Dr. Sudhir Chandra Sur Institute of Technology and Sports Complex

Report on Industry Visit at Texmaco Rail & Engineering Ltd

Topic: Industry Visit

Organized by: Department of Automobile Engineering, Dr. Sudhir Chandra Sur Institute of Technology and Sports Complex

Industry: Texmaco Rail & Engineering Limited, Kolkata

Date: 4th November 2025

Time: 11:00 am onwards

Venue: Texmaco Rail & Engineering Ltd, Belgharia, Kolkata, West Bengal

No. of Participation: 10

Introduction:

An industrial visit was organized to Texmaco Rail & Engineering Ltd, one of India's leading companies in the field of heavy engineering and rail infrastructure. The purpose of the visit was to provide students with practical exposure to large-scale manufacturing processes and to bridge the gap between theoretical knowledge and industrial practices.

Background:

As part of our academic curriculum and to bridge the gap between theoretical knowledge and practical exposure, an industrial visit was organized to Texmaco Rail & Engineering Ltd., one of India's leading engineering and infrastructure companies. The purpose of the visit was to provide students with first-hand insight into the functioning, production processes, and technological applications involved in modern railway and heavy engineering manufacturing. Texmaco Rail & Engineering Ltd., headquartered in Beliaghata, Kolkata, is a key player in the railway manufacturing sector, engaged in the production of freight wagons, coaches, steel castings, and hydro-mechanical equipment. The company has a long legacy of contributing to India's industrial and railway development, known for its commitment to quality, innovation, and sustainable engineering practices.

The visit aimed to help students understand the industrial workflow, including design, fabrication, quality control, and assembly operations, while observing the practical implementation of engineering concepts. It also provided exposure to the company's safety standards, quality management systems, and environmental sustainability initiatives. Through this industrial visit, students gained valuable knowledge about the integration of mechanical, electrical, and production engineering principles in real-world applications. It served as an important learning experience, enhancing their understanding of industrial operations, organizational structure, and the role of advanced technology in manufacturing.

Objective:

The main objectives of this industrial visit were:

1. To understand the manufacturing and assembly process of railway wagons, coaches, and other engineering components.
2. To observe the working environment, safety standards, and quality control measures in a major

engineering firm.

3. To interact with engineers and technicians to gain insights into industrial practices and challenges.

Overview of the Visit:

Upon arrival, the students were welcomed by the company's HR and technical team. A brief orientation session was conducted, highlighting the company's history, product portfolio, and safety procedures.

The group was then taken through various departments and workshops, including:

- **Design and Fabrication Unit:** Demonstrations on how wagon frames and coach bodies are designed and assembled.
- **Casting and Welding Section:** Observation of advanced welding techniques and metallurgical processes.
- **Quality Assurance and Testing Laboratory:** Exposure to mechanical testing methods ensuring durability and reliability of rail components.
- **Maintenance and Inspection Area:** Learning about preventive maintenance and inspection procedures for rail equipment.

Learning Outcomes:

The visit to Bengal Energy Limited was a highly informative experience. Students gained:

- Firsthand understanding of large-scale industrial operations and production planning.
- The importance of safety, precision, and teamwork in heavy engineering environments.
- The application of modern technologies such as CNC machines, robotics, and automated inspection systems in the manufacturing process.
- The knowledge on sustainable practices like recycling of metal scraps and efficient resource management.

Conclusion:

The industrial visit to Texmaco Rail & Engineering Ltd was a highly enriching experience. It provided valuable practical insights into mechanical and production engineering concepts and exposed students to real-world industrial challenges. The visit enhanced our technical knowledge, professional awareness, and appreciation for India's growing railway infrastructure sector.

Industry Visit conducted by the department of Automobile Engineering at Texmaco Rail & Engineering Ltd on 4th November 2025