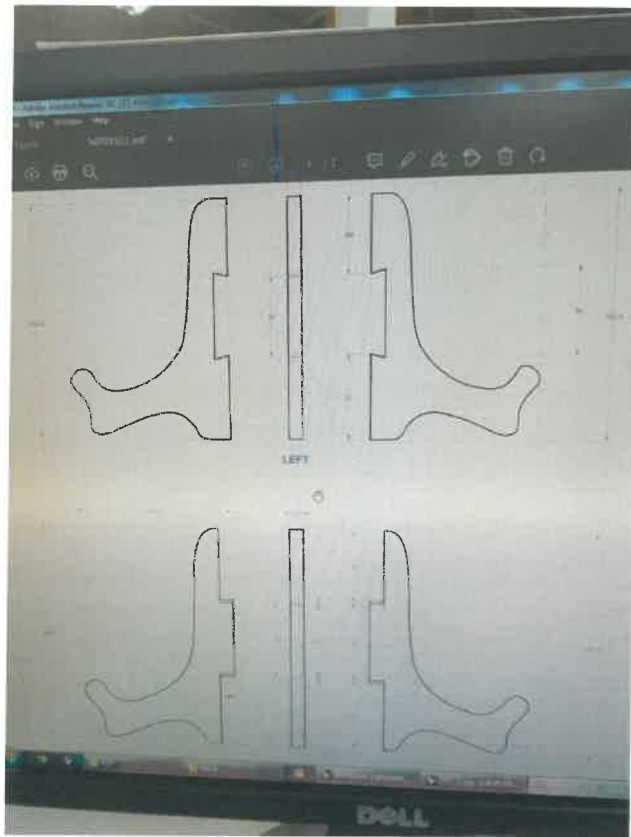


Figure 4.7: Final result of technical drawing need to be saved in PDF format



Figure 4.8: Details such as screw need to be drawn in the technical drawing

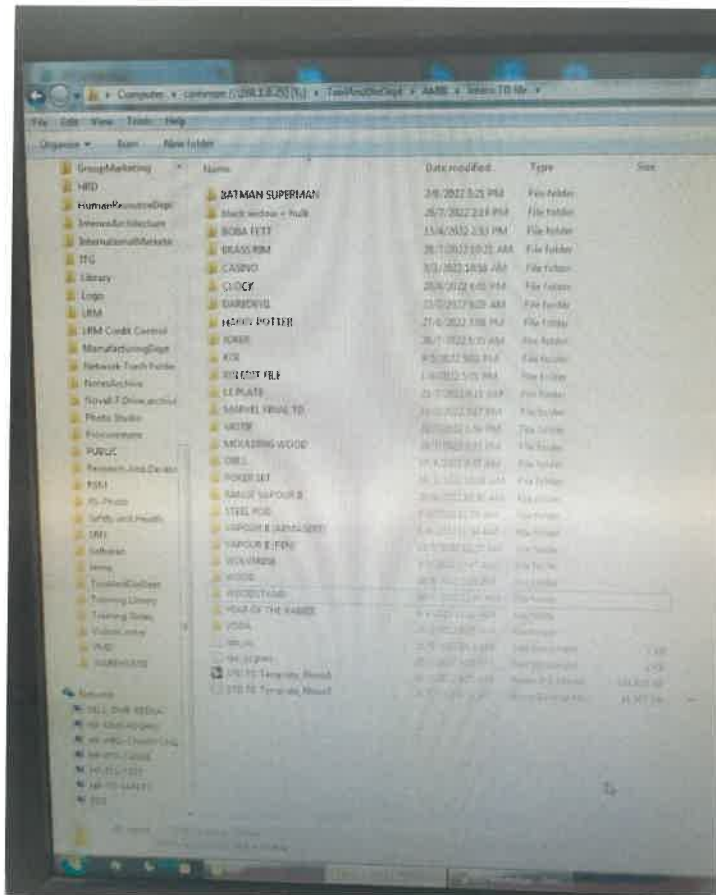


Figure 4.9: Overall Technical Drawing that I completed draw throughout my internship in Royal Selangor International Sdn. Bhd.

