



PROJECT BRIEF

Peroxide Manufacturer Sources River Water for Boiler Feeds, Achieving Efficiency and Reliability with SAMCO Ion Exchange Technology

PROJECT OVERVIEW

When a peroxide manufacturing plant in Buffalo, NY opted to leverage the region's ample river water to supply its boiler feed streams, the facility looked to SAMCO for an ion exchange (IX) system to efficiently demineralize its source water.

OBJECTIVE

Deionize river water to supply boiler feed for peroxide manufacturing operations.

- Reduce minerals to less than 10 micromhos per centimeter

SCOPE OF SERVICE

SAMCO delivered a turnkey IX deionization system, with the project scope entailing comprehensive process design and engineering, system fabrication, controls integration, commissioning, startup training and support.

CHALLENGES

- Low mineral concentration tolerance for boiler feed usage
- Limited operator availability

SOLUTION

To deliver efficient demineralization and filtration of river water, SAMCO designed, fabricated, and installed an ion exchange system to support the client's peroxide manufacturing operations. The system utilized two parallel IX trains with concurrent regeneration, allowing for automated cation/anion exchange. In addition to the IX pressure vessels, the solution included a triplex multimedia filter train for treatment of the treated boiler feed stream. SAMCO performed all construction and installation of the system for fast-track delivery. To minimize operational demands, the system included programmable logic controllers (PLC) and an operator interface for remote system monitoring and control.

TECHNOLOGY

SAMCO delivered an automated IX and filtration system, including:

- Alternating two-train IX pressure vessels
- Triplex multimedia filter train
- Rinse and recycle pumps
- Chemical storage and metering equipment
- PLC controls

OVERVIEW

Industry
Chemical

Location
Buffalo, NY

Objective
Deionize source water to <10 μcm for boiler feeds

Solution
100 GPM Twin Alternating Ion Exchange System