

ER Coupons (Soil Corrosion Probes) for CP Verification

Detect corrosion due to AC/DC stray current - verify off-potential

- Cost effective compared with traditional coupons
- All traditional coupon measurements topped with corrosion rate
- Continuous logging or spot wise readings
- Double wired pipe connection ensuring integrity of readings
- Rod type for easy positioning in the soil next to the pipeline
- Flexible type for integrated flush mounting on the pipeline
- Apply when coupons are recommended by the Standards / Technical Specifications

The MetriCorr rod-type ER coupon is - like any usual coupon - positioned in close proximity to the pipeline, whereas the flexible type is encapsulated and designed for integrated flush mounting directly on the pipeline surface. The coupons are electrically connected to the pipeline in a test post.

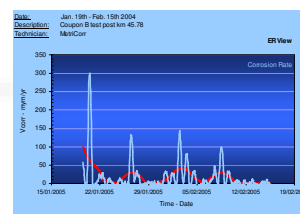
Electrical parameters like d.c. potential, a.c. voltage, a.c. current density etc. can be collected as on common coupons with appropriate traditional equipment.

On top of this, any corrosion on the coupons can be detected by the use of an ER-instrument. The time stamped corrosion rate can be measured and compared with the electrical fingerprints of the coupon by using the MetriCorr Coupon Datalogger ICL-02 described in a separate information sheet.

The MetriCorr ER coupon is cost effective. Corrosion is detected from above ground without having to remove the coupon from the soil. In case of no corrosion, the coupon lifetime is “infinite”. Once installed, replacement is necessary only when corrosion problems are detected and the coupon is corroded through.

The coupons are designed as electrical resistance (ER) probes with an exposed coupon element (simulating the coating defect) and a shielded reference element. By measuring the electrical resistance of those elements and making use of simple mathematical algorithms which correlate the resistance data with element dimensions, the residual thickness of the exposed element can be determined.

Make use of the MetriCorr ER coupons either along with traditional spotwise multimeter measurements or make use of the MetriCorr dataloggers, which can be arranged in a test post. Communication with dataloggers are made either by the RS 232 interface of your PC or remotely by GSM/GPRS and internet technology



Rod type



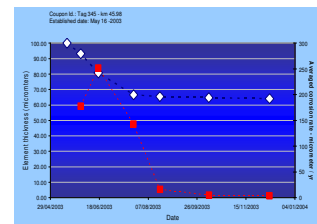
Flush type

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Technical data

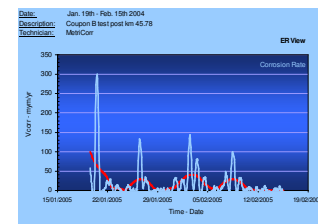
Standard element material	Carbon steel
Optional element material	Stainless steel - Other qualities on request
Standard coating defect area	0.4, 1.0 or 10 cm ²
Standard element thickness	100 - 500 micron
Optional element thickness	Customer specified.
Length of cable	6 or 12 meter (Standard) Max. 30 meters
<u>Conformance</u>	
ANSI/NACE RP0104-2004	Standard Recommended Practice: The Use of Coupons for Cathodic Protection Monitoring Applications

Please refer to our Technical Note on the MetriCorr ER - based CP verification techniques for information on FAQ's



Spotwise measurements

Continuous datalogging



Information within this sheet subject to change without notice