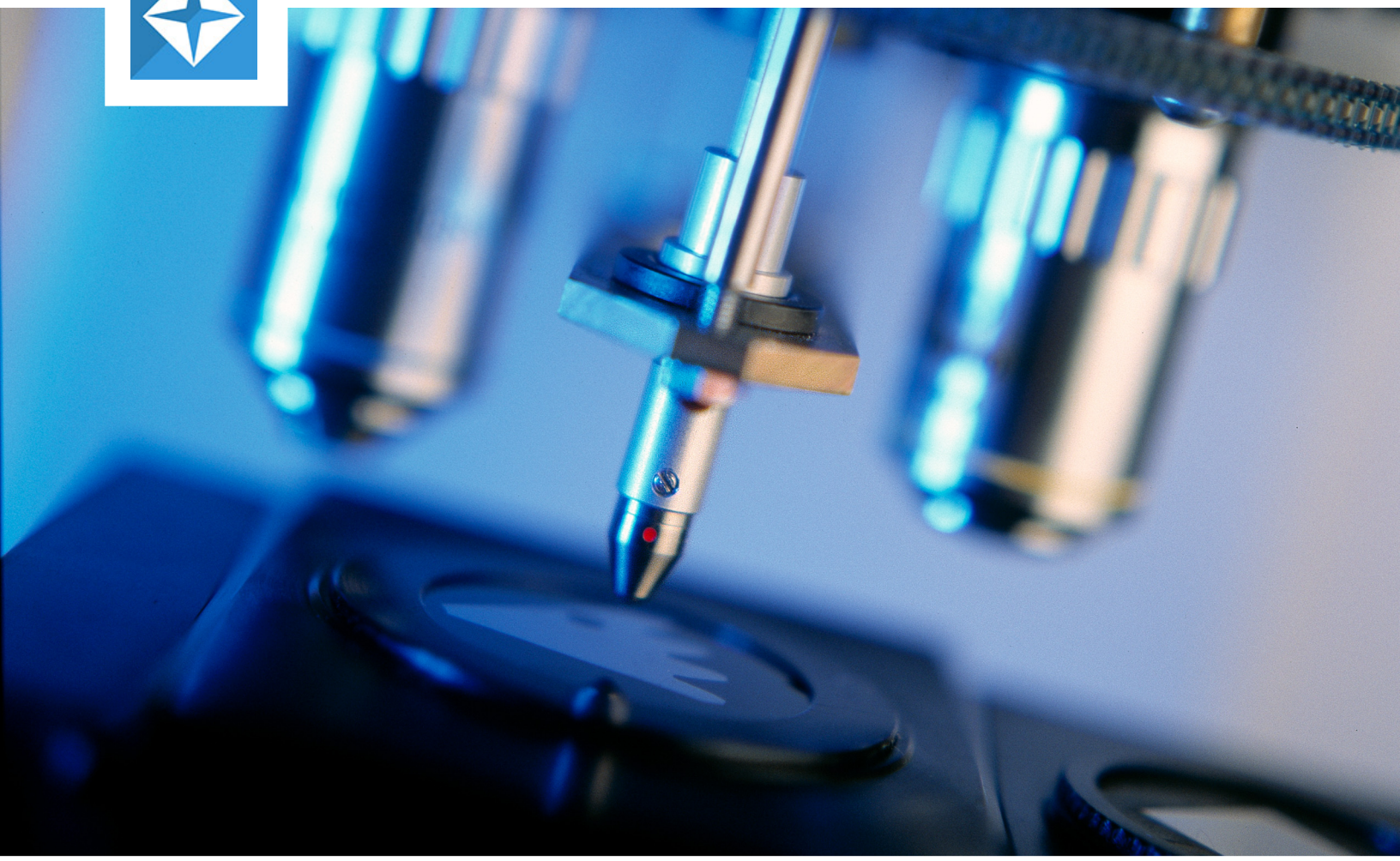
High definition in automated microhardness testing



