MACCAFERRI

CASE HISTORY

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TKO CONNECT CABLE SYSTEM, HKBN

HONGKONG, TSEUNG KWAN O INDUSTRIAL ESTATE, HONG KONG

Pipeline Protection

Problem

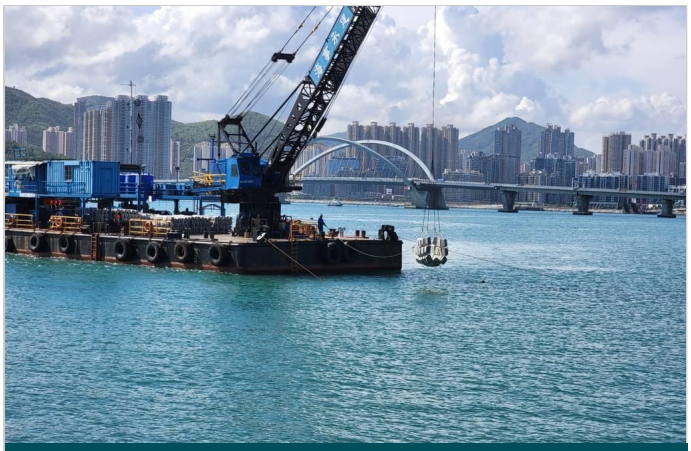
Fiber optic Broadband was to be placed along the seabed across TKO waterway, a major connection between TKO Data Centre and Siu Sai Wan.
One section was crossing an existing submarine outfall sewer pipe in which the cable trench excavation depth is limited. At this shallow draught location with thinner cover backfill, extra protection was required to be provided to protect the broadband line from getting damaged.

Client: HKBN Group
Contractor: HK Marine Contractors Ltd.
Products used (Qty.)
- ACBM 42 Panels

Date of construction: 06/2023 - 07/2023
Google Maps Google Earth

Solution

Submarine pipelines and cables if not protected well, can be moved due to high current forces upon them as their immersed weight is insufficient to counteract these forces.
For this project, Maccaferri proposed their ACBM system sepcially desgined for pipeline proteciton work.
The Articulated Concrete Block Mattress (ACBM) is a rectangular unit made of concrete blocks joined together by polypropylene ropes.
The mattress is flexible in two dimensions and is available in a range of thicknesses to suit the conditions required.
The ACBM is used for the anchorage and protection of underwater pipelines, cables and for protecting the foundations of structures against water scouring.
Materials used are selected to offer the required design life in sea water and are chemically stable; there is no significant reduction in compressive strength of the concrete blocks.
Lifting of the ACBM is carried out using a lifting frame which connects to the lifting loops.
The 42 ACBM panels, with dimensions 3.67 m x 1.93 m x 0.3 m, have been produced by Maccaferri in Johor, Malaysia and shipped to site.



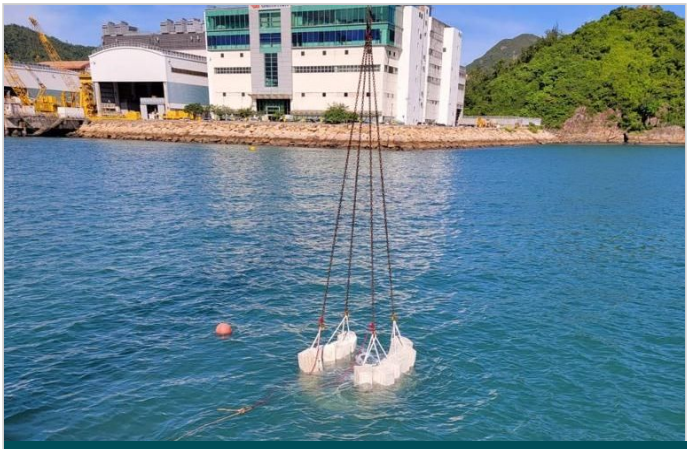
ACBM Installation



ACBM Installation



ACBM Installation



ACBM Installation

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