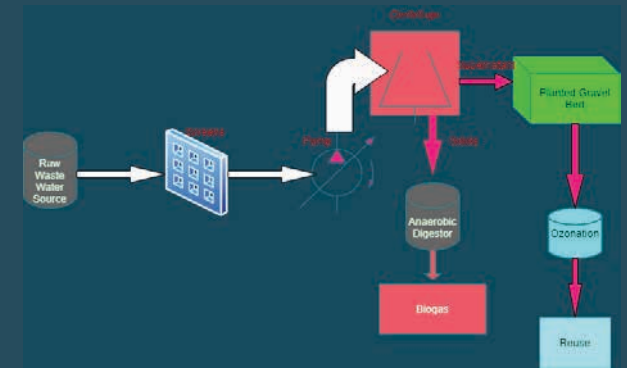


STP-on-Wheels: Decentralised Onsite Sewage Treatment Plant



Problem Statement: A tremendous amount of wastewater is generated from cities and travels very long distances to the conventional centralised wastewater treatment systems (CWTs), which results in various operational troubles. Sometimes, these CWTs cannot handle these large volumes of sewage. As a result, the waste is either partially treated or sometimes disposed of directly without any treatment into the water bodies, which in turn results in various adverse environmental impacts. These days, it is being felt, and in fact, several municipal corporations have already started requiring the proposed residential/ commercial/industrial projects to take care of their wastewater as well as solid and other wastes within their project areas. Researchers at IIT Bombay have proposed a decentralised onsite wastewater treatment plant to address this need.

Uniqueness of the Solution: Here on-spot safe and complete treatment of

wastewater generated at places of the collection grid such as slums, labour camps, the army in transit, fairs and exhibitions, holiday homes, industries, resorts etc., has been developed. Produced treated water can be reused for various non-potable uses, and hence the freshwater demand can be reduced. The proposed system has an option to treat wastewater in three ways after screening: One, through a centrifuge, to obtain biogas and treated water for reuse; Two, through a combination of aerobic, facultative and anaerobic treatment to treat water; and three, through a pre-settling tank and mechanical aeration unit, to treat water. Ozonation of the treated water is carried out in the last stage in all three options.

Current Status of Technology: A literature survey on various decentralised systems is in progress. The system is proposed; modifications will be done from time to time as the literature survey progresses.

Societal Impact: The negative environmental impacts due to partially or untreated wastewater discharge will be reduced, and the freshwater demand can be reduced.

Patent(s): Nil

Relevant Industries: Cities, Towns, Urban Local Bodies, Municipalities, Industries, Army, Resorts, Fairs and Exhibition Organisers.

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