CLEMEX CMT

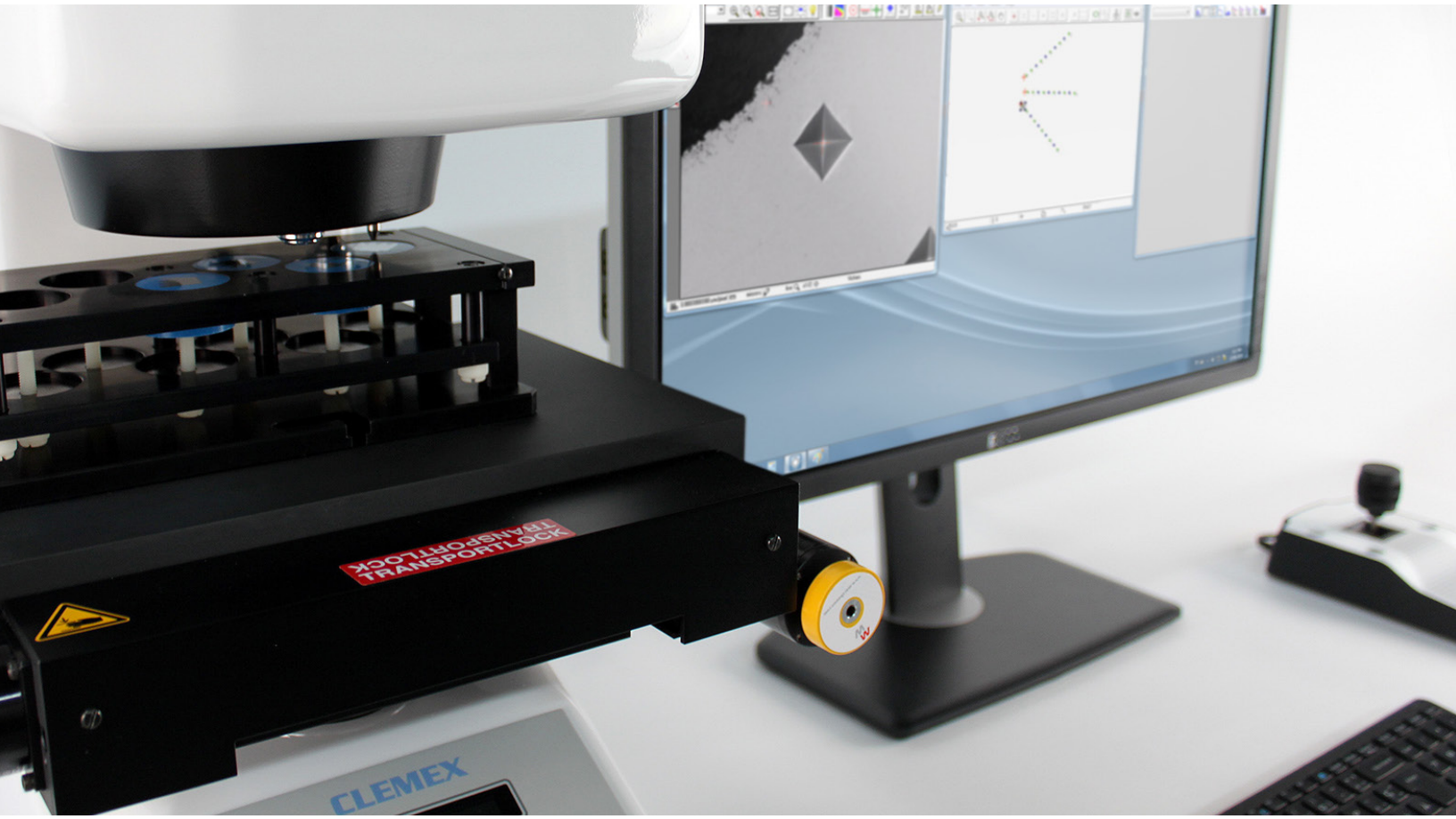
Automated hardness testing according to ASTM E384 and EN ISO 6507

Higher productivity

Auto-focusing and automatic measuring and reporting allow this system to function unattended for hours, thus increasing throughput and productivity.

Turn your tester into a microscope

Bundled with Clemex Vision Lite and its four modules, the tester can act as an image analysis system. Analyze phases, layer thickness, grain size and particle size.



Understanding your challenges

Accurate positioning of indents

With its macroview of the entire sample and its annotation tools, Clemex CMT enables you to position indents precisely where they are required.

Reproducible measurements

Thanks to its high definition camera, Clemex CMT can measure indents with unparalleled precision yielding results that are perfectly reproducible.

