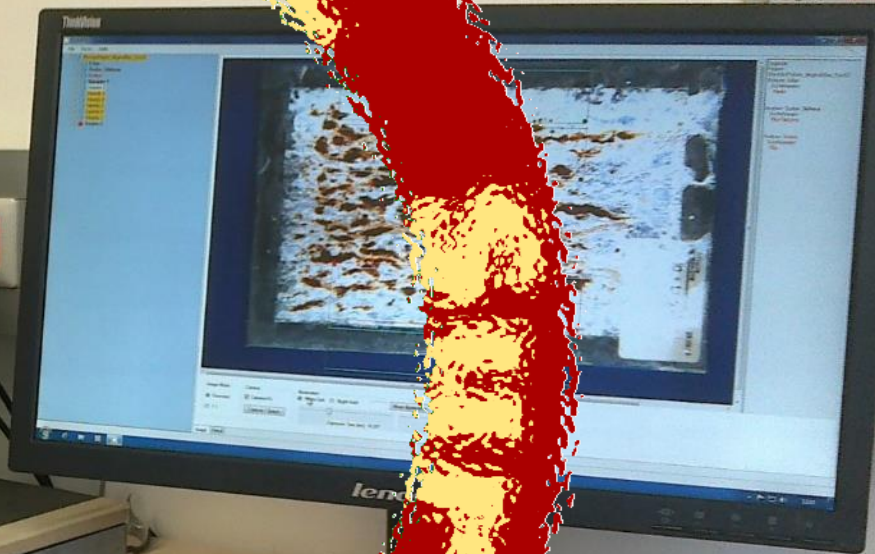




39
40 2

2015 OI
40
41
42 12
43 19
44 26

Handwritten notes on a piece of paper pinned to the wall.



Henkel Technologies

67 ex nro 10

What is **QUANTIZ®**

QUANTIZ® is a surface analysis system optimized for the evaluation of coating damage.

It is a combination of hardware and software for image creation and evaluation.

No additional programming effort is necessary. All analyses are evaluated according to the respective standard.

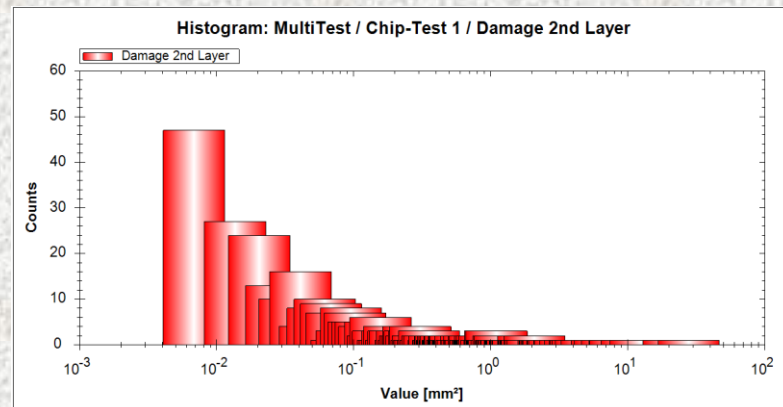
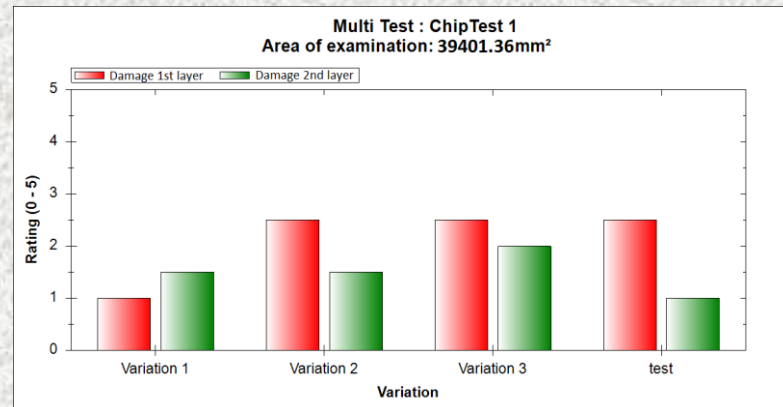
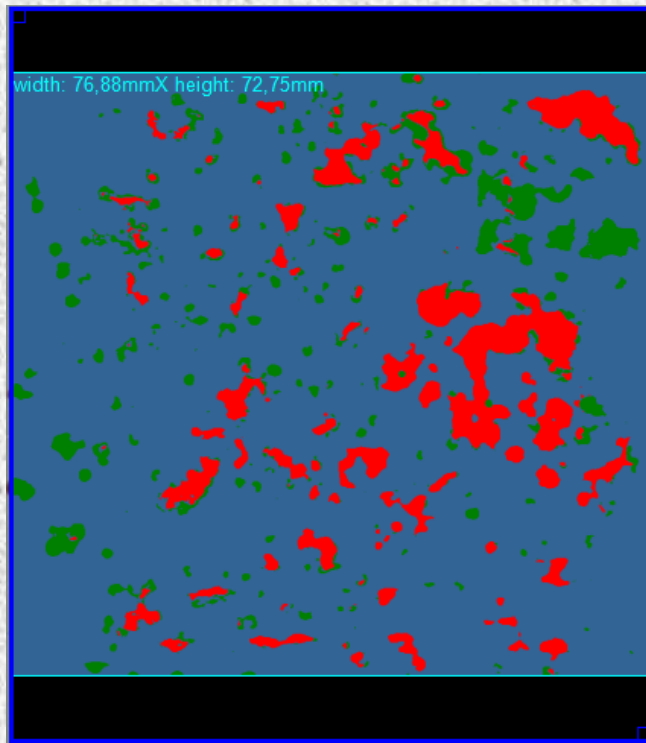
The operation is optimized with regard to the typical tests (delamination at the scribe, filiform corrosion, stone chip test, blistering, delamination at the edge, flange corrosion, cross-cut, adhesion...)



Evaluation options - examples

QUANTIZ[®]

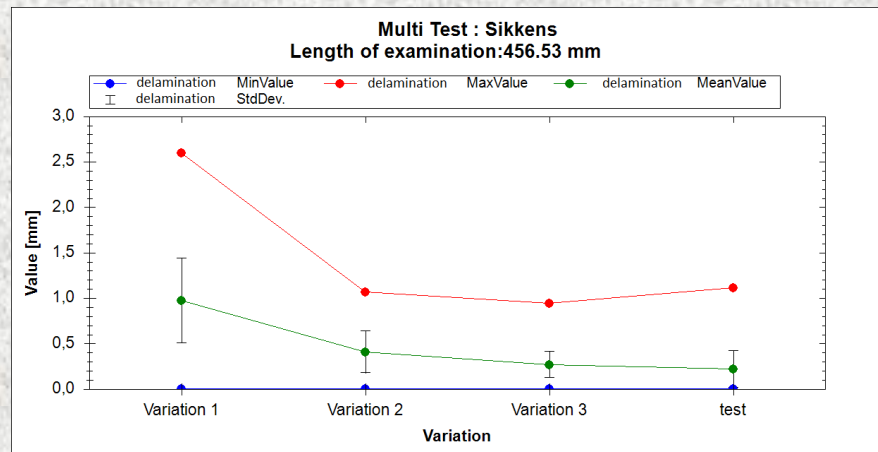
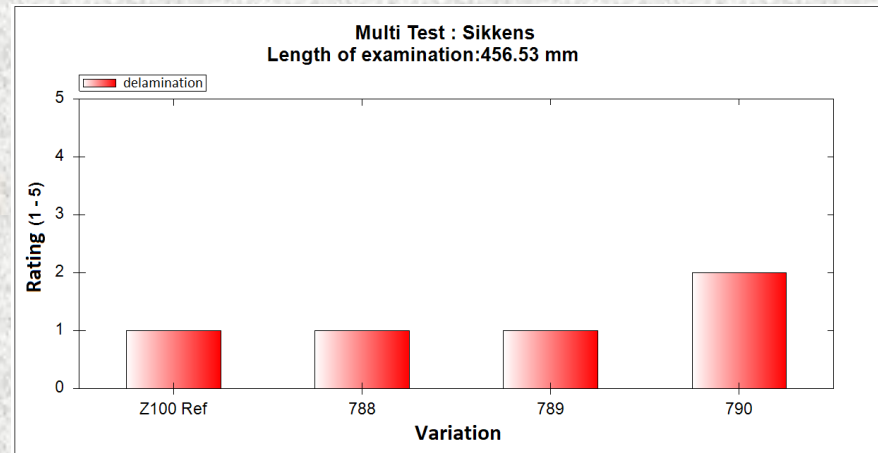
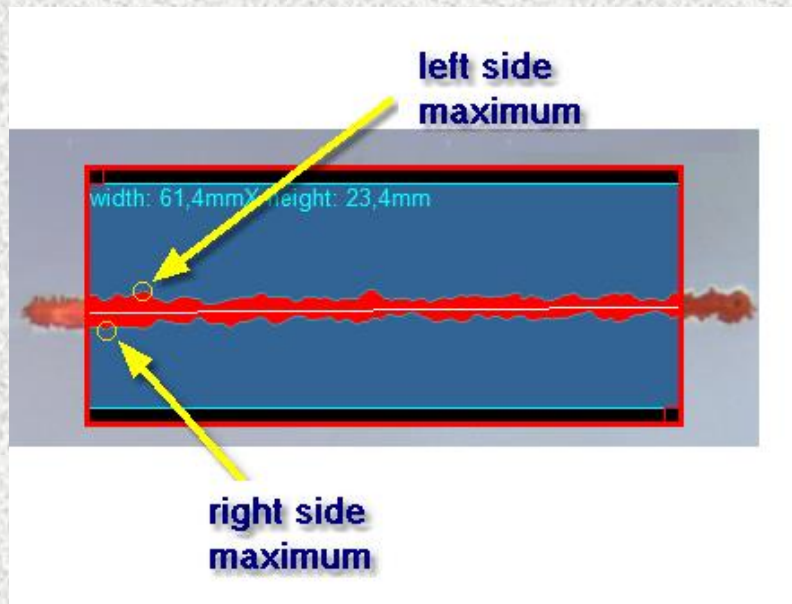
Multi-Chip Test; ISO 20567-1, EN ISO 21227-1, EN ISO 21227-2, SAE J400



