Professional
Imaging

dhs
Bilddatenbank

dhs®
MicroCam

dhs
Cleanalyzer

ABOUT
DHS SOLUTION

Since the early nineties dhs Solution has established itself internationally with its own imaging software in QA departments and laboratories in industry, research and development and media management. Today we also offer a wide range of services associated with the software solution as well as suitable hardware for imaging and data management. A perfect full service package, customisable to your individual needs.

The many years of experience of our staff and their direct day-to-day contact with you, the customer, add to the quality of our products. Teamwork and short communication channels are also of key importance to us.

Our goal is to continuously improve customer quality and productivity by offering flexible and customised image management solutions.

OUR
COMPETENCIES

Competence means performing diagnoses, developing strategies, planning and implementing, all with one goal in mind – to improve quality. Software, service and hardware are the fields of expertise that have made dhs Solution a general contractor for "professional imaging".

dhs Solution plans, organises and supports the end-to-end workflow in your QA laboratory.

You have a single point of contact for your complete imaging system. We provide custom technical consulting (software and hardware), assume responsibility for on-site system configuration and installation, train users for their special tasks and adapt dhs Image Data Base to your environment. The future begins today. Every day we diagnose, develop and plan in order to enhance the quality of our products and achieve all-round quality for our customers.

Software
- Archiving
- Acquisition
- Processing
- Analysis
- Documentation

Service
- System installation
- Custom programming
- Training
- Consulting
- Microscope maintenance/repair
- Service contract

Hardware
- Microscopes
- Digital microscope cameras
- Macroscopes
- Lighting equipment
- PC systems

PRODUCTS

dhs Image Data Base, **dhs-Cleanalyzer** and **dhs-Micro-Cams®** offer countless ways of combining software and hardware to support professional work in all laboratory applications.

dhs Image Data Base

Professional image management

dhs Image Data Base has been deployed for more than 20 years as a global, modular image management system in QA departments and laboratories for purposes of archiving, acquisition, processing, analysis and documentation. Its modular structure allows you to combine the software tools you need to satisfy your individual requirements. Ease of operation and clarity of structure simplify daily tasks so you can get down to real work right away.

Licensing options are available for single-user and multi-user solutions at different workplaces and even at different company locations. Your dhs Image Data Base does not require a particular interface and can be integrated into existing laboratory applications.

dhs-Cleanalyzer

Standard-compliant residual dirt analysis

Consisting of software and customer-selected hardware, dhs-Cleanalyzer was specifically designed for standard-compliant cleanliness analysis to evaluate filters and to determine component contamination levels.

The system supports all common national and international standards such as VDA Bd. 19, EN ISO 16232, EN ISO 4406 and others.

Four dhs-Cleanalyzer device models are available, enabling you to perform manual or fully automatic evaluations (depending on sample volumes). Further model selection parameters are the size (in µm) of the particles to be analysed and metallic and non-metallic particle detection. Here too, dhs Image Data Base with its full range of options can be flexibly combined with dhs-Cleanalyzer hardware models. Conversely, our open-interface software can be integrated into existing hardware to build a fully customised system.

dhs-MicroCam®

Digital microscope cameras

The choice of source in the digital world of images is enormously important. This is why our dhs Solution offering comes with its own digital microscope camera series – dhs-MicroCam®.

dhs-MicroCam® is used in light microscopy, stereo microscopy and macroscopy. Our cameras can be adapted as an image source to all optical systems using the standardised C-mount thread.

All dhs-MicroCams® are integrated into dhs Image Data Base through their software. As a result, all convenient tools such as live image functions and parameter setting and saving are available to you. The dhs-MicroCams feature a variety of sensor technologies (CMOS and CCD, 1/2" and 1") and resolution variants to ensure that the right image source can be found for each scenario.

Applications

- Interactive image measurement
- Determination of steel inclusions
- Particle and pore analysis
- Area detection
- Coating thickness measurement
- Cleanliness analysis
- Cast iron analysis
- Grain size determination
- Weld seam measurement
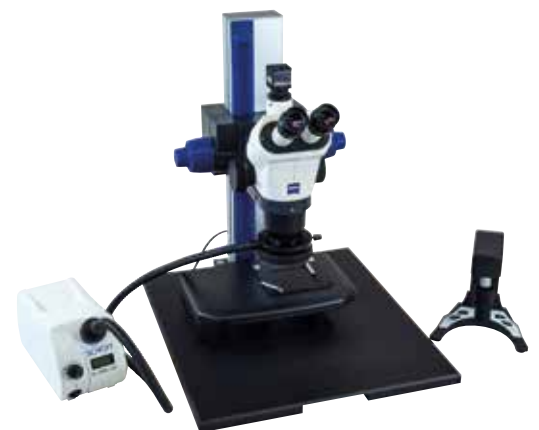
PROFESSIONAL
IMAGE MANAGEMENT

