

INTERNSHIP REPORT



Molding private limited, Vallam, Sriperumbudur

Training period 14/09/2023 - 04/10/2023

Submitted to partial fulfilment of requirements for the award
of degree of

MASTER OF SCIENCE IN CHEMISTRY

SUBMITTED BY:

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BATCH 2022-2024

DEPARTMENT OF CHEMISTRY



SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

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INTRODUCTION

In August 2011, M/s Sekisui DLJM Molding Pvt. Ltd. was established as a joint venture between Sekisui Chemical Ltd., Japan, and M/s Dipty Lal Judge Mal Pvt. Ltd., India.

Utilizing state-of-the-art engineering polymers such as PA 46, PA 66, PBT, ASA, PC, ABS, etc., the company designs, develops, manufactures, injects, paints, chrome plates, performs special decoration, and manufactures sub assembled systems.

Car Lighting Parts, Steering Garnishes, Air Bag Cover, Door Trims, Air Vent Module Assembly, In-Mold Decoration Technology, Steam Injection, Metal to Plastic Converted Precision Engine Components like Air Intake Manifold, Cylinder Head Cover, Electroplated Parts like Emblems, Tailgate Garnishes, Door Handles, Steering Bezels, Grill Surrounds, Head Lamp & Fog Lamp Garnish are among the product categories. Air Filter Body in the HVM category. World-class manufacturing is available at Sekisui DLJM. The company is IATF 16949, ISO 14001, OHSAS Certified.

PURPOSE OF INTERNSHIP

An internship is a professional learning experience that offers meaningful, practical work related to a student's field of study or career interest. An internship gives a student the opportunity for career exploration and development, and to learn new skills. It offers the employer the opportunity to bring new ideas and energy into the workplace, develop talent and potentially build a pipeline for future full-time employees.

The internship providing insight into the structure and function of each component; vehicle integration; and related terms and working. The students will gain all automotive programs combine work in the classroom, lab activities, and practical on -the job experience in industry approved work sites.



MOLDING

An exact replica of a material used in its preparation, a mold is a structure manufactured from that substance. Creating materials with molds is called molding. From a practical standpoint, a mold is essentially a hollow hole that is filled with hot liquid metal, plastic, glass, or ceramic, which solidifies into the shape of the hole as it cools. Mold makers are manufacturers that create molds. When removing the hardened or set substance from the mold, a release agent is usually employed to facilitate the process. In general, molded plastics are used to make cases, furniture, household products, and structural elements.

PLATING

Plating is a manufacturing process in which a thin layer of metal coats a substrate. As long as the treating duration is brief, plating techniques using mild acid at 80°C or lower won't significantly alter the characteristics of CFRP. Typical 130°C curing epoxy resins can be utilised with plated roller shells. Teflon, urethane, or silicone-coated rollers require heat-resistant resin with a high glass transition temperature (T_g) because the heat distortion temperature (HDT) of regular epoxy resin will be exceeded during treatment.

QUALITY CONTROL MEASURES

ISO-Certified Processes

Our manufacturing processes adhere to strict ISO standards, ensuring consistent quality and reliability.

Advanced Inspection Techniques

We utilize cutting-edge inspection techniques to identify and rectify any anomalies in the production process.

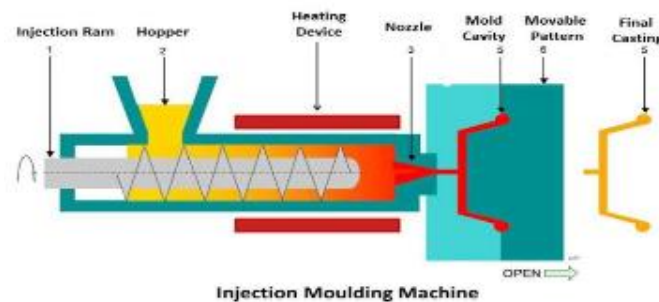
Quality Assurance Team

Our dedicated quality assurance team meticulously examines each product to guarantee adherence to the highest quality standards.

TYPES OF PLASTIC MOLDING

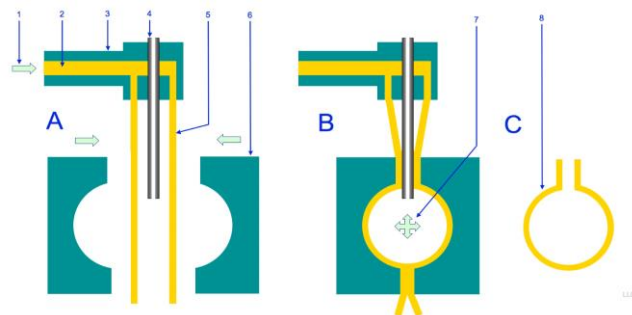
INJECTION MOLDING:

Injection molding is a precise and efficient process for creating complex plastic parts by injecting molten material into a mold under high pressure.



