Greenstreak

BUILDING TRUST

SPARK TESTER –
FOR THERMOPLASTIC WATERSTOPS WELDS

Sika Greenstreak's Spark Tester is a hand-held unit which generates a high voltage at a high frequency. It is intended for intermittent use, no more than 10 minutes at a time. It has an output of between 20,000 to 45,000 volts, at a frequency of approximately 500 kHz. When properly adjusted, the electrode is held within ¼ to 1 in. (6 to 25 mm) from a metal object, a spark will jump to the metal. Current output of the spark is about 1 mA.

This model is a variation of the tesla coil. It has a primary coil which produces an output voltage of about 1200 V at the input line frequency, 50 or 60 Hz. This output voltage is interrupted by a vibrating contact, energized by this coil at twice the line frequency. The output voltage of this primary coil is connected to capacitors, which are then discharged into a high voltage coil. The capacitance, resistance and inductance of this circuit is designed to oscillate, or ring, at a very high frequency, in this case 500 kHz. The output of this high voltage coil is adjustable by varying the distance of the vibrating contacts, which is user adjustable, by means of a knob on the end of the unit.

The Spark Tester can detect pinhole leaks in plastic welds where a test metal backing is applied. It is available in two voltage levels.
No. 223001 115V

No. 223006 220-240V

1) Turn the Output Adjustment Knob fully counterclockwise.

2) Turn the Output Adjustment Knob clockwise to adjust the voltage for the desired spark length. Hold the tip close to a metal object, to observe and adjust the length of the spark.

3) For pinhole detection of thick materials, the spark should be adjusted for near maximum length. For thinner materials, a shorter spark is desired. A one inch spark represents a peak voltage of approximately 50,000 volts.

4) Once the unit is adjusted, pass the electrode over the material being tested. The electrode can be passed directly over the material.

5) If the electrode passes over a pinhole or void, a bright, concentrated spark jumping from the electrode to the metal will be observed.
Do not use the Voltage Adjustment Knob as an "ON/OFF" switch for the high voltage, as this will prematurely wear this part. Never leave connected to the power line unattended. Remove from the power line when not in use. Use of a power strip with ON / OFF switch is recommended.

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