



**G.H.PATEL COLLEGE OF ENGINEERING & TECHNOLOGY,  
Vallabh Vidyanagar**



**Department of Electronics and Communication  
Engineering**



**न्यूक्लियर पावर कॉर्पोरेशन ऑफ इंडिया लिमिटेड  
भारत सरकार का उद्यम**

**NUCLEAR POWER CORPORATION OF INDIA LIMITED  
A Government of India Enterprise**

## **INDUSTRIAL VISIT REPORT**

**NAME OF THE INDUSTRY: Kakrapar Atomic Power Station  
(KAPS) Kakrapar**

**DATE: 8<sup>th</sup>, MARCH, 2018**

**VENUE: Moti Cher, Gujarat 394360**

**NO. OF STUDENTS PARTICIPATED: 37(Second Year EC Students)**

**FACULTY MEMBERS: 04**

Prof. Rohit Parmar

Prof. Sameer Trapasiya

Prof. Mayank Mahant

Prof. Nirav Desai

Objectives of Industrial are to enhance the knowledge of students, to make aware of real industry, to know the persons of industry and what is the working role of the person in the industry.

One day industry visit to Kakrapar Atomic Power Station (KAPS) was organized by Electronics & Communication Engineering Department, GCET for their 4<sup>th</sup>-semester students as a part of Industrial visit activity. The visit was planned for making observations in the desired framework of the study.

Kakrapar Atomic Power Station (KAPS), the fifth nuclear power station of India is situated on the Southern bank of Kakrapar weir, about 4 km away from Kakrapar dam. The Kakrapar weir is about 29 km downstream of Ukai Dam built on river Tapti. The latitude and longitude of the site are 21 14' and 73 22' E respectively. The site is in the South Gujarat region of Surat district in Gujarat State. It is about 86 km by road east of Surat on Surat-Dhulia road via Bardoli.

Kakrapar Atomic Power Station (KAPS) consists of two identical pressurized heavy water reactors (PHWR) of 220 Mwe, each reactor is natural uranium fuelled with on power refueling facility.. The reactor, boilers and most of the associated auxiliary equipment and systems are located in the Reactor Building. The building is so designed to contain all radioactive effluents which could result from the reactor systems failure. The service building is connected to the Reactor Building through double-door main airlocks. The Turbine building houses turbo-generator sets and pertinent systems which include condenser cooling, diesel generators, and other related components.

The heat abstracted from various cooling systems is dissipated to the atmosphere through Natural Draft Cooling Tower (NDCT) for condenser cooling and through Induced Draft Cooling Tower (IDCT) for active process water cooling beside other cooling equipment. The water required is drawn from the Moticher pond (by Kakrapar Left Bank Canal) by plant water pumps through intake structure and buried pipelines (KAPS Pamphlet, 1996). The water requirements of the plant for cooling make-up and raw water system are met from the Moticher lake, which is balancing reservoir between Kakrapar weir and head regulator at Ratania village.

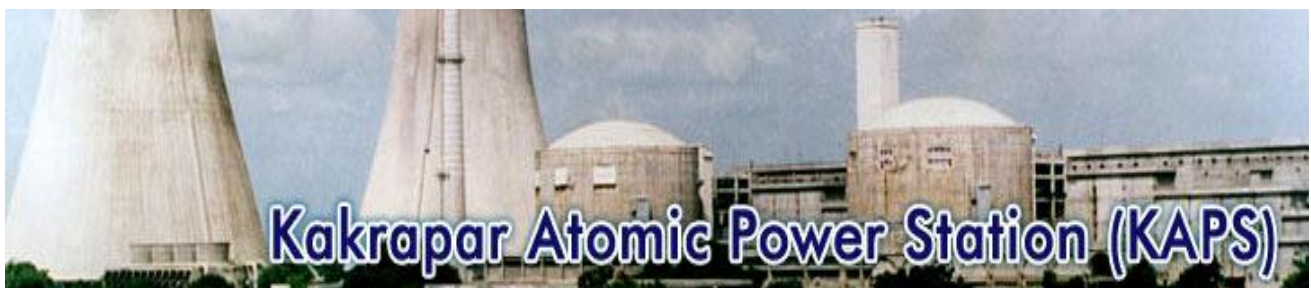
Due to prior communications with KAPS, Public Relation officer made special arrangements for students of GCET. The visit started with the visiting museum where theoretically knowledge was provided along with an explanation of model of KAPS and nuclear power plant architecture and showing a glimpse of KAPS. It also gave an introduction of company profile and its present functioning in KAPS for a different activity.

In post visit period students visited Cooling tower, Control room, Turbine section, Power Transmission section.

We are thankful to the institute & company management for providing all facilities and generous support.

This visit was organized in association with GCET ISTE Student Branch.

### **PHOTOGRAPHS**





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