Fully automated analysis

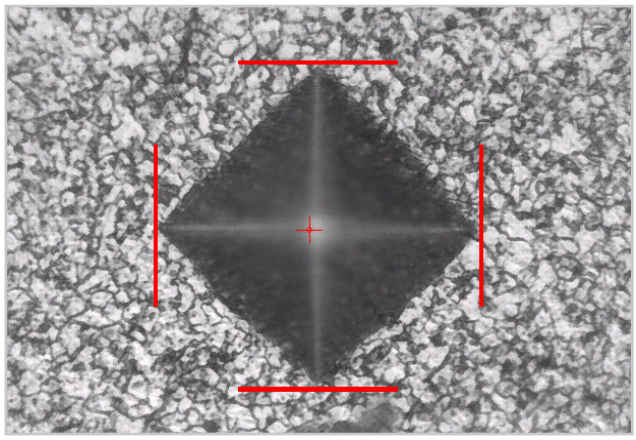
Clemex CMT combines ease-of-use, reliability, and auto-calibration, minimizing subjectivity associated with human intervention. Everything is automated, freeing users for other tasks.

More than hardness testing

Clemex CMT adds power to your tester by turning it into a fine-tuned image analysis solution able to analyze grain size, phase area percentage, coating thickness, and more.

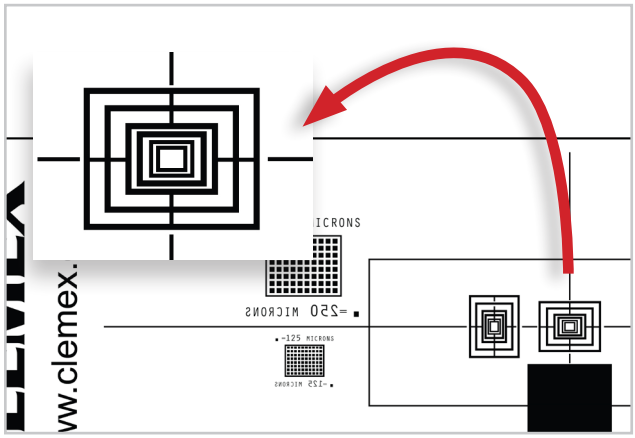
Fully automated microhardness testing

When you need a hardness testing solution that produces reliable, accurate, and repeatable test results, choose from the Clemex CMT line of macro and micro, single or dual, hardness testing solutions. These field proven systems offer unparalleled capabilities and are fully ASTM E 384 and DIN/ISO 6507 compliant.



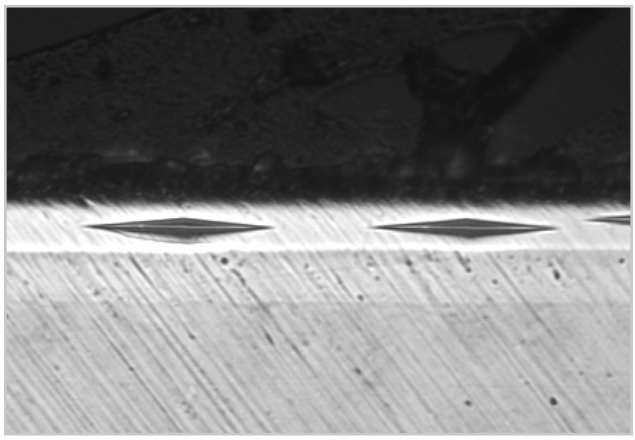
Auto-detection of indents on any sample

Using its unique auto-detection capabilities, Clemex CMT measures indents on any sample surface, from perfectly polished to rough and etched samples.



Reliability of results

Clemex CMT has a built-in validation function and uses dimensional calibration. Load is also applied using dead weights whose mass stays constant.

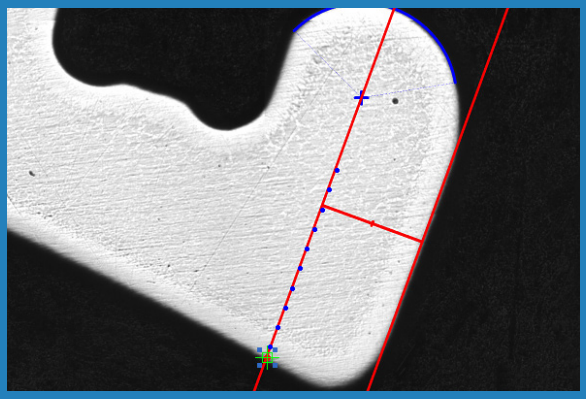


The highest image resolution

Clemex CMT acquires images with a high resolution camera. It produces the sharpest images and finest details ever, producing precise and repeatable results.

