



COOLING TOWER AND BOILER MAKE-UP WATER

Poland, 840 m³/d

Aim of the Project

The project focuses on producing high-recovery purified water for cooling tower and boiler make-up at a new potato chip manufacturing facility in Poland. High water recovery was a key requirement from the client in order to significantly reduce brine generation and minimize discharge volumes.

Lenntech has engineered and delivered a fully automated water recovery plant designed to meet strict performance and quality specifications. The system includes water conditioning, a Closed-Circuit Reverse Osmosis (CCRO) unit, storage tanks, and a distribution skid.

The CCRO technology enables high purification efficiency while maximizing water recovery and potentially minimizing both brine production and the need for chemical cleaning (CIP), further supporting the client's brine-reduction objectives.

The plant is controlled through a PLC-based automation system, with full integration into the client's SCADA platform for data acquisition, monitoring, and remote operation.

Key accomplishments

WATER
RECOVERY

Up to

93%

CONDUCTIVITY

< 40

μS/cm

WASTEWATER
DISCHARGE
REDUCTION UP TO

77%

WITH CCRO

Scope of Work

- ▶ Engineering, manufacturing and assembly
- ▶ Site installation and commissioning
- ▶ CCRO recovery up to 93%
- ▶ Water quality monitoring in distribution lines
- ▶ Include dosing cabinets for additional safety
- ▶ Remote I/O cabinet per skid
- ▶ Advanced control for fully automatic operation
- ▶ Connection to client SCADA platform
- ▶ Top brand equipment selected according to client's preferences
- ▶ In-line CCRO data normalization and performance monitoring

FEED WATER QUALITY

Conductivity: 500 μS/cm

Si: 14 mg/L

Hardness: 220 mg CaCO₃/L

PRODUCT WATER QUALITY

Conductivity: < 40 μS/cm

Hardness: < 5 mg CaCO₃/L