

A Report

On

“Industrial Visit – Zeeta Electrical Engineering Pvt. Ltd.”

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

On 24th March 2023. (Friday)

- **Objective:** “Training and Exposure on the working of a Semi-Automatic, automatic and Manual Lathe machine, Drilling machine, Chain driven material transfer mechanism, Annealing furnace, Punching Press related to the subject of Conventional Manufacturing Processes in Sem III.”
- **Venue:** “Zeeta Electrical Engineering Pvt. Ltd., Sanand, Ahmedabad, Gujarat.
- **Number of Students:** 54 Present out of 61 registered Students

(III semester, Mechanical Engineering)

• **Faculty Coordinator’s:**

1. Mr. Milan D. Trivedi (Asst. Prof. Mechanical Engg. Dept.)
2. Mr. Vivek V. Parikh (Asst. Prof. Mechanical Engg. Dept.)
3. Mr. Bhagyadeep B. Kalal (Asst. Prof. Mechanical Engg. Dept.)
4. Mr. Shail N. Shah (Asst. Prof. Mechanical Engg. Dept.)

1.1 OVERVIEW:

The number of students who attended the visit was 54 accompanied by 4 faculty members.

On the day of visit, the faculty left the college campus at 9:54 AM and reached the venue at 10:20 AM. The students were divided into 3 batches and were called at different timings. Batch 1 at 10:30AM , Batch 2 at 11:15AM and batch 3 at 12:00PM. Plant visit was completed upto 1:20 PM and we reached back to LJJET at 2:10 PM.

Initial the Procedure were briefed by Nainesh Sir, HR Department and then Production Person were allotted to explain about the different departments of the company.

Under their guidance and along with 4 faculties, students were then led to visit Manufacturing unit of plant.

To put it briefly, following sections of the Zeeta were visited.

- Machining unit having lathe,drilling,grinding
- Heat treatment such as annealing
- Stores,Inventory and assembly unit
- CNC machines
- Deburring machine
- Press

1.2 Features of Company:

- Founded in 2006
- Zeeta Electricals Engineering Pvt. Ltd have state-of-art production facility with Automatic and semi-Automatic power press to produce Copper and Aluminium Lugs & Terminal. They have customer base in more than 25 countries in Middle-East, Africa, South Asia, North and South America and Europe.

- **Product manufactured:** copper Lugs (UL)(cUL)(DIN)(FC), Aluminum Pin-Type Terminals (UL)(cUL), Inline Connectors (UL), Aluminum Lug (DIN), Mechanical Lug, Clamps, C-Connector, Battery Terminals, Bonded Copper Earth Rods, Copper profiles/ Sections, Cable Glands, Conduit Fittings, Friction Welded Bi-Metallic, SS Cable Ties (UL), Solar Connector (TUV), Copper Bent Lugs (UL) (90*) (45*) (25*), Trafo Connector, Shear Bolt Connector, Metro/Rail Lugs, Copper Lugs Approved For Locomotive (Metro/Rail), Copper Connectors for Windmill, India's Largest OEM Manufacturer for Global Brands, Copper Reducer, Aluminum Reducer, Copper Lugs for Transformers , Color Key Copper Lugs, Contract Manufacturing, IEC 61238 Tested Copper Lugs, AS/NZS 4325.1 Certified Copper Lugs, Copper Lugs Design for Class A , and Copper Lugs Design for Class B

1.3 Manufacturing and Machine department:

Student explored the Practical aspects of all machines which they have studied in Conventional manufacturing processes. They were exposed to much advanced manufacturing facility.

Plant was having number of CNC machines having these features:

1. Low space requirements to compact multi-axis control device in control cabinet.
2. Innovative CNC core with extensive technology functions
3. Open system platform
4. Highly configurable operator interface and standard operating concept for easy programming

Apart from that, Entire manufacturing unit was Quality enabled, Student explored the concept of Total Productive maintenance, 5S, Kaizen , PDCA cycle.

Manufacturing facility was equipped with heat treatment process , Press which they are going to learn in their upcoming semester.

1.5 Photography

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





SUMMARY AND OUTCOME OF THE VISIT

The visit enabled the students to

- Recognize the Plant layout of the Industry
- Identify input and output for the process.
- Experience the importance of working safety.
- Understand the concept of Assembly lines, FMS and 5S.
- Understand how the product of the plant interfaces to the world.
- Understand Industrial level of operation of different machines which they have studied.

Below are listed feedbacks of few of the students

1. Practical exposure to student.
2. The visit has helped them to understand their already learned subject.

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 Dr. A.C. Suthar – 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 – Mrs. Prexa Parikh, 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.