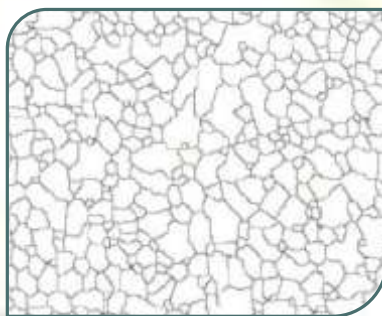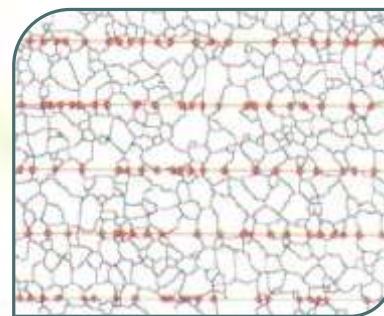# MICROSTRUCTURE ANALYZER SOFTWARE

Grain Size Estimation

☞ With automatic grain boundary, the re-construction Analyzer can take any ordinary/practical image for processing. It cleans the same, automatically joins the broken grain boundaries and makes the image perfectly suitable for further automatic analysis. Does not call for manual intercept marking.

☞ Options exist for the intercept method (parallel lines or concentric circles depending on the aspect ratio of grains), planimetry method, and comparison method. Also results can be obtained in the form of grain size distribution, individual grain area, its perimeter, L/ D ratio, mean lineal intercept length, average grain size, the largest grain size in microns etc.

☞ Grain size analysis of ceramic, Copper and other materials can be determined as per the individual method.
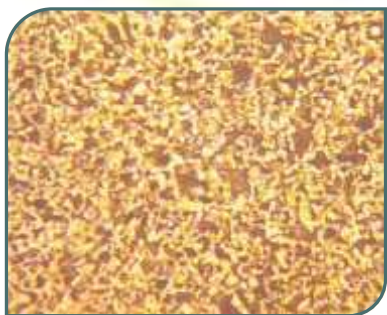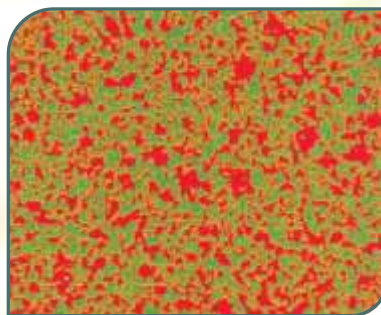
Original Image   **Processed Image**   **Grain Size 6.5**

Phase analysis

Based on the gray level difference, many phases can be identified and measured to its fine perfection based on thresholding gray levels. With automatic and manual methods histograms can be generated.
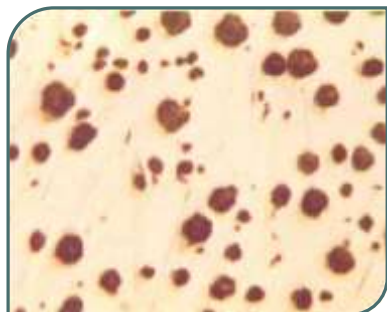
Original Image   Processed Image
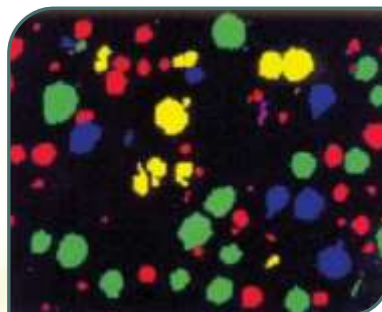
Modularity analysis

Graphite features as per their shape factors are separated in type I to Type VII. Percentage nodularity is Image stitching facility can be used if analysis is required on total 1 mm sq. by stitching/tiling of images.

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Phone : +91- 8750305291
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Under the etched condition, one can directly estimate the percentage of graphite, pearlite and ferrite.

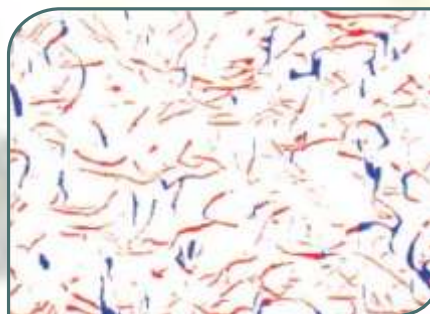Distribution can be obtained as per the size.

