



MEASURING TECHNOLOGY FOR SOFT MAGNETIC MATERIALS

MATERIAL

SENSORS

LABORATORY

MEASURING SYSTEMS

All systems are operated by comprehensive BROCKHAUS® software applications.

- Grain-oriented and nongrain-oriented electrical steel
- All other soft magnetic materials
- Amorphous material
- Iron powder

- Coils

- All quality grades / material characteristics (fully- and semifinished)
- All geometries, e.g. sheets, coils, strips, punched parts, ring cores, stators



Magnetostriction tester

BST-FA



STATOR TESTER







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EBA Inline measuring coil TGD C-frame



Inline Stator Tester BST-FA





Ring sensor BST-M

BST-SA



Punched part sensor





BST-L







RESULTS



Field strength Power loss Hysteresis loss **Eddy current loss Coercive field strength** Permeability **BH-curve** Remanence Magnetic flux Polarization up to 2T

> Frequencies 12 to 100 Hz Field strengths up to 10.000 A/m

Frequencies DC, 3 Hz to 20 kHz Field strengths up to 100.000 A/m According to IEC 60404-2,-3

BST-L: Power loss of stator back iron and teeth Relative magnetic properties for evaluating influences of manufacturing processes

Coercivity According to IEC 60404-7

Stacking factor According to IEC 60404-13, ASTM

Surface resistance According to IEC 60404-11, ASTM A717-01

Width of the inserted material Determination of holes and cracked edges **Detection of surface impurities**

Power loss Polarization **Field strength**

Loss values with monitoring of local variations Map of loss values

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BE SURE OF PERFECT RESULTS.

QUALITY

BROCKHAUS MEASUREMENTS is known all over the world as a market leader – primarily due to the high-quality of its sophisticated technical equipment. The exclusive use of high-quality materials, best trained employees and the use of state-of-the-art machinery guarantee the renowned long-life cycle of our products. Extensive verification processes in the selection of suppliers and material as well as in the production ensure the top quality of all BROCKHAUS products. This is proved by the very large number of installations at extremely satisfied customers around the world. BROCKHAUS products are in accordance with national and international standards (IEC 60404). BROCKHAUS is certified according ISO 9001.

SERVICES



Measuring Laboratory and Calibration Service

Professional measurement and calibration service

- For testing soft and hard magnetic materials according to IEC 60404
- Preparation of reference samples
- Calibration and testing of measuring instruments
- Testing documentation and certification
- On-site service
- Reference samples calibrated in our calibration laboratory accredited acc. to DIN EN ISO/IEC 17025:2018
 - Epstein samples acc. to DIN IEC 60404-2:2008-06
 - Single sheet samples acc. to DIN IEC 60404-3:2010-04



Automated Measurements

All our products are also available as automated systems. The most impressive fully-automated measuring lines are our Epstein-, Single sheet-, Stacking- and Franklin measuring systems.

DAkkS

Impressive videos of these systems are available at the BROCKHAUS YouTube channel.



R&D

As a market leader we continously seek to match the future needs of our customers. Hence we dedicate significant resources to research and product development. Due to our innovative culture and work approach we frequently gain access to private-public research programs, as well as cooperations with highly regarded universities and institutes.

Our company's vision states that "we constantly strive for a better understanding of our customers" and that "this understanding enables us to optimize our performance". All our research is dedicated to improving the competitive edge of our current and future customers. We are convinced that "through this we will become a partner to our customers" in times of rapid evolution in the fields of energy efficiency and e-mobility.







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