

bioprocessH₂O Case Study

Engineered Powders Phase I



Problem: An Engineered Powdered Coatings Manufacturer was generating high concentrations of silver precipitants in their process wastewater. The effluent discharge levels were not meeting their permit requirements.

Solution: BioprocessH₂O provided a microPULSE Microfiltration (MF) system designed for filtration of silver precipitant from the wastewater. The MF system for Phase 1 consists of one membrane skid containing 24 PVDF Cross-Flow Tubular Microfilter (MF) Membrane Modules. Phase 2 and Phase 3 consists of an additional MF membrane system in each phase. The MF membrane filtration system was selected to separate and concentrate metal precipitant from the water. Due to the superior strength of the membrane system, it allows for higher operating and backwash pressure to remove the solids and meet the effluent discharge requirements.

Status/Results: BioprocessH₂O's microPULSE MF System is very efficient and has exceptional chemical resistance. The MF system allows the company to remove the silver precipitant from the wastewater and provide a high quality feed stream to a reverse osmosis system for water reuse as well as product recovery!

***Get the most out of your water!
Call bioprocessH₂O today!***



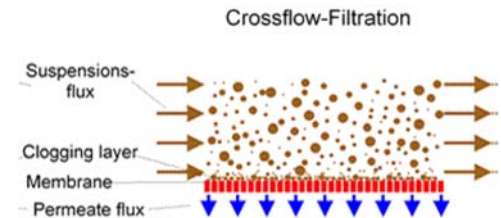
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Application Parameters:

Parameter	Influent Feed Rate	Permeate Discharge Rate
Design Permeate Flow – Phase 3	200,000 – 250,000 GPD	200,000 – 250,000 GPD
TSS, mg/L	~500 mg/l	<1mg/L
Silver, mg/L	20 – 40 mg/L	<0.01 mg/L
Temperature Range, °C	25°C - 35°C	<40°C
pH Range	~6.5 – 9.0 S.U.	~6.5 – 9.0 S.U.

Future Projects/Partnership: We have plans underway to increase system capabilities to match increased production at the Engineered Powders Facility.

If you have questions or comments and would like to learn more about our solutions packaging, please email us at H2O@bioprocessH2O.com or call bioprocessH₂O today at (401) 683-5400 to request a conceptual design and quotation for a system designed to meet your wastewater treatment needs.



Process Benefits:

- Back-pulsing capabilities
- Excellent chemical resistance
- Capable of aggressive membrane cleaning
- Positive barrier retention of TSS
- Eliminate operator exposure to wastewater
- Fully automated

Applications:

- Metal Working
- Automotive & Aerospace
- Chemicals and Petrochemicals
- Oil & Gas
- Produced Water

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