

Inclusion / 2nd Phase Constituent Module



Scentis Image Modules

Designed for use with Struers
Scentis Lab Management System

Introduction: The Inclusion Module is specifically developed with accuracy and repeatability in mind. By using the latest image analysis techniques a user can automatically determine inclusion or 2nd phase percentage of a specimen. The module utilizes the methodology described in ASTM E1245. Unlike ASTM E45, E1245 was specifically designed to be performed using automatic image analysis.

Whether you're a seasoned image analysis professional or a novice, you will find the intuitive interface and Wizard features of this module reassuring as you greatly improve both the quality and throughput of your testing.

Inclusion / 2nd-Phase Constituent Measurement

- Accurately measure inclusions or 2nd phases
 - Oxides
 - Sulfides
 - Other constituents
- Measure at any magnification
- Utilize the "flicker method" described in ASTM E1245 for accurate threshold settings
- Determine
 - Number of inclusions per unit area N_A
 - Volume fraction V_V
 - Mean free path
 - Others

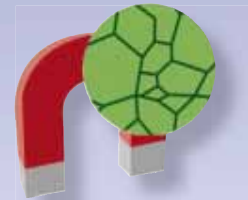
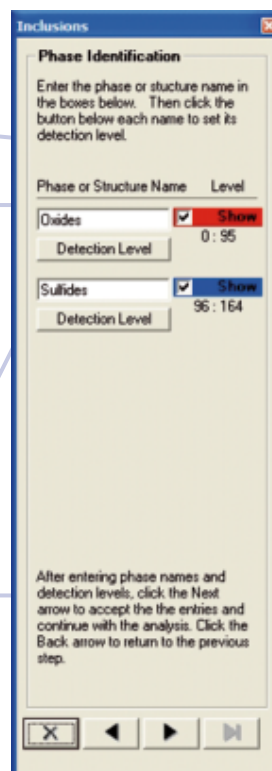
Reporting Options

- Multiple reporting options include:
 - Raw data reporting
 - Built-in report generator using List & Label[®]
 - Export to Microsoft Excel[®]

Optional plug-in image analysis modules provide state-of-the-art evaluation methods for everything from grain sizing to inclusion rating. Employ image analysis modules for evaluations according to international standards.

Why purchase an image analysis system with features you will never use? With Scentis you only purchase the image analysis modules you need.

The Scentis image modules allow you to perform sophisticated analysis very easily. Simply select the appropriate analysis module and follow the intuitive guidance of the built-in wizards.



New to image analysis?
Try the built-in Scentis Wizard for simple step-by-step assistance through the entire process.

A seasoned professional?
Get directly to the analysis with powerful built-in tools.

Desire repeatability?
Easily establish a "best practice" by utilizing the built-in technique recorder.

Desire reproducibility between operators or multiple laboratories?
Share your methods with other module owners using our unique "setup" filing structure.





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Inclusions - 11-15-2005 Specimen - 1

Specimen	Cylinder
Specimen Area: 134451.72	Name: MP9-004
Specimen Fields: 1	Unit: micrometer
Number of Specimens: 1	Field Width: 0.41
	Field Height: 0.41

Field

Field Width: 422.61
 Field Height: 317.43
 Field Area: 134451.68
 Required Field Area: 134451.68
 Images per Field: 1



Sulfide, vertikal, 500x, Gray, Display

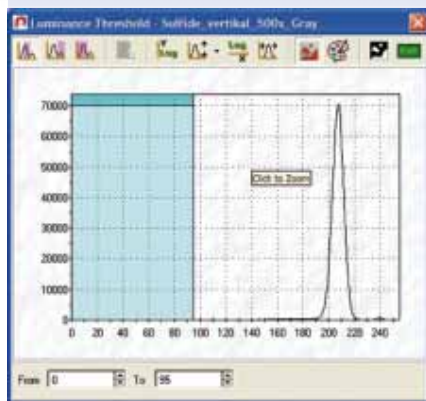
Inclusion Summary

Entry Date: 11/15/2005

Number of Fields: 1
 Area Average (µm²): 1.218448
 Area Fraction: 0.002277
 Area Detected: 31.182328
 Area Measured: 134451.68347
 Hot Working Direction (H/V): H

Oxides	Sulfides
Ave. Length in Working Direction: 1.238219	Ave. Length in Working Direction: 5.003862
Inclusions Per Unit Area (mm²): 393.568161	Inclusions Per Unit Area (mm²): 1467.766740
Inclusions Per Field: 35.00	Inclusions Per Field: 157.00
Inclusions Per Unit Length (mm): 73.358377	Inclusions Per Unit Length (mm): 270.024719
Number of Detected Picture Points: 258	Number of Detected Picture Points: 6469
Number of Picture Points in Field: 191.085	Number of Picture Points in Field: 71.065
Volume Fraction (%): 0.032789	Volume Fraction (%): 0.095371
Mean Free Path: 0.252031	Mean Free Path: 2.331779

11/15/2005



Inclusions

Handling

Select the orientation of the hot working direction as seen in your images.

Orientation

Horizontal

Vertical

Handling

Describe the working of the material:

Click the Next arrow to continue.
 Click the Back arrow to return to the previous step.

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Scantis Image Modules

A large number of image analysis modules are available, many of which conform to ASTM, ISO and DIN standards:

	Code:	Cat. no:
Multiple Phase Percent Area	SCIPA	36003001
Grain Sizing	SCIRA	36003002
Inclusion / 2nd-Phase Constituent Measurement	SCIND	36003003
Particle Size / Sphericity	SCIPS	36003004
ASTM E384 Microindentation / Macro Hardness Measurement	SCIMI	36003005
Brinell Hardness Measurement	SCIBI	36003006
Thickness, Layers and Coatings	SCITI	36003007
Graphite in Cast Iron	SCICI	36003008
Dendritic Arm / Cell Spacing	SCIAS	36003009

The Scantis image modules allow you to perform sophisticated analysis very easily. Simply select the appropriate analysis module and follow the intuitive guidance of the built-in wizards.

For further information on these modules, contact your local dealer.

You can also visit us at www.struers.com

Struers' products are subject to constant product development. Therefore, we reserve the right to introduce changes in our products without notice.