



DT1 Ductility Bend Tester

ASTM A720 Ductility Bend Tester

Welcome to the pinnacle of precision in ductility testing for nonoriented electrical steels with our advanced Ductility Bend Tester. Utilizing Epstein test strips, our bend tester provides precise and reliable measurements of ductility in silicon-bearing steel sheets and

Key Features

- Compliance with ASTM A720/A720M: Adheres strictly to the ASTM A720/A720M-02 (2016) standard, ensuring accurate and reliable test results.
- Epstein Test Strips: Utilizes standard Epstein test strips for consistent and repeatable testing.
- Robust Design: Engineered for durability and precision, capable of handling various commercial thicknesses of electrical steel.
- Automated Bending Process: Equipped with a stepper motor to automate the bending process, eliminating the need for manual bending.
- Automatic Break Detection: Features an inductive sensor that reliably and repeatedly detects the break, ensuring accurate end-of-test results.
- User-Friendly Operation: Simple setup and operation, with clear indicators and easy-to-read results.

Specifications

Material Compatibility: Nonoriented silicon steel sheets and strips.

Thickness Range: 0.010 to 0.031 inches (0.25 to 0.79 mm).

Bend Radius: Approximately 0.2 inches (5 mm).

Test Specimen Dimensions: Width of 1.2 inches (30 mm) and length of at least 6 inches (150 mm).

Testing Methodology

Our Ductility Bend Tester operates by clamping one end of the test strip securely while the other end remains free but under tension by a spring. The strip undergoes repeated 180° bends, driven by a precise stepper motor, until a crack appears or a complete rupture occurs. The number of bends withstood is recorded as a measure of ductility, with the break reliably detected by an inductive sensor.

Procedure

- **Sample Preparation:** Select samples from multiple locations within each test lot or lift. Cut test specimens to 1.2 inches in width and at least 6 inches in length. Ensure edges are free of burrs.
- **Setup:** Clamp the specimen in the stationary jaws and apply tension using the spring.
- **Automated Testing:** The stepper motor automates the bending process through a series of 180° reversals until failure.
- **Break Detection and Bend Counting:** The inductive sensor detects the break automatically and reliably, while the system automatically records the number of bends.
- **Recording Results:** Count each full 180° bend to determine the ductility of the test specimen.

PC Connectivity

Our Ductility Bend Tester features advanced PC connectivity options, allowing for seamless integration with your digital workflow:

- **Local Storage:** Save test results directly to a connected PC for easy access and archiving.
- **Network Integration:** Send results over a network to central databases or other connected devices, enabling efficient data sharing and analysis across teams and locations.
- **Export Options:** Export test data in multiple formats (e.g., CSV, PDF) for detailed analysis and reporting.



Significance

This bend test method is crucial for evaluating the ductility of nonoriented electrical steel, ensuring materials meet the necessary standards for commercial applications. It provides a reliable measure of material performance under stress, which is essential for quality control and material certification.

Contact Us

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