

IRON PROBE

The new patented reference electrode with high conductivity and hygroscopic (2 coupon)



Cu/CuSO₄ Reference electrode - Double steel coupon

Cathodic Protection patented Copper Sulphate Blend reference electrode (CSE), with integrated probes for Eirfree measurement (accordingly to EN ISO 15589-1).

Registered European trademark and patent no. 202022000002267

TECHNICAL FEATURES

Case	RECYCLED POLY OXYETHYLENE
Sizes	150x158 mm (HxØ)
Weight	4 kg
Electrode	Copper, 99% purity
Electrolite	Patented Copper Sulphate Blend (CSM®)
Porous plug	<u>Patented</u> ceramic mesh with high conductivity and hygroscopic power with a contact surface of 117,5 cm²
Carbon Steel Coupon	DC measure: 10 cm ² - AC measure: 5 cm ²
Distance Coupon / Porous plug	7 mm
Cable	MI. 3 FG16OR16 0.6/1kV, 3x1,5mm ²

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	Coupons	IRON PROBE	Reference Value	Max deviation
T 24h CSE-AAC stability	Not connected	min -120 mV max -115 mV,	- 120mV	+/- 5 mV
	Connected	min -130 mV max -110 mV	- 120 mV	+/- 20 mV
IR Drop	Measured Potential value Eon: -1,22 V		Real E irfree value: -1,16V	-0,06 V
Ambient conditions	Natural grounds also with high resistivity with low chlorides content (<200 ppm)			
Temperature	-5°C ÷ +40°C			
Lifetime	>25 years			
Minimum input resistance of connected devices	10 Mega OHM			

The reference probe in copper with patented copper sulphate mixture (CSM[®]) with n. 2 polarization coupon (platelets) is used to evaluate the real cathodic potential in the absence of ohmic drops of the Eirfree electrolyte.

Thanks to the very reduced distance between coupons and porous plug, the new IRON PROBE delivers an extremely precise measure, with a minimal deviation.

The proprietary blend with copper sulphate (CSM[®]) has been designed to prevent the escape of sulphate by capillarity.

The patented porous plug is made by a ceramic mesh with a high hygroscopic power and conductivity: the 117,5cm² porous plug allows the measure stability across time compared to smaller surfaces, even in grounds having a high resistivity.

The electrode integrates two steel carbon coupons: 5 cm² for AC measure and 10 cm² for DC measures .

STORING PROCEDURES

Store in a proper dry location, avoiding humidity, low temperatures (freezing) and the direct exposition to sun light. If properly stored, IRON PROBE shelf life is **unlimited**.

In presence of moisture the external surface of the coupon can oxidize; in case of extended storing time it is preferable to protect the probe surface with mineral oil which, however, **must be accurately removed before the installation. A careful cleaning of the surface with metal brush or sand paper is highly recommended.**

SAIT Srl - Via Pian di Botine, 18/A 06019 Umbertide (PG)

Tel. +39 075 9414656 email: info@sait srls.com

www.sait srls.com