

L. J. Institute of Engineering & Technology

LJ Campus, Near Sanand Sarkhej Circle, S.G.Highway,
Ahmedabad

Technical Visit Report

Department of Civil Engineering

Date of Visit

(11-01-2025)

Place:

(Jaspur Water Works, Jaspur, Ahmedabad, Gujarat)

Duration of Visit

(4 Hours 15 Minutes)

BE Semester: V

No. of Students Participant in Visit

One Batch

13 Students

Name of Faculty Members

Contact Number:

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INFORMATION ABOUT PLACE:

Jaspur water treatment plant has a capacity of purifying 400 MLD of water at present and supply to the New West Zone of Ahmedabad city. It has two plants one having capacity of purifying 275 MLD and another with 125 MLD and increasing the capacity by 600 MLD through expansion of existing plant.

The plant gets raw water from Canal Intake structure. The canal is Dholka Branch Canal of Narmada main Canal.

OBSERVATIONS DURING THE VISIT 125 MLD PLANT.

- We visited the treatment plant of 125 MLD capacity.
- The water to the treatment plant is obtained from canal under the gravity system of water supply. The water is supplied to other treatment units under gravity only.

Process – 1:

- In the beginning of process, raw water from Dholka line canal is collected through screeners in still tank which has mixer wherein Alum is added. As the water is not turbide, no need to add alum in the raw water.
- Chlorine is supplied to intake bay in order to kill pathogenic organisms which is known as pre-chlorination since chlorination is done before treatment.
- The amount of chlorine to be used vary from season to season. Since chlorine gets evaporated, the amount of chlorine used in summer is more as compared to other seasons.

Process – 2:

- The water taken from the intake is sent to still tank under pumped system which is further supplied to clariflocculator.
- In summer raw water has 5 NTU turbidity but in monsoon it increases to about 10 NTU. In order to maintain the turbidity different chemicals are used. The chemical used in this plant is Alum, if required.
- In this plant, intermediate chlorination is been done before water goes into the clariflocculator as turbidity is maintained less than 5 and hence, alum is not used.

Process – 3:

- Water from the clarifier is sent to filters where filtration takes place. However, in order to avoid choking of filters, pressurized water is supplied from bottom to top clearing filter media which is called back washing, repeated every 2-3 days for maintenance.
- The type of filter used is Rapid Sand filter. Students have seen all the process and how the valves are being operated for the filtration and back washing.

Process – 4:

- In the last stage of treatment, chlorination is done once again known as post-chlorination. This process is carried out in order to remove bacteria, viruses and smell from water and make water ammonia free.
 - After post chlorination the water is supplied to community with the help of pumping system.
 - Also, during transmission, content of chlorine gets reduced and in order to supply water in the community content of chlorine is checked in local municipality water distribution center and additional chlorine is added to maintain the minimum chlorine requirement.
 - The disinfected water is later sent to ESR located at Vaishnodevi Circle and from there distributed to the community.

H.O.D.:

Mr. Hiren Makwana

Prepared By:

Mr. Ishan Trivedi

Name of Department: Civil Department							
Sr. No.	Date of visit	Semester	Name of Company/Industry	Address	No. of students participated	No of faculty participated	Remarks
1	11/5/2025	5 th	Jaspur Water Treatment Plant	Ahmedabad	13	2	