

Coating Thickness of Inconel Image Analysis Report 153

Sample Description

Mounted sample of coated Inconel.

Purpose of Analysis

To demonstrate the ability of the Clemex Image Analyzer to automatically discriminate and measure the thickness of a given sample. In this example the sample would be rejected should the minimum thickness fall below 200 microns.

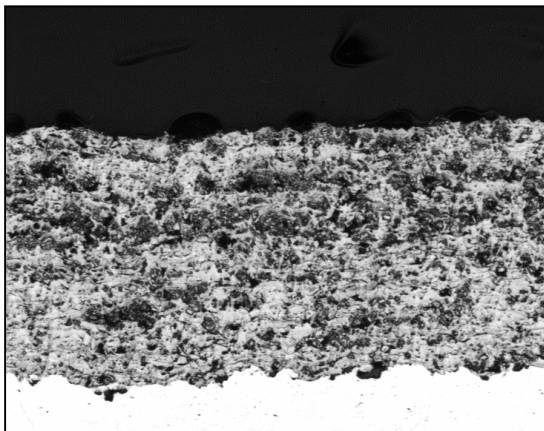


Figure 1: Original image (100X).

Procedure

Inclusions and dust particles were removed from the first coating binarization. Holes were filled and a grid was combined (Boolean AND) with the final coating detection. Measurements were performed on these lines to obtain a distribution of the coating thickness.

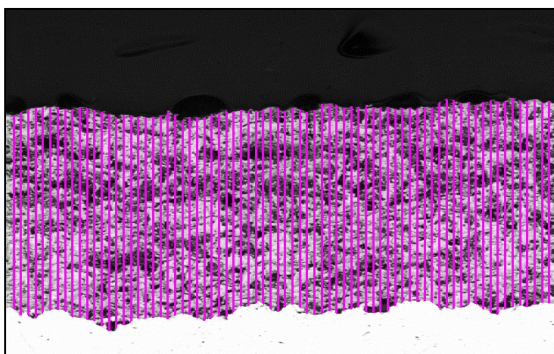


Figure 2: Measuring lines overlaid against the original image.

Results Summary

	Coating Thickness (microns)
Minimum	243.3
Maximum	477.7
Average	329.6
Standard Deviation	34.5

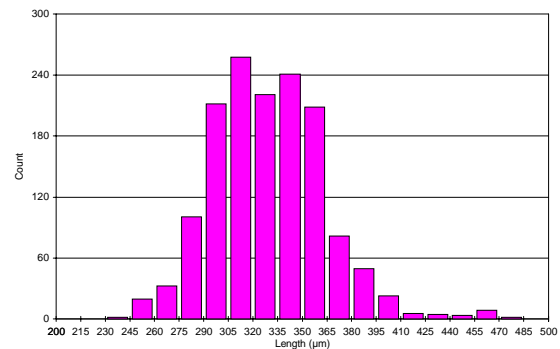


Figure 3: Length distribution of coating.

Equipment

Image Analysis

System: Clemex Vision SE
Camera: Sony XC 77CE, B/W
Microscope: Nikon Optiphot-2 (1.5, 5.0, 10, 20, 40X) with reflected light
Stage: Motorized marzhauser ek8b-s1 (100 x 100 mm) with auto focus drive