

Water Recycling in Industry, Commerce and Household Using Membrane Bioreactor Technology (MBR), A Case Study.

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ISEC 2022 Workshop “More than just water - waste water and sewage as source for energy, nutrients and value products”

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Water Recycling in Industry, Commerce and Household Using MBR

SFC Umwelttechnik GmbH

Chapter 1

- ❑ **SFC** - Technology specialist for advanced processes in drinking water and wastewater treatment
- ❑ Headquarters in Salzburg, Austria
Active worldwide
- ❑ Processes in biological wastewater treatment (municipal, industrial), membrane filtration and oxidation

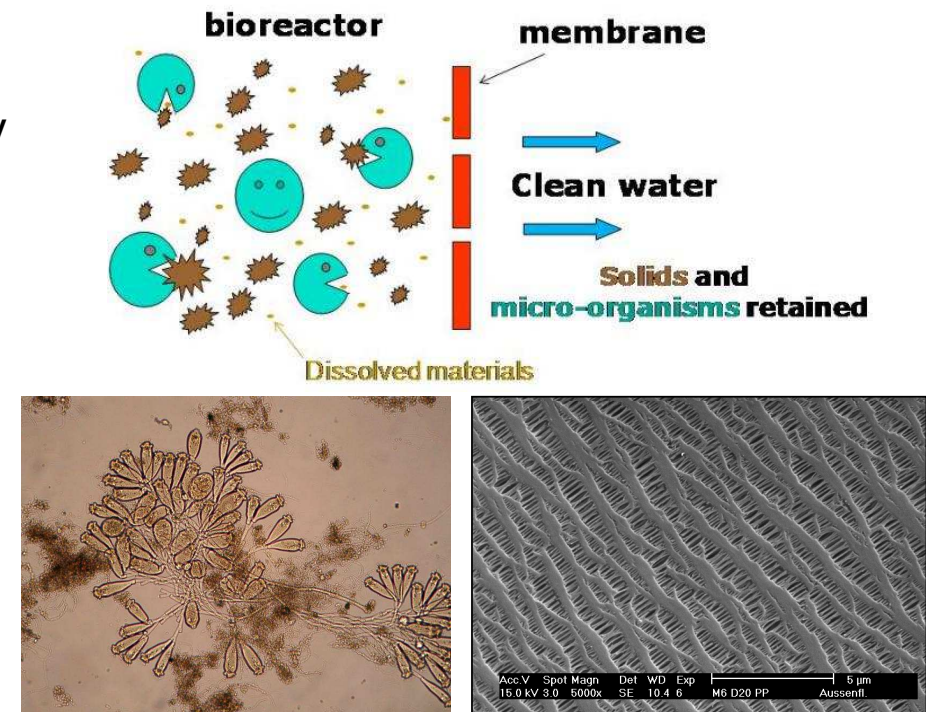


Water Recycling in Industry, Commerce and Household Using MBR

C-MEM MBR Features

Chapter 2

- ❑ Combination of bioreactor and membrane filtration
- ❑ Less space (ca. 50%) and much higher effluent quality compared to conventional wastewater treatment
- ❑ Technical disinfection by ultrafiltration membrane
- ❑ Ideal pre-treatment for further treatment steps, e.g. desalination by reverse osmosis
- ❑ State of the art technology for water reuse with many applications worldwide