4.2.3 Candle making

Problem Statement

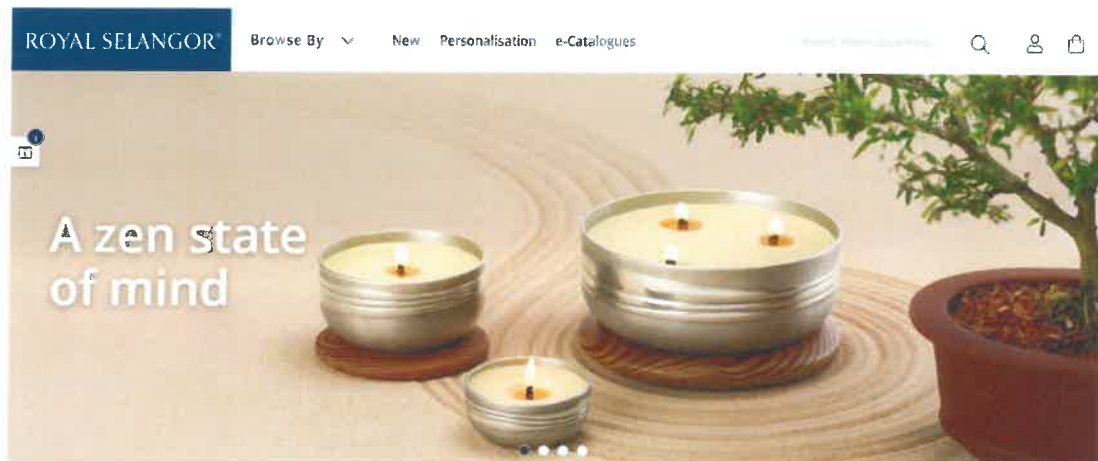


Figure 4.10: The Sense new collection in Royal Selangor International official website

Royal Selangor International Sdn Bhd release a new Sense collection in an earlier past month. The new product will be a candle in a pewter container. My department has proposed to make a new product which is a scented candle and targeting Europe market. Since they are targeting the EU country, there are some rules that they need to follow to make sure that the candle is passed. One of the rules that they need to follow is the content and looks of the candle. The look of the candle must not be like food products. The wax that cannot be used to make the candle is paraffin wax and the wick must not contain any lead. Paraffin wax will release toxic benzene and toluene which both are known as carcinogen substances which can lead to a person to have cancer if exposed too long. Then, the wick that burned the candle must not contain lead. Lead can cause lead poisoning hazard to young children where if high levels of exposure, its attack the brain and central nervous system. Therefore, EU country strictly banned these substances.

Royal Selangor release the scented candle product in July 2022; thus, few tests must be taken. Thus, manufacturers and importers of candles in the EU should conform to the requirements of the directive, with particular attention to EN 15493 fire safety and EN 15426 soothing behavior and pass REACH test. The team also need to prepare biodegradable packaging and have insert instructions to use the candle along the products later. If any of the requirements are not up to their standard, they could return the products which will bring damage cost to the company. Since the candle has been proposed before I was starting the internship, I was assigned to continue the experiment from the previous intern to make a new composition and did research on the requirements.

Objective

The main objective of this project is to produce good quality scented candles in pewter. This project aims for customer satisfaction when they buy this product and penetrate the European market successfully. Finally, this experiment on wax composition is intended to produce the best scented candles possible.

Methodology

I am doing research through most websites and articles to get the best composition used. For the candle, we will use beeswax and soy wax which is safer than paraffin wax. Besides, the waxes are from natural sources and eco-friendly. Rather than using wicks containing lead for the candle, the PIC of the previous decided to use natural wooden wicks which are lead-free and completely natural. The beeswax is used to get the yellowish colour of the candle. Comparatively to other scented candles available, our candle has a high percentage of fragrance. The following table shows the ratio that has been tested before getting the finalised result.

Material used	Ratio
Soy wax: Beeswax: Fragrance	50:40:10
	60:30:10
	70:20:10
	75:15:10
	80:10:10

Table 4.2: Composition of wax used

Every candle that has been made will go through test burning. The test burning is carried out to ensure that the burning of the candle is clean. The burning area must have a circle burning around the wooden wick, and the holes of the candle must stay put and no dirt left when put out the fire. The time taken for each burning area is also taken to choose the suitable timing where we did not want the candle to finish so quickly.



