SULFATE REMOVAL FROM SEAWATER

Scandinavia, 2400 m^3/d

Aim of the Project

The seawater Nanofiltration system is designed to treat fresh seawater for offshore works. The main goal was to design a system capable of reducing the sulfate concentration to less than 15 mg/L that would replace the use of tap water for drilling and stimulation processes. The system should produce 100 m3/h of water and must fit in the limited space available on the client's vessel.

Lenntech has engineered and built a double pass nanofiltration unit fully automated and resistant to marine environment. The system design complies with client's requirements in terms of automation level, electrical and mechanical specifications.

The unit has been delivered in three skids: a pretreatment and rinse skid including self-cleaning filtration and filters; a pump and water distribution skid; and a pressure vessel skid.

For this process, 175 state-of-the-art seawater nanofiltration membranes have been installed.

Scope of Work

- Engineering, manufacturing and assembly
- Sulfate removal nanofiltration
- Customized mechanical design for installation on top of 20ft tanks, with ISO locks.
- Duplex equipment for high-pressure line
- Customized production sequences adjustable
- depending on the water quality requirements.
- Installation supervision & commissioning
- Remote data monitoring and system optimization

FEED WATER QUALITY

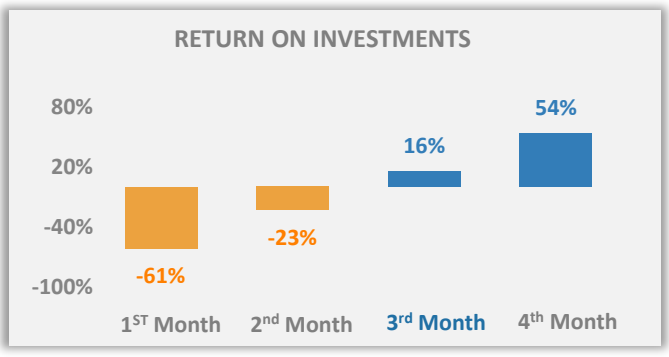
Conductivity: 48,000 µS/cm
Sulfate: 2500 ppm

PRODUCT WATER QUALITY

Sulfate < 15 ppm

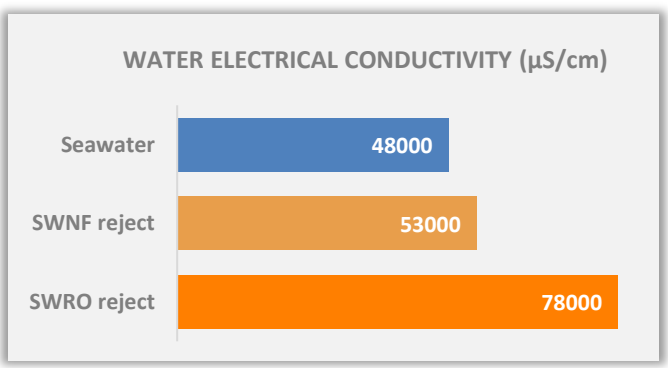
Key accomplishments

RETURN ON INVESTMENT < 3 MONTHS



Based on 24/7 operation, compared to drinking water average cost per m^3 in Scandinavia. Data specific to this project.

BRINE QUALITY IMPROVED FOR REJECT IN SEAWATER



LENNTECH Water Treatment Solutions
info@lenntech.com
www.lenntech.com
Europe – Delft, The Netherlands
T: +31 152 610 900
North & South America – Miami, USA
T: +1 877 453 8095
Middle East – Dubai, UAE
T: +971 4 429 5853