

Seat Tracks Analysis - Direct Measures

Image Analysis Report # 516

Sample Description

Four seat track samples were submitted for analysis.

Purpose of Analysis

Demonstrate that the Clemex Vision Lite image analysis system can be used to perform direct measurements over the images representing the seat track samples.

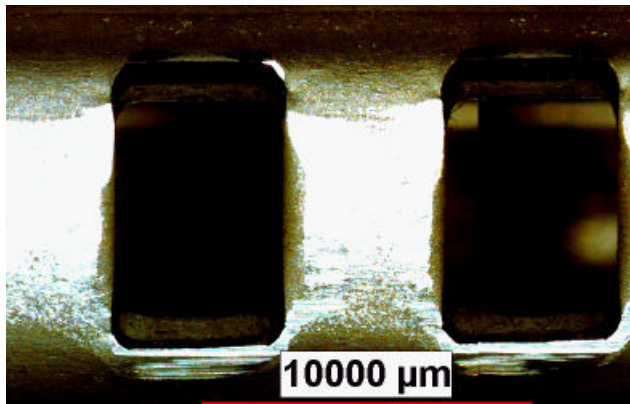


Figure 1: Part of the original 6x1 mosaic image (24 microns/pixel).

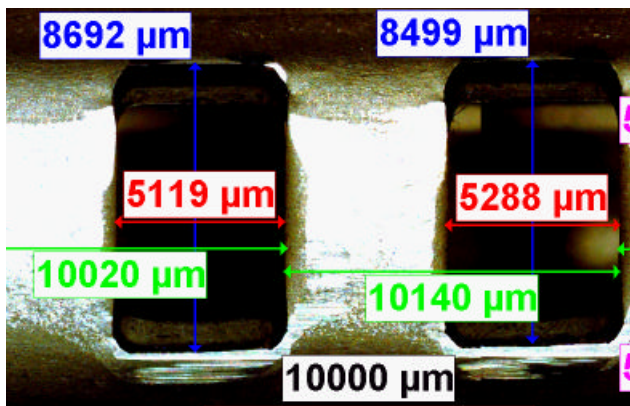


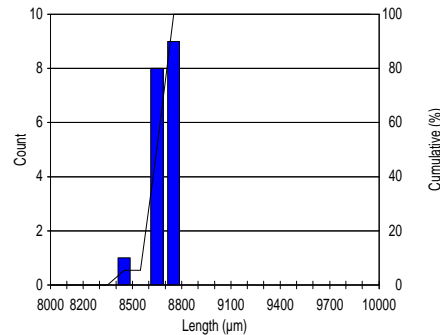
Figure 2: Direct Measurements applied over the original image.

Procedure

A 6 x 1 field mosaic was built to create an image that could include the whole sample without losing image resolution. Direct measurements can be performed during Pauses with messages that allow the user to use a specific tool for a specific measurement.

Results

Length, radius and angle measurements are performed depending on the selected tool (Line, Arc, Angle). Automated statistics and graphs are generated and would be cumulated if several images were analyzed. Final results can be printed directly from Clemex Vision. Raw data are linked to their respective objects for validation purposes. Raw data can also be exported in Excel format.



Minimum: 8498.96 microns
 Maximum: 8788.70 microns
 Mean: 8698.82 microns
 Std Dev.: 66.67 microns

Figure 3: Height distribution of holes and corresponding statistics.

Equipment

Image Analysis System:	Clemex Vision Lite
Stereoscope:	Leica MZ 12s
Magnification:	8x
Illumination:	Reflected Light
Calibration:	24.14 microns/pixel
Camera:	Clemex Dcam
Motorized Stage:	Marzhauser EK32IM 75x50mm
Stage Controller:	Clemex ST-2000

Discussion

The main difficulty of this analysis was to perform width measurements over the whole sample for 2 of the 4 available samples knowing they are larger than a field of view. This problem was overcome with mosaics.

From there, any direct measurement can be performed and processed the same as any other regular measurement.