Figure 4.11: Burning test of S and M size candle

There are a few substances that need to have in order to make a candle. The list of substances that need to be used in the candle making are list in the down below:

- i. Soy wax
- ii. Beeswax
- iii. Fragrance
- iv. Wooden holder
- v. Wooden wick

- vi. The list of apparatus that need to be used:
 - i. Beaker
 - ii. Measuring cylinder
 - iii. Weighing scale
 - iv. Measuring cylinder

To make the candle, you must first weigh the waxes by using scales following the ratio. Then, pour the fragrance into the measuring cylinder to get the desired value. Mix the soy wax and beeswax in a beaker and put the mixture in the oven with temperature 60°C. After the wax fully melted, take out the beaker from the oven and quickly pour the fragrance inside the mixture. Stir the mixture until it dissolves together. Make sure the pewter cup is on a table with a flat surface and at room temperature, pour the mixture into its container and leave until it hardens. The hardened candle then needs to be rested for at least one day before burning.

Result

Every new candle made, and its burning test result must be shown to the head department so that it can be updated, and advice can be given to improve the product. During the process of making the candle, I learned that the higher soy content will cause it to burn strangely. Some candles even leave soot marks on the candle and the burning area isn't circular. For the composition that contains 40% and 30% of beeswax, the colours of yellow were too strong and did not meet expectations of the designer. Hence, after a meeting with the head department, he approves the ratio of 70 soy wax:20 beeswax:10 fragrance. The candle for those composition burned well, the burn area, not leaving any soot to the candle. Also, the colours are pleasing and get the designer's approval. Hence, they decided to proceed with the ratio and will be used to every size of the candles. There are 3 sizes of candles which are S, M and XL. After successfully gaining the approval from the head department to proceed with the ratio, I proceed to do many samples that need to be prepared. The samples for shooting, samples to get

approval from the QA team, samples for drop test, samples for photoshoot in Singapore etc.



Figure 4.12: Final result of candle making

Based on the candle making project, I managed to calculate the ratio of the substances to make the candle heat distribution spread evenly. Table below showed the ratio for every size of candle's substance:

Table 4.2: Ratio for every size of candle's substances

Size (weight)	75% of soy wax	15% of beeswax	10% of fragrance
S (52g)	39g	7.8g	5.2g
M (200g)	150g	30g	20g
XL (600g)	450g	90g	60g

Throughout of this project, there are some issues occurred during the trial run and experimental progress. Some mistakes that I encountered and how I fix them are stated in paragraph below:

1. Cracks, holes and/or air pockets in the candle



Figure 4.13: The candle has a crack and bubbles on the surface during trial run experiment

One of the biggest issues that I have encountered during the candle making is there are some holes and crack in the candle surface after it be cured for a certain time. This is caused by the presence of water in the container. Even the tiniest amount of moisture can cause a crack or hole to appear in the candle. Hence, it is best to ensure that the container is entirely dry before pour the mixture in the wax. Besides, another possible cause is the temperature of the wax when pour the mixture into the container. A lower than recommended temperature when pouring can cause air pockets in the candle. Thus, to avoid air pockets from forming, we either warm up the container or reheat your wax. In my case, as we a rushing for completed the trial and run production for a week, then I need to find the fastest solution to remove the holes and cracks. Hence, I use the hot blower with minimum temperature which is 20°C and point the blower directly on the hole and crack's part. I did not have any problem for size S and M but for size XL, I need to be extra careful as the candle is bigger and has a high chance to splash the mixture out of the pewter container.

2.Colour changes

Another problem that encountered during candle making is colour changes of candle. During the preliminary test, the colour of the candle should be light yellow but in the trial run experiment, unfortunately, the colour of the candle turns a bit yellowish than the preliminary test.



Figure 4.14: The difference of colour on the candle making

Candle having changed colours is a common occurrence. As wax cures over time, the colour of a candle can eventually lighten over time. Or, if the colour changes as soon as the wax has cooled, then it's probably because the wax was too hot when poured it.

