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A REPORT ON ONE DAY VISIT TO INDIA MANUFACTURING SHOW AT BIEC, BENGALURU

Place of Visit: India Manufacturing Show at BIEC, Bengaluru

Date of Visit: 7th November, 2025

Introduction:

The Department of Mechanical Engineering, KS Institute of Technology, Bengaluru organized a visit for I and III semester students to the **India Manufacturing Show (IMS) 2025**, held at **Bangalore International Exhibition Centre (BIEC), Bengaluru** on **7th November 2025.** The India Manufacturing Show is one of India's largest B2B exhibitions that showcases cutting-edge manufacturing technologies, automation solutions, machine tools, robotics, and industry 4.0 innovations.

REPORT OF THE VISIT

A total of 48 students, accompanied by three faculty members, participated in the visit with great enthusiasm and curiosity. The schedule of the visit was executed as planned.

The students and faculty assembled at the college campus and departed at 9:15 AM in the college transportation provided for the visit. The group reached the BIEC venue at 10:15 AM. Upon arrival, the students entered the exhibition halls and were briefed about the scale of the event and the industry sectors displayed.

The students visited Hall 1, Hall 2, and Hall 3, which collectively exhibited a wide range of technologies, including:

- CNC and VMC machine tools
- Industrial automation and robotics
- 3D printing and additive manufacturing
- Smart manufacturing solutions

- Hydraulic and pneumatic systems
- Start-ups showcasing engineering innovations
- Sustainable and energy-efficient manufacturing solutions

Students interacted with industry professionals, product engineers, and stall representatives to understand machine capabilities, real-time applications, automation trends, and employment opportunities in the mechanical domain. Many students witnessed live machine demonstrations which helped them relate theoretical concepts to industrial applications. Faculty members guided the students in understanding manufacturing advancements and current industry requirements.

The visit enabled students to gain knowledge on Industry 4.0, automation trends, robotics integration, precision manufacturing, and digitalized production environments. The exposure also inspired many students to explore emerging areas such as additive manufacturing and industrial automation.

The team departed from the venue at 1:30 PM, concluding the visit successfully. Students returned with enhanced technical awareness, industry exposure, and a clearer understanding of future engineering directions.

Participant details:

No. of participants in total: **51**

Students: **48**

Faculty – Dr. Nirmala L, Prof. Saviraj A S & Mr. V Venkataramana (Turner)

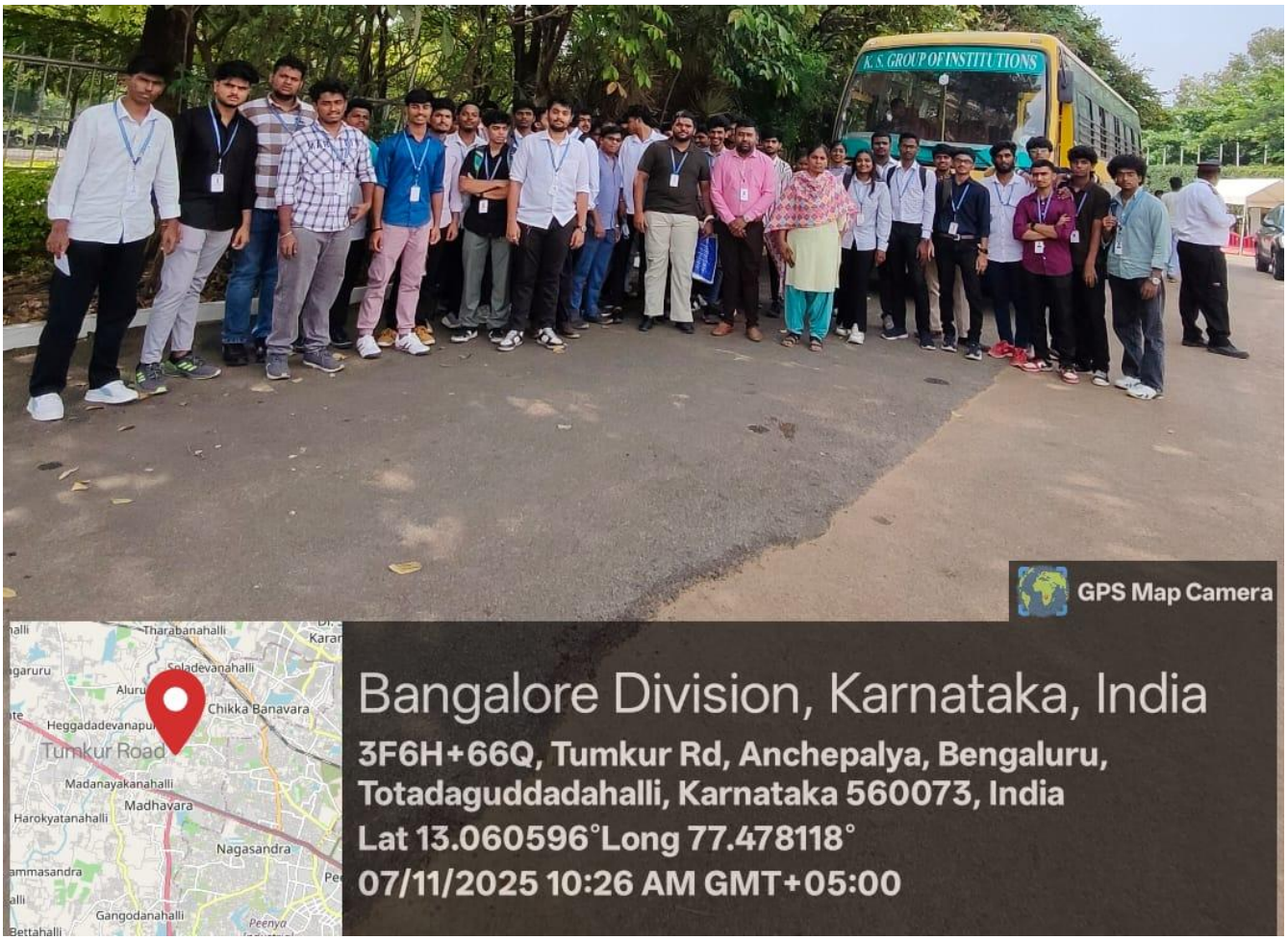
Objectives of the Visit:

