Cawangan Johor
Kampus Pasir Gudang

KIAN JOO GROUP
KIAN JOO CAN FACTORY BERHAD
(Company No 3166-P)

INDUSTRIAL TRAINING REPORT
(CHE 353)

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DIPLOMA IN CHEMICAL ENGINEERING
2018230208

22/03/2021 - 15/07/2021

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1.0 INTRODUCTION

Industrial training for Diploma in Chemical Engineering is the most important aspects for students in providing opportunities and introduction to students to get know and deepen the real world of work. The objective of this industrial training program is to give students an exposure to the actual working environment or more precisely to expose students to the industry culture thus will enable students to gain valuable practical experiences during their internship before graduation. It is also helping students to be able to perform the basic engineering practices, be able to write technical writing report and they can handle a project assigned. Through industrial training, students can improve their knowledge and practice the skills that they have learned by solving problems and assignments given. Furthermore, this training is also an excellent platform for students to train themselves to communicate formally and informally either with colleagues or superiors. This is because of the behavior is one of the most important aspects in the world of work. Indirectly, it can create an attitude of responsibility, discipline, teamwork and how alert an individual towards any problem occurred.

For a total of 17 weeks, starting from 22nd March 2021 until 15th July 2021, I have undergone my industrial training in KJ Can Factory Berhad (Johore). During my internship, I was assigned to Quality Control (QC) department under the supervision of Ms. Tee Chia Sin (Plant 1), Miss Lim Mong Nee and Puan Saiyidatul Fatimah (Plant 2) also with another staff, Miss Nurul Atikah. In QC department, I was given the opportunity to learn about the production flow and I also received tasks to do as a QC staff at production line which needed me to communicate well with the engineer, technician, and operator from the production line. Through weekly activities, I was exposed to new knowledge through learning in terms of document or report, inspection of equipment such as how to use and how to fix if not function well and the most important is inspection of product quality. I have also learnt the importance of teamwork and communication and it could be seen during I was working with them. This helps between each other to make the working well and smoothly.

In conclusion, the industrial training provided can see the objectives to produce quality graduates from the experimental and physical as well as able to face the real world of work in the future. Most importantly, this program gives the most positive impact to students as they manage to build new skills and exposed to new environment and knowledge from the industry.

2.0 CONTENTS

2.1 Organization Chart and History of The Company

2.1.1 History of Kian Joo Can Factory Berhad

Company Background

KJCF
KIAN JOO GROUP
KIAN JOO CAN FACTORY BERHAD
(Company No: 3186-P)

Figure 1 Logo of Company

Kian Joo Can Factory Berhad is the biggest packaging company in the ASEAN region. Packaging is part and parcel of marketing product. Well-designed packaging enhanced the product's marketability and strengthens a brand's position in the market. "Kian Joo" or "The Company" is one of the few companies in Malaysia which has the capabilities to implement packaging solutions that deliver freshness, convenience and security for the food and products.

Kian Joo is first beginning in 1956. The founder of this company is Mr See Boon Tay in 1956 with a few close friends, the Company was incorporated under the name Kian Joo Can Factory, Limited on 18th March 1958 @ incorporated only RM2.00. The company now is an indirect wholly owned Subsidiary of Can-One Berhad, a company listed on the main market of Bursa Securities.

Currently, Kian Joo's main offerings consist of General Cans, Aerosol Cans, Aluminium Cans, Biscuits Tin, Corrugated Cartons, Contract Packaging Services such as milk powder and beverage can and others. They have become an integral part of individual daily life.

KJ Can products are exported to Japan, Myanmar, Indonesia, Thailand, Singapore, Taiwan, Australia, Philippines, Middle East, and many more countries. Instead of Johor, they also have production factories at Selangor and Negeri Sembilan. They also have production factories at oversea which are Vietnam, Myanmar, and Singapore.

Location

KJ Can (Johore) Sdn. Bhd. has two plant which are located at Jalan Tampoi for Plant 1 and Jalan Hasil 2 for Plant 2. Plant 1 produced lacquered, coated, and printed tinplate which are then send to Plant 2 for tin, aerosol can and ends production.

Figure 2 KJJ Plant 1

Figure 3 KJJ Plant 2

Company Mission and Vision

1) Mission,
   - To maintain:
     i. Customer satisfaction, production, and cost efficiency.
     ii. Quality, safe, and hygienic packaging products.
     iii. Workplace of choice.

   - We shall attain these by striving for:
     i. Competency enhancement
     ii. Continuous improvement
     iii. Product quality improvement
     iv. Meeting customer requirements
     v. On time delivery in full
     vi. Staff teamwork and motivation
     vii. Food defense and food prevention
     viii. Effectiveness internal and external communication

2) Vision,
   - Kian Joo Can Factory Berhad is committed to strive for achieving world-class standard in Two Piece Cans and Ends manufacturing.

Certification of Company

- MS ISO 9001:2015 certification
- Hazard Analysis and Critical Point (HACCP)

Company Operations

Department and Production Line,

Department	Production line	
	Can	Component
Sale	Line 2	Press 2
Admin	Line 3	Press 3
Component	Line 7	Press 4
Printing	Line 8	Press 6
Printing	Line 9	Press 8
QC Department	Line 10	Press 9
Maintenance	Line 11	Press 10
Store	Biscuit	Press 12
		Press 13
		Press 13A

