

REPORT

on

Industrial Visit

:

"Pandiabili GIS Sub Station"

Date : 22nd August, 2025



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Empowering Communities...

**Centurion University of Technology and Management,
Odisha, India**

Introduction :

The Department of Electrical and Electronics Engineering (EEE), School of Engineering and Technology (SoET), Centurion University of Technology and Management (CUTM), Bhubaneswar Campus, organized an **Industrial Visit** for its 3rd year and 4th year B.Tech students to the Power Grid Corporation of India Limited (PGCIL) Substation at **Pandiabili, Tirimal**, on **22nd August 2025**. The visit provided valuable insights into modern power transmission systems through exposure to Gas-Insulated Substation (GIS) and Air-Insulated Substation (AIS) technologies. The GIS section showcased compact SF₆-enclosed equipment such as busbars, circuit breakers, and isolators, offering reliability, smaller footprint, and environmental protection. By contrast, the AIS yard presented the conventional open layout, easier to maintain but more space intensive. Students also observed **transformers, relays, surge arresters, SCADA systems, and battery backups**. The session emphasized safety practices including permit-to-work, lock-out/tag-out, and gas handling. The visit successfully connected theory with industrial practice.

Objectives :

- To expose students to GIS and AIS layouts and operations in high-voltage substations.
- To familiarize them with transformers, breakers, isolators, relays, and control systems.
- To help understand grid interconnections, single-line diagrams, and interlocking schemes.
- To reinforce awareness of industrial safety protocols in transmission systems.

Key Outcomes :

- **Technology Exposure:** Students learned differences in design, operation, and maintenance between GIS and AIS technologies.
- **Equipment Familiarity:** Knowledge of circuit breakers, current and potential transformers, surge arresters, and isolators was reinforced.
- **Operational Insight:** Practical exposure to SCADA, communication channels, and DC backups linked theory to real practice.

- **Safety Awareness:** Engineers highlighted permit-to-work, lock-out/tag-out, and SF₆ handling as crucial in operations.
- **Career Orientation:** Interaction with substation experts encouraged exploration of roles in grid management and power utilities.

Feedback from Participants:

Students described the industrial visit as **highly educational**, especially in comparing **GIS** and **AIS** setups. They appreciated observing **SF₆-insulated systems**, **real-time protection relays**, and **interconnection processes**. Many remarked that the visit clarified their classroom discussions on substation layouts and improved their understanding of practical applications. The students were accompanied by **Dr. Smruti Ranjan Nayak**, who guided them throughout the visit and ensured they engaged meaningfully with **PGCIL** engineers. Faculty feedback stressed that such visits are vital for strengthening experiential learning. They recommended arranging additional visits to high-voltage substations and renewable energy plants. Students suggested follow-up technical workshops on **SCADA** programming and relay protection to deepen knowledge.

Glimpses of the Event :

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Industrial Visit
to
PANDIABILI GIS Substation

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PANDIABILI GIS SUB-STATION

The **3rd year** and **4th year** students of the Department of **Electrical and Electronics Engineering (EEE)** visited the **PGCIL Pandiabili GIS substation** on **22nd August 2025**. The visit offered practical exposure to GIS and AIS technologies, major equipment, safety protocols, and SCADA systems, enhancing their knowledge of power transmission.

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GPS Map
Camera Lite

Butterfly Garden (Centurion University), Advanced skill development centre, Jatni Rd, Jatni, Odisha 752050, India

