



SHAHAJIRAO PATIL VIKAS PRATISHTHAN
S. B. PATIL COLLEGE OF ENGINEERING, INDAPUR, DIST: PUNE.

DEPARTMENT OF ELECTRICAL ENGINEERING

ACA – R - 63	Industrial Visit Report	Academic Year: 2024-25
Rev : 00		Semester: I
Date: 01.07.2014		

Ref: SPVP/SBPCOE/ELECT/2024-25 /F-16/04

Date: 31/09/2024

To,
The Principal,
SBPCOE, Indapur

Through: The HOD of Electrical Engg. Dept
Subject: Submission of the Report of Industrial Visit

Respected Sir,

With above reference, we have successfully conducted the industrial visit for the students of SE on 28/09/2023. The details are given below. The detailed report (Documents, photographs and certificates etc.) is enclosed herewith.

➤ **Expected Outcomes**

- To understand the various types and construction of turbine.
- To understand the various operation of generating power .
- To understand the various materials used for blade of turbine.

➤ **Aim of Industrial visit**

- It's lets student to know things practically through interaction & working method.
- To provide an exposure to student about practical working environment.
- To get a good opportunity to get full awareness about industrial practise.
- To raise the awareness about new technologies.
- After visiting an industry student can gain a combined knowledge about both theory and practical.
- Students will be more concerned about earning a job after an Industrial Visit.

No. of Students: 50

Faculty Coordinator and Members: 1. Prof. M.D.Patil
2. Prof. K.S.Tamboli
3. Prof. M.S.Gophane
4. Prof.R.S.Dhende

Sr. No.	Date	Industry / Place visited	Important details of visit
1	28/09/2023	Hydro Electric Power Plant,Ujjani.	Seen Working, Operation and constructional details of hydro power plant.



28th September, 2023

As per the decided date all the SE students and the faculty were gathered in the college, attendance of all students was taken by the HOD of electrical department Prof. T. V. Deokar. Then, we visited the Ujjani Hydro Power Plant, Ujjani, Tal-Madha, Dist-Solapur.

Ujjani Dam, also known as Bhima Dam or Bhima Irrigation Project, on the Bhima River, a tributary of the Krishna River, is an earthfill cum Masonry gravity dam located near Ujjani village of Madha Taluk in Solapur district of the state of Maharashtra in India. The Ujjani Hydro power station is located beside Ujjani Dam, which was constructed in 1980, mainly for irrigation purposes, and runs on water released from the dam. The power station has a unique reversible generating unit, which can generate 12 MW when water is released from the dam and also functions as a water pump. A pumped storage type powerhouse has been built at the toe of the dam with an installed capacity of 12 MW (one unit of vertical Francis-reversible pump turbine) on the left bank of the dam, 65 m (213 ft) downstream from the axis of the dam. It operates below 20 percent load factor under a range of maximum head of 36.77 m (120.6 ft) and minimum head of 25.6 m (84 ft). The hydropower component involved construction of a 13.42 m (44.0 ft) high weir, 915 m (3,002 ft) below the Ujjani Dam to control the lower pond for operation during the pumping mode.^[17] A penstock pipe of 3.2 m (10 ft) diameter (12 mm (0.47 in) thick) and 70 m (230 ft) length embedded in the dam diverts the flow of 44 m³/s (1,600 cu ft/s) from a gate controlled trash racks (15 panels) covered intake into the powerhouse. The lower pond in the pumped storage scheme of operation was built initially itself, soon after commissioning of the dam. The power plant is reported to be providing benefits since then. However, the power generation estimated initially at 105 GWh was expected to reduce to 21 GWh, as water was utilized for irrigation through the RBC and LBC canal systems.

A turbine consists of three essential parts: the tower, the nacelle, and the rotor blades. The tower structured as a steel lattice tower similar to electrical towers or sometimes as a steel tube-shaped tower with an inside ladder to the nacelle. At the same time, the rotor blades are connected to the nacelle. The rotor and the rotor blades convert wind energy into rotational mechanical movement. The three-blade horizontal axis rotor is presently the most common. The rotor blades are primarily made of reinforced carbon-fibre plastics or glass fibre. The design of the blade is exceptionally similar to that of the aero plane wing.

Thanking You.

Yours faithfully,

Prof. Tamboli K.S.
Industrial Visit Coordinator
Electrical Engg. Dept.



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Prof. K. S. Tamboli
Visit Coordinator

Prof. T. V. Deokar
HOD

Dr. S. T. Shirkande
Principal