

Advanced Waste Water Treatment

Proven German Advanced SBR Technology
SBR - Sequential Batch Reactor

for

Domestic and Industrial Effluent

by



3R TECHNOLOGY

creating environmental solutions

www.3rtechnology.in

About 3R TECHNOLOGY

3R stands for RECOVERY, RECYCLE and REUSE units and systems.

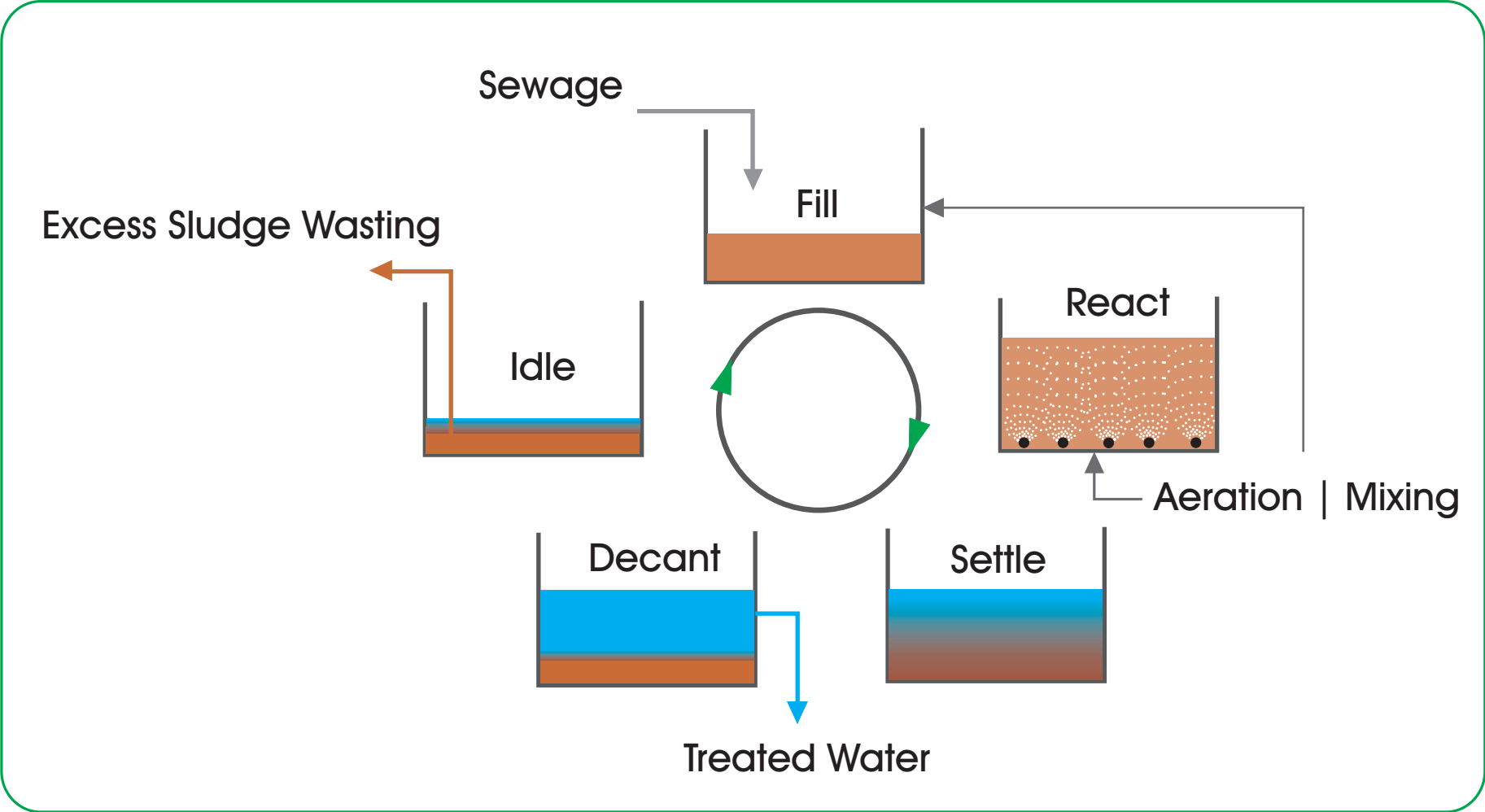
3R TECHNOLOGY offers solution for optimum utilization of raw materials and energy with minimum waste or Zero Discharge through Recovery and Recycle/Reuse systems. This has been termed under Cleaner Technology of UN Resolution for sustainable business development. 3R Technology acknowledges the facts of Cleaner Technology.

3R Technology introduces Advanced SBR Technology for Sewage Treatment, the technology originally developed during 1995 for treating - difficult industrial effluents. Automation along with Extended Aeration offers low sludge generation, consistent high quality effluent and free from many operational problems of conventional activated sludge process.

