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# TO STUDY THE SOAK PIT AND BRING A NEW VIEW FOR FUTURE MODIFICATION

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***Abstract*: In 1992 World Health Organization studies claimed to have reported that out of India's 3,119 towns and cities, just 209 have partial sewage treatment facilities, and only 8 have full wastewater treatment facilities According to another 2005 report, sewage discharged from cities and towns is the predominant cause of water pollution in India. Investment is needed to bridge the gap between 29000 million liters per day of sewage India generates, and a treatment capacity of mere 6000 million liters per day. A large number of Indian rivers are severely polluted due to disposal of domestic waste. The wastewater is directly discharged without treatment into the water bodies are causing environmental problems also affecting the health of human beings and it will create the environmental imbalance in aquatic life. Therefore the waste water needs to be treated In rural areas in India there is less availability of drainage system so the waste water from house needs to be treated by decentralized method and make it available for domestic purpose like watering to the plants, washing clothes, agriculture etc. The object of this project is to treat the water at domestic level.**

***Keywords:* concret, mud pump, motar pump, PVC pipes, bixialgeogrid.**

## I. INTRODUCTION

Waste water is a general term used to represent the water with poor quality that contains more amounts of pollutants and microbes. If wastewater is discharged into the nearby water bodies, it can cause serious environmental and health problems to human beings Wastewater treatment is an important measure to reduce the pollutant and other contaminants present in wastewater. The first step in wastewater treatment method is primary treatment which removes the solids, oil, and grease from wastewater. Secondary treatment or biological treatment is the second step, which exploits microorganisms to eliminate the chemicals present in wastewater. Final step is the tertiary treatment; which eliminates the microbes from wastewater before discharging into the river. here is no intention or no need to reuse of waste water, collected storm water or gray water, soak pits can offer cost efficient opportunity for a partial treatment of waste gray or storm water from a primary treatment and relatively safe way of discharging it to the environment and there with recharging ground water bodies. As waste water percolates through the soil from the soak pit, small particles are filtered out by the matrix and organics are designed by micro organisms. The waste water effluents is absorbed by soil particles and moves both horizontally and vertically through the soil pores sub-soil layers should be water permeable in order to avoid fast saturation. High daily volumes of discharged effluents should be avoided. Thus, soak pits are best led for soil with good absorptive properties, clay, hard packed or rocky soil is not appropriate. Souk pit we used the same way as leach fields, but require less space as well as less operation and maintenance. But bey generally can also receive less effluent and the ground water

**AIM:** to study the soak pit and bring a new view for fature modification

**OBJECTIVE:** To Enhance the Use of Domestic Wastewater

· To Make The Village Drainage And Mosquito Free

· To Overcome Inadequacy Of Waters To Meet Water Demands

· Collect The Sludge From Tank And Use As Fertilizer

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## II. METHODOLOGY

- TYPES OF SOAK PIT
- MATERIALS FOR SOAK PIT
- CONSTRUCTION OF MODIFIDE SOAK PIT
- WORKING OF SOAK PIT
- USE SLUGE AS A FERTILIZER

Soak Pit Type – 1

Individual / Community Soak Pit

- Individual Soak Pit can be constructed under MGNREG Scheme.
- Soak Pit helps in recharging ground water.
- No skill or technical expertise required for Soak Pit construction.
- Low operational cost, economically efficient and easy to maintain.
- Periodic maintenance Once in a year.
- Can easily be constructed at household leve

Community Soak Pit can be constructed if there is no space for Individual Soak Pit construction

Soak Pit Type – 2

Magic Pit

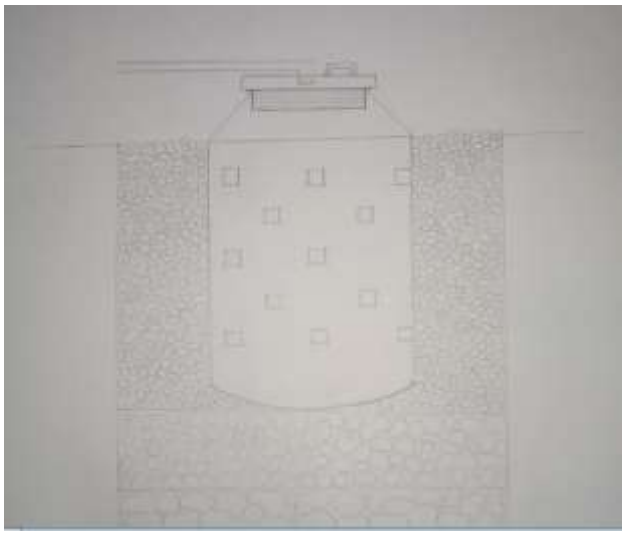
- Perforated Concrete rings can be used in this method.
- Fill the Boulders & Gravel around the ring.
- Connect Grey Water pipeline into the rings.

## III. MODIFIED SOAK PIT

IDEA OF MODIFIED SOAK PIT

- These soak Pits Are for All Society Member
- Provide Two Soak Pit for Alternative Use
- Provide Bixal Geogrid To Avoid Entrance Of Coarser Particals In soak Pit
- Clean and change these soak pits after every 3 years
- Use Mud Pump For To Collect The Sludge water From Bottom Of The Tank

Use sludge water as fertilizer



Calculation

- Suppose a village has a population of -5000
- We provide 2 soak pits for approx. 10 houses. If each house have approx. 6 people
- Water demand person
- Water Drinking – 5 Lit.
- Bath -85 Lit.
- Cleaning – 10 Lit.
- Washing- 30 Lit.
- Other – 5 Lit.
- Total = 135 Liter
- For 60 People.=135 X 60 = 8100
- Suppose ~ 10,000 © tank capacity=10.000 lit.
- Sludge Setdown -30Liter
- Sludge Removeal - 2yr
- Total sludge = 30 lit X60 = 1800 lit
- Total tank capacity: 1800 +10 10,000
- = 11,800/
- Suppose 12,000 lit
- 12 m3
- 1 $m^3$= 1000 lit
- Capacity = 12 m3.
- Min depth-1.5m
- D = 3.2 m

## IV. CONCLUSIONS

I) Using This Method We Can Increase Amount Of Groundwater Considerably

- This Method Can Be Really Helpful In the Areas Or Villages Where The Facility Of Drainages Is Not Provided
- The Waste Material Remains In The Soak Pit Can Be Further Used For fertilizer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