ANODE TESTERS

WE50-SALT : SILVER/SILVER CHLORIDE REFERENE ELECTRODE

SALT & BRACKISH WATER

High-precision Ag/AgCl reference electrode comes with 10m of flexible 2.5mm insulated cable and a 4mm banana plug compatible with most digital voltmeters.

Silvion Type WE50/0.5/PP/SBE Ag/AgCl 0.5M KCl is a portable reference electrode for measuring cathodic protection potentials in SEAWATER or BRACKISH WATER.

WE50-FRESH : SILVER/SILVER CHLORIDE REFERENCE ELECTRODE

FRESH WATER ONLY

High-precision Ag/AgCl reference electrode comes with 10m of flexible 2.5mm insulated cable and a 4mm banana plug compatible with most digital voltmeters.

Silvion Type WE50/0.1/PP/SBE Ag/AgCl 0.1M KCl is a portable reference electrode for measuring cathodic protection potentials in FRESHWATER.

WEBSITE WWW.PROMTPARTS.CO.NZ

To assess the adequacy of a vessel's cathodic protection, it is imperative to measure the potential difference between the metallic surfaces and water. This involves creating connections with both the structure and the electrolyte (water). This is achieved by measuring the potential difference (voltage) in the water with a high-precision reference electrode. The reference electrode creates a connection to the electrolyte.

When conducting potential measurements on the underwater metals, the WE50 Series is linked to a high-input impedance multimeter (minimum 10 MegOhm). The electrode is then immersed into the water from the vessel's side to reach predetermined water depths. Once the electrode is at the desired depth, the potential of the metals is measured by connecting the test lead from the meter to the various underwater metals and recording the voltage displayed on the multimeter.

Measuring the vessel's potential voltage under water is critical to determining if the vessel's anodes are functioning correctly and ensuring the vessel is adequately protected.

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OUTER CASING	
Material	Acetal body with porous ceramic sintered disc and nylon cable gland
Dimensions	Length: 145mm
	Diameter: 22mm
Ceramic disc diameter	10mm
Weight	80grams
SILVER CHLORIDE ELEMENT	
Materials	Silver compounds are 99.90% pure
Dimensions	Length: 20mm(+/- 2mm);
	Diameter: 6mm
Surface Area	Geometric: 4cm2;
	Real: 200cm2

	WE50-Fresh:	WE50-Salt
ELECTROLYTE	Inert electrolyte with 0.1Molar KCl	Inert electrolyte with 0.5Molar KCl
Accuracy @ 20deg C	+/- 10mV	+/- 5mV
Temp Coefficient	- 0.65mV/deg C	
Temp Range	- 5 to +70deg C	
Internal Resistance	Less than 1000 Ohms	
Theoretical Design Life	30 years @ 0.1 µA load	

MEASUREMENT PROCEDURE

Prioritise adherence to all site safety regulations, especially if measurements are to be conducted in areas posing potential hazards.

1. Attach the WE50 Series probe's test lead to the "COM" terminal of the well-calibrated high-input impedance multimeter.
2. Configure the meter to measure DC Volts, specifically on the mV or 2V scale.
3. Establish a connection between the positive test lead of the multimeter and the metallic structure being tested, ensuring a clean and robust connection.
4. The sensor end of the cell is safeguarded by a protective "screw storage cap." Before usage, unscrew this cap and keep it safe.
5. Submerge the WE50 Series probe to the desired water depth in close proximity to the vessel. Record the measurement displayed on the meter.

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