Table 2.1 List of Departments and Production Line

2.2.1 Organization Chart

KJ Can (Johore) Organizational Structure

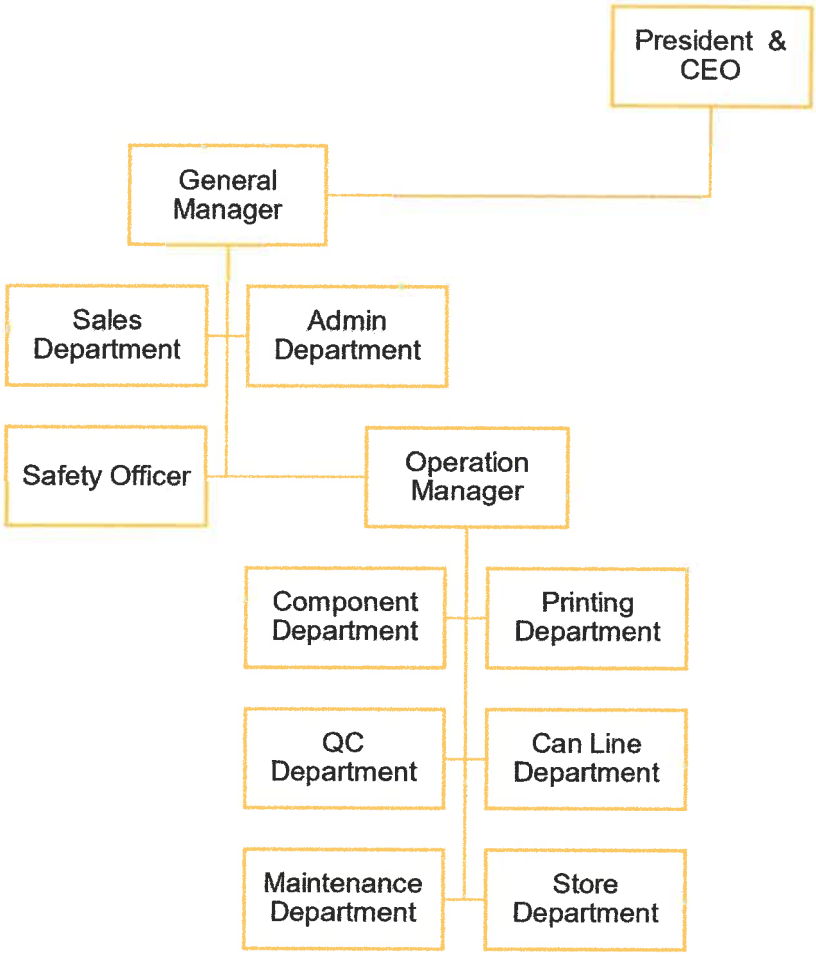


Figure 4 Organization Chart

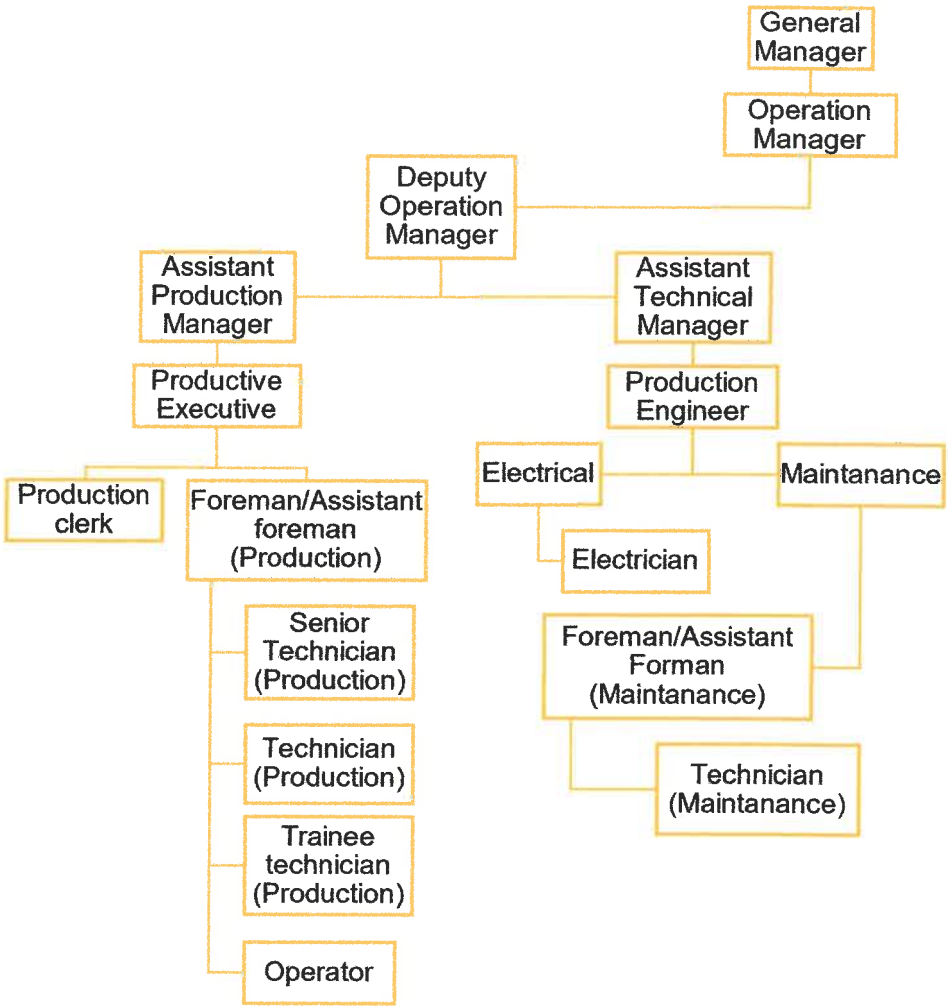


Figure 5 Organization Chart of Plant 2

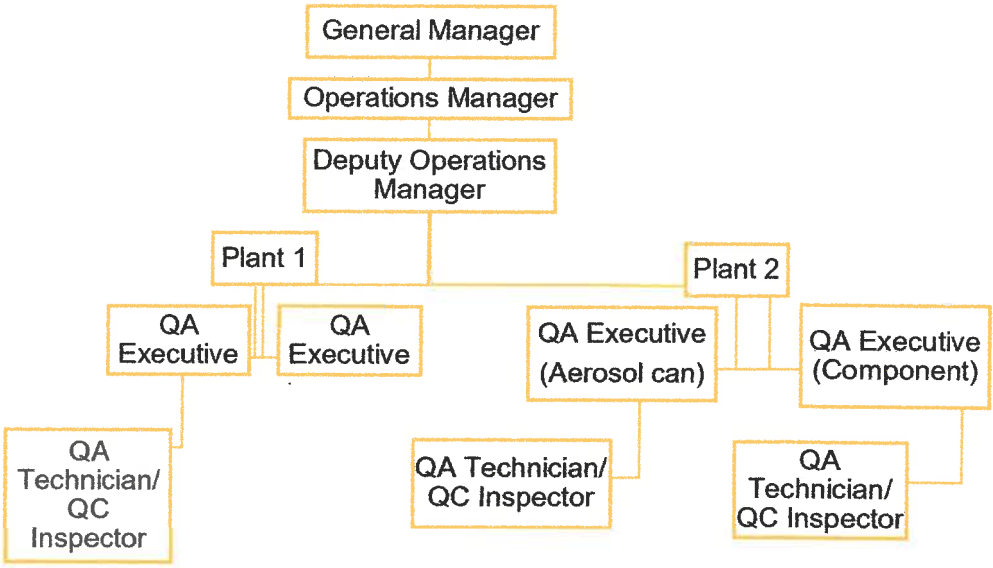
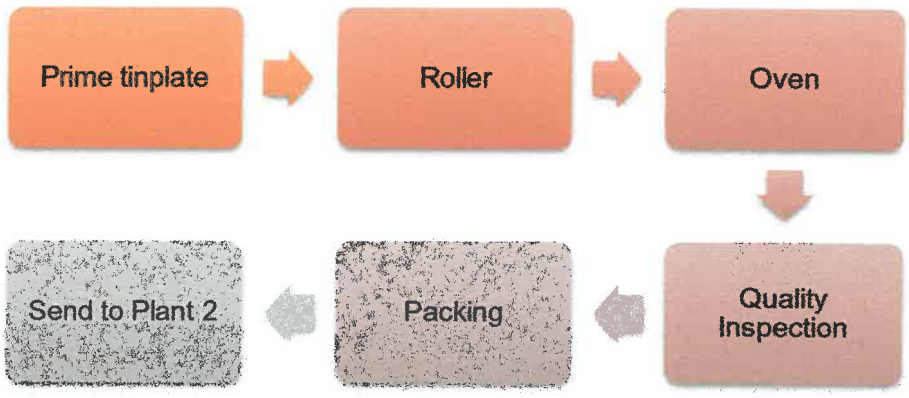


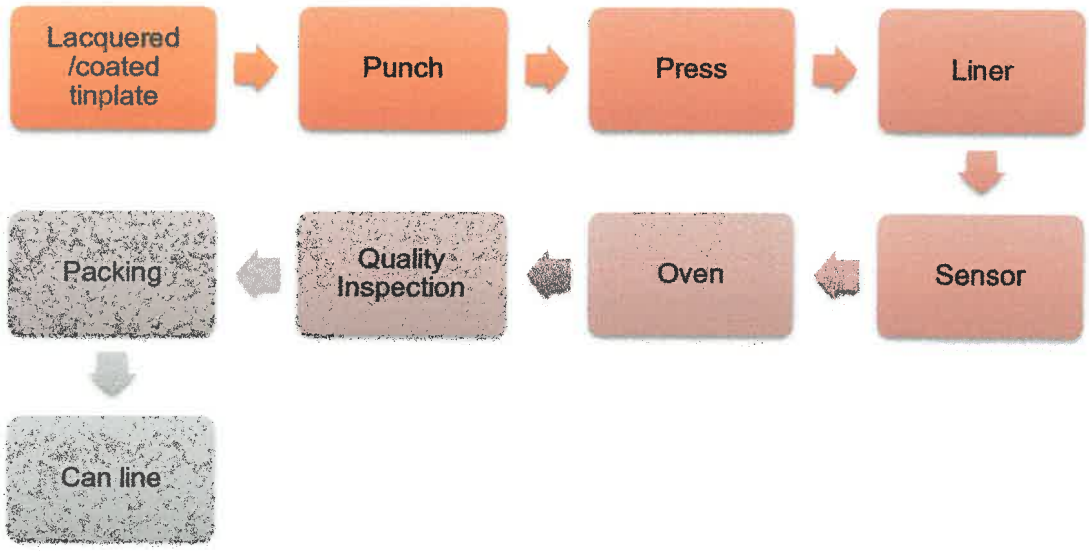
Figure 6 Organization Chart of Quality Control (QC)

