Kangaroo Valley Pipeline (Australia)

Project description

The Kangaroo Valley Pipeline, located to the southwest of Sydney, was constructed in 1976 to provide water to Australia's largest city and other parts of New South Wales.

The pipeline has a diameter of 3,100 mm and a length of 2.5 km, and a condition assessment at the end of 2021 identified the need to replace both the main bearings and the lateral bearings that support and align the pipeline along its full length.

mageba scope

mageba was awarded the contract to design and manufacture the required bearings, with a design life of 50 years to match the remaining expected service life of the pipeline itself.

The pipeline is supported by a set of four bearings at 21.5-metre intervals, with two main bearings supporting the pipeline's weight and a lateral bearing at each side resisting horizontal forces. Each bearing is of the free-sliding type, facilitating sliding movements in all directions parallel to its sliding surface.

mageba met this need by supplying "Type R" bearings – a specially developed version of the LASTO®FLONBLOCK bearing with suitably designed anchor plates for connection to the pipeline support structures. Suitably tailored dust skirts were also supplied to protect the bearings – especially their sliding surfaces. The 192 bearings required for the first phase of the project were fabricated in mageba's Shanghai factory.

Highlights & facts

mageba products:

Type:	LASTO®FLONBLOCK deformation sliding bearings
Installed:	2023

Structure:

City:	Sydney
Country:	Australia
Owner:	WaterNSW
Contractor:	Diona / VSL Australia
Designer:	Water NSW

The pipeline is located southwest of Sydney in Australia

A LASTO®FLONBLOCK bearing designed to support a vertical load of 1,335 kN

A pair of bearings work together to support the pipeline while accommodating movements and rotations

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