GIATEC

iCOR®

NDT Device for Detecting and Measuring the Rate of Rebar Corrosion

> "The iCOR has proven to be robust onsite and I am confident in the results I see."
>
> **Dr. Jose Pacheco**
> Associate, CTL Group

MP MATERIALS PERFORMANCE
CORROSION INNOVATION OF THE YEAR AWARDS

- Non-Invasive Wireless Technology
- Fast & Accurate Real-Time Data in Seconds
- Simple & Easy-To-Use

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NDT Device for Detecting and Measuring the Rate of Rebar Corrosion

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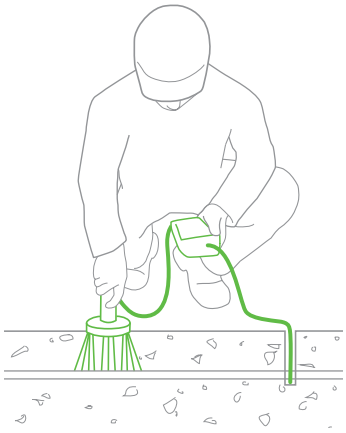
Giatec iCOR

Other Commercial Devices



Overview

iCOR is the most advanced wireless corrosion measurement device for evaluating the health of reinforced concrete structures. iCOR is a 3-in-1 device which detects corrosion potential, corrosion rate, and in-situ electrical resistivity. Unlike other devices which must drill into the concrete and physically connect to the rebar to evaluate it, the iCOR is completely non-invasive. Corrosion rate measurements are taken outside the concrete without damaging the structure or compromising its integrity. Data is collected, analyzed, and stored wirelessly within the mobile app on the tablet provided. This information is then presented as contour maps which are accessible in real-time. In 2019, the iCOR was presented the Corrosion Innovation Award by the National Association of Corrosion Engineers (NACE).

Features

Software

- Real-time contour mapping of corrosion rate, electrical resistivity, and corrosion potential
- Accurate non-subjective algorithm-based interpretations
- Multiple and directional parameters tested in a single measurement
- Easy reporting and data exporting

Hardware

- Non-destructive, and non-invasive wireless technology
- Measurements obtained and evaluated within seconds
- Simple and easy-to-use with minimal training required
- Single-person operation device
- Tablet included with free Android app
- Award-winning patented technology

Patented Technology

iCOR benefits from the patented CEPRA technology that makes it possible to estimate the rate of rebar corrosion through a non-invasive, non-destructive approach. This means that the need to connect the device to the rebar to obtain corrosion rate measurements, which is the case for other commercial devices, is eliminated with the iCOR.

Applications

- Detection of corrosion in reinforcement
- Measurement of rebar corrosion rate
- Evaluation of corrosion potential of rebar
- Measurement of in-situ electrical resistivity
- Assessment of concrete durability
- Rehabilitation and repair of concrete structures

Technical Specifications

Testing Time
3 to 30 seconds

Corrosion Rate Range
0 to 500 µm / year

Corrosion Potential Range
–800 to +200 mV / CSE

Electrical Resistivity Range
0 to 10,000 Ω • m

Standard
ASTM C876 (Half-Cell)
RILEM TC 154-EMC

Data Communication and Analysis
Free Android app

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