Choosing the correct probe for your Elcometer High Voltage Holiday Detector

When it comes to testing the porosity of coatings using the high voltage or holiday detection method, regardless of whether you’re using a Continuous DC, or Pulsed DC detector, it’s important to choose the right probe for your application, so you can test thoroughly, efficiently, and ensure the most reliable results.

Elcometer provides a wide range of probes and extension pieces to suit different applications and coating types. So, which probe should you choose?

The band brush probe is supplied as standard with the Elcometer 236 and Elcometer 266 gauges, as it is ideal for most applications, and works especially well in small areas or on complex surfaces.

The wire brush probes and conductive rubber probes are designed for larger surface areas, and are available in a range of different widths. The conductive rubber probe is also ideal for when testing on coatings that are more susceptible to scratches, and you want to avoid damaging the coating.

There’s also a range of probes designed for internal and external pipe inspection, all available in a range of diameters to suit different sizes of pipe.

The circular wire brush probes are perfect for internal pipe inspection, and the probe you select should be large enough for it tightly fit inside the pipe, leaving no gaps, ensuring you test all of the surface. You can also attach extension poles to the probe, which allow you to test deeper inside the pipe.

The ‘C-Type’ wire brush is lightweight, easy to use, and ideal for testing the outside of pipes that have obstructions on them, such as valves or inspection hatches.

Alternatively the rolling spring probe is tightly wrapped around the pipe and simply rolls along as you move, allowing you to quickly and reliably test long sections of pipe. The rolling spring is available in either phosphor bronze or stainless steel; and while both work in the same way there are advantages depending on which one you choose.

The stainless steel probe is extremely robust, and has flat, rectangular coils, meaning a large area of the probe is always in contact with the surface, ensuring a thorough test.

The phosphor bronze probe, on the other hand, is lightweight and flexible making it incredibly easy to manoeuvre, even on rough, uneven surfaces. It also has less capacitance, which means it is easier for the instrument to consistently deliver the set voltage to the probe while testing. This is particularly important when using the Elcometer 280, especially at high voltages at the upper end of the range (in other words closer to 30kV), or when testing large diameter pipes.

Whichever rolling spring you choose, there should be no gaps between the probe and the surface, to ensure a thorough test.

Combined with the Elcometer 280, and its trailing earth voltage return cable which you don’t have to clip to the substrate you are testing, the rolling spring probe is perfect for fast yet thorough pipeline inspection. And if the pipe you’re testing is un-grounded, you can always use the Elcometer 280’s grounding mats and grounding pin to test. You can see how this works in the Elcometer 280 video.

There are a range of probe extension pieces which can be attached to any of Elcometer’s high voltage holiday detectors, to make it easier testing floors or large structures, or to test deeper inside pipelines.
The Elcometer 236 also has its own telescopic probe handles, which can extend up to 3.6m (142”) in length, for easy access to difficult areas.

There’s also a second hand grip for the Elcometer 266, designed for two handed use without compromising its safety, which is ideal for testing pipes and tank floors.

For more information and training on Elcometer’s range of high voltage holiday detectors and accessories, visit Elcometer.com.

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