

Calotte



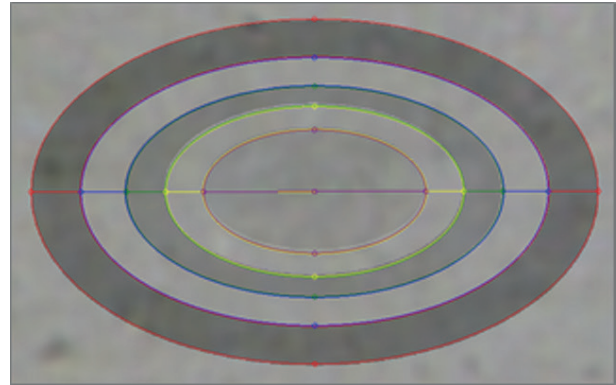
The dhs analysis module Calotte automatically calculates the **layers thickness for calotte grindings** according to the standard **EN 1071-2:2002 Part 2: Determination of layer thickness by the cup grinding method**.

The cup grinding method is used for **samples that cannot or should not be dissected**. Even with very thin layers, it allows a better assessment, as the layers are cut diagonally instead of vertically.

Calotte grinding method

To grind the calotte, a hardened steel ball is rotated.

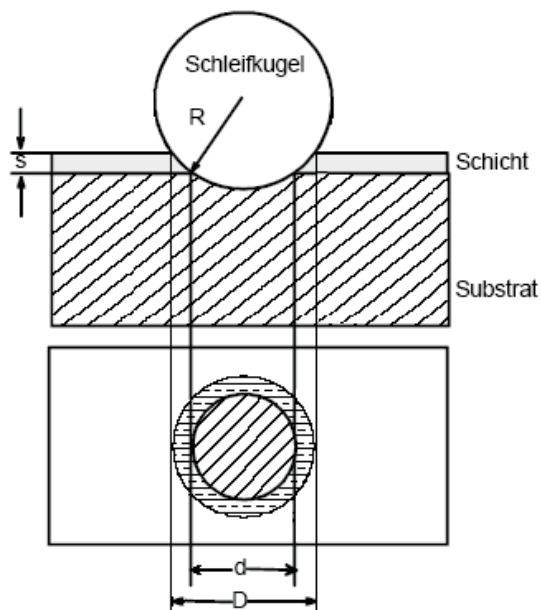
As soon as the coating has been penetrated the **projected area** can be analysed with the dhs Image Data Base.



Parameter for calculation

The following parameters form the basis for calculating the layer **thickness (S)** and must be determined as objectively as possible using the micrograph that was recorded with the microscope:

- **Diameter of grinding ball (R)**
- **Inside and outside ring diameter at the respective layer edge (d) (D)**



Information in the overview

- Measurement based on EN 1071-2:2002, Part 2: Determination of coating thickness by the cup grinding method
- Edge detection automatic or manual depending on the quality of the image
- Generation of measurement series files for several images
- Transfer of all images and measurements to the **dhs Image Data Base** for easy documentation and archiving

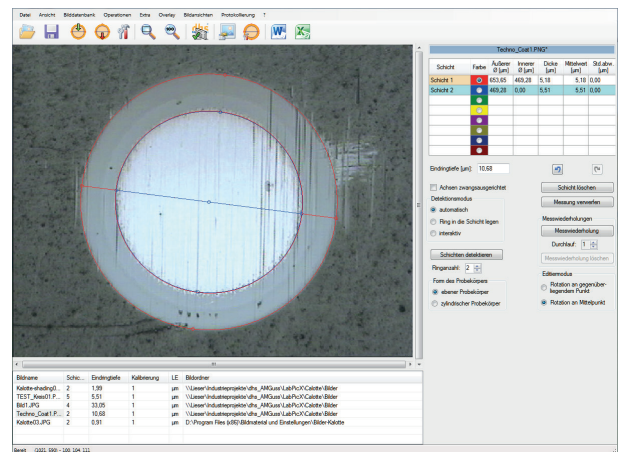
Detection

Depending on the image quality, **edge detection is automatic or according to manual definition** of up to five points on the edge of the layer (ellipse approximation).

During measurement, the intensity and also the **colour information of the image** are processed. Layer determination is **fully automatic** depending on the condition of the sample. It is also possible to determine the layer boundaries semi-automatically or interactively. If required, complete **measurement series files** can be generated for several images.

Parameters to be determined

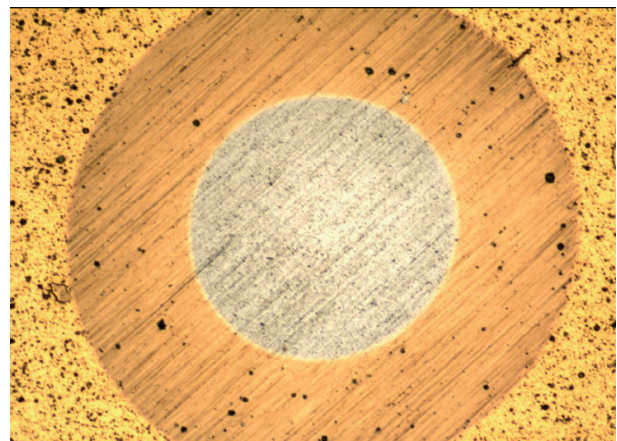
- **Layer thicknesses** of all measured circular layer structures
- **Number** of measured layers
- **Depth of penetration into the substrate**
- **Total penetration depth** into the sample
- **Number of measurement** iterations
- **Average layer thickness** from all individual measurements
- **Standard deviation**



Documentation

All image data, measurements (diagrams, tables, statistics) are transferred **to the dhs Image Data Base** for archiving and documentation.

Logs are then generated with **MS Word and MS Excel**. You can then easily compile images, text, and tables to create a report.



dhs Dietermann & Heuser Solution GmbH

Herborner Str. 50

35753 Greifenstein-Beilstein, Germany

Phone: +49 (0)27 79 91 20-0

Fax: +49 (0)27 79 91 20-99

Email: vertrieb@dhssolution.com

Web: www.dhssolution.com

dhs
Image Data Base

dhs
Micro Cam

dhs
Cleanalyzer

dhs Image Data Base, dhs-MicroCam® and dhs-Cleanalyzer are trademarks of dhs Dietermann & Heuser Solution GmbH. All technical data and information in this brochure are correct at the time of going to press (10/2014). Errors and omissions excepted. Subject to change.