

## Improved Bio Tower

This method involves Inlet sump and Pump house, Primary units, Bio-Tower Feed sump and Pump house, Improved Bio Tower, Mixing Chamber, Aeration tank, Final Clarifier, Recirculation sump, Pump house, Chlorine contact tank, Chlorine house, Thickener and Centrifuge.

The Sewage is conveyed to the Plant by providing network of gravity sewer lines and is collected in Raw Sewage Sump after removing coarse material by Coarse Screens and pumped to Inlet Chamber of primary treatment unit with the help of pumps.

Floating material and heavy inorganic particles present in the sewage are removed in fine screen and grit chamber of primary treatment units

Sewage will then be taken into Splitter Box from where it is distributed to Improved Bio-Towers. Sewage is spread over medium through rotating arms using hydraulic pressure due to head. Bio-Tower consists of packed bed of UPVC/Plastic medium where fixed film of micro organisms is formed over media. Biological degradation of organic matter present in sewage occurs as trickling sewage comes in contact with biological film formed over medium.

The introduction of Mixing chamber in this system plays very important role in denitrification Process. The recycled sludge is blended with outlet flow from Bio-Tower in required proportion thus creating anoxic condition which is essential for denitrification process.

The sewage after passing through Bio Tower media is Collected and taken for further treatment such as Aeration, Clarification, Chlorination and Sludge removal. Treated sewage is disposed off in nalla or river or can be used for gardening, car wash, cooling or any such use where it is not consumed by human being for drinking or culinary use.