We have been developing digital image processing software for more than 20 years. In close cooperation with many thousands of users in various sectors. That's why our software solutions are both universal and individual. They combine modern digital processing technologies with solutions tailored to the needs of individual users. **dhs Image Data Base** is the imaging platform. It features all functions of innovative digital image management software, ranging from archiving, acquisition, processing and analysis through to documentation.

Archiving

The basic module – the actual data base – is the control centre of our image management system. This is where images and data are managed and the entire application is controlled. The data base is of flexible design and can easily be adapted to individual needs.


Basic module (object strip)

The licence server enables all software modules to be distributed to the workstations in your corporate network at low cost.
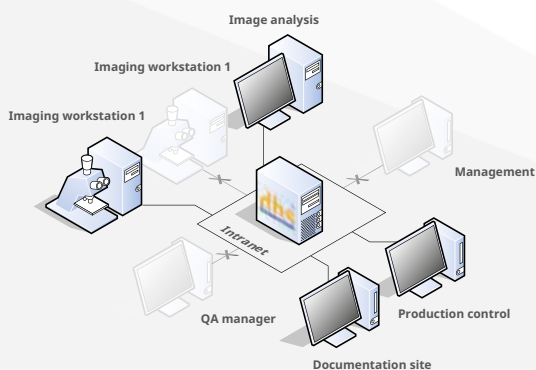
Licence management

Acquisition

Images are obtained from a variety of sources and optical systems. Using image acquisition, images are transferred from the various camera systems to dhs Image Data Base® in all popular image data formats. All key parameters are supplied for optimal setting of the live image. Many automated functions make daily work that much easier.
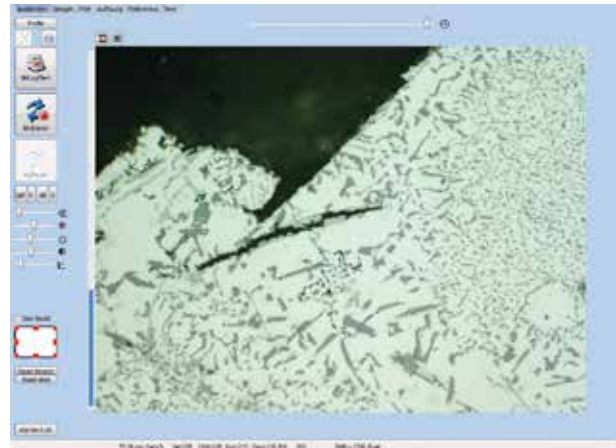

Module: Image Acquisition

Processing

A large selection of add-on modules is available to:

- measure images (Measurement Tool)
- optimise images (Image Manipulation, HDR)
- combine images (Panorama Image/Sharpness Reconstruction)
- compare images (Metal Sections)
- manage and forward images (ImageWizard)

At the touch of a button the results (images and data) are transferred to the data base where they can be further processed.
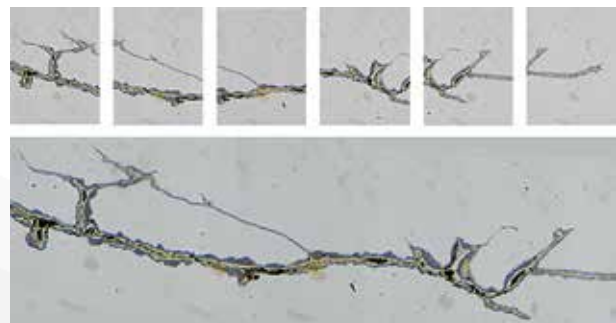

