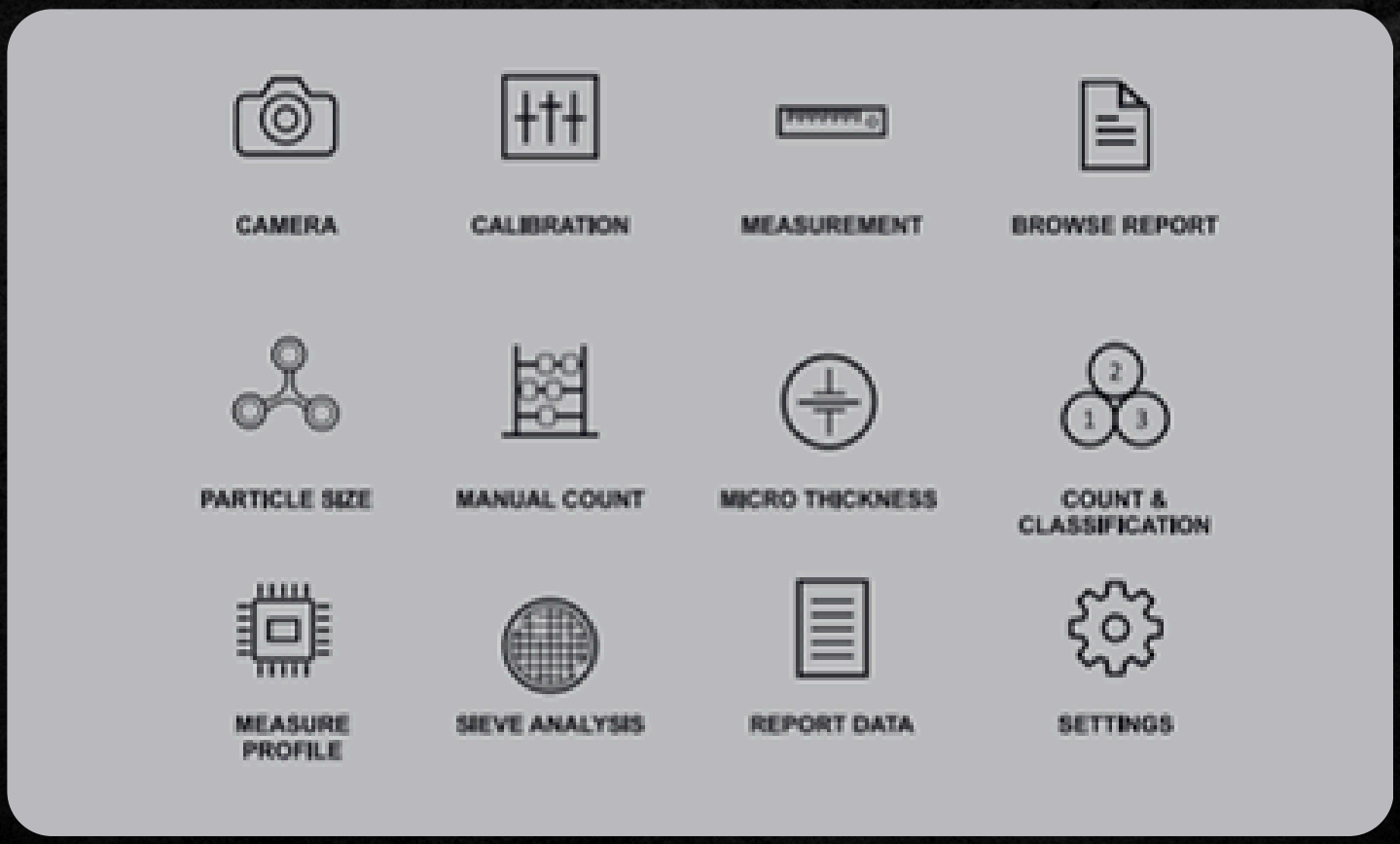
UCOMAX
UNITED COMPANY OF INDIA

MEASUREMENT PRIME

Micro Measurement Software

INTRODUCTION OF MEASUREMENT PRIME

MEASUREMENT PRIME is a new generation image analysis software, meant for metallurgist and material scientist for analyzing MEASUREMENT PRIME dimensions. It is a single Window based system The MEASUREMENT PRIME software can handle both grey monochrome (8bit) and color (24bit) image. Multiple images of any size can be opened and displayed on the screen for analysis or comparison. The software supports the most common formats like BMP, JPEG, TIFF, PNG, GIF, and PSD. Live images also can be observed and captured on the same platform. Since the system is in a Window environment, graphs and charts displayed on the monitor can be quickly transferred into other Windows based programs such as, MS Word, MS Excel or any other commercial Windows based software for the purpose producing reports and presentations.



MODULES OF MEASUREMENT PRIME

Some of the major modules in MEASUREMENT PRIME are as follows:

CAMERA

One can select different display/capture sizes along with other setting like white balance, brightness, contrast, Hue, Saturation can be changed on live displayed image. Once all setting are done, image can be captured in appropriate folder for appropriate analysis.

CALIBRATION

Calibration should be performed on all the objectives of the microscope, where Digital Camera is installed. Calibration should be performed only when all hardwares are finally fixed. In case of readjustments or replacement of any part, calibration should be done again.

MEASUREMENT

With the Measurement module one can obtain measurement on manually drawn lines on traces, shapes or by outlining an object Which can be accumulated and logged on to the results worksheet from where they can be stored to a file, printed or transferred to spread sheet for further analysis or statistics..

PARTICLE SIZE

Manual, Auto bright and Auto dark methods to identity intensity range defined object to be measured. Various calculation & measurements available for selected Particle are; Dimensions, Area, Perimeter, Ferrite Length, Min/Max Radius, Thread Length, Thread Width, Fiber Length, Fiber Width.

MANUAL COUNT

Pores, due to their contrast with the rest of the image, are relatively easy to detect automatically the module allows a user to recognize and measure the porosity in the material according to ASTM B276 Standard Thresholding readily accomplished using gray scale techniques. The dark phase of porosity is detected in red bitplanes

MICRO THICKNESS

Plating or coating thickness is determined by cross-sectional microscopy method. The specimen is cross- sectioned, mounted, polished and microscopically evaluated for measuring the plating or coating thickness, sometimes, etching of the core base metal may be necessary to accurately measure the coating or plating thickness. SETTINGS The Module SETTING is designed to set various parameters for first time when software is installed. The setting options are available to choose ISO/ASTM standard calibration, setting in report format, setting of various parameter on printed image in report. Once all settings are done, you need one button click for all Analysis. All settings are stored till you change them in future. Do not change them in routine, it is not necessary.

COUNT & CLASSIFICATION

Identification of objects in an image, count them, obtain several features measurements. Objects identification by user or automatically. User defined classification on basis of size or intensity.

COMPONENT PROFILE

This module is related to inspection of appearance and profile measurement of DIODE for automobile, robot & Computer industries. The Software is one button automatic profile measurements based on edge detection using image processing algorithms. It plays an important role in making pass/fail Judgments (with min/max acceptance range decided by user anytime) whether DIODE is manufactured according to specifications. It can be further customized as per customer requirements for extra charges as per mutually agreed terms.

