




# MECHATROMA

## Department of Mechanical Engineering



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## Newsletter Highlights

Feild Visit  
Industrial Visit  
Alumni Connect

**April-June 2025**

VOLUME XX, ISSUE II  
**NEWSLETTER**

# From Chief Editor's Desk



**Dr. Nitin Kumar Waghmare**  
**HOD, Mechanical Engineering**

**Dear Readers,**

I am delighted to welcome you to the latest edition of our quarterly newsletter. This publication is a testament to our collective achievements, ongoing projects, and the vibrant spirit that drives our department forward. We strive to bring you the most relevant and inspiring stories each quarter, highlighting our team's incredible work and dedication.

During the last quarter (April-June 2025), the department has made significant contributions in various domains such as teaching and research, product development, sponsored projects, outreach activities and students' achievements. I am sure this issue will give a glimpse of the above.

Great things are often the culmination of a series of small, seemingly insignificant actions brought together with purpose and dedication. It is the accumulation of these small efforts that ultimately leads to extraordinary achievements. Each tiny step forward, each decision made with care, and each challenge overcome contributes to a larger tapestry of success.

The power of small actions lies not in their individual magnitude but in their collective impact. Like the threads of a rope, each strand may be weak on its own, but when woven together, they form an unbreakable bond. Similarly, the small things we do each day—whether it's learning a new skill, helping someone in need, or pushing through a difficult task—may seem minor in isolation. However, when combined over time, they become the foundation upon which great things are built.

Embracing this mind set allows us to approach challenges with a sense of hope and resilience. It reminds us that every small victory is a step closer to achieving our dreams. So, let us celebrate the small wins, for they are the building blocks of greatness. By focusing on the journey, one small step at a time, we can create something truly remarkable.

Thank you and best wishes

**Dr. Nitin Kumar Waghmare**  
**Chief Editor & HOD**  
**Dept. of Mechanical Engineering**

**“Great things done  
by a series of small things  
brought together”**

**~ Gogh**

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# FIELD VISITS

## LLYORD TECHNOLOGY AND BUSINESS INCUBATOR FOUNDATION

The Lloyd Technology and Business Incubator Foundation is an initiative by the Lloyd Group of Institutions to promote innovation, entrepreneurship, and the development of a robust startup ecosystem. The foundation provides a platform for aspiring entrepreneurs and early-stage startups by offering mentorship, infrastructure support, access to funding networks, and guidance in various aspects of business development. Their focus spans across diverse sectors, including technology, engineering, and other innovative fields.

**The primary objective of this visit were to:**

- Expose students to the practical aspects of technology development and business incubation.
- Provide insights into the challenges and opportunities faced by startups and entrepreneurs.
- Understand the role of incubation centers in fostering innovation and economic growth.
- Observe the application of mechanical engineering principles in various incubated projects and technologies.
- Encourage an entrepreneurial mind set among the students.



Interaction of Llyord Technology and Business Incubator Foundation to the students of 2<sup>nd</sup> Year Mechanical Engineering



# INDUSTRIAL VISITS

## TRUE STAR AIR SYSTEM PVT. LTD. NOIDA

An industrial visit was organized for the 2nd-year students of the Mechanical Engineering Department to Truestar Air System Pvt. Ltd., Noida. The visit aimed to bridge the gap between theoretical knowledge and practical industry experience, giving students a firsthand look at the operations of a modern HVAC manufacturing and ducting solutions company.

Truestar Air System Pvt. Ltd. was founded in 2021 in Gujarat, with a clear vision to deliver high-quality HVAC products and ducting systems. The company operates with an experienced team dedicated to ensuring customer satisfaction and timely delivery. Although relatively new, True star has deep roots in the field of factory fabricated ducting, and it has steadily expanded its presence, including its modern facility in Noida.

### Their core offerings include:

- Factory fabricated ducting systems
- HVAC components and solutions
- Customized air systems based on project requirements

With a commitment to quality and innovation, the company continues to grow and expand its reach within India's industrial and commercial HVAC market.

### The key objectives of the visit were:

- To understand the industrial applications of HVAC and ducting systems
- To observe the fabrication and assembly processes in real-time
- To interact with industry professionals and understand quality control practices
- To gain exposure to machinery and systems related to air handling and distribution



Students and Faculty members at Truestar Air systems Pvt. Ltd.