2.2 Process Flow

1. Lacquering / coating process:



2. Ends process (cone and dome)



2.3 Brief Daily / Weekly Activity

This section is a summary of all the activities that have been done during the industry training. Through all the activities that have been done, all information of work task that be learned at KJ Can (Johore) Factory Berhad will be explained briefly in this section. Each activity is explained based on daily routine followed by other activities such as training, measurement, and testing conducted.

2.3.1 Training activities

During my industrial training, I was exposed to a lot of new things. I was given the opportunity to experience real working environment and exposed to various company rules and ethics where it was mandatory to practice all the time. My working hours started at 8.00am to 5.00pm daily from Monday to Friday while 8.00am to 1pm on Saturday. Throughout my industrial training, I was assigned in the QC (Quality Control) department under the supervision Miss Tee Chia Sin (Plant 1), Miss Lim Mong Nee (Plant 2) and Puan Saiyidatul (Plant 2) as Quality Assurance (QA). QC department has responsible to check the quality of item during production. They will ensure the items production in control and comply the specification that given.

Before I started my first day of industry training, I was reported to Plant 1. I was given small briefing about the company and attended the safety explanation by Mr. Shuib as Safety Officer who in charge in Plant 2. I was taken around some areas to be introduced especially in QC office. From time to time, I was given the opportunity to learn and handle the task and get helped by staffs. Furthermore, to gain better understandings and knowledge on the QC task, I preferred to go to production line to observe their processing of items and asking staff around there if not understand. After completing 3 weeks of my internship at plant 1, I was sent to Plant 2 to get more experiences and independence there. At plant 2, I also assigned to QC department which is under component department.

On the first day, at Plant 1 and Plant 2, I was requested to study the process control plan data before going to production line. Process control plan is a document that describe process step, the process's quality control items, responding control methods, and reaction plans. Simply said that it is a plan to control production and to assure the product, service, and met the process requirements. I also have given an opportunity by my supervisor to teach new quality inspector regarding on how quality assurance inspection in component department.

2.3.2 Daily activities

- Daily QC meeting
- Quality assurance inspection and verification.
- Certificate of analysis (COA) for export product and food can ends.

PLANT 1

1. Quality assurance inspection for lacquered or coated tinplate

At plant 1, there are few tests that are required to do. Those tests are cross test, MEK rub test, copper sulphate test, dry film weight, lacquered viscosity, scratch test and bend test. My first task is to practice doing all this test under supervision of QA executive Plant 1. After that, I am required to do a daily curing verification based on the tests above.

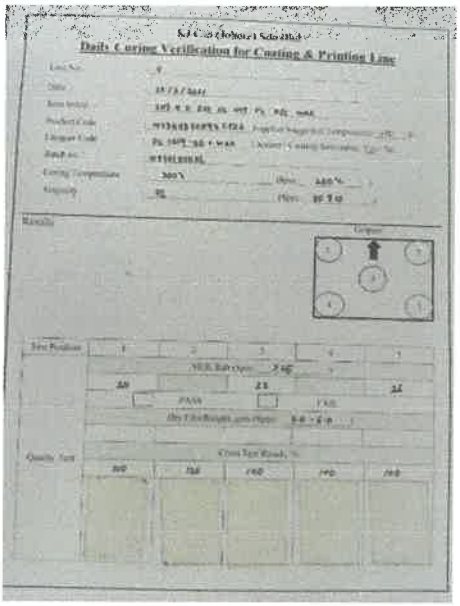


Figure 7 Daily Curing Verification

2. Sorting daily production report and verification

I was required to sorting production daily report for lacquering and coating line and do verification by using the same sample that operator used to conduct test on it. This action is very important to assure the quality of lacquered or coated tinplate before proceeding to the next process. For this task, I am also required to write the result obtained on the 'remarks' column in the production report. If there are any problem, must inform the QA executive for further actions.

3. Cross test

Cross test is a method to test the adhesion of lacquer, coating, or varnish to the tinplate to which lacquer, coating and varnish is applied. A sharp blade or knife is used to make a cross-cut pattern, 11 x 11 lines with 1-2 mm gap on a lacquered or coated tinplate. After that, any flakes produce must be removed from the surface. Then, a scotch tape (pressure sensitive tape) is pressed onto the cross-cut pattern before being pulled (90º). Not more than 15% peel off are considered pass the cross test.

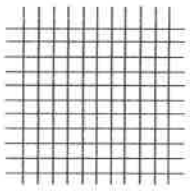


Figure 8 Cross-cut pattern

Figure 9 Cross test

4. Methyl Ethyl Ketone (MEK) rub

In the manufacturing of cans, liquid lacquers are applied and subsequently dried at high temperature which we called it as lacquer curing. This step is important to determine if the liquid lacquer or coating is completely dry on the tinplate. If MEK rubs test shows fail, it may be because of the oven speed which will affect the time taken for lacquer curing to be done, temperature may be drops while curing, or the dry film weight too high. It will easier for QC inspector and the technician to detect and act for an adjustment.

Materials and apparatus needed for this test are, MEK solvent, 1kg hammer, cotton, masking tape and lacquered or coated tinplate.

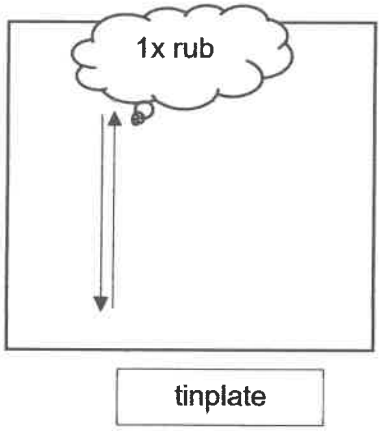


Figure 10 MEK rub direction

Figure 11 MEK rub test

5. Copper Sulphate test for lacquered tinplate

The aim doing copper sulphate test is to make sure that lacquered or coated tinplate are fully covered with lacquer or coat. From this test, I also must make sure that is no rusty on the lacquered are. If no rusty on the lacquered are, that show that the tinplate is fully covered by lacquer or coat. To conduct copper sulphate test, the material and apparatus needed are old cloth and cooper sulphate solution. Copper sulphate solution is poured onto the tinplate and rub the solution to the overall tinplate by using old cloth.

7. Bend test

This test is also part of product quality inspection in Plant 1. Bend test are required to determine the flexibility of a lacquer or coating by bending a coated or lacquered tinplate without cracking and loss of adhesion. First, the tinplate that has been cut into small piece will be folded on the edge side. Then, unload the load of the bend test equipment onto the folded area by 180^{o} direction. After that, unfold the tinplate and observe if there is any peel off lacquered or coat at the folded area. Rub with copper sulphate solution if necessary.

