Pores

The dhs Pores Analysis module enables **automatic detection, calculation** and **visualisation of the porosity** of the binarised microstructure image.

Detection

The microstructure is automatically converted to greyscale values and binarized direectly if required. The **greyscale range** of the sample image is **set** by the threshold-value controller or directly in the histogram. Then, all the individual parameters of the particle to be analysed are set via **pre-classifiers (filters)** and their **colour coding is defined.** All settings can be **saved** in **profiles** so that they can be reproduced.

The **analysis results** are immediately displayed in the desired size classes:

- Total number of particles and percentage per size class
- Variance
- Maximum
- Standard deviation
- Median
- Minimum
- Average value

A total statistic is also output.

Visualisation

The individual size classes and their proportional distribution are directly visualised on-screen in the previously defined colour in **real time**.

Information at a glance

- Calculation of the porosity of the binarised microstructure image
- Depiction and determination of limit values
- ROI (as a circle, rectangle, freehand)
- All software settings can be saved in profiles and re-accessed
- Simple integration of the measurement results in the database
- Enhanced option with functions for area detection, for comprehensive particle analysis

Features

- When the limit value is exceeded, the bar colour changes to the limit colour.
- The **ROI (Region of interest)** is selected with a rectangle, circle or polygon
  -> a standard size can be saved in the profile for
      a circle or rectangle
  -> ROI **can be moved in any direction**
- Erosion and dilatation of unneeded image components
- Cutting particles
- Median filter
- **Image zoom** with mouse or scroll wheel
- Mirror image (horizontal / vertical)
- **Edge correction** by means of edgeboard contact
- **Setting options can be saved in profiles** and reproduced
- Whole profile can be saved via all settings

Result depiction / Documentation

The **result table** is exported **into MS Excel™** at the press of a button – a **bar chart** is created **automatically** and the resolution and font size can be adjusted individually.

All three tables (result, statistics, individual particles) are saved in the database and are integrated into the image data.

Enhanced option

The Pores Analysis module is also designed to determine phases. With the **enhanced option**, you receive the **complete functional scope for particle analysis** of area ratios and size classes according to the area of application – get in touch with us!

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