

PROJECT BRIEF

Bridge Strengthening and Corrosion Protection on the Island Eastern Corridor Roadway (Stage-1) with the TYFO® Fibrwrap® Systems



Hong Kong, SAR
March 2006



Built in the early 1980's, the Island Eastern Corridor is a main route along the east coast of Hong Kong Island. The steel reinforcement of the bridge structures along the corridor were found to have serious corrosion, leading to concrete spalling and impaired traffic load capacity.



The clients, Lap Kai Eng. Co. Ltd. and the Highways Department of Hong Kong, approved and adopted the proposal from FYFE (Hong Kong) Ltd to use the TYFO® UC Carbon Laminate System for the bridge strengthening works, and the TYFO® CIS Corrosion Inhibitor System to arrest existing steel corrosion.



The scope of works included the following:

- Design and construction of temporary platforms.
- Detailed condition survey and non-destructive testing to concrete structures.
- Concrete repairs using patch method.
- Design, supply and installation of the TYFO® UC Carbon Laminate System to bridge decks to restore lost loading capacity.
- Application of TYFO® CIS Corrosion Inhibitors System to bridge piers to treat both concrete and reinforcement, inhibiting corrosion and increasing integrity of the structural elements.
- Installation of an impressed current cathodic protection (ICCP) system to arrest future steel corrosion.

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