PROJECT BRIEF
Microelectronics Company Installs SAMCO’s RO-PEDI Ultrapure Water System to Meet Industry Regulations and Improve Product Quality

PROJECT OVERVIEW
At a leading microelectronics company in New York, the client installed SAMCO’s cutting edge ultrapure water (UPW) system that utilized reverse osmosis and a portable exchange deionizer (RO-PEDI) for superior oxygen and bacteria removal, bringing the client’s water into industry compliance for use in their photoreceptor production line.

OBJECTIVE
Satisfy stringent microelectronic water purity standards and achieve 18+ meg-ohm/cm ultrapure water with significant bacteria and oxygen removal.

SCOPE OF SERVICE
The client worked with SAMCO to develop an effective solution that comprised detailed design/ engineering, controls integration, system fabrication, commission, startup, and ongoing maintenance and system support.

CHALLENGES
- High bacteria and oxygen levels
- Stringent industry regulations
- Fast-track project, concept to completion
- Critical application requiring high uptime
- Minimal operator availability

SOLUTION
After installing SAMCO’s RO-PEDI system, the client observed marked consistency in ultrapure water quality and maximized ROI. A jumbo 30 cu. ft. PEDI executed off-site regeneration, and a membrane degasifier efficiently removed CO₂ and O₂—both systems working simultaneously to reduce DI exchange frequency under minimal supervision. A built-in system redundancy resulted in high uptime, and a prepackaged design enabled fast-track, turnkey project delivery that included programmable logic controllers (PLC), automating flow, temperature, pressure, and resistivity monitoring from a remote location.

TECHNOLOGY
Project deliverables and equipment included:
- RO system with storage tank
- Jumbo cu. ft. PEDI
- Triplex sand, duplex bag, and .2 micron filters
- Heat exchanger
- Equalization tank
- Influent booster and transfer pumps
- Chemical feeds
- Membrane degasifier
- Ultraviolet sterilizer
- Catwalks/platforms
- PLC controls/remote telemetry

OVERVIEW
Industry
Microelectronics
Location
New York, US
Objective
Purify city water to meet stringent microelectronics industry standards
Solution
80 GPM Ultrapure RO-PEDI Water System

Need help bringing your water to industry compliance standards? Is water purity an issue? Contact us today at SamcoTech.com • askengineers@samcotech.com • (716) 743 9000
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