

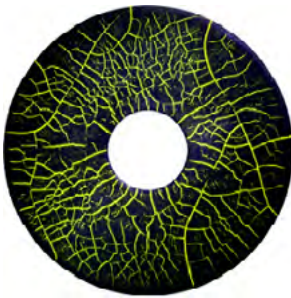
# TESTING AND MEASURING INSTRUMENTS



## TEST PIECE ACCORDING TO PROF. BERTHOLD

The test piece consists of a soft iron cylinder divided into four 90° segments by inserted non-magnetisable sheets. These sheets have a magnetic resistance like air and simulate a cross slot, allowing the verification of the direction of magnetic fields.

Ref. No. 135005



## CALIBRATION STANDARD TYPE 1 INCL. REFERENCE PICTURE

according to EN ISO 9934-2 annex B (former MTU No. 3)

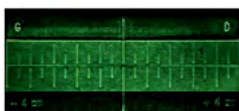
When using magnetic powder suspensions, it is most important to regularly check the indication ability of the test media. Hydro-mechanical strains in pump circulations, discharge of powder particles, too weak or too strong preparation of the media can be reasons for not properly identifying flaws.

After rinsing the calibration block with test liquid, the crack picture (shown left) displays the extent to which the test liquid is able to deliver indications. Delivery includes certificate with reference picture.

Ref. No. 135012



Illustration at daylight



Shows the test result

## REFERENCE STANDARD TYPE 2 INCL. REFERENCE PHOTO

according to EN ISO 9934-2 annex B

The sensitivity of the magnetic powder ink can be evaluated and realised by the reference block type 2. Delivery includes certificate with reference picture.

Ref. No. 135013



## ASTM-CENTRIFUGE WITH STAND

The ASTM centrifuge controls the exact magnetic powder concentration in a liquid base.

Ref. No. 135015

## TESTING AND MEASURING INSTRUMENTS



### RESIDUAL FIELD STRENGTH METER MP-1

The MP-1 meter detects residual fields up to 20 A/cm in ferro-magnetic parts and shows polarity. No calibration needed. Comes with a carrying bag and one probe.

Display	Analogue
Measuring unit	A/cm
Metering range	0-5 A/cm, 0-20 A/cm
Power supply	1.5 V battery (baby)
Size	83 x 122 x 40 mm
Weight	ca. 345 g (including 1 probe)

#### CALIBRATION BLOCK FOR MP-1

Calibrated on 5 A/cm.  
Ref.-No. 133011

Ref. No. 133010



### MAGNETIC FIELD STRENGTH METER FSM-2

The FSM-2 is used for tangential measuring of the magnetic field strength in DC and AC fields. A tangential field probe is attached to the workpiece's surface during magnetisation, and the hall sensor measures the voltage change produced by the magnetic field. This meter measures the true RMS of asymmetric magnetic fields.

The FSM-2 is equipped with a RS 232 interface and background display lighting. With closed cover, the housing meets protection class Ip65. Comes with a mains adapter and a tangential field probe.

Display	Digital
Measuring unit	kA/m, A/cm, Oe, mT and G
Metering range	+/- 400 A/cm
Power supply	9 V battery (charge level indicator) or mains adapter
Size	165 x 110 x 35 mm
Weight	ca. 500 g (including 1 probe)
Probe	Tangential

Ref. No. 135012

### CARRY CASE FOR FSM-2

Ref.-No. 133038



### FIELD PROBES

Field probe type	Ref. No.
Tangential for FSM-2 (spare)	133039
Axial for FSM-2 (spare)	133043
Angled tangential for FSM-2 (spare)	133044

## TESTING AND MEASURING INSTRUMENTS



### REFERENCE BLOCK FOR FSM-2 INCL. CERTIFICATE (OPTIONAL)

calibrated on 200 A/cm

By using workpieces with a long-term stability, daily calibration is not necessary. We can supply the calibration standard 200 A/cm as an accessory upon request. Please note that the measuring unit has to be adjusted to the reference block. This is important for supplementary orders of the reference block for an existing FSM-2.

Ref. No. 133042



### MAGNETOSCOPE

Residual field indicator to determine the residual magnetism of work pieces (YES/NO indication). This instrument does not require a battery.

Ref. No. 135001



### UV-INTENSITY METER J 221

The J 221 meter measures the irradiance of UV-lights. By attaching the perforation filter, the metering range B (see table below) can be extended to approx. 5000 - 30,000  $\mu\text{W}/\text{cm}^2$ .

The sensor can be taken off and can be used for external measurement by wire connection.

Display	Analogue
Measuring unit	$\mu\text{W}/\text{cm}^2$
Metering range	A: 0 - 1200    B: 1000 - 6000

Ref. No. 134001



### LUXMETER

The Luxmeter is a high-resolution instrument to measure the irradiance of daylight sources or the daylight environment. The measurement is made by a sensor connected to the instrument by a flexible cable.

Display	Digital
Measuring unit	Lux
Metering range	0,01...199,99 x $10^3$ (automatic switch-over)
Power supply	3 x 1.5 V AA battery
Size	140 x 88 x 38 mm
Weight	approx. 160 g (including sensor)

Ref. No. 135013

## TESTING AND MEASURING INSTRUMENTS



### TEST SET FOR MAGNETIC PARTICLE INSPECTION

Content (in carrycase):

- 1 x Magnetic field strength meter FSM-2 with tangential field probe and mains adapter
- 1 x Reference block for FSM-2 (optional)
- 1 x UV-Intensity meter J 221
- 1 x Magnetoscope
- 1 x Test piece according to Prof. Berthold
- 1 x Reference block according to EN 9934-2
- 1 x ASTM-centrifuge

Ref. No. 135057

### TEST SET WITH MP-1 (RESIDUAL FIELD STRENGTH METER)

instead of FSM-2

Ref. No. 135052

The equipment in this leaflet has been tested in combination with Magnaflux products and approved for standard operational practice. Operation manuals are available on request.