

Title: Industrial Visit to Wagholi Grameen Pani Puravatha Yojana, Wagholi

Objectives: To study working of Water pumping station.

IMPORTANT INFORMATIONS REGARDING THE INDUSTRIAL VISIT

Name of Industry / Centre Visited : Wagholi Grameen Pani Puravatha Yojana, Wagholi

Resource person of the company : **Mr. Sharad Kale saheb**

Contact Number : **9923260505**

Background of the Company / Industry / Centre Visited:

Water Filtration Plant

Name of Resource Person to initiate communication with the company:

Dr. Arun G. Patil, Prof. P.G.Patil & Prof. Anushri Salwe , Asst. Professor in Mechanical Engineering Department.

Name(s) of Approving Authority:

- 1) Prof. (Dr.) T.K.Nagaraj, Principal, BSIOTR Wagholi.
- 2) Prof. Dr. P.S.Kachare, HOD (Mech) BSIOTR Wagholi

Date of communication for seeking permission for Industrial Visit:

Mode of communication : Via Email (Teleph. communication).

Date of visit : 21 March 2023

Students details : Second Year student of Mechanical Engineering

Total Strength : 19

OBJECTIVES / BENEFITS OF VISIT TO STUDENTS AND COLLEGE

Understanding the Modes of filtration.

DETAILS OF INDUSTRIAL VISIT

The department of Mechanical Engineering of JSPM'S BSIOTR, Wagholi organized one day Industrial visit to Wagholi Grameen Pani Puravatha Yojana, Wagholi on 21 March 2023 for Second Year students of Mechanical .The visit was organized with the prior permission and guidance of Hon. Principal **Dr. T.K.Nagaraj** and HOD of Mechanical Engineering Department **Prof. Dr. P.S.Kachare**.

15 students of Second Year of Mechanical Engineering along with faculty members Dr. Arun.G. Patil & Prof. P.G.Patil attended the industrial visit which started at 10.30 a.m. & concluded at 12.30 p.m.

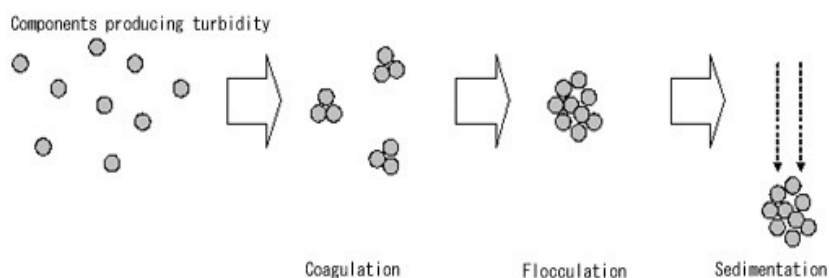
TECHNICAL DISCUSSIONS DURING THE INDUSTRIAL VISIT/OUTCOME

- 1) **Aeriation** :- Aeriation is the process of adding air into wastewater to allow aerobic biodegradation of the organic materials. The principal secondary treatment techniques used are the trickling filter and the activated sludge process and are often classified as fixed-film or suspended-growth systems

Photographs:



- 2) **Coagulation**:- The coagulation process involves adding iron or aluminum salts, such as aluminum sulphate, ferric sulphate, ferric chloride or polymers, to the water. These chemicals are called coagulants, and have a positive charge. The positive charge of the coagulant neutralizes the negative charge of dissolved and suspended particles in the water. When this reaction occurs, the particles bind together, or coagulate (this process is sometimes also called flocculation). The larger particles, or floc, are heavy and quickly settle to the bottom of the water supply. This settling process is called sedimentation. The following diagram illustrates the basic reactions and processes that occur during coagulation.



Photographs:



- 3) **Flocculation:-** Flocculation is a process by which a chemical coagulant added to the water acts to facilitate bonding between particles, creating larger aggregates which are easier to separate. The method is widely used in water treatment plants and can also be applied to sample processing for monitoring applications.

Photographs:



- 4) **Sedimentation:-** is the process of allowing particles in suspension in water to settle out of the suspension under the effect of gravity. The particles that settle out from the suspension become sediment, and in water treatment is known as sludge

Photographs:



- 5) **Filtration:-** filtration, the process in which solid particles in a liquid or gaseous fluid are removed by the use of a filter medium that permits the fluid to pass through but retains the solid particles. Either the clarified fluid or the solid particles removed from the fluid may be the desired product.

Photographs:



- 6) **Distrubution:-**

Photographs:



Significance:- To introduce such a technology to provide students an insight regarding internal working of water pumping station and water purification process for solving industrial problems and encourage them for finding new challenges in industries, Mechanical Engineering Department organized an Industrial visit for Second Year students.

Photographs:



Wagholi Grameen Pani Puravatha Yojana, Wagholi on 21 March. , 2023

Prof. P.G.Patil
Subject In-charge

Dr. P.S.Kachare
HOD Mech. Dept.