Industry Visit Report

Title: Industry Visit report on Prabhat Murti Kala Kendra, Gwalior
Date of Visit: 28-Feb-2025

1. Introduction

On **Feburary 28, 2025**, a group of **30 students** from the **Department of Mechanical Engineering, MITS-DU** visited **Prabhat Murti Kala Kendra, Gwalior**, a renowned Lost Wax Casting Industry located in **Gwalior, Madhya Pradesh**. The visit aimed to provide students with practical exposure to lost wax casting process and understand its applications in metal sculpture manufacturing. Students were exposed to various stages of the lost wax casting technique, inventory management, and innovative furnace technology used in the industry.

2. Details of the Visit

- **Date:** 28 February, 2025
- **Time:** 10:30 AM – 12:30 PM
- **Location:** Prabhat Murti Kala Kendra, Gwalior
- **Participants:** 20 Students, 2 Faculty Members
- **Faculty Coordinators:** Prof. R.P. Kori and Dr. Amit Aherwar
- **Industry Representatives:**
    - **Mr. Anuj Rai** – Manager

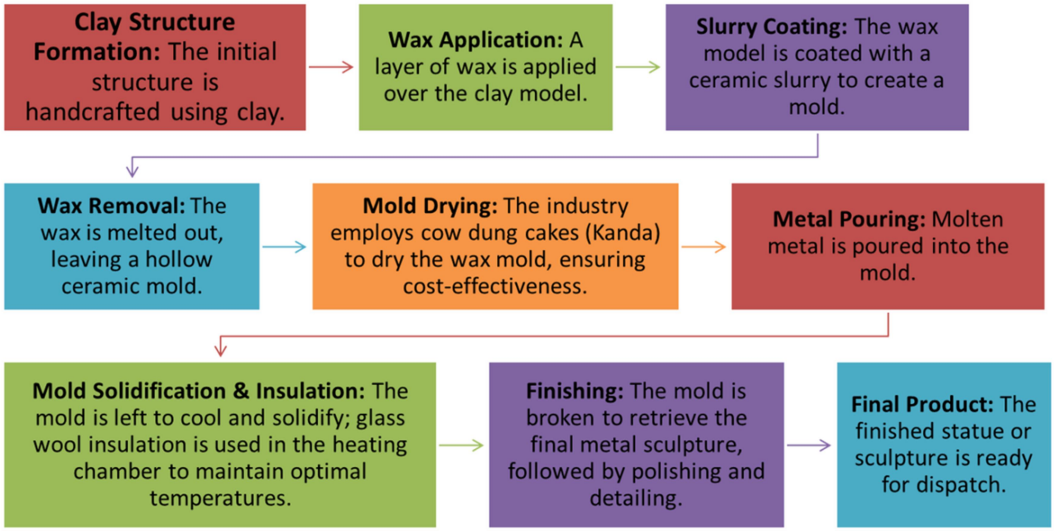
3. Industry Overview

Prabhat Murti Kala Kendra is a renowned Lost Wax Casting Industry based in Gwalior, specializing in the creation of metal sculptures and statues. This industry follows traditional casting techniques while incorporating modern innovations for efficiency and cost-effectiveness.

4. Key Learning:

- Practical understanding the processing steps of Lost Wax Casting
- Usage of alternative materials like cow dung cakes (Kanda) for cost-effective wax drying
- Advanced furnace designs and metal melting techniques
- Practical insights into inventory management and resource optimization

Lost Wax Casting Process (As Learned During the Visit)



***Note:** Due to the density difference, 1 kg of wax corresponds to approximately 9 kg of metal.

5. Technical Insights Furnace & Metal Melting Innovations

- The industry uses innovative furnace designs with a diesel and air mixture for heating, improving efficiency.
- Monthly diesel consumption for furnace operation is approximately 1,000 liters.

5.1 Integrated Crane System

- The industry is equipped with an integrated crane with a payload capacity of 3 tons, ensuring smooth handling of heavy castings.

5.2 Diverse Range of Products

- The facility houses multiple sample pieces and statues made from metal, fiber, and other materials, showcasing their craftsmanship and versatility.