1. To expose students to the latest advancements in manufacturing technologies, including automation, robotics, CNC machines, additive manufacturing, and Industry 4.0 solutions.
2. To bridge the gap between theoretical learning and real-world industrial applications by observing live machine demonstrations and production solutions.
3. To understand current industry requirements and manufacturing trends, enabling students to align their skills with future career and industry expectations.
4. To enhance students' awareness of modern engineering practices, including precision machining, digital manufacturing, industrial IoT, and sustainable production technologies.
5. To promote interactive learning, professional engagement, and technical curiosity through discussions with industry experts, technologists, and exhibitors at the event.

Outcomes of the visit:

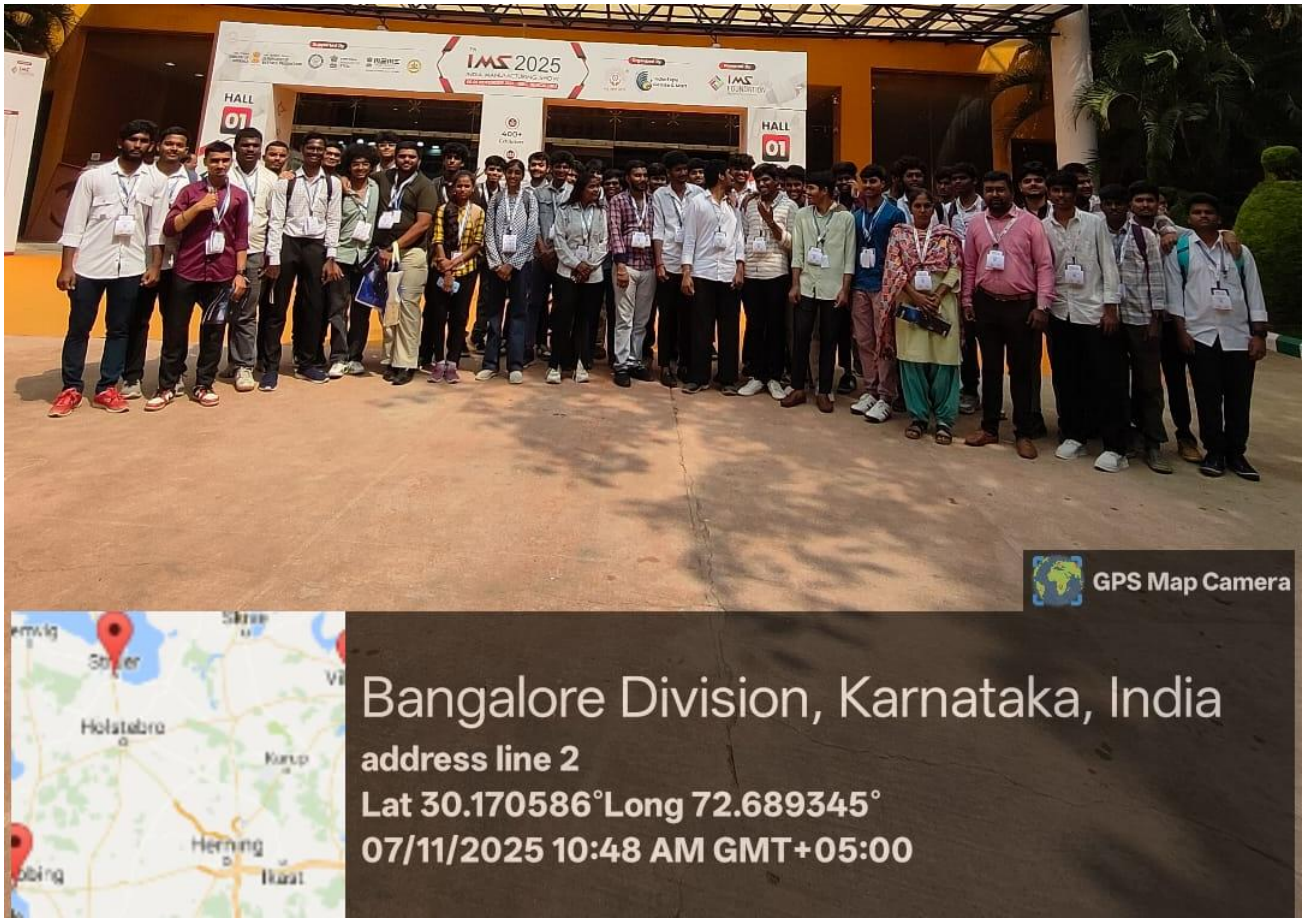
1. Students gained practical knowledge of modern manufacturing systems including CNC, automation, robotics, 3D printing, and smart factory solutions showcased at the exhibition.
2. Students were able to relate classroom concepts to real-world industrial applications by observing live machine demonstrations and manufacturing workflows.
3. Students developed awareness of current industry trends and technological advancements, particularly in Industry 4.0, digital manufacturing, and industrial automation.
4. Students enhanced their technical communication and interaction skills by engaging with industry professionals, exhibitors, and technical experts.
5. Students showed improved understanding of future career opportunities and skill requirements, motivating them to explore advanced manufacturing, innovation, and entrepreneurship in engineering.

Photos:




IMS 2025
INDIA MANUFACTURING SHOW
Free Shuttle
Shuttle
Pick-Up Point
GPS Map Camera
Tumkur Road
Chikka Banavara
Madhavara
Nagasandra
Gangodanahalli
