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# SEWAGE TREATMENT TUNNEL

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***ABSTRACT***
*Sewage treatment plants is sketched to remove the waste from household and industrial sources to remove materials that harm water quality. Water plays a major role for doing day to day activity in the world due to population explosion the water resources are more and the availability is very less. The demand of water is growing day by day. Because of household waste sewage our rivers Ponds and other natural resources are polluting. India treats 20% of sewage and rest is fall directly into the river which causes several problems. There are many problems which are faced due to sewage. The components of sewage treatment plants are soild removal chamber. In primary stage this system removes solid waste it can also reduces the body of the incoming waste-water,solid waste removal is the first stage of sewage treatment. Waste-water that comes out from this work can be further treated with chemicals to release it into streams or pond. The Secondary stage remove micro-organisms and other matter which are not removed in primary stage. Only 31% of waste-water is being treated and reuse.*

***KEYWORDS:*** *Sewage, Disposed, Treatment, Biological, Sludge*

## 1. INTRODUCTION

In many developing nations large quantities of brood and industrial waste are released without treatment. Unregulated growth in urban areas has made planning and expansion of water and sanitation very difficult and costly. The total amount of waste-water generated by class 1 cities is 35588.12 MLD, this is approximately 73% waste-water produced by 23 major cities as shown in Table 1.Unprocessed waste-water contains pathogenic or pathogenic microorganisms and toxic compounds present in Industrial waste that pollute the landfill site. There are 2 stages of waste-water treatment, the first and second phases. This primary phase removes solid waste from the waste-water excreted. Basic treatment is done in the first stage of sewage treatment and second phase removes biotic matter and micro- organisms carried by water in purified water to be released for maximum treatment.

**TABLE 1-** Wastewater Treatment Capacity in Urban Areas in India[1]

| Categories | No.of Metropolis | Total Release (in MLD) | Waste-water excreted (in MLD) | Treated Water (in MLD) |
|---|---|---|---|---|
| **Class-1** | 498 | 44769.05 | 35588.12 | 11553.68 |
| **Class-2** | 410 | 3324.83 | 2696.7 | 233.7 |
| **Total** | 908 | 48093.88 | 48254 | 11787.38 |

## 2. LITERATURE SURVEY

**Jayshree** et al.in their paper titled **"Review of waste-water Treatment Technology"** referring that many water sources are polluted because of household and industrial excreted waste.Several usual waste-water treatment methods namely chemical absorption activated sludge has been used to remove contaminants using aero-bic waste-water treatment.As a reduction phenomenon it earns extra interest due to its low operating costs and its preservation this paper reviews the use of Technologies for waste-water treatment to remove contaminants from waste-water [2].

**Seung-Pil Lee** et al.in their paper titled **"Research on the Influence of the Cleaning Centers of Operations"** referring that the regulated effects and execution parameters within the sewage treatment plant were assess by conducting different examines of ignominy of waste-water treatment quality.The data used in this review is based on actual data from the sewage treatment system using the media process during 2012 [3]**.**

**Rahul Sharma** et al.in their paper titled **"Exemplary lesson in Sewage Treatment"** referring that the thought process of the people and combine it with the current scenario and productively lower down the comprehensive need for a good scientific approach.The main purpose of this work is to use clean water in a way that does not harm people and the environment and to take into account the social situation [4].

**Shreya Gupta** et al.in their paper titled **"Research on Sanitation and Sanitation in Delhi"** gives an overview of sewage treatment plants (STPs) in Delhi,mainly aiming upon Okhla village.The total amount of STP treatment in Delhi,was designed against the amount of sewage and that is why a gap was found between the two.This information will be very useful in the further distribution of STP and in protecting the health of the people and the environment [5].

**Rakesh Singh Asiwal** et al.in their paper titled **"Waste-water treatment with Waste-water Treatment Plants"** referring the development of new waste-water treatment technologies from different industries is a matter of trouble to humans.Very few testings is being done to treat waste-water in the steel industry,especially with regard to the development of a waste-water treatment (ETP) program design.Another beneficial aspect of this research will be the recycling,re-use of water and mud from the steel industry [6].

## 3. METHODOLOGY

A plant is necessary to collect the industrial and household excreted waste and thus removing the materials which harms public health.This work objective is to produce an environmental safe liquid waste and solid waste suitable for disposal or reuse.There are 2 stages of waste-water treatment,the first and second phases.This phase removes solid waste.Basic treatment in the first stage of sewage treatment and the second phase removes organic matter and microorganisms carried by water in purified water to be released for maximum treatment.

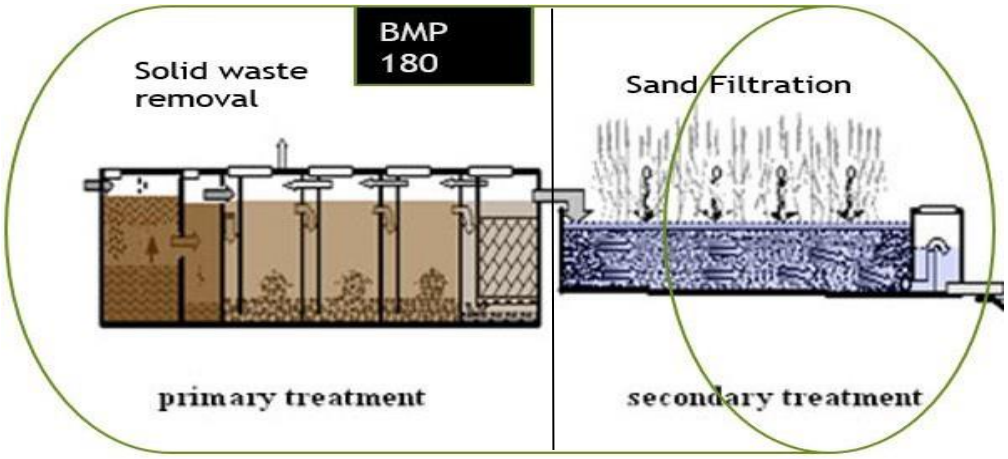


**Fig.1** Block Diagram of proposed tunnel

## 4. RESULT AND DISCUSSION

In this work ,the proposed system removes solid waste and sludge from rivers and purify them by 2 stages which are primary and secondary stages. After eliminating, the solid wastes and harmful chemicals the obtained water almost reusable quality water. The main aim of this work is to reuse waste water and used it for irrigation, gardening, flushing, cooling of air conditioning systems and numerous other household purpose.

The waste-water is high in Biological Oxygen Demand and all liquefy solids. This work aim is to make this excreted water safe for release in natural environment or to reuse it for other different purposes.

The Dissolved Oxygen amount of waste-water recorded is found to be lower due to the existence of higher organic matter and an increase in Biological Oxygen Demand and Chemical Oxygen Demand. This exponential growth of both values shows that polluted nature of the released water. We have to lower it curtailed to 20ppm.

## 5. CONCLUSION

Since there is no meaty plant for sewage, it is requisite to construct a Sewage Medication plant. This work is designed significantly to meet the future extension for further years according to **"Indian Codal provisions".** This work is planned perfectly to meet the requisites and stipulation of huge population with a wide ranging time span. The treated sewage water is now reuse for the agriculture, fire emergency, and toilets in public, commercial and industrial buildings and if it is regulated cleaned, it can be use to rejuvenate ground water.

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