

# SEWAGE TREATMENT PLANT

Today, on Earth, when the Ground water is depleting and with very low fresh water sources, its become necessary to find out an another source of water or to save water by re-use of waste water produced by our-selves. For the same, today world is trying to re-use the waste water. Re-use of waste water is possible by incorporating different type of waste water treatment plants in your respective premises. Sewage Treatment Plant is a big option by which waste water produced in the institution / property can be re-used and finally the raw water consumption can be reduced. Different technologies of Sewage Treatment Plant are available for different capacities from 1 KLD to 2000 KLD in different phases. The brief description about STP's is.

Raw Sewage flows through a bar screen chamber to an Oil & Grease Trap to an Equalization Tank. (oil skimmers are the optional provided in Oil & Grease Traps for oil reduction).The bar-screen is, so designed that it can be cleaned manually from outside the Tank. Two submersible solid handling pumps are provided in the Equalization Tank to pump the collected Raw Sewage to the Aeration Tank. An automatic level controller is provided in the Equalization Tank to turn the pump off at the low water level in the Tank and so to start the pump automatically when water level is high.

Air is introduced in the Equalization Tank through submerged air diffusers, to prevent the sewage from becoming septic during long retention or low load conditions. The Raw Sewage that comes into the Aeration Tank is aerated by using Fine Bubble Diffusers mounted in a grid at the bottom

of the tank. Facility is made to pull up the Diffusers for cleaning if necessary. Air is supplied to the diffusers by twin lobe rotary air blowers located in the plant room. The aeration system is designed in a way so as to achieve complete mixing of the sludge organisms with raw sewage in order to achieve a MLSS of between 3000 – 4000 mg/l in the Aeration Tank.

From the aeration tank this mixed liquor passes into a Settling Tank / Settler / Clarifier. The liquid in the settling tank is maintained in quiescent condition allowing the solids to settle to the bottom of the clarifier for collection. The accumulated solids (Activated Sludge) is consistently pumped back into the aeration tank by sludge recycle pumps. This return sludge undergoes further digestion in the aeration tank and also provides the active organism needed to digest the incoming raw sewage. Excess sludge from the bottom of the settling tank is wasted into an adjoining aerobic digester cum thickener tank / Holding Tank. In this tank sludge is aerated. The air is shut off periodically and supernatant water is led back into the Equalization Tank. This way the sludge is thickened and its volume is reduced. The thickened sludge will be further solidified using a centrifuge or a filter press and the solid cakes will be used as manure in horticulture.

The treated and disinfected water from the Chlorine Contact Tank is passed through a Pressure Sand Filter followed by an Activated Carbon Filter and a Softener (optional) and then stored in a Treated Water Tank. Water From this tank is used for the gardening, Toilet flushing & Car parking area within the site or soft water is used in the AC plants of the premises

## **APPLICATIONS**

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|---------------------------|----------|----------------------|----------|--------------------------|----------|---------------------------|
| <b>*Housing Complexes</b> | <b>*</b> | <b>Hotels</b>        | <b>*</b> | <b>Hospitals</b>         | <b>*</b> | <b>Resorts</b>            |
| <b>Shopping Malls</b>     | <b>*</b> | <b>Townships</b>     | <b>*</b> | <b>Industries</b>        | <b>*</b> | <b>Commercial Offices</b> |
| <b>Retrofits</b>          | <b>*</b> | <b>Up-Gradations</b> | <b>*</b> | <b>AMC &amp; O&amp;M</b> |          |                           |

## What MADHVAK offers?

Sewage Treatment plant is classified in the terms of its Technologies available in the Aeration Mediums. Some of the Technologies Available at **MADHVAK** are as following:

- Extended Aeration.
- Moving Bed Bio-Reactor (MBBR).
- Submerged Fixed Film Aeration (SAFF).
- Membrane Bio – Reactor (MBR).

At **MADHVAK** we also provide various Settlers / Clarifiers (Secondary Clarifier, Tube settlers, etc).

**MADHVAK** being a single window solution for all, provides all spares, consumables, equipments, accessories, etc being required for Sewage Treatment Plant.

**MADHVAK** also provides the sale of new plants, expansions of existing plants, retro-fits of existing plants, Installation & Re-Installation of new & existing Plants, commissioning & Re-commissioning of New & existing Plants. We also offer to our customers Annual Maintenance contract & Operation Maintenance Contracts.

