SITARAMBHAI NARANJI PATEL
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A Report on Industrial Visit at ± 500 KV HVDC, Padghe Maharashtra

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.

The ± 500 KV HVDC Padghe, Maharashtra visit organized by Electrical Engineering Department of S. N. Patel Institute of Technology & Research Centre Umrakh-Bardoli on 31-07-2017. The benefit has been taken by 50 students of 4th year Electrical Engineering Department. This type of practical exposure never experienced before. The entire "Electrical engineering Department" & "T & P Team" are thankful to "The Principal", "The Vice-Principal", "The T & P Coordinator" & "The Entire HVDC Padghe Team" for their cooperation and involvement.

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$\pm$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:	$\pm$500 kV
Length of overhead DC line:	752 km
Main reason for choosing HVDC:	Long distance, network stability, environmental concerns
Application:	Connecting remote generation