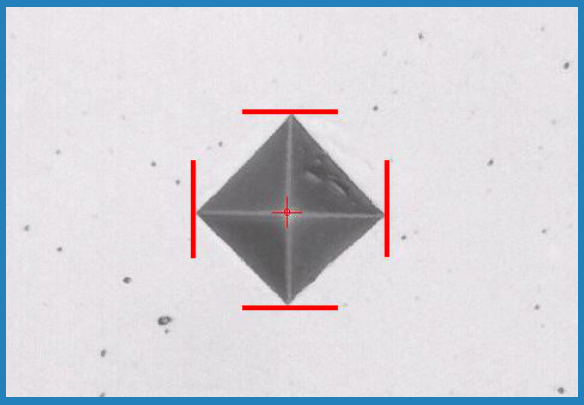
Microhardness testing in 3 easy steps

Clemex CMT is the top-of-the-line automated microhardness tester. With three easy steps, it provides added precision when positioning indents thanks to its integrated macroview technique and layout tools. By visualizing the complete sample, no matter the size, traverses and/or patterns can now be mapped-out with unequaled precision.



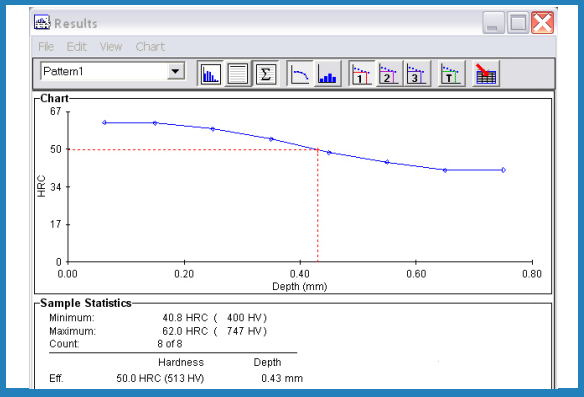
Step 1 - Traverses/Patterns

Open, modify, or create new traverses/ patterns using reference points or lines. Traverses and patterns can be individually adjusted.



Step 2 - Click and walk away

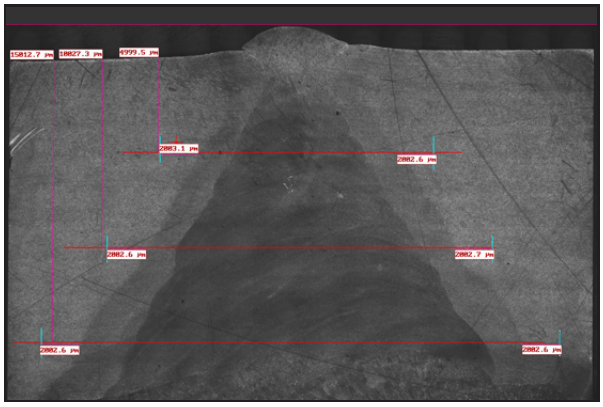
Clemex CMT intelligently follows the predefined patterns, indents the sample, focuses when needed, measures, and generates data dynamically.



Step 3 - Results

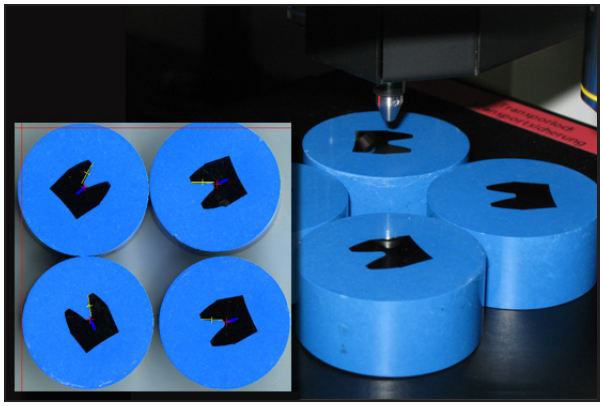
Review results in graphical and/or tabular format. Export results to the spreadsheet application of your choice, or simply print standard or customized reports.