6. Inventory & Resource Management Monthly Inventory Requirements:

- Wax – 500 kg
- Silica – 3 tons
- Sodium Silicate – 2,000 liters

- Diesel (for furnace combustion) – 1,000 liters
- Plaster of Paris (POP) – 100 bags (each bag contains 24 kg)
- Metal – Ordered based on project requirements due to high cost

7. **Commonly Ordered Metals & Their Composition: Bronze:**

   The industry commonly orders metals like Bronze and Gunmetal. Bronze typically comprises 60% copper, 5% tin, and 3% zinc, while Gunmetal contains 88% copper, 10% tin, and 2% zinc. These compositions are carefully managed to ensure optimal quality and durability in their sculptures.

8. **Major Project: Bronze Hanuman Ji Statue** One of the industry's most notable projects is the bronze Hanuman Ji statue located in Indore, Madhya Pradesh. This magnificent structure:

   - Cost approximately ₹2 crore
   - Took 8–9 months to complete
   - Showcases the expertise and craftsmanship of the industry

9. **Outcome**

   As a result of this visit, students have gained enhanced practical knowledge of the lost wax casting process, improved their understanding of industrial operations, and developed skills in inventory management and resource optimization. This experience will help students apply these concepts in future academic projects, internships, and professional careers in mechanical engineering and manufacturing domains.

माधव प्रौद्योगिकी एवं विज्ञान संस्थान, ग्वालियर (म.प्र.), भारत

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P.), INDIA

Deemed University

(Declared under Distinct Category by Ministry of Education, Government of India)

NAAC ACCREDITED WITH A++ GRADE

Department of Mechanical Engineering

Glimpses of Industry Visit


GPS Map Camera
Gwalior, Madhya Pradesh, India
Prabhat Murti Kala Kendra, Moti Jheel, Gwalior, Madhya Pradesh 474010, India
Lat 26.252751° Long 78.147669°
28/02/2025 12:00 PM GMT +05:30
Google


GPS Map Camera
Gwalior, Madhya Pradesh, India
Prabhat Murti Kala Kendra, Moti Jheel, Gwalior, Madhya Pradesh 474010, India
Lat 26.252711° Long 78.147623°
28/02/2025 12:00 PM GMT +05:30
Google


