Customer Case Study

Worsley Alumina

West Australia

Lifting a 220 tonne spent caustic tank

The Customer

Worsley Alumina is a joint venture operation between BHP Billiton, Japan Alumina Associates (Australia) Pty. Ltd. and Sojitz Alumina Pty. Ltd.. Based in Western Australia, operations include a bauxite mine and an alumina refinery. Located in Western Australia, Worsley Alumina is one of the world's largest and most efficient alumina refineries.

The Challenge

Working on site with SDR Australia the application involved the raising and lowering of a large empty steel spent caustic tank measuring 20 meters diameter x 20 metres tall with a gross weight of 220 tonnes at Worsley Alumina's Collie plant.
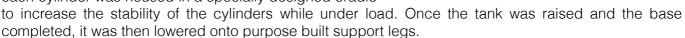
Our Partner

Rigging Rentals are industry specialists in Lifting Equipment Hire, located in Melbourne, Geelong, Adelaide and Perth. They take great pride in offering their service, experience and quality brands for Lifting & Materials Handling equipment. They work closely with Pacific Hoists on many large lifting and materials handling applications.

The Solution

A complete lifting system was designed using 12 PSC2512 cylinders   together with a number of Eagle Pro's custom made high pressure hoses and various valves and fittings. The system was operated by an electric pump to raise the tank 100mm and lower 800mm. The initial raise was done in 10mm increments to ensure an even lift and this was observed by spotters with 2 way radio contact.

Due to the ground surface and mass weight of the load each cylinder was housed in a specially designed cradle to increase the stability of the cylinders while under load. Once the tank was raised and the base completed, it was then lowered onto purpose built support legs.

The process of raising and lowering of the tank onto the support legs went very well and took 4 hours to complete, and was a complete success.

Pacific Hoists continue to work closely with its partners on many large lifting projects throughout Australia.

For more information, please contact Pacific Hoists or chat online at our website