Evaluation options - examples

QUANTIZ[®]

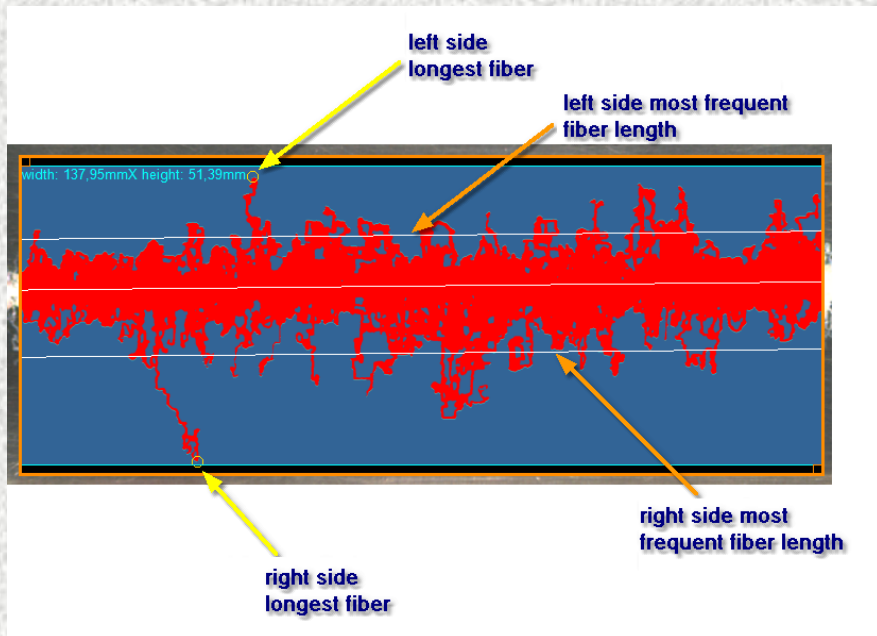
Scribe Test; EN ISO 4628-8 , EN ISO 21227-1, EN ISO 21227-3



Evaluation options - examples

QUANTIZ[®]

Filiform Corrosion; EN ISO 4628-10 , EN ISO 21227-1, EN ISO 21227-4



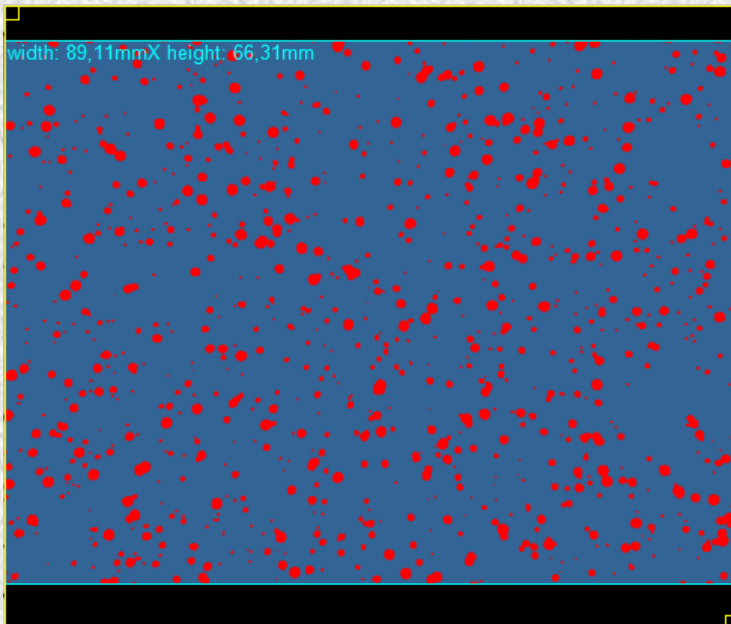
Determined quantities

- Longest fiber left/right/averaged
- Most common fiber length left/right/averaged
- Medium filiform width
- Histogram of the fiberlengths
- Characteristic value according to ISO 4628-10
e.g.: L5/M3 → longest thread 5mm,
most common fiber length 3mm
- Note: The Quantiz Recording Unit
provides brightfield illumination for
non-destructive evaluation of filiform corrosion

Evaluation options - examples

QUANTIZ[®]

Blistering; EN ISO 4628-2, EN ISO 21227-1



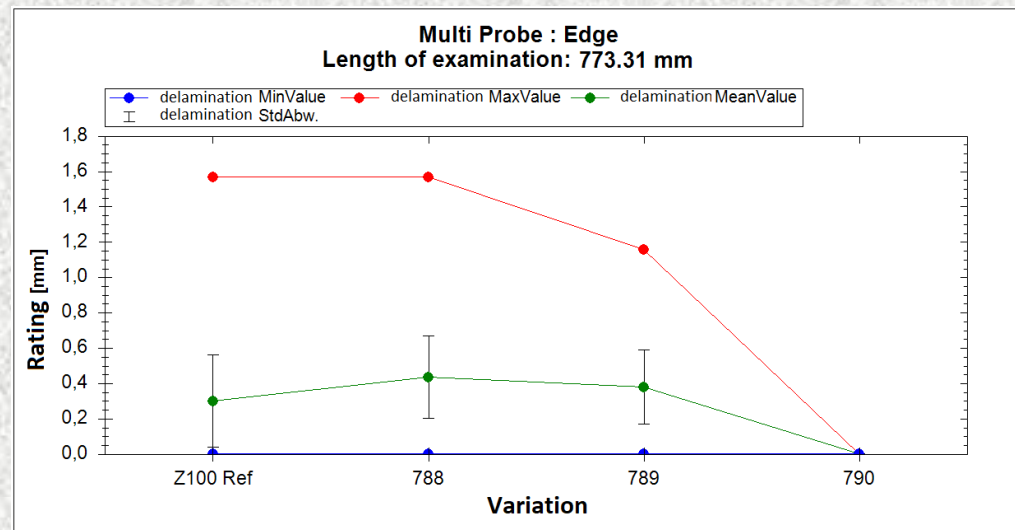
Determined quantities

- Medium blister size
- Smallest, largest blister
- Area fraction of blisters [%]
- Histogram of blisters
- Characteristic value according to ISO 4628-2
e.g.: 2(S3) → Quantity of blisters 2, size 3
- Note: The Quantiz Recording Unit provides brightfield illumination for Non-destructive evaluation of blistering

