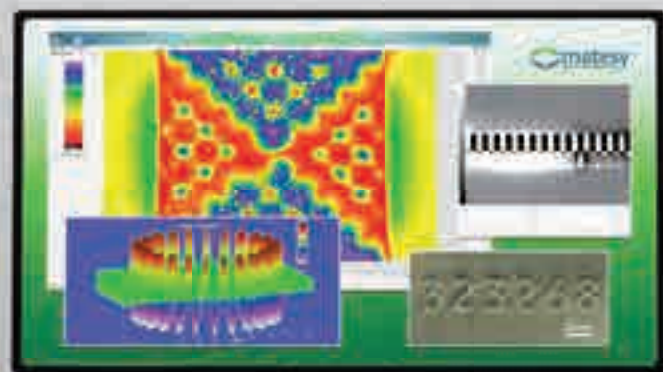


# mageye

The magneto-optical hand-held microscope

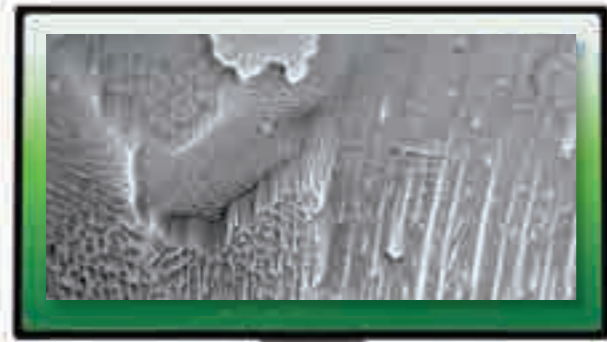


Your partner for magnetism and lead testing

# mageye - magneto-optical microscope

## Mobile visualization of magnetic fields

Magnetic stray flux can be visualized and evaluated via a mobile „magnetic field sensor“. The mageye, Matesys miniaturized magneto-optical USB magnetic field camera, delivers information about the magnetization of the material in high resolution ( $\mu\text{m}$ ).



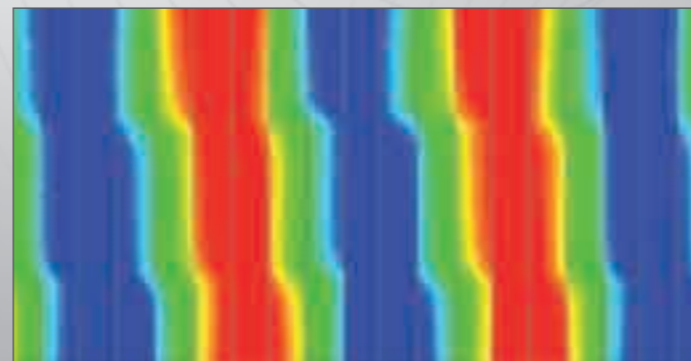
### Highlights

- Direct investigation of magnetic structures on the surface
- High geometric resolution
- Fast visualization of magnetic fields
- Measurement of the magnetic flux density
- Handy and portable

Picture:  
domain scan of  
electrical steel sheets

## The mageye

The mageye is a digital microscope camera system with an integrated magneto-optical sensor tip for the fast and reliable visualization of magnetic stray field structures. The portable system, including a comprehensive user software allows realtime stray field analyses and quality tests of magnetic materials. It is possible to visualize magnetic stray fields of magnetic stripe cards, magnetic tapes, magnetic encoders, obliterated serial numbers, magnetic ink as well as di- and multipole magnets.



Pictures: analysis of the magnetic structure of linear encoders

## Visualization

The mageye is able to visualize magnetic stray fields and flux densities in a high optical resolution. The core of the system is an application adapted magneto-optical sensor in combination with a high-resolution USB-camera. The included user software allows a decent post processing of the captured images. Our mobile device especially applies for small and narrow examination environments.



Picture: control of magnetic security features on banknotes



Picture: reconstruction of serial numbers

### Technical information

- Direct visualization of magnetic fields
- Analysis of: polarity, homogeneity, distribution of the magnetic material and magnetization properties
- Field range: 0.01 to 130kA / m (0.1 to 1,600 Oe)
- Sensor size: 8 x 8mm
- Portable and easy to use
- USB interface

### Application areas

- Quality control (e.g. for electrical steel sheets and the properties of soft magnetic materials)
- Forensics (e.g. recovery of serial numbers on chassis and on weapons)
- Geology (investigation of minerals and meteorites)

### Functionality

- Internal area lighting using linearly polarized light (LED)
- Rotation of the polarization plane of the light in the magneto-optical sensor depending on the locally applied magnetic field
- Analysis of the local changes in intensity with a second polarization filter