Module: Panorama Image

Software-based, fully automatic and time-saving tools for image analysis tasks are growing in importance. We offer practical tools for area detection, grain size determination and particle and pore analysis in metallography and metallurgy. Our focus here is on the simple and rapid analysis of samples and graphic display of the results. Coating thickness can also be measured and visualised fully automatically; for example, in paint shops, electroplating shops, hardening shops and in the plastics industry.
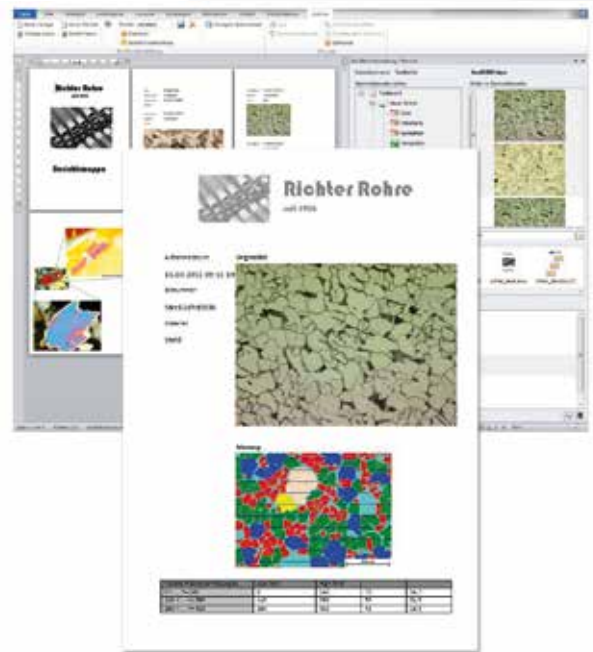
Standard-compliant evaluations of castings and steel materials round off our analysis package.
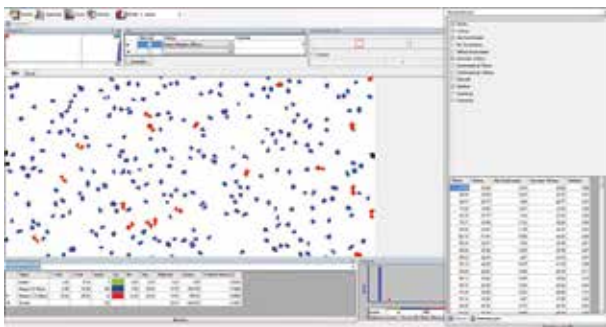
Module: Particle Analysis

Module: Cast Iron Analysis

Documentation

Tests, evaluations and analyses are invariably documented at the end of each workflow. Results must be recorded, set down in reports or quickly communicated internally and externally. With this in mind, dhs Image Data Base provides convenient options for creating professional test reports as well as modern forms for internal and external communication.

Module: Reporting

Features

- ■ Archiving
- ■ Acquisition
- ■ Processing
- ■ Analysis
- ■ Documentation
- ■ Universal and individual
- ■ Flexible
- ■ Cross-sector

CAMERAS, MICROSCOPES AND PC HARDWARE

The **dhs-MicroCam®** series offers a variety of modules with different resolutions and sensors. The right camera for every job. Our program also includes microscopes, macroscopes, microscope tables and controllers and suitable lighting equipment from well-known manufacturers.

As an authorised ZEISS dealer, dhs Solution offers expert advice and the right solution for your needs – including PC and monitor, if required!

In conjunction with dhs Image Data Base, dhs Solution provides you with suitable hardware components as image sources and optical systems (microscope cameras and microscopes/macroscopes). Our own microscope cameras are perfectly matched to dhs Image Data Base.

Various dhs-MicroCam® models

Features

- Digital microscope cameras
- Microscopes of well-known manufacturers
- Macroscopes
- Microscope tables and controllers
- Lighting equipment
- PC hardware

Zeiss stereo microscope

SOFTWARE

	dhs Bilddatenbank	dhs Cleanalyzer	dhs MicroCam
Archiving			
Basic Module dhs Image Data Base	✓	✓	✓
Back-ups	✓	✓	✓
DataImEx	✓	✓	✓
Viewer	✓	✓	✓
Licence Server	✓	✓	✓
Acquisition			
Image Acquisition	✓	✓	✓
Image Acquisition REM	✓	✓	✓
Processing			
Measurement Tool	✓	✓	✓
Measurement Tool Light	✓	✓	✓
Panoramic Image	✓	✓	✓
Sharpess Reconstruction	✓	✓	✓
ImageWizard	✓	✓	✓
Image Manipulation	✓	✓	✓
Metal Sections	✓	✓	✓
HDR (High Dynamic Range)	✓	✓	✓
Analysis			
Area Detection	✓	✓	✓
Grain Size	✓	✓	✓
Particle Analysis	✓	✓	✓
Coating Thickness	✓	✓	✓
Coating Thickness Professional	✓	✓	✓
Cast Iron Analysis Standard	✓	✓	✓
Cast Iron Analysis Advanced	✓	✓	✓
Cup grinding	✓	✓	✓
Steel inclusions	✓	✓	✓
Documentation			
Automatic Reporting	✓	✓	✓
Communication	✓	✓	✓
Updates			
from older versions to the newest version	✓	✓	✓