Bangalore Division, Karnataka, India
3F6H+66Q, Tumkur Rd, Anchepalya, Bengaluru,
Totadaguddadahalli, Karnataka 560073, India
Lat 13.060596°Long 77.478118°
07/11/2025 10:29 AM GMT+05:00


Bharat Heavy
Electricals Limited
BHEL
THERMAL POWER
GPS Map Camera
Bangalore Division, Karnataka, India
address line 2
Lat 30.170586°Long 72.689345°
07/11/2025 11:57 AM GMT+05:00



The Department of Mechanical Engineering expresses its sincere gratitude to the **Management, Principal, and Head of the Department** for their constant encouragement and support in organizing this visit. We also thank the **Transport Department** for arranging the bus facility, which ensured the smooth and safe travel of students.

PO/PSO Mapping Table – Industrial Visit to Toyota Kirloskar Motors

Outcomes of the Visit	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
Identify and describe modern manufacturing technologies such as CNC, automation, robotics, and additive manufacturing.	3	2	1	1	3	1	-	1	1	-	2	2	1
Relate real-world industrial practices to mechanical engineering concepts learned in the	3	2	2	1	2	2	-	2	2	1	2	3	1

Outcomes of the Visit	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
curriculum.													
Interpret Industry 4.0 tools, digital manufacturing solutions, and smart production systems observed at the expo.	2	1	1	1	3	1	-	1	1	-	3	2	1
Demonstrate improved technical communication and teamwork through interactions with industry experts and peers during the visit.	1	1	1	-	1	1	1	3	3	2	2	1	3
Recognize current industrial skill requirements and career opportunities in advanced manufacturing sectors.	1	1	1	-	1	2	1	2	2	1	3	1	2

PROGRAM OUTCOMES (POs)

PO1: Engineering Knowledge: Apply knowledge of mathematics, natural science, computing, engineering fundamentals and an engineering specialization as specified in WK1 to WK4 respectively to develop to the solution of complex engineering problems.

