

**MET's Institute of Engineering
Bhujbal Knowledge City, Adgaon, Nashik
Department of First Year Engineering**

Name of the program "Industrial Visit" at Dhanraj Switchgears private limited

Date: 28/08/2025

Time: 10:00AM - 1:30PM

Day: Thursday

Venue:

Induction Coordinator-Dr. R. S. Dhake & Prof. R. D. Rajkuvar

Activity Coordinator: Shilpa M Mugde

Event Coordinator:

E&TC: Prof. Priyanka More

Electrical: Prof. Dinesh Malkhede

Prof. Diksha Ahire

Objectives of the Visit

1. To observe the manufacturing process of electrical switchgear and control panels.
2. To understand various testing procedures and quality-control standards.
3. To study safety measures followed in electrical industries.
4. To learn about the design, layout, and functioning of distribution boards, MCC (Motor Control Centers), PCC (Power Control Centers), and LT/HT panels.

An industrial visit to **Dhanraj Switchgears Pvt. Ltd.** was organized to provide students with practical exposure to electrical manufacturing processes and industrial operations. The company is known for producing high-quality electrical panels, switchgear assemblies, and power distribution systems. The visit helped students understand real-time production, testing, and quality-assurance procedures used in the electrical industry.

About Dhanraj Switchgears Pvt. Ltd.

Dhanraj Switchgears Pvt. Ltd. is a leading manufacturer of:

- LT / HT Switchgear Panels
- Power Control Centers (PCC)
- Motor Control Centers (MCC)
- Distribution Boards
- APFC Panels (Automatic Power Factor Control)
- Control & Relay Panels
- Customized industrial electrical systems

The company follows national and international standards like **IEC, IS, and BIS** for manufacturing and testing. Their products are widely used in industries, commercial complexes, and infrastructure projects.

Key Areas Observed During the Visit

1 Design & Engineering Section

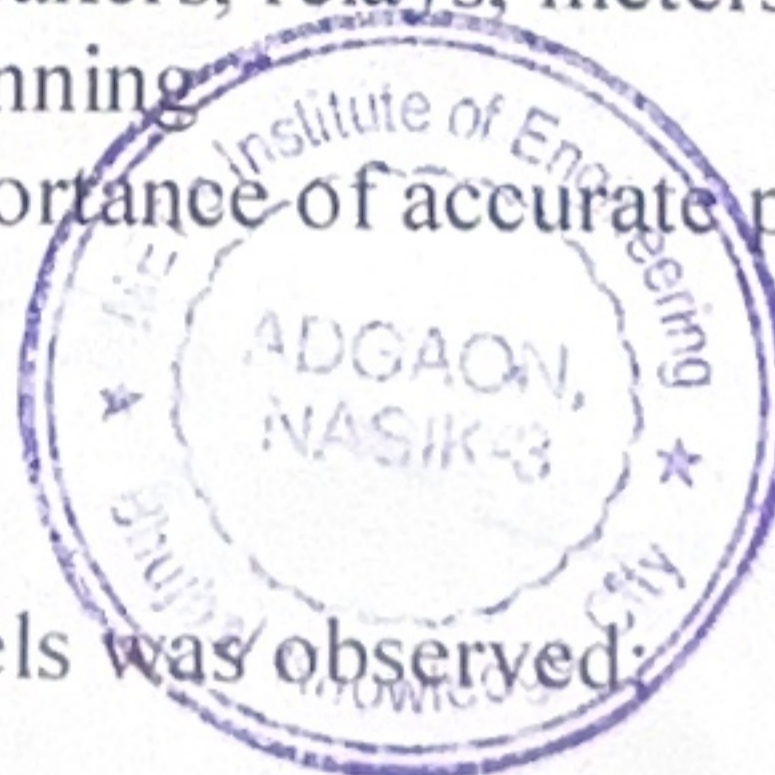
Students were introduced to:

- Panel design using CAD software
- Preparation of single line diagrams (SLD)
- Selection of components like breakers, relays, meters, busbars
- Load calculation and system planning

This section highlighted the importance of accurate planning in electrical engineering.

