Customer Success Story

Location: Mexico

AMI deploys High Salinity RO (HSRO) solution ahead of schedule

Ensuring a sustainable and reliable water supply while meeting regulatory standards is critical in the PowerGen industry.

Challenge

A company in Mexico is involved in the generation, transmission, and distribution of electric energy, using combined cycle gas turbine (CCGT) technology.

It needed high-capacity Reverse Osmosis (RO) systems to provide high-quality water for processes including steam turbine cooling and boiler feedwater treatment.

The goal was to improve equipment efficiency, environmental compliance, and overall performance of its facilities.

Source water from wells measured 20,000 mg/L TDS (30k EC) and contained high salinity and iron (over 1 ppm).

The client requested rapid deployment within 4 months.

Feedwater with iron over 1 ppm

Water from AMI system

Solution

Applied Membranes designed, built, and commissioned High Salinity Reverse Osmosis (HSRO) solution treating natural groundwater from existing wells producing **1 million gallons per day (MGD) (700 GPM) (160 m3/h)** of high-quality permeate.

The HSRO solution included six (6) 40-foot containerized modules, including pretreatment and RO desalination systems.

AMI containerized solution includes packaged membrane water treatment systems designed for simple plug-and-play onsite installation. Equipment was pretested at Applied Membranes USA facility simulating onsite conditions within practical limits.

Key Features:

- Antiscalant
- Chemical injection system
- Media filtration
- Greensand filtration
- Energy recovery
- Clean-in-place system

Results

Applied Membranes delivered all 6 containerized systems within 3 months surpassing customer's expectations without compromising on quality.

High-quality product water: AMI systems consistently produce high-quality water (SDI < 0.5).

Rapid deployment: AMI efficient manufacturing processes enabled delivery within three months.

Operational efficiency: AMI containerized systems contributed to operational efficiency of the client's power plants, providing high-quality water for critical processes.

Easy installation: Climatized containers are durable to withstand varying environmental conditions. Installation was simplified plug-and-play for immediate use at the project location.

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