PO2: Problem Analysis: Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conclusions with consideration for sustainable development. (WK1 to WK4)

PO3: Design/Development of Solutions: Design creative solutions for complex engineering problems and design/develop systems/components/processes to meet identified needs with consideration for the public health and safety, whole-life cost, net zero carbon, culture, society and environment as required. (WK5)

PO4: Conduct Investigations of Complex Problems: Conduct investigations of complex engineering problems using research-based knowledge including design of experiments, modelling, analysis & interpretation of data to provide valid conclusions.

PO5: Engineering Tool Usage: Create, select and apply appropriate techniques, resources and modern engineering & IT tools, including prediction and modelling recognizing their limitations to solve complex engineering problems.

PO6: The Engineer and The World: Analyze and evaluate societal and environmental aspects while solving complex engineering problems for its impact on sustainability with reference to economy, health, safety, legal framework, culture and environment.

PO7: Ethics: Apply ethical principles and commit to professional ethics, human values, diversity and inclusion; adhere to national & international laws.

PO8: Individual and Collaborative Team work: Function effectively as an individual, and as a member or leader in diverse/multi-disciplinary teams.

PO9: Communication: Communicate effectively and inclusively within the engineering community and society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations considering cultural, language, and learning differences

PO10: Project Management and Finance: Apply knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, and to manage projects and in multidisciplinary environments.

PO11: Life-Long Learning: Recognize the need for, and have the preparation and ability for i) independent and life-long learning ii) adaptability to new and emerging technologies and iii) critical thinking in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSOs):

PSO1: Ability to apply concept of mechanical engineering to design a system, a component or a process/system to address real-world challenges.

PSO2: Ability to develop effective communication, team work, entrepreneurial and computational skills.

Justification for PO/PSO mapping:

PO1 – Engineering Knowledge: Students explored live demonstrations of CNC, VMC, 3D printing, robotics, welding systems, and automation solutions, enabling them to connect core mechanical engineering principles with real industrial technologies.

PO2 – Problem Analysis: Interactions with industry experts showcased how industries identify manufacturing challenges and apply systematic approaches like automation, process optimization, and smart sensing to solve production bottlenecks.

PO3 – Design/Development of Solutions: Exhibits on customized jigs & fixtures, automated production lines, robotic cells, and additive manufacturing highlighted how industries design and develop efficient, safe, and cost-effective manufacturing solutions.

PO4 – Conduct Investigations of Complex Problems: Students learned how industries use testing equipment, simulation software, sensor-based monitoring, and real-time inspection methods to collect data, validate quality, and make informed engineering decisions.

PO5 – Engineering Tool Usage: Exposure to advanced engineering tools such as industrial robots, AI-based vision inspection, CAD/CAM integrated systems, 3D scanners, and IoT-enabled machines strengthened their understanding of modern engineering tool applications.

PO6 – The Engineer and The World: Many stalls emphasized energy-efficient systems, sustainable manufacturing, green technologies, and MSME/start-up innovations, helping students understand manufacturing's role in economic and environmental sustainability.

PO7 – Ethics: Industry representatives highlighted safety compliance, standard certifications, ethical manufacturing practices, and responsible technology deployment, reinforcing professional integrity and global industrial norms.

PO8 – Individual and Collaborative Team Work: Students explored the expo in groups, discussed technologies collaboratively, and learned how real industrial projects involve coordinated effort across multidisciplinary teams.

PO9 – Communication: Students interacted with technical experts, product engineers, and stall representatives, enhancing their ability to ask technical questions, comprehend industrial terminology, and communicate engineering concepts confidently.

PO10 – Project Management and Finance: Discussions on machine productivity, ROI, automation cost-benefit, and enterprise manufacturing solutions helped students understand financial and managerial aspects of large-scale engineering decision-making.

PO11 – Life-Long Learning: Exposure to rapidly evolving manufacturing trends such as Industry 4.0, AI-based automation, smart sensors, and digital manufacturing inspired students to continuously upgrade their skills and stay industry-relevant.

PSO1 – Application of Mechanical Engineering Concepts: The exhibition enabled students to witness real applications of manufacturing, material handling, automation, thermal processes, and machine design concepts studied in their curriculum, reinforcing practical engineering understanding.

PSO2 – Communication, Teamwork, and Computational Skills: Engagement with industrial professionals, collaborative learning, and observation of software-driven manufacturing solutions strengthened students' communication abilities, teamwork mindset, and awareness of computational tools used in the industry.

12/11/25

Industrial Visit coordinator

12/11/2025

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