

Roxby Downs Uranium Mine South Australia

High Temperature - Desert Conditions



Project Need

When the Western Mining Corporation began planning for a new pipeline to Roxby Downs in central South Australia it became obvious that the extreme operating requirements and installation conditions would pose a number of challenges for the project team. Supplying water to the expanding copper-uranium mines in the Olympic Dam area meant a groundwater temperature of 60°C and operating pressures of up to 3.5MPa, as well as tackling 113km of South Australian desert along the route.

In total, the project required over 26,000 tonnes of SINTAKOTE® SINTAJOINT® rubber ring pipe. Using 5mm wall thickness and high grade steel ensured production and installation costs were minimised. The pipeline route ran through several local communities, including a number of important aboriginal heritage sites. A carefully planned project schedule ensured minimum disturbance of these areas. On a project of this scale, communication between local communities and the project team was essential.

As a sign of things to come, construction began in desert temperatures of 45°C. The project team produced a tailor-made Code of Practice for the 250 site workers, with Steel Mains providing continuous product training and on-site technical support throughout the scheme, including an induction course for all transport operators.

Solution

In order to ensure the successful completion of this unique project, WMC enlisted Steel Mains to manage the entire contract. Steel Mains' practical experience and close partnership with the selected sub-contractors ensured that the best solution was delivered in terms of product, pipeline design, supply and installation. Working with design consultants Kinhill (now KBR), Turners Transport and Transfield Construction, Steel Mains designed, manufactured, supplied and installed the 115km of DN600 mild steel SINTAJOINT® pipe and ductile iron pipe.

Achievements

Utilising its superior range of products, a high level of technical experience, Steel Mains was able to monitor and control project quality from planning through to completion. However, commissioning of the new pipeline was only part of the project. Completing the installation with minimum disruption to the local environment and heritage, especially under such adverse working conditions, made the project a true success.

Project: Roxby Downs Pipeline

Principal: Western Mining Corporation (BHP Billiton)

Location: Roxby Downs - Central South Australia

Completion: 1998

Supplied: 115km of DN600mm Sintakote® Steel Pipe, Fittings & Valves