

Drain Waste Water Cleaner

Chougale Mohammed Zaid Sadique¹, Prof. Nitin Sall², Prathmesh Gawde³, Shiraz Qureshi⁴ and Sunil Singh Bhadauriya⁵

¹ Mumbai University

Received: 8 December 2015 Accepted: 4 January 2016 Published: 15 January 2016

Abstract

Wastewater is defined as the flow of used water from homes, businesses, industries, commercial activities and institutions which are subjected to the treatment plants by a carefully designed and engineered network of pipes. This type of wastewater is classified and defined according to its sources of origin. Typically 200 to 500 litres of wastewater are generated for each person connected to the system every day. The amount of flow handled by a treatment plant varies with the time of day and with the months of the year. The processes reviewed here include both those that remove pollutant dirt in wastewater and those that vanishes them. Using a wastewater treatment technology that removes, rather than destroys, a pollutant will give a treatment remains. At wastewater treatment plant, this flow is treated before it is allowed to be returned to the environment. There are no holidays for wastewater treatment, and most plants operate 24 hours every day of the week. Wastewater treatment plants works on critical point of the water cycle, helping nature protects water from the excessive pollution. Most treatment plants have primary treatment and secondary treatment .

Index terms— wastewater, primary treatment, secondary treatment, BOD, COD, TOC, etc.

1 I. Introduction

he Maharashtra floods refers to the flooding of many parts of the Indian state of Maharashtra including large areas of Mumbai city located on the coast of the Arabian Sea, on the Western coast of India, in which almost 1,094 people died.

The rainfall continued for the next week. The highest 24-hour period in India was 1,168 mm (46.0 inches) in Aminidivi in Lakshadweep on 6 May 2004 although some reports suggest that it was a new Indian record.

Keeping in mind the natural calamities and Swachh Bharat Abhiyaan we have made this project. As this project is very compact as compared to other municipal machineries used to drain out the wastes. As the big machineries causes traffic jams on the roads and highways, but by using this we can easily remove waste easily and without causing any traffic jams.

2 II. Theory and Concepts

3 a) Definition

Wastewater is defined as the flow of used water from homes, businesses, industries, commercial activities and institutions which are subjected to the treatment plants by a carefully designed and engineered network of pipes. There are large no. of machines used for removing out the wastes from drains.

4 b) Problem statement

Every dynamic spring is subject to these constraints where variation of forces and alignment takes place. To find a solution for the problem of water logging due to plastic, thermocol, metal, etc. To treat problems like malaria, typhoid, etc. caused due to water accumulation.

5 c) Past researches

By doing some research in the past we can say that it is seen that major factors that affect the strength of the machine are design parameters, material selection, raw material defect, and surface imperfection. It is seen that design parameters i.e. operating modes, operating temperature, and imperfections, as we seen as temperature increases the strength of material decreases.

It occurred one month after the June 2005 Gujarat floods. Large numbers of people were stranded on the road, lost their homes, and many people walked very long distances back home from work that evening.

The floods were caused by the heaviest, ever recorded 24-hour rainfall of 944 mm (37.17 inches) which lashed the metropolis on 26 July 2005, and continued for the next day. 644mm (25.35 inches) was received within the 12-hour period between 8am and 8pm.

plants have primary treatment and secondary treatment. A short description about the primary treatment which includes screening whereas secondary treatment involves activated sludge, trickling filters etc. and also to measure removal of the carbon in the wastewater treatment processes can be done by TOC(Total organic carbon), BOD(Biochemical oxygen demand), and COD(Chemical oxygen demand) is also explained here. Year 2016 J III. Drain Waste Water Cleaner

6 g) Modifications

Our project is simply a drain waste water cleaner machine, which is automatically operated .Following different modification can be done to improve the output and efficiency. we have use a geared motor, adjustable plates, backside waste bin, single plate clutch, springs,. This machine can be placed inside the drainage pipe to remove all the wastes like plastic, thermocol, etc.

Hence by having above modifications above machine can be made a multipurpose output machine, which can be may power driver and automatically operated.

7 IV. Conclusion

The drain waste water cleaner machine is designed and manufactured by using gear changing and shaft coupling principle. It consist mainly DC geared motor, shafts, waste removal plates, dust bin, bearings, sprocket and chains. Construction materials are easily available, creates employment (construction and maintainence), simple to construct. ¹

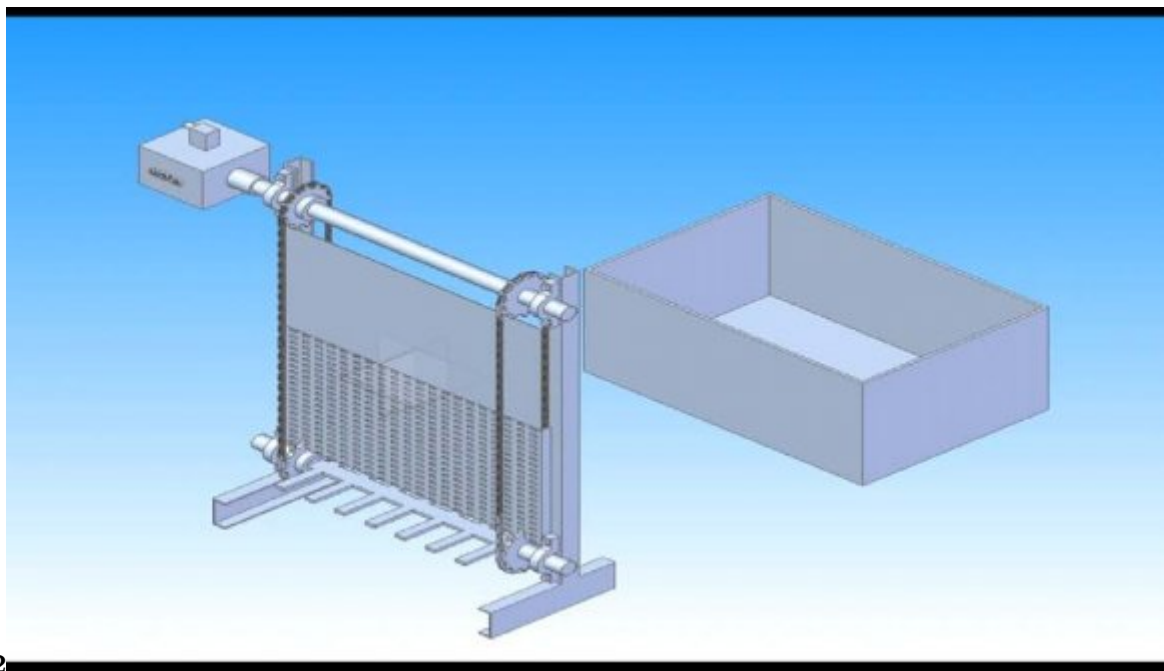


Figure 1: Figure 2 :

68 [INTERNATIONAL JOURNAL OF ENGINEERING RESEARCH AND APPLICATION (IJERA)] ,
69 *INTERNATIONAL JOURNAL OF ENGINEERING RESEARCH AND APPLICATION (IJERA)* 2.
70 (INTERNATIONAL JOURNAL OF ADVANCE ENGINEERING AND RESEARCH. IJAER)
71 [Drain Waste Water Cleaner] *Drain Waste Water Cleaner*,