

POROSITY ANALYSIS

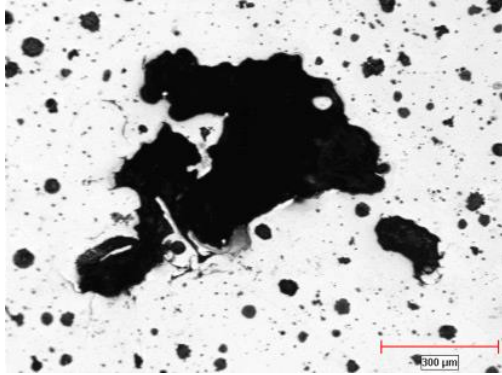


Figure 1: The original image at 100X.

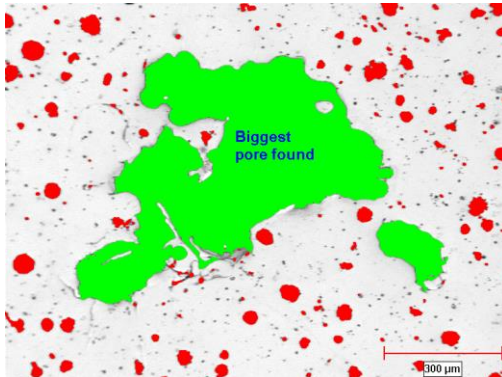


Figure 2: Final detection overlaid against the original image. Pores are in green and nodules are in red.

Results

The area and area percentage of pores in submitted sample are measured. Automated statistics and graph are generated and cumulated during the analysis of the sample.

	Area (microns ²)	Area Percent (%)
Minimum	647.59	0
Maximum	245979.52	21.23
Mean	17410.42	8.45
Std Dev.	41307.57	8.23

Sample Description

Sample of nodular cast iron.

Purpose of Analysis

Demonstrate the ability of the Clemex Vision image analysis system to discriminate and measure the area percent of porosity in the field of view.

Procedure

All objects are binarized using the Gray Threshold instruction and pores are isolated from the nodules. The main distinctive criterial used for this purpose were intensity, sphericity and compactness. Porosity and nodules can be measured at the same time allowing a category transfer from the mapping view after the run. When the run is completed, the objects in the image window are associated to the direct measure in the Data Browser. By clicking on the desired object, the stage will move back at the field where the object was measured.

Equipment

Image Analysis System:	Clemex Vision PE
Microscope:	Nikon Epiphot-200
Camera:	Sony 77-CE B&W
Magnification:	100X
Stage:	Motorized Marzhauser

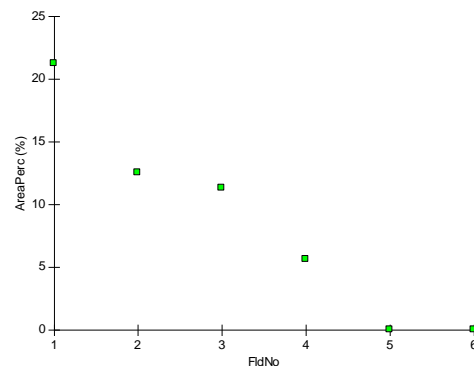


Figure 3: Area percentage of pores for each analyzed field.