**Note: Always store your candles away from direct sunlight while they're curing because they can affect the colour as well!*

But for this issue, it happened because the stock of soy wax from older supplier is lighter colour rather than soy wax from the new supplier. The reason why we get the new supplier is because we want to cut the cost on substances use in the candle making. Figure below shows the different between old and new soy wax.



Figure 4.15: Soy wax from the first supplier is in a beads form (left picture) meanwhile in a flat form in the new supplier (right picture)

3. Candle does not burn evenly.

Along my candle journey of candle making, I also have encountered a situation when the candle has not been able to burn from edge to edge, forming a circular tunnel around the wick and down through the core of the candle. This extremely common phenomenon is called as tunnelling.



Figure 4.16: Burning the candle form a tunnel

No candle is immune from potentially tunnelling. Some of the most common causes of candle tunnelling are:

- **Irregular burning practices:** Candles should always burn for long enough so that the wax pool has enough time to reach the edges of the candle container. Extinguishing a candle too early may lead to the formation of a tunnel
- **Incorrect wick size:** A very common cause of tunnelling is the usage of a wick too small for the volume of the width of the container. A wick which is too small may, despite its best efforts, not have enough power to burn the wax from the edge to edge. Hence, I change the size of the wooden wick as stated below:

Table 4.3: Wooden wick width and length for candle of size S, M and XL

Size	S	M	XL
Width	6mm		
Height	28mm	46mm	54mm

4.3 Problem encountered and approach adopted for solving problem

During my involvement in industry training, here are some of the weaknesses and problems that arise. Given that such a thing is a thing that often happens, it is regarded as a trivial matter but if it is seen in the long run, it will affect the performance, and this can spread and become so entrenched in the culture of the company. Here are the comments that I can raise the industrial training in Royal Selangor International Sdn Bhd.

i. Lack of staff

The problem of lack of staff in a company is very worrying because this will cause the work to be delayed and not operated to meet the demand of customers. I always need to work for other departments to cover their job. I often need to do work for Research and Development(R&D) Department, Packaging Department and Manufacturing Department. Sometimes I had to do repentance work for a long time in a day. It will damage the reputation of the company if it continues. To avoid such a thing, the company need to hire more staff to make the work easier and not use trainee to do the work.

ii. Unrelated tasks

I was aware my job scope during the first month of my internship is not related to Chemical Engineering. In the first week of the internship, I need to sort cloudy glass and was given the task to find a way to clean the cloudy glass. I also need to check around 100 pieces of the old pewter in the warehouse for another department. Sometimes I need to lift a heavy box of glasses and need to clean all of them during my internship period. I need to open an alarm, almost 300 pieces of the clock during my internship. I was not given a proper scope of tasks. Unfortunately, although I already tried to discuss the problems that I had

encountered with the lecturer and supervisor, there is still no action taken during my internship.

iii. Miscommunication instruction among staff

Communication plays a vital role in our daily lives and is an integral part of the workplace. Communication ensures the operation of the workplace, and it is the quality of communication that can significantly affect the results of work.

However, I encountered with mislead communication among the staff due for some reason. I am supposedly receiving instruction from my supervisor, but other staff also give me a different instruction at the same time. For instance, my supervisor asks me to search for 30 pieces of clean glasses and at the same time I receive instructions to find other 30 pieces of cloudy glass from other staff. This led to a miscommunication and repentance of work for me. I do hope all the staff work in a professional manner and give work accordingly to have a systematic of workflow.

iv. Deal with different kind of people and clients

The one problem that sticks out in my head during my internship was when I had to deal with different kind of people and clients. I was given a task to call many clients to follow up with them. This was a problem to me because I had no experience in talking with clients on the phone. To solve this problem, I prepared myself and learned from Mrs. Nik Camelia earlier before making any calls. She taught me how to communicate with the clients in terms of how to approach them, what to say to them, how to handle if there are any rejections. It made me more confident than before. By doing this, I find that it is important to have a good communication skill to make your work more effective.

