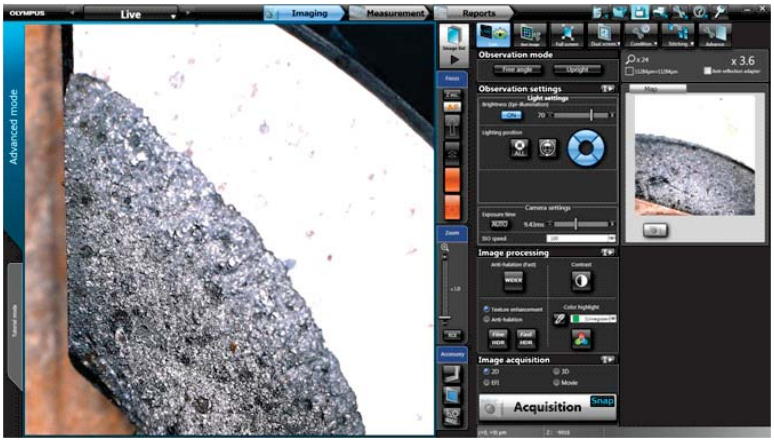
Fine Tuning Focus and Exposure on the DSX-Series Opto-Digital Microscope

LECO Corporation; Saint Joseph, Michigan USA
NOTE: Product available in USA only.

Olympus® DSX100

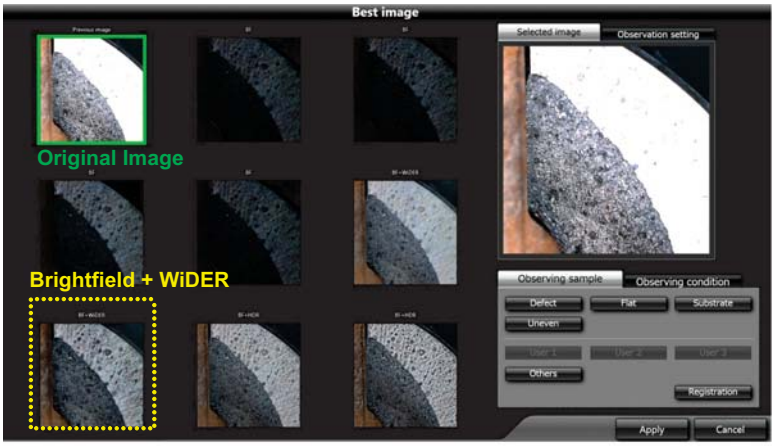
Examining a Failed Mold Cylinder

A fractured mold cylinder is placed under the DSX100 for examination. Because the top of the mold cylinder is highly polished, the light reflected off of it is somewhat overwhelming.



Using "Best Image" Feature

For this sample, the DSX's "Best Image" feature seems like a logical choice to automatically adjust the illumination for the clearest, most useful image. Pressing the "Uneven" button presents several Brightfield, Brightfield with WiDER and Brightfield with HDR images from which to choose. WiDER (Wide Dynamic Range) is a way to even out image illumination with very little frame rate reduction.



Capturing an Image Using EFI

The image is improved using WiDER, but there is still a focus issue. The area of interest is the fracture surface, which encompasses several focal planes, leaving the lower region extremely out of focus. This is an ideal opportunity to use the DSX100's Extended Focal Imaging (EFI) capability. When EFI is invoked, a series of images are automatically captured on a range of focal planes. The software then combines the focused pixels from each of these images into one "best of the best" image. The motorized head makes quick work of image capture and processing, with the whole process taking less than thirty seconds.

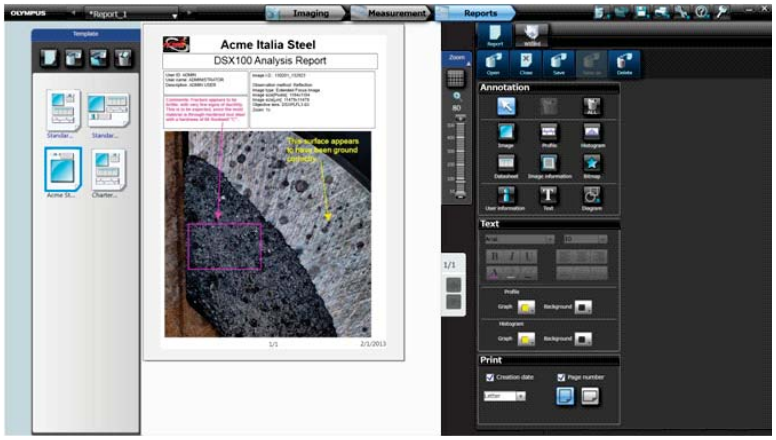
Metallographic Application Note

Delivering the Right Results

The image acquired using EFI is in focus from top to bottom.

Creating a DSX100 Report

One of the standard report templates can be used for automatically creating reports.



Custom templates can also be created which feature a company logo, special information, and annotations/drawings in a user-defined layout.

Reports can be generated as PDF files, or be exported to Excel in the Rich Text Format.

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