

## **INDUSTRIAL VISIT REPORT**

A complete report on industrial visit organized by Shree Ramkrishna Institute of Computer Education and Applied Sciences, for the students of B.Sc Sem III and V Environmental Sciences and MSc SEM I and III of Environmental Sciences and Industrial Safety & Management in order to get the practical knowledge about “To interact the students with actual industry personals, to make them aware of the industrial procedures required to enter in any company, To experience the working environment in industry and visualize all the important Departments in the Industry, Interaction of students with the peoples of all important department, to provide an exposure to actual difference between theoretical diagram of object and actual working process rather than ideal one”.

**Name of College: - Shree Ramkrishna Institute of Computer Education and Applied Sciences, Sarvajanik University, Surat.**

**Department: Environmental Science**

**Date of visit: 20/09/2025**

**Faculty Accompanied: 1.) Prof. Pratik Patel**

**2.) Prof. Bhavin Bhatt**

**3.) Lab Asst. Riya Desai**

**Detail of Industry:**

**Name of Industry/Place: Pandesara, CETP, Surat.**

**Address: R.S.NO.46, Opp. Palladium Residency, Nr. Tirupati Circle, Vadod, Bhestan, Surat, Gujarat 394221.**

**Descriptions:**

On 20<sup>th</sup> September 2025, at 10:30A.M., A visit to the Common Effluent Treatment Plant (CETP) located in Pandesara, Surat, was organized as part of an academic program. The plant is a model facility for treating industrial effluents in an environmentally sustainable manner. We all gathered at the CETP by the allotted time. After the arrival of all the students, we were asked to be present in the conference room, where Mr. Deepak Dave gave brief introduction about the CETP, how and by which methods they treat wastewater of different industries. After the briefing, we were divided into two groups for the plant visit. This report provides an overview of the treatment processes, infrastructure, and environmental practices observed at the plant.

1. **Location and Capacity:** The CETP is strategically located at Resin Land, approximately 3 km from Pandesara industrial estate. Treatment Capacity: The plant is designed to handle 100 MLD (Million Liters per Day) of effluent from various industries, ensuring compliance with environmental regulations.
2. **Green Belt Development:** The CETP boasts an impressive 42,300 sq. meters of green belt, contributing to biodiversity and acting as a natural barrier for pollution control.
3. **Non-Conventional Energy Use:** The plant relies on non-conventional energy sources to minimize its carbon footprint.  
Solar Energy: Plays a vital role in powering the sludge drying system, demonstrating sustainable practices
4. **Screening:** The first stage of treatment involves five hydraulic bar screens with a mesh size of 6 mm.  
Purpose: Removes large debris, such as plastics and solid waste, to prevent damage to downstream equipment.  
Efficiency: Ensures smooth flow of effluent into the subsequent treatment stages.
5. **Equalization Tank:** The effluent is stored and homogenized in the equalization tank.  
Purpose: Balances variations in effluent quality and flow rate. A continuous mixing mechanism prevents settling and ensures uniformity.
6. **Pre-Settling Tank:** There are total 3 pre-settling tanks are present.  
Treatment Additives: Lime stone and PLC (Poly Aluminum Chloride) solutions are added for pre-treatment.  
Function: Helps in coagulation and flocculation, allowing suspended solids to settle before primary treatment.
7. **Primary Sedimentation Tanks:** There are total 2 primary sedimentation tanks.  
These tanks separate heavier solids from the effluent.  
Observation: The process significantly reduces the pollutant load entering the biological treatment stage.
8. **Sequential Batch Reactors (SBRs):** The plant operates 10 SBR units, producing six sludge belts daily.  
Segmentation: Each belt operates for 40-60 minutes.  
Parameters like MLVS (Mixed Liquor Volatile Suspended Solids) and SVI (Sludge Volume Index) are closely monitored to ensure efficient biological treatment.  
Output: Treated water meets the discharge standards for reuse or safe disposal.
9. **Sludge Management:**  
Moisture Content: The sludge produced contains 40-50% moisture, referred to as "wet cake".  
Solar Sludge Drying System: Utilizes solar energy to dry sludge. The dried sludge is sold to cement industries as a raw material, promoting waste-to-resource conversion.

**Conclusion:** The visit to CETP, Pandesara, showcased advanced wastewater treatment processes and sustainable waste management practices. The integration of solar sludge drying, extensive green belt

development, and reliance on non-conventional energy highlight the plant's commitment to environmental sustainability.

After the visit, we were again asked to gather in the conference room where, the doubt discussion session was made available to all the students and professors. Their queries were addressed in a highly understanding manner. Additionally, a few students were invited to share their feedback about the visit.

**Acknowledgment:**

We express our gratitude to the management and the staff of CETP, Pandesara, for their guidance and hospitality during the visit, which made this a valuable and insightful experience.



