XLERPLATE®

Customer Report

Customer: Brockman Engineering
Location: Corio (Geelong), Vic
Project: Water Tanks
Date: May 2006

XLERPLATE® steel stores Melbourne water

One of Victoria's most experienced fabrication companies is completing work on the second of two major steel water tanks for Melbourne Water.

Brockman Engineering Pty Ltd won separate tenders to design and construct a 33 megalitre storage tank at Mornington and a 53 megalitre storage tank at Frankston.

The two huge steel tanks are part of an ongoing program by Melbourne Water to improve water quality and upgrade storage capacity. The 65 metre diameter Mornington tank was completed late last year and the 95 metre diameter Frankston tank will be commissioned in May 2006.

Both tanks, which have been fabricated from XLERPLATE® steel, replace open reservoirs and provide more effective storage and water quality for surrounding areas. The Mornington storage tank is 10.5 metres high and the Frankston tank 8.7 metres high.

BLUESCOPE STEEL

Above right: Brockman Engineering's Project Manager Max Goddard.

Above: The XLERPLATE® steel floor functioned as a work surface for the completion of the tank fabrication.

In 1989 Brockman Engineering Managing Director, Don Forbes, put together a team to purchase a major shareholding in the company, which had already established a strong reputation for the quality of its general fabrication work, covering everything from bridge girders to crane jibs and metals processing vessels.

This team was instrumental in introducing the design and construction of steel storage tanks for the chemical, oil and water supply industries, which is now a core activity for the 84 year old Corio based company.

"Since 1988 we've designed and constructed almost 100 storage tanks," Project Manager Max Goddard said. "Most have been in Victoria, but we've also tackled projects in New South Wales, Queensland and South Australia."

Mr Goddard said that the company had developed specialised skills and access equipment to tackle increasingly larger and more complex design and construction tasks. The Frankston and Mornington contracts involved siteworks, foundations, tank fabrication, electrical works and piping – all with challenging scheduling.

"We've had excellent support from all parties, particularly from BlueScope Steel," Max Goddard said.

The Frankston and Mornington tanks incorporate more than 2,100 tonnes of XLERPLATE® steel from BlueScope Steel.

Both tanks, which are the largest designed and constructed by Brockman Engineering, were fabricated from 250 Grade XLERPLATE® steel. Tank wall thicknesses vary from 22mm at the base to 10mm at the top. Floors and roofs were fabricated from 6mm XLERPLATE® steel.

Existing Melbourne Water tanks have roofs clad with aluminium profiles. The Frankston and Mornington tanks incorporate roofs fabricated from 6mm XLERPLATE® steel.

"We set up a program with BlueScope Steel to order XLERPLATE® steel for delivery in a sequence that gave us time to fabricate the shell and the roof of the tanks before the floor was delivered."

Max Goddard, Brockman Engineering Pty Ltd

Internal surfaces of the tanks are coated with a special "high-build" epoxy layer developed for contact with drinking water.

"These have been projects where the flexibility of suppliers has been crucial to success," Max Goddard said.

"Melbourne Water have particularly high engineering standards which presented their own challenges. Both tanks are built to an American standard which has tighter tolerances than the Australian standard. The American standard calls for tolerances of less than 0.25mm on plate thickness."

Above: A roof constructed of 6mm XLERPLATE® steel provides security. Tank wall thickness varies from 22mm at the base to 10mm at the top.

"We've had excellent support from all parties, particularly from BlueScope Steel."

Max Goddard, Brockman Engineering Pty Ltd

The specifications of the water tanks and their production schedule involved the supply of non-standard XLERPLATE® steel, sometimes with short lead times.

"We've had extremely close co-operation from BlueScope Steel, not just on specification, but also on delivery scheduling," Max Goddard said. "They got together with us to organise delivery of steel to our premises, to Smorgon Steel for profiling and some direct to the construction sites.

"We set up a program with BlueScope Steel to order steel for delivery in a sequence that gave us time to fabricate the shell and the roof of the tanks before the floor was delivered. It's worked well.

"These are very large projects. In the case of Mornington the construction period was 18 months and for Frankston it will be two years. You have to have confidence in your suppliers. That's something we've established with BlueScope Steel over a number of years.

"We've looked at imported steels at various times, but we have always gone with the Australian product and marketed that. Australian steel is some of the best steel in the world and we've never had any problems with it."

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