Evaluation options - examples

QUANTIZ[®]

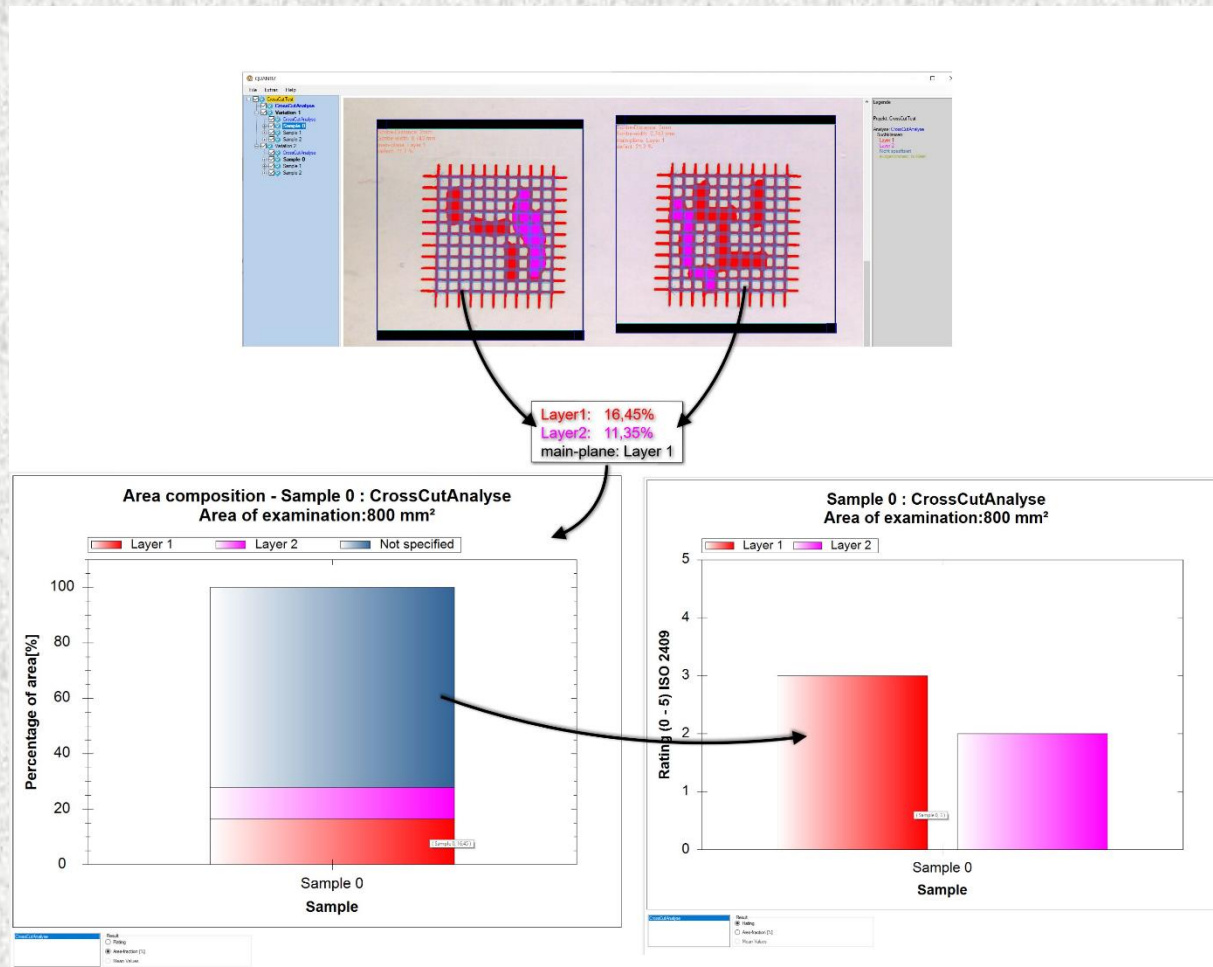
Delamination at the cut edge; EN ISO 21227-1



Evaluation options - examples

QUANTIZ[®]

Cross cut analysis; EN ISO 2409

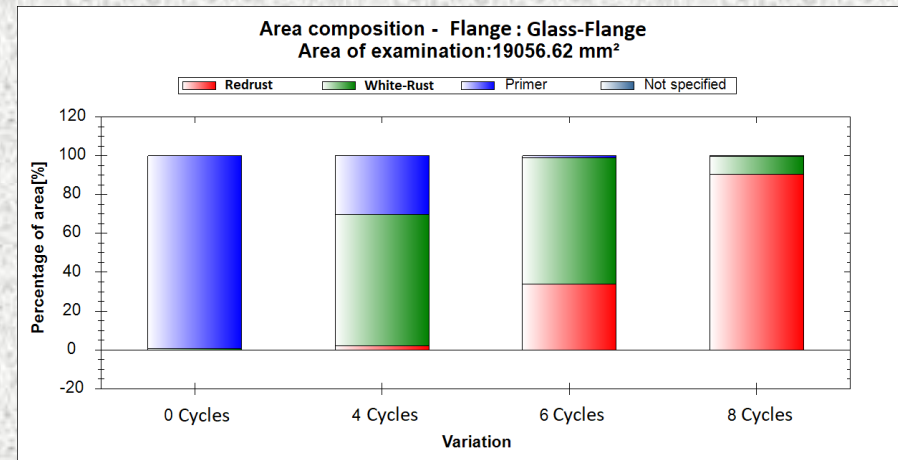
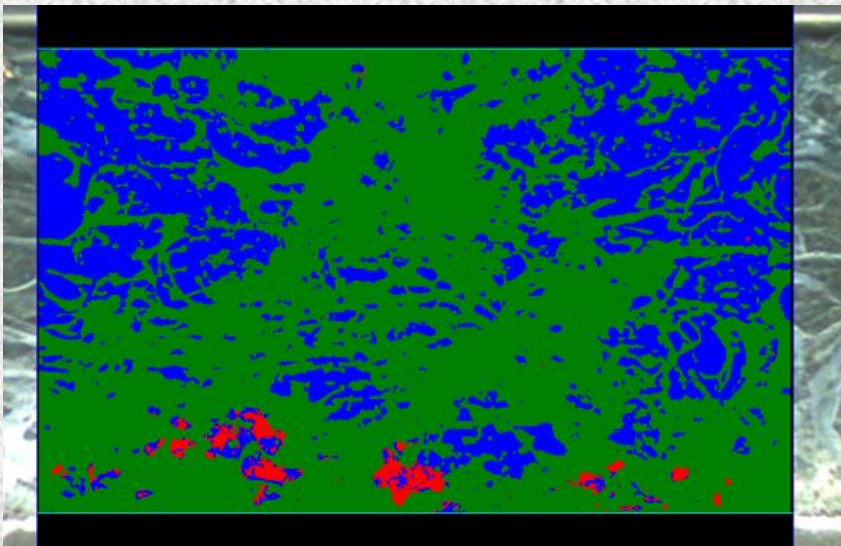


Evaluation options - examples

QUANTIZ[®]

General evaluation of surface area; EN ISO 21227-1

Evaluation/differentiation of red and white rust



Evaluation options - examples



Further possibilities for image analysis of surfaces based on EN ISO 21227-1

- Assessment of the degree of cracking EN ISO 4628-4
- Evaluation of the degree of exfoliation EN ISO 4628-5
- Cross-cut test EN ISO 2409

If your requirements are not covered by our system,
please contact us.

*How does **QUANTIZ**[®] fit into your workflow?*

Sample preparation



Typical process of an evaluation with **QUANTIZ[®]**

Salt spray test, VDA-test, ...