Product Features



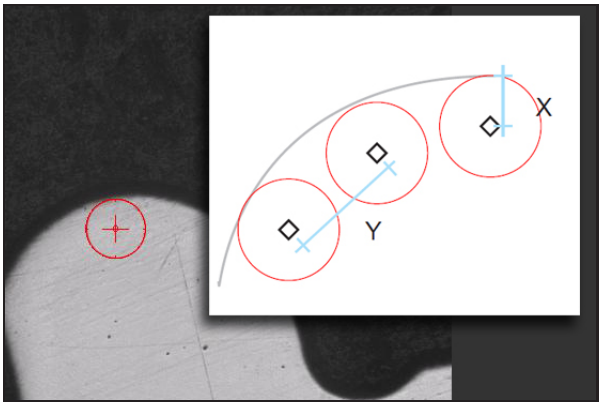
Annotation Tools

No matter how complex the pattern layout, annotation tools allow traverses and/or patterns to be positioned precisely where they are required. Annotation tools help in finding the center of the sample or drawing parallel lines.



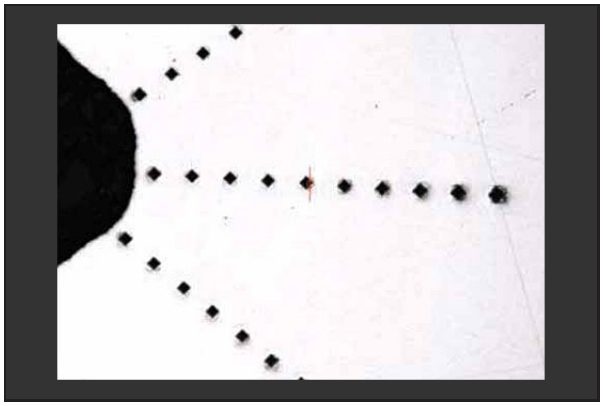
Macroview

Get a detailed image of the whole sample in seconds. These high-res marcroview images help see microstructural changes, heat-affected and heat-treated zones, and can be saved for later use in reports or archiving.



Reference Circle

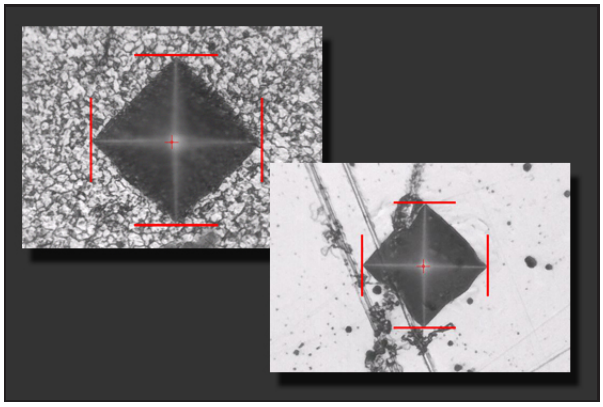
Ideal for irregular or curved samples. Position indents at precise distances from the sample's edge. Once a radius is specified, the distance between indents is determined by a Y value that resets when a field is added to the pattern.



Traverses Perpendicular to Edge

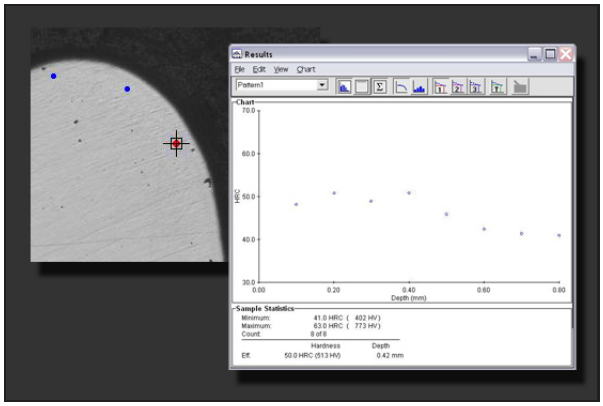
The T-Bar tool rotates traverses to any angle to ensure its perpendicularity with the sample's edge. Save, copy or paste traverses to predefined locations with a click of the mouse.

Product Features



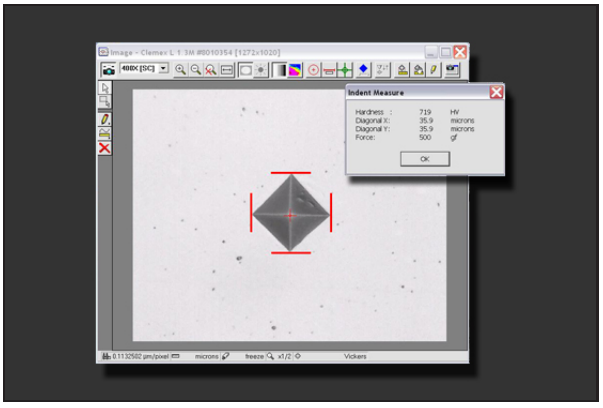
Auto Detection

From perfectly polished to rough and etched samples, the auto-detection capabilities of Clemex CMT allow measurements on a variety of sample surfaces.



