

DuPont FILMTEC™ at Australia's First Large-Scale Municipal Desalination Plant in Perth



The Challenge

A combination of climatic change and increasing population had a significant impact on the potable water supplies in Perth, Western Australia. The Perth seawater desalination plant, located south of Perth, was designed and built in 2005. It was the first largest seawater desalination plant when constructed at that time in the southern hemisphere.

The Solution

Since 2006, the plant has been constantly delivering reliable and high quality drinking water, which accounts for about 17% of Perth's water supply. Around 18,000 DuPont FILMTEC™ reverse osmosis elements were installed and play a vital role in securing long-term water supply for the local residents.



Fast Facts

Country:	Australia
Operator:	Suez
Membrane Type:	DuPont FILMTEC™ SW30HRLE-400 & LE-400
End-user:	Water Corporation
Total # of Elements:	17,976
Plant Capacity:	145,000 m3/day
Start-Up Date:	2006
Feed Water Quality:	37,000 ppm TDS, SDI<5
Product Water Quality:	<200 ppm TDS, <0.1 ppm Br
Temperature Range:	14-26 °C
Product Quality:	Potable water
Pretreatment:	Dual media filters

The Benefits

Since commissioning in 2006, the plant operates at a recovery of 45% for the first pass seawater RO and 90% for the second pass brackish water RO. The well-maintained membranes have been operating over 10 years without replacement and consistently demonstrating excellent operating performance, reliability, and durability.

Reverse Osmosis System Summary

First Pass

Number of RO Trains	12
Number of membrane elements per pressure vessel	7
Number of pressure vessel per train	162
Total number of RO elements	13,608
Membrane Element Type	SW30HRLE-400

Second Pass

Number of RO Trains	6
Number of membrane elements per pressure vessel	7
Number of pressure vessel per train	104
Total number of RO elements	4,368
Membrane Element Type	LE-400



Water Solutions
Have a question?

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