

INDUSTRIAL WATER REUSE:

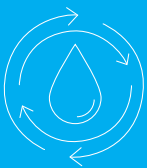
THE INTELLIGENT WAY TO OPTIMISED WATER REUSE

GRUNDFOS iSOLUTIONS



FIND OUT HOW WE'RE SAVING WATER IN OUR PRODUCTION IN DENMARK WITH A NEW WASTEWATER TREATMENT PLANT ENABLING SAFE AND EFFICIENT WATER REUSE

At our production facilities in Bjerringbro, Denmark, we paint our pumps during a process known as electrocoating – an advanced way to ensure high-quality, economical coating of metal parts. Our cathodic electrodeposition (CED) paint plant was consuming and contaminating around 2 m³ of water every hour, which is a significant amount considering the average household consumes approximately 0.3 m³ a day. As part of our efforts to solve global water challenges, our goal is to cut 50% of our total water consumption by 2025 compared to 2008. So, to help us realise this, we needed a new water reuse solution for our CED paint plant that would bring clear water savings and environmental benefits, while also maximising process safety and reliability.



80%
WATER
RECOVERY



REDUCED
OPEX



HIGHER
WATER
QUALITY



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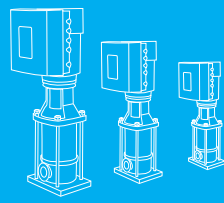
OUTCOME

- **AROUND 80% OF THE WASTEWATER FROM THE RINSING PROCESS IS REUSED**
- **THE NEW WASTEWATER FACILITY SAVES AROUND 5,000 M3 OF WATER A YEAR**
- **WATER QUALITY HAS IMPROVED DUE TO BETTER SURVEILLANCE AND DATA**

"If we can reuse water, we don't need to use drinking water from our processes. Our new water treatment system is bringing us significant water savings and helping us achieve our goal of reducing water use by 50%. Right now we save the same amount of water as is used in 100 households in a year" says Klaus E. Christensen, Lead Project Manager

NEW SYSTEM

In 2018, we opened a new wastewater treatment plant designed to reuse water from our production. This new facility is a closed-loop system that enables us to clean wastewater from our CED paint plant. Once used in the plant's rinsing tanks, the water goes through an advanced membrane filtration system, including microfiltration, reverse osmosis and UV disinfection. After treating, the water is then reused as clean rinsing water in the same tanks. A number of pumps, sensors and controls were installed as part of the new system. This includes Grundfos E pumps, digital dosing pumps, pressure sensors, flow sensors and water quality sensors.



PUMPS INSTALLED

- CRE
- NBE
- Dosing pumps (DDA)
- SOLOLIFT
- MULTILIFT