

K. K. Wagh Institute of Engineering Education & Research, Nashik

Department of Electronics & Telecommunication Engineering

AY: 2016-17

Industrial Visit Report

Name of Industry Visited:	Reliance Dahanu Thermal Power Station (DTPS)
Address of Industry Visited:	Dahanu Road, Palghar District, Near Dahanu Railway Station, Dahanu, Maharashtra 401608
Date of Industrial Visit:	21 st Feb 2017, (11:30am to 2:30pm)
Target Participants:	students of (Electronics)
Number of Participants:	34 students of BE (Electronics) + 3 staff members
Name of Course for which Industrial Visit Organized:	Power Electronics & Applications
Name of Visit Coordinator:	Prof. K.S.Navale
Name of Instructor:	Mr. Premnath Raut (Head of Training Dept)
Outcome of Industrial Visit:	Students will be able to elaborate structure, operation & applications of Thermal Power Plant. (This outcome is mapping to PO1, PO2, PO4, PO5, PO6)

About Visited Industry:

Dahanu Thermal Power Station (DTPS), consisting two units of 250 MW, is one of the best power generation plants in the country, which commenced its commercial operations in January 1996. Recognized with innumerable awards, this power plant is known for its distinctive features that set it apart from others in terms of technological innovation, superior performance and continuous sustainability for a longer period. DTPS is located around 120 km north of Mumbai along Mumbai-Ahmedabad rail line.

The plants utilise a mix of Indian washed coal and imported coal as fuel. The general blending ratio is 80 : 20. The indigenous fuel is received from SECL (Korba) and also imported from various countries such as Indonesia and South Africa among others.

Dahanu Thermal Power Station has implemented integrated management systems (IMS) in its processes and is certified for quality management, environment management, occupational health and safety assessment studies, social accountability management, information security management, energy management and accreditation for DTPS coal testing laboratory.

Special Features:

Many features distinguish the Dahanu plant as India's one of the finest power generation plants. These include :

- The CW Systems are equipped with concrete volute pumps to facilitate the smooth functioning of Sea water condenser cooling system.
- Complete automatic control & monitoring of the three cylinders reheat condensing turbine, boiler and auxiliaries by Digital Distributed Control, Monitoring and Information System (DDC-MIS) to maintain trouble free output.
- Highly advanced Supervisory Control and Data Acquisition (SCADA) system for complete centralized control over transmission and distribution.

In a bid to ensure minimization of plant's adverse environmental impact, the DTPS has installed :

- A chimney of 275.3 mtrs height for proper emission/ dispersion of boiler exhaust
- An Electronic Electrostatic Precipitator (ESP) of 99.9% efficiency to collect fly ash with In-house developed Ammonia dosing system to improve collection efficiency.
- Four ambient air quality monitoring stations to measure hazardous gases such as PM10, PM2.5, SO2 and NOx
- Flue gas Desulphurization unit of 100% capacity having efficiency greater than 90%, for removal of Sulphur and its oxides.
- Advanced air pollution monitoring system

1	Plant Capacity :	: 2 X 250 MW
2	Land for Plant	: 351.58 hectares
3	Land for Ash disposal area	: 370.00 hectares
4	Total Coal (Washed + Imported)	: 2.6 Million tons
5	Sea Water (Condenser Cooling)	: 84,000 (M3/Hr.)
6	Sweet Water	: 300 (M3/Hr)

Prof. K.S.Navale
Industrial Visit Coordinator