

TAKREER CARBON BLACK & DELAYED COKER PROJECT

Ruwais - Abu Dhabi



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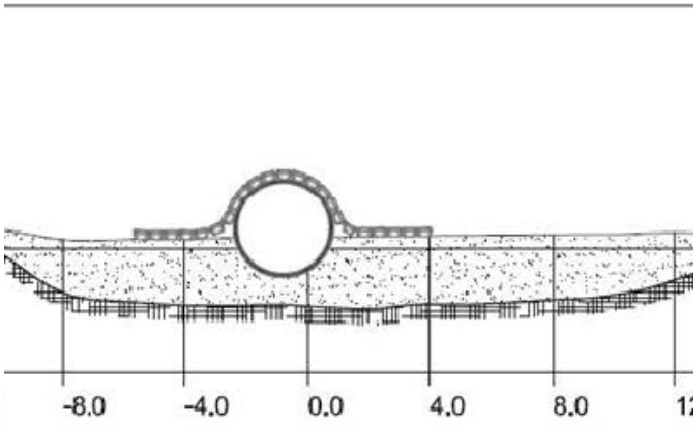
TYPE OF PROJECT Pipeline Protection	YEAR OF CONSTRUCTION 2015	CLIENT Takreer	CONTRACTOR Samsung Engineering	DESIGNER Maccaferri
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PROD. RELATED
ACBM (1,301 Nos.)

Challenge

Ruwais Industrial Complex, of which the Takreer Ruwais Refinery is a part, is located on the coast of the Arabian Gulf at a distance of about 250km by road to the west of Abu Dhabi City. Takreer is responsible for implementing the Carbon Black & Delayed Coker Project and it awarded Samsung Engineering Co. Ltd (SECL). This project includes manufacturing, supply & installation of 5 No. polyethylene pipelines with cement filled walls, a diameter of 3m & with a total length of nearly 20km. SECL subcontracted the manufacturing, supply and installation of the polyethylene pipelines to

Union Pipe Industries (UPI). Construction activities of the fifth and last pipeline of length 4km suffered some serious issues of transversal movements due to severe wave & current action and poor sea bed soil. This problem was significant for the first 2km towards onshore side, the maximum displacement being 16m from the originally designed position of the pipeline. UPI requested Maccaferri to propose a technical solution that is able to guarantee HDPE pipeline stability against wave & current action, as well as stability from vessel anchors and falling objects.



Section

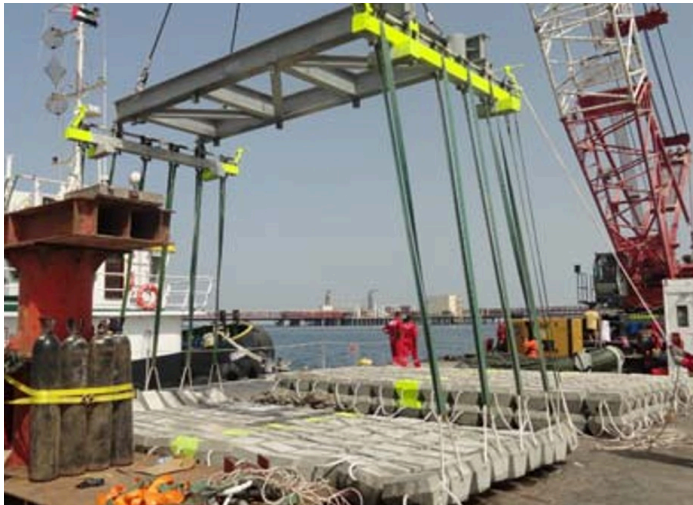


During Construction

Solution

Based on design information, Maccaferri proposed Articulated Concrete Block Mattress (ACBM) as a solution and provided technical assistance to UPI for ACBM manufacturing and placement. An analysis of the

current and wave action along the whole pipeline was carried out and pipeline stability was assured by laying ACBMs of selected dimensions.



During Construction



After Completion



OPEN GOOGLE MAPS



OPEN GOOGLE EARTH