SIEVE/MESH ANALYSIS

Sieve has rectangular or round mesh openings. This module has automatic measurements based on edge detection in image processing. The sieve measurement parameters are; Aperture size and wire diameter & pitch. Measurements are done to NIST traceable standards. Test sieve can be supplied according to ASTME-11-20 or ISO 3310 Specifications. Reporting is presented graphically in a Histogram. It also included statistical summary information. Automation reduces approximately 92% of the time spent on the Calibration process, when compared to traditional methods, with better accuracy

REPORT DATA

All reports are saved in the folder and can be retrieve anytime in future.
1. Measurement | 2. Grain Size | 3. Porosity | 4. Decarburization | 5. Segmentation | 6. SG Iron | 7. Gray Iron

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MODULES OF MEASUREMENT PRIME

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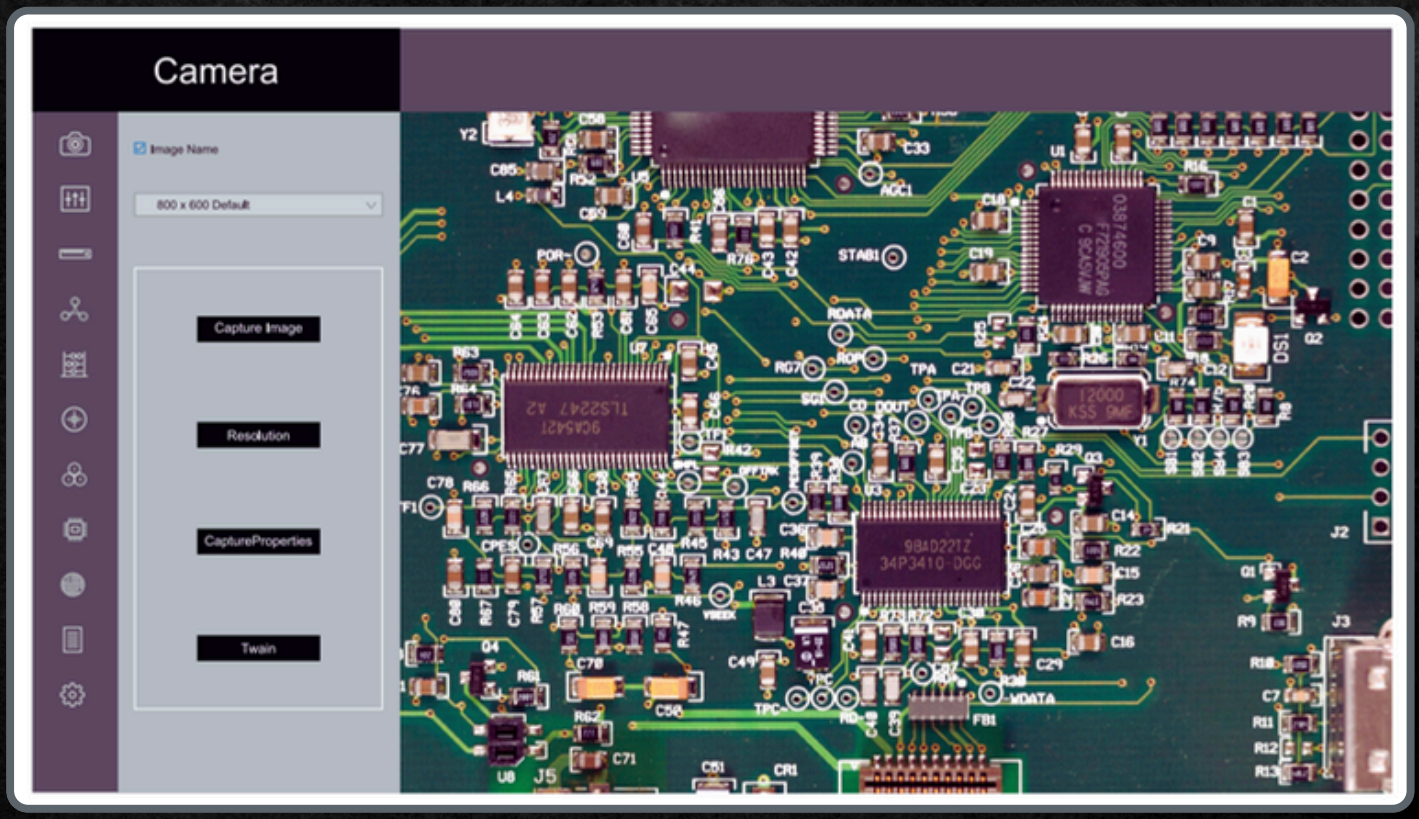
CAMERA



