

MAR SLEEVA COLLEGE OF ARTS AND SCIENCE

MURIKKASERRY

REPORT ON INDUSTRIAL VISIT - 2023

DATE – 13/01/2023(Friday)

TIME – 09:30 AM Onwards

PLACE OF VISIT:



**ANNA ALUMINIUM INDUSTRY
KIZHAKKAMBALAM (P.O)
ALUVA, ERNAKULAM
KERALA
683562**

Industrial Visit – Anna Aluminum Industry

As a part of syllabus, pg department of commerce organized an Industrial Visit for the IVth Semester (II Year) bachelor of commerce (B.COM Co-operation) students at **Anna Aluminum Industries**.

B.COM students have a syllabus on their fourth semester visiting an industry understand about the process that are taken part for the making the products and analysis all the works that are taken part

To understand the process taken part for producing and the decision making and controlling to all the workers and the work was given to the workers the aim of the industrial visit.

The visit was organized on **13/01/2023 (Friday)** from 09:30 AM onwards.

□ BACKGROUND OF THE COMPANY

Anna Aluminum Industries located at kizhakkambalam, kochi is involved in the business of manufacturing of non-ferrous castings for the past 18 years. The company owned by experience technocrats and the workshop equipped with latest foundry equipment's, backed by skilled, technical & dedicated staff, the company is able to ensure the best quality of castings. Along with aluminum casting, company specializes in the field of Phosphorous Bronze, 85:5:5:5 Gunmetal, Brass castings & Aluminum Bronze. Apart from the foundry division, the company also possesses all in-house machining facilities, finishing department, sand blasting department, vacuum impregnation plant and art division for art castings.



□ DESCRIPTION OF THE VISIT

The visiting team included 35 students of mechanical department accompanied by faculty of the department. Around 11:15 AM the team entered in the premises of **Anna aluminum industries**. We were given a warm welcome by CEO of the industry. He gave a welcoming speech to us and introduced Anna aluminum Industry to the students. Thereafter he explained regarding the safety measure to be taken in the industry. He also motivated the students to be an Entrepreneur.

Thereafter the students started the tour in the foundry. The main part of the foundry included the Sand-Casting section.

➤ Sand casting

The students were made aware with the different steps in a sand casting process:

1. First they mixed the raw sand and the binder in the **sand mixture machine**. As a binder they used molasses. Then the mixed sand is used for sand casting in make the mold of the pattern in the cope and drag. Then they made the gate, runner, and riser which acts a passage for the molten metal.
2. For the purpose of melting the raw metal, they used **Pit Furnace, Induction Furnace and Electric Resistance furnace**. The molten metal was removed from the furnace with the help of tongs and crucible which had the temperature of 1000 to 1200° C and poured it in the mold.





Then they let it cool down and after that they opened cope and the required object is obtained. In heavy castings they use the **CO₂ gas** to strengthen the casting sand.

Students thoroughly understood the sand-casting process as they spent around 2 hours in the same. The glimpses of the same are as follows:



➤ **Fettling shop (finishing shop)**

In this department the finishing of the casted metal is done. The finishing work includes casted removal of the feeder, riser and extra projections through the processes like grinding, polishing etc.





➤ **Centrifugal Casting Shop**

Axis symmetric components can be manufactured by the centrifugal casting process. The students were shown and explained the working of the centrifugal process of casting.

In this department they used Induction Furnace for the melting of the metal but unfortunately the furnace was not in working condition due to some technical issues.

The students were also explained the working of Pyrometer- Temperature Measuring Device to check the temperature of the furnace.



➤ Gravity Die Casting Shop

In the third workshop the students were explained the gravity die casting .By the use of gravity die casting they are making the valves which is used in foot valves and pumps.

The dies were not made by the company but were imported from other manufacturing unit and they just performed the casting process.



➤ Ending The visit

Around 12 PM the students had finished visiting the entire foundry and were thoroughly satisfied with the visit of the industry.

The students were then offered cold-drinks as a part of hospitality. Some final words of encouragement were given by the manager to the students and then the students gathered outside the company premises for the group photograph.

The students like to thank Dr. Joshy Varghees Principal and college Administrator and Anil Jose HOD of commerce department for allowing them to go for an industry visit.