Figure 14 Bend tester

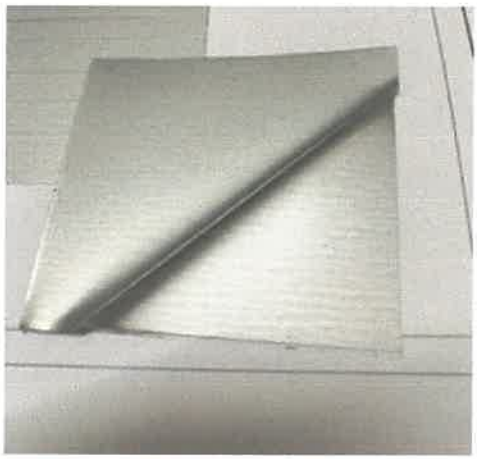


Figure 15 After bend test

PLANT 2

9. QC Daily Meeting

Every day at 8.20 am, meeting and discussion are held in QC office among QC inspector and Operation Manager before they start working. Technician and operator will summon if necessary. They will report and discuss the problems on the previous production included the solutions to overcome it. After that, my supervisor will distribute the tasks to they do. This is daily routine that I get involve in their meeting before start working. What I see and gain from the meeting, it was compulsory to discuss about what, when, who, why and how. All those questions were related to the production. Sometimes, the boss will remind about the necessary of quality of items and discipline during working.

10. Camera check at component production line

Camera on the production line is the sensor on where it can reject defect ends on the line. So, I am assigned to do camera checking everyday using camera reject defect samples before production starts. This action is required to make sure camera can detect and reject most defect ends before going to packing area. If the camera can reject the defect samples, I must inform the engineer on the line to make adjustment from the camera monitor as I have no access to the monitor.

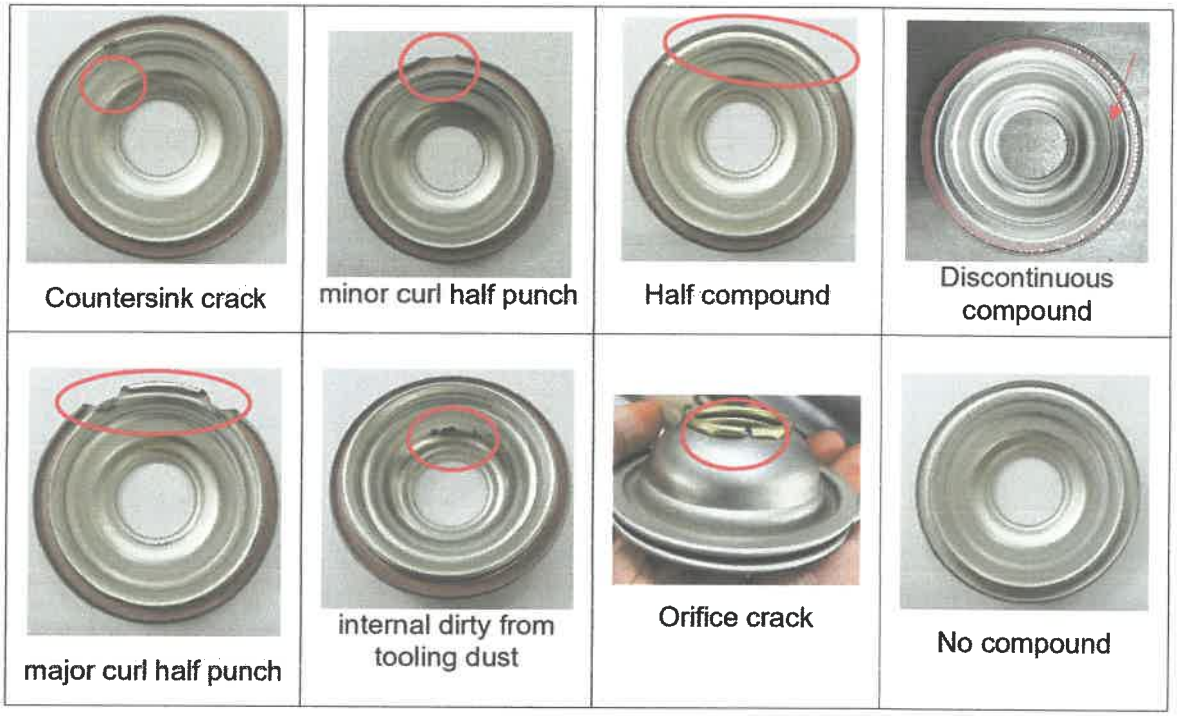
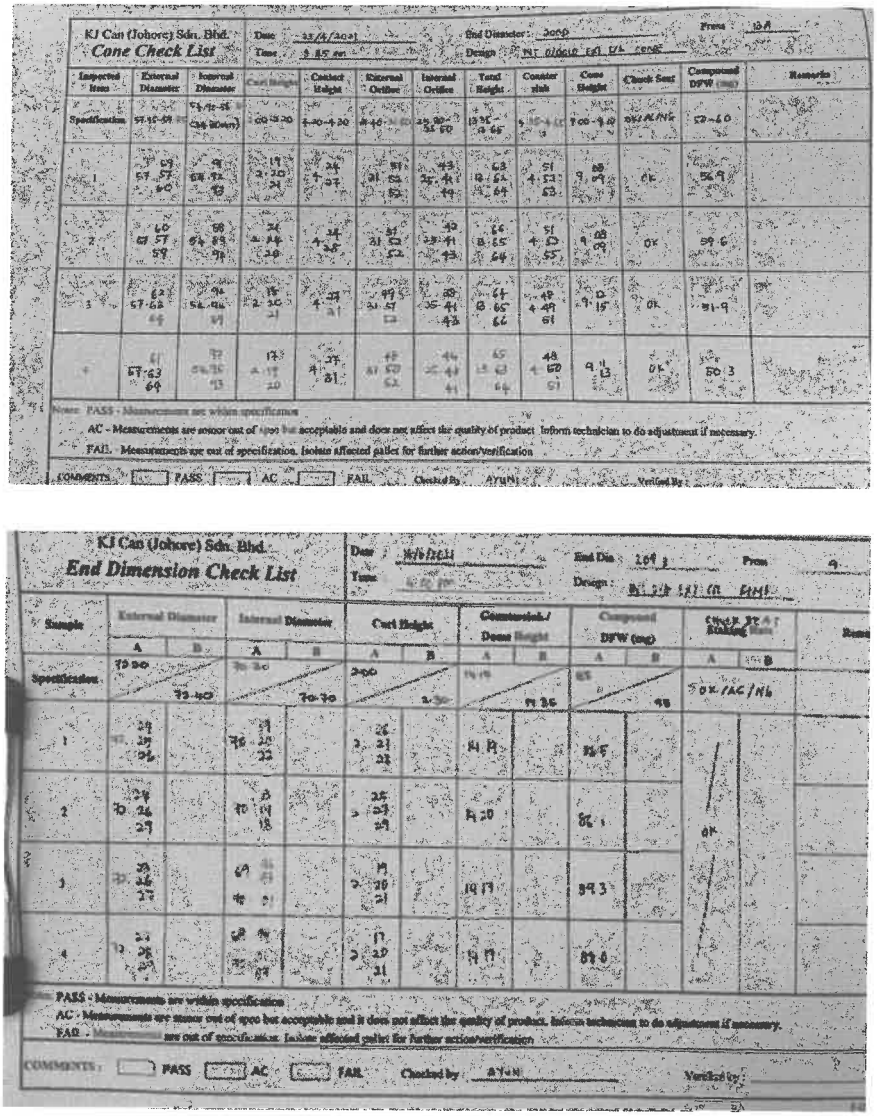


Figure 17 Camera Reject Samples

11. Dimension measurement for cone and dome

When I am assigned to in charge the component production line, I am required to do ends dimension measurement for each production line. This is to make sure that the ends produced for the day is within the dimension specification. Measurement instruments involved are calliper, cone height gauge, contact height gauge and total height gauge. All those measurements will be recorded in Ends Dimension Check List form as per below:


KJ Can (Johore) Sdn. Bhd.
Cone Check List

KJ Can (Johore) Sdn. Bhd.
End Dimension Check List

Figure 18 Cone/Ends Dimension Checklist

12. Deformation test for cone and dome

Deformation test is to determine the maximum pressure for ends (cone/dome) to deform from its initial state. A deform tester with its gauge will be used for this test. Each production item has its own deformation value. In process control plan, it states that specification for deformation value must be more than 14 bars, usually they will control the value to more than 14.50 bar. This test is required to do daily for each three hours for QC. All results will be recorded in Component Deformation Log sheet.

