

What is Cathodic Protection?

Cathodic protection systems use specialist electrochemical techniques to control the deterioration of embedded or immersed steel structures. Originally developed in the 1800's as a means of controlling corrosion on naval ships, cathodic protection has come a long way since and has therefore garnered widespread industry acceptance as a reliable tool for corrosion control of important plant assets.

Cathodic protection works by inhibiting the electrochemical degradation processes on the metal surface, commonly known as corrosion or rust. Protection is achieved by implementing either a Sacrificial Anode Cathodic Protection (SACP) or an Impressed Current Cathodic Protection (ICCP) system.

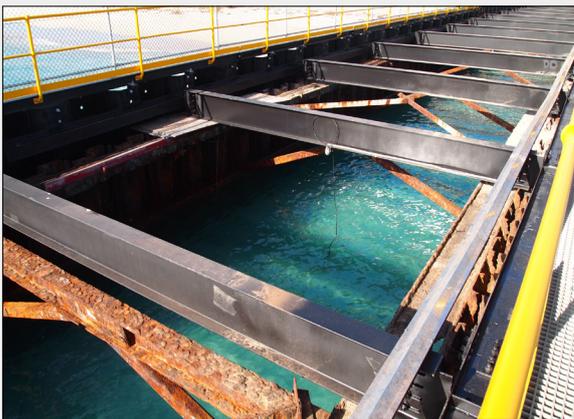
Cathodic Protection Applications

CP Systems have countless industrial, commercial and residential applications, including the following:

-  **Tank Internals and Floor Plates**
-  **Major Assets eg. Pipelines, Railways**
-  **Jetty and Wharf Protection**
-  **Reinforced Concrete Structures**
-  **Concrete Realkalisation**
-  **Removal of Chlorides**



What Extrin Can Offer...



Cathodic protection is a highly specialised and technical niche. All Extrin engineers working on cathodic protection have extensive knowledge in the design and monitoring of cathodic protection systems. All leading Extrin Engineers are also trained by the Australasian Corrosion Association (ACA) and have successfully completed the "Advanced Cathodic Protection" course and exam.

Extrin have extensive experience in providing clients the following services:

-  **Cathodic Protection Design**
-  **Project Management**
-  **Monitoring and Compliance**
-  **Fault Finding**
-  **Materials Procurement**



Asset/Infrastructure Assessment

- Corrosion Management Audit
- Asset Condition
- Failure Investigation
- Criticality Review

QA/QC

- Coating Inspections
- Project Management
- Repair Integrity Analysis
- Shutdown Planning and Maintenance Management



Microbial Investigation

- Site Inspections
- Analytical Testing
- Mechanism Determination
- Remediation

Analytical Services

- Water Analysis
- Corrosion Product Testing
- Metallurgical Testing
- Product Trials
- Concrete Testing



Concrete Services

- Durability Assessments
- Mix Design Review
- Protective Coatings
- Refurbishment works
- Project Management

Corrosion Training Services

- Corrosion Awareness
- Corrosion Prevention
- Corrosion Detection
- Other Client-Specific Training Courses



Failure Analysis

- Failure Catalyst Analysis
- Review and Recommendations
- Asset inspection and testing

Design and Durability

- Durability Report
- Materials selection
- Concrete mix design
- Corrosion rate prediction
- Maintenance specifications



Visit our website for more information on our services and projects undertaken



“Consultants in Corrosion Management”

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