Materials Services I Materials Germany

Electronic Magnetic Pole Tester

thyssenkrupp

Type 181004

Function

This handy magnetic pole tester provides an instant zero-delay magnetic pole indication. Just press the pushbutton to activate the built-in electronic circuitry that will indicate the appropriate magnetic pole via LEDs at once. The green LED marks the south pole, the red one indicates north. The probe is fitted in the tip of this pen-style pole tester. A black mark identifies the center and the location of the sensor. Due to the small distance between the probe and the specimen, reliable indications are obtained even with closely spaced pole centers. As the tester is passed over the magnet, an LED light change from green to red indicates the south-to-north pole transition. A magnet's neutral zone can likewise be precisely identified in this manner. It is assumed in all of the foregoing that the pole tester is held in a vertical position relative to the magnet.

With mechanical pole testers it is not uncommon for the polarity of the sensor magnet to be reversed by the action of the pulse fields. As a result, the device will indicate the very opposite of the actual magnetic polarity. This may have severe consequences when mounting magnet-based equipment. Another drawback of mechanical pole testers is that the rotary magnet must be mounted in a sensitive bearing assembly allowing it to turn without effort. This arrangement necessarily involves a certain amount of inertia that will delay the indication, while also requiring protection of the sensitive magnet. The result will be an air gap between the sensor magnet and the magnetic pole to be identified. The device will cease to operate reliably with small distances between pole centers, or with small-sized magnets.

The electronic magnetic pole tester does not exhibit these disadvantages. It is of rugged design, with no moving parts, ensuring zero-inertia response, and is also readable in the dark and where access is difficult. Even with very strong magnetic fields, there will be no magnetic reversal or demagnetization of the probe.

Applications

- Measurement of stray magnetic fields in packaging
- Coil testing
- Post-magnetization polarity checks
- Assistance with the following:
  - Electric motor assembly
  - Installation of magnetic clamping blocks
  - Error analysis
  - Multipole quality control

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Technical Data	
Dimensions	approx. 143 mm * 22 mm * 19 mm
Weight	approx. 31 g (including battery)
Display	two-LED display (green = south, red = north)
Sensitivity	±15 mT on/off hysteresis
Operating temperature range	0 °C to 50 °C
Storage temperature	-20 °C to +70 °C
Battery	4 * 1.5 V-button cell
Supplied accessories	Operating instructions, battery

Contact

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