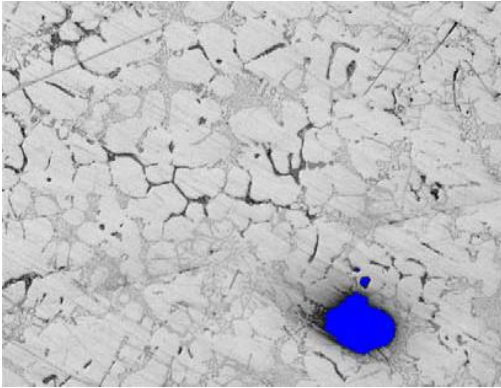# POROSITY ANALYSIS

Figure 1: *The porosity is binarized into blue bitplane (Gray Thresholding).*
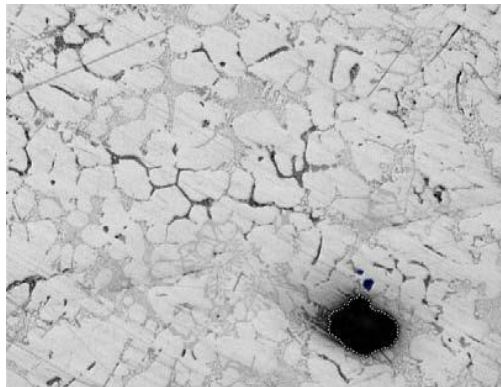

Figure 2: *The selected object is highlighted by a dotted line.*

Sample Description

One aluminum sample is submitted for image analysis.

Purpose of Analysis

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

Procedure

The microstructure of submitted aluminum was viewed at 100X. The porosity was binarized into blue bitplane by Gray Thresholding. Certain binary operations needed to be applied to clean bitplane and remove artifacts. Individual measurement can be traced from Mapping View mode. 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 Optiphot-2
Camera:	Sony DXC-950
Magnification:	100X
Stage:	Motorized Marzhauser

Results

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

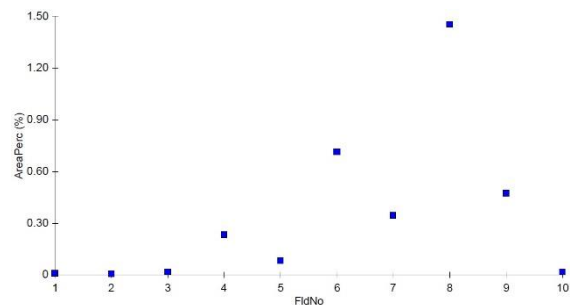|	Area (microns^2)	Area Percent (%)
Minimum	43.1	0.006
Maximum	9855.5	1.46
Mean	2274.4	0.34
Std Dev.	3118.2	0.46

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