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# Generation of Electricity by Sullage Water

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**ABSTRACT-** Renewable and clean forms of energy are one of the major needs at present. The development of the sanitary engineering has parallel and contributed to the growth of the city. Without an adequate supply of safe water, the great city could not exist and life in it would be both unpleasant and dangerous unless human and other wastes were promptly removed. The concentration of population in relatively small areas has made the task of sanitary engineer more complex. The cities, towns and villages are being polluted ground water.

**KEYWORDS** Electricity generation by sullage water LED Lights.

## I. OBJECTIVES OF PROJECT

- 1) To generate electricity from sullage water
- 2) To help the future generation for smart cities
- 3) By this project we can provide assured electric supply to the remote areas
- 4) It helps highly energy saving and can be used for street lights.

## II. INTRODUCTION

The development of the sanitary engineering has paralleled and contributed to the growth of the city. Without an adequate supply of safe water, the great city could not exist and life in it would be both unpleasant and dangerous unless human and other wastes were promptly removed.

There are two types of sewerage systems. One is a river-basin sewerage that maintains the quality of water in water-bodies such as rivers and lakes between two or more municipalities, and is operated by a prefecture.

The prefecture treats all the sewage from the river-basin municipalities together in its sewage treatment plants.

The other type is a public sewerage for primarily eliminating sewage in urban areas, and generally operated by municipalities.

Industries also demand more and better water from all available sources.

The rivers receive ever-increasing amount of sewage and industrial wastes and thus resulting more attention to the sewage treatment, stream pollution and complicated phenomena of self-purification.

In many developing countries there is no such treatment plant for the sewerage water. Rivers receive large amount of polluted water and resulting many diseases.

Thus, self-purification and treatment plants play a vital role in sanitation of water.

The other benefit is now introducing in the form of generating electricity.

### Types of waste water

1. Black water
2. Grey water (Sullage water)
3. Yellow water

## III. STAGES OF WASTE WATER TREATMENT

They typically consist of several steps in the treatment process. These include:

1. Collection;
2. Screening
3. Chemical Addition;
4. Coagulation

5. Sedimentation
6. Filtration;
7. Disinfection;
8. Storage;
9. Distribution.

#### IV. WASTE WATER TREATMENT PLANTS IN PUNE

- 1) WASTE WATER TREATMENT AT BOPODI - The plant is located near Harris Bridge, Bopodi and its capacity is at 18 MLD. The extended aeration process is used to treat the waste water. The sewage generated from Aundh ITI, Aundhgaon, Sindh Colony, Bopodi, and Bopodi Gaothan, NCL, Raj Bhavan etc. area is treated in this plant. The sump well and pump house is constructed at Botanical garden in Aundh, and a pipeline carries the sewage up to the Bopodi Sewage Treatment Plant. The treated waste water is discharged in Mula River. Total area served is about 15 sq. kms. The cost of the project was Rs. 5.69 crores and the plant is functioning since June 2003.

#### V. CONCLUSION

- 1) We can produce electricity by the continuous flow of sullage water as it will help in energy saving.
- 2) It will help the future generation for smart city.
- 3) By this project we can provide assured electric supply to remote areas.
- 4) It is highly energy saving and can be used for street lights.
- 5) It will reduce load on power generation plant if use of this project is increased.
- 6) The electricity generated from this concept can be stored and can be used for other purpose
- 7) By making other modifications this project can be used for other electricity consuming things including street lights
- 8) India is a developing country this project will encourage India to become developed country.

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