

Annexure-II

Membrane Bioreactor for Wastewater Treatment

Abstracts

Membrane Bioreactors (MBRs) concept can broadly be defined as a system integrating biological process along with membrane filtration for separation of biomass with an aim to purify wastewater for reuse and recycle purpose. MBR offers several advantages over conventional settling techniques by way of highly efficient separation of biomass, high quality effluent free of bacteria and pathogens, higher loading rates, smaller footprint, longer operational life and good control of biological activity.

The offered Technology is a developed process to treat the wastewater in side stream membrane bioreactor in which essentially two primary unit operations take place, namely aerobic bioreactor and ceramic membrane based filtration unit. The process of aerobic biological treatment may or may not need pretreatment depending upon the characteristics of the feed. Ceramic membrane based filtration involves deployment of ceramic microfiltration or ceramic ultrafiltration depending upon the final utilization requirement of the treated water.