



Moving Bed Bioreactor

Minimal investment, maximum cost reduction

In addition to advanced treatment methods like the Membrane Bioreactor, Triqua now also offers a treatment method if the bulk of the pollution load must be disposed of (as means of cost reduction) or if applicable discharge regulations are not as strict. It is called the Moving Bed Bioreactor or MBBR. With the Moving Bed Bioreactor (MBBR) Triqua offers an economical solution for wastewater treatment if the "bulk" of the pollution load must be disposed of (as means of cost reduction) or if applicable discharge regulations are not as strict.

Process

The MBBR system consists of an activated sludge aeration system where the sludge is collected on recycled plastic carriers. These carriers have an internal large surface for optimal contact water, air and bacteria. See elements underneath.



Figure 1 Picture carrier material

The bacteria/activated sludge grow on the internal surface of the carriers. The bacteria break down the organic matter from the waste water. The aeration system keeps the carriers with activated sludge in motion. Only the extra amount of bacteria growth, the excess sludge will come separate from the carriers and will flow with the treated water towards the final separator.

The system can consist of a one stage or more stage system (see underneath schedule), depending on the specific demands.

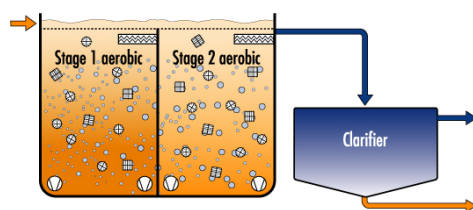


Figure 2 Schedule MBBR system with double stage biology

Selection criteria

Influent.

Especially for easy degradable bulk of wastewater.

Effluent

When less strict effluent regulations are necessary.

Applications

The MBBR is very suitable for the maritime market when it concerns the treatment of domestic wastewater. But the MBBR is also a good way to expand the capacity of existing active sludge systems.

The MBBR process is used for the removal of organic substances and nutrients (nitrification and denitrification)

Benefits

- Cost efficient
- Small footprint
- Fast deployment
- Scalable & simple operation
- Flexible & innovative technology
- Durable & stable
- Intensive nitrification
- Environmentally friendly

Triqua can offer a system made to measure or modular systems. The installation can be built in the ship's hold in stages, this way we avoid the making of unnecessary adjustments onboard.