

ULTRAPURE WATER TREATMENT

RO-DI System for Photo-Film Industry

Industry:	Photographic Film & Chemicals
System:	630 gpm Triplex Ultra Pure Water System
Location:	Southeast USA
Goals:	18+ meg-ohm/cm Ultra Pure Water, < 5 ppb Silica

Project Overview:

Our state-of-the-art Ultra Pure Water System (UPWS) at a leading Photographic Film & Chemicals manufacturing facility utilizes Reverse Osmosis & Mixed Bed Deionizer System (RO-DI) to purify city water to ultra high purity levels. It is designed to meet one of the highest water purity standards in the Photo-Film industry.

Critical Issues:

18+ meg-ohm/cm quality ultra high purity water
Fast-track project, concept to completion

Critical application needing high uptime
Minimize operator attention

Vision for Solution:

- RO-DI in lieu of only DI for consistent ultra pure quality with superior removal of bacteria, silica & organic compounds
- RO-DI reduces DI regeneration frequency by a factor of 30
- RO-DI maximizes ROI with a two year payback through chemicals savings
- Triplex independent trains design for 50% redundancy & very high uptime
- Utilize our standard products & pre-packaged system design for fast-track turnkey project
- PLC w/ Remote Telemetry for minimum onsite operator attention

Project Scope:

Treatability Studies	Detailed Design/Engineering
System Fabrication	Controls Integration
Field Installation	Commission/Startup
One Year Operations	Ongoing Service

Equipment Description:

Each 210 gpm System Train:

Multimedia Filter	Activated Carbon Filter
Reverse Osmosis (RO)	Chemical Feeds
RO Storage Tank	Transfer Pumps
Mixed Bed DI (MBDI)	PLC/Remote Telemetry

Support Systems:

Acid/Caustic Feed	Neutralization System
RO Cleaning System	

Special Features:

- PLC controlled system enables supervisory control & data acquisition from a remote site
- Process monitoring include flow, temperature, pressure, level, pH, resistivity, silica, etc
- Clean-in-place system enables easy cleaning of membranes, for time and costs saving

