

World First By Coe Drilling On The Gold Coast

The Tweed River Crossing is believed to be the first slurry pipeline utilising a coupling jointing system to be installed by horizontal directional drilling (HDD) in the world to date.

The crossing, recently completed by Coe Drilling Australia Pty Ltd, is part of the \$75m Sand Bypassing contract awarded to McConnell Dowell Constructors (Aust) Pty Ltd. The API 5L Grade B pipeline had a polyurethane internal corrosion protection system applied, whilst the external couplings were coated with Powercrete J.

The Tweed River Entrance Sand Bypassing Project is a joint scheme by both the NSW and Queensland State Governments to bypass the naturally occurring northerly movement of sand around the Tweed River entrance. The objectives of the project are to establish and maintain a clear navigation channel at the mouth of the Tweed River to the open sea and achieve a continuing supply of sand to the placement areas (southerly Gold Coast beaches) at a



Above: Completion of 30" rock reaming on the Tweed River.

the coupling protects the polyurethane from exposure to high temperatures during welding of the pipeline.

The crossing which was drilled using the Coedrill 550 encountered a mixture of fine sands overlying the highly fractured Greywacke rock formation. The borehole was drilled using a 6" Wenzel Mud Motor and was ultimately opened up to a final diameter of 30" to accommodate the Slurry Pipeline and the 150 mm HDPE electrical conduit.



The patented McConnell Dowell pipeline coupling - simple but effective.

rate consistent with natural littoral drift rates.

Installation of the 425m long sand slurry pipeline beneath the Tweed River was completed by Coe Drilling in early August. The pipeline, which was prepared by McConnell Dowell, uses the patented "McDow" coupling which allows the pipeline to be both internally polyurethane lined for maximum longevity and welded for maximum integrity, whilst covering all tensile forces which could be expected during the pullback phase of the directional drilling operation. The purpose is to enable butt jointing of polyurethane lined pipelines by conventional stovepipe welding techniques. The design of



Above: Welding of the "McDow" coupling.