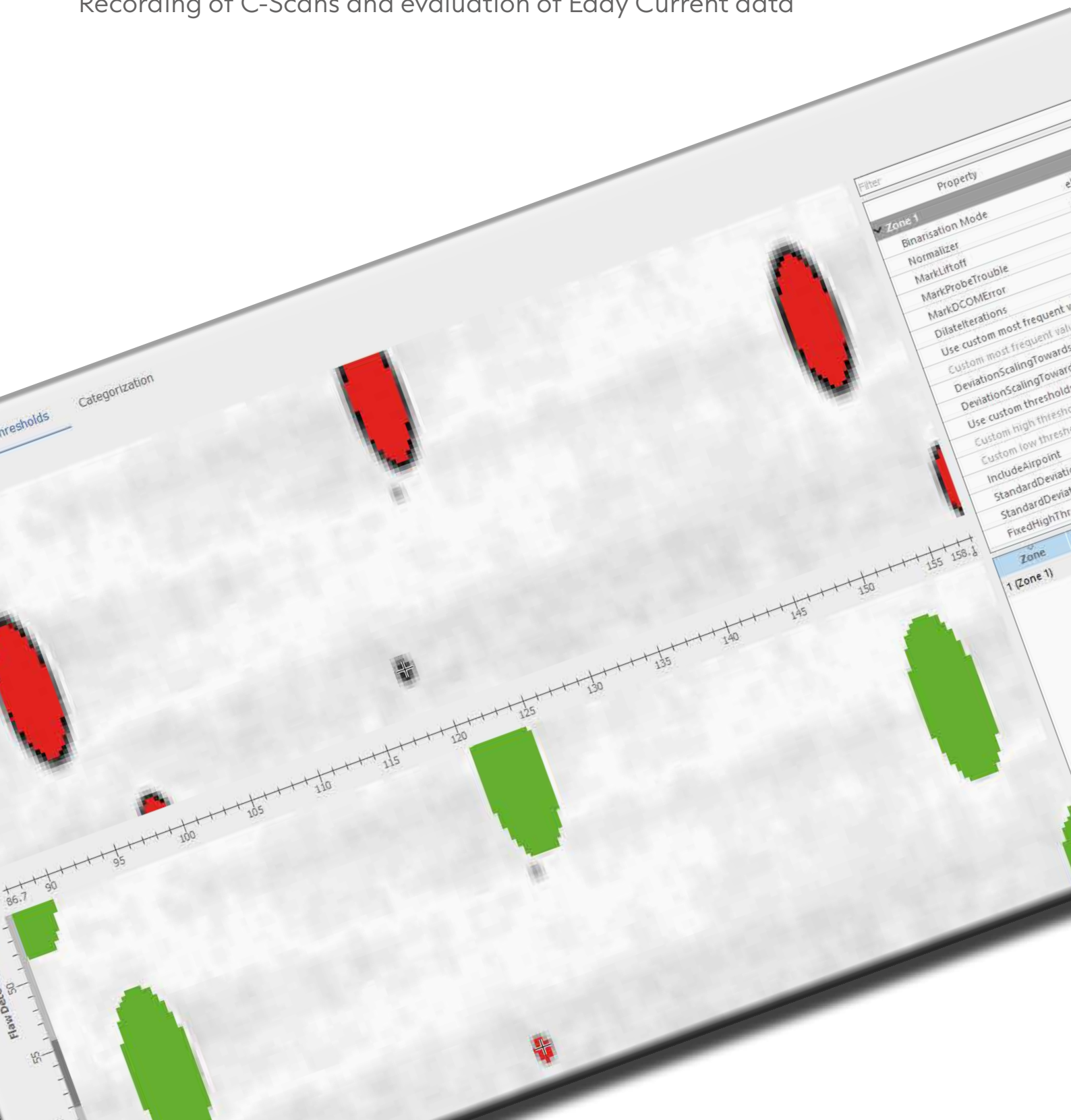**eor**

Rohmann GmbH

E L O \ **IMAGE**

Recording of C-Scans and evaluation of Eddy Current data

ELO\IMAGE

Image evaluation software for precise defect recognition

Defect recognition in spite of interfering contours.
Making use of modern image processing algorithms.

The Image Processing Module Software ELO\IPM, developed by Rohmann, is an add-on for the successful ScanAlyzerIS C-Scan software.

Up to now, interfering contours such as bore holes, edges, grooves prevented Eddy Current inspection, as they were recognized as reject defects.

The image evaluation software not only makes it possible to mask out bore holes, but also laser and balancing markings or oil grooves and many more interferences.

Differences in the geometry of the parts, tolerances in the scanning process or deviations caused by the introduction of the part into the inspection system are compensated by the high flexibility of the software.

The image processing can be applied together with our multiplex technology (up to 32 sensors) in the same manner as with any other ScanAlyzer software. This application, combined with the image evaluation, leads to a very short set-up and inspection time.

