

Stirling Trunk Main

Australia's Largest Pipeline Project of the 20th Century



Project Need

A pipeline from Stirling to the Tamworth Reservoir had always been part of Water Corporation's long-term plan for Western Australia. The pipeline would be needed to ensure the future reliability of supply to the metropolitan areas: Goldfields and Mandurah. However, with run-off to the region's catchment area down by as much as 40%, the scheme needed to be started earlier than planned. This meant bringing forward Australia's largest pipeline project of the 20th century.

The designers chose Steel Mains' SINTAKOTE[®] steel pipeline system, with a combination of SINTAJOINT[®] rubber ring joints for the majority of the pipeline and spherical slip-in welded joints for the sections where thrust restraint was required. In this way, the designers eliminated the need for concrete anchor blocks, yet minimised construction pipelaying costs by utilising SINTAJOINT[®] (RRJ) rubber ring joints whenever possible – utilising the best of both worlds.

Solution

The unique scheme required 106km of 1422mm diameter steel pipe - over 10,000 pipes weighing almost 8 tonnes each. Steel Mains was able to provide the ideal solution, with the commissioning of a dedicated production facility at Kwinana, near Perth. Not only did this minimise transportation costs, it ensured that production could be managed with the accuracy and flexibility required by the project team. The new plant also provided a valuable boost for local employment, with 45 jobs being created. This holistic approach could only be achieved through the close partnership between Steel Mains, Water Corporation, Western Australian State Government and the local communities.

Achievements

The SINTAKOTE[®] external (FBMDPE) fusion bonded medium density polyethylene corrosion protection system was ideally suited to the variety of ground conditions experienced along the route. The combination of SINTAKOTE[®] with the cement mortar internal lining is recognised as the standard steel protection system across Australia and ensures the long-term performance of the pipeline for generations to come. Steel Mains' commitment to the project team extended far beyond the supply of pipes and began long before manufacturing had even commenced. The high level of partnership - among all parties involved - led to the successful completion of the landmark project, and the supply of 200 megaliters a day to the Tamworth region.

Project: Stirling Trunk Main

Principal: Water Corporation – Western Australia

Location: Stirling, Western Australia

Completion: May 2001

Supplied: 106km of 1422mm OD Sintakote[®] Sintajoint[®] RRJ joint & SSJ welded joint Steel Pipe, Fittings & Valves