WELDING ANALYSIS

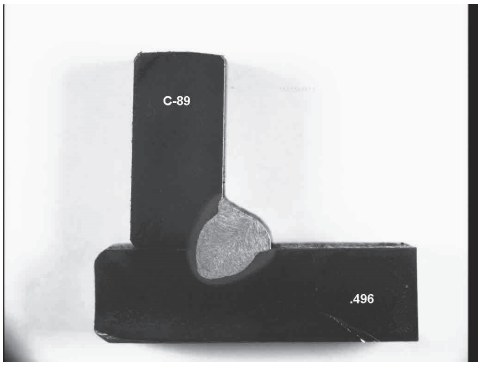

Figure 1: *Original image (10X).*

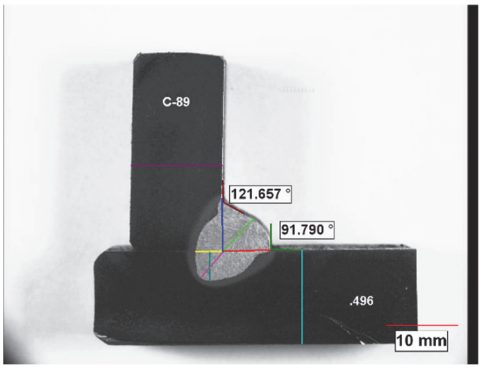

Figure 2: *Six typically measured characteristics on welded parts.*

Sample Description

One image showing a fillet welding is submitted for analysis.

Purpose of Analysis

Demonstrate the ability of the Clemex image analysis system can measure a sequence of specific characteristics on welded parts.

Procedure

The system loads an image showing each characteristic that have to be measured with a short explanation for each of them. The magnifier tool was switched on at 4x zoom. This tool zooms only the region surrounding the cursor allowing to increase the drawing precision while still seeing the whole sample. This is often more convenient than using the regular zoom which is applied on the whole image. When all characteristics have been addressed, the system measures them accordingly.

Equipment

Image Analysis System:	Clemex Captiva or Vision (PE & Lite)
Magnification:	10X
Illumination:	Reflected Light
Calibration:	6.4277 µm/pixel

Results

The angle and length measurements were performed on each drawn feature. Automated statistics and graph were generated and would be cumulated if analyzing several images inside the same run. Final results could be printed directly from Clemex Vision or Captiva, and saved for further use. A customized report was built using the Report Generator module, to conform to industrial standards. Raw data is linked to their respective objects for validation purposes. Raw date could also be exported in Excel format.

	Measured	Specification	Passed or Failed
Leg 1:	7.39	8.00	Pass
Leg 2:	6.68	8.00	Pass
Throat:	6.24	6.00	Failed
Root Penetration:	4.71	5.00	Pass
Penetration 1:	3.86	4.00	Pass
Penetration 2:	4.05	13.00	Pass
Material 1:	12.66	14.00	Pass
Material 2:	12.92	15.00	Pass
Angle 1:	121.66	115.00	Pass
Angle 2:	91.79	115.00	Failed

Figure 3: *Summary of the results.*