

PROJECT BRIEF

Corrosion Protection of New Steel Piles at Shekou Port with the TYFO® Fibrwrap® Composite System

CHINA



Lamma Island, China
March 2000



Proposal for construction of a new jetty, supported on steel piles, was underway at Lamma Island, China. Cathodic protection treatment was proposed for the submerged portion of the steel piles. Suitable methods were explored for corrosion protection of the exposed portions of steel piles in the splash zone, which would be subjected to intermittent wetting-and-drying cycles of corrosive sea water and also to abrasive wave forces.

The TYFO® Fibrwrap® Composite System was chosen as it met the requirements of a non-corrosive, non-conductive, watertight and abrasion-resistant material. The contract called for protection of 482 numbers of steel piles using The TYFO® Fibrwrap® System. The TYFO® Fibrwrap® Composite System was proposed to be applied before insertion of steel piles into the sea. This approach ensured that the steel piles would be shielded from corrosion-causing agents from the very beginning. Although the stipulated contract period was 8 months, the production of steel piles could not keep up with the high labour productivity of this state-of-the-art technology.

Application of the TYFO® Fibrwrap® Composite System required proper surface preparation to ensure adequate bond and desired performance of the composite jacket. Considering the volume of work involved and limitation on the time lag between surface preparation and the application of the composite, special mechanical means were used for surface preparation of the steel piles. The protection works were executed under strict quality control within the stipulated project schedule and to the satisfaction of all parties concerned.

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