Every inspected part is documented with a C-Scan with a log.
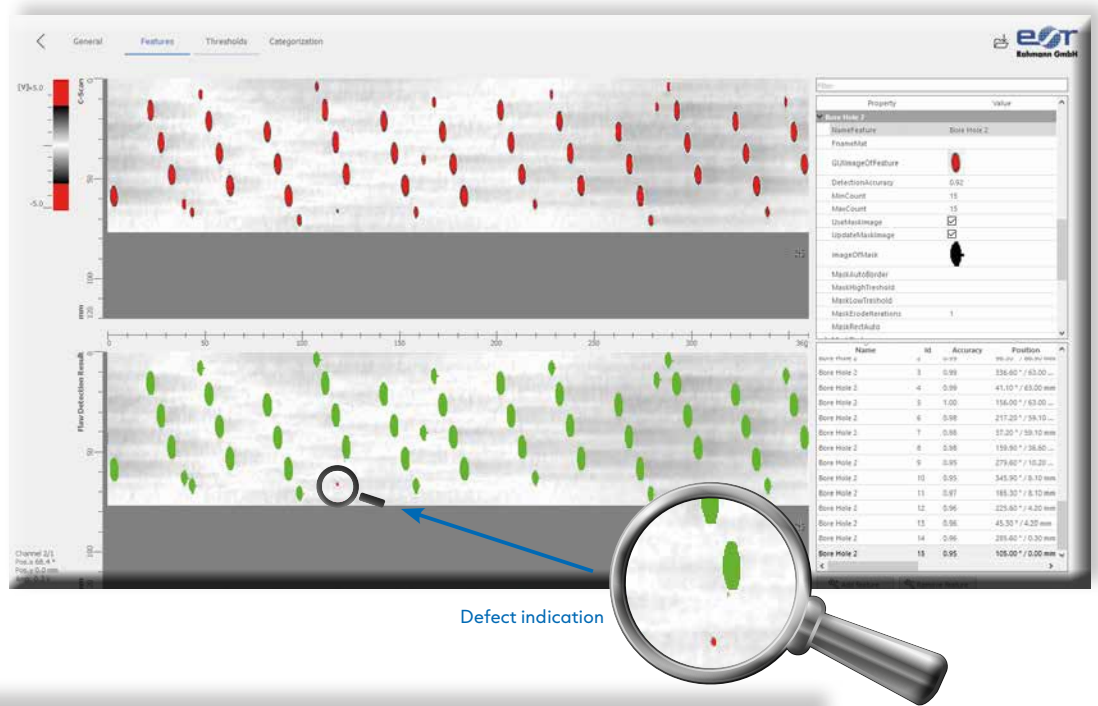
Examples of inspected parts with bore holes and DMC masks.

Functions of the ELO\IPM Software

▷ Possibility to mask out interfering geometrics as a "Feature"
▷ Detection of defects in the vicinity of the masked areas
▷ Counting and inspecting the number and positions of features such as bore holes or other geometrics
▷ Summary of the result for features and defect detection for every area
▷ Recognition, evaluation and counting of reference defects
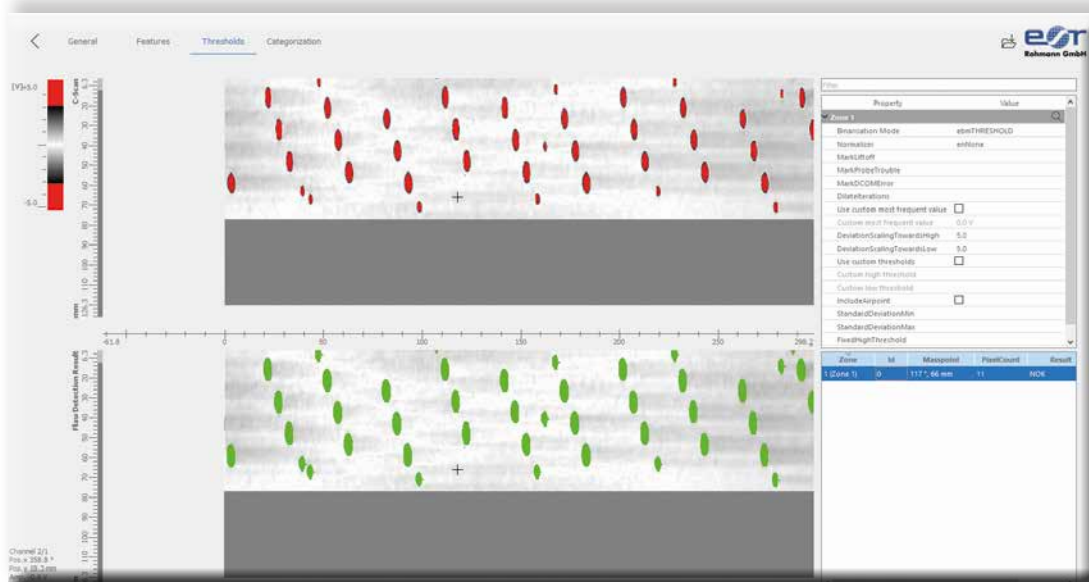▷ Set-ups defined according to the type of part with an automatic retrieval on the base of DMC information

Use of already existing functions of the PL600 in combination with the image processing:

▷ Array technology
▷ Distance compensation
▷ Path-controlled filter

Bore holes can be masked out in the menu item "Features" as shown in the example. One masked bore hole helps the software to recognize bore holes of the same dimension and it masks them out fully automatically.