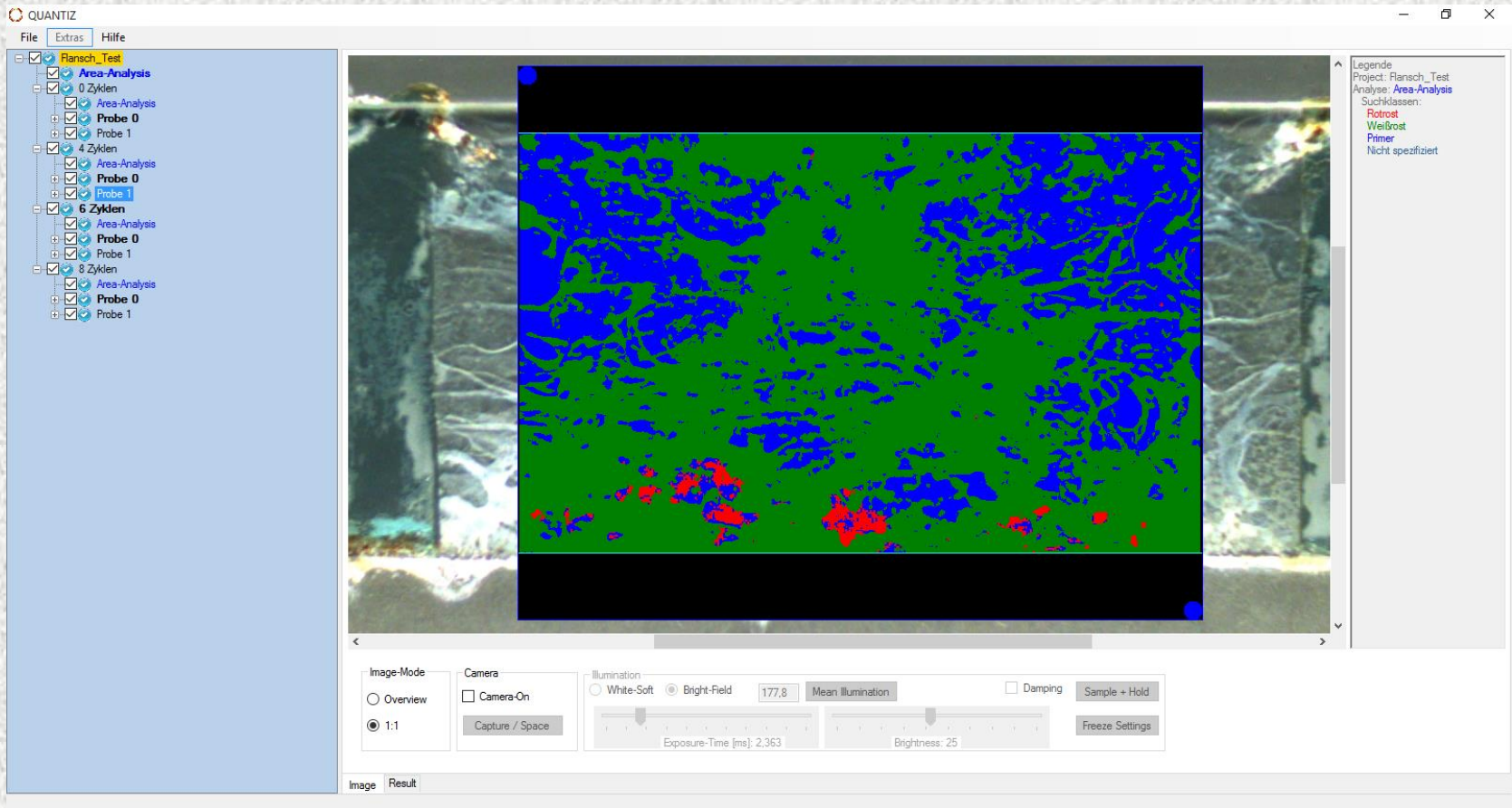
Typical process of an evaluation with **QUANTIZ[®]**

