Paint Test Equipment

Porosity

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Holiday Detector

The Holiday Detector is a DC voltage Holiday Detector for detecting pinholes and flaws in insulated coatings on conductive substrates.

Information

Where coatings have to provide an effective safeguard against corrosion, it is essential that any pinholes or flaws that will eventually lead to corrosion are detected at the earliest possible stage, preferably immediately after the coating application.

The test voltage is of high impedance, enabling safe testing, and does not damage or cause burn marks to the coating.

The Holiday Detector is a compact and lightweight instrument, which can easily be carried by the operator with the supplied Carry Bag.

Specification

Accuracy: ±1%.

Resolution S4001: 0.01kV.

Resolution S4002 & S4003: 0.1kV.

Voltage Type: DC.

Compliance

ISO 29601, ISO 2746, ASTM D5162, ASTM G62, NACE SP0274, NACE SP0188 and NACE SP0490.

Paint Test Equipment

Supply

Supplied in an industrial foam-filled Carrying Case with High Voltage Probe, Band Brush, 10m Earth Cable and Carry Bag.

Calibration Certificate with traceability to UKAS is an optional extra.

Part No	Product
S4001	Holiday Detector 0.5–6Kv (max test thickness 1100µm) Inc High Voltage Handle
S4002	Holiday Detector 1–20Kv (max test thickness 3700µm) Inc High Voltage Handle
S4003	Holiday Detector 1–30Kv (max test thickness 8000µm) Inc High Voltage Handle
NS001	Holiday Detector Calibration Certificate
SS003	Spare Earth Cable 10m
SA004	Earth Cable 25m
SS001	Spare Band Brush
SS002	Spare High Voltage Handle

Broad Brush

Brass-filled Brushes for the testing of coatings on large flat areas using the Holiday Detector.

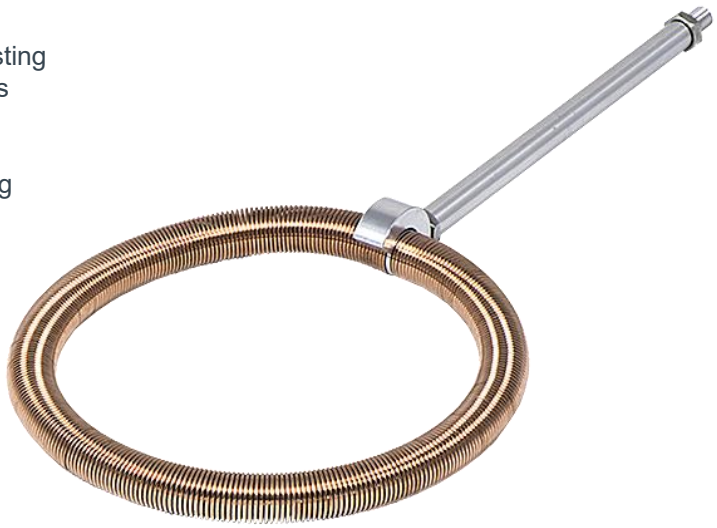
All Broad Brushes come complete with the connector assembly.

Part No	Product
SA502	Broad Brush 200mm (8″)
SA503	Broad Brush 500mm (20″)

Rolling Springs

Phosphor Bronze Rolling Springs for the testing of coatings on the external diameter of pipes using the Holiday Detector.

All Rolling Springs require the SA490 Rolling Spring Connector. One Rolling Spring Connector can be used on multiple Rolling Springs.