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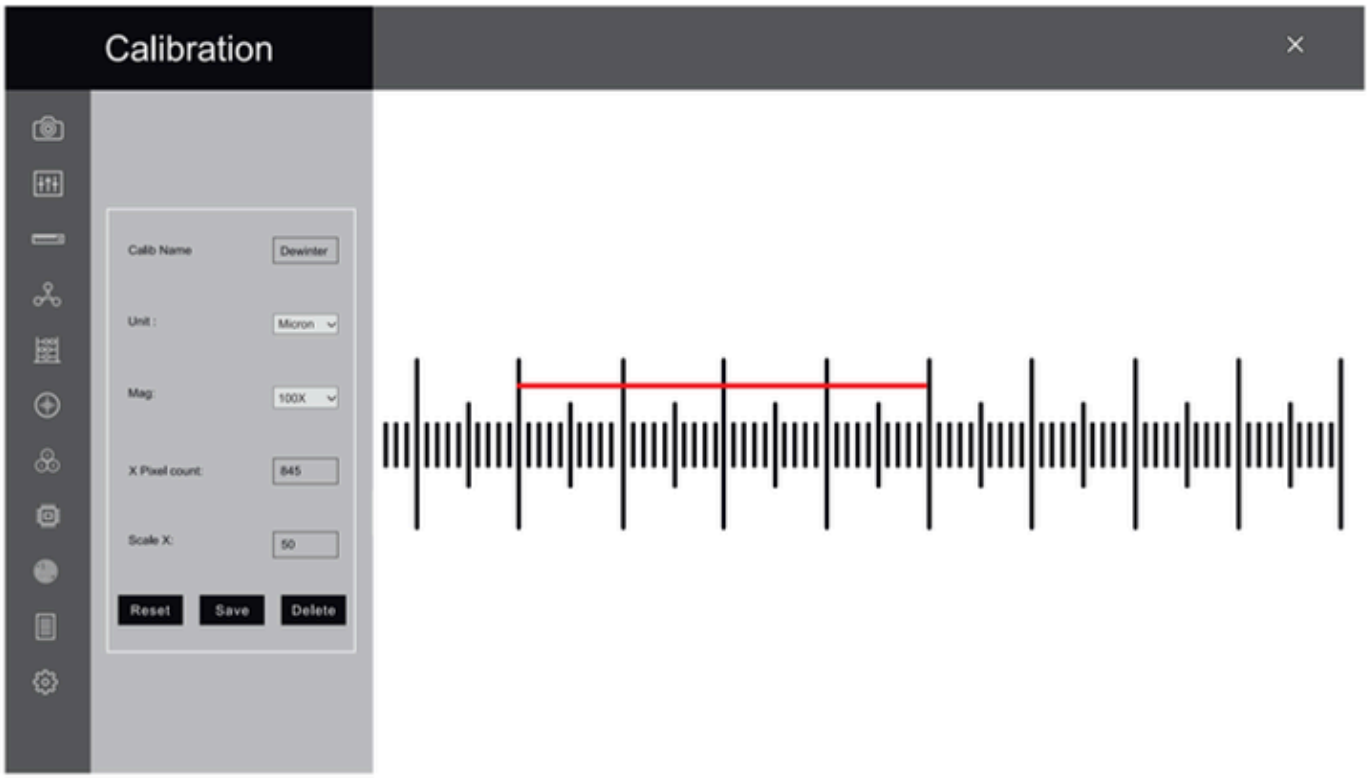
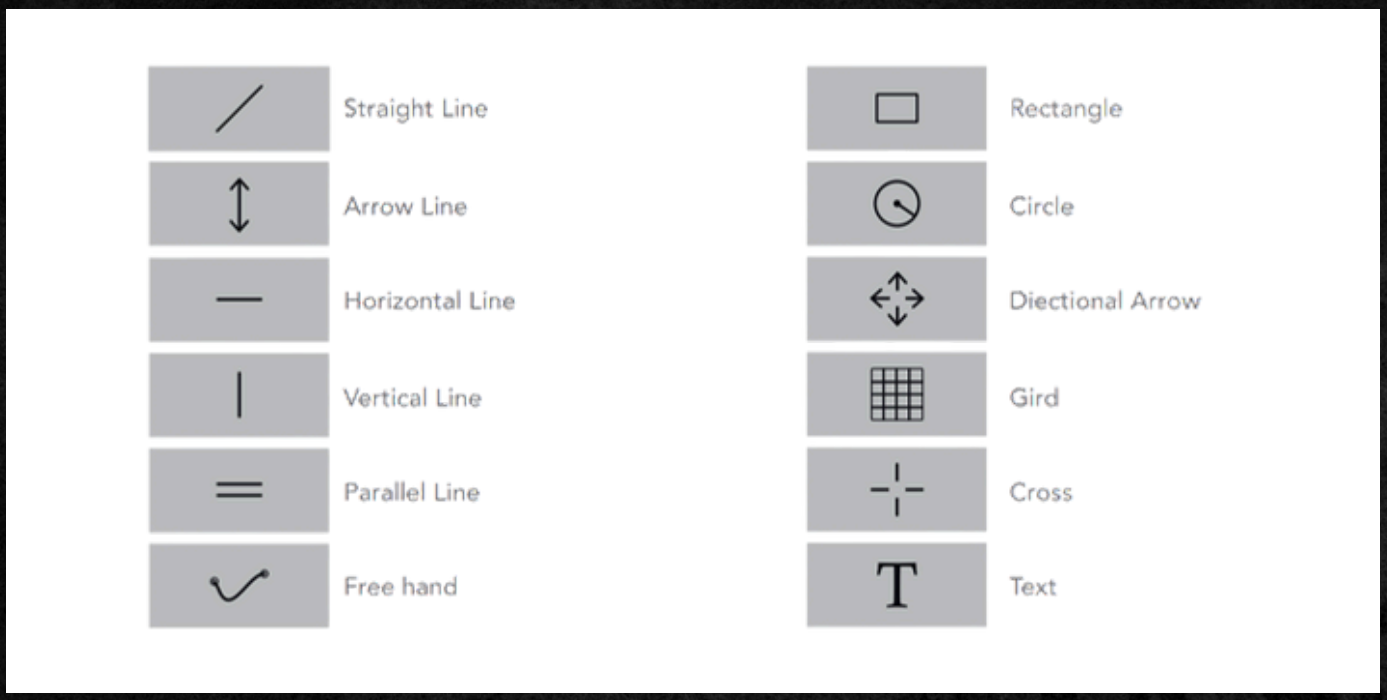
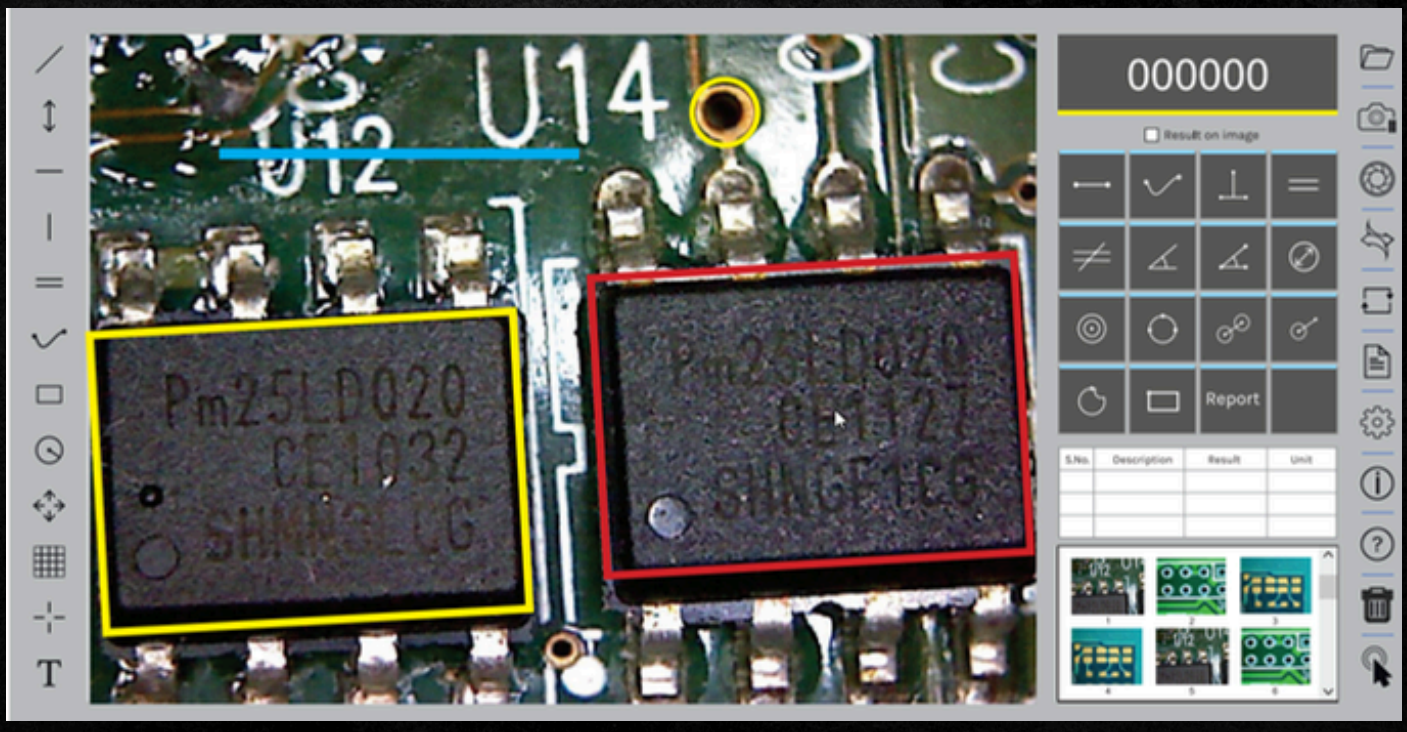


ANNOTATIONS

Annotation features allows quick and easy Documentation of your image tools. The available tools are: line between two points, horizontal line, vertical line, freehand line, two parallel lines, perpendicular lines, Square, Circle, Text, Arrow, Grid, Cross lines from center, scale bar, highlighter. The text color & Thickness of line can be designated.



MEASUREMENT PRIME



MEASUREMENT

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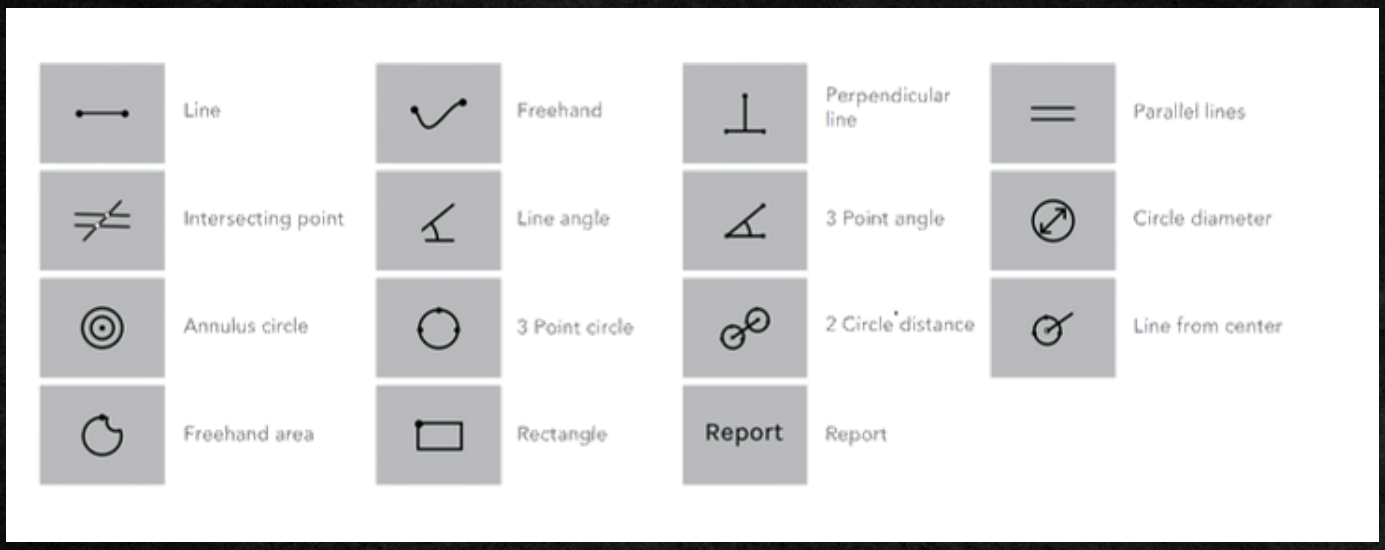