Capture your samples with the Quantiz-Hardware



Typical process of an evaluation with **QUANTIZ[®]**

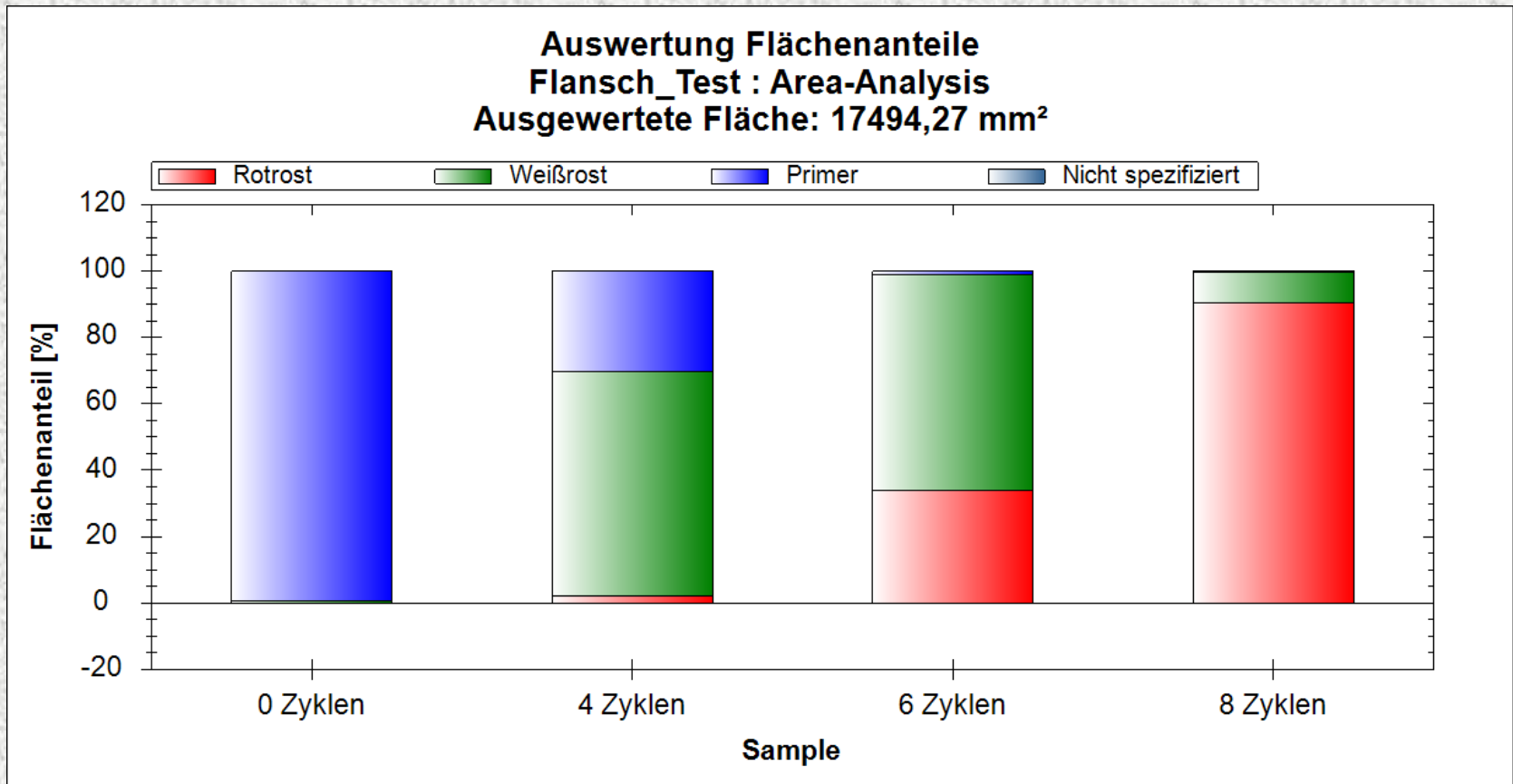
Evaluation with the Quantiz-Software



Typical process of an evaluation with

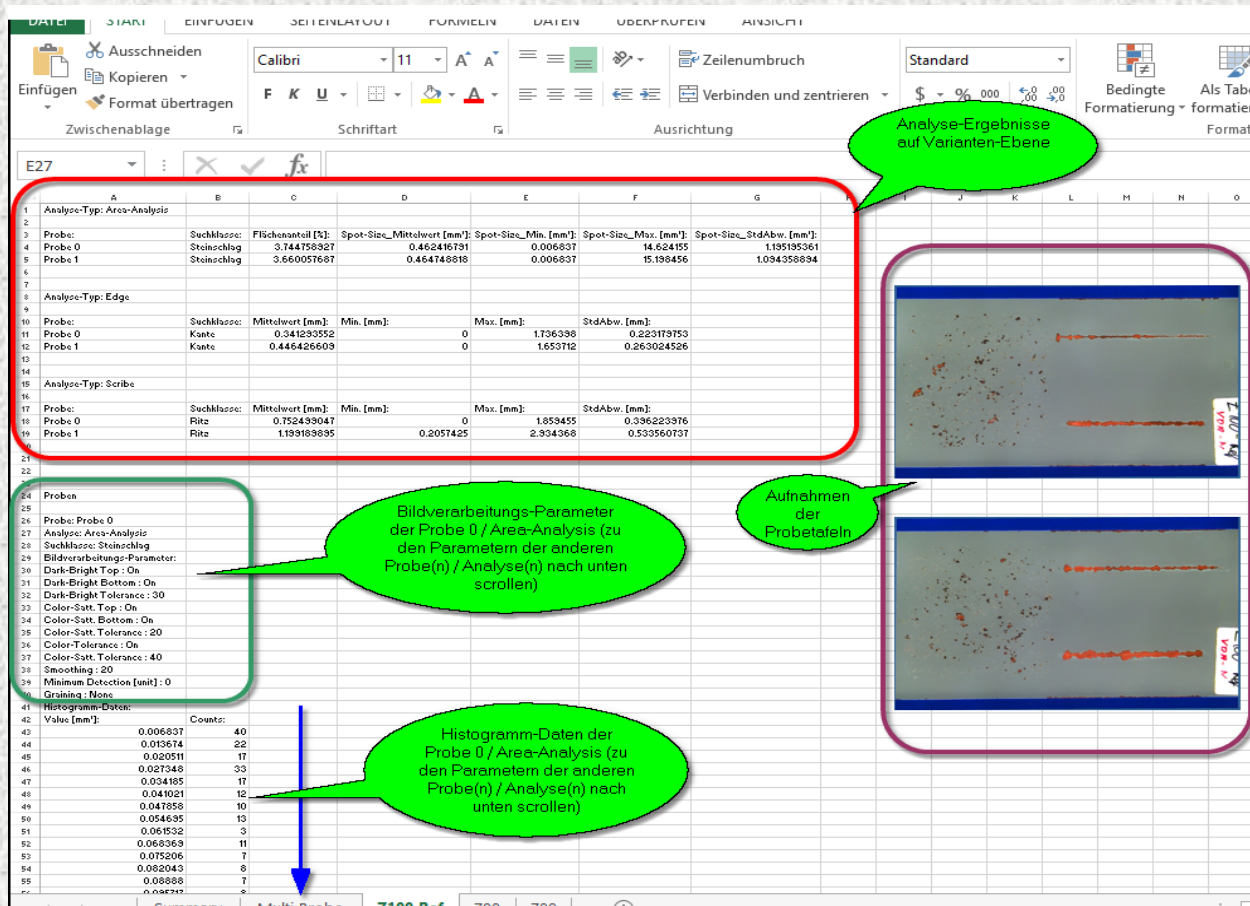
QUANTIZ[®]

