



DEPARTMENT OF CIVIL ENGINEERING		
AY : 2019-20	<b>Industrial Visit Report</b>	Class: TE Civil
Semester: I/II		Date:18/09/19

**Course:Environmental Engineering**

**Industry:Water treatment Plant,Barshi**

**Address: Tal: Barshi ,Dist : Solapur**

**Report:**

All students of TE Civil Engineering have visited Water Treatment Plant on 18<sup>th</sup> Sept 2019 along with Prof Patil P.B.& Prof MaliS.M.This WTP is located 8 km away from MITCORER-BARSHI.The in-chargeAssistant Engineerhas given Information about WTP, Unit Operations and process.

**Salient Features of WaterTreatment Plant:**

The Water treatment plant was successfully commissioned in the year1997. This is a concrete structure with different treatment units such as aeration, sedimentation, filtration and disinfection etc. The total treatment capacity of WTP around 19Lakhs Liters.

**Aeration:**

Aeriation is intimate exposure of water and air. Itis used to remove bad tastes &odor, minerals such as iron, manganeseand gasessuch as carbon dioxide, methane from water. Also, the bacteria present in water are killed due to agitation process in water

Working: -

It is thoroughly mixing the air and water so that various reactions can occur between components air and components of water. Aeriation removes the constituents of water using two minerals,

1. Scrubbing action
2. Oxidation

**Settling Tank/Sedimentation tank:**

After the aeration the second unit is the sedimentation tank. It can also be called as settling tank. The depth of the settling tank is around 40ft. The principle of the settling tank is particles can settle down by virtue of its weight. In order to increase the weight of finer particles, the coagulant is added to the water so that the finer particles can bind together and start settling. There is also a mechanical clarifloculator which will collect all the sediments by moving in circular motion then the upper surface water is discharged to filtration unit.

**Filtration by Sand beds:**

This unit comes after Sedimentation tank. There are four sand beds tanks for filtrations. Sand layer is placed in such a way that coarser sand is at bottom and finer one at top. The depth of filter is around 20ft. The sand required for filter bed was procured from Godhra Gujarat. The water from sedimentation tank is delivered by pipes to these filter bed. There is also a mechanism to clean the clogged pores of filter beds, which is called as backwashing.

**Disinfection/Chlorination:**

Immediately after filtration process, deflection is done for filtered water using chlorine. The chlorine gas is stored cylinder which is mixed with water at specific interval of time. This unit kills bacteria and germs.

**Distribution pumps:**

Once the water is completely treated, it must be distributed for community usage. This is done using distribution pumps.

**Photos:**



**Course Coordinator**

**Staff-Coordinator**

**HOD**

**Encl.**

1. Circular
2. Permission Letter
3. Attendance
4. Undertaking