

COOLING TOWER MAKE-UP WATER

Optimize your cooling tower operations

REDUCTION OF WATER SUPPLY NEEDS

UP TO
70%

Reduction on fresh water consumption

COMPLIANCE WITH ENVIRONMENTAL REGULATIONS

UP TO
85%

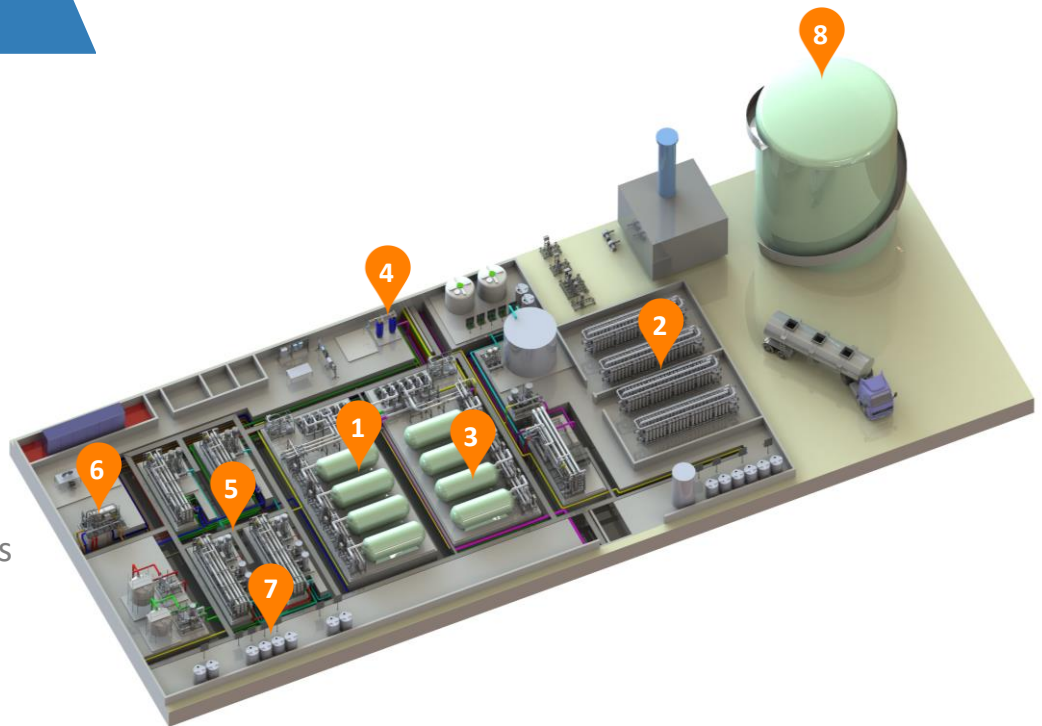
Reduction of blowdown production

INCREASED RELIABILITY

- **Extended** equipment lifetime
- **Control** of scaling, fouling & corrosion

Our Solution

- 1 ▶ MMF
- 2 ▶ Ultrafiltration
- 3 ▶ GAC Filtration
- 4 ▶ Ion Exchange
- 5 ▶ Reverse Osmosis
- 6 ▶ Electrodeionization
- 7 ▶ Chemical Dosing Stations
- 8 ▶ Water Storage



Special features

- ▶ Closed Circuit Reverse Osmosis, allowing up to **96% water recovery**
- ▶ Containerization to minimize the site works and footprint
- ▶ Automatic analytic measurement
- ▶ Product water chemical conditioning



COOLING TOWER MAKE UP WATER

The Netherlands, 2900 m³/d

Aim of the Project

Purified water availability is of extreme importance for the end-user. Having high purified water as make-up water will allow a **reduction of water consumption by 20%** in the cooling units, and consequently wastewater (blow-down) minimization.

First, the water should be treated by chemical injection in order to fit the CCRO feed recommendations, and also to minimize fouling and scaling in the cooling tower.

Then, two independent CCRO units are needed to **produce 120 m³/h of permeate at 93% recovery** and allow to reduce the brine production at the same time. The system is equipped with top-brand equipment to allow full control of chemical uses and CCRO settings.

FEED WATER QUALITY

TDS: 900 ppm

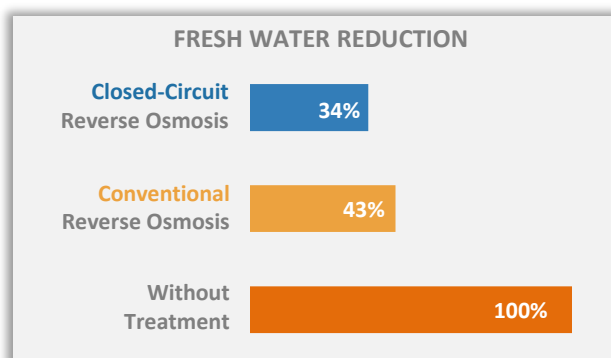
PRODUCT WATER QUALITY

< 100 ppm TDS,
disinfected & conditioned

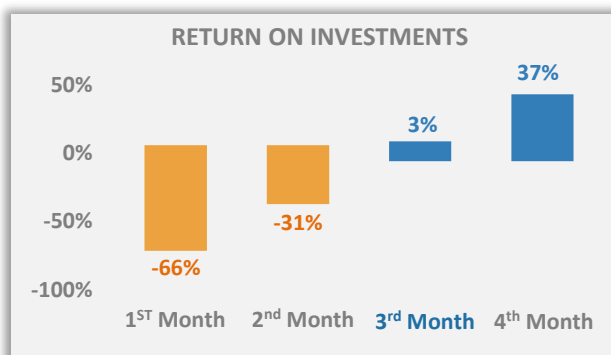
Scope of Work

- ▶ Engineering, manufacturing and assembly
- ▶ Feed and distribution pumps
- ▶ Closed-Circuit Reverse osmosis unit
- ▶ Chemical treatment
- ▶ Top-brand equipment
- ▶ Siemens PLC
- ▶ Containerization
- ▶ Site commissioning
- ▶ Remote monitoring
- ▶ Service and maintenance

FRESH WATER SAVING > 2.000.000 M3/YEAR



RETURN ON INVESTMENTS < 3 MONTHS



RO BRINE REDUCTION > 250.000 M3/YEAR

