

Area Percentage of Phases Image Analysis Report 278b

Sample Description

Polished NdFeB sample.

Purpose of Analysis

Demonstrate the ability of the Clemex Vision image analyzer to discriminate and measure the area percentage of each phase in the field of view.

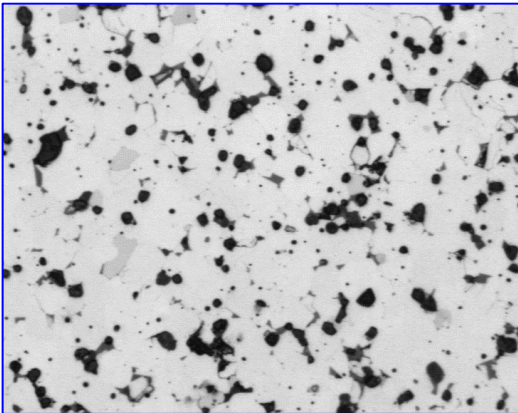


Figure 1: Original image at 1000x.

Procedure

The original image was improved by a Gray Delineate.

Each phase was linked to a different bitplane according to its gray level using Gray Threshold (fig. 2).

The artifacts were removed using binary instructions (Fill, Trap, Chord Size, Invert, Opening, Disconnect, Boolean).

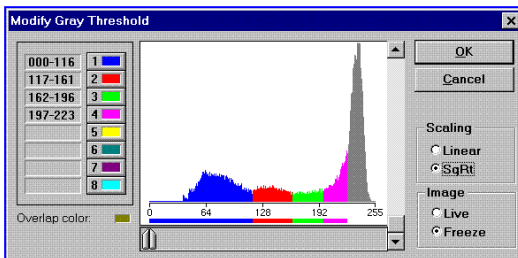


Figure 2: Gray Thresholding of the improved gray image.

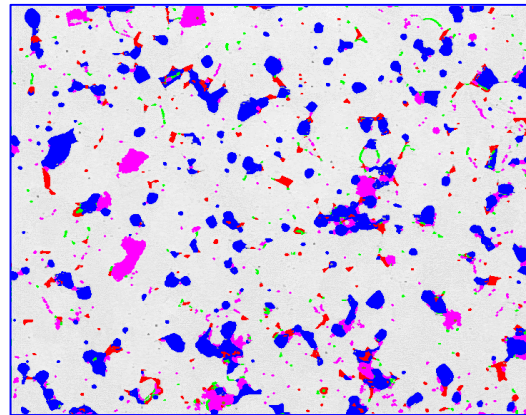


Figure 3: Final detected phases superimposed over the original image.

Results Summary

	Area %
Black	53.57
Dark Gray	11.67
Gray	6.71
Light Gray	28.43

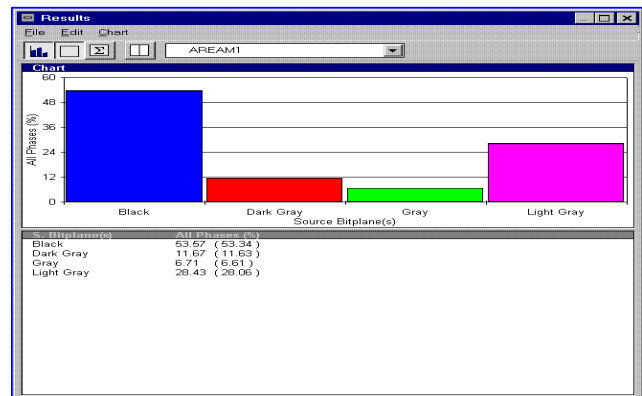


Figure 4: Area percentage of each phase compared to the field of view.

Equipment

Image Analysis

System: Clemex Vision SE
Camera: Sony XC-77 CE, B&W (728 x 574)
Microscope: Nikon Epiphot 200
Objective: Nikon 100x (Mag.: 1000x)
Motorized Stage: Marzhauser EK8B-S1