

Industrial Visit

THE SARDAR SAROVAR DAM



Sarvajanik Education Society

Sarvajanik College of Engineering & Technology
Towards progressive civilization...

BE 2nd year

Electrical Engineering

SUB: A Brief Report On Industrial Visit Of

Sardar sarovar dam.

Total students visited: 118

Total faculties visited: 5

Report

In our filed trip we visited the sardar sarovar dam hydro power plant .The dam now being jeweled by the construction of the statue of unity beside it is a gravity dam, built on the narmada river near navagam. This engineering marvel was started to build in 1979 and its construction was finished on 19 january 2007 with an expenditure cost of 2200 INR Rs . The dam is surrounded on its three sides by water. Its main power plant houses six 200 MW Francis reversible Toshiba turbines to generate electricity and supply water for irrigation and drinking purposes. The lower part of the power plant additionally consists of five 50 MW Kaplan turbines supplied by BHEL which are used solely for power generation. Capacity is 1450 MW. Its power share ratio with various states is as follow:

- 27% to Maharashtra
- 16% to Gujarat
- 57% to Madhya Pradesh

The Kaplan turbines are installed 150 mtrs below the sea level accompanied by a kilometer long tunnel which is 8 mtrs*9 mtrs wide, whole tunnel is centrally air conditioned for air ventilation. The walls of the dams are seismic proof which can withstand tremors upto 7 Richter scale with epicenter of the tremors at the site. In 2007 the NCA (Narmada Control Authority) gave the clearance to raise the height of the dam from 121.69 mtrs to 136.68 mtrs .and install 30 more gates.

Its current capacity includes:

1. Irrigation : 1.84 Mha (75% area drought prone) in Gujarat.

: 0.246 Mha in desert districts of Rajasthan

2. Drinking Water : 25 Million Population (by 2011)

: 30 Million Population (by 2021)

: 9490 Villages + 173 Urban centers in Gujarat

: 1336 villages & 3 towns in Rajasthan to a population of approx. 4.58 million

3. Hydro Power : Installed capacity: 1450MW

4. Irrigation Strategy: Through RWS & PIM, maximum water use efficiency can be achieved. Water hazards due to over watering – salinity and water logging – can be prevented leading to sustainable agricultural benefits to small and marginal farmers in the command area.

Other technical and non-technical details about the dam are easily available on <http://www.sardarsarovardam.org/project-info.aspx> for reference.

Group photo at site



Students BE-II Electrical

Photographs of site



Figure - tunnel's outer photograph



Figure whole dam at a glance

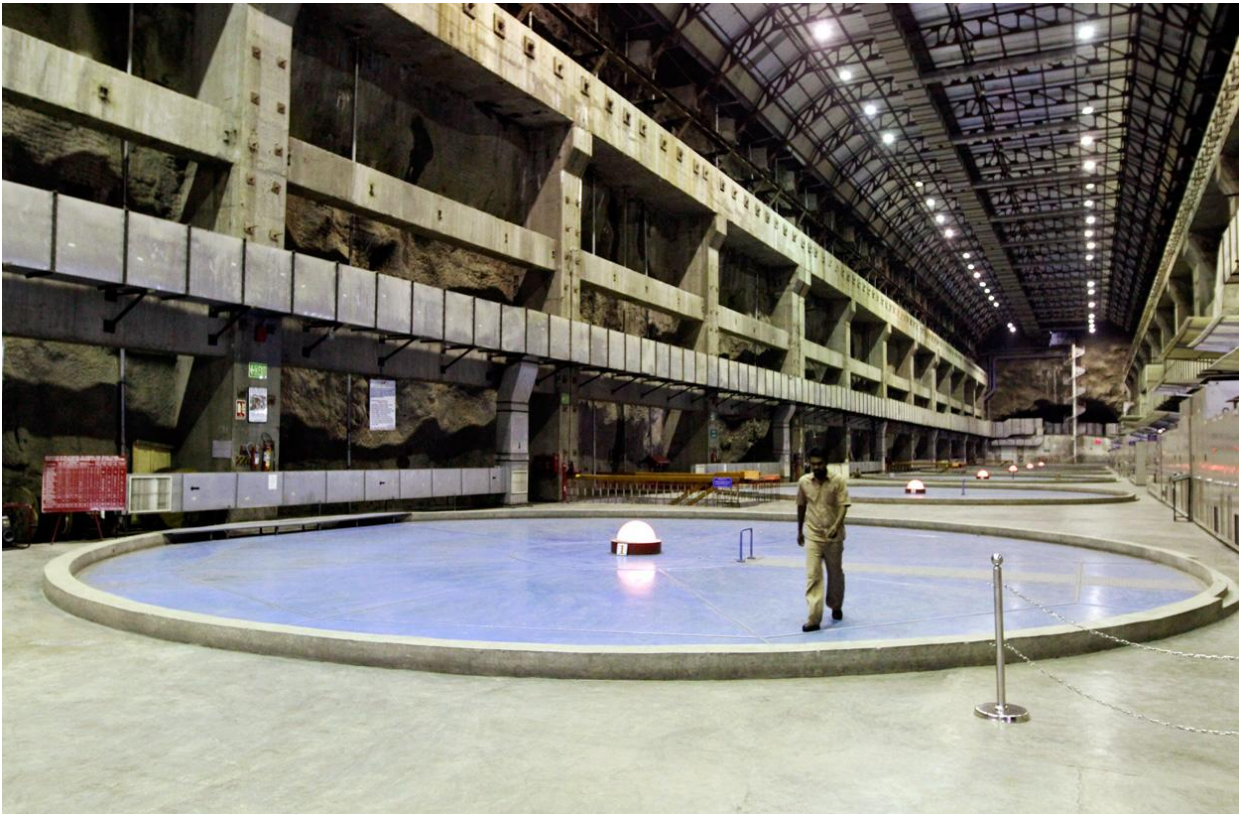


Figure inside the tunnel