Defect indication

Evaluation variants such as an evaluation with a pre-set threshold can be selected in the menu "Threshold". Once the threshold values have been set, the software automatically detects when a threshold has been exceeded and then indicates this.

Important functions of the ELO \ IMAGE-Software

DMC INFORMATION

Set-ups defined according to the type of part with an automatic retrieval on the base of DMC information.
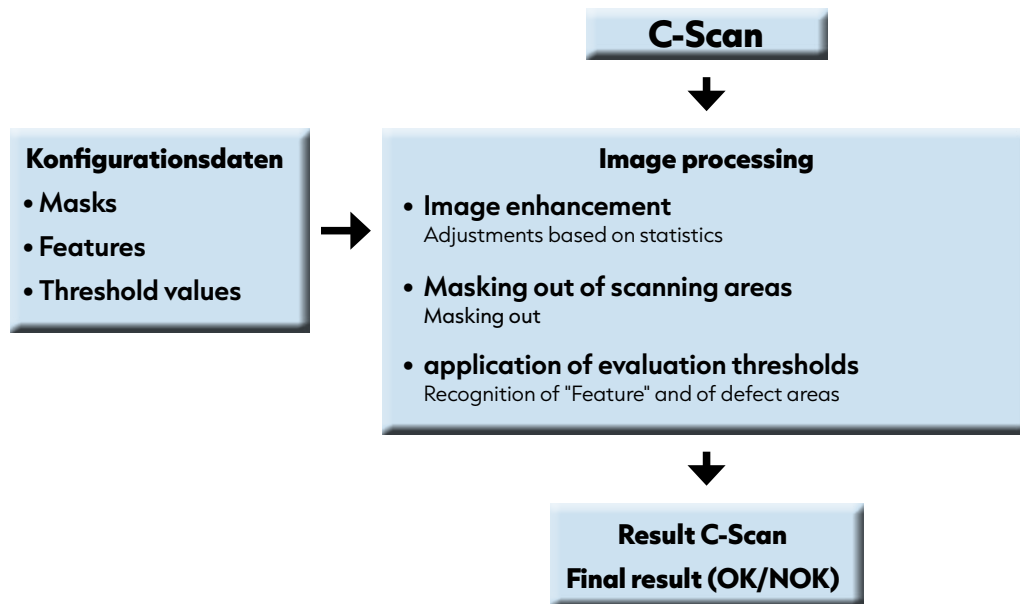
PDF EXPORT

Automatic creation of PDF, PNG and CSV files

EFFECTS

Masking out makes it possible to exclude certain areas from the evaluation due to geometric effects such as edges or bore holes, in order to avoid misinterpretations.
Counting and inspecting the number and positions of features such as bore holes or other geometrics.

ELO\IMAGE

Working principles of the image evaluation

C-Scan

↓

Konfigurationsdaten

- Masks
- Features
- Threshold values

→

Image processing

- **Image enhancement**
  Adjustments based on statistics

- **Masking out of scanning areas**
  Masking out

- **application of evaluation thresholds**
  Recognition of "Feature" and of defect areas

↓

Result C-Scan
Final result (OK/NOK)

Technical Data

▷ ScanAlyzer IS software for integrated systems

▷ Multilingual user interface and selectable log level on the GUI

▷ Easy configuration of areas in the software

▷ I/O information display including fieldbus side

▷ PLC process and system status information

▷ Definable defect reports

▷ ComDrvS7 get-put communication with Siemens S7 (300,1200,1500)

SYSTEM REQUIREMENTS

▷ Windows 10, 64 Bit

▷ CPU: i5, better i7 or similar CPU

▷ 16 GByte RAM

▷ Screen 1920 x 1080 Pixel (Full-HD)

▷ Two 1 GBit Ethernet connections (ELOTEST PL600 and PLC)

▷ SSD hard disk (500 GB recommended)

▷ Local administrator rights are required for installation

▷ Normal user rights are sufficient for normal operation

▷ We generally recommend connecting the evaluation computer to the internet, which makes it possible to have TCP/IP based remote access as an option or for servicing purposes.

SCOPE OF DELIVERY

▷ Download of files for the installation

▷ License with serial number

▷ Manual

▷ Languages: German, English, French, Spanish, Chinese (simplified)

▷ Further languages on request

ARTICLE NUMBER

▷ C05850100042 ScanAlyzer 7.x IS

▷ C05850100040 ScanAlyzer 7.x ELO\IPM

*If the client provides his or her own computer, we will charge for the required support according to our respective current cost rates. We do not provide any warranty for equipment we do not supply.

Rohmann GmbH

www.rohmann.de \ info@rohmann.de \ TEL. +49 (0)6233-3789-0 \ FAX +49 (0)6233-3789-77
Carl-Benz-Straße 23 \ 67227 Frankenthal \ GERMANY