About Director Engineering - Mr. N.Thanikasalam ME(IISc)

- 30 years Multi - Disciplinary Engineering Design and R&D, Project Implementation Experience on Helicopter Power Transmission, Fire Vehicles Pumps, Mechanical Automation, Multi Utility Vehicle, Special Purpose plans and Equipments.
- 18 years Design and R&D in Advanced Water and Waste Water Treatment and Zero Discharge Evaporators.

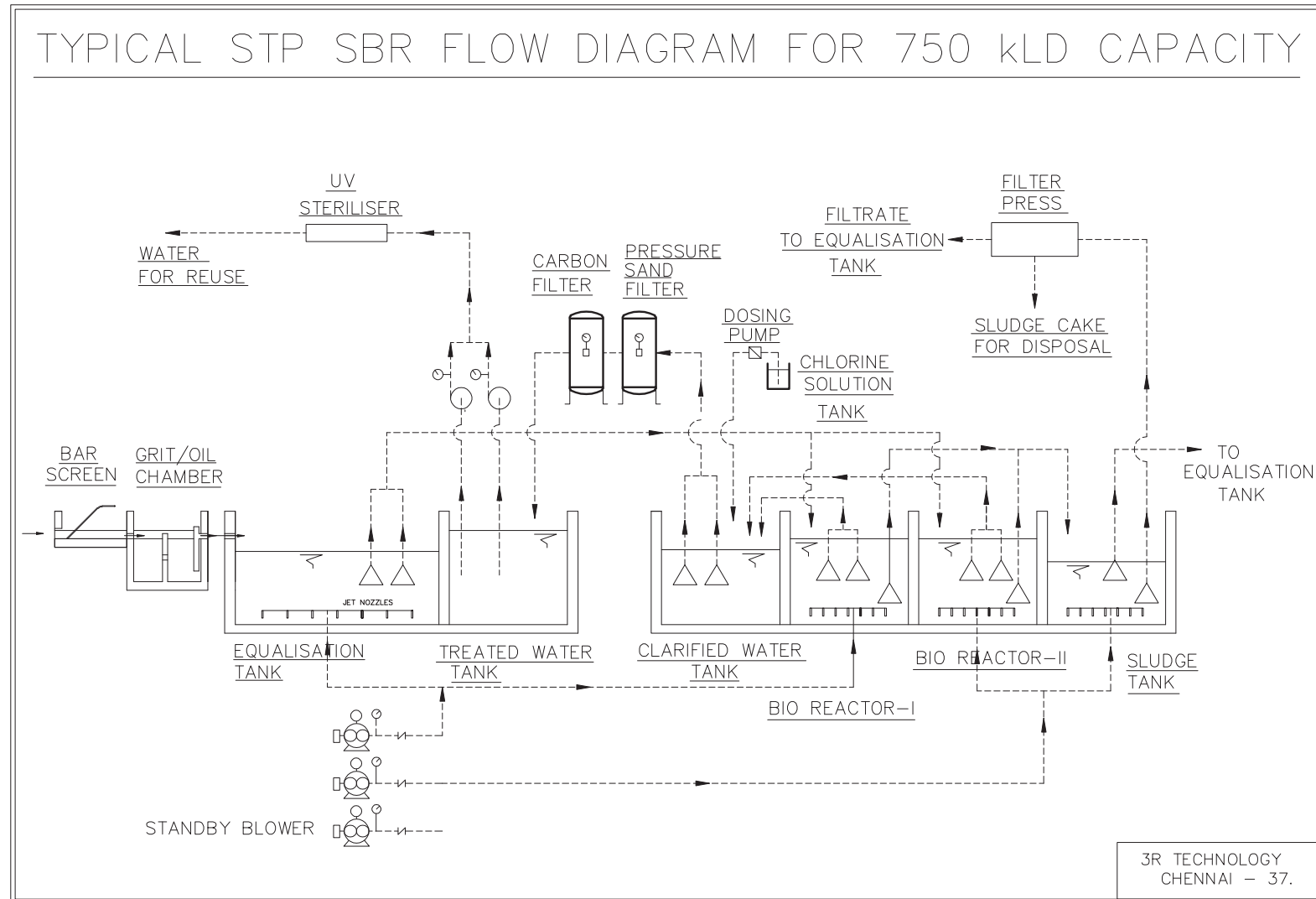
SBR Operating Principle



Benefits of Advanced SBR

- Consistent good quality treated water for reuse applications (BOD < 15).
- Handle varying flow and organic loadings.
- No need of Settling Tank.
- No need of Sludge Recycling system.
- Less Foot Print.
- Low Sludge production.
- Retrofits on Existing Tanks.
- No clogging, cleaning and free from common treatment problems.
- Easier to control Filamentous Growth and Settling Problems.
- Simultaneous Nitrate and Phosphate removal.

