

Kyle of Tongue, Scotland, UK

Country: United Kingdom

Project Timescale: May—November 2011

Structure: Prestressed Bridge

CPT Treatment Applied:

DuoGuard™ Hybrid Anode™ System

PatchGuard™ Galvanic Anode System

CPT Products used

- DuoGuard™ 175
- PatchGuard™
- DuoCrete SD Mortar
- MN15 Reference electrodes
- Voltage and Current Controllers

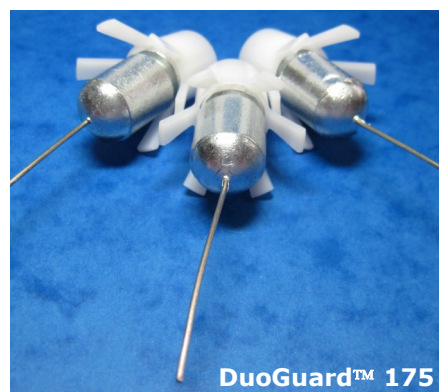


Access to the underside of the deck was achieved using an innovative modular web-deck arrangement rather than a traditional scaffolding.

The Kyle of Tongue Bridge, located in the Scottish Highlands, links the eastern and western side of the Tongue and was built to replace a ferry service which operated until 1971.

The bridge deck, constructed using prestressed beams, was suffering corrosion due to exposure to high concentrations of chloride from the sea beneath it and de-icing salts used on the deck. For the first time CPT applied the DuoGuard Hybrid System to prestressed steel. The 6 month installation was overseen by AECOM and The Highland Council.

One of the requirements of the system was to maintain the steel potential above $-0.9V$ due to the risk of hydrogen embrittlement of the steel strands (potentially catastrophic in pre-stressed elements). As a result it was necessary to measure the steel potential using MN15 Reference Electrodes and regulate the current passed by the DuoGuard 175 anodes. This was done by using a specially designed voltage and current controllers.



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