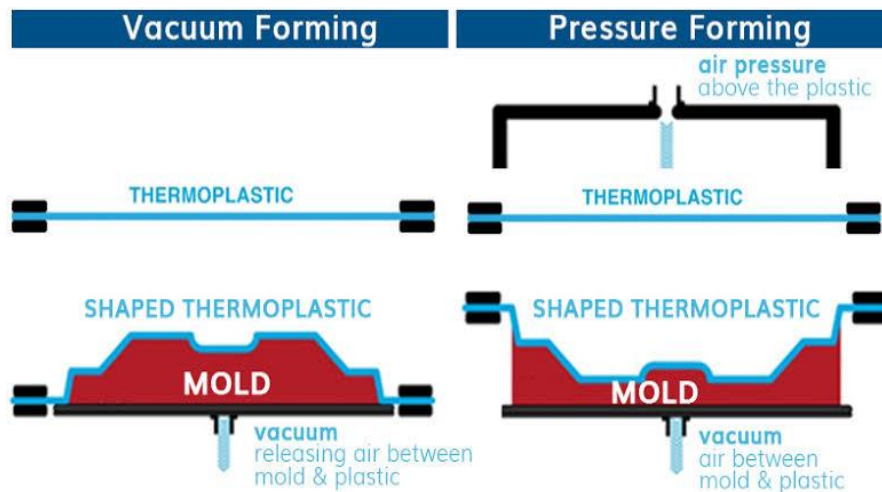
BLOW MOLDING:

Blow molding is used to manufacture hollow and seamless objects, such as bottles, using air pressure to expand the material into the desired shape.



THERMOFORMING:

Thermoforming involves heating a plastic sheet until it is pliable, then molding it into the desired shape using a mold and vacuum or pressure.



INJECTION MOLDING PROCESS



Injection Molding Process

1

Clamping

The mold is held closed under pressure during the injection and cooling cycles.

2

Injection

Molten plastic is injected into the mold cavity, then cooled and solidified.

3

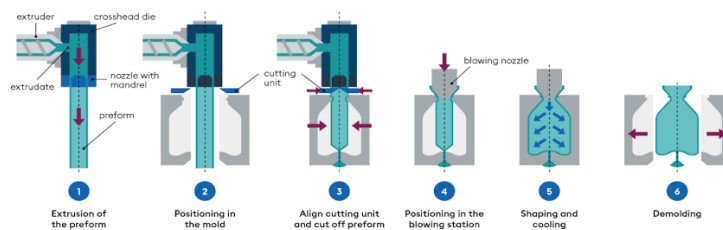
Ejection

The solidified part is ejected from the mold using pins.

BLOW MOLDING PROCESS

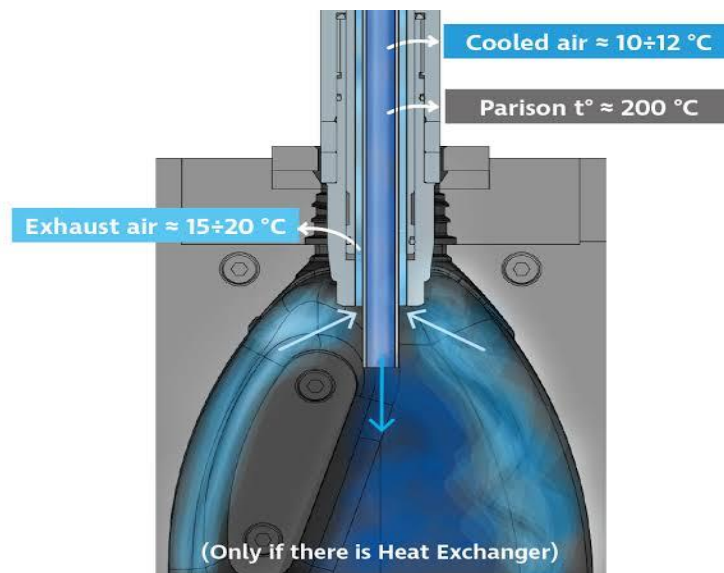
Extrusion:

A tube of molten plastic is extruded and clamped into the mold.