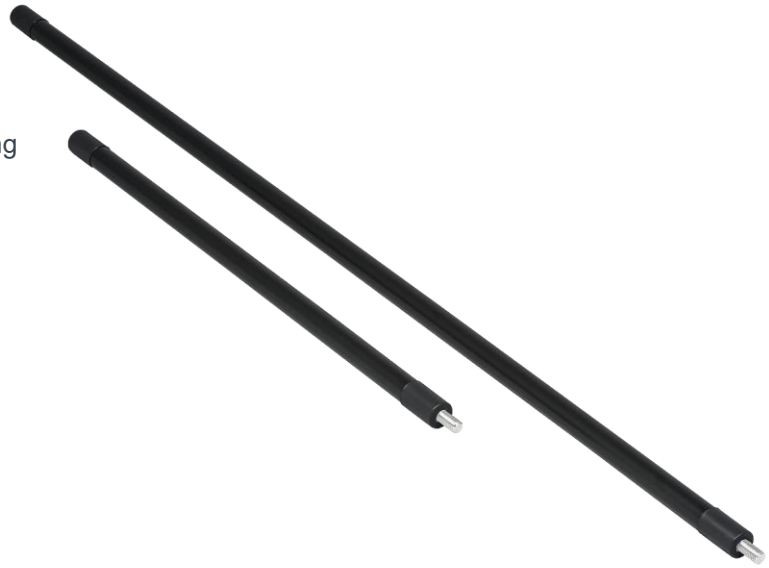


Part No	Product
SA404	Rolling Spring 4″ (102mm)
SA406	Rolling Spring 6″ (152mm)
SA408	Rolling Spring 8″ (203mm)
SA410	Rolling Spring 10″ (254mm)
SA412	Rolling Spring 12″ (305mm)
SA414	Rolling Spring 14″ (356mm)
SA416	Rolling Spring 16″ (406mm)
SA418	Rolling Spring 18″ (457mm)
SA420	Rolling Spring 20″ (508mm)
SA424	Rolling Spring 24″ (610mm)
SA430	Rolling Spring 30″ (762mm)
SA436	Rolling Spring 36″ (914mm)
SA442	Rolling Spring 42″ (1067mm)
SA448	Rolling Spring 48″ (1219mm)
SA490	Rolling Spring Connector

Extension Rod

Insulated Extension Rods for extending the reach of the Brushes and Rolling Springs using the Holiday Detector.

Extension Rods can be connected together to make longer lengths when using Circular Brushes down long pipes.



Part No	Product
SA002	Extension Rod 500mm (20″)
SA003	Extension Rod 1000mm (40″)

Coating

If the coating has been applied recently, it should be cured in accordance with the manufacturer's instructions before testing. In the absence of manufacturer's instructions the coating should be cured for at least 10 days. The surface of the coating should be free of oil, dirt and other contaminants before testing.

Earthing

The Holiday Detector earth cable must have a secure connection to the substrate of the item under test.
All items under test must have a secure connection to earth or ground.

Set up

The Holiday Detector must be switched off and the multiturn voltage control turned fully anticlockwise.

Connect the plugs on the High Voltage Handle and Earth Cable to the colour coded sockets on the front and back of the instrument.

Switch the Holiday Detector on to switch position A. The green fault indicator will illuminate and there will be a low reading on the display. Press the switch on the High Voltage Handle and turn the multiturn voltage control on the instrument in a clockwise direction until the required test voltage is displayed.

Test Voltage

The test voltage should be set in accordance with the coating manufacturer's instructions.

In the absence of manufacturer's instructions the test voltage table shows the test voltage required for the testing of the coating thickness in compliance with ISO 29601.

The Holiday Detector can be used on coatings above 300 microns in compliance with ISO 29601. The 0.5 to 6kV Holiday Detector (S4001) can be used on coatings above 100 microns.

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Testing

For the majority of testing, switch position A is sufficient. However, for difficult-to-see flaws it may be necessary to select a continuous test voltage where the spark can be seen more easily, jumping across the flawed area. This can be achieved by selecting switch position B, which gives a continuous test voltage when the High Voltage Handle is pressed and will sound the alarm every time a spark occurs. The red flashing fault indicator illuminates and remains on until the High Voltage Handle switch is pressed again.

To reset the instrument, re-press the High Voltage Handle switch. This restores the test voltage so that testing can resume.

Always ensure that the High Voltage Probe is kept away from the instrument.