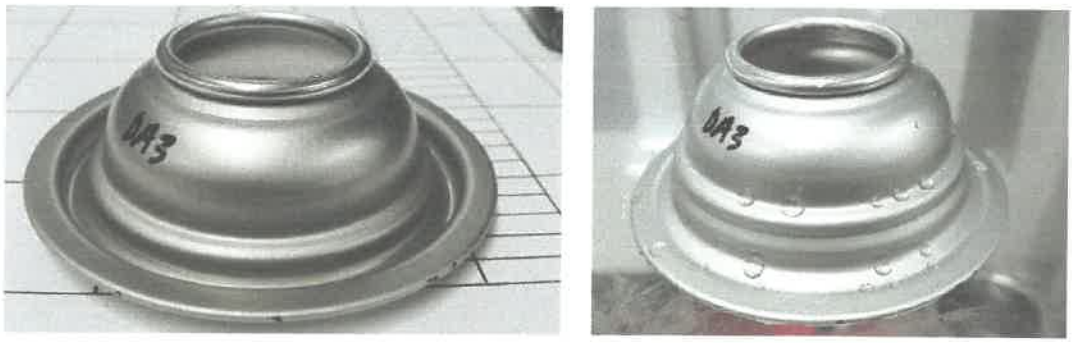


Figure 19 (left) Before deformation, (right) After deformation

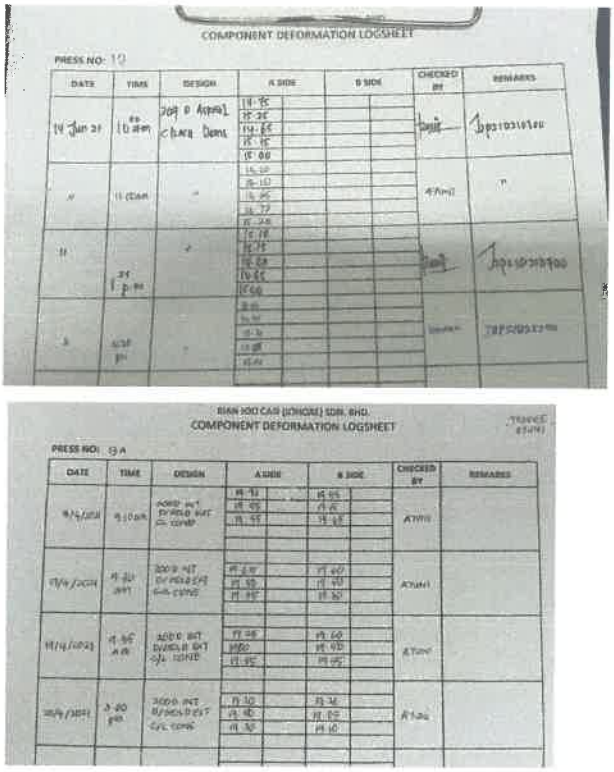
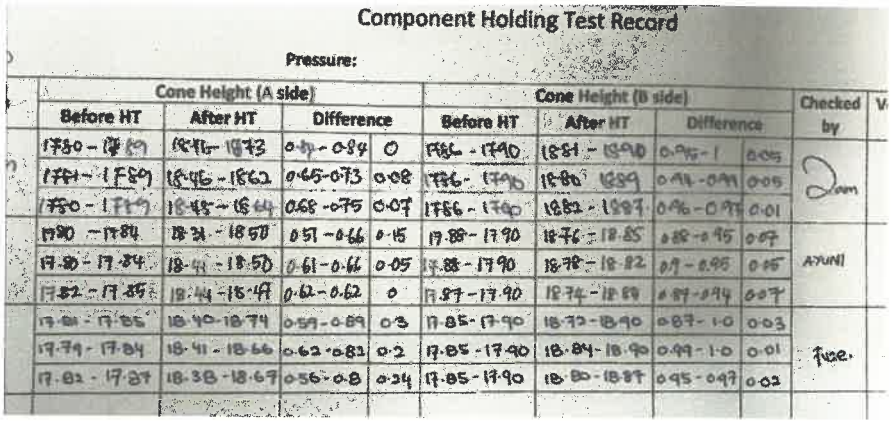


Figure 20 Component Deformation Logsheet

13. Holding test for cone

Holding test is to determine the cone height increments at 12 bar for 25 seconds. It is required to do once a day for each cone production line. For holding test, cone height reading for each sample before and after holding test must be recorded in Component Holding Test Record, then the difference must be calculated. Equipment used for this test is the deform tester.



Component Holding Test Record

Pressure:

Cone Height (A side)				Cone Height (B side)				Checked by
Before HT	After HT	Difference		Before HT	After HT	Difference		
1780 - 1789	1871 - 1873	0.81 - 0.84	0	1786 - 1790	1851 - 1890	0.95 - 1	0.05	Deform
1771 - 1789	1846 - 1862	0.65 - 0.73	0.08	1786 - 1790	1880 - 1889	0.94 - 0.99	0.05	
1750 - 1789	1845 - 1864	0.68 - 0.75	0.07	1786 - 1790	1882 - 1887	0.96 - 0.97	0.01	
1790 - 1794	1834 - 1858	0.51 - 0.66	0.15	1788 - 1790	1876 - 1885	0.88 - 0.95	0.07	AYUNI
1790 - 1794	1841 - 1850	0.61 - 0.66	0.05	1788 - 1790	1878 - 1882	0.9 - 0.95	0.05	
1782 - 1785	1844 - 1846	0.62 - 0.62	0	1787 - 1790	1874 - 1881	0.87 - 0.94	0.07	
1781 - 1785	1840 - 1874	0.59 - 0.89	0.3	1785 - 1790	1872 - 1890	0.87 - 1.0	0.03	
1779 - 1784	1841 - 1866	0.62 - 0.81	0.2	1785 - 1790	1884 - 1890	0.99 - 1.0	0.01	fuse.
1782 - 1787	1838 - 1867	0.56 - 0.8	0.24	1785 - 1790	1880 - 1887	0.95 - 0.97	0.02	

Figure 21 Component Holding Test Record

14. Copper sulphate test for internal lacquered ends

Copper sulphate test in component department is for the lacquered ends only. This is to make sure that is no internal scratches and ends are fully covered with lacquer. Especially for ends with internal double gold lacquer. This is because product with this lacquer are water-based product, so if the internal side is not covered properly then corrodes will happen.

Internal lacquered ends must be soak in copper sulphate solution for about 30 – 60 seconds, then wash the ends with plain water. After that, an observation will be made to see if there any corrosions happen after ends soak in copper sulphate solution.

