

MICROSCOPY & IMAGE ANALYSIS

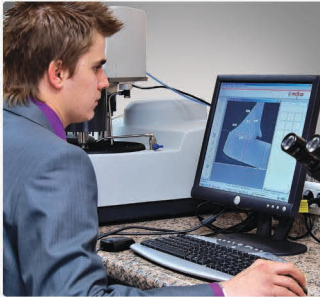
IMAGIN



metken[®]
Technology behind Specimen

20
YEARS

IMAGIN[®]



MESURA 200

Image Capture
Image Archiving
Image Enhancement
Calibration
Interactive Measurement
Phase Content Analysis
Annotation
Report Generation
Direct Transfer to Excel

GRANO 200

Image Capture, Save & Calibration
Grain size determination in accordance with ASTM E112 and EN ISO 643
Instant detection of Grain boundaries
Direct transfer to Excel

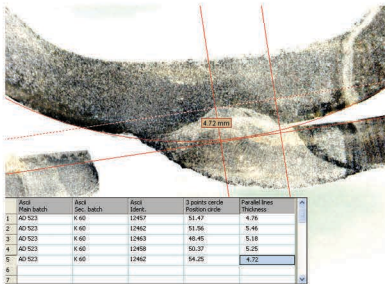
NODULA 200

Image Capture, Save & Calibration
Automatic detection and coloring of Graphite Nodules.
Cast iron analysis according to EN ISO 945 including nodularity
Ferrite/Pearlite fractions etc.
Report Generation
Direct transfer to Excel

MESURA 200

IMAGIN MESURA 200 allows you to view the live microscope image, compare it with stored images and if necessary save it to the system. Several databases can be created according to the customers, projects, materials or specimens.

IMAGIN MESURA 200 has several measurement tools for performing manual measurements of lines, curves, angles, areas etc. after which they can be saved and archived. Many application areas exist like "Weld Assesments, Macro analysis, PCB component measurements etc.



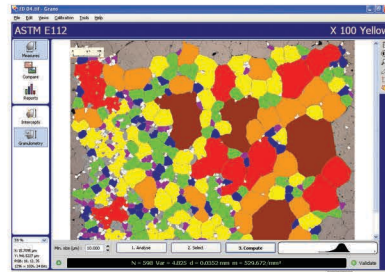
With 'Annotation' facility, it is possible to add comments, graphics, arrows etc. directly on the image allowing you to label specific areas of interest.

IMAGIN MESURA 200 allows you to design your own template or select one of METKON's standard templates for "Report Generation" where the text and images are automatically placed. When required, it is also possible to transfer data directly to Excel for further processing.

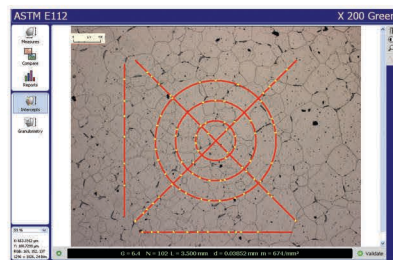
GRANO 200

Customer requirements for imaging applications increase in parallel to the complexity of material applications in research field as well as in industry.

IMAGIN GRANO module has been designed for automatic measurement of grain size according to ASTM E112 and EN ISO 643. Firstly, the grain boundaries are detected after which the grain size can be calculated in different ways;

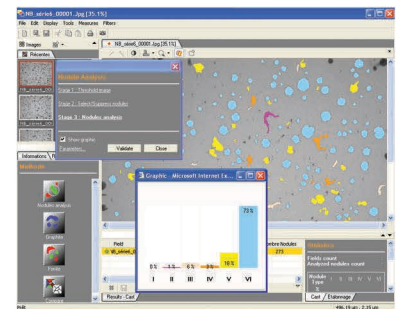


"Intercept Method" counts the number of intersection in each field and the grain size is calculated by Abrams 3-circle or Linear Equations. "Area Method" determines the size of each individual grain by area after which the grains are categorized for the calculation of fractions.



NODULA 200

IMAGIN Modular Imaging System offers flexibility to the customer to select and build his own system according to his individual needs. More modules can be added at any time when needs grow.



IMAGIN NODULA 200 module is designed for the analysis of graphite in cast irons especially in Ductile and Gray Iron Foundries and Quality Control Labs. Nodularity assesment is made by percent count and nodules proportion. It is also possible to measure "Area percent ferrite, Area percent graphite and Area percent Pearlite". Archiving of all images with calibration and generating Reports creates an additional advantage to increase productivity and repeatability.