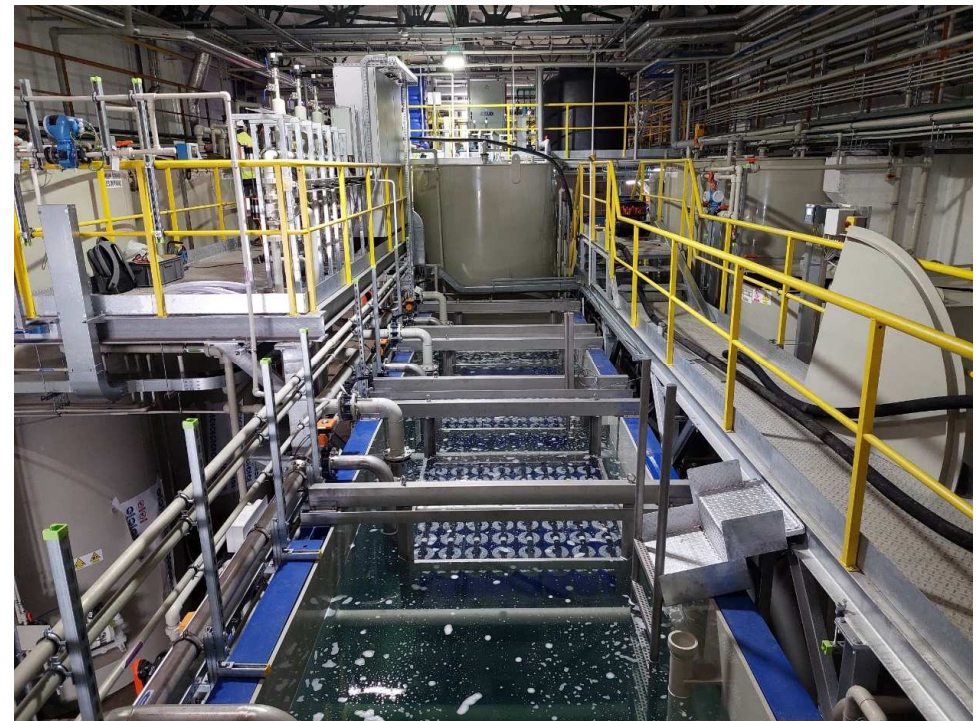


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Case Study: Water Recycling Automotive Industry

Chapter 3

- ❑ Wastewater from Automotive Industry
(Paintwork, Cleaning, Parts processing)
- ❑ Heavy metals, organic pollutants
- ❑ Up to 173 m³/day
- ❑ Zero-Liquid-Discharge (no water to sewage)
- ❑ All treated water will be recycled
- ❑ Combination of physico-chemical pre-treatment, MBR, reverse osmosis and final drying of remaining sludge by evaporation



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Case Study: Anaerobic MBR

Chapter 3

- ❑ Municipal Wastewater
- ❑ Up to 200 m³/day, full-scale demonstration plant
- ❑ “Wastewater treatment plant of the future”
- ❑ Recovery of energy and nutrients from municipal wastewater
- ❑ Combination of UASB (anaerobic treatment), membrane filtration, degassing and ion exchange process

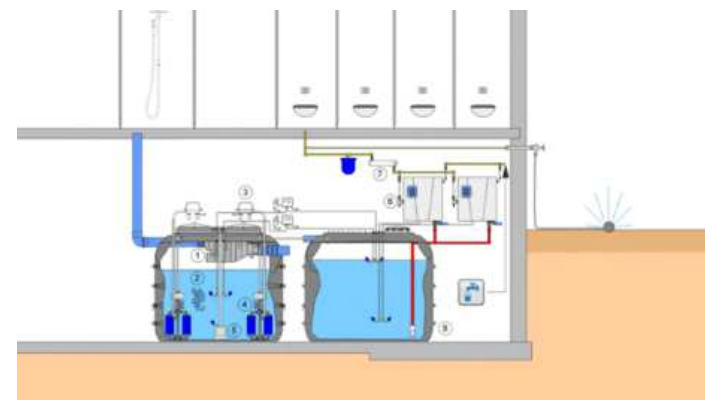


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Case Study: Household Greywater Recycling

Chapter 3

- ❑ Treatment of greywater from showers, hand basins, baths
- ❑ Water recycling for in-house use, e.g. service water for toilet flushing, cleaning, gardening, washing machines, swimming pool make-up water
- ❑ Combination of MBBR process and membrane filtration
- ❑ Achieves highest reuse standards (NSF350C)



Water Recycling in Industry, Commerce and Household Using MBR

Contact Data

Thank you for your attention.

For further information, please visit:

www.sfcu.at

or read:

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