Legend: ✓ = available   ● = optional   – = not available

	dhs Bilddatenbank	dhs Cleanalyzer	dhs MicroCam
👤 SERVICES			
Installation + short introduction	✓	✓	✓
dhs Online-Support	✓	✓	✓
dhs Consulting	✓	✓	✓
User training at your site	✓	✓	✓
Administrators training	✓	✓	–
Programmers training	✓	–	–
Service-Contract	✓	✓	–
Custom Programmings	✓	✓	✓
Technical service/reparation for microscopes	●	✓	✓
🔬 HARDWARE			
Digital Cameras			
dhs-MicroCam® 1312	✓	●	✓
dhs-MicroCam® 3112	✓	●	✓
dhs-MicroCam® 4013	✓	●	✓
dhs-MicroCam® 5012	✓	●	✓
dhs-MicroCam® 5013	✓	●	✓
dhs-MicroCam® 2022	✓	●	✓
dhs-MicroCam® 5022	✓	●	✓
Canon EOS 600 D	✓	–	✓
dhs-Cleanalyzer			
dhs-Cleanalyzer Professional 5µm	✓	✓	–
dhs-Cleanalyzer Professional 15µm	✓	✓	–
dhs-Cleanalyzer Professional 50µm	✓	✓	–
dhs-Cleanalyzer Stereo	✓	✓	–
dhs-Cleanalyzer Stemi	✓	✓	✓
dhs-Cleanalyzer Scan	✓	✓	–
Particle Standard for dhs-Cleanalyzer	✓	✓	●
DKD Certificate for Particle Standard	✓	✓	●
Filter Holder for dhs-Cleanalyzer	✓	✓	●
Microscopes and Accessories			
Zeiss-Microscope	✓	✓	✓
MEIJI-Microscope	✓	✓	✓
Leica-Microscope	✓	✓	✓
dhs-Macroscope	✓	–	✓
Illumination equipment	✓	✓	✓
dhs Video Converter USB	✓	–	–
PC			
Desktop-Computer	✓	✓	✓
Notebooks	✓	✓	✓
Displays	✓	✓	✓
Printer	✓	✓	✓

FULL-SERVICE

A wide range of services complements our offering. We assume responsibility for installation and configuration of software and hardware components, customise the software to suit your needs and train your employees on site.

Our product specialists provide expert assistance quickly via a telephone hotline. Secure Internet-based remote maintenance software enables our service technicians to connect to your system immediately to answer your questions. Advanced training is also possible in this way. Custom requirements can be implemented quickly and inexpensively using the internal programming language integrated in the software.

Regular software revisions and maintenance of your microscopes ensure that your system is always "up-to-date". Our service contract combines many service components at favourable terms and conditions.

dhs Solution has your interests at heart long after you have made your purchase – that's our philosophy!

Always there for you, our product specialists

Staff training on site

Features

- Installation
- User training
- Hotline
- Online support
- Custom modifications
- Software updates
- Service contract
- Microscope maintenance

Interested?

Have we managed to arouse your curiosity and would you like to find out more about dhs Image Data Base?

- Visit us on the Internet at
  www.dhssolution.com
- Request our info folder with extensive detailed information and individual brochures.
- Would you like an individual software and hardware presentation at your company? Arrange a date with us or with our sales partners.

Thank you

dhs thanks the many thousands of users who have made valuable contributions to the ongoing development and optimisation of our software by supplying feedback. It's due to them that dhs Image Data Base is one of the most practice-oriented applications on the market – once again, many thanks!

We're always there for you!

The dhs head office is located in central Germany, just a stone's throw away from the Rhine Main and Ruhr economic centres. However, at the same time our location is so peaceful and in such an attractive landscape on the edge of the Westerwald that our team is able to devote its full concentration and commitment to further developing the dhs software and creating new ideas.

Proximity to our customers and partners is important to us. Despite our central geographic location we also make intensive use of all options offered by modern communication technology so you can be sure that we are there for you at all times.

Detailed directions on how to reach us can be sent to you on request via e-mail or can be found on our website at **www.dhssolution.com**

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