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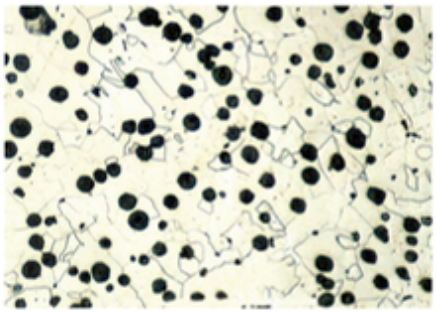

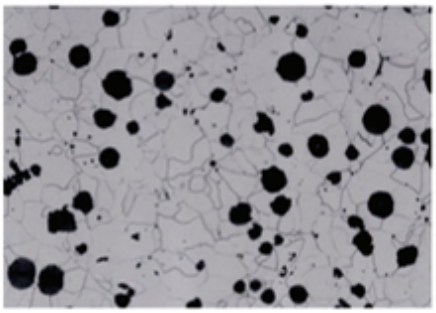

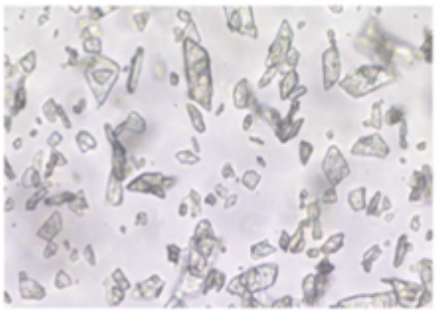

MANUAL COUNT

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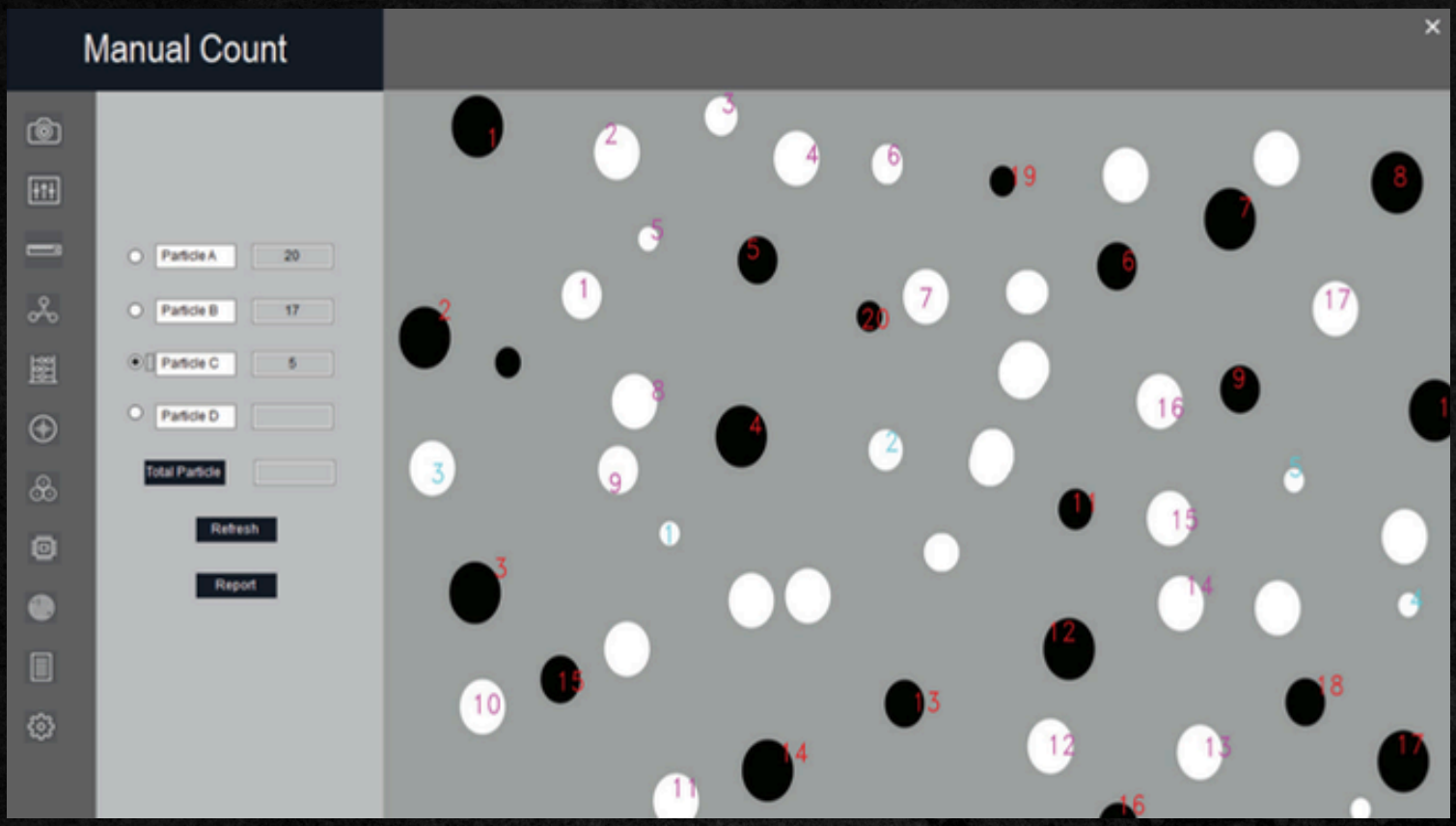

