

TAKING CARE OF THE STRESS IN TRENCHLESS PIPELINES



Australian water utilities have become increasingly reliant on trenchless methods of pipeline installation and rehabilitation. This trend has in turn resulted in demand for higher performance, long-life polyethylene (PE) pipes. Iplex's Millennium® High Stress Crack Resistant PE100 pipe meets the markets request.

Project Overview

The first Australian HDD installation of Iplex Millennium® HSCR PE100 pipe was installed in Yeppoon in Queensland. The Livingstone Shire Council project involved drilling beneath an environmentally sensitive estuary to provide an increased flow capacity to meet population growth in a region south of Causeway Lake. The existing configuration was two ductile iron potable water pipelines contained within the bridge structure over the Causeway Lake crossing. The bridge required maintenance and the location of the water mains prohibited access to effect the repairs and routine maintenance.

The critical importance of the pipeline, combined with the difficult ground conditions that included significant amounts of risk, drove Livingstone Shire Council to select Iplex Millennium® HSCR PE100 pipe and HDD specialists Maxibor with the installation.

Iplex Millennium® is a high stress crack resistant (HSCR) grade of PE100 pipe that provides up to ten

times greater resistance to slow crack growth than conventional PE100 pipe. It has the same pressure burst strength of conventional PE100 pipe but is specifically designed for use in critical or high value pipeline assets where the risk of premature failure from slow crack growth is possible.

The project involved two pilot holes 380m in length, drilled to a maximum depth of 17m. The holes were subsequently enlarged using a reamer to allow for the pull-through of the parallel DN450 and DN315 pipes.

The project was delivered on time and on budget. The short turnaround from the awarding of the tender to completion minimised the disturbance to the community. The Yeppoon installation has highlighted how Millennium® HSCR ensures the structural and operational integrity of a pipeline, even under the most challenging installation and application conditions.

PROJECT

Causeway Lake
Water Main Underbore

LOCATION

Yeppoon, Queensland

PRODUCT

Dual Millennium
HSCR PE100 DN450
and DN315 PN20

LENGTH

380m

METHOD

HDD

