

## *Educational Enhancement Visit at Sardar Sarovar Dam*

The department of Civil Engineering had been credited to organize the visit to Sardar Sarovar dam as a part of Educational Enhancement since last 3 years.

- In the year of 2017-2018, Prof. Vimal Patel took the initiative to collaborate the Educational visit in which Mechanical Engineering and Electrical Engineering department can take part as the project involves the knowledge seedlings of these branches too.
- Visit was successfully planned and executed by Prof. Nidhi Chandarana and Prof. Lekhank bhuvra for Civil Engineering Department students on 17/09/2018 under guidance of Prof. Vimal Patel
- The total 33 students had actively participated in the visit to get fruitful knowledge.
- **Site Information :**
- **Site 1: Statue of Unity**
- An iconic 182 meter tall statue, a tribute to the Iron Man of India, is being built at the Sadhu-Bet Island, approximately 3.5kms south of Sardar Sarovar Dam at Kevadia in the Narmada district of Gujarat This inspiring memorial site, with a number of edu-tainment components, is located between the Vindhyachal and Satpuda Ranges rising weir Narmada River, impounded by Garudeshwar, the Sardar Sarovar Dam and the town of Kevadia. The majesty of this grand monument will be enhanced by a picturesque backdrop. Its unique location will prove to be beneficial for eco-tourism and regional development.
- The total project cost is estimated to be Rs. 2989 crore, and will be completed in four years.



**“Work has been completed upto full body”**

- Site 2: Sardar sarovar Dam (Narmda)

**Glimpses of visit**

- The site visit carried out at “Sardar Sarovar Dam for 5th and 3rd semester students.
- The visit begun at “Sardar Sarovar Dam” at Narmada at around 10:00 A.M.
- The Sardar Sarovar Dam is a gravity dam on the Narmada river near Navagam, Gujarat in India. Four Indian states, Gujarat, Madhya Pradesh, Maharastra and Rajasthan, receive water and electricity supplied from the dam. The foundation stone of the project was laid out by Prime

Minister Jawaharlal Nehru on April 5, 1961. The project took form in 1979 as part of a development scheme to increase irrigation and produce hydroelectricity. The dam was inaugurated by Prime Minister Narendra Modi on 17 September, 2017

- Its Length is 1.6 km. The student's observed the retaining wall while travelling through tunnel. The Height of dam is 163 m and active Capacity of Dam is 5800000000 m<sup>3</sup>. Spillway capacity is 84949 m<sup>3</sup>/s. The Length of Dam is 1210 m. Power station Information: there are 6 big turbines are working at a time. In these turbine 6\*200 MW (Francis pump Turbine) and 5\*50 MW (Kaplan type turbine). Total Capacity of Turbines is 1450 MW. In these 3 Turbines are Reversible. It works as pump also because at recycling of Water we need to pump at that time Turbines are work as Pump.
- After that Technical person gave all process of supplying of water with help of the chart. Also give the information about material and technology used for construction of Dam and give information about quantity the concreting work done.

Outcome:

- The students were able to drive the theoretical concept of hydraulic engineering,
- The students learned the geology parameter which is important for construction of dam
- Students come to know about construction advancement techniques
- The students develop the idea of Minor work and precaution required while taking up the massive projects.





**“ Student’s and faculties at Sardar Sarovar Dam – Narmada River”**



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### “ Beautiful Landscape Of the Dam”

- Students were taken inside the tunnel for observing turbines & control room. Inside the tunnel there is six turbine-generator set for production of electricity. Then they also explain the canal structure for irrigation point of view. Students were told that how the distribution of generated electricity is done between states like Gujarat, Maharashtra & Madhya Pradesh.

Site: 3

### Main canal and reservoir site

- There are total 5 Radial Gates provided to release water to different distributaries
- Ability to release Total 40,000 cusec water to the distributaries that water fulfils the Industrial Visit as well as Domestic demand of Gujarat. Two Yojna for water dis Gujarat is Sauni Yojna and Sujlam Suflam Yojna feeds from here.



“Details of Narmada main Canal”