Name of The Program	**Industry Visit (MAHLE ANAND Thermal Systems, Pune)**
Date	31/10/2025, 5/11/2025 and 6/11/2025
Mode	Offline
No. of students participated	10
No. of Faculty participated	01
Report of the event	As part of the ongoing collaboration (MoU) between Vishwakarma Institute of Technology (VIT), Pune, and **MAHLE ANAND Thermal Systems Pvt. Ltd., Chakan**, a three-day industrial visit was organized for a group of 10 students. The visit aimed to provide students with **industry exposure**, familiarize them with **real-time industrial processes**, and identify **areas where AI, IoT, and automation can be integrated** to enhance operational efficiency. **Day 1: Orientation & Plant Familiarization** • Welcome address and briefing about the company's history, vision, and manufacturing capabilities. • Safety instructions and guidelines for plant movement. • Guided tour of the production departments, including: o Heat Exchanger Assembly Unit o Brazing Furnace Section o Quality Inspection Lab o Material Handling and Storage Areas • Interaction with plant supervisors who explained component manufacturing, critical tolerances, and workflow. **Day 2: Technical Exposure & Problem Understanding** • Demonstration of various thermal system designs and testing procedures. • Exposure to automation equipment, sensors, and existing digital systems used in production. • Discussions with engineers on: o Operational bottlenecks o Quality control challenges o Areas requiring predictive maintenance o Manual processes suitable for automation • Students asked questions and took notes on possible AI applications such as defect detection, anomaly identification, and system optimization. **Day 3: Interaction, Insights & Opportunity Identification**

	• Group meeting with department heads and R&D team.
	• Identification of **problem statements** suitable for student projects, internships, and research:
	  ○ Opportunities for computer vision-based inspection
	  ○ Worker safety monitoring using IoT sensors
	  ○ Inventory monitoring and optimization
	  ○ Data-based predictive maintenance models
	  ○ Automation of repetitive manual tasks
	• Discussion on how VIT students and faculty can contribute through mini-projects, major projects, and consultancy-based solutions.
	
	Key Learnings for Students
	• Real-time understanding of industrial manufacturing workflows.
	• Awareness of quality assurance techniques and production standards.
	• Exposure to practical challenges and industry expectations.
	• Enhanced readiness for internships, research, and employment in the automotive sector.
	• Understanding how AI, IoT, Cloud, and Data Science can support the digital transformation of a traditional manufacturing setup.
	
	Outcome of the Visit
	1. Strengthened collaboration between VIT and MAHLE ANAND Thermal Systems.
	2. Identification of specific processes that can be automated using AI/IoT.
	3. Agreement to work jointly on future research problems and student internships.
	4. Students gained hands-on insights and improved industry readiness.
	5. Opportunities created for project-based learning and innovation under the MoU.

Objectives of the Program	1. To bridge the gap between academic learning and industrial practices. 2. To understand the workflow, manufacturing processes, and thermal system design operations at MAHLE ANAND. 3. To interact with engineers, supervisors, and management teams to understand practical challenges. 4. To explore potential automation and AI-based solutions under the VIT–MAHLE ANAND collaboration. 5. To prepare students for future industry-oriented projects, internships, and research engagements.
Benefits to students and Faculty	Benefits to Students: 1 Industry **Exposure:** Students gained first-hand understanding of real-time industrial processes, equipment, quality standards, and manufacturing workflows at MAHLE ANAND.

2 Application-**Based Learning:**
Classroom concepts related to AI, Data Science, IoT, automation, thermal engineering, and quality control were seen in practical industrial settings.

3 Problem **Identification Skills:**
Students interacted with engineers and identified real industry problems that can be addressed through academic projects.

4 Career **Readiness:**
Exposure to industrial expectations improved students' preparedness for internships, placements, and industry projects.

5 Opportunity **for Internships & Projects:**
Under the MoU, students can work on live industry assignments, final-year projects, and internships with MAHLE ANAND.

6 Skill **Development:**
Students enhanced skills in observation, communication, technical analysis, safety understanding, and documentation.

7 Motivation **and Confidence:**
Visiting a reputed automotive thermal systems facility increased confidence and motivated students toward innovation and industry-focused learning.

Benefits to Faculty:

1. **Enhanced Industry-Academia Collaboration:**
Faculty strengthened ties with MAHLE ANAND, enabling future joint initiatives, projects, and research opportunities.

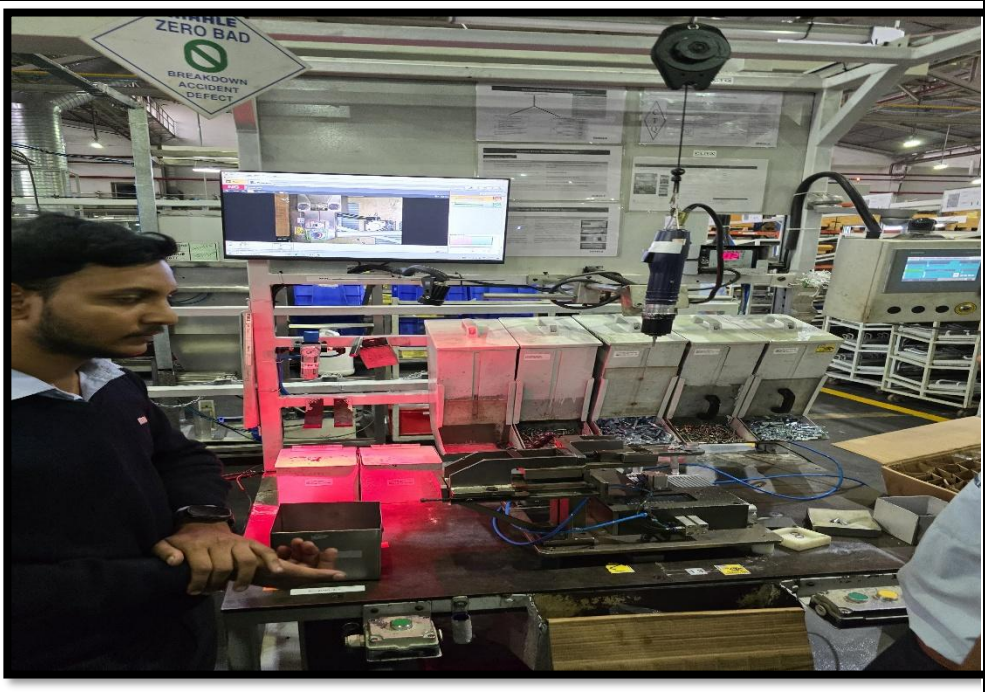
2. **Understanding of Current Industry Challenges:**
Direct interaction with industry engineers helped faculty understand the latest industry requirements and challenges, enabling more relevant teaching.

3 **Identification of Research Problems:**
Multiple real-world problems suitable for research, consultancy, and sponsored projects were identified.

4 **Opportunities for Collaborative Research:**
Faculty can propose AI/ML, IoT, automation, and predictive analytics solutions to the company under the MoU.

5 **Professional Development:**
Faculty gained exposure to modern manufacturing systems, quality assurance workflows, and industry automation practices.

6 **Improved Mentoring Capability:**
With better understanding of industry expectations, faculty can guide

	students more effectively for projects, competitions, and innovation activities.
Photograph(S)	 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