

Opening Measurement on a Sieve #270 mesh

Image Analysis Report # 378
Clemex Technologies

Sample Description

An image showing the a part of a sieve was submitted for analysis.

Purpose of Analysis

Demonstrate that the Clemex Vision image analysis system can measure the opening of the holes.

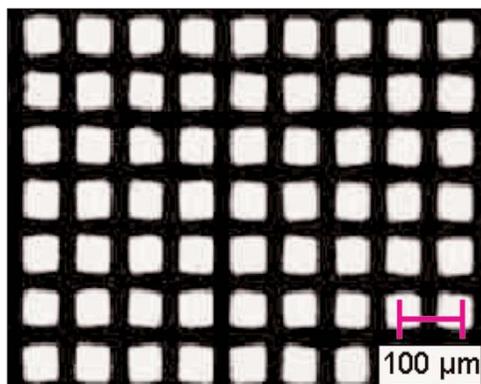


Figure 1: Original image (3.05 microns/pixel).

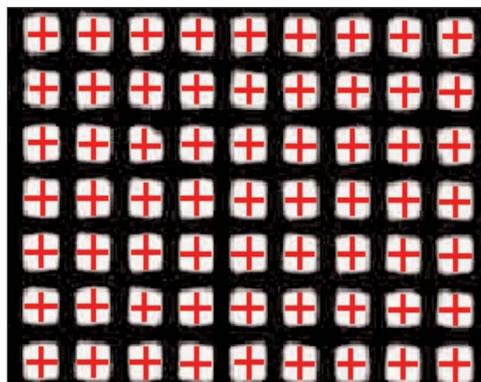


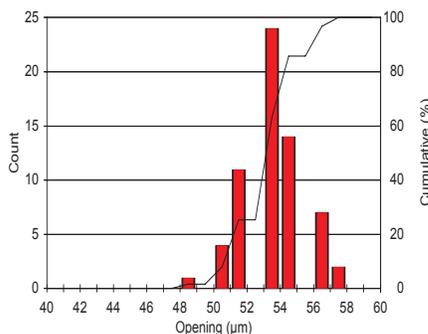
Figure 2: Cross representing the vertical and horizontal opening as measured.

Procedure

The sieve itself was binarized then inverted to obtain the holes. A centroid instruction followed by a vertical and a horizontal dilation created a centered cross for each hole. The intersections between the crosses and the holes are isolated to obtain final crosses of the perfect size.

Results

A custom measurement was created to obtain the average of vertical and horizontal hole dimensions. The “Opening” custom measurement, feret 0° and feret 90° were performed on each cross to obtain distributions. Automated statistics and graph were generated and would be cumulated if we were analyzing several images (sample). 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.



Minimum:	48.81	µm
Maximum:	57.97	µm
Mean:	53.68	µm
Std Dev.:	1.88	µm

Figure 3: Opening distribution and corresponding statistics.

Equipment

Image Analysis System:	Clemex Vision PE
Microscope:	Stereo zoom
Illumination:	Transmitted Light
Calibration:	3.05 microns/pixel

Discussion

Using image analysis to control sieve wear should always begin with a threshold adjustment over a new sieve, in order to correctly binarize the metal. The same routine under the same conditions when executed on worn sieves, will produce reliable results.

Results are reproducible.