

Strontium Ferrite Characterization Image Analysis Report 242

Sample Description

Free strontium ferrite powder on a slide.

Purpose of Analysis

Demonstrate the ability of the Clemex Vision image analyzer to obtain a size (length) distribution of the strontium ferrite particles.

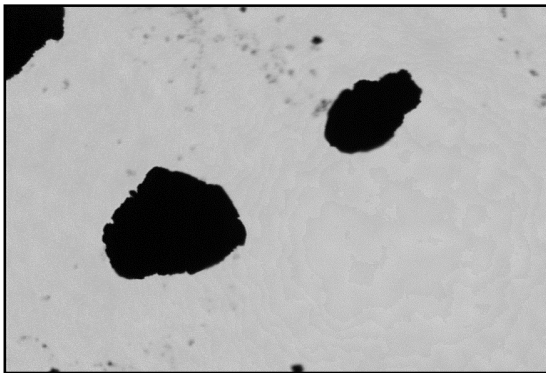


Figure 1: Original gray image.

Procedure

Objects that were partially out of view were eliminated using a square grid (cyan) and an object transfer.

Area, length, width, diameter, sphericity, aspect ratio and roughness measurements were performed on the final bitplane.

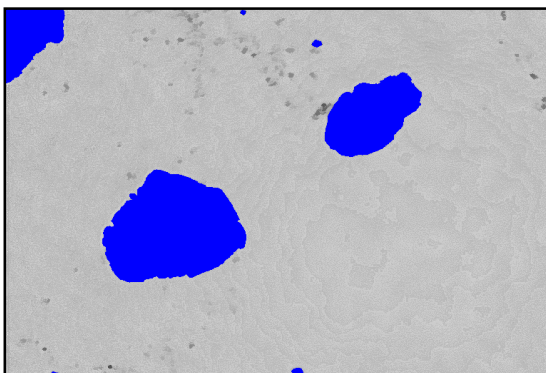


Figure 2: Binarization in blue bitplane of the original image by Gray Thresholding

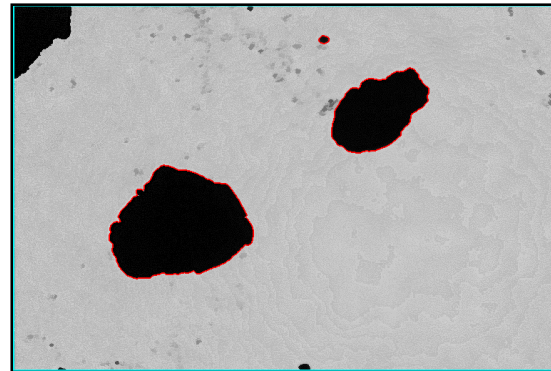


Figure 3: Outline of the final detected particles overlaid against the original image. Square grid used for eliminating partially visible objects can be seen in cyan.

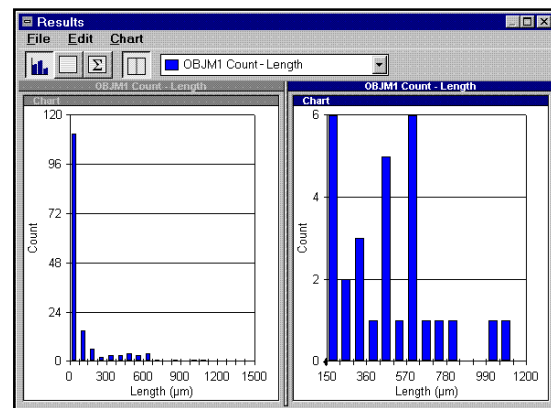


Figure 4: a) Results Window showing length distribution. b) Same as for a) but objects under 150 μm are not included.

Results Summary

	Length μm
Minimum	2.3
Maximum	1119.1
Mean	117.5
Std Deviation	204.4

Equipment

Image Analysis System:	Clemex Vision PE
Camera:	Sony XC-75 CE
Microscope:	Nikon Optiphot 2
Objective:	Nikon 4x (Mag.: 40x)