JAYA ENGINEERING COLLEGE
(Approved by AICTE, New Delhi II Affiliated to Anna University, Chennai)
Accredited by NAAC & NBA
Thiruninravur, Chennai, Tamil Nadu, 602 024
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Industrial Visit to NTTF , Chennai
DEPARTMENT OF MECHANICAL ENGINEERING

REPORT

Event title	Industrial visit –NTTF chennai
Resourse person	Mr.R.Purusothaman, Sr Training officer
Academic Year	2025-2026
Organised by	Dept of mechanical Engg
Program type	Field visit
Start date and End date DD/MM/YYYY	29-3-2025 to 29-3-2025
Duration of the activity in mins start and end time	240 mins 10.30 am and 2.30 pm
Participents Students and Faculty	29 students and 2 Faculty Members
Mode of session online / offline	Offline
Event coordinator	Mr N.Murugesan /AP/Mechanical Engg /JEC Mr K.Sakthivel /AP/Mechanical Engg /JEC
Target participents	II and III Year Mechanical Engg Students and Aeronautical Engg Students
Outcome	The outcome of a student industrial visit to NTTF is both Educational and inspiring Student can leave with a greater appreciation for all kind of cnc machines ,A clear idea of their career paths ,and an understanding of how their academic studies relate to real life of automation

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Industrial Visit-Report
Nettur Technical Trainng Foundation

NTTF
CHENNAI
(29-03-25)

ABOUT THE INDUTRIAL VISIT

An industrial visit was organized by the Department of [Mecchanical Engg] of **Jaya Engineering College** to **NTTF Industries** on [29-3-2025]. The purpose of this visit was to bridge the gap between theoretical knowledge gained in classrooms and its practical applications in industry. NTTF (Nettur Technical Trainng Foundation) is a leader in manufacturing precision tools, providing insight into the latest technological developments and manufacturing processes.

2. Objective of the Visit

The objectives of the visit were as follows:

- To observe the real-world applications of engineering principles.
- To understand the manufacturing processes and technologies used in precision tooling.
- To gain insight into the industrial operations, quality control procedures, and automation systems.
- To interact with professionals in the field and understand their career paths and challenges.

3. About NTTF Industries

NTTF Industries is a renowned company that specializes in the design, manufacturing, and maintenance of tools, dies, and molds. The company is well-equipped with advanced machinery and technologies to serve industries in sectors like automotive, electronics, and aerospace. NTTF is known for its high precision manufacturing standards and its emphasis on research and development.

4. Visit Summary

The students arrived at NTTF Industries at [9.30 AM -2.30 PM] and were warmly received by the company staff. The visit began with a brief introduction to the company, its operations, and its role in the industry. A senior official from NTTF led the session and provided insights into the various departments and their functions.

4.1. Introduction to Company Operations

The visit started with an overview of the company's operational structure:

- **Manufacturing Units:** NTTF operates multiple manufacturing units that handle different stages of tool and die production.
- **Design & Prototyping:** The design phase uses advanced CAD (Computer-Aided Design) and CAM (Computer-Aided Manufacturing) software for precision design.
- **Manufacturing Process:** Various stages like milling, turning, grinding, and EDM (Electrical Discharge Machining) were explained in detail.
- **Quality Control:** NTTF employs advanced quality control mechanisms to ensure product consistency and precision.

4.2. Tour of the Factory

The students were then taken on a tour of the factory floor. This part of the visit was particularly engaging as the students got to see:

- **CNC Machines:** The use of CNC (Computer Numerical Control) machines to produce precision components was demonstrated. The automation in the production process helps in reducing human error and increasing efficiency.
- **Injection Molding Machines:** A detailed explanation was given on how these machines are used to produce parts in high volumes with accuracy.
- **Robotics in Production:** Students saw how robotic arms were integrated into the production line to carry out tasks like material handling, assembly, and quality checks.

4.3. Interaction with Engineers and Technicians

The students were given the opportunity to interact with engineers and technicians who work at NTTF Industries. This interaction helped in understanding the real-time challenges and advancements in the field of precision tooling.

Some of the key discussions were:

- The importance of **precision** in the manufacturing process and how errors are minimized.
- The role of **automation** in modern manufacturing processes and its impact on productivity and cost reduction.
- The growing demand for **skilled professionals** in areas such as CAD, CAM, and CNC programming.

4.4. Applications in Industries

The guide explained the various industries that benefit from NTTF's products:

- **Automotive:** High precision components for vehicle assembly.
- **Electronics:** Molds for manufacturing electronic device parts.
- **Aerospace:** Precision tooling for high-stress and safety-critical applications.

5. Technologies Demonstrated

During the visit, the following technologies were highlighted:

- **CAD/CAM Software:** The software used to design and simulate the tooling process.
- **CNC Machines:** The working of CNC machines and their role in manufacturing high-precision parts.
- **EDM Machines:** Explanation of Electrical Discharge Machining (EDM) for fine-tuning components with high accuracy.
- **Robotic Automation:** The integration of robotics to reduce human intervention and increase manufacturing precision.

6. Learning Outcomes

The industrial visit was a valuable learning experience for the students. The key takeaways were:

- **Practical Knowledge:** Gained practical insights into manufacturing processes like CNC machining, injection molding, and EDM.
- **Automation and Robotics:** Understanding the role of automation in enhancing the manufacturing process.
- **Real-World Applications:** Exposure to how theoretical concepts in engineering are applied in real-world industries.
- **Career Insights:** Interactions with professionals provided a clearer understanding of career opportunities and required skills.

7. Conclusion

The industrial visit to **NTTF Industries** was highly informative and enriching for the students of **Jaya Engineering College**. It provided a deeper understanding of the cutting-edge technologies used in precision tooling and manufacturing. The experience also emphasized the importance of practical knowledge and hands-on learning in shaping a successful engineering career.

We would like to thank NTTF Industries for their hospitality and for providing such an enriching experience. We also appreciate the efforts of the faculty members who coordinated the visit.

Student`s feedback:

The Department of Mechanical engineering organized industrial visit to NTTF .The Faculty members present were highly supportive of all students.This experience were incredibly valuable bringing about a positive shift in our perspective and practical approach to education ,Especially in Engineerig We the Mechanical Engineering students,Sincerely thank our Management ,Dr.S.Suyambazhahan – Director (Academics),Dr.V.Suresh kumar Principal, Dr.S.Rajendran.Vice Principal, Dr .U.C.Jha HOD /Mechanical .We would also like to express special coordination ot the visit Mr .N.Murugesan AP/Mechanical and I.Elamparuthi lab asst /Mechanical .Coordinators of visit ,As well as to all the faculty and student coordinators for their unwavering support throughout the event.