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Mr. Rahul Singh (Operational Head) Explaining about the process flow of the company

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# INDUSTRIAL VISITS

## NEWHOLLAND TRACTOR PLANT

New Holland Fiat (India) Pvt. Ltd., a subsidiary of CNH Industrial, is a globally recognized name in the agricultural equipment industry. The company set up its plant in Greater Noida in 1998, and since then, it has been manufacturing state-of-the-art tractors and agricultural implements tailored for Indian and global markets.

### Key highlights of the company:

- ISO 9001:2015 certified plant
- Production capacity exceeding 100,000 tractors per annum
- Exporting to more than 100 countries
- Equipped with robotic welding, advanced painting systems, and precision assembly lines
- Focus on sustainable and innovative agriculture solutions

### Objective of the Visit

#### The main objectives of the industrial visit were:

- To gain insights into modern manufacturing and assembly processes of tractors
- To observe automation, robotics, and lean manufacturing practices in action
- To understand the role of mechanical engineering in agricultural machinery design
- To enhance industry readiness among students through practical exposure

#### During the visit, students were guided through various departments, including:

- Design and Planning Section: where CAD tools are used to design duct layouts.
- Fabrication Shop Floor: showcasing sheet metal cutting, bending, and assembly processes.
- Quality Assurance: highlighting the importance of tolerance checks and leakage tests in duct systems.
- Packaging and Dispatch Unit: ensuring proper handling and timely delivery.
- Some of the valuable insights gained include:
  - Importance of material selection inducting
  - Automation in sheet metal fabrication
  - Safety standards in industrial manufacturing
  - Real-time production line management



## Interaction with Experts

Students engaged in an interactive session with senior engineers and HR representatives who provided valuable insights on:

- Career opportunities in agricultural equipment manufacturing
- The integration of Industry 4.0 in tractor production
- Mechanical design, material selection, and sustainability in product development

### Feedback:

- Himanshu Pandey: The visit was very insightful and well-organized. It provided a practical understanding of the manufacturing process.
- Mayank Kumar: The interactive session with the management team was particularly valuable. It clarified many concepts we learned in class.
- Md Shibli: The factory tour was fascinating. Seeing the assembly line in action helped us visualize theoretical knowledge. However, more detailed explanations during the tour would have been beneficial.
- Tridev Kumar: The Q&A session was excellent. The professionals were open to questions and shared their career experiences, which was motivating.
- Harsh Choudhary: Providing written materials about the company and its products was very helpful in understanding the company.

Photos of the Session with Labeling: The banner and screen shots are attached here with







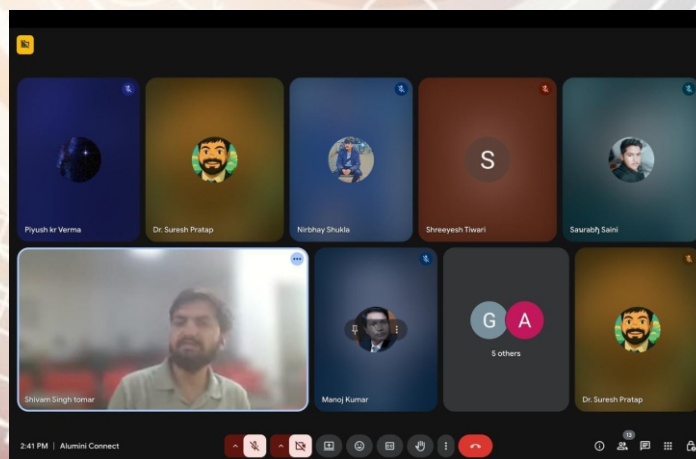
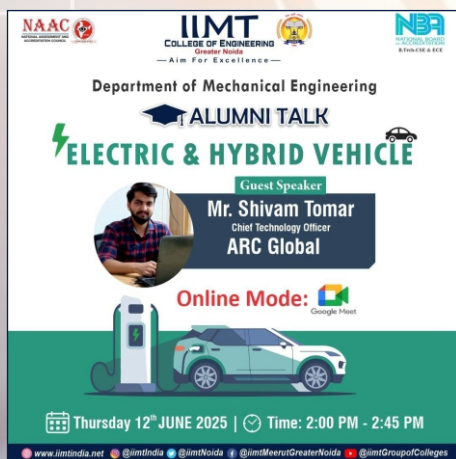
Students and Faculty Members at NewHolland Tractor Plant



