Boiler Feedwater Demineralisation Plant

FILTEC
Making Water Safer

Waikato, New Zealand



Project Snapshot

Client: Waikato Dairy Manufacturer

Capacity: 300 m³/day

Technology: Ion Exchange Demineralisation, Carbon Filtration, Chemical Regeneration

Source Water: Reservoir Water, River Water

Completion: 2023

Project Outcomes

- 300 m³/day demineralised water production capacity
- Typical treated water conductivity of 1 µS/cm
- Reduced boiler scaling and blowdown requirements
- Automated regeneration with acid and sodium hydroxide
- Integrated SCADA monitoring and control

Automated Demineralised Water Production for Dairy Processing

A Waikato dairy manufacturer required a reliable source of high-grade demineralised water to meet stringent steam boiler feedwater specifications and support cheese production operations. The presence of dissolved minerals in the available water supply created a risk of scale formation, reduced boiler efficiency and increased maintenance requirements.



FILTEC designed, fabricated and installed a fully automated ion exchange demineralisation plant capable of producing 300 m³/day of treated water.

The system incorporates carbon filtration upstream of the ion exchange process and automated regeneration using acid and sodium hydroxide to maintain media performance and treatment reliability.

The plant consistently delivers treated water with a typical conductivity of 1 µS/cm, supporting efficient boiler operation and reduced blowdown frequency. Integrated SCADA connectivity enables remote monitoring and operational visibility, while welded flanged and triclover chemical pipework connections enhance safety, reliability and long-term maintainability.

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