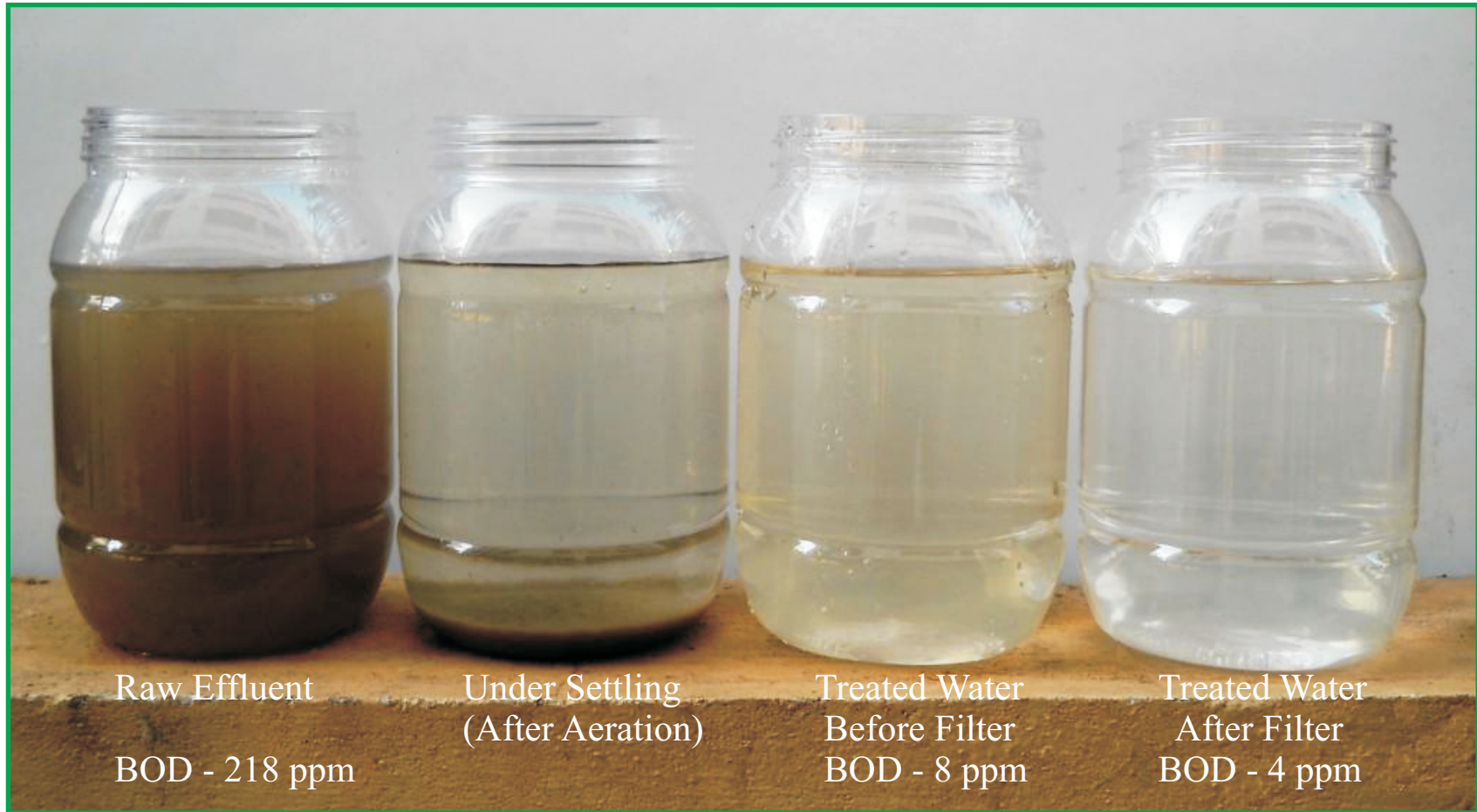
Schematic Advanced SBR Flow Diagram



Advanced SBR Applications

- Sewage Treatment for Reuse Applications like Toilet Flush, Landscape, Car Wash, Construction, Gardening etc. (Below and Above Ground)
 - Apartment Buildings
 - IT Parks
 - All Commercial Establishments such as
Hospital
Hotels
Educational Institutions, etc
 - Decentralized STP in remote and hilly terrains.
- Industrial Effluent Treatment for Recovery and Recycle:
 - Tanneries, Textile Dye and Bleaching Effluents,
 - Pharmaceutical, Chemical Process Industries,
 - Automobile and Engineering,
 - Food and Beverage.

Image



Case Study : Advanced SBR Water Treatment Results.

Advanced SBR was installed in Apartment housing 220 Flats in Chennai, the following Water Test Readings are given below:

Analytical Test Results				
Sl No.	Parameter	Test Result Before Treatment	Test Result After Treatment	Permissible Norms
1.	BOD	218 ppm	4 ppm	BOD < 20 ppm
2.	TSS	194 ppm	4 ppm	BOD < 20 ppm
3.	pH	7.8	7.4	6.5 to 8.5

3R TECHNOLOGY offers 5 kLD to 2 MLD Plants
Packaged - 2.5 kLD to 250 kLD Plants



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