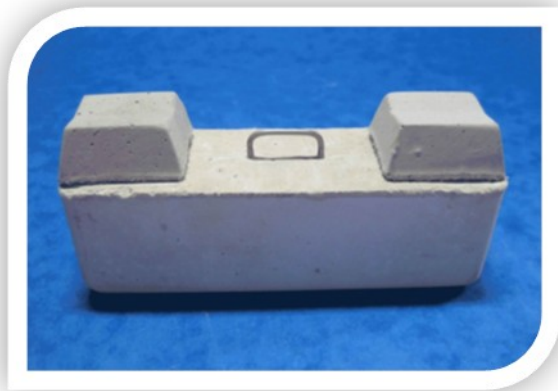


Description

RebaGuard is a discrete sacrificial anode applied to reinforcing steel in concrete patch repairs resulting from attack by chloride salts.

Many structures suffer continual chloride induced corrosion damage due to incipient anode corrosion damage resulting after concrete repairs. Although the fresh mortar in patch repairs offers a passive environment for the steel within, it does not deal with chloride contaminated concrete outside the patch repair. This leads to further corrosion damage at the periphery of the repair.

RebaGuard anodes redress the electrochemical balance induced through removal of the previously corroding steel in the patch. RebaGuard anodes corrode preferentially to the surrounding steel protecting it from further corrosion damage. RebaGuard anodes also use a flexible attachment system allowing positioning of the RebaGuard anode away from the steel appreciably enhancing current distribution.



Features

- Simple, single unit
- Enhanced attachment system
- Large charge capacity > 150 kC*
- Targeted application

Advantages

- No long term maintenance
- Simple installation
- Enhanced current distribution*
- Enhanced health and safety features
- Long life*
- Performance can be monitored
- Suitable for all rebar sizes

Application

Application shall be in accordance with the 'Installation Guidelines' and is summarised as follows:

RebaGuard anodes are typically applied at a density of 2-9 units/sqm concrete surface, at a spacing of 350-700mm between anodes.

RebaGuard anodes are typically installed at the edge of concrete repairs which have previously been broken out following procedures detailed in national standards.

The individual RebaGuard units are applied to reinforcing bars at the edges of the patch repair at locations detailed in the design. The units are attached parallel or beneath the rebar using the connectors provided, so as to ensure no direct contact with the steel, maximising current distribution.

Electrical continuity of the RebaGuard anode conductors and the reinforcing steel shall be confirmed. The RebaGuard units shall then be encased in the repair mortar ensuring complete coverage of the anode surface.

The RebaGuard anode installation can be monitored using half-cell potential surveys, current outputs and reinforcing steel corrosion rate measurements.

*Dependant on local site conditions, including chloride concentration, concrete properties, humidity and temperature

Product Data

Packaging : 9 units per box.

Storage : Store dry. Do not allow contact with oxidizing materials.

Specification Clause

The discrete anode shall be RebaGuard, a sacrificial alloy anode surrounded by a mortar of pH <12.4 with an integral electrical connection which allows fixing of the anode at a range of distances from the reinforcing steel in order to maximise current distribution.

Ancillary Material

The following ancillary materials are also available from CPT Ltd;

- DuoGuard™ 1000/750/500/350/175 anodes for treatment of chloride contaminated concrete outside patch repairs
- PatchGuard™ and PatchGuard Plus™ Galvanic anodes
- Manganese dioxide reference electrodes
- Monitoring equipment to monitor steel corrosion activity

Limitations

In order that suitable current flow and lifetime be achieved from the RebaGuard anode, certain practical considerations should be taken into account.

The patch repair material cover for the RebaGuard unit must be a minimum depth of 20 mm. When installed in a patch repair, the resistivity of the repair material should be in the range 50-200% of the parent concrete.

Any discontinuous steel should be either electrically bonded to or electrically isolated from the system negative. Any cracks or delaminations in the concrete which affect ionic current flow will affect performance of the RebaGuard unit and should thus be pre-treated.

During installation, electrical shorts between the RebaGuard anode and other metal components must be avoided.

The time to achieve passivity will be dependent on site conditions. Depolarisation of treated steel will be slower in moist conditions.

Health and Safety

Protective clothing must be worn. Wear gloves and eye protection at all times.

Design of the RebaGuard system should be undertaken by a competent designer.

Contact Details

For technical and sales support please contact us at;

E-mail: nigeld@cp-tech.co.uk

Address:
Enterpriselab, The Sir Colin Campbell Building
University of Nottingham Innovation Park
Triumph Road
Nottingham
NG7 2TU

Telephone +44 (0)115 8229 430
Fax +44 (0)115 9220 316

www.cp-tech.co.uk