Assessment of quantitative results



Typical process of an evaluation with **QUANTIZ[®]**

Export of the results, all images and evaluation parameters to an Excel file

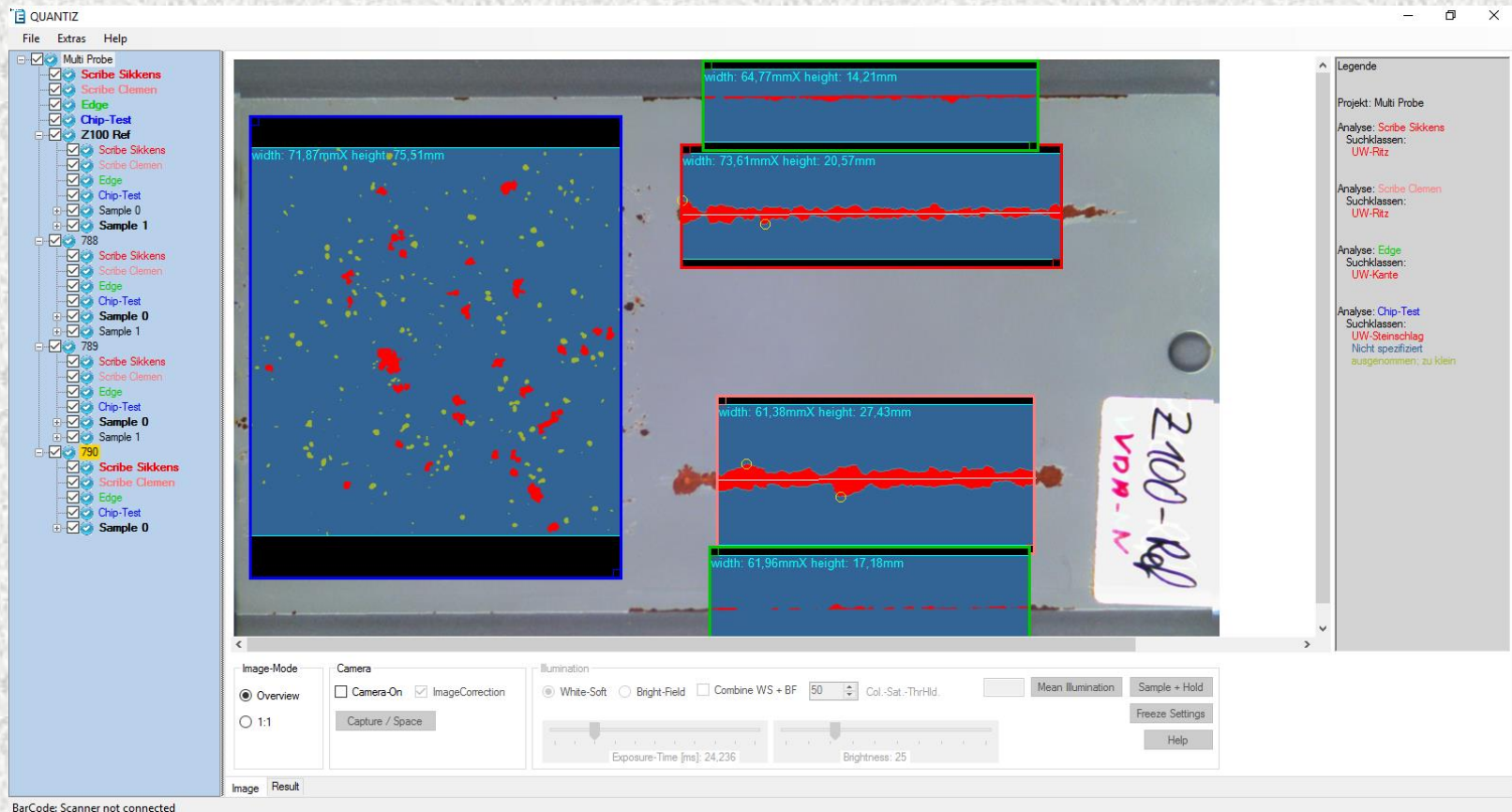


Hardware **QUANTIZ**®



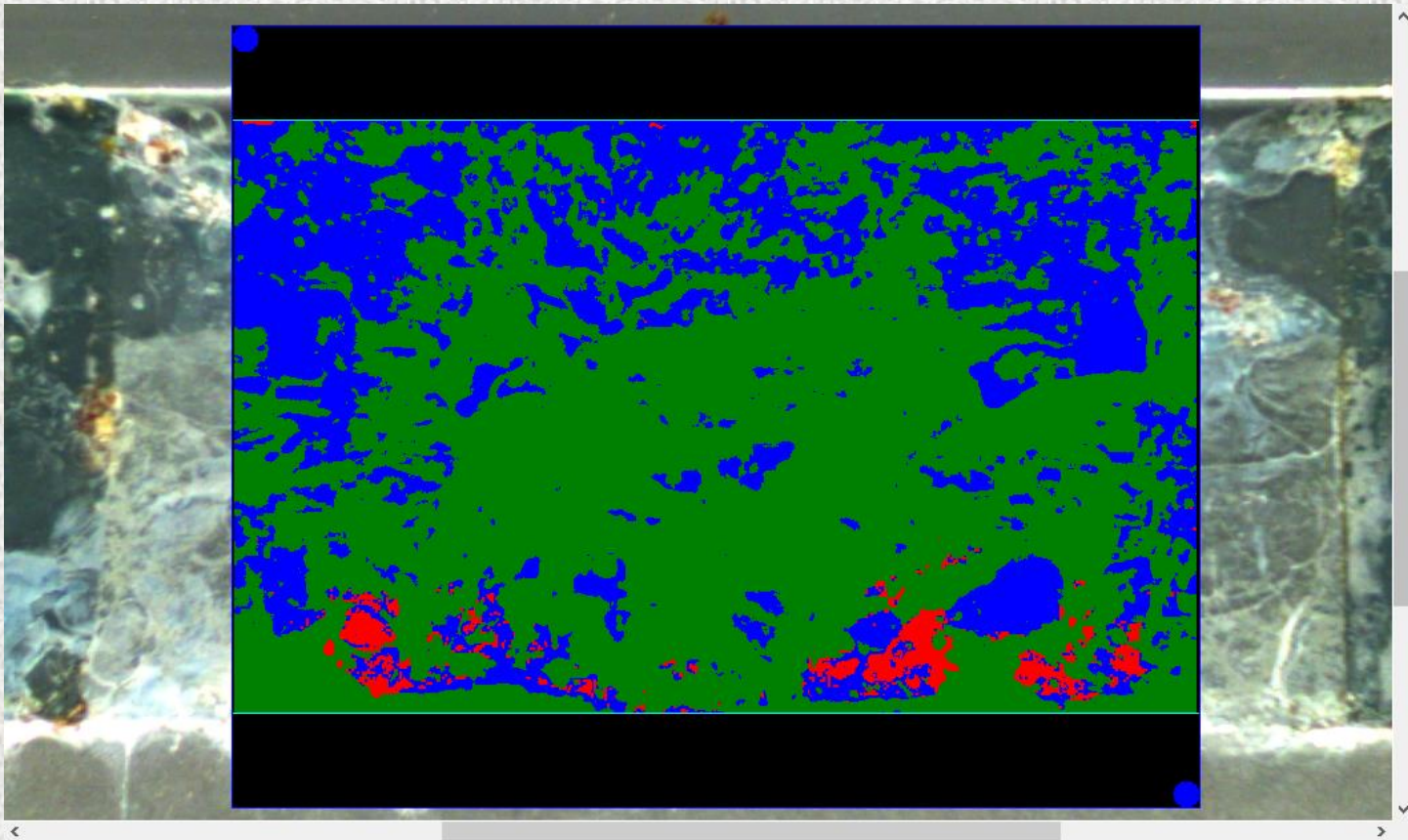
Hardware **QUANTIZ**®

- **Capturing samples with white soft illumination**
For the evaluation of delamination at the scribe, delamination at the edges, chip test, ...



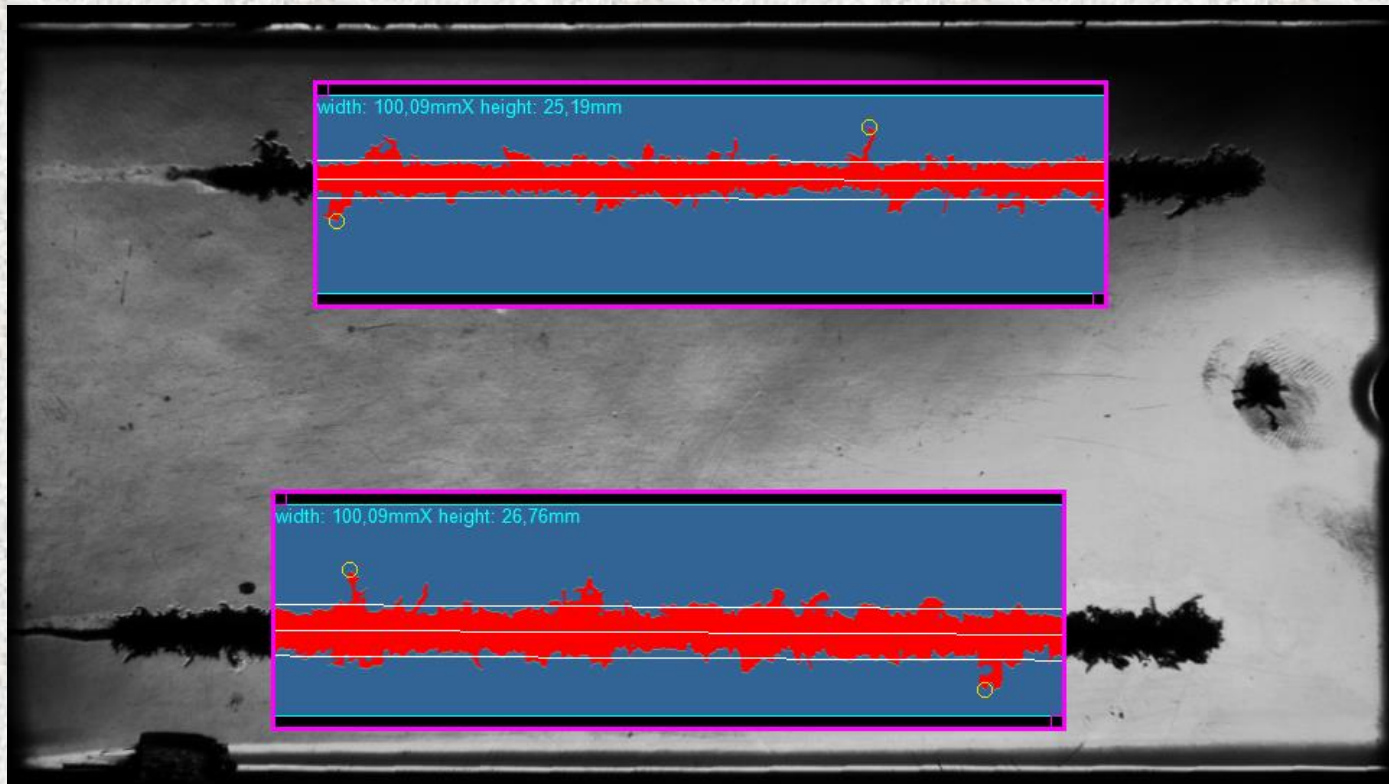
Hardware **QUANTIZ[®]**

- **Capturing samples with white soft illumination**
... Flange corrosion, adhesive test, ...



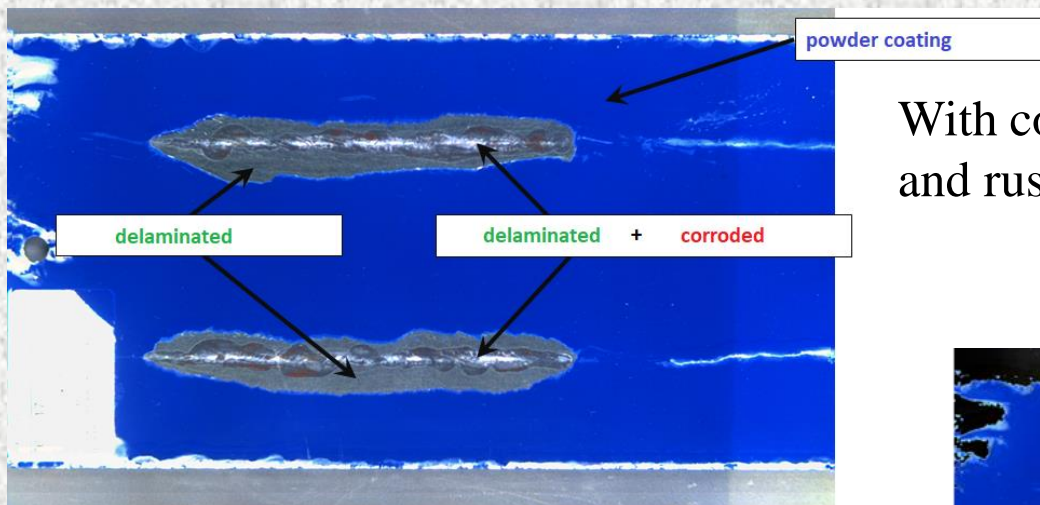
Hardware **QUANTIZ[®]**

- **Capturing samples with bright-field illumination**
Non-destructive evaluation of filiform corrosion, blistering, delamination at the scribe, ...

