



Department of Mechanical Engineering

Industrial Visit Report

Visit to Pact Closure Systems India Pvt Ltd by New Horizon College of Engineering

Date of Visit: 14/11/2024

Location: Pact Closure Systems India Pvt Ltd, Saukya Road, Kacherkanahalli, Hosakote Taluk, Bengaluru, Karnataka, 560067

Department: Mechanical Engineering

Accompanied by: Prof. Hanamant Yaragudri, Dr . Nagabhushana N

Duration: 11:00 AM - 12:30 PM

1. Objective of the Visit

The primary goal of the industrial visit was to introduce students to real- world applications of engineering principles in the manufacturing and packaging industry. The visit aimed to provide insights into the production and quality control processes involved in manufacturing closures and caps, as well as to highlight innovations in sustainable packaging practices.

2. Company Overview

Pact Closure Systems India Pvt Ltd is a division of the Australian-based Pact Group, known for its expertise in producing sustainable and innovative packaging solutions. The company focuses on manufacturing high-quality closures and seals for products in the food, beverage, personal care, and pharmaceutical sectors. Pact emphasizes sustainability through the use of recyclable materials, energy-efficient production processes, and eco-friendly designs.

3. Key Areas of Focus During the Visit

a. Introduction to Pact Closure Systems

The visit began with a brief introduction to the company, its history, and its core business operations in India. The company representatives highlighted Pact's focus on producing environmentally sustainable packaging solutions that meet stringent safety and quality standards.

b. Overview of Manufacturing Process

Students were given a guided tour of the manufacturing floor, where they observed the following key stages in the production of closures:

- **Raw Material Handling:** The types of raw materials used, especially recyclable plastics and sustainable materials, were introduced, along with their sourcing and preparation processes.
- **Injection Molding:** A demonstration of injection molding, a primary process for forming closures, was provided. Students saw the high-precision machinery and molds used to shape plastic into various caps and closures.
- **Assembly and Quality Control:** The tour included an overview of automated assembly lines, where closures are tested for durability, sealing ability, and tamper-evidence. Quality control measures, including leak tests, pressure tests, and visual inspections, were demonstrated to ensure product reliability and compliance with industry standards.

c. Emphasis on Sustainability

Pact representatives explained the company's commitment to sustainable packaging solutions, focusing on recyclable materials, minimal waste production, and energy-efficient technologies. The company's practices align with a circular economy model, and students learned about the company's various initiatives to reduce its environmental impact.

d. Research and Development

The students visited the R&D department, where they gained insights into how Pact Closure Systems innovates new designs and tests material compatibility with various product types. R&D engineers shared how they work on tamper-evident and child-resistant closures that meet regulatory standards.

4. Key Learnings

The industrial visit provided students with valuable insights into:

1. **Real-world Application of Engineering Concepts:** Students observed how principles from their courses, such as fluid mechanics, material science, and thermodynamics, apply to manufacturing.
2. **Sustainability in Manufacturing:** The emphasis on using recyclable materials and reducing environmental impact gave students a fresh perspective on eco-friendly engineering practices.
3. **Importance of Quality Control:** They learned about the rigorous quality control processes required to ensure product safety and reliability.
4. **Innovation in Packaging:** Students gained a better understanding of how product design and innovation contribute to the functional and aesthetic appeal of packaging solutions.

5. Student Feedback

Students expressed their appreciation for the visit, noting that it provided them with a deeper understanding of industrial practices and enhanced their appreciation of the engineering challenges in the manufacturing sector. They particularly valued the insights into sustainable practices and innovation within the packaging industry.

6. Conclusion

The industrial visit to Pact Closure Systems India Pvt Ltd was an enriching experience for the students, bridging the gap between classroom learning and industrial application. It provided them with practical exposure to modern manufacturing processes, quality assurance, and sustainability in engineering. Such visits are instrumental in shaping students' professional outlook and preparing them for future careers in engineering and manufacturing.



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