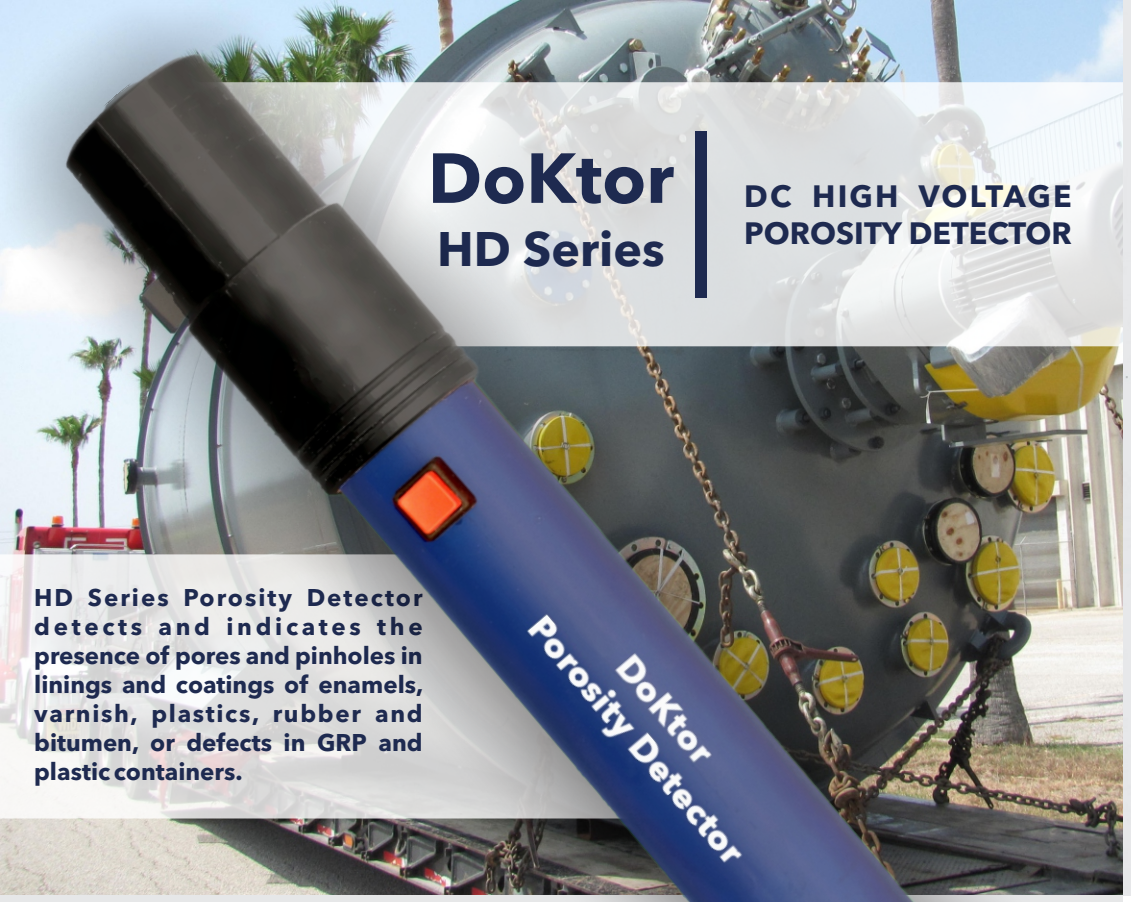
DoKtor
HD Series

DC HIGH VOLTAGE POROSITY DETECTOR



HD Series Porosity Detector detects and indicates the presence of pores and pinholes in linings and coatings of enamels, varnish, plastics, rubber and bitumen, or defects in GRP and plastic containers.

Manufactured by :

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HD Series

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Technical Specification

Series	HD-10	HD-12	HD-15	HD-20	HD-25
Range	0.5kV - 10kV	0.5kV - 12kV	0.5kV - 15kV	0.5kV - 20kV	0.5kV - 25kV
Built-in Battery	7V2	7V2	9V6	9V6	9V6
Full Charge*	5 Hours	5 Hours	6 Hours	6 Hours	6 Hours
Weight*	0.6kg	0.6kg	0.75kg	0.75kg	0.8kg
Charger	12 V / 2A				
Dimension	45mm (diameter) x 305 mm				
Flaw Indicator	Visible spark at end of electrode				

* Approximate Values

Applications

DC Porosity Detectors are used to search out, detect pinholes in non-conductive anti-corrosion coatings applied to conductive substrates. by electric spark method. Defect of this type are usually too small for detection by the naked eye.

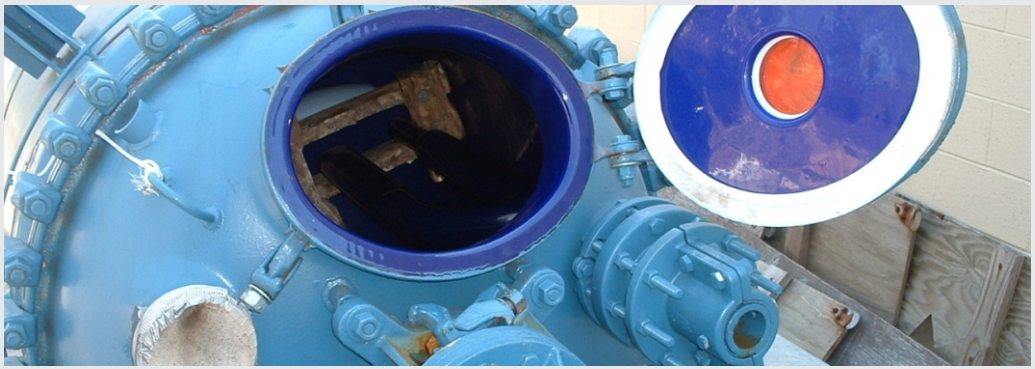
A common application for this equipment is the detection of pinholes in enamel, in the plastic linings of containers, oil tanks, agitator vessels , pipe lines, boilers and heat exchangers or, in fact, in any non conductive coating applied to a conductive substrate.

The magnitude of the test voltage to be used depends on the dielectric strength and thickness of the coating to be tested, the voltage being applied via a special electrode which is screwed on to a probe head. A wide range of replaceable electrodes catering for almost any practical requirement is available.

Instrument Details

The porosity detector incorporates a continuously variable EHT supply, the output of which is directly controlled by variable voltage controlling knob. Operation of the instrument is based on the fact that a spark dis-charges and ionization takes place between electrode and substrate whenever the former passes over a defective spot.

The energy levels used are extremely low. Protection resistors in the probe head and an electronic control circuit ensure that the short circuit current is always limited to a safe value even in the event of accidental direct operator contact with the electrode.



Each spark discharges an electric pulse which triggers a fast switching circuit in the meter unit. Since this trigger action is largely unaffected by the duration and intensity of the discharge, the visual fault indication is

RANGE TO DETECT COATING THICKNESS

THICKNESS	RANGE
0.5-4.5mm	0.5-10 kV
1.5-8mm	2-15 kV
1.5-10mm	2-20 kV
1.5-15mm	2-25 kV
1-5-20mm	2-30 kV

STANDARD SPARK LENGTH BETWEEN TEST PROBE AND EARTH TERMINAL

1 kV	0.3mm
2kV	1.5mm
5 kV	3.5-4mm
10 kV	7-8mm
15 kV	12-13mm

20 kV	15-17mm
25 kV	18-20mm
30 kV	22-24mm
35 kV	28-31mm