



- Monitoring and documentation of the soft magnetic properties of electrical steel
- Continuous inline quality control
- Inline measurement of specific hysteresis loss and peak induction
- Parallel data capture systems for H and J
- Absolutely simultaneous measuring process
- High reproducibility and measuring accuracy
- Programme-controlled operation
- EBA Expert software for measurement, display and integration into QM systems

## Measuring categories

Specific hysteresis loss

Maximum polarization

Maximum field strength

Remanence

Coercive field strength

Permeability

Measuring frequencies

50 or 60 Hz (measurements possible up to 400 Hz)

J(H) values for graphic display

Measuring Technology for Soft Magnetic Materials

## EBA Inline Measuring System

# EBA Inline Measuring System

## Operating principle

The measuring system consists of a measuring and processing unit together with a double-yoke system with all the required coils (exciting coil, secondary coil, tangential field coil). The double-yoke system is installed in the production line. The material to be measured is guided through this unit.

In order to assign the measured and documented values clearly to one electrical steel coil the measuring system is able to administrate material identification data. Digital signals for the start and end of the measurement can be processed from the measuring system itself in order to track the material during production.

Incorporation of the values for polarization and field. Calculation of the values for hysteresis loss. Graphic display of the values over the whole length of the steel strip. Comparison of the values achieved with the nominal values. All non-permissible values are saved as statistical anomalies. Via the operating software parameters can be set for any number of measuring programmes and any type of sheet can be calibrated.

The software enables quick integration into quality data documentation. Documentation of the position where faults are identified (tolerances exceeded) and an identification line over the whole length of the strip.

## Components

- Power amplifier up to max. 4 kW
- Measuring unit (16-bit microprocessor) and superordinated PC for process visualisation
- Digital inputs are separated optically for process signals, analogue outputs and analogue inputs (measuring the secondary and field coil signals of the measuring coils)  
Serial interfaces for linking to a superordinated quality management system
- Operational components for installation in the production line:  
19"-TFT monitor, operating keyboard suitable for industrial applications

## Technical Data

Repeatability	better than 0.5 %
Comparability of the measuring results	statistically $\pm 2\%$ against Epstein measurement
Maximum field strength	5,000 A/m
Continuous setting accuracy	better than 1.0 %
Maximum speed	300 m/min
Maximum width of strip	1,300 mm
Power supply	3 x 220-440 V AC, 50/60 Hz



Measuring and processing unit



Evaluation software



Inline measuring coil

Other measuring systems

**Electrical Steel: C 510**

**Electrical Steel: MPG 200 D**

**Surface Resistance: Franklin Tester**

Product divisions

**Measuring Technology for Hard Magnetic Materials**

**Magnetizing Technology**

**Services**

**BROCKHAUS**  
**MEASUREMENTS**