2 Fabrication Unit

Here, the manufacturing process of panels was observed:



- Sheet-metal cutting and bending
 - Welding and fabrication of panel enclosures
 - Powder coating for protection against corrosion
 - Busbar preparation and assembly
- Students learned how raw metal sheets are converted into panel structures.

3 Assembly Section

In this department:

- Electrical components such as MCBs, MCCBs, ACBs, relays, and meters were installed
 - Wiring and termination were done according to design
 - Cable management techniques were explained
- Students witnessed how precision and safety are maintained during assembly.

4 Testing & Quality Control

A special highlight of the visit was the testing lab, where the following tests were demonstrated:

- High-voltage (HV) test
 - Insulation resistance test
 - Continuity test
 - Functional test of panels
 - Verification of safety standards
- All panels undergo strict quality checks before dispatch.

5 Safety Measures

- Proper use of PPE (gloves, helmets, safety shoes)
 - Earthing and grounding procedures
 - Safe wiring practices
 - Lockout-tagout (LOTO) policies
- This gave students an understanding of electrical industry safety norms.

Learning Outcomes

- Clear understanding of the switchgear manufacturing process
- Exposure to industrial machinery and tools used in electrical fabrication
- Knowledge of quality-testing procedures
- Awareness of electrical safety protocols
- Insight into design, engineering, and real-time assembly of panels

Conclusion

The industrial visit to **Dhanraj Switchgears Pvt. Ltd.** was highly informative and beneficial. It bridged the gap between classroom learning and practical industrial experience. The knowledge gained regarding switchgear production, safety, and testing will be invaluable for students pursuing electrical engineering and related fields. The visit enhanced technical understanding and gave students exposure to real-world industrial operations.