Figure 22 Copper Sulphate solution

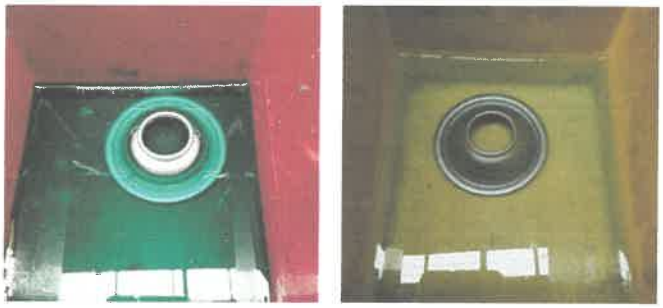
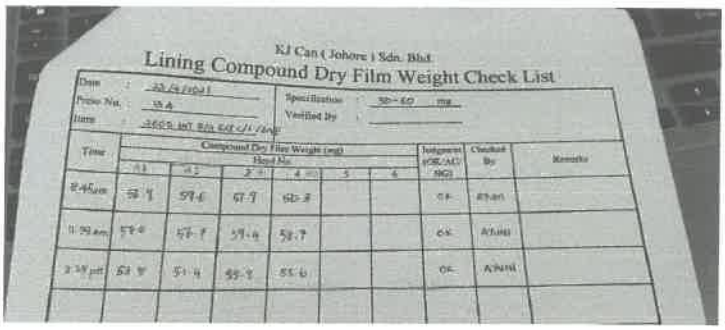


Figure 23 Copper sulphate test

15. Compound dry film weight (DFW)

For this company, there are two type of compound used for can sealing. One for sealant in the double seams of aerosol cans and round general line cans, and another one is for used in fatty food application such as sweetened condensed milk ends and planta ends. Each item will have its own compound weight specification based on end size. If compound weight too heavy, it will cause problem at can seaming, and if compound too light it will cause microleak at the seam area. When I am assigned to production line, as QC inspector DFW must be weight once in three hours. This is to make sure that compound is always in specification. If DFW out from its spec, must inform operator to make an adjustment. Below is the lining compound dry film weight check list to record the results:



KJ Can (Johore) Sdn. Bhd.

Lining Compound Dry Film Weight Check List

Figure 24 Compound DFW Check List

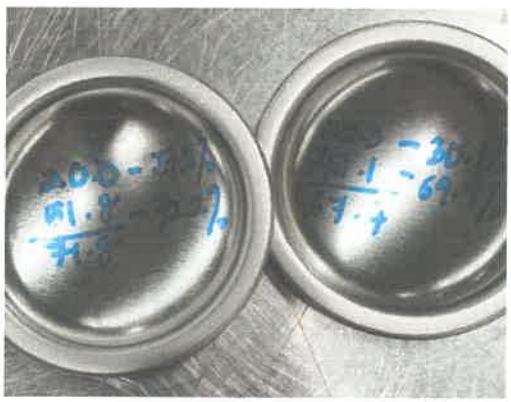
16. Compound Distribution

Compound distribution is important to get better results in can sealing. From time to time, I was assigned by my supervisor to do compound distribution 200D cone. But for dome, compound distribution must be done before production start. Compound distribution must achieve 20-30% under the curl and 60-70% at seam panel. If results get out of the specification, must inform the technician to do adjustment. To do this test, chemical balance weighing scale, sharp knife and wooden stick will be needed. Results must be recorded and attach with the daily production report.

Compound distribution calculation:

$$1)\ \frac{Compound\ at\ Seam\ panel\ weight\ (mg)}{Total\ compound\ weight\ (mg)} \times 100\%$$

$$2)\ \frac{Compound\ under\ curl\ weight\ (mg)}{Total\ compound\ weight\ (mg)} \times 100\%$$



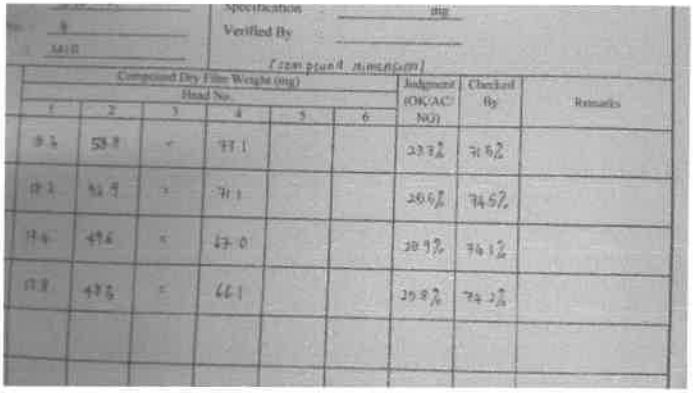


Figure 25 Compound Distribution

2.3.3 Monthly activities

- Stock-take – involves counting and checking all products, goods/ inventory in business to make sure the records are accurate and correct.
- Rearrange QC ends sample according to month and year neatly in the box.
- Make new camera reject samples to replace the old samples.

2.4 Description of Task/ Mini Project Assigned

Throughout my internship days, I was assigned to perform a few tasks and mini projects. Among the tasks that I had conducted were as below:

2.4.1 Residual Moisture Content Test

From time to time, I am assigned to assist my supervisor to do residual moisture content test for the water based can sealing compound from the ends. This test is crucial to know moisture percent in the water-based can sealing compound after drying since this type of compound should be 98% dry before double seaming. Lower moisture level is required to prevent substantial moisture condensation on the end. Higher moisture levels may cause conversion tooling contamination and defects

To do this test, I need to take 10 pieces of ends for one set and a piece of aluminum foil then weigh it separately. Mark the ends before putting it through liner and let ends dry through oven as usual. After ends exits oven, collect ends, and immediately wrap with the pre-weighed aluminum foil to prevent from moisture loss, allows it to cool at the room temperature and weigh the foil wrapped ends. After that, remove the foil and dry ends in the laboratory oven for 5 minutes at 120°C. After baking, allows ends to cool to room temperature and then reweigh. Lastly do the calculations to get residual moisture percentage.

Calculations:

a) **Measured Weight,**
   - Unlined ends
   - Aluminum foil
   - Foil wrapped ends
   - After bake weight

b) **Semi-dry compound weight,**
   - Foil wrapped ends (-) unlined ends (-) aluminum foil

c) **Totally dry compound weight,**
   - After baked weight (-) unlined ends

d) **Dryness Correction Factor, DCF,**
   - 0.001g × 10 (ends)

e) **Adjusted totally dry compound weight,**
   - Totally dry weight (+) DCF

f) **Moisture weight,**
   - Semi-dry weight (-) Adjusted totally dry weight

g) **Residual moisture content,**
   - $\frac{Moisture\ Weight}{Semi\ Dry\ weight} \times 100\%$

2.4.2 Prepared Summary from Component Daily Production Report

I am given a task from Miss Lim, Operation Manager to do three summaries based on the component daily production report which deformation and holding test, dimension, and component problems. Those summaries must be email to my supervisor daily. These summaries will be used by the Operation Manager to do analysis and data collection for meeting with production staff especially their technician so that they can make improvement for the next production. I use Microsoft Excel to complete this task. Here I gained new excel skills as I completed the task.

