

Wastewater Treatment: MBBR System

Egg Processor achieves BOD reduction goal with Moving Bed Biofilm Reactor (MBBR).
Stuart Ward of *Process Engineered Water Equipment, LLC* explains system design...

Case Study

Newburgh Egg is tucked away in the rolling hills of New York state and produces U Kosher egg products. Three million fresh eggs are brought to the facility on a daily basis for processing. The combination of being the largest private employer in the county and located in a small community village makes working closely with their neighbors very important. POTW flows vary seasonally with a large influx during the summer months. Consequently the plant's discharge must be controlled and monitored in the fall and winter months.



Loading MBBR Media

The facility had an existing manually operated DAF pretreatment system which effectively removed TSS and FOG and associated non-soluble BOD. However the city POTW required soluble BOD be reduced as well.



Command Control Panel

MBBR System

PEWE designed a compact Moving Bed Biofilm Reactor (MBBR) system to bring the facility into compliance. The new



Dual Tank MBBR System

MBBR system entailed dual sequential reactors. The water would be pumped from the DAF discharge sump to tank 1 and then flow by gravity to tank 2 and then final discharge. The new operation featured an automated PEWE *Command Control* system panel with color touch-screen. This control function was extended beyond the MBBR to include the entire treatment system. Careful review of the pretreatment requirements allowed for a seamless transition. The new system was fully automated in less than a week and the MBBR was up and running.

Final Results

At start-up the new stainless steel MBBR system quietly mixed the carrier media. The system was inoculated for 2 weeks with waste activated sludge provided by the local POTW. Over the course of time the bacteria colony took hold and proliferated. BOD discharge dropped and remained below permit required levels. And Newburgh Egg was especially pleased as their persistently low pH improved above target results.



Pay Off

Mr. Moses Goldstein, owner of Newburgh Egg was quite wary of the variety of expensive solutions and performance "guarantees" offered by other firms. At the end of the day he is very satisfied with the new MBBR system and his experience with PEWE. Moses is comfortable showing his new **Green** MBBR wastewater treatment system to interested firms.



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