

Wastewater Polishing



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Challenge

Effluent from wastewater treatment plants (WWTP) typically is discharged to surface water. There are a few applications in which WWTP effluent is being polished by sandfilters. This polished effluent is re-used for low grade non-potable applications.

With sandfilters, high grade re-use applications, or even potable applications, are not possible because the sandfilters do not remove microbiology or dissolved substances such as nitrate and salinity. The treatment technology needed for removal of salinity is reverse osmosis, however reverse osmosis membranes are susceptible to microbiological fouling and silt that passes through sandfilters.

Solution

Norit X-Flow's hollow fiber ultrafiltration (UF) membranes screen all turbidity and microbiology. Norit X-Flow's UF membranes provide a simple solution that produces water that meets the highest standards for turbidity and microbiology. The water can either be re-used directly, if salinity and dissolved substances are within limits, or fed to a reverse osmosis system, to remove salinity and dissolved substances.

Norit X-Flow's hollow fiber membranes are available in two configurations:

- Norit XIGA™ – Multiple membranes, up to four, installed in horizontal membrane housings.
- Norit Aquaflex – Single membranes installed vertically and connected directly to feed and filtrate headers.



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Benefits

- Tight UF membrane
 - 6 log removal of bacteria
 - Turbidity \ll 0.1 NTU
 - Silt Density Index \ll 3
- Dead end filtration
 - Low energy consumption
 - Simple system
- Chemically enhanced backwash
 - Low operating pressure
 - Fully automated, no operators
 - Uses low cost chemicals
- Fully automatic operation
 - Logging of operating parameters
- Pressurized system
 - Fully enclosed
 - No operator exposure to fumes or aerosols
 - Small footprint
- Direct coagulation with inorganic coagulants
 - Short retention times
 - High removal of organics
 - Phosphate removal

Applications

- Chemical/PetroChem
- Process water
- RO pre-treatment
- Wastewater recovery and re-use



X-Flow BV

P.O. Box 739 • 7500 AS Enschede • The Netherlands

T +31 53 42 87 350 • F +31 53 42 87 351

E info@xflow.com • I www.xflow.com

Please visit our website to obtain information about your local support!

X-Flow BV reserves the right to make changes in the technical specifications at any time.

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