

The Isle of Arosa Bridge Repair Project

The repairs projected for the bridge shall assure that it will 'start from scratch' in terms of durability and in load bearing capacity, that is to say, around 50 years, as if it were just built. This statement has to be understood within the context of a system of inspection and maintenance which shall allow the behavior of the structure to be observed.

The interventions which shall take place are:

- Injection of the fissures in the box girder, and sanitization of the corroded metalwork on the lower part of the box, pier area, abutments and walkways adjacent to the bridge on the landside area. Fulfillment of repair works in said areas prior to the introduction of sacrifice anodes which impede surrounding areas becoming future anodes, susceptible to corrosion associated with the projected repair areas.
- Repair of gravel beds in the pier areas.

- Placement of sacrifice anodes in the tidal area and submerged areas, with the placement of a zinc mesh upon the shaft and a mortar cast in the space left between the face and a fiberglass mould bolted to the face.
- Painting of all external faces of the deck, abutments and piers (except those areas above high-tide level which are covered with the fiberglass moulds) with a waterproof, chloride-based paint, but which allows the drainage of internal water vapors. This strategy increases the resistance of the concrete and hence decreases the intensity or speed of corrosion and consequently the useful life of the structure.
- Painting of the inside of the box.
- Cleaning of support plates and protection with paint and repair of the neoprene bases in case of deterioration.



Spain /2007 Project data

Structural Type:
2,000m long Pre-tensed
joint-free concrete box
Location:
Access to the Isle of Arosa, Pontevedra
Date of Works:
2007
Proprietor:
Galician Regional Government
Scope of Works:
Special Inspection and Repair Project