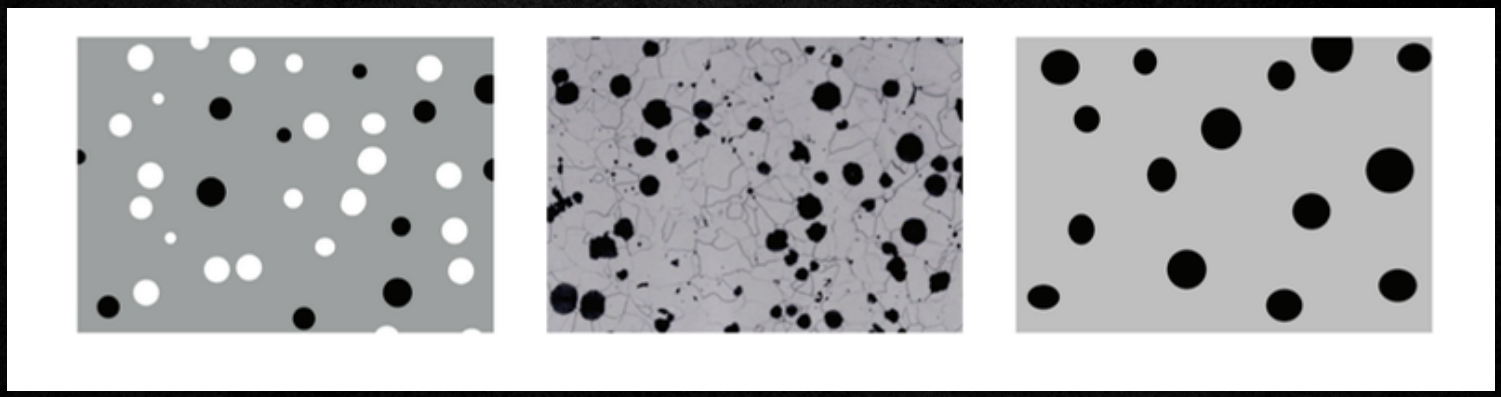

MICRO THICKNESS

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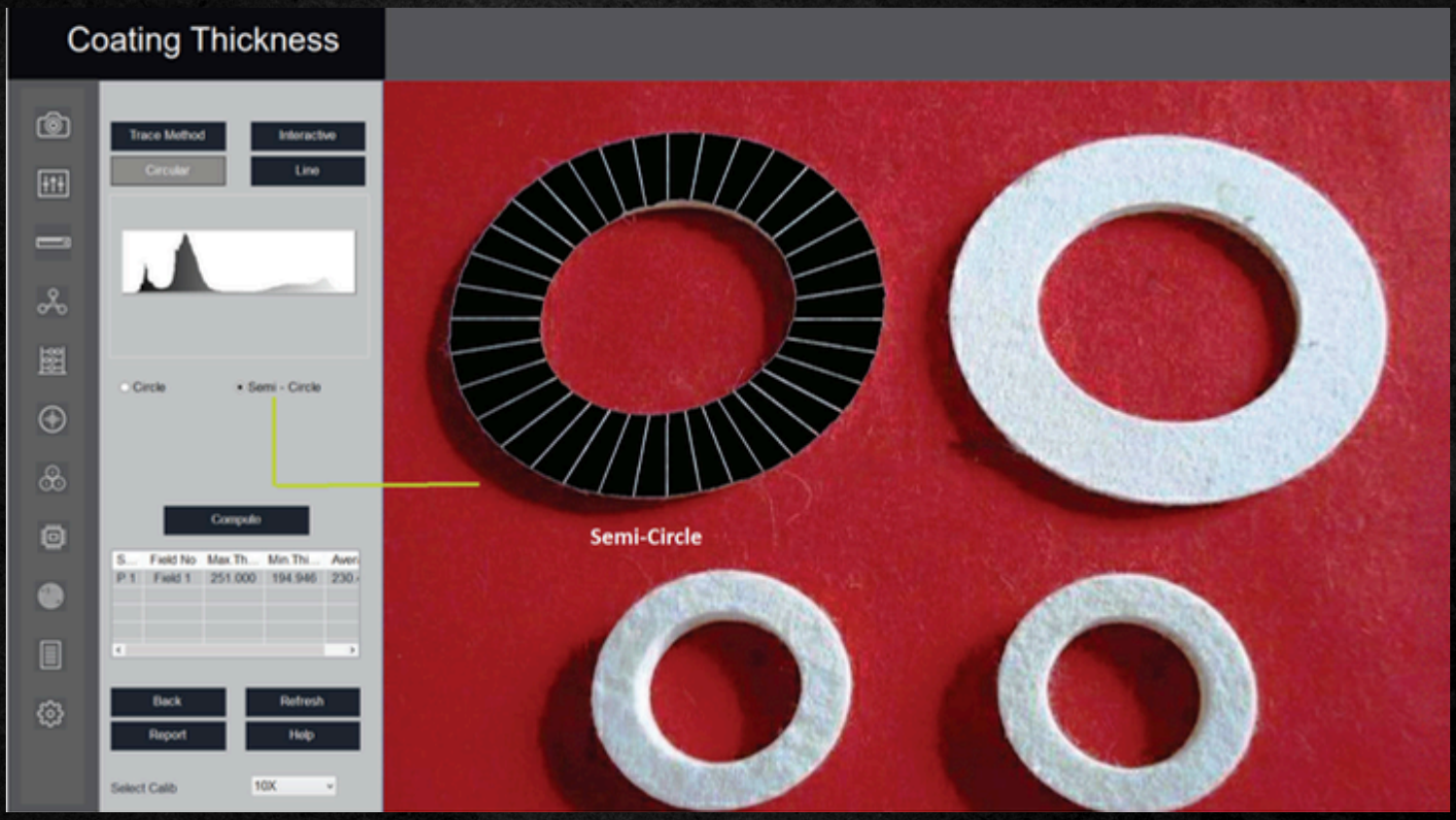

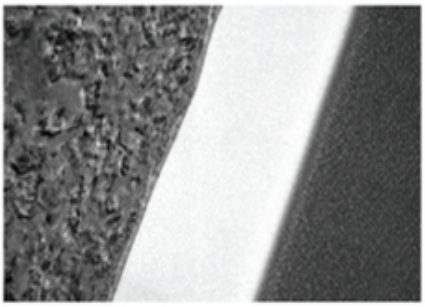

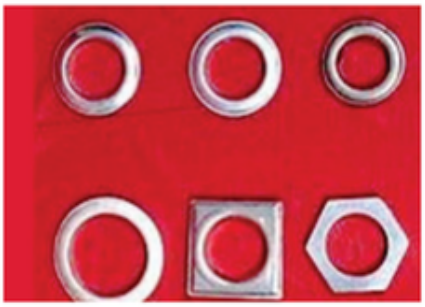

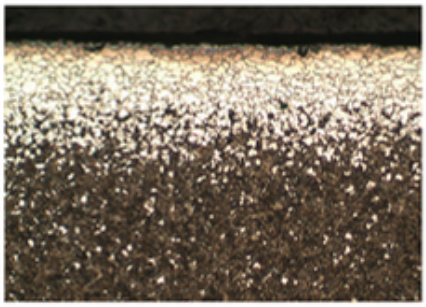

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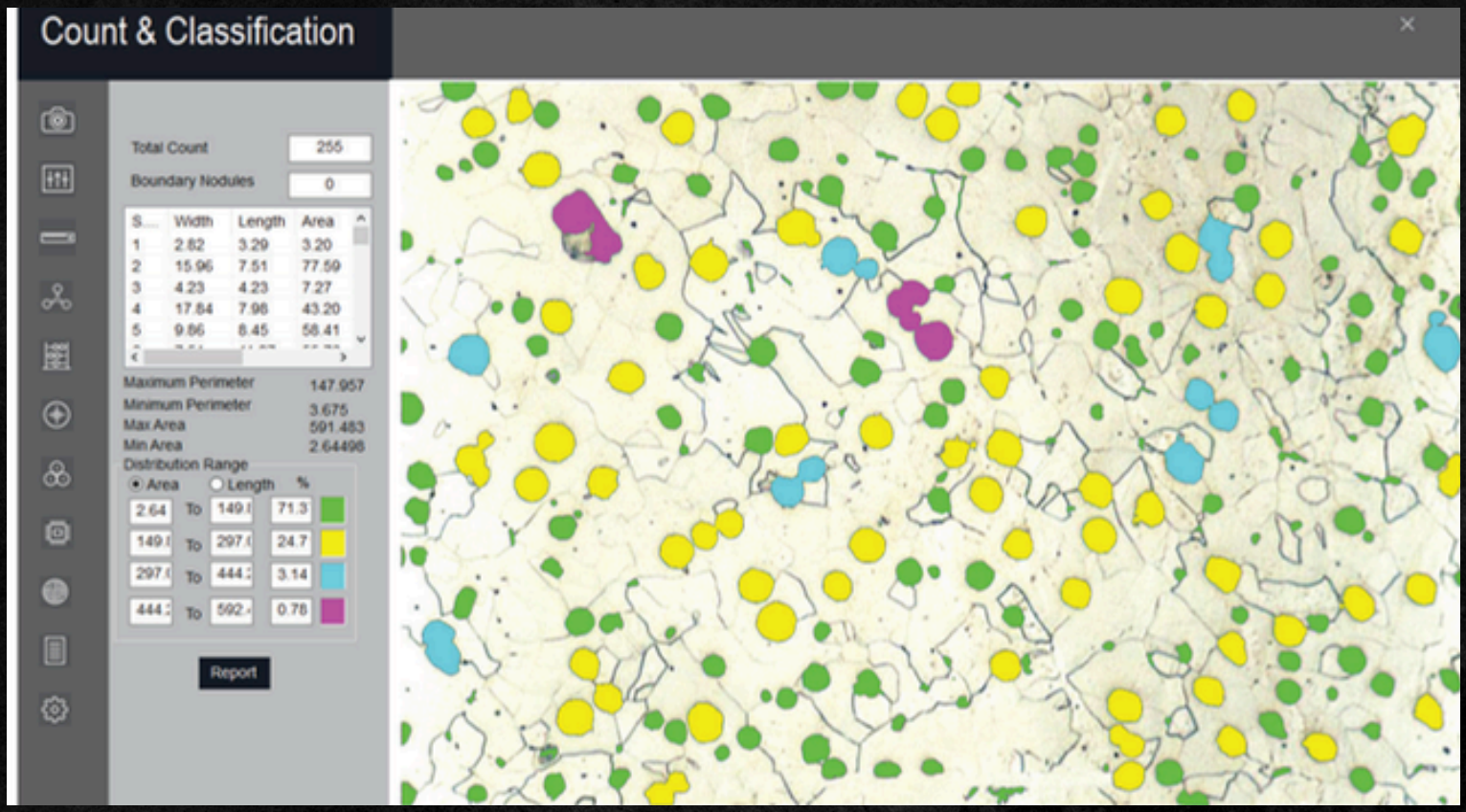

