

# **Report on**

## **“Industrial Visit to Fine Cast Pvt. Ltd. and Unique Forging Pvt. Ltd., V. U. Nagar”**

EVENT DATE: 19/02/2025

### **1. Introduction**

The Mechatronics Department of G. H. Patel College of Engineering & Technology (GCET), V. V. Nagar organized an industrial visit to Fine Cast Pvt. Ltd. and Unique Forging Pvt. Ltd., located in V. U. Nagar, Anand, on 19th February 2025. The objective of the visit was to provide students with practical exposure to casting, forging, and manufacturing processes and to understand the application of engineering principles in the production environment.

### **2. Objectives of the Visit**

- To understand the manufacturing processes involved in casting and forging industries.
- To gain practical knowledge about mold preparation, melting, pouring, forging techniques, and quality control.
- To interact with industry professionals and gain insights into industrial practices and technologies.
- To relate theoretical knowledge with real-world industrial applications.

### **3. Details of the Visit**

- Date of Visit: 19th February 2025
- Participating Students: 2nd Year Mechatronics Engineering Students.
- Faculty Coordinator:  
Dr. Ketan Tamboli (Associate Professor, Mechatronics Department)
- Industries Visited:
  1. Fine Cast Pvt. Ltd., V. U. Nagar – Specializing in precision investment casting manufacturing.
  2. Unique Forging Pvt. Ltd., V. U. Nagar – Specializing in forging components for various industrial sectors.

#### **4. Key Learnings from Fine Cast Pvt. Ltd., V. U. Nagar**

- Introduction to Investment Casting: Overview of the lost-wax casting process and its advantages in producing complex parts with high precision.
- Mold and Wax Pattern Preparation: Understanding the preparation of wax models, ceramic shell building, and dewaxing processes.
- Melting and Pouring Process: Exposure to metal melting techniques, pouring molten metal into molds, and cooling processes.
- Quality Assurance and Inspection: Use of non-destructive testing (NDT), dimensional inspection, and quality control measures.
- Industrial Safety Practices: Importance of safety protocols during casting operations.

#### **5. Key Learnings from Unique Forging Pvt. Ltd., V. U. Nagar**

- Forging Techniques: Study of hot forging, closed-die forging, and open-die forging processes.
- Material Handling and Equipment: Understanding the use of forging presses, hammers, dies, and furnaces.
- Post-Forging Processes: Insights into heat treatment, machining, and surface finishing of forged components.
- Applications of Forged Products: Discussion on industries utilizing forged parts such as automotive, aerospace, and heavy engineering sectors.
- Quality Control Measures: Overview of mechanical testing and inspection procedures for forged parts.

#### **6. Student Feedback & Experience**

- The visit provided hands-on exposure to real-world industrial processes.
- Students gained clarity about theoretical concepts studied in the classroom.
- Interaction with experienced professionals enhanced students' understanding of casting and forging technologies.
- The visit motivated students to consider careers in the manufacturing sector.

#### **7. Conclusion**

The industrial visit to Fine Cast Pvt. Ltd. and Unique Forging Pvt. Ltd. successfully enhanced students' technical knowledge and practical understanding of manufacturing processes. The visit aligned with the academic curriculum and helped bridge the gap between theoretical knowledge and practical application. Such visits play a vital role in nurturing competent engineers ready for industry challenges.

## 8. Acknowledgment

We sincerely thank Fine Cast Pvt. Ltd. and Unique Forging Pvt. Ltd. for their warm hospitality and informative sessions. We are also grateful to CVM University and GCET management for their continuous support in organizing this industrial visit.

### Photographs:



## Participation List:


**G H PATEL COLLEGE OF ENGINEERING & TECHNOLOGY**  
 Vallabh Vidyanagar  
 (The Charutar Vidya Mandal (CVM) University)  
 Mechatronics Department

  
**CVM**  
 UNIVERSITY

**INDUSTRIAL VISIT TO FINE CAST, V U NAGAR – DATE 19/2/2025**  
**SECOND YEAR - MECHATRONICS**

No	Enroll. No	Student Name	Batch	SIGNATURE
1	12302100501001	ANKIT PARBAT BHUDIA	1A10	<i>[Signature]</i>
2	12302100501002	JOSHI HARSHIL VIJAY	1A10	<i>[Signature]</i>
3	12302100501003	PRAJAPATI KATHAN HIMANSHU	1A10	<i>[Signature]</i>
4	12302100501004	PATEL KAX MANISHKUMAR	1A10	<i>[Signature]</i>
5	12302100501005	MAKWANA MADHAV BRIJESHKUMAR	1A10	<i>[Signature]</i>
6	12302100501006	KOLADIYA MANTRA MAGANBHAI	1A10	<i>[Signature]</i>
7	12302100501007	MANVEER SINGH KAINTH	1A10	<i>[Signature]</i>
8	12302100501008	JOSHI MITUL SHAILESHKUMAR	1A10	<i>[Signature]</i>
9	12302100501009	SAIYED MOHAMMAD ANEEQ MAYUDDIN	1A10	<i>[Signature]</i>
10	12302100501010	CHAWDA PANTH AKSHAY	1A10	<i>[Signature]</i>
11	12302100501011	BAMBHROLIYA PARTH RATILAL	1A10	<i>[Signature]</i>
12	12302100501012	PATEL POOJAN ATULKUMAR	1A10	<i>[Signature]</i>
13	12302100501013	PRASHILKUMAR JITENDRASINH SOLANKI	1A10	<i>[Signature]</i>
14	12302100501014	VAGHELA VANSH KALPESH	1A10	<i>[Signature]</i>
15	12302100501015	KACHHIA ZEEL PINALKUMAR	1A10	<i>[Signature]</i>
16	12402100503001	PANESAR BALJINDER SINGH PARVINDER SINGH	1A10	<i>[Signature]</i>
17	12402100503002	JOSHI DEV RAJENDRAPRSSAD	1A10	<i>[Signature]</i>
18	12402100503003	PANCHAL JAY ANILKUMAR	1A10	<i>[Signature]</i>
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22	12402100503007	DOMADIYA TARUN BHAVESHBHAI	1A10	<i>[Signature]</i>
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 Dr. Hemant Thakkar      *[Signature]*