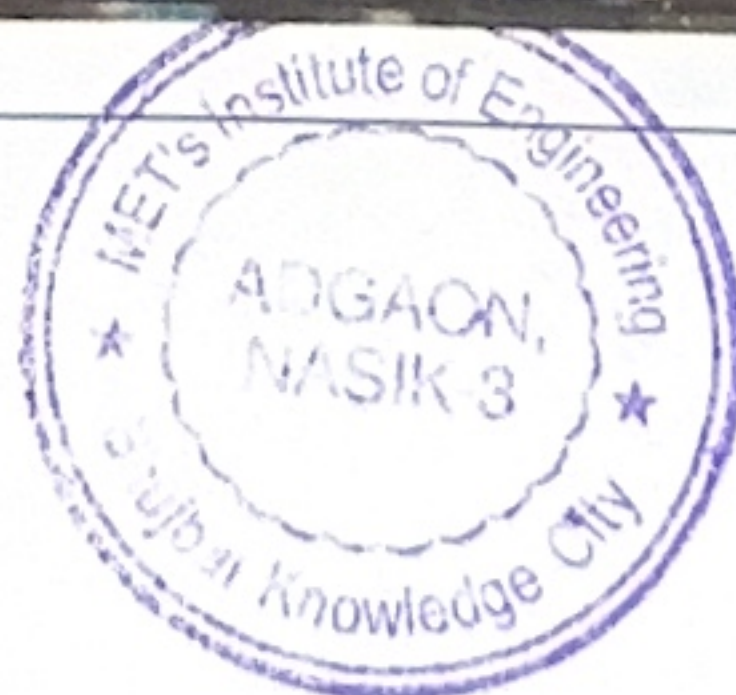
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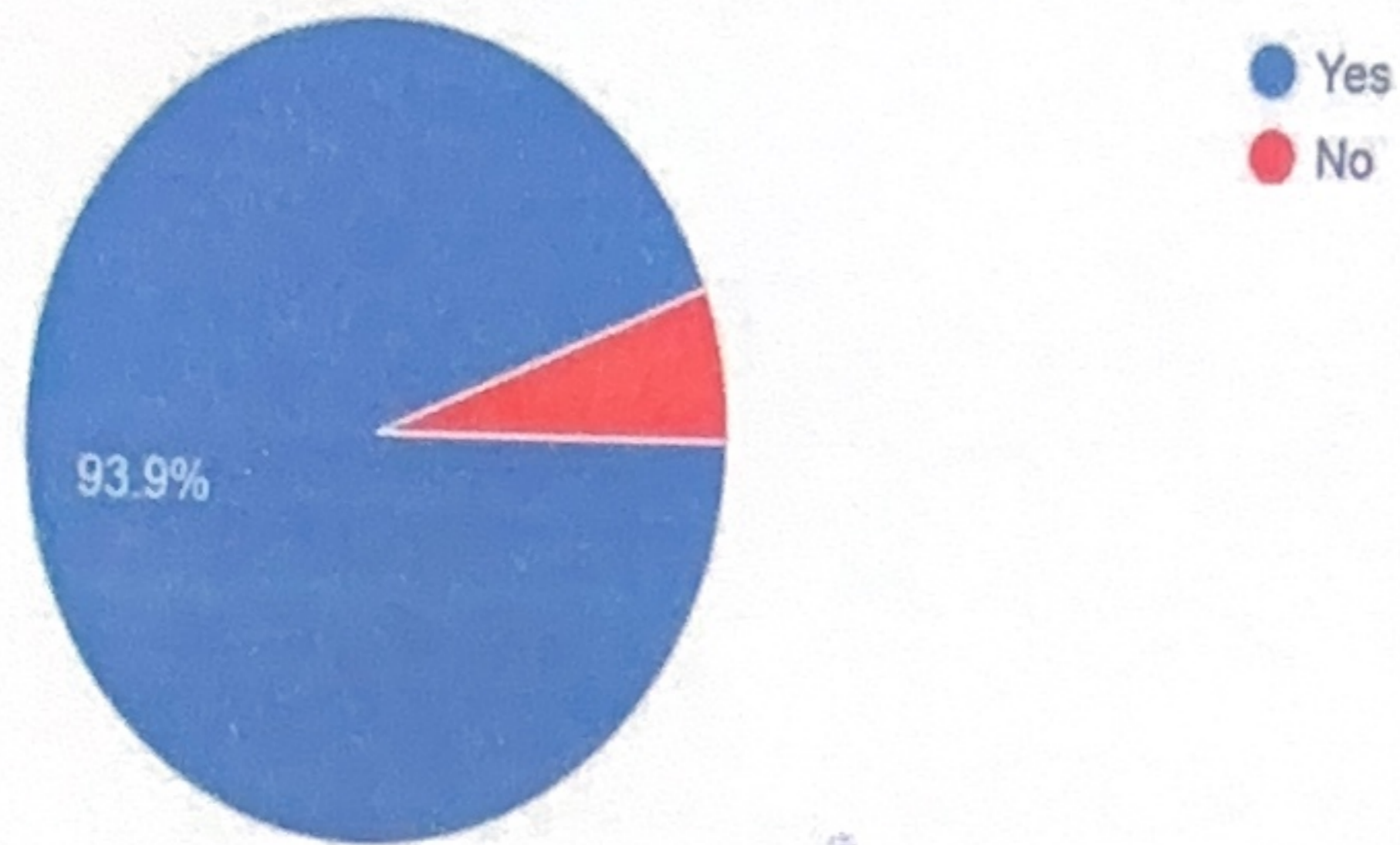





Please rate your experience

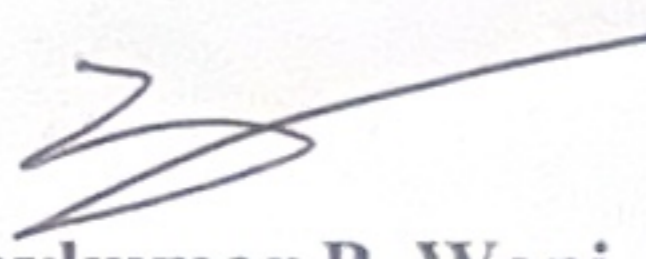


Would you be interested in attending a similar field visit in future?
33 responses




Dr. V. S. Khairnar
(FE-Coordinator)


Dr. R. S. Dhake &
Prof. R. D. Rajkuvar
(Coordinator)


Dr. Vijaykumar P. Wani
(Principal-IOE)