

Fonterra Edendale RO-EDI Plant

Southland, New Zealand

FILTEC

Making Water Safer

Project Snapshot



Client: Fonterra



Capacity: 32 m³/h



Technology: Reverse Osmosis (RO),
Electrodeionisation (EDI), CIP



Source Water: Demineralised Water
and Condensate



Completion: 2024

Project Outcomes

- ✓ High-purity boiler feedwater (<0.06 µS/cm conductivity)
- ✓ >99% system availability with dual-train configuration
- ✓ Reduced scaling and corrosion risk for electrode boiler
- ✓ Automated operation with minimal operator intervention
- ✓ Integrated with site SCADA

RO-EDI System for High-Purity Boiler Feedwater

Fonterra required a high-purity water treatment system to support a new electrode boiler at its Edendale site. The system needed to consistently achieve ultra-low conductivity feedwater while integrating with site automation and minimising operator intervention.

FILTEC designed and delivered a dual-train reverse osmosis and electrodeionisation (RO-EDI) system, producing 32 m³/h of high-purity water with >99% availability. Each train delivers 16 m³/h, achieving final water quality of <0.06 µS/cm conductivity and <0.01 mg/L silica.

The system incorporates a compact skid-mounted layout to simplify installation and maintenance, along with automated start-up, shutdown and membrane protection sequences. Integration with Fonterra's SCADA network via remote I/O enables seamless operation and monitoring.

All installation, commissioning and operator training were completed within the scheduled shutdown window, allowing the new boiler to be brought online without delays. FILTEC continues to provide CIP servicing and performance support through its South Island-based service team.

