



# D. A. DEGREE ENGINEERING AND TECHNOLOGY

## MECHANICAL ENGINEERING DEPARTMENT

### INDUSTRIAL VISIT REPORT

**DATE: 04/11/2023**

One day industrial visit done on the 04<sup>th</sup> November 2023 at Elecon Engineering Company Limited (Anand, Gujarat). A total of 18 students participates in this to increase their knowledge regarding foundry technology by observing the industry and reduce the gap between industry and book.



*Photograph: A group photograph at the Elecon Company (3 Faculty and 18 Students)*

#### **ABOUT COMPANY:**

Elecon Engineering Company Ltd. was established in the year 1951 as the pioneers in the manufacturing of Industrial Geared motors and Reducers, Material Handling Equipment, Mining equipment, casting processes etc. Elecon is one of the largest manufacturers of Industrial Gears in Asia and Material Handling Equipments.

Elecon's Foundry Division (EFD) is ISO 9001-2008 certified and caters to machining and foundry needs of Elecon Engineering. After seven decades expertise in the industry, EFD now



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provides casting and machining services to several other companies other than Elecon group with its ultra-modern amenities to fulfil high quality requirements.

The Ferrous and Non-Ferrous Foundry is spread over ten acres of land, and has state of the art melting, moulding and heat treatment and quality assurance facilities.

#### **ABOUT VISIT:**

The mechanical engineering department made this arrangement to provide a glimpse into the industry for the students so they can make clear their mind related to casting technology. After reaching to the company, HR personnel guide us to the foundry division of the Elecon Engineering Company Limited (Anand, Gujarat). Mr. Amit Utlewar leads us to the different departments and provide us thoroughly knowledge about departments and activities performed in those departments.

At first, we are entering into the pattern making department where patterns are manufactured as per the requirements given by their clients. They manufactured patterns for the different materials such as wood, aluminium, thermocol, etc. they manufactured patterns in different sizes.

Afterwards, we guided to moulding department where moulding material gets prepared, and the moulding box gets ready for the next step. In this department we observed that they use refractory bricks channelling system for constructing gating system for the pouring operation. These mould box then poured with the molten metal. This molten metal was prepared in the induction furnaces. This foundry division have expertise in ferrous and non-ferrous metal casting. They have facility for casting ferrous material up to 4500 Kgs single pc and non-ferrous material Copper Alloys: Centrifugal up to 2500 kgs single pc and Aluminium Alloys: up to 100 Kgs single pc.

After seeing melting induction furnaces and pouring facility we shifted to the cleaning and cutting department where extra material gets cut off and cast gets separated from the mould material. For the finishing of the cast product company used different machining



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operations along with the heat treatment facilities where stress relieving operation and hardening process done as per the requirement. They have water and oil quenching facility along with the Gas fired furnaces. At the end of these many operations cast product passes through Painting & Packing shop. This is the end of casting process.

At last, Mr. Amit Utlewar took us to the metallurgy department where they check metal properties such as mechanical properties and metallurgical properties. Follow by all these observations we get chance to ask questions regarding visit and process which is carried out into this industry. Mr. Amit Utlewar resolves our queries and gave satisfactory answers to our questions with proper details. By getting this knowledge in this one-day visit to this company we are extremely delighted and express our gratitude to industry personnels.

#### **SUMMARY:**

Acquiring knowledge from the books and from the industry (application) both are immensely valuable. In this visit we understand the whole process of casting and seeing the major equipment along with the supportive equipment in working mode. By this we have clear our knowledge which was initially gather from the books. This visit also breaks the stumbling block for students which are always present between college and industries.

#### **ACKNOWLEDGEMENT:**

We are thankful to management of Hiraba Kelavani Trust and Principal of D. A. Degree Engineering and Technology for giving the permission to arrange such type of visit. Also, we are thankful to Head of Mechanical Engineering Department Asst. Prof. Bhaumik Bhandari and Asst. Prof. Shyamal Prajapati for continuous guidance and for making this visit possible.

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