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Friday, 22.08.2025



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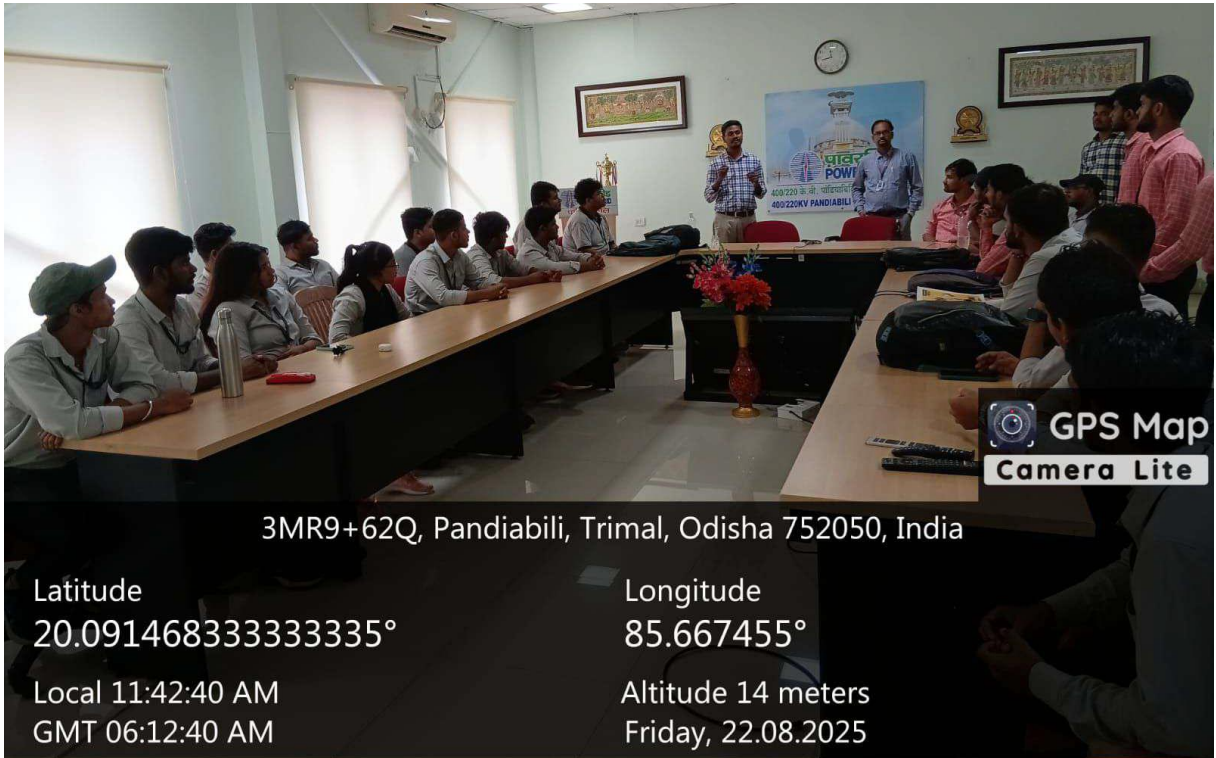
