

CASE STUDY

PROJECT DEMINERALISED WATER FOR MINERAL PROCESSING PLANT

PRODUCT Brackish Water Reverse Osmosis (BWRO) Hire

INDUSTRY Manufacturing

LOCATION Kemerton, Western Australia



BACKGROUND

High quality demineralised water is produced from bore water for cooling tower and boiler feed water at a titanium dioxide plant in Kemerton.

Initially interested in a hire Reverse Osmosis (RO) plant to supplement the demineralised water supply from its existing Ion Exchange plant, this manufacturer realised the reliability and cost effectiveness of RO compared to ion exchange and decided to increase the requirement to 1,500 m³/day for a longer hire term to replace an old Ion Exchange system. Prior to completion of the first hire term, the RO hire plant capacity was upgraded to 1,800 m³/day and extended to a second term.

With ongoing service and support by MAK Water, RO proved to be a more efficient and reliable replacement for Ion Exchange and the contract was subsequently extended to a third term with a longer Build Own Operate (BOO) contract.

SOLUTION

- In-house design and manufacture of a 1,500 m³/day (3 trains) Brackish Water Reverse Osmosis (BWRO) hire plant, with upgrade to 1,800 m³/day
- Custom design with 316SS high pressure pipework to achieve the required treated water quality
- 3 x 33% trains for operational flexibility
- ClearAccess™ Remote Monitoring and Control
- Fast six week lead time for hire reverse osmosis plant supply
- Onsite commissioning and training of local operators, with ongoing service and maintenance



The Brackish Water Reverse Osmosis hire plant

RESULTS AND BENEFITS

- **Quick response.** The hire reverse osmosis plants were delivered within six weeks.
- **Technical Support.** MAK Water has provided ongoing technical support through the transition from Ion Exchange to Reverse Osmosis.
- **Plant Reliability.** The high quality equipment and service has proven RO to be reliable replacement for Ion Exchange.
- **Cost Effective.** The RO plant has proven to be a cost-efficient replacement for Ion Exchange.
- **Compliance.** Maintains compliance with the strict treated water quality requirements.



The Brackish Water Reverse Osmosis hire plant on site in Kemerton