Oxilyser 3: Digital Passivity Meter

DISCOVER THE DIFFERENCE

Easy and accurate passivity measurement of austenitic and duplex stainless steel surfaces

- Easy measurement on any surface, horizontal or vertical
- LED color and scale (0 - 100) indication
- Pre programmed for most common stainless steel types
- Robust design

The corrosion resistance of stainless steels depends on the quality of a very thin oxide layer, the so called 'passive layer'. Maintaining this passive layer is one of the most important aspects in maintaining the quality of stainless steel. Damage of the passive layer, in time, will cause severe corrosion. Therefor preserving the passive layer is a must. With the Oxilyser 3 you measure passivity fast and accurately. Besides a 0-100 passivity scale, a LED (green/red) will indicate passivity or not. The Oxilyser 3 helps you to avoid corrosion problems.

Principle

The principle of the Oxilyser 3 is based upon measuring the rest potential of the stainless steel surface combined with a sophisticated algorithm for evaluation. The electrolyte is a non toxic organic acid and filter paper strips function as electrolyte bearer.
This method is the most direct way for measuring passivity. The scale of the LCD display is divided into 100 units. Passivity of three stainless steel groups can be measured:

1. 0% Molybdenum (AISI 304, 321, 304L, Wst. Nr. 1.4301, 1.4541, etc.).
2. 2% Molybdenum (AISI 316, 316L, 316Ti, Wst. Nr. 1.4404, 1.4571, etc.).
3. Duplex stainless and 6% Mo steel such as Wst. Nr. 1.4462, duplex 2205, duplex 2507, 254 SMO and 1943 hMo.

Applications

- Checking effectivity of pickling and passivating treatment
- Checking passivity after unloading tanks with aggressive fluids like acids
- Checking passivity after cleaning/rinsing, e.g. stainless steel storage tanks, transport tanks (shipping, industry, trucks, etc)

Advantage

The Oxilyser replaces the palladium chloride test as it is a more reliable and quick standard for passivity testing. Direct measurement, built in algorithm for passivity testing. The unit operates on a standard industrial quality 9V battery.

WE GOT YOU COVERED

Marine Care BV
Oude Maasweg 35
Port number 4005
3197 KJ Rotterdam
The Netherlands
T. +31 (0)10 2950342
F. +31 (0)10 2950345
E. supply@marinecare.nl
W. www.marinecare.nl

MARINE CARE

OXILYSER 3
PASSIVITY METER

- Easy measurement on any surface, horizontal or vertical
- LED color and scale (0 - 100) indication
- Pre programmed for most common stainless steel types
- Robust design

SPECIFICATIONS

- Objective result on LCD display. Scale 0 (active) to 100 (fully passive)
- Passive or not LED passivity indication for three stainless steel groups
- Measuring procedure fits into quality control and assurance procedures and corrosion monitoring systems.

OXYLISER KIT CONTENT:

- Oxilyser 3 base unit with 9V battery
- Shockproof Epoxy Double Bridge Ag/AgCl2 reference electrode. Gel filled, this makes measuring up side down and on vertical surfaces possible
- Red connector clamp
- Box with filter paper (for ± 100 measurements)
- Potassium Chloride 60ml bottle (for conditioning of electrode)
- Electrolyte refill 60 ml bottle (for ± 100 measurements)
- D.I. water (rinsing) liquid 60 ml bottle
- 2 reference stainless steel plates (304 and 316)
- Scotch brite pad to activate surface

INSTRUCTIONS FOR USE:

1. Ensure the surface is clean (and degreased) before testing

2. Connect electrode and connector clamp to Oxilyser 3 unit (respect colour coding of connectors)

3. Select corresponding grade of stainless steel to be tested (304, 316 or duplex); in case unknown: select 304 or apply molybdenum drop test

4. Determine test area on stainless steel surface

5. Take out a piece of filter paper and wet with a few drops of electrolyte, apply strip on surface to be tested

6. Remove transparent cap from electrode, clean electrode tip with some drops of demineralised water

7. Place electrode on wetted filter paper and connector clamp on surface within 10 cm of the filter paper, ensure the filter paper stays very wet

8. Wait for 10 seconds until the value on the LCD display stabilizes and the LED light gives a green (pass) or red (fault) value

9. **After use**: Fill transparent cap with potassium chloride and place cap on electrode (to prevent it from drying out)

10. Disconnect cables and put components back in case

Passivity Value on LCD Display After ~3-10 seconds			Interpretation	
0% Mo (304 a.o.)	2% Mo (316 a.o.)	6% Mo/ duplex		
< 30	< 35	<40	AND ▼	Active and contaminated, surface will not re-passivate.
30-55	35-60	40-65	AND ▲	Wait until stable value has been reached.
30-55	35-60	40-65	AND ▼ OR =	Bad passivity, surface will not re-passivate.
>55	> 60	>65	AND ▼	Wait until stable value has been reached.
>55	>60	>65	AND ▲ OR =	Good passivity.

This information is based on data that we believe to be accurate and reliable and is intended to be used by persons having the knowledge and skill to apply this product properly. We assume no responsibility for results or damages incurred from their use by the Buyer. No liability (including liability for negligence) will attach to Marine Care or its servants or agents arising out of or in connection with or in relation to this product information.

WE GOT YOU COVERED

MARINE CARE BV
Oude Maasweg 35
Port number 4005
3197 KJ Rotterdam
The Netherlands
T. +31 (0)10 2950342
F. +31 (0)10 2950345
E. supply@marinecare.nl
W. www.marinecare.nl