

(Affiliated to Savitribai Phule Pune University, Pune & Approved by AICTE) Gat No. 309/310, off Mumbai Pune Expressway Kusagaon (Bk), Lonavala Pune – 410401 Department of Electronics and Telecommunication Engineering

Date – 27<sup>th</sup> Sept 2017

#### NOTICE

All students are informing that Department of Electronics and Telecommunication Engineering planning to arrange **Industrial Visit** to HVDC Terminal Station, MSETCL, Padgha, on 15<sup>th</sup> Sept 2017. Interested students should contact to event coordinator Prof. Dipali Shende e before 2<sup>nd</sup> Sept 2017.

Prof. P.A. Kamble

HoD of EnTC Dept.



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# **Industrial Visit Report**

Date of Visit :	15 <sup>th</sup> Sept 2017	
Time :	5:30 am to 09:05 pm	
Organization Visited :	HVDC Terminal Station, MSETCL,	
	Padgha, Mumbai 421101	
No. of Student :	27	
Faculty Accomplished :	Prof. Dipali Shende	

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.

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

#### ±500 KV HVDC Padghe Plant Specification:



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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 **1-11 SP HAMS** 805Z IN& MEI



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# **Photos:**

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**Attendance:** 



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