

AI Weld Metrology



WELDinspect
BpT CLARITY PRO™



Train the AI model to automatically measure and classify weld images as within specification or not with the optional AI module

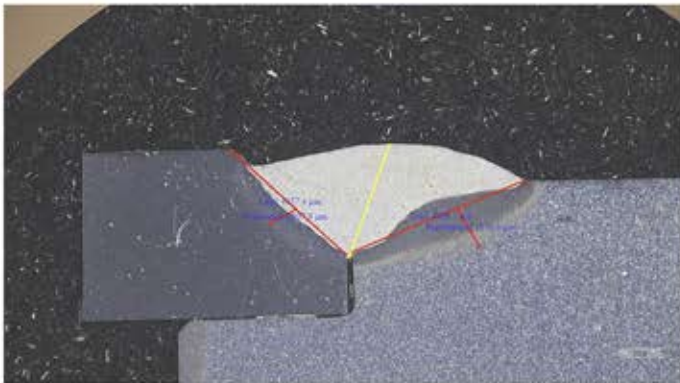
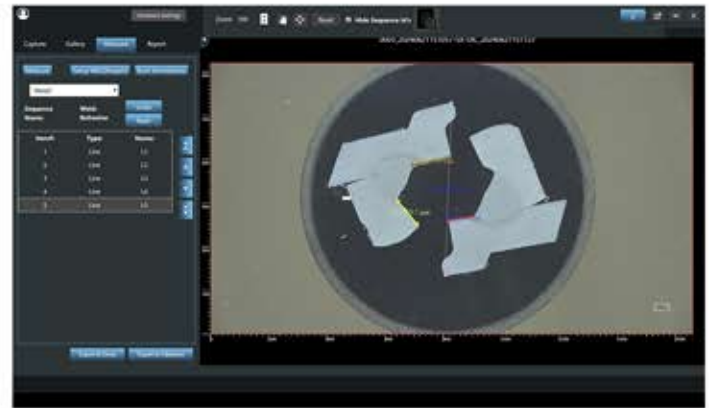
- **Data Preparation:** Use annotated images of data to train the AI model.
- **Model Training:** Automated routines assist in training models to identify specific defects such as porosity, undercut, incomplete fusion or overlap
- **Real-Time Detection:** As weld images are captured, the AI module can assess images simultaneously to speed up detection and classification of defects.
- **Custom Defect Categories:** Tailor the AI logic to meet your unique compliance standards
- **Continuous Improvement:** As more images are processed over time, the AI model continuously improves the accuracy and reliability of the analysis.



BPT Clarity Pro WELDinspect is a digital microscope system with an easy to use, dedicated welding workflow system to optimize high-volume metrology requirements. The software system is designed for the Inspectis DIM-U and DIM-F inverted weld inspection systems.

BPT Clarity Pro WELDinspect Features and Functions

- Presents a live image on the computer monitor
- Captures image of the weld



- Provides for an Image Overlay to compare the specimen to required standard
- Automatically performs linear and angle measurements crucial to quality welds

- Creates a report (individual image or batch), with the measurements annotated on the image