4.4 Professional and ethical issues

- **Workload is heavy as interns must take on staff responsibilities.**

Due to a lack of workers in other department, I was being used in packaging department, manufacturing department and research and development department. Taking on jobs every day has become my responsibility and my workload with no supervision and being treated like employees. On top of that, I need to transfer to other department and have no solid work that I can do in industrial engineering department. There is one time that I was assigned with many works task and need to handle it by myself. However, they have not yet offered a solution to this problem

- **You have to make your own decisions.**

Since there was no expert member to advise me on certain issues, I had to make my own decisions. When handling the cleaning cloudy glass project, I need to figure out how to clean the glass by myself and just do it without any monitoring by other people. Same goes to candle project, when some one else make a mistake for making the candle, I was assigned to solve the problem.

- **There is a problem with the intern's management.**

In this company, interns are usually not replaced according to their job scope when they join. Interns are usually assigned to a department with a vacancy of workers. For example, if the intern student reports to the T & D department, he will be transferred to packaging since there is a vacancy. The complaint will be of no use to the HR department because they take it lightly. Even when they know they don't have such job scope suitable to offer, they will insist on taking the internship. This is because they have a limited budget for hiring workers to fill in the vacancy.

- **There are no proper tasks for the intern.**

The intern has not been assigned a proper task since day one. The internship lasted 24 weeks without any planning on their part. We are sometimes given tasks that are their jobs, but they don't have time to complete them. When we had free time, we had to scan documents, and I even had to clean a department that was disorganised. As we discussed this matter previously, no further action has been taken.

4.5 Health, environment, and sustainable aspects

Health

Main goal of health at the workplace is to prevent workplace injuries, illnesses, and deaths. At the end of every working day, it is morally right to ensure the workers return home safe and healthy. We can increase productivity and efficiency at work by protecting the workers, thereby reducing absenteeism. This company provided three breaks for the manufacturing team as they did the strenuous work. Therefore, they must rest a lot in order to focus on finishing their job. The company has flexible working hours for the office staff. This means that they can come at 8am and go home at 5pm or come at 9am and be back at 6pm. If they work 8 hours a day. Workers can improve their mental health by achieving a work-life balance this way. On weekends they can rest or do something they like. Work was not constantly on their minds. Therefore, it could enhance productivity among workers. Additionally, on weekends the factory closes except for those who want to do overtime.

Environment

Every product made by Royal Selangor is made to last and be handed down from one generation to the next. We take the product's entire lifespan into account. When developing a new product, the environmental impact is a factor that is carefully

considered in all decision-making. Our efforts at each stage can be summed up as follows:

Table 4.4: List of Royal Selangor International Sdn Bhd's efforts

Eco-Friendly packaging
The best example of Royal Selangor International Sdn Bhd's efforts is to help the environment post-consumer is the current change in packaging. They are implementing a massive design change to work towards a goal of zero non-biodegradable content in our packaging. Eliminating plastic foam is the obvious environmental advantage, but also adapting a flat pack box format also helps with reducing transport emissions when we get our boxes from the supplier as we can fit multiple more boxes in a single delivery.
Reuse and recycle
Royal Selangor International Sdn Bhd look to their old inventory before sourcing for new components when creating new products. Modern prototyping is a lot eco-friendlier, and pewter has the added advantage that can melt down the old prototypes and use the material to make new ones. Pewter shavings, discontinued items, items which do not meet quality standards and cannot be repaired are melted and re-used to make new products. Old moulds have been used to create sculptural artwork at the Royal Selangor Visitor Centre.
Locally sourced
Royal Selangor International Sdn Bhd try wherever possible to source local and ethical components and raw materials. Examples of this include getting all ceramics parts sourced locally to avoid the impact of transport from overseas.
Client Care & Repair service
Their client care & repair service ensure that their products can last a lifetime and even passed from generation to generation.

Sustainable

At Royal Selangor, they are committed to sustainability and have a long-term perspective. In addition to preserving their more than 100-year legacy, they also recognise the value of maintaining artisanal skills, reducing our environmental impact, and assisting local communities.

- Acting on climate change

Since 1976, all of their pewterware has been produced at their current production facility, along with silverware and gold items by Royal Selangor associate companies Comyns and Selberan. Every piece that will eventually find its way into homes and celebrations around the world was first crafted using molten pewter, gold, and silver that was cast from diesel-fired cauldrons. The conversion of the cauldrons to those powered by electricity, a cleaner energy source, took place five years ago.