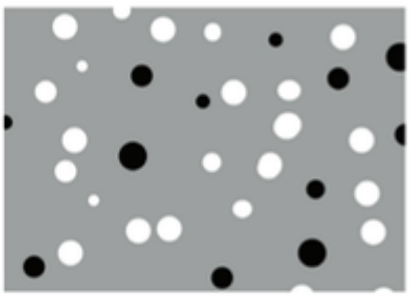

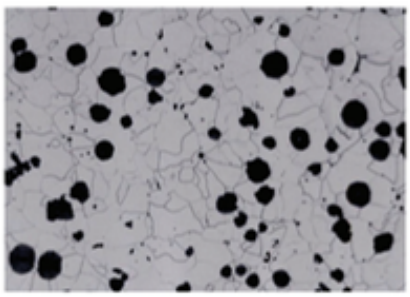

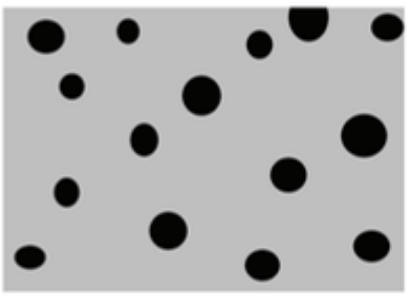

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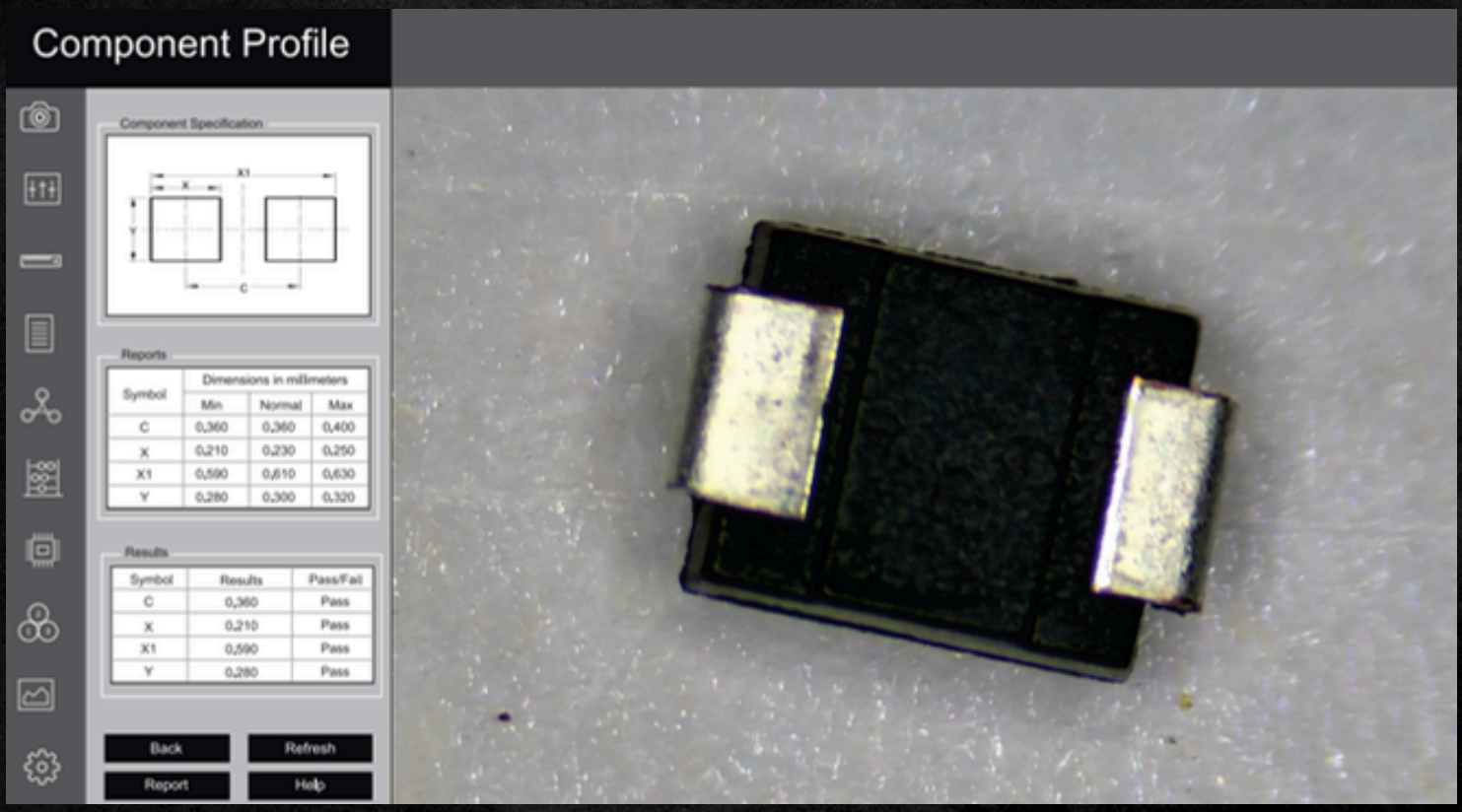

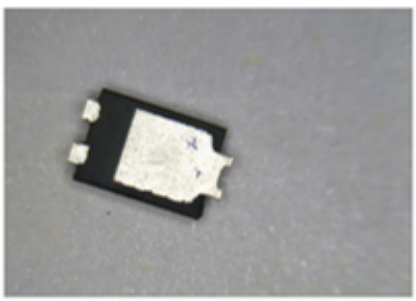

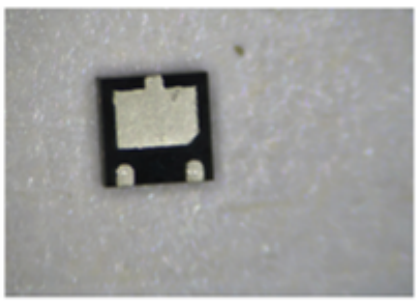

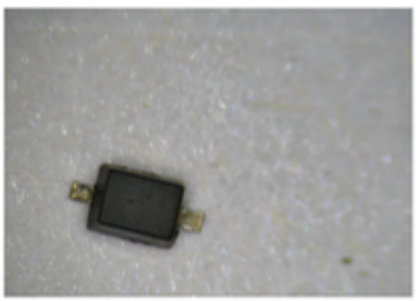

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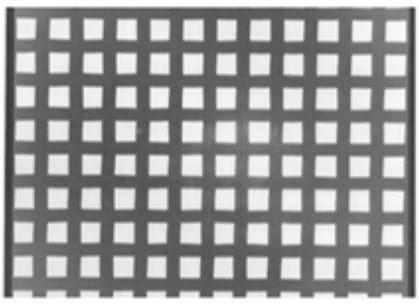
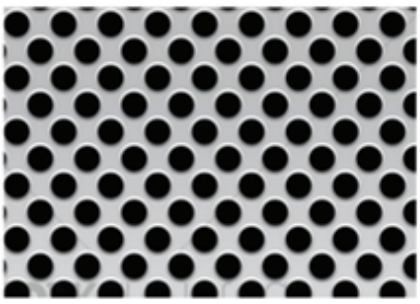
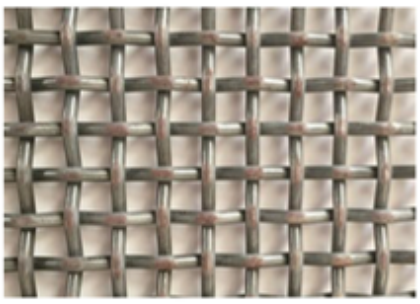


