D Y PATIL INSTITUTE OF ENGINEERING & TECHNOLOGY AMBI PUNE	**Department of Electrical Engineering** **TE Electrical** **SEMESTER - I, AY 2017-18**

Industrial Visit Report

Date of Visit :	10th February 2018
Time :	5:30 am to 09:05 pm
Organization Visited :	HVDC Terminal Station, MSETCL, Padgha, Mumbai 421101
No. of Student :	77
Faculty Accomplished :	Prof. Prashant M. Chavan Prof. Aparna A. Yennam Prof. Shahuraj S. Sable

The Maharashtra State Electricity Board (MSEB) built a 1,500 MW HVDC link between the cities of Chandrapur and Padghe (near Mumbai) - the first HVDC transmission link to Mumbai. The converter terminals were constructed by ABB (Sweden and India) and Bharat Heavy Electricals Limited (BHEL) of India. The 500 kV Chandrapur - Padghe HVDC Bipole feeds Mumbai on the west coast with 1,500 MW from a thermal power generation plant located near Chandrapur in the eastern part of Maharashtra State 752 km away. The link helps to stabilize the Maharashtra grid, increasing power flow on the existing 400 kV AC lines while minimizing total line losses.

±500 KV HVDC Padghe Plant Specification:

Commissioning year:	1999
Power rating:	1,500 MW
No. of poles:	2
AC voltage:	400 kV (Both Ends)
DC voltage:	±500 kV
Length of overhead DC line:	752 km
Main reason for choosing HVDC:	Long distance, network stability, environmental concerns
Application:	Connecting remote generation

The main objective of this visit can be briefed as

- Visit is compulsory as a part of curriculum designed by Savitribai Phule Pune University for the subject of Power System II, Design of Electrical Machines.
- This visit was fruitful for students to bridge the gap between the theoretical and practical knowledge.

Outcome of the visit

- Students got the basic idea about Transmission Line Power Flow, Convert DC to AC, Thyristor Bank, DC and AC Switchyard Operation, Electrode Station, PLCC and SCADA System Operation, etc.
- Students got information about how to transmit power from Chandrapur and Padghe HVDC Terminal Station.
- Students observed the whole working process of Conversion of DC to AC.
- Student got information of various section of Padghe HVDC Terminal Station.
  - AC Switchyard
  - DC Switchyard
  - Control Room
  - Safety Section

Mr. Sunil Shenava (Ex.Engineer) gives the whole information about how to works HVDC terminal Station also explains HVDC Chandrapur to Padghe indication and control panel. After explanation students have visited to DC and AC Switchyard. In DC Switchyard 2 pole coming from Chandrapur power station. Mr. Sunil Shenava have explain details about centre tap isolator, lighting arrester, capacitor bank, smoothing reactor, etc. After students have visited to AC Switchyard, in AC Switchyard Mr. Yogesh Kaware explain details about AC power Transmission and Explain various equipment's in AC Switchyard.

Students found satisfactory about the industrial visit at HVDC Terminal Station, MSETCL, Padgha, Mumbai 421101

MAHATRANSCO
Maharashtra State Electricity Transmission Co.Ltd.

Maharashtra State Electricity Transmission Company Limited

Office of The Superintending Engineer,
HVDC RS (O&M) Circle, PADGHA– 421101Tal: Bhiwandi Dist-Thane(Maharashtra) India
CIN No. U40109MH2005SGC153646
Phone No. : 9769006191 (O)**E-mail:** se7300@mahatransco.in**Website** :www.mahatransco.in

Ref. No. SE / HVDC /Padgha /Tech/ No - 0216 **Date:** 12 FEB 2018

To,
The Principal,
D. Y. Patil Institute of Engineering & Technology,
Ambi, MIDC road, Talegaon Dabhade,
Pune -410 506

Subject: Industrial Visit on dtd.**10th February, 2018** at HVDC Terminal Station, Padghe.
Ref.: 1) Your office letter No.: DYPIET/ELECT/17-18/157 dt. 12/01/2018
2) Your office letter No.: DYPIET/ELECT/17-18/167 dt. 08/02/2018

Dear Sir,

Students from T.E.. Electrical Engineering, **D. Y. Patil Institute of Engineering & Technology, Pune** have visited HVDC Terminal Station Padghe on **Date:10/02/2018** as a part of their Industrial visit.

Prof. Prashant M. Chavan, Prof. Shahuraj S. Sable & **Prof. Aparna A. Yennam** accompanied the students for the visit.

No. of candidates present = 72 (students) + 3 (faculties) = 75.

This is for your information please.

Thanking you.

(Sandeep Kalantri)
Superintending Engineer

PADGHE HVDC
ABB
MSEB

PADMA BIRI

PADGHE HVDC
MSEB
ABB