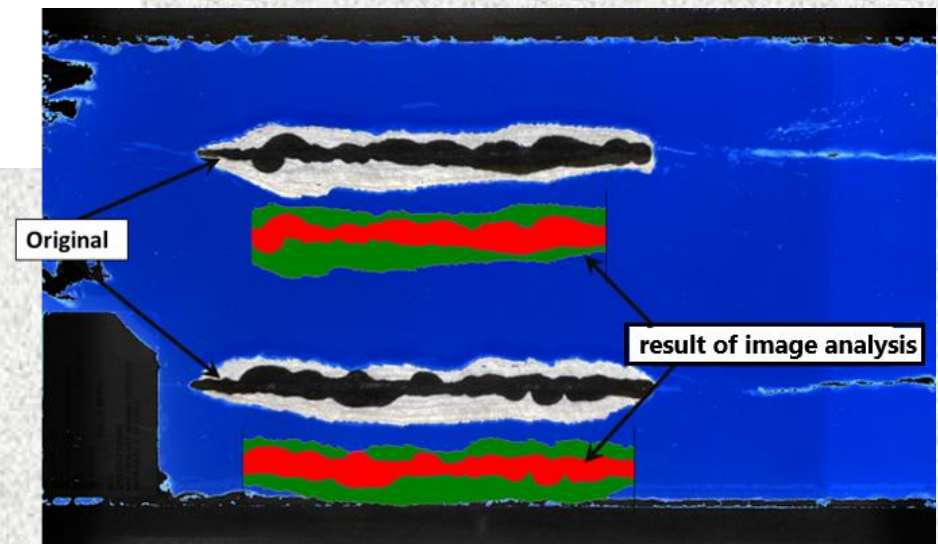


Hardware **QUANTIZ**®

- **Capturing images with combined illumination**
for special purposes



With combined illumination, the delaminated and rusted areas may be evaluated separately



Hardware **QUANTIZ-LIGHT®**

- **If brightfield illumination is not required, there is the Quantiz-Light variant**
 - **Reduced price**
 - **Evaluation of test panels without restriction in size**
 - **Optional:**
 - **Evaluation of components**
 - **Evaluation directly on car body**

Hardware

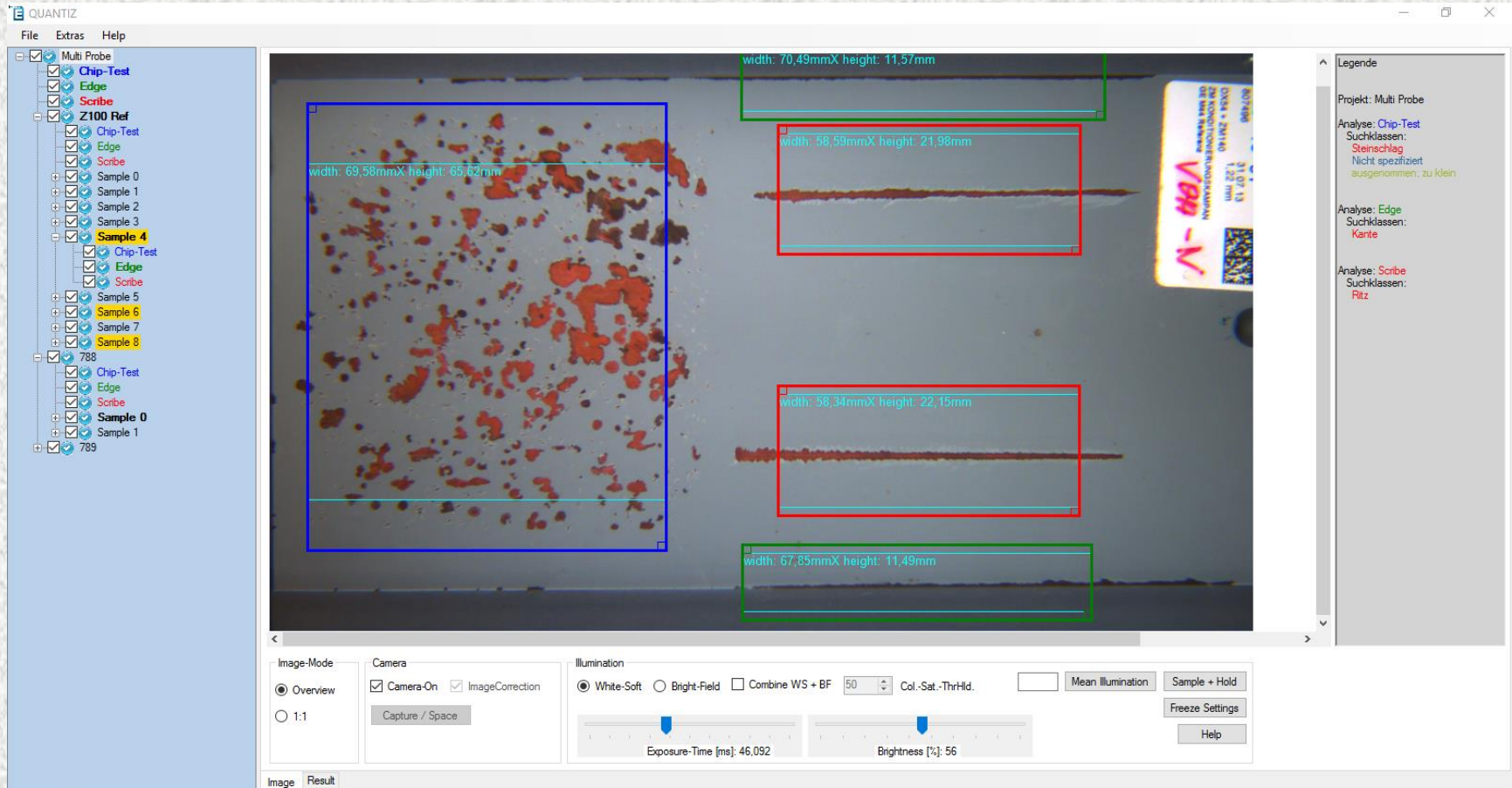
- ## Optional: BarCode functionality

- **Control of the evaluation process via datamatrix-code**



Software-features

QUANTIZ[®]

