CECO Peerless

Industrial / Sewage Water Treatment

Moving Bed Bio-Reactor (MBBR)

Product Application

The MBBR process was introduced by the late 1980s. It is biological process that uses an activated sludge process but is enhanced by floating bio-carriers where biofilm can grow. MBBR is widely used for municipal and industrial wastewater treatment.

- **Petrochemical, Oil & Gas process industrial Wastewater** – High levels of suspended solids, COD and BOD5
- **Industrial wastewater from various industries, pharmaceutical, textile, chemical, food & beverage, etc.** – High levels of suspended solids, COD and BOD5
- **Sewage & municipal water treatment** – suspended solids, COD and BOD5

Process Description

A Moving Bed Bio-Reactor (MBBR) system consists of an aeration tank equipped with special plastic carriers that provide a higher surface area which allow buildup of a large biomass. The carriers are made of a material with a density close to the density of water (1 g/cm3). The carriers will allow a high contact area between the biological substrates, air and the biomass.

The system can consist of one biological tank or more, depending upon the performance guarantee requirements. MBBR also used within an anaerobic treatment system which is manly used for industrial wastewater treatment when the COD level is very high.

Product Benefits:

- Compact and requires small footprint compared to conventional bio-process
- Maintenance friendly
- Robust & durable technology
- This process is used for the removal of organic substances, nitrification and denitrification
- High volume load which leads to stability against biological load / flow fluctuation.

Service and Features:

- Supply customized design
- Supply as part of integrated system to achieve the performance guarantee values
- Provided in different types/shapes of carriers depending upon operation & performance requirements
- Fast track delivery
- Retrofit for existing plants
- Installation & supervision commissioning
- Operation & maintenance services