Case Study

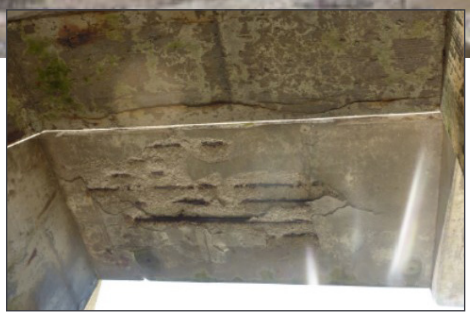
Heysham Power Station

Heysham Power station is based on the West coast of the UK and provides power to the electricity grid. The water intake facility is located adjacent to the shoreline and takes in water prior to treatment for use in the cooling facility and is thus a critical part of the power station operation.

Location
Morecambe, Lancashire

Structure
Reinforced Concrete Basin

Completed
December 2014



The Problem Identified

The concrete structure is continually exposed to chloride laden seawater which has migrated into the cover concrete and initiated steel reinforcement corrosion. The water level in the basin was variable which exacerbated corrosion issues due to the wet/dry cycling effects allowing oxygen to access steel along with higher moisture levels. Cracking and spalling was evident in a number of areas as a result of chloride salt attack.

The Solution Developed

A targeted galvanic anode system was installed into areas suffering from corrosion damage and identified as at risk from the chloride/moisture exposure conditions. The system was to be installed during a planned shutdown and thus the galvanic anode system offered the rapid installation required in the time allowed.

The Benefits Provided

The sacrificial system offers long term corrosion protection to the reinforcing steel in the structure. The installed system will counter on-going corrosion and prevent concrete delamination which would otherwise affect operation of the process. Due to the location of the structure it was necessary that the installed corrosion protection system was designed such that it did not require on-going maintenance.

CPT Products Used

PatchGuard Connect

MN15 Reference Electrode

Certificate Number 10159
ISO 9001, ISO 14001

Concrete Preservation Technologies

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