

SEWAGE WATER TREATMENT MACHINE

1Patel Dakshesh, 2Sharma Sudhirkumar, 3Sharma Sheel, 4Sahu Gautam

1Lecturer, 2Student, 3Student, 4Student

1Mechanical Department,

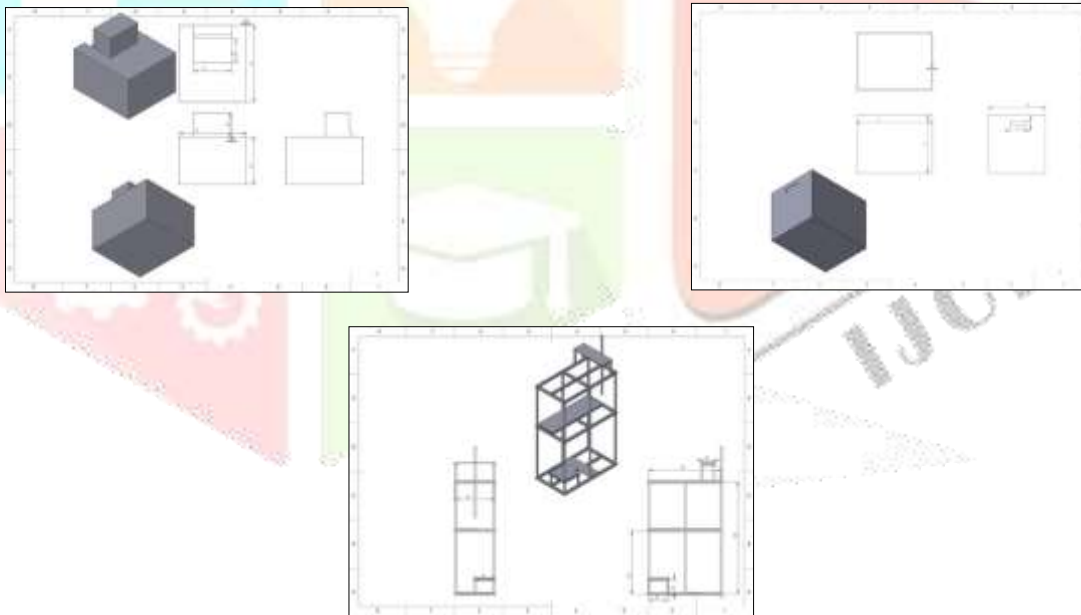
1Bhagwan Mahavir Polytechnic, Surat, Gujarat, India

Abstract: Sewage treatment is the process of removing contaminants from wastewater, primarily from household sewage. It is a by-product of sewage treatment is usually a semi-solid waste or slurry, called sewage sludge, that has to undergo further treatment before being suitable for disposal or land application. It can be used for several purposes like in agricultural fields, farms, hydro cleaning of streets, public gardens, domestic uses, etc. includes physical, chemical, and biological processes to remove these contaminants and produce environmentally safer treated wastewater (or treated effluent).

Index Terms: Mechanical department, sewage water treatment machine, purifying machine, domestic purposes.

I. INTRODUCTION

The separation of waste & treating grey water is the most needed to prevent pollution to our environment nowadays. So, our machine can deal with the circumstances like grey water from household uses which is to be treated. The treated grey water to a level to act according to an order, set of rules, or request. It can be used for several purposes like in agricultural fields, farms, hydro cleaning of streets, public gardens, domestic uses, etc. Our main aim of this project is to convert waste grey water into clean & filtered water. Also, it is necessary to remove as much of the suspended solids as possible before the remaining water called effluent is discharged back to the environment.



1.1 sewage water treatment machine

II. PROBLEM STATEMENT

- Archimedes Screw was not made due to manufacturing problems
- Less RPM was achieving due to incorrect adjustment of valves and pipes.

III. PROCESSED APPLICATION

- A research project conducted in several east coast states utilized some rather high tech systems for washing machine discharge and many began failing in as little as 8 months. Consider using Sodium Per carbonate (Oxygen Bleach) in your laundry. It will not only whiten and brighten your clothes, it will also help keep your septic system healthy.
- The grey water will be passed through a screen filter to move further for purification.

- Many of the energy converters widely used today involve the transformation of thermal energy into electrical energy. The efficiency of such systems is known as steam, however, subject to fundamental limitations, as dictated by the laws of thermodynamics and other scientific principles.
- After the removal of solid & bio waste, the gray water will pass through a aeration tank via. A filter & will store as per the estimated capacity.
- After the water being stored, it will pass through a heating chamber to convert gray water into hot water.
- The condense chamber is storage tank in which, hot water will be collected at a specific decided capacity & to condense.
- And at last, the treated water, after proper condensing will be released through outlet pipe for further uses.

3.1 INSPECTION & TESTING

1. **Conductivity Test** – It is used to check how much current passes through both (I.e., Influent & Effluent) Here, Influent refers to Sewage water which we took for testing. Whereas, effluent refers to our output treated water from our machine. The results are as follows –

- **Influent** –



- ✓ Temperature of water – 20°C
- ✓ Conductivity – 0.41 us/cm (micro semen/centimetre)

- **Effluent** –



- ✓ Temperature of water – 20°C
- ✓ Conductivity – 0.41 us/cm (as per sources, conductivity does not exceed 2 us/cm)

- Therefore, there's no change in the conductivity of water. Thus, it does not harm the environment.

2. **Ph Level Test** – To check whether the water is acidic or basic.

- **Influent** –



Figure No. 13.4.3 – results of pH for influent

- ✓ pH Level – 7.29
- ✓ Temperature of water – 20°C
- **Effluent –**



- ✓ pH Level – 6.70 (For public land irrigation, pH level should be vary between 6.5 – 8.5)
- ✓ Temperature of water – 20°C

3. **Dissolved Oxygen Test** – it shows the quantity of oxygen dissolved in water. It's unit is mg/L. it is also denoted as DO.

- **Influent –**



- ✓ DO – 9.3 mg/L

- **Effluent –**



3.1 inspection & testing

- ✓ DO – 2.9 mg/L (As per sources, dissolved oxygen should be vary between 4 – 8 mg/L)

IV. RESULTS & DISCUSSION

- It includes physical, chemical, and biological processes to remove these contaminants and produce environmentally safer treated wastewater (or treated effluent).
- A by-product of sewage treatment is usually a semi-solid waste or slurry, called sewage sludge.
- That has to undergo further treatment before being suitable for disposal or land application.
- To Purify Water.

4.1 CONCLUSION

Hence, we concluded that –

- It Prevents the possibility of water scarcity and which can be used for domestic purposes like cleaning utensils, cleaning the house, etc. And, it purifies water at different stages

V. FUTURE SCOPE

- Prevents the problem of water scarcity.
- Does not cause any harm to nature.
- Easy to transport i.e., mobile

Table 1 – list of figures

fig. no.	details		
	title	subhead	subhead
1.1	sewage water treatment machine	introduction	-
3.1	inspection & testing	processed application	inspection & testing

VI. ACKNOWLEDGEMENT

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[2] Live Places :

- Visit At Bamroli Sewage Treatment Plant, Vesu, Surat.
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