Original Image

Processed Image

Flake analysis

Graphite flakes are classified in size class from 1to 8 as per their length. Min, Maxflake length and distribution curve can be plotted. Also separation of the flakes as A, 8, C, Dis is possible in normal cases.
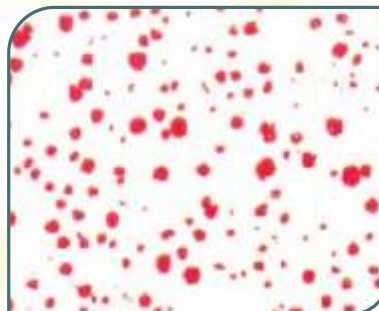

Original Image
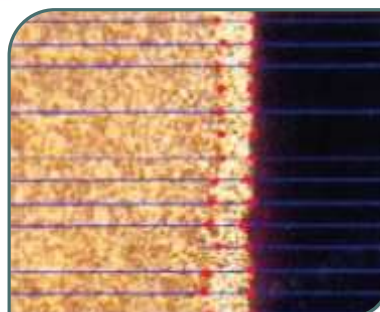

Processed Image

Particle count and size classification

Individual particles in the given field of view can be marked, separated as per their sizes. Distribution curve can be plotted.
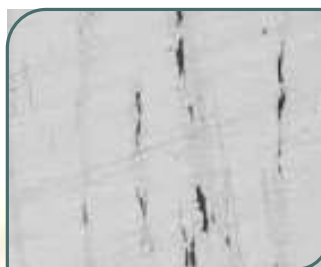

Linear Measurements

Measurements like plating, coating, decarburization, interlamellar distance, degree of banding etc. are done manually or automatically depending on the image contrast. Arbitrary line measurement helps measure distance in any direction.

Inclusion analysis

Given a good polish, accurate results can be obtained by separating and rating inclusions. One can also immediately see the classification and can correct or edit the same. Advanced modules can also correct few artifacts like scratches on the samples. The automatic motorized stage measurement option can compile the results of multiple fields and the same can be expressed in the desired format.
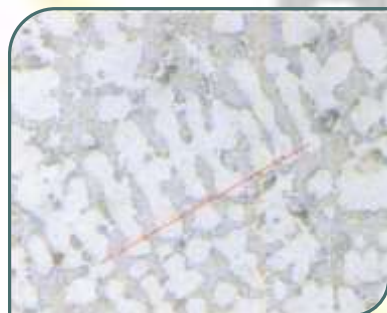
Original Image

Processed Image

Multilayer coating measurement (Tribology)

In the study of the measurement of multilayers of CVD coatings software measures layers' thickness automatically. This is supported by ball crater instrument with necessary accessories.
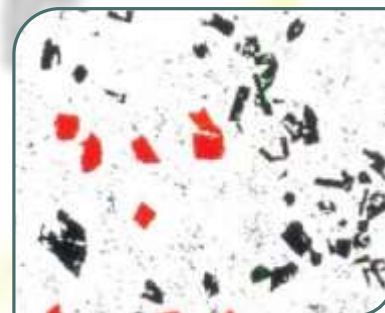
Aluminum module

SDAS Measurement

Porosity Measurement

Cuboids Measurement

Other module

Retained austenite (by comparison), Carbide distribution (by comparison), Millipore particles analysis, Cement analysis, PCB analysis, Degree of banding.

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Data base maintenance, Reports

Powerful archiving software provides gallery of thumbnail images for easy searching with comparison facility. Standard or tailor made reports are generated with Excel sheet for easy access to further networking / printing.

USB DIGITAL CAMERA

USB Cameras are imaging cameras that use USB 2.0 or USB 3.0 technology to transfer image data. USB Cameras are designed to easily interface with dedicated computer systems by using the same USB technology that is found on most computers. EO USB Cameras are available in both CMOS as well as CCD sensor types making them suitable across a larger range of applications. USB Cameras contain out-of-the-box functionality for quick setup. USB Cameras using low power USB ports.