Blow and Cooling:

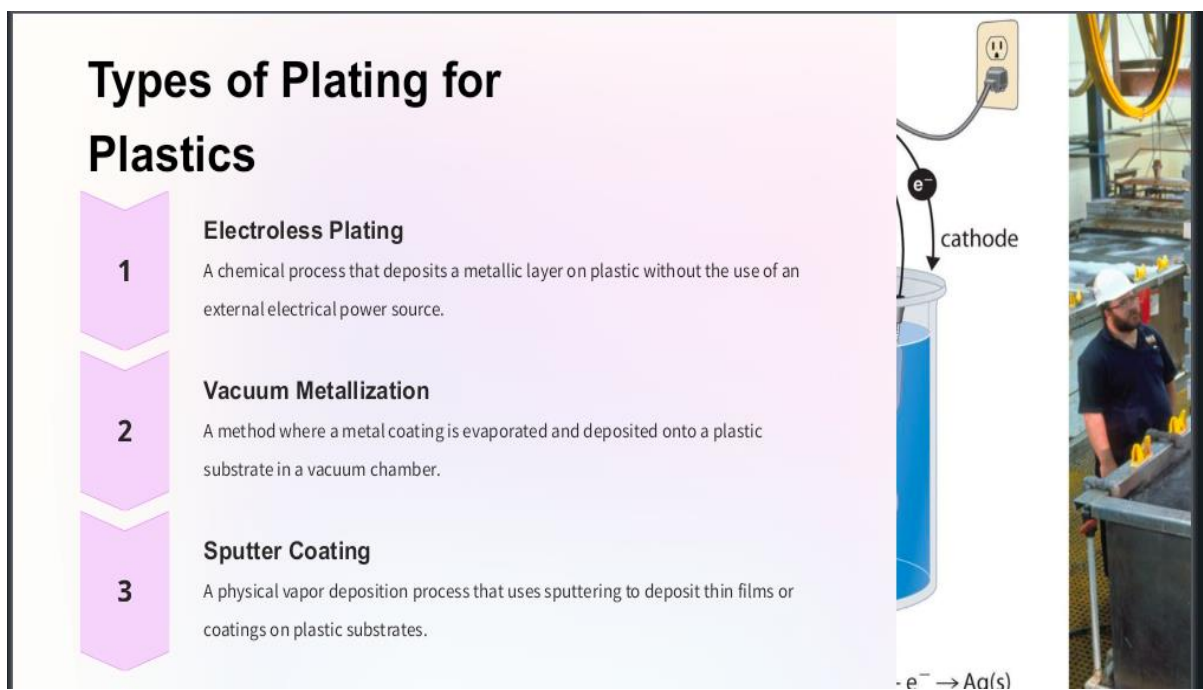
Compressed air is blown inside to expand the plastic into the shape of the mold, then it's cooled and solidified.



THERMOFORMING PROCESS



TYPES OF PLATING



BENEFITS OF PLATING

Enhanced Aesthetics

Plating provides a stunning metallic finish, enhancing the appearance of plastic parts.

Improved Durability

Plating adds a protective layer, increasing the resilience and lifespan of plastic components.

Corrosion Resistance

Metal plating offer resistance to corrosion, crucial for applications in challenging environments.

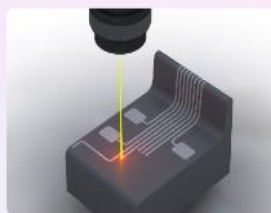
APPLICATIONS

Applications of Molded and Plated Plastics



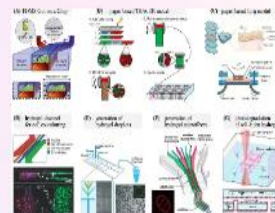
Automotive

Used for interior trims, dashboards, and exterior components due to their lightweight and design flexibility.



Electronics

Plated plastics are utilized in electronic casings, connectors, and housings for their conductivity and aesthetics.



Medical Devices

Molded plastics are integral in medical device manufacturing, offering sterile and cost-effective solutions.

CONCLUSION

On the whole, this internship was a useful experience. I have gained new knowledge, skills and met many new people. I achieved several of my learning goals and got insight into professional practices currently advocated in the industry. Related to our study I learned more about the manufacturing of automotive parts. Furthermore, I have experienced that it is of importance that education is objective and we have to be aware of the industrial aspect of the topics I study. This internship program was not one sided, but it was a way of sharing knowledge, ideas and opinions. The internship was also good to find out what our strengths and weakness are. This helped us to define what skills and knowledge we have to improve in the coming time. I can confidently assert that the knowledge gained through this internship is sufficient to contribute towards our future endeavours. At last, this internship has given us new insights and motivation to pursue a career in core automotive industry.

SEKISUI DLJM



IATF nzw,

04 October 2023

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr. SHARON K P (Reg.N0. 42910021) S/O, Mr. Kesavan R, Pursuing MSC Chemistry (Final Year) from Satyabhama institute of science and technology Sholinganallur, Chennai 600 1 19 has undergone Block fieldwork programme at Sekisui DLJM Moulding Private Limited, Vallam Vadagal. The duration of the Internship is from 14th

September 2023 to 04th October 2023.

We wish him all the successes for his future endeavours.



For Sekisui DLJM Moulding Private Limited.,

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