Statistics

Fields count : 3
Analyzed nodules count : 819

Nodule Type	I	II	III	IV	V	VI
%	0	1	6	3	18	73

Details

Class	1	2	3	4	5	6	7	8
%	0	0	0	0	0	7	32	61

Details

Max Nodule diameter type VI. (mm) : 0.035
Max. fiber length (mm) : 0.059
Nodule Density (/mm²) : 653.1
Surface Density % : 10.3
% Ferrite : 83.0
% Graphite : 10.0
% Pearlite : 7.0
% Ferrite/Matrix : 92.2
% Pearlite/Matrix : 7.8
% Ferrite/Pearlite : 1185.7

IMM 901 Inverted Metallurgical Microscope



BasicMagnifications : 100x - 1000x
Eyepieces : WF 10x eyepieces paired (field of view Ø16mm)
Objectives : 10x/0.25 (W.D. 6.7mm), 25x/0.40 (W.D. 0.76mm)
 40x/0.65 (W.D. 0.67mm), 100x/0.25 (oil) (W.D. 0.3mm)
Stage : Mechanical stage 200 x 152mm travel with right hand
 Coaxial dropdown controls, movable range 15 x 15mm
Focusing : Coaxial low position coarse & fine focus controls
 graduated to 2 microns per division.
Illumination : 6V 20W adjustable light sources with halogen lamp
Size&Weight : 540L x 195W x 320H mm & 10kg
Order No : 60 01



Optional Accessories

WF 12.5x eyepiece
 (10mm diameter) / **Order No: 60 11**
 WF 10x with reticles
 (0.01 mm division) / **Order No: 60 12**
 Stage micrometer for IMM
 Reticle, 1mm with 100 division/ **Order No: 60 22**
 Eyepiece, WF 10x
 with ASTM Grain size E112/ **Order No: 60 12**

IMM 901 Inverted
 Metallurgical Microscope

PST 901 Trinocular Stereo Zoom Microscope



BasicMagnifications : 6.5x - 45x
Eyepieces : WF 10x, paired
Objectives : 6.5x - 45x
Stage : Trinocular zoom head and Post Stand Fluorescence ring
 illuminator
Focusing : Rack and pinion system, with anti-static PVC dust cover
Size&Weight : 170W x 250D x 55H mm & 6.0 kg
Order No : 60 02



Optional Accessories

Stage micrometer for PST, Reticle, 5 mm
 with 100 divisions / **Order No: 60 23**
 Mechanical Stage for PST 901
Order No: 60 43
 Objective, 0,5x / **Order No: 60 53**
 WF 10x with reticles,
 100 division, for PST/ **Order No: 60 13**

PST 901 Trinocular Stereo
 Zoom Microscope

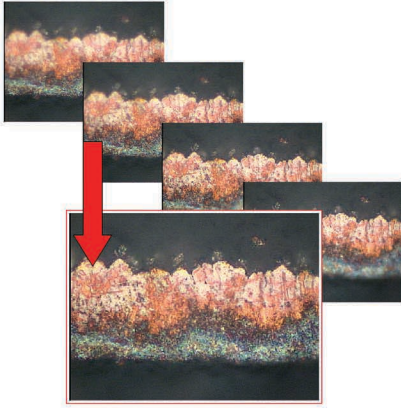
Specifications

IMAGIN Hardware Set

CMOS Color Camera, Resolution 5 M. Pixels with Interpole Mod
USB2 - PC Interface, C Mount - Microscope Interface. Including
DUROLINE, IMM 901 or PST 901 adapter according to application.

IMAGIN MESURA 200

Image capture, Image archiving, Image enhancement, Calibration,
Multi Image, Multi Focus Function, Interactive measurements (Length,
thickness, width, angle, radius, curve perimeter, area), Multi Image
Alignment, Multi Focus Function. Phase content analysis, Add Text &
Marker Arrow and Calibration Scale, Image annotation, Image
report generator, Automatically measurements and threshold func-
tion, Direct transfer to Excel.

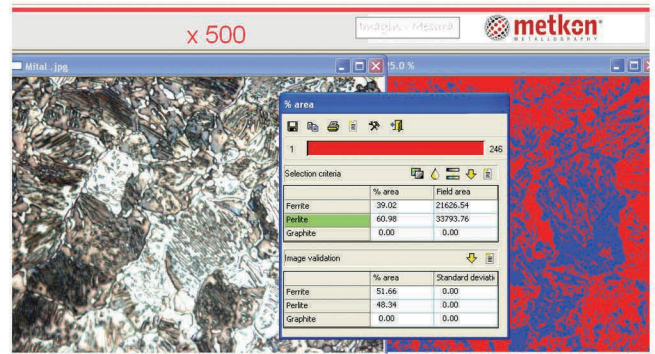


IMAGIN GRANO 200

Image capture, save and calibration, Grain sizing software in
compliance with ASTM E112 and NF EN ISO 643, Intercepts
method and Image comparison Grain sizing with granulometry
analysis, Instant detection of Grain Boundaries, Powerfull report
generator, Direct transfer to Excel
Order No: 66 04

IMAGIN NODULA 200

Image capture, save and calibration, Graphite nodules automatically
detected and coloured with regards to Shape and size, Cast iron
analysis in compliance with EN ISO 945 including nodularity, Ferrite
/ Perlite fraction, Powerfull report generator, Direct transfer to Excel
Order No: 66 05



System Requirements

Min configuration for the PC is either Windows XP or Windows 2000, for optimal performances, a Pentium 4 is recommended, RAM memory about 512Mb - 1Gb

* Other voltages and frequencies available upon request.
Please state when ordering.
All specifications are subject to change without notice.



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