Efforts at enhancing the environmental sustainability of the business continued. The company began to look into ways and means of reducing electrical consumption and increasing our use of renewable energy sources. Government commitments to increase renewable energy to 20% by 2025 and the introduction of improved Net Energy Metering helped support the company's efforts. Through this scheme, they can export excess solar PV energy back to the national grid. Consequently, solar power became an increasingly attractive source of green energy.

The factory and offices, including the Royal Selangor Visitor Centre, now have rows of solar panels in neat grids. They generate 870 kilowatts of energy for manufacturing and visitor centre operations every day. Since we have the power of solar energy, the company wasn't getting black out during the whole Kuala Lumpur has no electricity due to problems at TNB. A lot of big places such as airport got interrupted by this incident. While us having backup of solar power to generate our electricity during those time. It is really helpful because we didn't lose any importance things while we doing the works.

- Sourcing Responsibly

Responsibly Sourced Wood

We also use wood in our work. There are a lot of orders of bespoke or LVMH using wooden box for the packaging box. Hence, the company began by choosing goods made of wood that adhered to the standards for sustainability set forth by the Programme for the Endorsement of Forest Certification (PEFC). The PEFC is a global non-profit, non-governmental organisation whose goal is to advance sustainable forestry practises through third-party certification from an impartial body.

The PEFC works to make sure that the highest ethical, social, and ecological standards are upheld in the production of both wood and non-wood forest products. Then, customers will be able to tell which items come from forests that are maintained responsibly. PEFC Chain of Custody Certification ensures that the wood, wood fibres, and non-wood forest products contained in the product can be traced back to the forest from which they originated.

The Malaysian Timber Certification Scheme (MTCS) has awarded us Chain of Custody Certification. MTCS is the Malaysian Timber Certification Council's national timber certification scheme for sustainability.

CHAPTER 5

CONCLUSIONS

5.1 Conclusions

Based Industrial Training conducted during semester 6, I have learned many things besides rewarding experience. In conclusion, this industry training has given me a lot of exposure to the real working environment. Besides, I can find out more about the environment that exists in the workplace. Apart been given the opportunity to learn and recognize the administrative organization of management of a company and see how management is implemented. I also can train myself to have a high level of discipline but can understand the ins and outs of the job in a company.

Through the practice of this industry, I can create a lot of confidence in myself based on what they have learned and experienced. By this, I became more confident of my abilities, learn to accept reality, learn punctual, learn from mistakes and be able to face all the challenges that afflict with an open mind. Furthermore, I also get to learn and know how to solve a problem that occurred with the help solve that problem with other employees and have a responsible attitude and a sense of trust in themselves to any given task. Finally, the Industrial Training has provided many significant exposures as well as useful experience and I will practice all the existing experience during the workplace true later in the future. Thanks to all involved in helping me during the Industrial Training. Student's participation in such training can prove and strengthen the identity of students in training in technical fields, thus making UiTM as practical education platform.

5.2 Suggestion and recommendations

Here also I would like to say a few suggestions that are necessary to be addressed by the parties concerned to improve the existing training system among them are:

- i. Proposed that the training industry or the parties can operate in industrial training company that puts the students who make the training industry to make the meeting to discuss matters concerning the task has been carried out within 2 weeks. This not only makes it easy for supervisor but at the same time can get accustomed to interacting with superiors or the more mature and see the progress of students in performing tasks directed by the UiTM.

- ii. Here I want to give some more suggestions felt is necessary to repair the vulnerabilities in the system of training on the run: -
 - a. To propose to create an incentive scheme after completion of training, to encourage students to be more diligent and have high morale.
 - b. To suggest that UiTM provide some pocket money to students who enroll in their place so that students are more enthusiastic during the training industry.
 - c. On behalf of UiTM, they must provide appropriate space with industrial training students so that they are more comfortable and relaxed when they make something work.
 - d. Monitor the level of discipline that works not retained staff and customers are more contented when dealings. This will make Royal Selangor International Sdn Bhd as an example to other private companies.