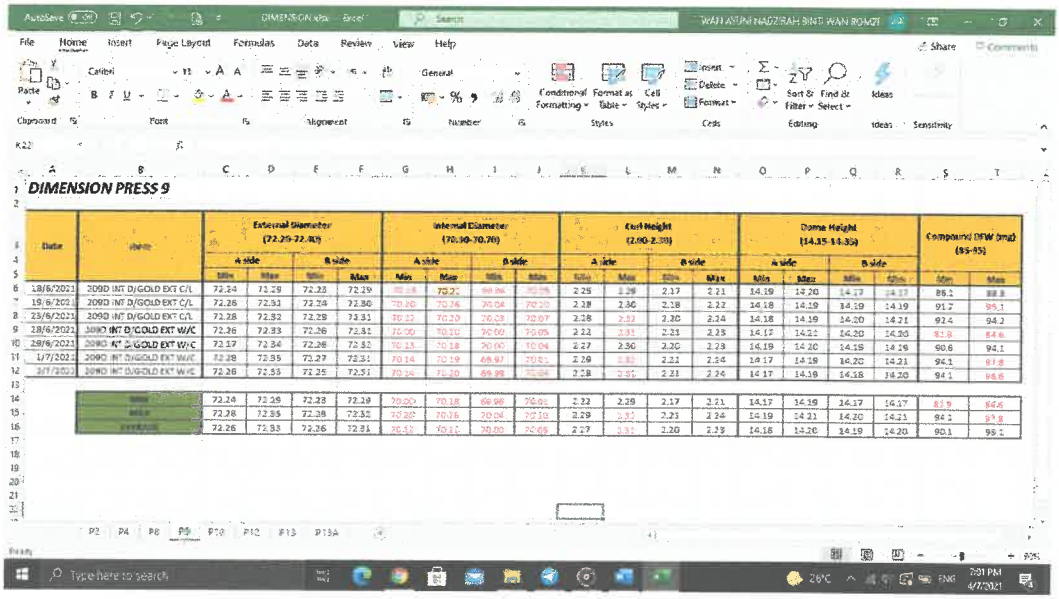


Figure 26 Dimension Summary

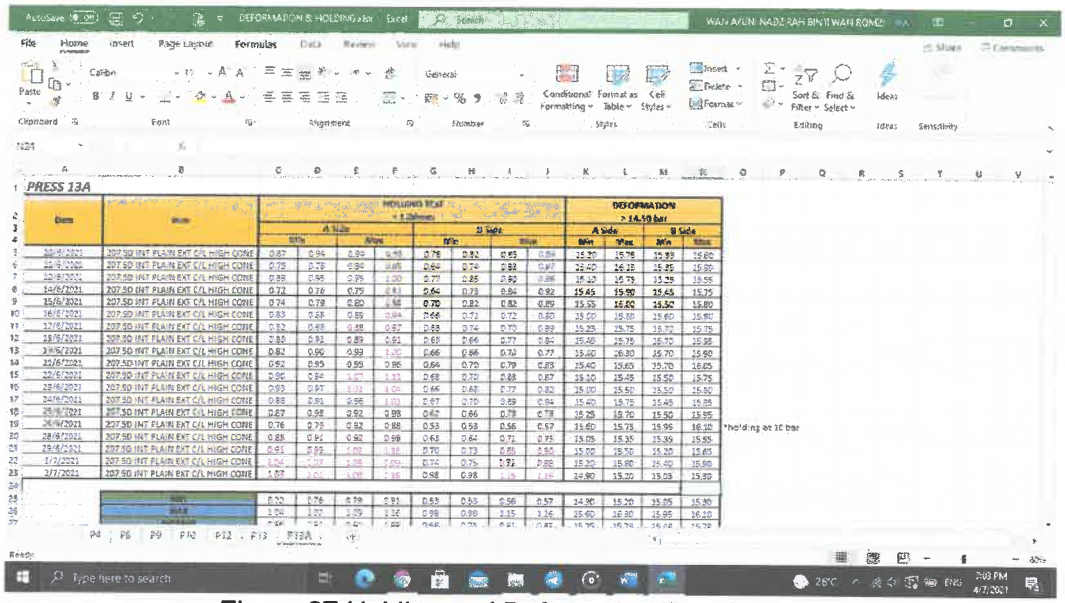
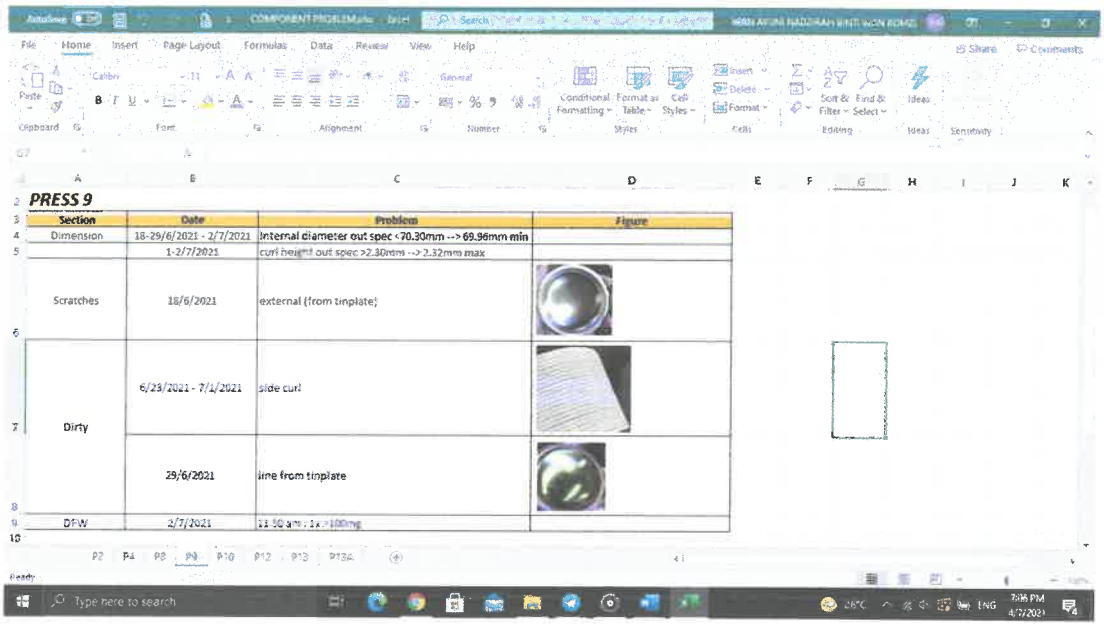


Figure 27 Holding and Deformation Test Summary



PRESS 9

Section	Date	Problem	Figure
Dimension	18-29/6/2021 - 2/7/2021	internal diameter out spec <70.30mm --> 69.96mm min	
	1-2/7/2021	curl height out spec >2.30mm --> 2.32mm max	
Scratches	18/6/2021	external (from tinplate)	
Dirty	6/29/2021 - 7/1/2021	side curl	
	29/6/2021	line from tinplate	
DFW	2/7/2021	11 SG a/m : 1x >100mg	

Figure 28 Component Problem Summary

2.4.3 Can Line Air Tester Test Using 209D Dented Dome (Press 12)

By using dented dome from press 12, I am required to do test at can line which is to seam the dented dome and let the finished can with dented dome go through the air tester. This is to determine the effectiveness of the air tester at the can line. When a dented dome is used for seaming can, it will change the can volume. So, when the finished can enter air tester, the air tester will eject pressure into the can, and it will cause the dome to deform. Usually, deformed dome will cause micro leaking and cause the can internal pressure to change due to the change of volume. The air tester function to detect the leaking area and reject the leaking can out.

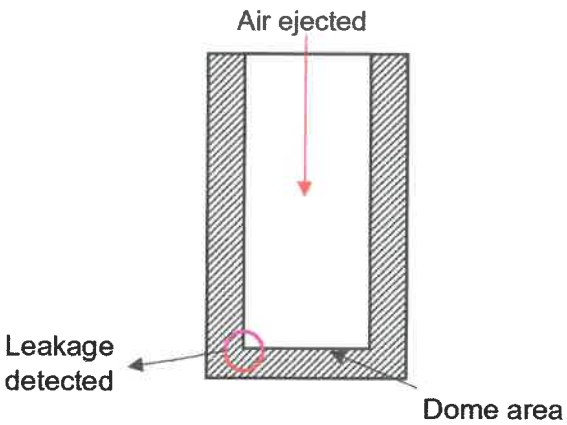


Figure 29 Aerosol can cross sectional area

After air tester test, I must do holding test using the same can samples to determine at what pressure will the dome start deforming. The results will be recorded and discussed in the simple technical report.

