

Thickness Measurement Image Analysis Report 206

Sample Description

A 3" diameter aluminum sample.

Purpose of Analysis

Demonstrate the ability of the Clemex image analyzer to discriminate a pencil mark and measure the thickness of the zone between this mark and the edge of the sample.

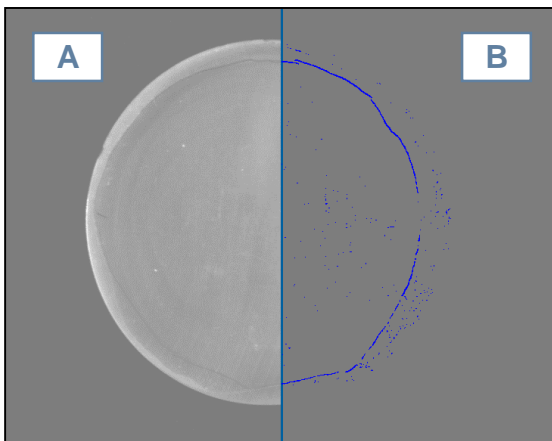


Figure 1: **a)** Original image. **b)** A gray modification (Top Hat on Black) allows the binarization of the pencil mark (in blue).

Procedure

Artifacts were removed (Trap) and a Pause Edit instruction allowed the user to draw some parts missing due to the pencil mark being lighter in some areas.

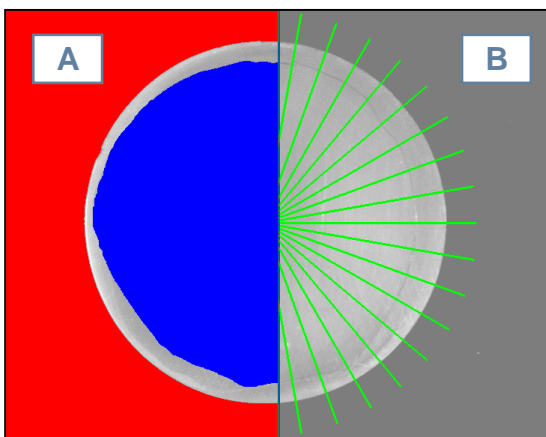


Figure 2: **a)** The circle was Filled and the background was binarized in red. **b)** The two previous bitplanes were combined (Boolean OR) and will be removed from the circular grid (Boolean AND, XOR).

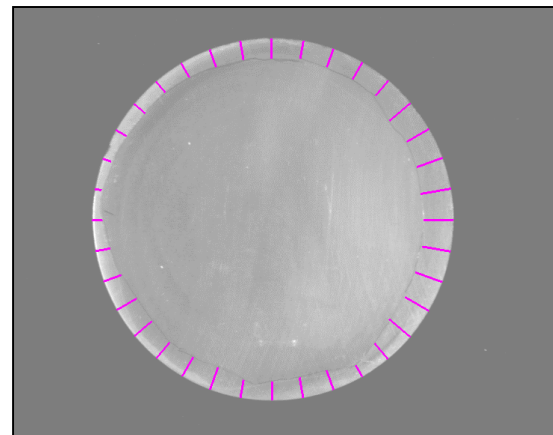


Figure 3: Resulting measuring lines deduced from the circle, the background and the circular grid.

Results Summary

	Length (mm)
Minimum	1.791
Maximum	6.811
Mean	4.383
Standard Deviation	1.257

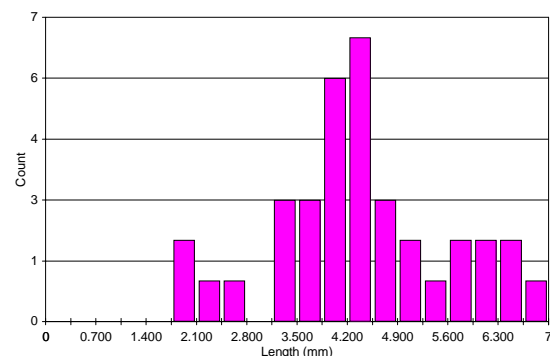


Figure 4: Length distribution of the measuring lines.

Equipment

Image Analysis System: Clemex Vision SE
Camera : Sony XC-77CE BW
Macro Stand: Kaiser (Germany)