All comments submitted are expected to increase industry training system and can be beneficial to us all. We should strive to improve the quality of training. All suggestions

and comments noted above, please donate to our mutual benefit towards improving the quality of training conducted in the future. I hope that this firm will take place for students to undergo industrial training in the future to successfully again.

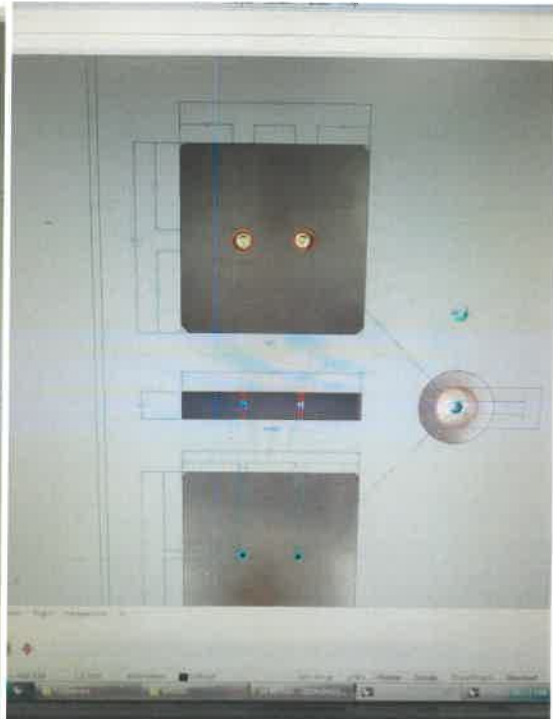
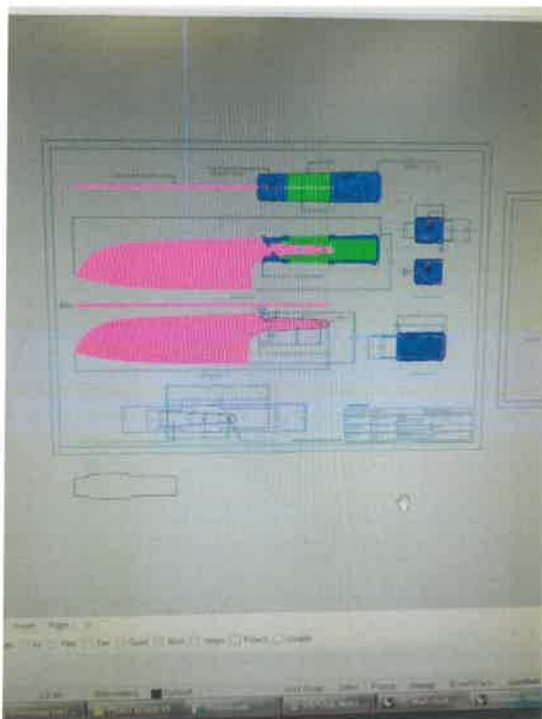
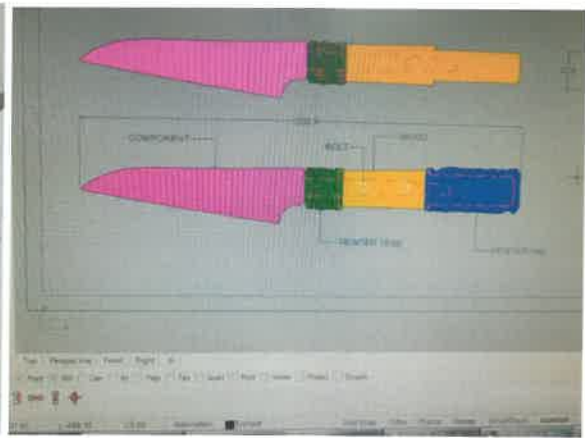
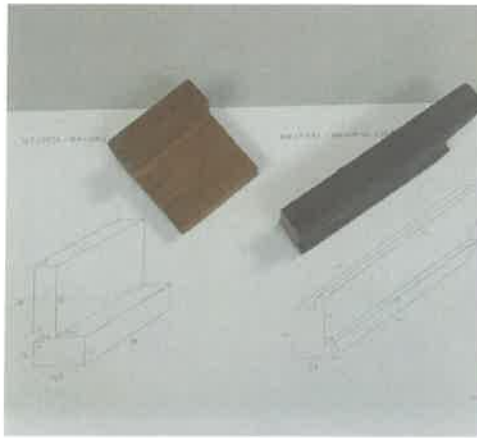
APPENDICES



