GRAY CAST IRON MEASUREMENT AS PER ASTM A247

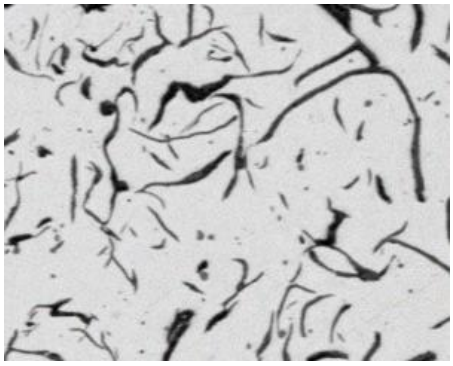


Figure 1: *Part of the original image captured at 100X (1.27 µm/pixel).*

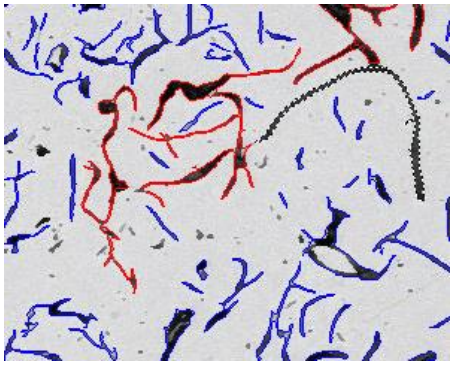


Figure 2: *Outline view of flakes as measured. Note that the longest flake was first part of a group of flakes.*

Sample Description

Images of gray cast iron with different sizes of flakes are submitted for analysis according to ASTM A247.

Purpose of Analysis

Demonstrate the ability of the Clemex Vision image analysis system can measure the maximum size (length) of flakes size and find the longest one.

Procedure

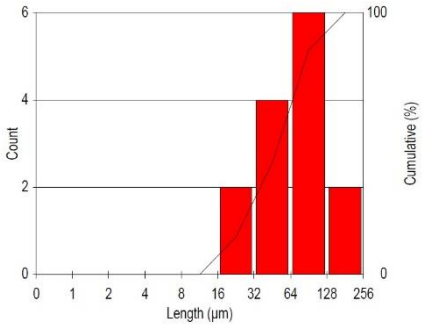
All flakes were binarized in blue bitplane. The system stopped and waited for the user to identify flakes or group of flakes that possibly contain the longest flake (transferred into the red bitplane). The eraser appeared allowing to separate any connected flakes from the bitplane of interest (red) prior to measurements.

Equipment

Image Analysis System:	Clemex Vision PE
Magnification:	100X

Results

Length measurement is performed on each distinct feature from red bitplane. Automated statistics and graph are generated and would be cumulated when analyzing several images. Final results can be printed directly from Clemex Vision. Raw data are linked to their respective objects for validation purpose. Raw data can also be exported in Excel format allowing to build an automated macro to find the size class.



Maximum: *153.76 microns*
Size Class: *Oversize (greater than 128 microns).*

Figure 3: *Flakes' Length distribution, maximum value and corresponding size class.*