209D DENTED DOME TEST

DATE: 25/6/2021 LINE: 11 PREPARED BY: WAN AYUNI NADZIRAH

Objective: To test the effectiveness of can line air tester.

Method: Sealing can by using 209D dented dome.

Results:

Before		After air tester	Air tester rejected	Can holding test	After holding test
			X	Dome deform at 10 bar	
			X	Dome deform at 11 bar	
			X	Dome deform at 11 bar	

			X	Dome deform at 10 bar	
			X	Dome deform at 10 bar	

Discussion:

- All formed can using dented dome are NOT rejected by air tester.
- No dome deformation occurs after air tester.
- Three domes deformed at 10 bar and two domes deformed at 11 bar.

Conclusion:

- Can line 11 air tester are NOT effective because it cannot detect all dented dome and did not reject the can with dented dome.

Figure 30 209D Dented Dome Simple Technical Report

2.4.5 Deformation Test Press 8 Using Old and New Gauge

I was assigned to do a deformation test for 201D dome from Press 8 by using the old and the new deformation gauge. Here, I need to compare the result value using old and new gauge for each 201D dome design. For each gauge and design there would be three type of samples, the standard sample, center damage samples and side damage sample. This test is to study if the new gauge is suitable to be use for Press 8 deformation test.

DEFORMATION 201D DOME USING NEW AND OLD GAUGE

DATE: 17/6/2021 PRESS: 8 PREPARED BY: WAN AYUNI NADZIRAH

Objective: To study either the new gauge is suitable to use for deformation test press 8 for each design.

Test Method:

- Item: 201D Int Plain Ext C/L and 201D Int D/G Ext C/L dome
- Comparison between dome deformation using old gauge and new gauge.
- Using standard samples and damage samples (center & side)

Result:

1) Standard Sample.

Old Gauge					
Int Plain Ext C/L	Before	After	Int D/G Ext C/L	Before	After
14.75			14.00		
14.20			14.05		

Discussion:

- By using old gauge, the reading show that damage sample has higher pressure value than the standard sample for both items.
- But, Int Plain Ext C/L show drop in reading on the last two side damage sample for both old and new gauge.
- New gauge reading is higher than old gauge.
- For old gauge, standard samples for both items, shows that an area on the dome not deformed, but new gauge shows that all dome area were deformed after test.
- Both gauges, all dome area deformed after test for all damage samples for both items.
- New gauge: covered all seam panel area so the area did not deform after the test compared to old gauge.

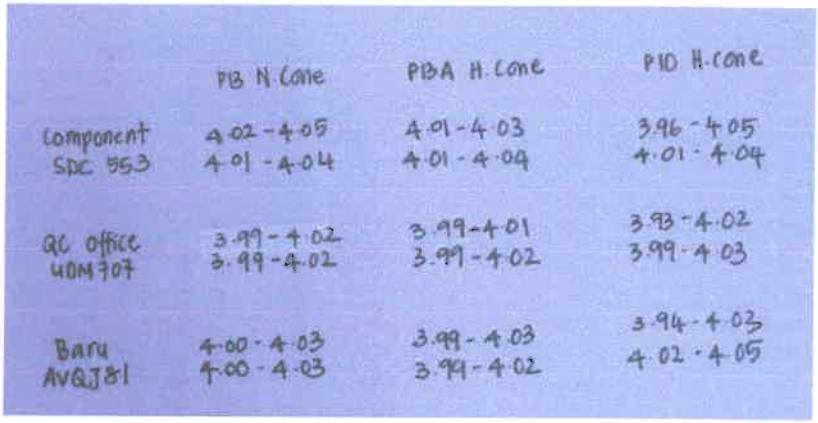
Conclusion:

- New gauge is not suitable to use.
- Because seam panel area using new gauge cannot deform, so all pressure goes to dome area which cause dome area to deform more than using old gauge.
- Result for all standard and damage samples using new gauge show only small difference and similar results compared to the old gauge which show huge difference between standard and damage samples.

Figure 31 Press 8 Deformation test Technical Report

2.4.5 Inspection Measuring & Testing Equipment (IMTE) And Verification.

I was assigned to verify the equipment in different places where at QC, component department and superior. This objective to verify the measurement of equipment. The equipment was contact height gauge and cone height. Each equipment had their code name that must be recorded so that it could be trace if it did not function well. The ways to verify was prepared different samples according to listed by supervisor. Then, the samples were measured by the equipment. The results I was compared between different places by using same samples. The reading of measurement was still acceptable even though there was a certain reading were slightly difference. If the equipment was not function well, I will report to my supervisor then it might change to another equipment. This is quite necessary due to staff was using it to monitor their production to makes sure the dimension is within specification.



	PB N.Cone	PBA H.Cone	PID H.Cone
Component SDC 553	4.02 - 4.05 4.01 - 4.04	4.01 - 4.03 4.01 - 4.04	3.96 - 4.05 4.01 - 4.04
QC office UDM707	3.99 - 4.02 3.99 - 4.02	3.99 - 4.01 3.99 - 4.02	3.93 - 4.02 3.99 - 4.03
Baru AVQJ81	4.00 - 4.03 4.00 - 4.03	3.99 - 4.03 3.99 - 4.02	3.94 - 4.03 4.02 - 4.05

Figure 32 Contact Height Verification

3.0 CONCLUSION

In conclusion, industrial training has a huge positive impact on students both physically and mentally. Overall, this internship was a very useful experience to students. During my internship period, I have gained a variety of invaluable knowledge as well as experiences that I will never forget. I also met a lot of new people and learnt a lot from them. Here, I can integrate class learning theories at UiTM with real practices even though it is difference from the syllabus.

Moreover, during MCO 3.0, industrial has strengthen the SOP which all staffs are compulsory to obey their rules. Due to pandemic, I was experienced working in environment that we were not sure it secure or not. Thus, each person must take a good care of themselves to avoid the virus spread to others. I once experienced to do swab test due to one of the workers there is the confirmed Covid-19 patients.

During practical, especially at line production I could communicate with foreigner staff in easy way even though there was language barrier that cause difficult to explain to them. I was given opportunity to provide train new workers with the helped from my supervisor. During deliver the instructions, I used the easy language to them so that they could understand when I am explaining to them.

Furthermore, I learnt so many things during my period of industrial training especially at line production such as work under pressure, which I need to manage my time properly so that I could follow the production flow. Usually, at class students were given at least one week due to complete the task, but in real working experience, every task must be submitted as early as possible.

This practical training was good to find out the individual strengths and weakness. It helped me to define what skills and knowledge that I need to improve next time. At last, this internship has given me new insights and motivation to pursue a career in industrial section.

4.0 RECOMMENDATION

In my humble opinion, during 17 weeks of my Industrial Training in KJ Can Berhad, this company is suitable and convenient for industrial students to do their internships. They provided place for students to do their report, they also give permission to use office computer, and this company also provided food coupon for students throughout the internship period. Student no need to worry about food in this pandemic time.

Next, I would recommend this company to the students majoring in Industrial Science Technology to undergoes internship in this company because they are more suitable. Industrial Science Technology course have a few subject related to metal packaging production and its quality inspection. From my opinion the concept in metal packaging manufactures is more to pure physics and chemistry, as they apply basic concept in it. But, for I also would recommend it to engineering students, as they can also apply their fundamentals of engineering and relate it with engineering concept while undergoes training in this company.

Lastly, apart from protection glove, earplug, mask I noticed that this company does not provided another personal protective equipment to student. For example, safety shoes and proper protection while handling with heavy metals. So, I would recommend to this company to provide more PPE to intern students. Throughout the industrial training at this company, I was exposed to the heating of tin/alum. While I was handling this heated tin, I only provided with gloves. Other than that, I used my own money to buy safety shoes since I required to work and production line which are including work at the machines and heavy tinplate.

5.0 REFERENCES

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