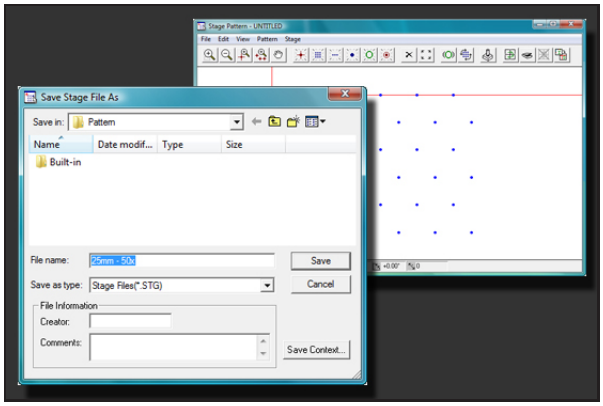
Free Run

This unique feature allows you to indent a sample anywhere at will, and obtain statistically relevant results. Simply position the sample, indent, click to measure, then go to the next spot on the sample. Measurements are automatically cumulated.



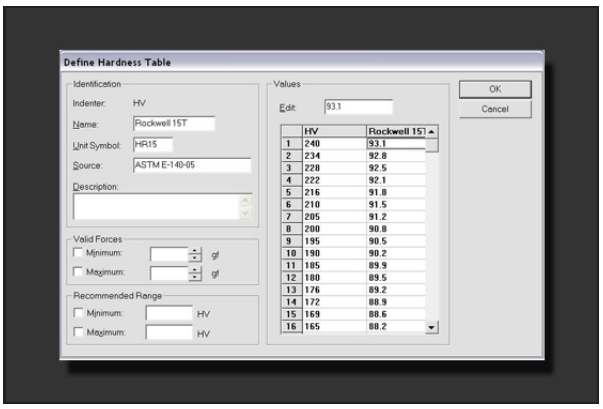
Measure from Tip to Tip

Indent diagonals are measured using dimensional calibration based on a high precision stage micrometer. This allows for precise results.



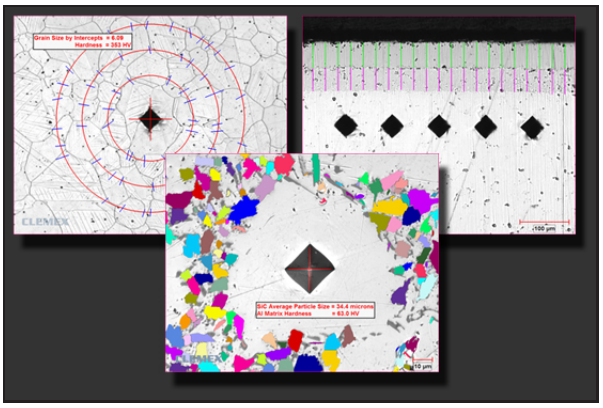
Save and Reload Traverses

No need to create the same pattern over and over again. This feature is extremely useful for users who analyze the same kind of areas repeatedly. Once a pattern has been created, you can save it and re-load it later to duplicate the analysis on a new sample.



Multiple Conversion Tables

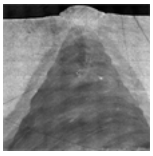
Native hardness measurements are in HV or HK. Conversion tables for HRA, HRB, and HRC scales are in compliance with ASTM E-140.



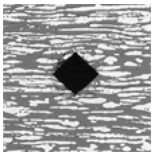
Quantitive Microscopy Instrument

Included with CMT is our versative Clemex Vision Lite software, allowing you to analyze phases, layer thickness, and grain or particle size.

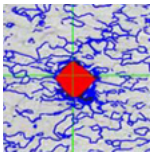
Related Web Reports



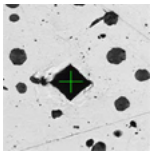
Micro-hardness testing of heat affected zones



Hardness testing and delta ferrite percent



Hardness testing and grain size measurement



Hardness testing and nodularity assessment

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