Your AI Metrology Company



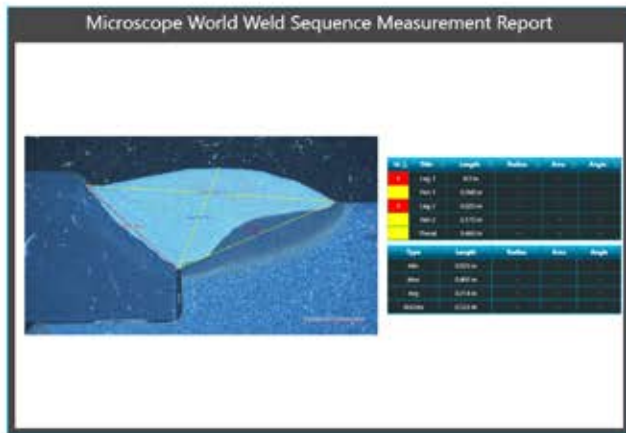
Sample



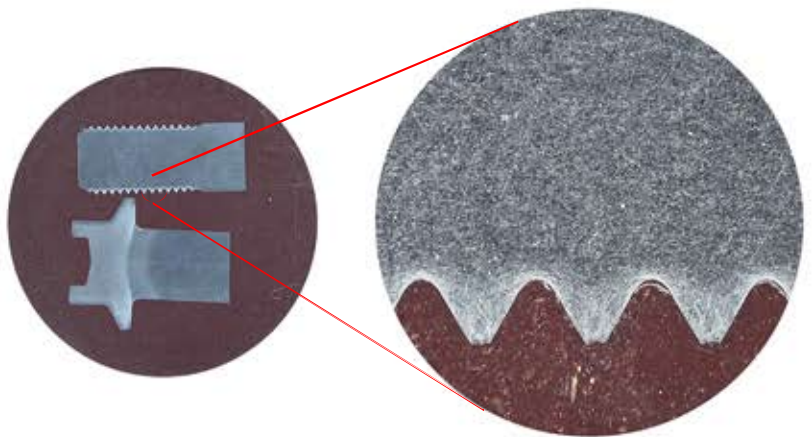
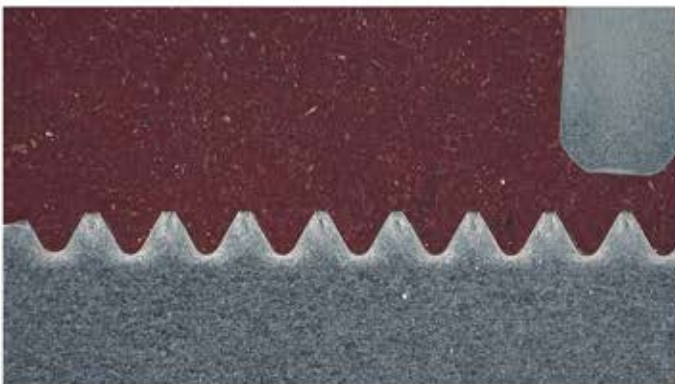
25x



35x



- The organization of the workflow is designed to make training easy, and facilitate consistent quality inspection that improves productivity and efficiency
- Flexible report formatting
- Easy sharing via intranet or internet with multi-user access
- Scalable and modular



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OPTICAL DATA

Model	Video Output	Zoom Range	Magnification On-screen	Magnification Optical	Field of View H [mm]	Field of View V [mm]	Calibrated Pixel Size [μm]
DIM-U	4K	x1 (min)	7.5 x	2.6 x	81.8	46.0	21.3
DIM-U	4K	x26 (max)	196 x	68 x	3.08	1.73	0.8
DIM-UX	4K	x1 (min)	10.9 x	3.8 x	55.7	31.3	14.5
DIM-UX	4K	x35 (max)	368 x	127 x	1.65	0.93	0.43
DIM-F	Full HD	x1 (min)	7.2 x	2.5 x	84.0	47.3	43.7
DIM-F	Full HD	x26 (max)	205 x	71 x	2.96	1.66	1.54
DIM-FX	Full HD	x1 (min)	11.2 x	3.9 x	54.3	30.5	28.3
DIM-FX	Full HD	x35 (max)	367 x	126.9 x	1.66	0.93	0.86

SYSTEM SPECIFICATIONS

FEATURE	SPECIFICATION
Video Output	DIM-U, Ultra HD with 2160p resolution at 30 fps; 8.5mp / 3840 x 2160 resolution; 16:9 format; progressive scan CMOS sensor; pixel size 1.62um x 1.62um.
Imager	DIM-F, HD 1080p at 60 fps; 2.3mp / 1920 x 1080 resolution; 16:9 format; progressive scan CMOS sensor; pixel size 2.5um x2.5um
I/O Ports	I/O ports: HDMI video output; 5P MiniDin power input; 8P MiniDin PC communication
Camera and Lens controls	Camera Controls: Zoom, Iris, Brightness, Focus, Contrast, Clarity, White Balance
Illumination	Illumination: LED ring light with diffuser; (optional) polarizing filter set
Storage/ Operating Environment	Temperature -20°C to +60°C; relative humidity 20-95%;