Picture of me cleaning the cloudy glass



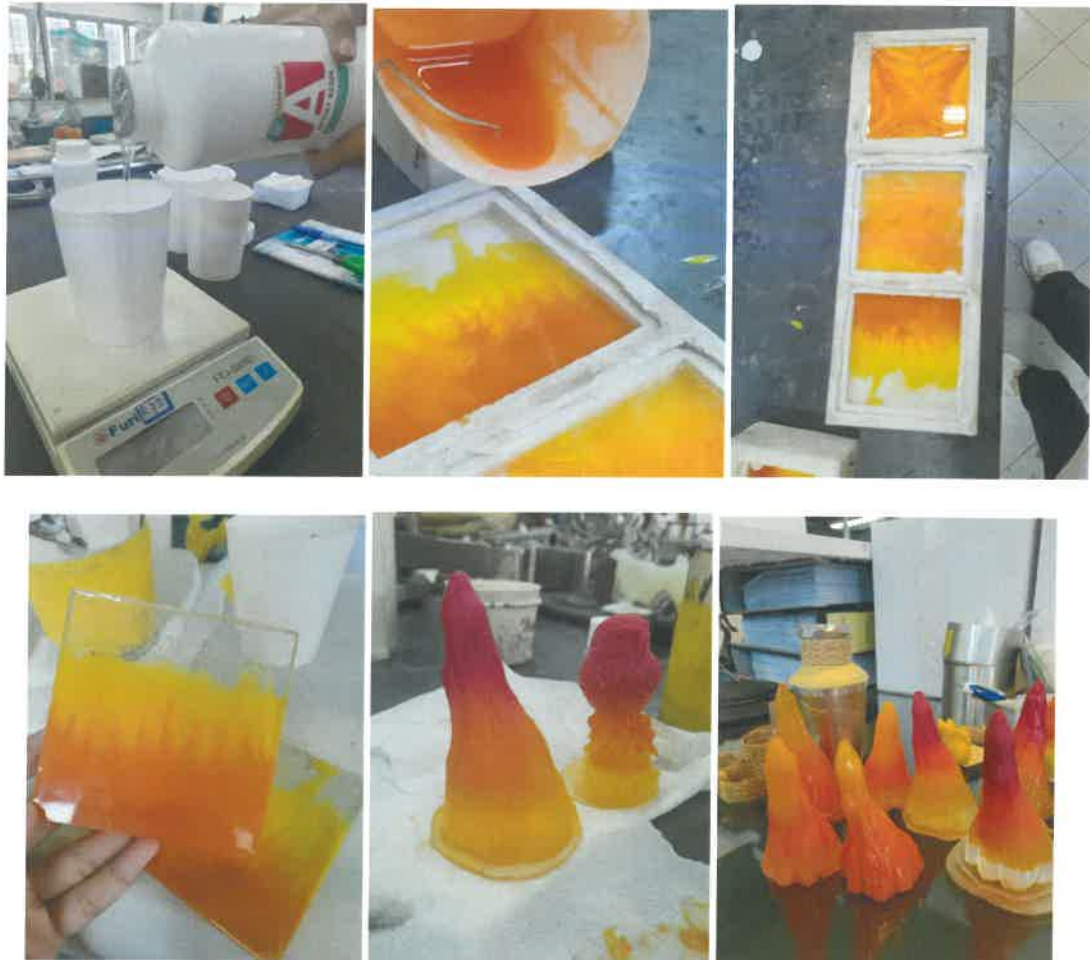
Sorting glass in the warehouse



Some of the technical drawing that I draw



Trial run of candle



Other project that I did which is resin experiment on Boba Fett fire sculpture



Rattan weave project on KOI



Picture with Dr Yusri, the Head of New Product Development (NPD) Department



Pictures with our supervisor, Nik Camelia during the internship

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2. *Sustainability*. (n.d.). ROYAL SELANGOR.
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- **Individual**

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