

Soluble Salt Meter (SSM)

Used in accordance with ISO 8502-6, ISO 8502-9



The Soluble Salt Meter (SSM) is developed specifically to address problems with US Navy and IMO test protocols using the Bresle Patch. The SSM exactly duplicates the Bresle Patch process but with a higher accuracy and reproducibility. Measurements are automated and there are no consumables. The complete test sequence requires less than a minute.

In comparison to the Bresle Patch the SSM:

- cuts sampling and inspection time
- low costs per sample. No consumables.
- extracts surface salts more reliably for more accurate readings
- minimizes operator error through automatic metered water injection and electronic recording of measurements
- improves safety by eliminating the need for syringe with needles
- Does not leave sticky residue on the substrate

The SSM is a patented design that provides a hand held, automated method for detection of soluble salts on flat surfaces. The SSM has been independently tested both in laboratory and US Navy shipyard facilities and is approved by NAVSEA for use as a replacement to the Bresle patch method in NAVSEA Standard Item 009-32 (FY-10).

The SSM combines surface salt extraction and conductivity measurement in one tool, allowing convenient and ergonomic operation. It is developed as a direct replacement for the Bresle patch inspection method (ISO 8502-6). The hand held design provides a self-contained, easily transportable, unit for soluble salt measurements. The SSM and supplied fluid dispenser allow for quick and accurate injection of deionized water, automatic extraction of surface salts and conductivity measurement. The SSM is complete with a backlit LCD display and easy to follow on screen instructions.

Up to a 1000 measurements can be stored in the internal memory. This data can be downloaded to any PC and exported in Microsoft® Excel file format for use in any Coating Technical File (CTF) using the supplied software.

Operation

The SSM performs a measurement cycle in five easy steps:

- 1) Attach SSM to surface
- 2) Inject de-ionized water into SSM with one press of the dose bottle
- 3) Press "Start": SSM automatically
 - agitates solution
 - takes a measurement
 - displays the result on the LC D screen
 - stores the data in memory
- 4) Remove SSM and wipe remaining water from surface
- 5) Clean meter by flushing with deionized water

Technical Specifications

Standards E	Equivalent to ISO Standard 8502-6 Extraction of soluble contaminants for analysis -- The Bresle method; meets the requirements of ISO Standard 8502-9 Field method For the conductometric determination of water-soluble salts.
Measurement Area	1250 mm (circular) fixed footprint
Attachment Method	Magnetic with silicone seal (no effect on surface quality; proven to seal over deep pits)
Water Injection Method	Automated, with simple press of fixed volume dispenser
Dose	3 ± 0.05 ml
Measurement Process Steps	5
Total Process Time	60 seconds
Probe Range	0-300 µS/cm
Resolution	1 µS/cm
Measurement Accuracy	± 3 µS/cm
Surface Temperature Range	5 - 50 °C
Temperature probe accuracy	± 0,3 °C
Minimum radius of curvature	550mm
Memory	Holds up to 1000 measurements (10 batches of up to 100 measurements each)
Connectivity	via USB with PC or laptop
Power Supply	Lithium-ion rechargeable battery
IP Rating	IP54
Dimensions (Instrument only)	21 x 10 x 8 cm
Weight (Instrument only)	780 g

Packing List

The Soluble Salt Meter kit is supplied in a robust carry case and includes :

- Soluble Salt Meter type HED7263901
- 3ml fixed volume fluid dispenser
- Container for deionized water
- Flexible plastic tubing to interconnect SSM and dispenser
- Universal AC adapter to charge the Li-ion battery of the SSM
- CD with SSMLink software and manual
- USB connection cable
- 4 sachets of 84 µS/cm validation fluid

