



BAC[®]

CORROSION CONTROL

STEEL IN CONCRETE

**ENGINEERING
&
PRODUCTS**



CORROSION CONTROL

BAC provide a complete portfolio of products and systems to protect, repair, monitor and maintain concrete structures where steel reinforcement is liable to corrode.

Overview

Concrete structures with steel rebar reinforcement are subject to corrosion, especially in areas subject to high temperature, salinity and humidity. The need to monitor and maintain these structures and their integrity is crucial whether they form part of an industrial plant, accommodation or foundation supports.

BAC can offer a range of products and systems that will prevent corrosion and / or help clients monitor corrosion accurately. Dependent on the structure type, condition and location will determine the type of system and service life we can offer.

Many types of structures and components Reinforced concrete can encompass many types of structures and components, including slabs, walls, beams, columns, foundations, frames and many more. Shown opposite is a Ribbon mesh ICCP system installation commonly used in new build infrastructure projects where long life and structural integrity is essential.

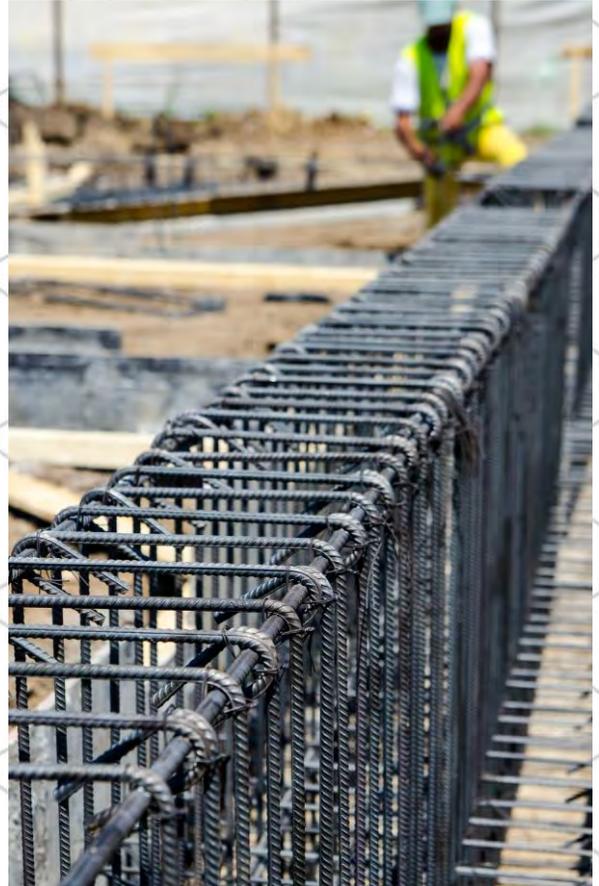
What BAC can offer?...

System design and operation BAC offer a complete turnkey system design, supply, installation, monitoring and maintenance solution for your project

Range of products

BAC offers a range of products to eradicate corrosion of the rebar. Both Galvanic and ICCP systems are offered which can be suited at either the casting stage or retrofitted to existing structures.

- LPR Corrosion Monitoring Equipment
A range of specialist products for monitoring and determining the presence and rate of corrosion to steel reinforcement in concrete structures and buildings.



Steel rebar in concrete is susceptible to corrosion.



Example of an MMO Ribbon Mesh installation.



Large structures can be zoned for manageable CP protection.



Multi Channel Transformer Rectifiers



Bespoken cabinet design incorporating Remote Monitoring and Control Station



Ribbon Mesh Anodes



LPR Meter for Corrosion Rate Monitoring

- Impressed Current Power Supplies

We can offer a complete range of modular cathodic protection transformer rectifiers, especially tailored to zoned Steel In Concrete Impressed Current CP systems.

We can offer either air or oil cooled units. Control can be provided utilising our state of the art digital thyristor control board.

Constant current, constant voltage and auto-potential control modes are available with our digital thyristor models and the capability to set your required values and thresholds at site is done intuitively with our market leading HMI digital control panel or remotely using our RMRC software products.

Regular monitoring and survey readings can be taken, stored and relayed at your convenience to ensure your systems is always effective and operational.

- Ribbon Mesh and Overlay Mesh Anodes

Mixed Metal Oxide / Titanium Ribbon Mesh Anodes are used for the protection of steel reinforcing re-bar embedded in concrete. A range of Ribbon Mesh & Overlay Mesh sizes are available according to the desired current output / lifetime required.

- Permanent Reference Electrodes

Permanent Reference Electrodes to monitor the potential of the rebar structures in concrete. For use as part of an ICCP system.

- Remote Monitoring and Control Software

BAC offer full remote monitoring and control functionality for their Thyristor controlled Transformer Rectifiers and Switch Mode Power supplies. Our clients have the flexibility to control the units and view their data both locally through a server / PC configuration or through a web based platform when operating remotely. The software is configured according to the client requirements and our aim is to provide a logical, well laid out platform that delivers accurate data and allows you full monitoring, control and security of the system.



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- Galvanic Anodes for Concrete
- GSC Super Anode

Sacrificial zinc anodes imbedded in an ion-conductive auto moistening paste, for cathodic protection of reinforced concrete structures.

- ZRA Roll Anode

anodes are composed of a multi-layer zinc core with ion-conductive gel They are made by wrapping the zinc sheet with the ion-conducting electrolyte up to reach a diameter of about 25mm with variable length according to request (from 10 cm at 1m).

- Zinc Layer Anode

ZLA has been designed to operate as an additional anode that replaces all the anodic areas of the reinforced concrete structure. It is applied to the surface of the concrete.

Project References	Scope
MTL Hong Kong	Supply of > 200 DC Output channels and full remote monitoring and control Cathodic Protection system
Tunn3I	Supply of > 100 LPR Probes and associated accessories for Copenhagen Metro extension project
West Qurna 1 Project - Exxon Mobil	Supply of 10,000 Galvanic Anodes for protection of concrete pile structures
Great Man Made River Authority	Supply of products and systems for prestressed concrete pipelines network
Doha Metro - Qatar	Supply of LPR Corrosion Monitoring systems
Lancashire County Council - Bridges	Design supply monitoring and maintenance on two bridge structures with ICCCP systems



LPR Sensors for Corrosion Rate Monitoring



GSC Super Anode – Galvanic CP Protection



Zinc Layer Anode



ZRA Zinc Roll Anode – Discrete Galvanic Anodes

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