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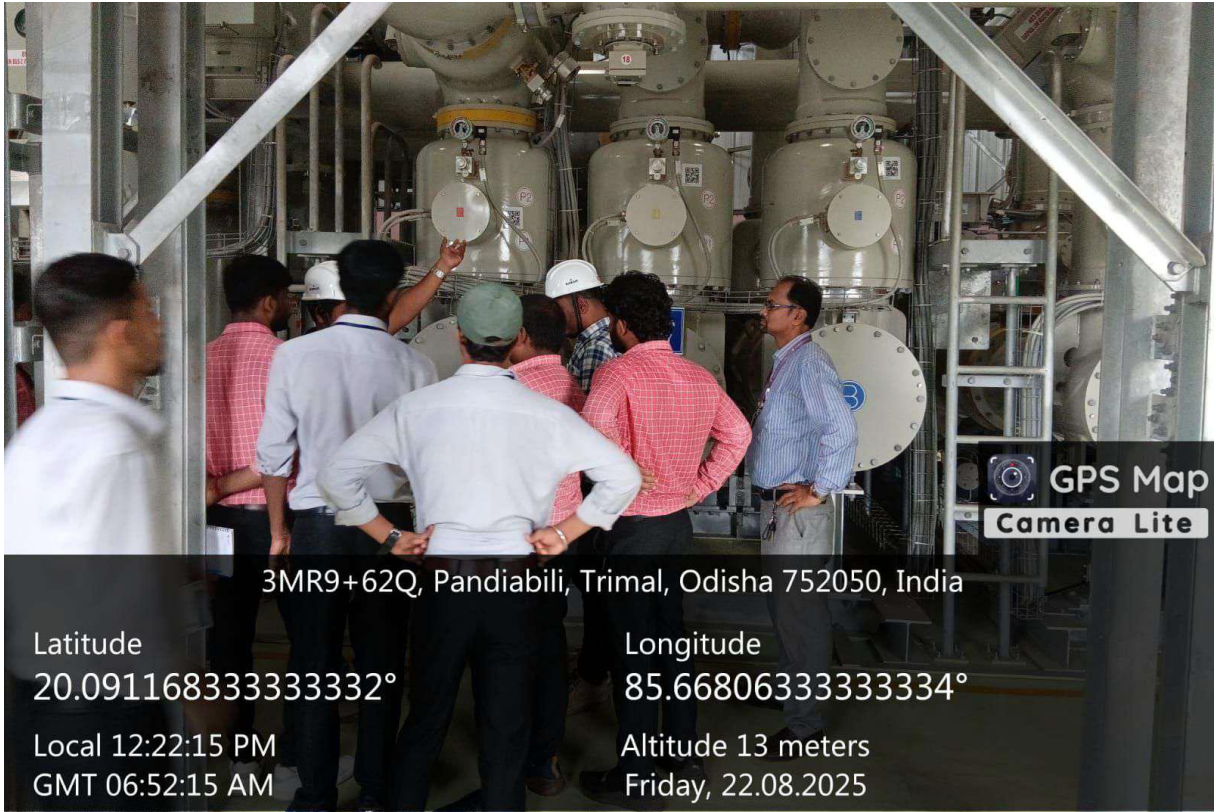
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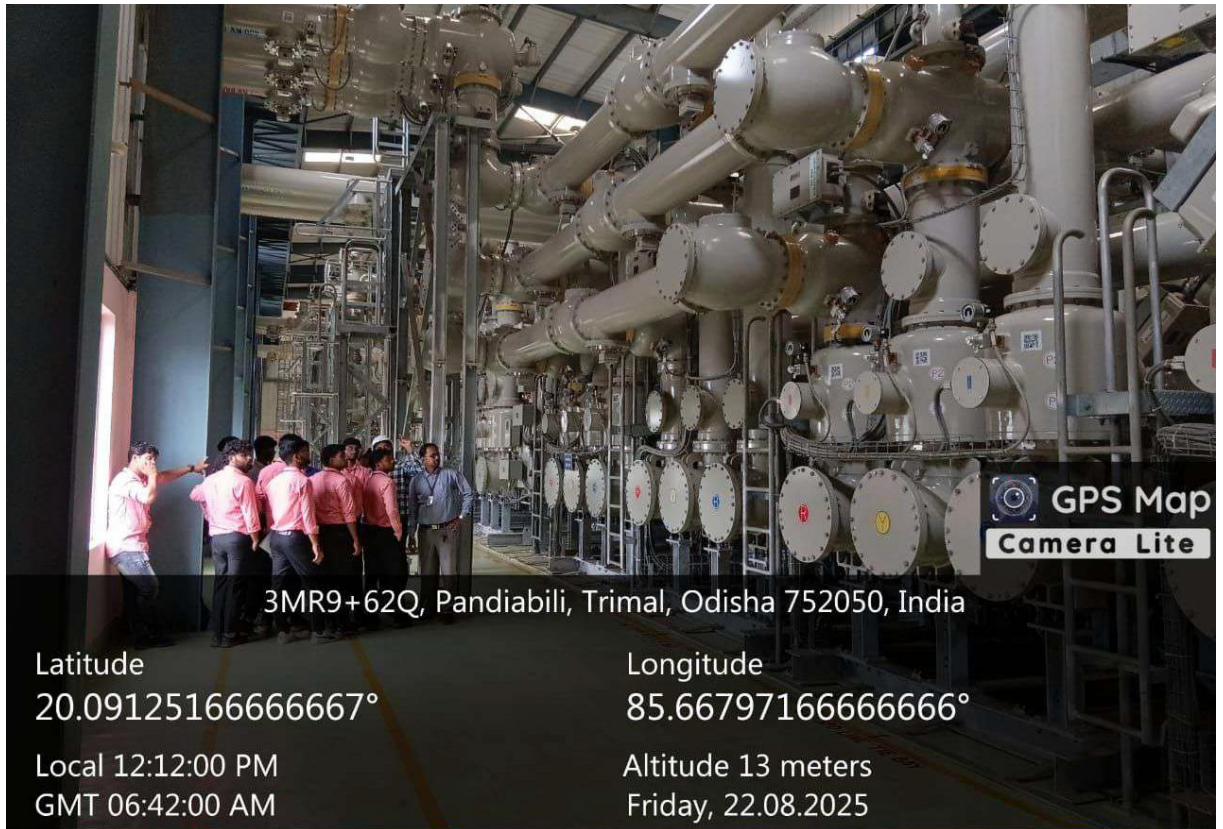
