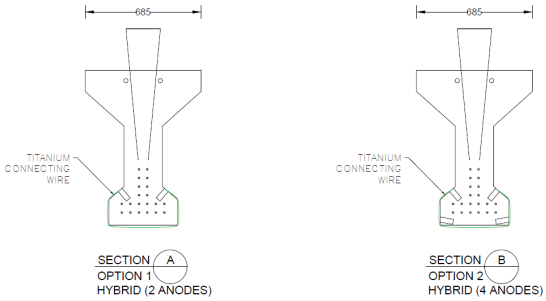
Princes Wharf, Australia

Country: Australia
Project Timescale: Nov 2013—Feb 2014
Structure: Princes Wharf
CPT Treatment Applied:
DuoGuard™ Hybrid Anode™ System
CPT Products used
- DuoGuard™ anodes
- DuoCrete SD Mortar



Princes Wharf is a strategically important port facility in the centre of Hobart. The reinforced concrete structure has been exposed to sea water over its life and was showing signs of significant chloride salt attack. The pre-stressed beams were actively corroding and investigation revealed some failure of pre-stressing strands.

In order to achieve a long-term repair solution, a DuoGuard Hybrid corrosion protection system was proposed along with carbon fibre laminated reinforcement. Options for the corrosion protection of pre-stressed beams are limited as traditional cathodic protection techniques can potentially cause hydrogen embrittlement of steel strands.

A Hybrid system was utilised as the applied voltage can be controlled in the impressed current phase, and importantly, when running over the long-term in sacrificial mode presents no risks of hydrogen embrittlement.

During the repair process loose concrete was removed, defective strands cut out, DuoGuard anodes installed, concrete repair undertaken and carbon fibre reinforcement applied.


DuoGuard anodes

For technical and sales support please contact us at;

Concrete Preservation Technologies Ltd,
Nottingham, UK,
Sir Collin Campbell Building,
Nottingham University, Innovation Park,
Triumph Road, NG7 2TU

t: +44 (0)115 9724 238
f: +44 (0)115 9220 316
e: nigeld@cp-tech.co.uk
www.cp-tech.co.uk

Cert No. 10159
ISO 9001