

A Tool for Quantitative Metallography



Microstructure Characterizer

Microstructure Characterizer Setup

Image from the microscope is captured by a CCD camera. Output of camera is video signal that is converted by frame grabber card to digital signal to form an image in the Computer. Image is Analyzed by "MiC" - Software for Microstructure interpretation.

Microstructure Characterizer

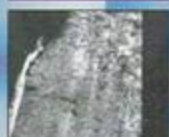
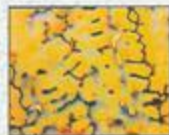
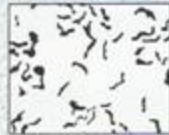
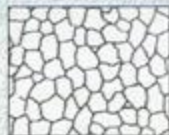
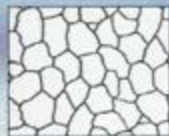
- A dedicated Software for the Metallurgists

Microstructure Characterizer is a powerful image processing software. It can be installed easily and is user friendly in nature. Using this software you can:

- Characterize different types of microstructural images for grain size, coating thickness & phases.
- Acquire images from one or more files.
- Enhance your image using the filtering and enhancement features.
- These specialized features permits you to examine and analyse important characteristics of the images clearly with extra high precision.

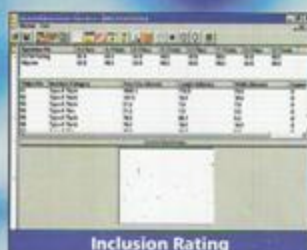
MiC characterizes microstructural features using standard methods of material characterization such as ASTM grain size measurements, coating thickness, linear & angular measurements, comparison of super imposed grain size reticules, inclusion rating as per IS and ASTM standards, nodularity measurements, powder particle size distribution and so on...

- Create custom made formatted reports of live and stored images.
- Offers results as the computer display as well as hard copy multicolour print outs.

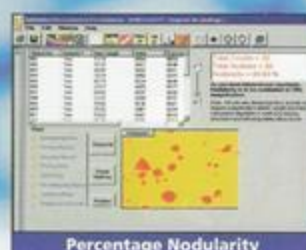




Main Menu Display



Inclusion Rating



Percentage Nodularity



Image Enhancement

Microstructure Characterizer

Features

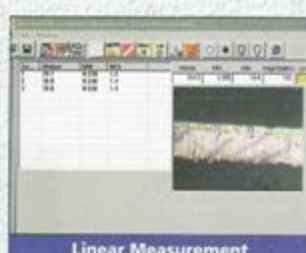
- ASTM Grain size calculation as per E-112
- Grain size variation trend chart : An advanced tool.
- Grain size estimation - Comparison with standard graticules - fast, time saving approach for routine analysis.
- Volume Fraction Measurement as per ASTM E-562:89.
- Nodularity Measure for of Cast Irons calculated as per JIS 5502.
- Inclusion content rating in Steels as per Indian Standards- Using a button press comparison method
- Inclusion rating in Steels as per ASTM E-45.
- Linear Measurements / Angular Measurements
 - ▶ Plating thickness
 - ▶ Plating layer on PCB
 - ▶ Nitrided layer thickness
 - ▶ Case hardened depth
 - ▶ Individual nodule diameter
 - ▶ Pearlite interlamellae spacing
 - ▶ Carburisation and Decarburisation depth
- Powder Particle Size Distribution
- Hardness Indentation Measurement



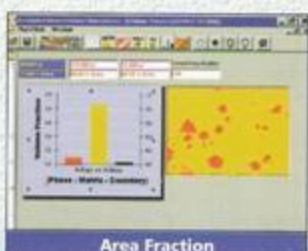
Angular Measurement



Solarization - Thresholding



Linear Measurement



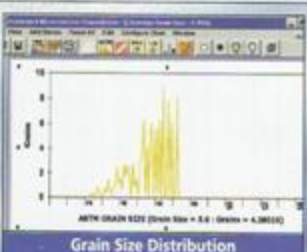
Area Fraction



Vicker's Hardness Measurement



Grain Size by Comparison



Grain Size Distribution



Powder Particle Distribution

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