

Berendsen Helps Luna Park Smile Again

Berendsen Fluid Power's Sydney branch recently undertook a large refurbishment project on major rides within Luna Park.

The History

Luna Park is one of the most recognised and heart-felt icons in Sydney.

For this reason, it was critically important from the start that Metro Edgeley, the assigned operators of Luna Park, bestowed the important tasks of hydraulic equipment refurbishment to a company with experienced and reliable engineers and technicians.

Metro Edgley won the contract to operate Luna Park from the Carr State government in 1999. Their task was to refurbish and modernize the Sydney icon whilst retaining the historical passion present since 1935. The overall cost to redevelop the entertainment centre has been in the order of \$72 million, employing approximately 900 people throughout its 4-year redevelopment program.

The Job

The complex hydraulic system is the heart of all major rides and attractions at Luna Park. Their safe and reliable operation is critical to the park's success and on-going viability.

Large hydraulic power units provide hydraulic oil flow at high pressure to drive a number of hydraulic componentry – cylinders, drive motors, controls and other devices, which provide both the simple and complicated motions experienced on most of the rides at the park.

Diverse experience with a range of components from a variety of manufacturers combined with the technical support from a local source are the critical attributes necessary to successfully undertake a project of this nature.

Metro Edgley sought a contractor who could provide a complete turnkey service, with the important facets of technical support, Pump/Motor Test cells and large workshop facilities that include an approved test rig facility. Total support in the field was also important, in the form of troubleshooting, installation and commissioning.

Additionally, a company that was able to deliver the hydraulic refurbishment program within a tight timeframe and within budget was also essential.

Berendsen Fluid Power was able to meet these requirements and the Sydney Branch was assigned the prestigious contract of designing and implementing the refurbishment program to the Ferris wheel, Mini Ferris wheel and the UFO ride.

The Details

The Ferris Wheel was the largest and most demanding of the three rides and entailed workshop work as well as fieldwork. The system consists of a Vickers Power unit with a Double Vane Pump and 450-litre oil capacity delivering a hydraulic oil flow of 80 litres/min at 14000kpa. The system drives four Vickers Vane motors, which in turn deliver the driving force through 4.17:1 reduction gearboxes ultimately turning the giant 30m diameter "Ferrari" Ferris Wheel.

Berendsen undertook the complicated and intricate task of de-commissioning, component removal, refurbishing, bench testing, re-installing and commissioning the complete system.

A unique feature of this project was the delicate and dangerous task of dismantling, removing and re-installing the four Vane Motors and the pipework from the Power unit to each of the motors.