

CASE STUDY

PROJECT	PROCESS WATER FOR WA LITHIUM MINE
PRODUCT	Sea Water Reverse Osmosis (SWRO)
INDUSTRY	Mining
LOCATION	Goldfields-Esperance Region, Western Australia



BACKGROUND

The owner of a lithium mine undergoing expansion near Kalgoorlie in Western Australia required assistance with upgrade of the existing water infrastructure to provide a reliable supply of water for the new processing plant. With the water source being both variable and of limited availability, the focus was on a design that was also capable of treating process wastewater for reuse.

MAK Water worked closely with the owner to design the best possible solution, which included multiple new water treatment plants and upgrade of an existing plant to achieve the required outcome. The SWRO plant was designed to treat hypersaline RO brine/reject water (brine recovery) from an existing SWRO plant onsite, for reuse in the process circuit.

MAK Water was engaged by the owner to design and construct a robust SWRO plant capable of treating extremely high TDS feed water at a high recovery rate. MAK Water was also awarded a long term contract to provide plant operators to maintain and operate all of the water treatment plants onsite.

SOLUTION

Containerised Sea Water (SWRO) plant to produce 1,272 m³/day of permeate, for process use.

MAK WATER KEY SOLUTIONS

- Fast 18 week delivery time
- Containerised (2 x 40') solution for easy installation
- Monitoring of feed water pH and conductivity
- pH adjustment dosing system
- Low flux rate designed for up to 57,000 TDS feed water
- Premium instrumentation package with ClearAccess™ Remote Monitoring
- Onsite installation assistance and commissioning
- Long term Operations Agreement for all plants onsite

RESULTS AND BENEFITS

- **Technical Support.** Expert advice and consultation throughout the design and delivery phases. Operations Agreement to provide ongoing technical support, maintenance and operation of plant
- **Plant Reliability.** Custom design and quality equipment will provide reliable operation with minimal maintenance
- **Compact Footprint.** Fully containerised for easy site installation
- **Delivery.** New plant supplied, installed and commissioned to meet client schedule



Containerised 1,272 m³/day Sea Water Reverse Osmosis (SWRO) plant



Premium instrumentation package with ClearAccess™ Remote Monitoring