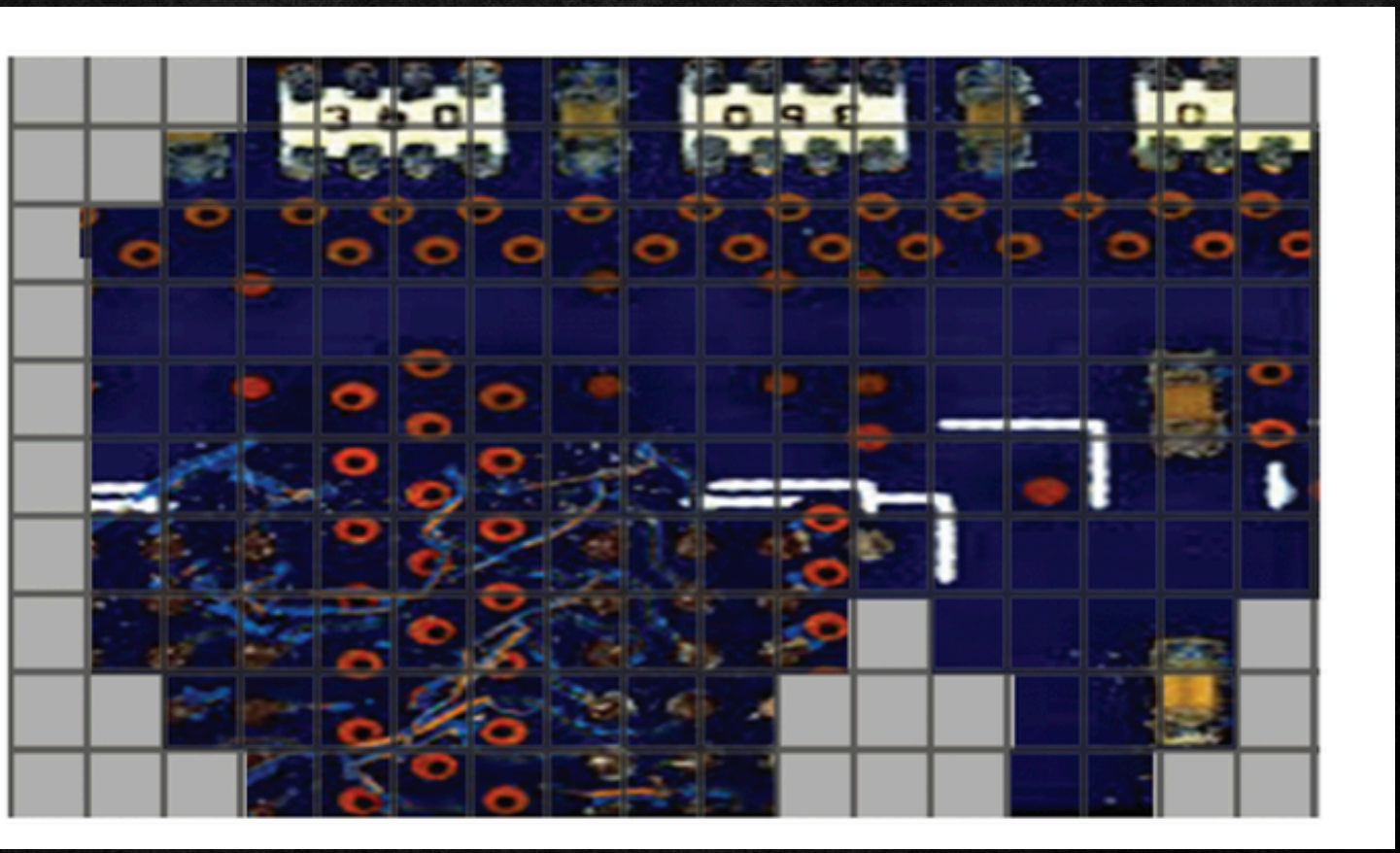




MANUAL STITCHER

The software is designed to stitch overlapped image tiles by moving stage precisely step by step to cover the entire specimen and sub segment stitching of the data blocks into one image. It has an automatic algorithm for homogeneous illumination using shading (back ground) correction. Stitching options are available for few images as well as for whole samples with resolution up to several gigapixel.

Ideal for large tissue samples, this ensures reproducibility while taking the guesswork out of tilting experiments.

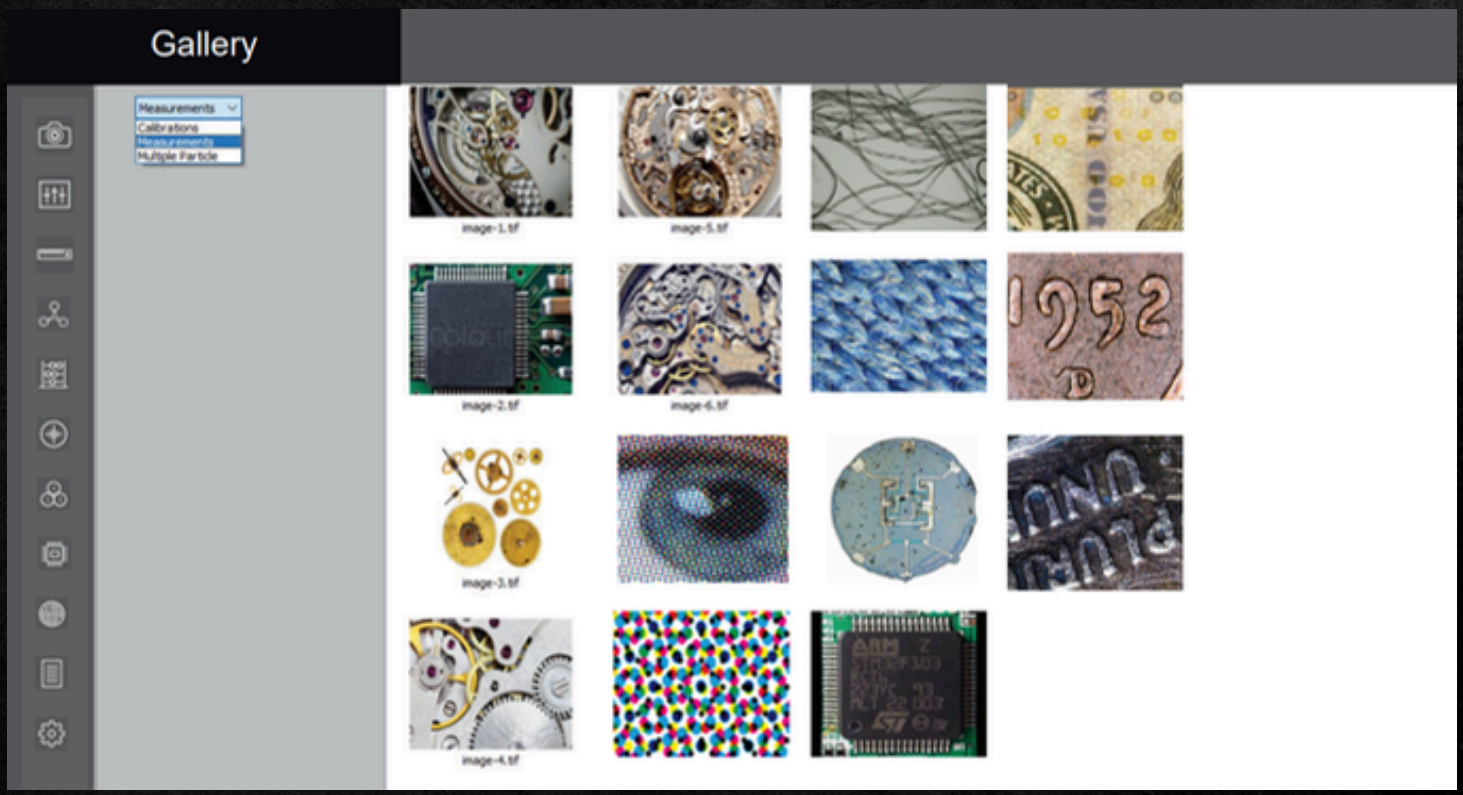


GALLERY

Four Folders are available to view any Captured images.

