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छोटुभाई गोपालभाई पटेल प्रौद्योगिकी संस्थान, वारडोली
Chhotubhai Gopalbhai Patel Institute of Technology, Bardoli

Uka Tarsadia University

Department of Civil Engineering

Site Visit

(A technical site visit was organized for 3rd year civil engineering students. The purpose of this visit was to gain real life application of Advanced concrete technology subject.)

Visit to Pramukh Testing Laboratory for Civil Engineering Students

Date: 27/09/2024

Venue: Nana Varachha Surat

Time: 9.30 AM to 3.30 PM

Total No. of Participants: 9

Name of the Expert: Mr Shivang Dhabhi

Event Coordinator: Ms. Palak Trivedi

Program objective:

The objective of the visit was to:

- Understand the functioning and importance of a testing laboratory in civil engineering projects.
- Gain insights into different types of tests conducted on construction materials such as cement, aggregates, steel, concrete, and soil.
- Familiarize students with modern testing equipment and procedures used to ensure the quality and safety of civil engineering structures.

Program outline:**Site Tour:**

- **09:30 AM:** Arrival and Introduction to lab
- **09:45 AM:** Welcome and orientation by site personnel
- **09:45 AM:** Understanding Self compacting concrete mix design.
- **10:30 AM:** Preparing for trial mix-1 for SCC
- **11:00 AM:** Demonstration of Flow table test, V-Funnel test, L-box test, U-box test for trial Mix-1
- **12:30 PM:** Lunch Break
- **1:00 PM:** Preparing for trial mix-2 for SCC
- **1:30 PM:** Demonstration of Flow table test, V-Funnel test, L-box test, U-box test for trial Mix -2
- **2:30 PM:** Hands on Practice on Nondestructive testing.
- **3:30 PM:** Conclusion of the visit and group photo.

Program outcomes:

The visit provided the following learning outcomes:

- Students gained hands-on experience with testing equipment and procedures.
- They developed a deeper understanding of the significance of quality assurance in construction materials.
- The visit reinforced theoretical concepts covered in the classroom and showcased their application in real-world scenarios.
- It also highlighted the importance of laboratory tests in ensuring the durability and safety of civil engineering structures.

List of Participants

Sr. No	Enroll No	Name	Name of Program
1	202203103510154	HARMIT D PATEL	B.Tech Civil
2	202203103510155	PRATIKKUMAR I PATEL	B.Tech Civil
3	202203103510156	Raju Singh k Rajput	B.Tech Civil
4	202203103510315	TAHIR I HAFEJI	B.Tech Civil
5	202203103510316	MEET N LAD	B.Tech Civil
6	202303103520026	PRATIKSHABEN D VASAVA	B.Tech Civil
7	202303103520027	Isha J Rana	B.Tech Civil
8	202303103520028	Swetax D Patel	B.Tech Civil
9	202303103520029	VRUNDANKUMAR R PATEL	B.Tech Civil

Details to be included

Introduction:

On 27/09/2024, the students of 3rd year from the Civil Engineering Department of CGPIT visited Pramukh Testing Laboratory as part of their educational curriculum. The primary aim of the visit was to provide students with practical exposure to advanced material testing methods and to bridge the gap between theoretical knowledge and real-world application.

Overview of Pramukh Testing Laboratory:

Pramukh Testing Laboratory is an NABL (National Accreditation Board for Testing and Calibration Laboratories) accredited facility that specializes in testing various construction materials. The laboratory is equipped with state-of-the-art machines and technologies that are widely used in quality control and research for civil engineering projects.

Key Testing Procedures Demonstrated:

Concrete Testing:

- **Slump Test:** The laboratory staff conducted a slump test to assess the workability of fresh concrete.
- **Compressive Strength Test of Concrete Cubes:** The students were shown the process of testing the compressive strength of cured concrete cubes.
- **Flexural Strength Test:** The procedure for testing the flexural strength of concrete beams was demonstrated.
- **Flow Table Test:** Measures the flowability of concrete by determining its spread on a flat surface when vibrated.
- **V-Funnel Test:** Assesses the viscosity of self-compacting concrete by measuring the time it takes for concrete to flow through a narrow funnel.
- **L-Box Test:** Evaluates the passing ability of self-compacting concrete by measuring its ability to flow through obstacles in an L-shaped box.
- **Ultrasonic Pulse Velocity (UPV) Test:** Measures the speed of ultrasonic pulses through concrete to assess its uniformity, quality, and detect flaws or voids.

Interaction and Q&A Session:

- The laboratory professionals encouraged students to ask questions and clarify their doubts regarding testing procedures and the significance of material quality in construction. The interactive session allowed students to better understand the real-world challenges and how quality control measures are implemented in construction projects.

Glimpse of the Site Visit





Concluding Remarks

- The visit to Pramukh Testing Laboratory was a highly educational and insightful experience for the students. It provided them with valuable exposure to various material testing techniques and equipment, which are essential for ensuring the quality of construction projects. The students left with a greater appreciation for the importance of material testing in civil engineering practice and a better understanding of the standards and procedures involved.

Acknowledgements:

- We would like to extend our sincere thanks to the management and staff of Pramukh Testing Laboratory for their time, guidance, and cooperation during the visit. Special thanks to Mr. Shivang Dhabhi for providing detailed explanations of the tests and answering the students' queries. The visit would not have been successful without their support.

Report prepared by:

Ms. Palak Trivedi

Date: 05/10/2024

Sign of the HOD