



Shri Yashwantrao Bhonsale Education Society's

# YASHWANTRAO BHONSALE INSTITUTE OF TECHNOLOGY

(DTE CODE: 3470) (MSBTE CODE : 1742)

Approved by AICTE, DTE & Affiliated to Mumbai University & MSBTE Mumbai  
(NBA Accredited ME, CE, EE Diploma Programs)

Date- 30/01/2026

## Industrial Visit Report

### 1. Schedule of the Visit-

- **Date of Visit:** 28/01/2026
- **Name of Industry:** Mahalaxmi Vidyut Pvt. Ltd.
- **Location:** Tilari, Dodamarg
- **Type of Industry:** Power Generation
- **Number of Students:** 31 (TE Electrical Engineering)
- **Faculty Coordinators:** Mr. O.S. Ghadigaonkar, Mr. P.S. Chavan & Mr. D.U. Sawant
- **Academic Year:** 2025–26

Mahalaxmi Vidyut Pvt. Ltd. is involved in electrical power generation and associated operations. The plant plays a vital role in supplying electricity to nearby regions and follows standard operating and safety procedures as per industrial norms. The visit began with a brief introduction session conducted by industry officials, **Plant Engineer Mr. Anil Belanki and Engineer Mr. Nhanji Naik**, followed by a guided tour of the plant premises.

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### 2. Introduction

Industrial visits are an integral part of the engineering curriculum as they bridge the gap between theoretical knowledge and practical industrial applications. With this objective, the Department of Electrical Engineering organized an industrial visit for Third Year Electrical Engineering students to **Mahalaxmi Vidyut Pvt. Ltd., Tilari, Dodamarg**. The visit provided students with firsthand exposure to power generation systems, electrical equipment, safety practices, and real-time operation of a power plant.

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### 3. Objectives of the Visit

The main objectives of the industrial visit were:

- To understand the practical aspects of electrical power generation.
- To study major electrical equipment used in power plants.
- To gain knowledge of switchgear, protection systems, and control panels.
- To observe safety measures followed in an industrial environment.



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### **4. Description of the Visit**

During the visit, students were introduced to various sections of the power plant. Industry experts explained the overall process of power generation starting from the energy source to electricity distribution.

#### **4.1 Power Generation Section**

Students observed the power generation process and learned about the role of turbines, generators, and auxiliary systems. The working principle of generators and conversion of mechanical energy into electrical energy was clearly explained.

#### **4.2 Electrical Equipment**

The following equipment were explained in detail:

- Alternators / Generators
- Transformers (Step-up and Step-down)
- Circuit Breakers
- Isolators and Bus Bars
- Control Panels

#### **4.3 Switchgear and Protection**

Special emphasis was given to switchgear and protection systems. Students learned about:

- Overcurrent protection
- Earth fault protection
- Relays and circuit breakers
- Importance of protective devices in preventing system failures

#### **4.4 Safety Practices**

The officials highlighted safety rules and precautions followed in the plant, including:

- Use of personal protective equipment (PPE)
- Safety signage and procedures
- Emergency shutdown systems



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### **4.5 Safety Practices**

The officials highlighted safety rules and precautions followed in the plant, including:

- Use of personal protective equipment (PPE)
- Safety signage and procedures
- Emergency shutdown systems

### **5. Details of Electrical Equipment:**

#### **Generator Details (as explained during visit):**

- Type: 3-phase synchronous generator
- Number of units: 2
- Rated capacity: 5.5 MW per unit
- Total installed capacity: 11 MW
- Rated voltage: 6.6 kV
- Frequency: 50 Hz
- Power factor: 0.8 lagging
- Cooling system: Air / water-cooled
- Speed: 600 RPM
- Turbine: Kaplan

#### **Switchyard Equipment – Detailed Explanation & Ratings:**

The switchyard at Mahalaxmi Vidyut pvt ltd is an important part of power plant used for control, protection and evacuation of generated electrical power generation at 6.6 KV, power is stepped up & transmitted to grid through switchyard.

##### **1. Power Transformer-**

- Type: 3 Phase Power Transformer
- Rated capacity: 8 MVA
- Voltage ratio: 6.6 kV / 33 kV
- Frequency: 50 Hz
- Cooling method: ONAF / ONAF



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### 2. Circuit Breaker-

- Type: Vacuum Circuit Breaker (VCB)
- Rated voltage: 7.2 kV
- Rated current: 1250 A
- Short circuit breaking capacity: 25 kA
- Frequency: 50 Hz
- Operating mechanism: Spring / motor operated

### 3. Isolator-

- Type: Vertical Break type
  - Operation: Manual
  - Rated voltage for 6.6 KV: 7.2 KV
  - Rated current for 6.6 KV: 1250 A
  - Rated voltage for 33 KV: 36 KV
  - Rated current for 33 KV: 630 A
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## **6. Learning Outcomes**

After completing the industrial visit, students were able to:

- Understand real-time power generation processes.
  - Identify and explain major electrical equipment used in power plants.
  - Gain practical knowledge of switchgear and protection systems.
  - Appreciate the importance of safety measures in electrical industries.
  - Relate classroom learning with industrial practices.
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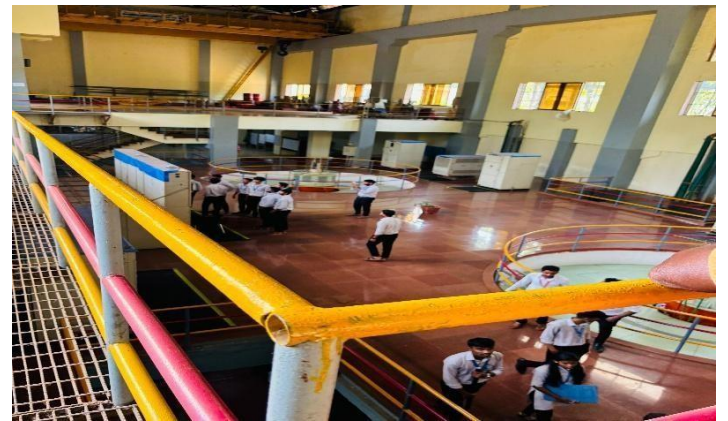


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### Glimpse of the event





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### 7. Conclusion

The industrial visit to Mahalaxmi Vidyut Pvt. Ltd., Tilari, Dodamarg was highly informative and educational. It provided valuable practical exposure to Third Year Electrical Engineering students and enhanced their understanding of power generation and electrical systems. The visit successfully fulfilled its objectives and proved to be a beneficial learning experience.

