

Micro-tunnel & HDPE pipeline, a successful duo for Casablanca Ocean Outfall pipelines

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ABSTRACT

The Casablanca marine outfall project is located on the Moroccan coast near the city of Sidi Bernoussi. The outfall system discharges the effluent of the nearby wastewater pre-treatment plant. The marine part of the outfall consists of a OD 2.8m micro tunnel that was pushed over 1057m under the shoreline and under the seabed to be connected to a OD2300mm HDPE solid wall pipeline of 1200 m long to reach the offshore diffuser section. HDPE section was ballasted using concrete ring collars.

The tunnel was pushed from a 12m diameter construction pit that was later on backfilled after installation of a pig launcher. The diffuser section is laid at approx. -20m LAT water depth.

The project comprised the detailed engineering, procurement, construction and commissioning of the marine outfall system including the header tank.

The combination of micro-tunneling with concrete pipe jacking and HDPE pipelines enables to tackle environmental, technical and schedule constraints for the successful completion of the project.

The paper will present those constraints and explain how the combination of micro-tunneling and HDPE pipelines was addressing them.

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