



PROJECT BRIEF

Chemical Manufacturing Plant Secures Essential Supply-Chain Component and High-Purity Water for Its Boiler Makeup with SAMCO System

PROJECT OVERVIEW

A chemical manufacturer in Ohio was faced with shutting down a product line when the only North American manufacturer of a critical ingredient announced it was shuttering their operations. Plans were quickly made to manufacture the needed material in house by building a new facility. SAMCO was contacted by the chemical company's EPC to solve water supply challenges for the project.

OBJECTIVE

Deliver a system to produce high purity water for process applications, and make-up water for a high-pressure boiler:

- < 5 ppm TDS
- < 5 μ S conductivity
- < 0.04 ppm iron
- < 0.05 ppm silica
- 0 ppm hardness

SCOPE OF SERVICE

SAMCO worked with the EPC to specify the correct treatment process, based on the source water quality, required effluent quality, and other customer needs. SAMCO engineered and manufactured a modular RO system and supported the customer and EPC through installation and commissioning.

CHALLENGES

- Fast project delivery required
- High-purity water required for both boilers and process
- High TDS lake water source
- Neither the client nor EPC had built a process plant to produce this material

SOLUTION

SAMCO collaborated with the customer, EPC, process engineers, and other system vendors to establish a specification for the treated water. It was determined that a single RO plant could be used to serve both the process water needs and boiler make-up for the high-pressure boilers. This reduced the cost, footprint, and OPEX for the new plant.

SAMCO provided the prefabricated RO equipment, modules, and startup support for the facility.

TECHNOLOGY

SAMCO's project deliverables and equipment included:

- RO filtration unit
- Variable frequency drive
- Sodium bisulfite feed
- Antiscalant feed
- PLC control

OVERVIEW

Industry
Chemical

Location
Ohio

Objective
Reduce lake water TDS to extremely low levels for high-pressure boiler, help client manufacture key material required for their process

Solution
60 GPM RO