

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE (UGC - AUTONOMOUS)

Report on Industrial Visit to Polavaram Dam Project 28 - 29 January 2019



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As a part of imparting innovative technologies to the MITS students in the field of Engineering and Construction practices and also with the initiation and inspiration from our beloved Secretary and Correspondent Dr. N. Vijaya Bhaskar Choudary, we the Department of Civil Engineering, Madanapalle Institute of Technology and Science have arranged an Industrial Visit for II and III year students to Polavaram project on 28th & 29th January, 2019 situated at West Godavari district in Andhra Pradesh

Acknowledgement

On behalf of the Civil Engineering department, we, the faculty and all II year and III year students are really thankful to our beloved Secretary and Correspondent Dr. N. Vijaya Bhaskar Choudary for providing the opportunity for the memorable visit to Polavaram project, where we enhanced our knowledge towards the Construction of massive dam structures and innovative materials that are available in the construction industry. We thank the Principal Dr. C. Yuvaraj for arranging the facilities and sanctioning the budget. We thank Dr. Thulasiram Naidu, Associate Dean, R&D & Consultancy for his immense cooperation and help in arranging transportation facility by talking to Water Resources and Irrigation Department officials. In this connection, we also thank Sri. Raghava Reddy, SE, Irrigation Department, Chittoor Dist., Sri. Krishna Prasad, EE, Irrigation Department, Madanapalle division, Madanapalle and Mrs. Lakshmi, APSRTC Depot-1 Manager for their help in arranging the AP government buses for the visit. We are also very much thankful to the authorities of Polavaram Dam project. Last but not least, we thank Andhra Pradesh government for giving us permission to visit the epic construction in India which is a Civil Engineering miracle.

We thank the honorable Chief Minister of Andhra Pradesh Sri. N. Chandrababu Naidu for giving this opportunity and providing transportation to Polavaram. Though there was huge work going on, officials at Polavaram have given their best to us in order to explain the construction of dam. We are very happy for their interest.

Purpose of Visit

The objective of this industrial visit is to help students gain first-hand information regarding the various state of the art engineering materials and technologies available in the construction industry. An industrial visit helps to bridge the gap between classroom and the real field world. Industrial visits give students insight into their future professions by giving them the opportunity to observe industrial processes in operation. One of the important objectives of engineering course is to prepare graduates to quickly become productive upon entering the workforce. Therefore, industrial visit makes students understand the subject to its core and its deeper practical experiences in real field situation. Keeping all the above said points in view, our college management, Principal and Civil Department faculty members had arranged an industrial visit on 28th January 2018 to Polavaram project.

What Students Learnt?

- Raw materials used in the construction of dam
- In and Out of construction of dam, the dimensions of the dam
- Students learnt about the parts of the dam
- They had a great exposure in the tasks of mobilization of site
- Polavaram dam is the India's first dam which has a discharge of 50 L cusec/sec when all the gates are open.
- It has a capacity of 194 TMC
- Right canal of Polavaram project is towards Vijayawada
- Left canal of Polavaram project is towards Vishakhapatnam
- 960 MW Power plant is established to provide electricity
- Gates of Polavaram dam are nearly 20m height

Different manufacturing and process units for construction materials at Project site

- Students were explained about Cofferdam and its uses. They came to know about the purpose of coffer dam and the construction of cofferdam.

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- Especially in Polavaram project, cofferdam was built on a wall which was dug up to nearly 90m down. Hard rock was found at 90m from the ground surface. Plastic Concrete was used in the construction of cofferdam
- Hard rock was found at depth of 18m from the ground surface for the main dam.
- There are 40 gates in the dam
- Students experienced the pouring of concrete
- Transportation of concrete through chutes was witnessed by students
- Building construction using steel columns,
- Different types of adhesives and paints used in the construction for various purposes and its applications.
- Alternative materials for sand like M-Sand and its usage and uses.

Students' feedback

- After the visit, students' feedback has been collected on 31-1-2019. The summary of feedback is given below
 - Through this type of visits, the students knew how to apply learned concepts practically in the field
 - Got state of the art information about various innovative materials available in market.
 - Came to know about advanced manufacturing techniques in construction of dam.
 - Students felt very much happy for visiting the office at Polavaram which had the prototype of Polavaram Dam project
 - Students expressed their sincere thanks to Management, Principal, Dean R&D & Consultancy, Irrigation Department officials and DM, APSTRC, Madanapalle Depot and Department faculty and staff for arranging this visit.
 - The students felt that, this type of field/industrial visits is necessary once or twice in a semester to improve practical knowledge on the subjects.