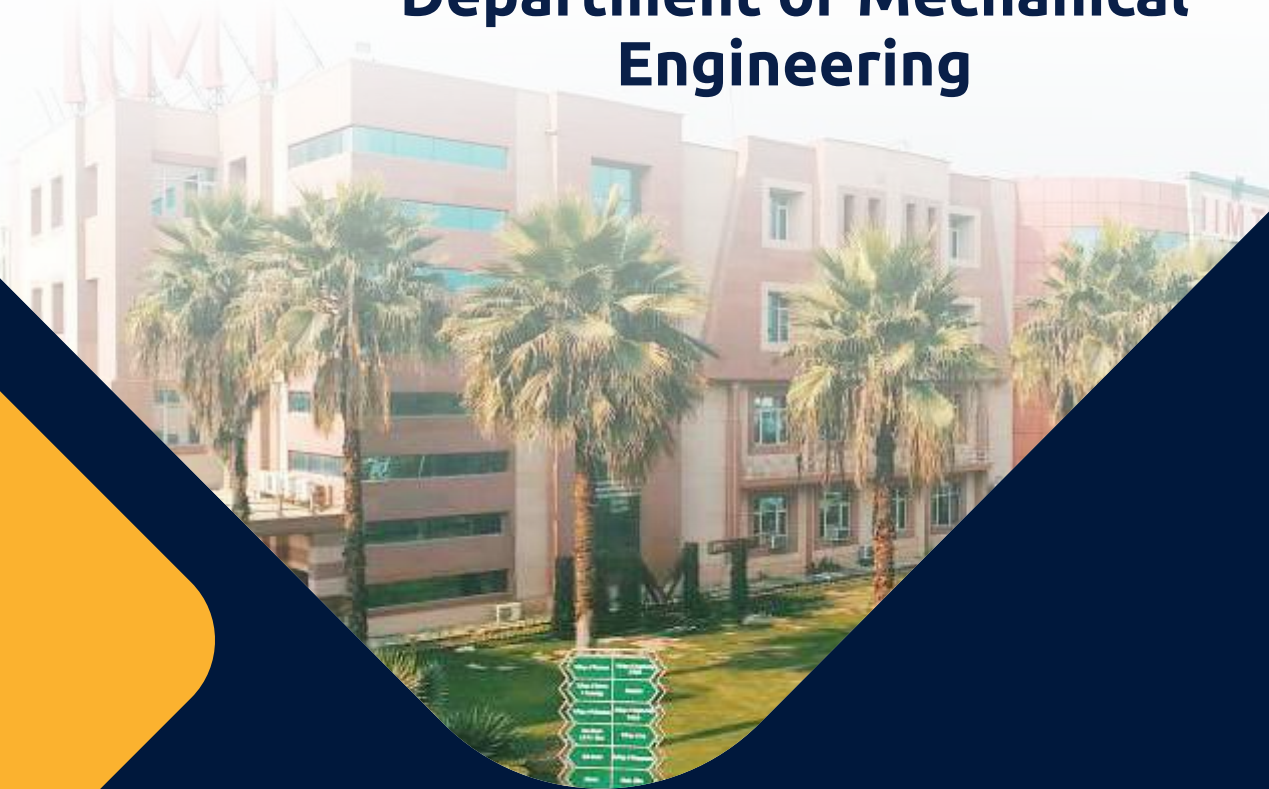
# ALUMNI CONNECT

It will be a brainstorming session which will help students to connect and interact the alumni. Alumni connect will help students to get motivation and guidance from their alumni. This program will also give opportunity to shape carrier, job opportunities, startups and the setup business.

The guest speakers and Alumni Mr. Shivam Kumar Tomar, is a CTO at ARC Global. Explains about Electric vehicles (EVs) and hybrid vehicles are transforming the automotive industry by offering sustainable alternatives to traditional gasoline-powered cars. EVs run entirely on electricity stored in batteries, producing zero tailpipe emissions, which significantly reduces air pollution and greenhouse gas emissions. Hybrid vehicles combine an internal combustion engine with an electric motor, improving fuel efficiency and lowering emissions compared to conventional vehicles. Advances in battery technology have extended EV range, while fast- charging infrastructure continues to expand, addressing range anxiety. Hybrids, like plug-in hybrids, offer flexibility with electric-only modes for short trips and gasoline for longer journeys. Government incentives, rising fuel costs, and growing environmental awareness are driving adoption. However, challenges like high upfront costs and battery production sustainability remain. As technology evolves, electric and hybrid vehicles are poised to dominate, paving the way for a cleaner, greener future in transportation.



## Department of Mechanical Engineering



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