

La Rance Hydro-Electric Power Station

France



Country: France

Timescale: Spring—Summer 2007

Structure: Hydro-electric power station

CPT Treatment used:

DuoGuard™ Hybrid™ Anode System



The La Rance Hydro-electric power facility is located on the estuary of the River Rance near to Saint Malo in France. One of the first tidal power stations, the Rance plant was built over a period of 6 years from 1960 to 1966 and has A 240MW installed capacity making it the second largest tidal facility in the world.

Problem

With continued exposure to chloride salts from the saline estuary water, the sub structure has suffered corrosion damage to the exposed concrete beams. The beams had previously been repaired and the repairs had failed due to continued corrosion activity.

Solution Developed

In order to offer long –term protection to the repaired beams, DuoGuard anodes were installed in rows along their full length. DuoGuard anodes operate by providing an initial impressed current to generate a passive environment around the reinforcing steel, then provide long term protection as a self-powered sacrificial anode.

Benefits

The DuoGuard solution provided a long term, low maintenance solution to the corrosion problems at La Rance, which could be installed in the difficult environment encountered.



CPT Products Used:

- ◆ DuoGuard™ 500
- ◆ DuoCrete SD Mortar
- ◆ MN15 ref. electrode
- ◆ DuoGuard system surface mounted connection box

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