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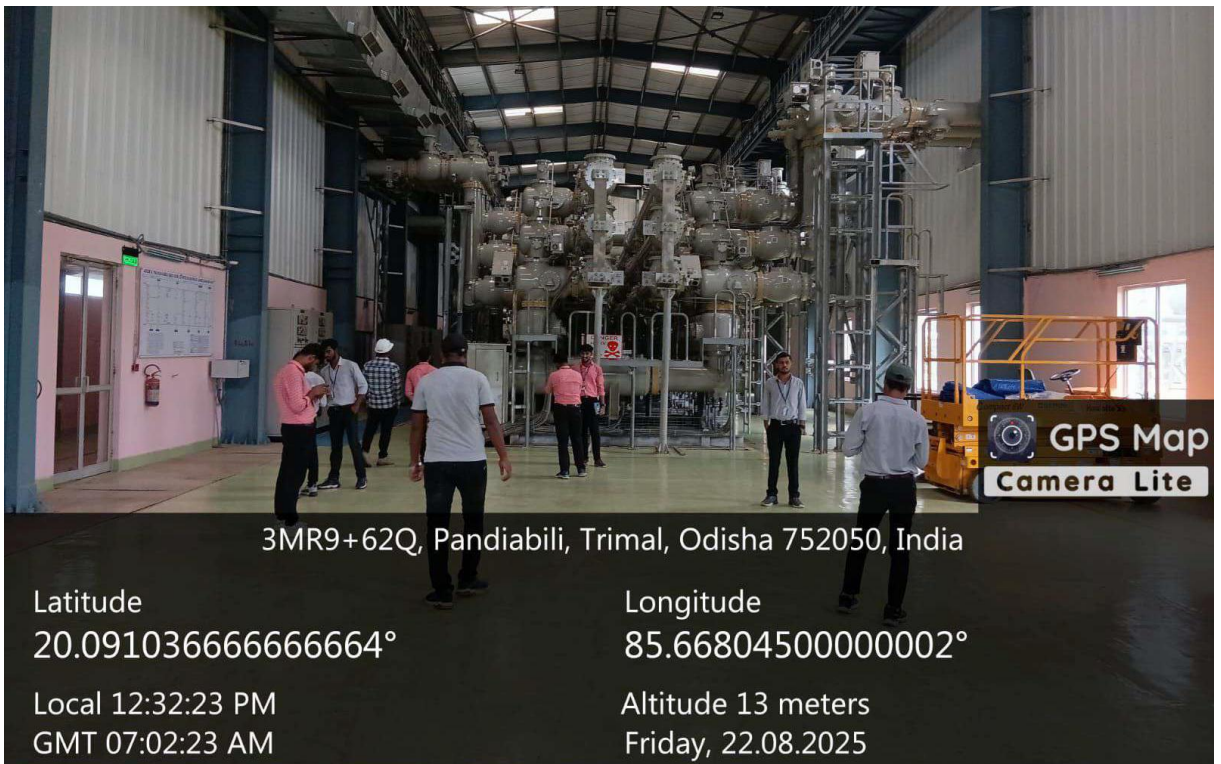
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