SurTech

Dr. Sudhir Chandra Sur Institute of Technology and Sports Complex

(Formerly Known as Dr. Sudhir Chandra Sur Degree Engineering College)

540, DumDum Road, Surer Math (Near Dum Dum Jn. Station), Kolkata-700074

Phone: +91 22 25603889, 25603898, 65330375

Website: www.surtech.edu.in; Email-info@dsec.ac.in

Title: **One-Day Industrial Visit to Bandel Thermal Power Station (BTPS), WBPDCL, Tribeni**

Objective: To provide practical exposure to thermal power generation processes, coal-handling and boiler operations, steam turbine-generator mechanics, high-voltage switchyard systems, and industrial safety protocols at a utility-scale thermal power plant.

Date: 19/11/2026 (10:30 AM onwards)

No of Student Participant: **20**

Report: The **Department of Electrical Engineering at Dr. Sudhir Chandra Sur Institute of Technology and Sports Complex organized a one-day industrial visit to the Bandel Thermal Power Station (BTPS) under The West Bengal Power Development Corporation Limited (WBPDCL), located at BTPS Township, Tribeni, Hooghly, on 19th November 2026 starting at 10:30 AM. The visit was approved and facilitated by the BTPS Training Cell, WBPDCL.**

A total of 20 students from the Department of Electrical Engineering participated in this technical visit. The visit was organized under the guidance of Dr. Sayantan Chakraborty, HoD, EE, and accompanied on-site by faculty member Mr. Subhadeep Dutta, Technical Assistant, Department of Electrical Engineering.

During the visit, engineers and technical personnel from the BTPS Training Cell demonstrated the end-to-end operational workflow of coal-fired thermal power generation. Students gained key technical insights into:

Coal Handling & Boiler Operations: Understanding coal transportation, pulverization mills, pulverized-fuel firing systems, water-wall tubes, superheaters, economizers, and flue-gas heat recovery processes.

Steam Turbine & Alternator Unit: Direct observation of high-pressure, intermediate-pressure, and low-pressure steam turbines coupled with synchronous generators, condenser systems, and cooling water circulation.

Control Room & Instrumentation: Real-time monitoring of Distributed Control Systems (DCS), boiler-turbine-generator (BTG) control panels, synchronization equipment, and automated fault-alarm systems.

Power Evacuation & Switchyard: Overview of step-up generator transformers, high-voltage busbars, circuit breakers, protective relays, and grid integration systems feeding power to the state transmission network.

Industrial Safety & Environmental Compliance: Familiarization with personal protective equipment (PPE) requirements, electrostatic precipitators (ESPs) for ash emission control, ash handling plants, and high-voltage clearance protocols.

The industrial visit proved to be an enriching academic and practical experience, effectively bridging classroom concepts of power plant engineering, electrical machines, and power systems with real-world utility-scale thermal power station operations.

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A few glimpses of the industrial visit:





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