

A Report

On

“Industrial Visit –Indo-German Toolroom.”

For the Students of Mechanical Engineering Department. (Semester – IV)

On 28th May 2022(Batch 1)

On 30th May 2022(Batch 2)

- **Objective:** “Our main purpose of this visit is to familiarize the students with industrial environment and to get practical knowledge of mechanical engineering field. Students would know about various types of machineries, departments of industry, quality aspects of the product, inspection criteria, safety rules, production process, marketing aspects etc. of the industries.”
- **Venue:** “Indo-German tool room, Vatva”.
- **Number of Students:** 93 (IV semester, Mechanical Engineering)
- **Faculty Coordinator’s:**
 1. Mr. Chintan Patel (Asst. Prof. Mechanical Engg. Dept.)
 2. Mr. Pravin Zinzala (Asst. Prof. Mechanical Engg. Dept.)
 3. Mr. Vivek Parikh (Asst. Prof. Mechanical Engg. Dept.)
 4. Mr. Hemang Dhamelia (Asst. Prof. Mechanical Engg. Dept.)
 5. Mr. Mihir Mistry (Asst. Prof. Mechanical Engg. Dept.)

Indo-German Tool room

OVERVIEW:

Indo German Tool Room Ahmadabad is a tool room and training Centre engaged in production of tools of precision plastic & metal component and also engaged in area of Training in tool and die making, CAD/CAM & CNC Technology, Robotics and Industry 4.0. "Indo German Tool Room, Ahmadabad India, A government Of India Nonprofit autonomous society, is an institute in Tool and Die making and modern production technology. It has established as most reliable source for SME's for their tooling requirements. Besides tool room activities, society permits use of its resources to industries like precision machining, quality control and CAD-CAMCAE-RPT services. The tool room is also a source for day one Productive and trained manpower at entry level in tool and die making and CAD-CAM-CAE and CNC technology.

Inside the Plant:

Students got a chance to observe various types of conventional machining process on various types of machines like lathe, milling, shaper, grinder, etc. Furthermore they got a chance to observe various CNC machines like CNC turning center, vertical machining center, wire cutter, EDM, 3D printer, Machining Robot, Welding Robot, Pick and Place Robot etc. They also got the opportunity to observe how various types of job are to be prepared on various CNC machines. They also got chance to observe various CAD software like master cam, uni graphics etc. They got a chance to see various design models made in CAD software. Furthermore they also come to know that the main service of IGTR is Training, Tool room and consultancy. During training the Long term Courses has been designed to train the trainees in Design and Manufacture of intricate tools like. Press Tools, Plastic Moulds, Die Casting, Dies, Gauges, Jigs & Fixtures etc. In order to provides skilled manpower to the industry in the field of tool and die Technology. The Medium Term Courses (MTC) and short Term Courses (STC) have been designed to the need of industries in upgrading the knowledge and skill. After completion of the courses the participants will be able to perform works more effectively. The Course will impart hands on experience to the participants to enhance abilities. Participants will be given opportunity to use training facilities.

Plant sections visited:

- CNC manufacturing room
- Precision cutting tool room
- VMC tool room
- Training room
- Robotics and Industry 4.0

Photography

Photography was prohibited inside plant premises, so group photo was taken outside the plant.



Day:01



Day:02



SUMMARY AND OUTCOME OF THE VISIT

Through this visit, students gained information and practical knowledge about various manufacturing process like drilling, milling, shaping, machining, welding, surface grinder. They also gain knowledge of various non-conventional machining processes like CNC WIRE CUTTING and ELECTRO DISCHARGE MACHINE. They got awareness about cutting edge technology like ROBOTICS and Automation in INDUSTRY 4.0. They also become aware about safety procedure to be followed during the manufacturing process. They got the knowledge about various personal protective equipments and its use. They also got aware about difficulties faced during the manufacturing process and how to solve it. They were also known about how to get more productivity with the available resources. About 60 students benefitted from this visit as they got chance to discuss with assistant engineers working at the unit.

ACKNOWLEDGEMENT

The coordinators are grateful to the College authorities, Management and the Vice President – Dr. Manish Shah (LJK Trust) for supporting them to carry out such a program and for providing the support. Secondly, the coordinators would like to thank Director (L.J.I.E.T.), who encouraged the coordinators for this program. Also, the coordinators extend their gratitude to the Head of the Department (Mechanical Engineering), who has played a major role by being there at the time of need. Last but not the least; the students did a wonderful job and the coordinators are proud of each of their students.