Corrosion Solutions Lifejacket® Anode System

Galvanic Cathodic Protection Product Datasheet



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Description

The LifeJacket® Cathodic Protection System uses a proprietary zinc mesh anode placed directly against the inside face of a stay-in-place fiberglass form*, and is proven to stop corrosion by providing an electrical current to the affected region. This current is produced through a galvanic process and does not require a remote power supply.

The custom fabricated fiberglass jackets are designed and manufactured to fit a wide range of infrastructure shapes and sizes for rapid installation. Along with providing the attachments and components of a cathodic protection system, LifeJacket® also creates a stay-in-place form that is used for "form and pump" repair of the concrete structure that is being repaired and protected.

Application

- Structures subject to chloride contamination
- Prestressed concrete piling
- Steel H piles
- Bridge columns
- Pile Caps and Beams

Features and Benefits

- Over 20,000 units installed with zero defects.
- Repairs and protects concrete structures with severe corrosion damage and spalling.
- Rigid output GRP shell.
- Stay-in-place form for placement of cementitious repair materials.
- Site installation friendly jackets are fully assembled ready to install on site.
- Does not require remote power supply Low maintenance costs.
- Self-adjusts to temperature, humidity and concrete resistivity.
- Custom-built to fit any structural element size and shape.
- Life expectancy is 25 years minimum.**

Material Specification

Zinc Anode Electrical Conductivity	
Zinc Mesh Weight	7.8 kg/m² (1.6 lb/ft²)
Zinc Mesh Average Open Area	53%
Zinc Current Capacity	738 A-hr/kg (335 A-hr/lb.)
GRP Water Absorption (ASTM D570)	
GRP Ultimate Tensile Strength (ASTM D638)	103 MPa min. (15,000 psi min.)
GRP Flexural Strength (ASTM D796)	. 172 MPa min. (25,000 psi min.)
GRP Flexural Modulus of Elasticity (ASTM D790)	4.8 GPa min. (700 ksi min.)
GRP IZOD Impact (ASTM D4812)	15ft-lb/inch min. (unnotched)
GRP Barcol Hardness (ASTM D2583)	
Complete full assembled system weight	17.1 kg/m² (3.5 lb./ft²)

*Patent US 08748524

**As with all galvanic protection systems, service life and performance is dependent upon many factors including reinforcing steel density, concrete conductivity, chloride concentration, humidity and anode spacing.

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