



Joseph, Adriel Sebastian

Graduate Technology Development Engineer

Manager: Vickneswaren Selvamugam

Evaluated By: Awal Rahman

Year End Review 2023

Organization: Dyson Digital Motor & Sahara
Mechanical Engineering (Vickneswaren Selvamugam)

Location: Malaysia - Advanced Manufacturing

01/01/2023 - 31/12/2023

Overall Summary

Manager Overall Evaluation

Rating: 3- Achieving

Comment: I would like to see Adriel will be a valued member of team by always being someone we can count on. He took many steps to improve processes for the recent DV0.5 Filler Shim preparation. These steps were iterative and resulted from previous design iteration. He did volunteer in cheering up team by acting as Santa during team December birthday celebration. Wish his good attitude will drive him to row in his carrier and life.

Employee Overall Evaluation

Comment: What were your key successes?

- Designed and prototyped mold to cut the braze alloy material to form the shim for DV 0.5
- Create Standard Order Procedure (SOP) to train technician to cut the shim.
- Completed the Dyson Learning Curriculum within 2 months+.
- Designed and prototyped mold to reuse the X597 shim for research work.

What are the areas you would like to develop next year to improve your performance further?

- To be even better in Designing and Prototyping.
- Perform even better in the Back End Team.
- Start developing in Test and Build Team and System Team.
- Continue learning on Material properties.

How have you demonstrated the Dyson values?

- I never stand still. I always look forward to solving new problems in the back-end team and also always look forward to learning new things.
- I never give up. My first 4 prototypes of mold to cut the shim was failure, but I did not give up and tried 5th time and happen be successful.
- I never stop innovating. I tried many different molds design and proposed different type of process flow to cut the shim for efficiency reason.

Goals

Need to output 288 shims for the Demonstrated Vision (DV 0.5) of X830 project.

- As 144 pieces of ceramic is intended to braze by the end of the year, therefore 288 shims were needed to complete the process because 2 shims were required for each ceramic heater.
- When the shim's material arrived (NiCuSil-3), it was delivered in a rolled form therefore had all the liberty to mold the shim in however shape intended as long it delivers it responsibility to braze both the heatsink and the ceramic.
- After some calculation, it was finalized that the size of the shim to be (Length = 26.5mm, Width = 30mm).
- Accordingly, a mold was designed and prototyped to cut the shim from the rolled form. A small calculation was made to estimate that, 433 shims can be cut from the rolled form.
- Then came up with the process to cut the shim, including the materials needed and hands-on skills to output the 288 shims.

- Later created a Standard Order Procedure (SOP) to teach the technician for the shim output.
- Finally, checked the quality of the shims therefore no unbrazed condition to happen.

Due Date: 16/12/2023 **Status:** Completed **Completion Date:** 16/12/2023

Supports:

Manager Evaluation

Comment: Early exposure on Technology Development cycles.
Will enhance understanding on pieces of Development cycles

Employee Evaluation

Comment: • During the process to output the shim, a roller was used as mandatory to flatten the shim. This is because earlier I did a experiment to braze using a flatten shim and unflatten shim, the unflatten shim shows many unbrazed areas and the flatten shim shows a good braze condition.

Additional Manager Evaluation

To complete Induction Curriculum - SEA in Dyson Learning

- There were numbers of online courses, training and 1 face to face training for 3D CAD which conducted for 5 days.
- All these courses need to be complete within 3 months with an intention to understand the Dyson product, Dyson Culture and Technical Skills needed to perform in Dyson.

Due Date: 11/12/2023 **Status:** Completed **Completion Date:** 25/11/2023

Supports:

Manager Evaluation

Comment: Basic knowledge to learn and require actual on job learning.
Good indication to continue learning and grow in Technology Development

Employee Evaluation

Comment: • It was a great learning experience as I got to know about Dyson's product and culture more in depth. Moreover, all the technical skills taught through Dyson learning and external organization has really upgraded my skills.

Additional Manager Evaluation

To find a way to reuse the X597 shim to use for the research work for X830 project.

- There were quite a number of shims manufactured for X597 project is still in the office unused. There need to find a way to use them for X830 project.
- The ceramic for X597 is in a curved shape so is the ceramic, but the X830 ceramic is more like a rectangular. There needed to find a way to cut a X830 shim out of the X597.
- Therefore, a mold has been designed, and 3D printed to cut from the X597 shim.
- After cutting, the quality was checked and also brazed. Giving good results.

Due Date: 02/12/2023 **Status:** Completed **Completion Date:** 02/12/2023

Supports:

Manager Evaluation

Comment: As part of Technology Development engineer, creativity will help in solving day to day challenge

Employee Evaluation

Comment:

Section Summary	
Manager Evaluation	Employee Evaluation
Comment: Good starting for Adriel in managing Goals Take it as learning path in developing knowledge and skills	Comment: It was a great 3 months working, learning and researching in Dyson. Hope to continue stronger in coming years.

Feedback

Section Summary	
Manager Evaluation	Employee Evaluation
Comment: Put effort on area that valuable in Sahara Technology, find something that you want to shine. Set vision where you will be in next 3, 5 & 10 years. Learn how to realize your vision.	Comment: All the feedback from my back-end team was insightful and helps me to perform better in the future.