GPS Map Camera
Gwalior, Madhya Pradesh, India
Prabhat Murti Kala Kendra, Moti Jheel, Gwalior,
Madhya Pradesh 474010, India
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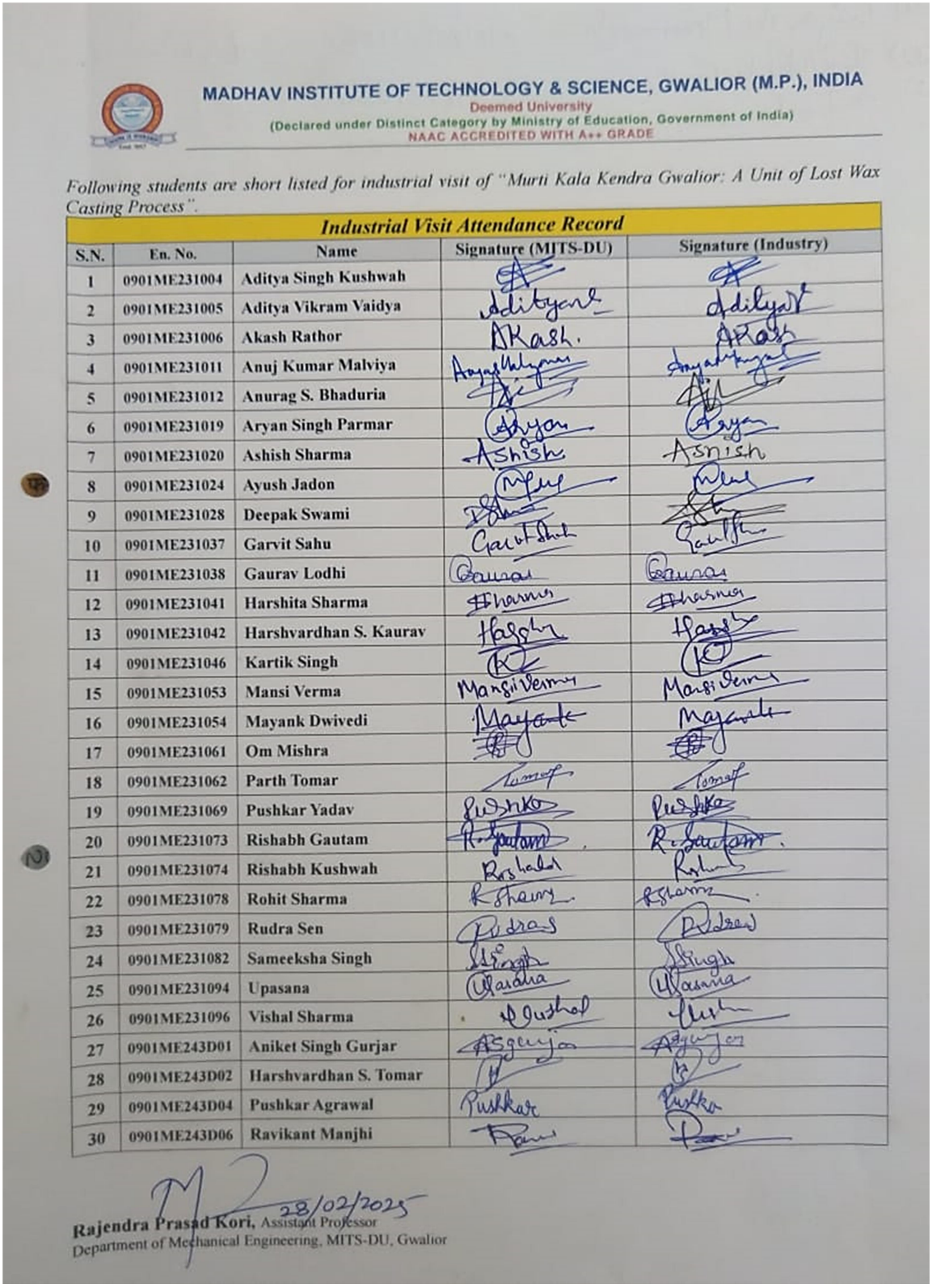
28/02/2025 12:26 PM GMT +05:30
Google



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Following students are short listed for industrial visit of "Murti Kala Kendra Gwalior: A Unit of Lost Wax Casting Process".

Industrial Visit Attendance Record

S.N.	En. No.	Name	Signature (MITS-DU)	Signature (Industry)
1	0901ME231004	Aditya Singh Kushwah		
2	0901ME231005	Aditya Vikram Vaidya		
3	0901ME231006	Akash Rathor		
4	0901ME231011	Anuj Kumar Malviya		
5	0901ME231012	Anurag S. Bhaduria		
6	0901ME231019	Aryan Singh Parmar		
7	0901ME231020	Ashish Sharma		
8	0901ME231024	Ayush Jadon		
9	0901ME231028	Deepak Swami		
10	0901ME231037	Garvit Sahu		
11	0901ME231038	Gaurav Lodhi		
12	0901ME231041	Harshita Sharma		
13	0901ME231042	Harshvardhan S. Kaurav		
14	0901ME231046	Kartik Singh		
15	0901ME231053	Mansi Verma		
16	0901ME231054	Mayank Dwivedi		
17	0901ME231061	Om Mishra		
18	0901ME231062	Parth Tomar		
19	0901ME231069	Pushkar Yadav		
20	0901ME231073	Rishabh Gautam		
21	0901ME231074	Rishabh Kushwah		
22	0901ME231078	Rohit Sharma		
23	0901ME231079	Rudra Sen		
24	0901ME231082	Sameeksha Singh		
25	0901ME231094	Upasana		
26	0901ME231096	Vishal Sharma		
27	0901ME243D01	Aniket Singh Gurjar		
28	0901ME243D02	Harshvardhan S. Tomar		
29	0901ME243D04	Pushkar Agrawal		
30	0901ME243D06	Ravikant Manjhi		

28/02/2025

Rajendra Prasad Kori, Assistant Professor
Department of Mechanical Engineering, MITS-DU, Gwalior