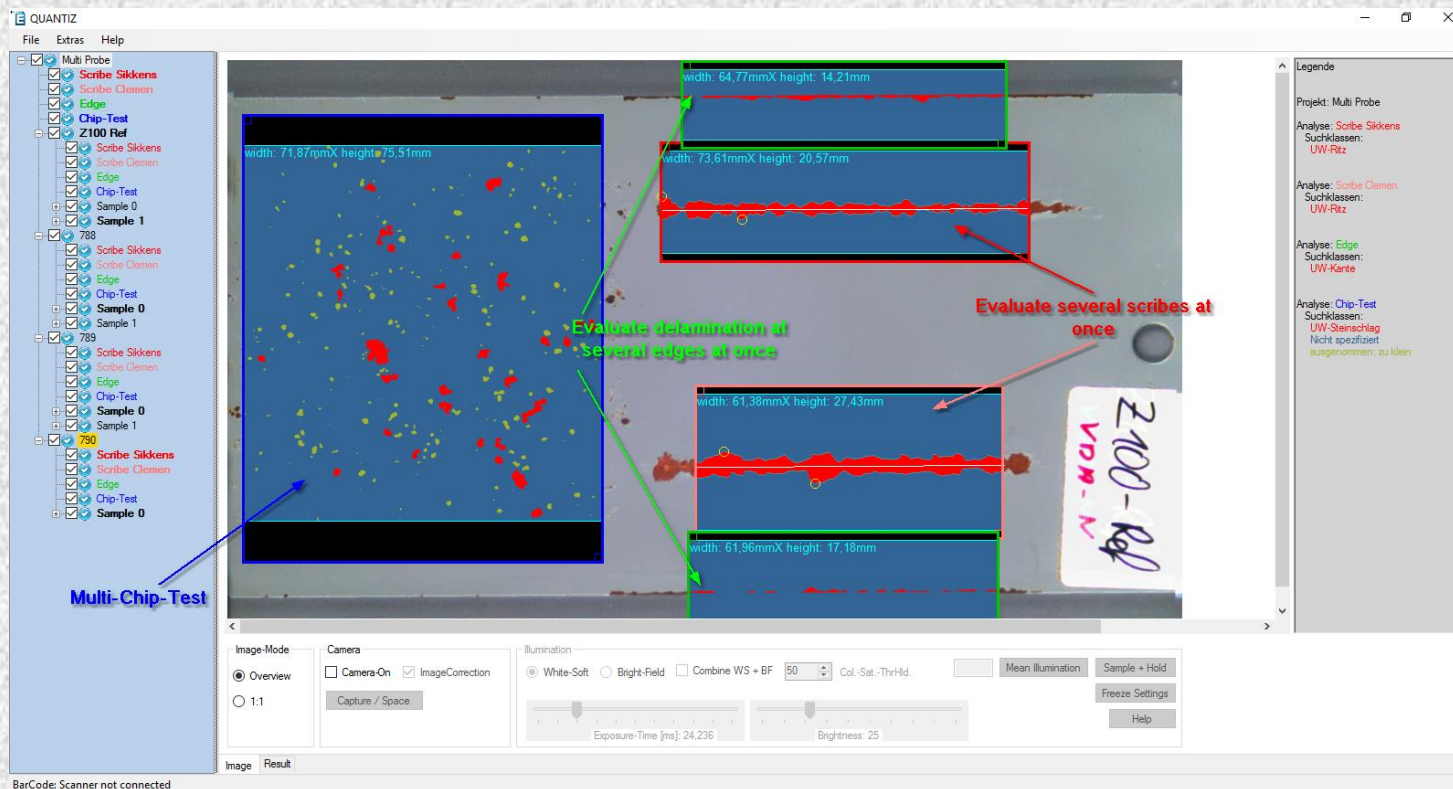


RC stopped...

Software-features

QUANTIZ®

- **Multi-Analysis**
 - Save space in your weathering chambers
 - Save time with combined evaluation



Software-features

QUANTIZ[®]

- **Quantiz is a taylor-made solution for the evaluation of coating damage**
 - **No additional programming required**
 - **Optimized processes in respect of the typical tests (delamination at the scribe, filiform corrosion, chip-test, blistering, ...)**
- **The performance of multi-processor PCs is fully exploited**
 - **Evaluation of entire projects within a few seconds**

Software-features

QUANTIZ[©]

- **Result files contain the images, the quantitative results and all evaluation parameters**
 - **Picture documentation of the current rehearsal status**
 - **All relevant data compactly together**
- **Settings/parameters can be saved and used as templates for future projects.**
 - **Standardized evaluation**
 - **Even faster creation of projects**

Software-features

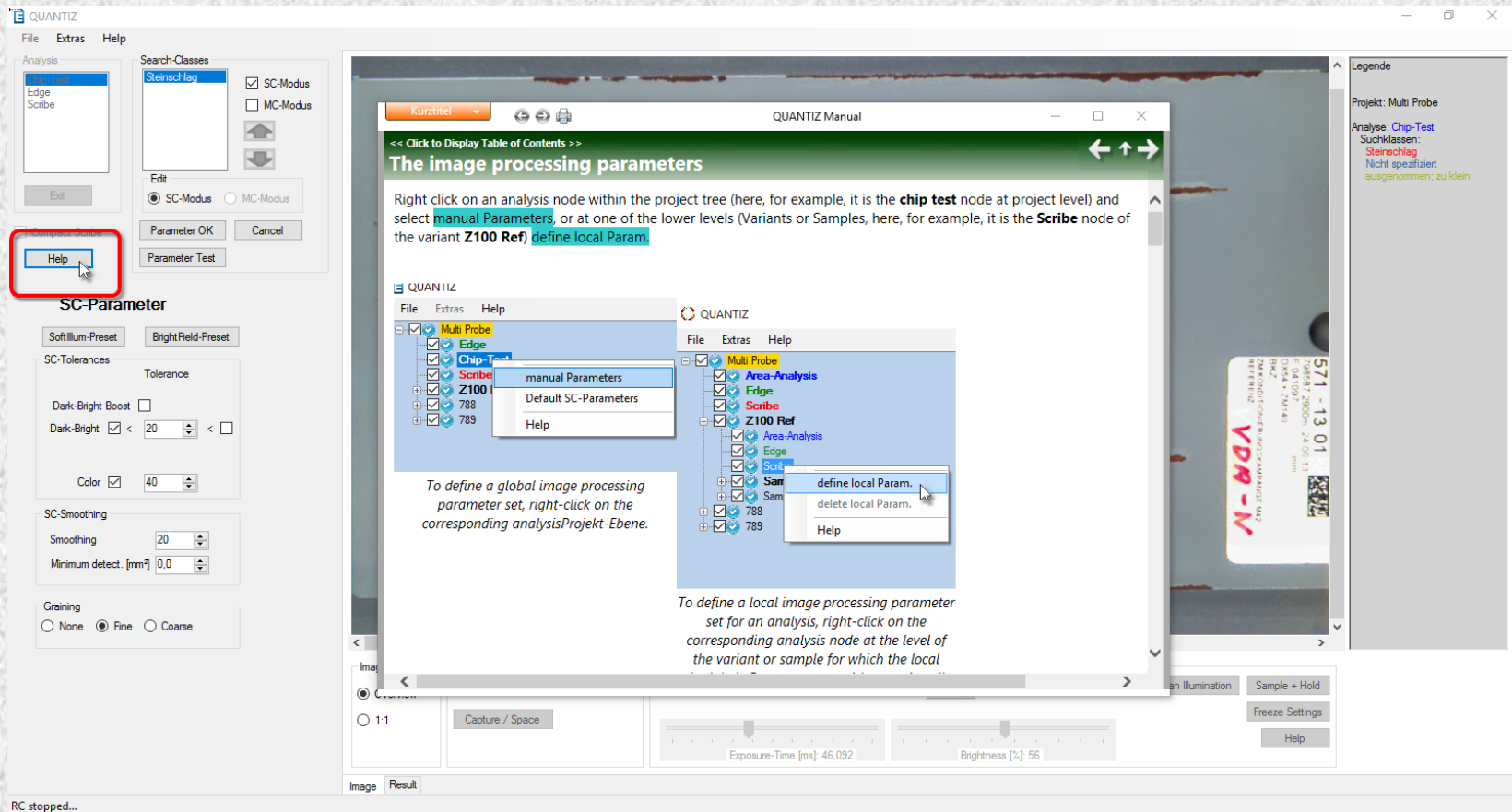
QUANTIZ[®]

- **Easy-to-use image processing with automatic threshold determination**
 - **Setting the parameters for image processing requires minimal user interaction, and often no intervention is required at all.**

Software-features

QUANTIZ®

- Context-sensitive help



Software-features

QUANTIZ[®]

- **Feature-limited software at reduced prices**
 - If you only need specific analyses, buy the software package that suits your needs.
- **Annual Licenses**
 - Annual licenses include not only technical support and receiving all updates, but also receiving all upgrades. This means that your system is always up to date and offers every functionality without restrictions.

Advantages of **QUANTIZ[®]**

Compared to pure software solutions with image processing and evaluation that are as general as possible, Quantiz offers many advantages as a specialized overall system

- **The control of the hardware is fully integrated into the software**
No back and forth between recording and evaluation
- **The images are immediately integrated into the evaluation software**
No cumbersome image import

Advantages of **QUANTIZ[®]**

- **Hardware is fully calibrated upon delivery**
No calibration required by the user (pixels/mm, geometric distortion, ...)
- **Compact hardware compared to repro units**
Advantage in confined spaces
- **Image acquisition and evaluation parameters...**
 - can be saved as templates to serve as a basis to create new projects (reproducibility, standardization)
 - are also stored in the result and thus complete the documentation of the analyses carried out

Advantages of **QUANTIZ[®]**

- **In addition to soft white light, the hardware also offers brightfield illumination, thus enabling a non-destructive evaluation of e.g.**

- **Filiform corrosion**
- **Infiltration at the Ritz**
- **Blistering**
- **...**

and a particularly sensitive examination of surfaces, e.g.

- **Investigation of "Anti-Fingerprint" Systems**
- **Sensitive detection of incipient white rust on galvanized sample plates**

Advantages of **QUANTIZ[®]**

- **5 MP Matrix Camera**
Compared to line scan cameras, matrix cameras offer a live image with a clear advantage in sample handling
- **You buy hardware and software from the same provider**
a significant simplification in support issues



„ Can I use this at all?!“

- **Get in touch with us**
Describe your needs. We not only want to cover the standard, but also your special case.
- **Send us typical samples**
We will evaluate the samples according to your specifications and send you the results together with your samples.
The samples provided by you will of course be treated confidentially by us.