The folders are:

1. Measurement
2. Calibration
3. Multiple Particles
4. Component Profile
5. Sieve/Mesh analysis



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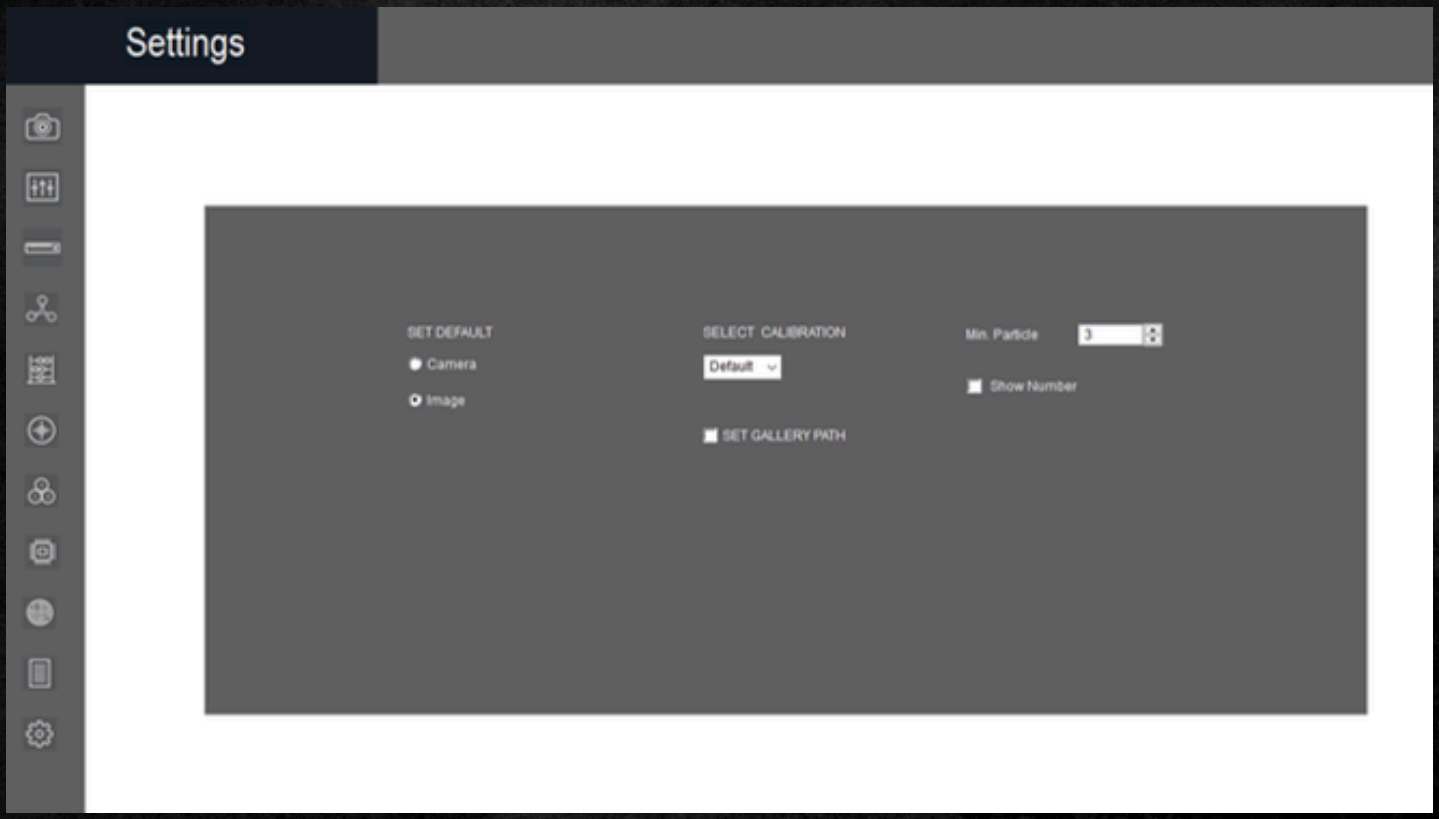
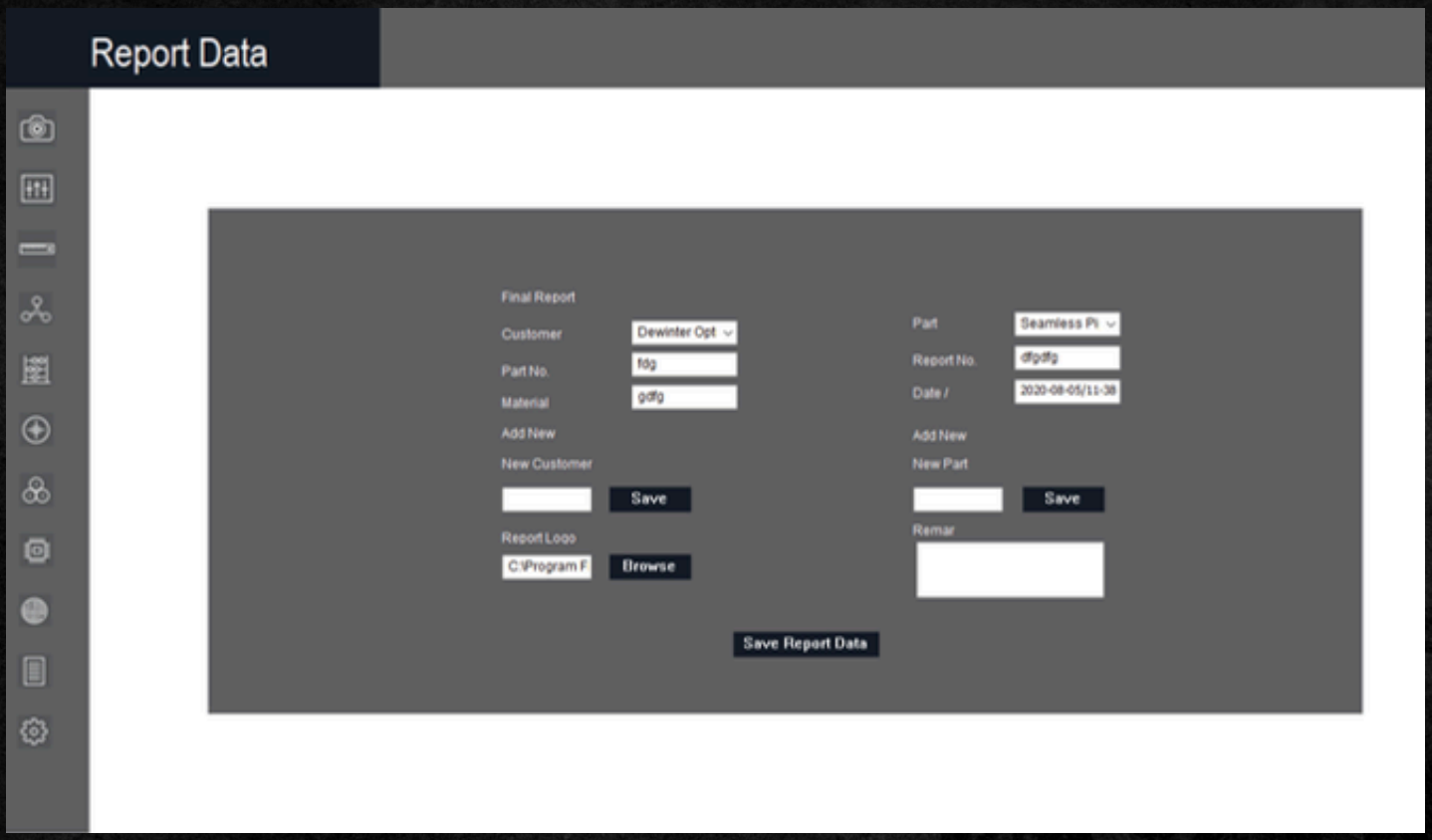


REPORT DATA

Report is available in this module for preview before print or if print is not required.



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