With the High Voltage Handle switch pressed on, place the Brush or Rolling Spring on the coating to be tested and move over the full area of the coating. If a flaw is detected a spark will jump across from the Brush or Rolling Spring through the flaw in the coating to the metal substrate, the alarm will sound, the red flashing fault indicator will illuminate and the test voltage will drop to zero.

Replacing Batteries

When the batteries require replacement, the red Lo Bat indicator will illuminate.

With the instrument switched off pull out the 2 drawers located on the rear of the instrument, replace with 2 Energizer lithium PP3 batteries, ensuring correct polarity.

Safety

Safety precautions must be strictly followed whilst using the Holiday Detector.

The Holiday Detector must be operated by responsible and trained personnel, who are in good health and do not suffer from any cardiac conditions.

The Holiday Detector must not be used in any area which could have a combustible or flammable atmosphere, as the test voltage can cause a spark and an explosion could occur.

The work under test must be located in a clearly defined area, with unauthorised personnel prohibited.

All items under test must have a secure connection to earth or ground.

Test Voltage Calculator

Coating Thickness	Test Voltage
Up to 500µm	2.3kV
500µm–600µm	2.9kV
600µm–700µm	3.5kV
700µm–800µm	4.0kV
800µm–900µm	4.5kV
900µm–1000µm	5.0kV
1000µm–1100µm	5.5kV
1100µm–1200µm	6.5kV
1200µm–1300µm	7.0kV
1300µm–1400µm	7.5kV
1400µm–1500µm	8.0kV
1500µm–1600µm	8.5kV
1600µm–1700µm	9.0kV
1700µm–1800µm	10.0kV
1800µm–1900µm	10.5kV
1900µm–2000µm	11.0kV
2000µm–2100µm	11.7kV
2100µm–2200µm	12.4kV
2200µm–2300µm	13.0kV
2300µm–2400µm	13.5kV
2400µm–2500µm	14.0kV
2500µm–2600µm	14.5kV
2600µm–2700µm	15.0kV
2700µm–2800µm	15.5kV
2800µm–2900µm	16.0kV
2900µm–3000µm	16.5kV

Coating Thickness	Test Voltage
3000µm–3100µm	17.0kV
3100µm–3200µm	17.5kV
3200µm–3300µm	18.0kV
3300µm–3400µm	18.5kV
3400µm–3500µm	19.0kV
3500µm–3600µm	19.5kV
3600µm–3700µm	20.0kV
3700µm–3800µm	21.0kV
3800µm–3900µm	21.5kV
3900µm–4000µm	22.0kV
4000µm–4100µm	22.5kV
4100µm–4200µm	23.0kV
4200µm–4300µm	24.0kV
4300µm–4400µm	25.0kV
4400µm–4500µm	25.8kV
4500µm–4600µm	26.4kV
4600µm–4700µm	26.8kV
4700µm–4800µm	27.4kV
4800µm–4900µm	28.0kV
4900µm–5000µm	28.5kV
5000µm–5300µm	29.0kV
5300µm–8000µm	30.0kV

Paint Test Equipment is a global leader in the manufacture of specialist test equipment specifically for the industrial painting and coating industries for the protection of steel assets from corrosion, mainly in the oil, renewables and steel construction sectors. We have over 30 years experience and extensive knowledge in delivering practical solutions in supporting our customers with world class products for corrosion prevention.

Prevention of corrosion on steel is essential to extend the asset lifetime, optimise performance and minimise downtime for expensive maintenance work. Using Paint Test Equipment products ensures that industrial coatings are applied to the highest achievable quality standards of ISO compliance.

We supply small, medium and multinational companies with the full range of technologies and innovations in our unrivalled portfolio of products for our customers to grow their business and enhance profits through cost effective corrosion management equipment.

Paint Test Equipment is committed to providing proactive and innovative solutions to meet customer requirements for the highest quality, user friendly inspection equipment. Paint Test Equipment is the partner of choice.

Paint Test Equipment

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