*Inverted*

# METALLURGICAL MICROSCOPE

## MTX-41

www.multitek.in

**MULTITEK**
TECHNOLOGIES

# QUICK ANALYSIS FOR LARGE
# OR THICK SAMPLE MATERIALS

The MTX-41 inverted microscope is used for a wide range of applications often seen in the steel, automotive, electronics, and other manufacturing industries. The microscope enables users to inspect polished metals and cross-section samples simply by placing them upside down on the stage. The sample does not need to be leveled and can be thick, large, or heavy.
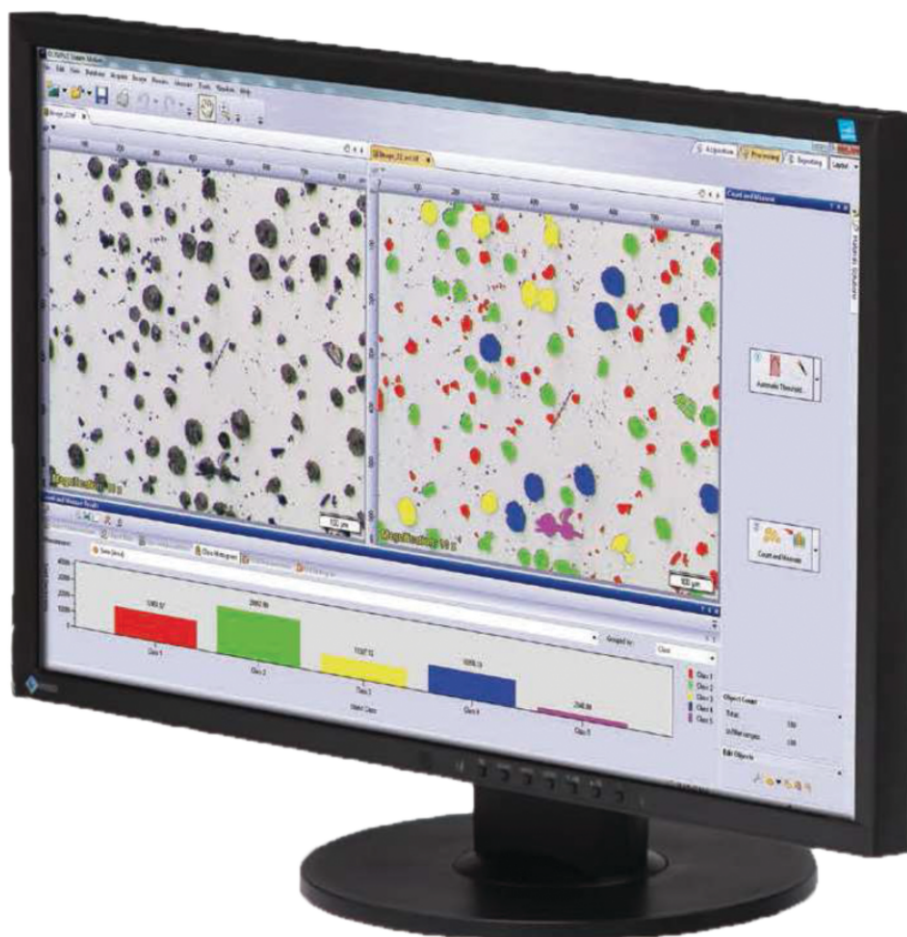




The MTX-41 delivers crisp images that can be difficult to capture using conventional microscopy observation methods. When combined with Multitek image analysis software, the microscope streamlines the inspection process from observation to image analysis and reporting.

# STREAMLINE YOUR INSPECTION PROCESS

## Fast Inspections, Advanced Functionality

Quickly observe, measure, and analyze metallurgical structures.

## User-Friendly

Even novice operators can comfortably make observations, analyze results, and create reports.

## Advanced Imaging Technology

Our proven optics and imaging technology deliver clear images and reliable results.

## Modular

Choose the components you need for your application.

**Ductile cast iron showing nodular graphite**



**Cast iron solution**

# EVALUATING GRAPHITE NODULARITY

The software can be used to evaluate the graphite nodularity and content in cast iron samples (nodular and vermicular). The form, distribution, and size of graphite nodes can be classified.
**Supported standards: ISO, NF, ASTM, KS, JIS, GB/T**
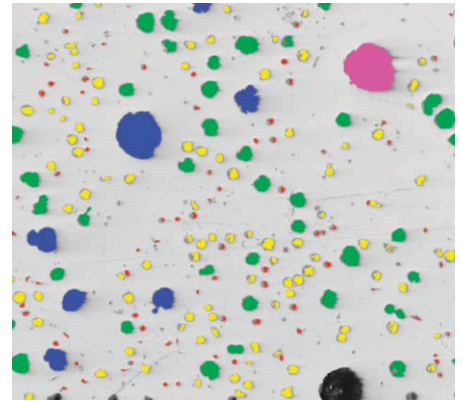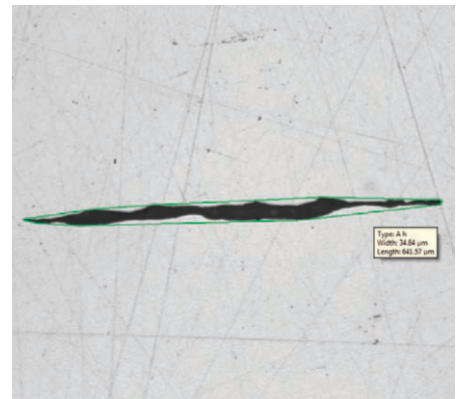
# RATING NONMETALLIC INCLUSION CONTENT IN HIGH-PURITY STEEL

Classify nonmetallic inclusions using an captured image of the worst field or inclusion that you have manually located on the sample.
**Supported standards: ISO, EN, ASTM, DIN, JIS, GB/T, UNI**



**Inclusion worst field solution**

# COMPARE IMAGES OF YOUR SAMPLE AND REFERENCE IMAGES

Easily compare live or still images with auto-scaled reference images. This solution includes reference images in accordance with various standards. The solution also supports multiple modes, including live overlay display and side-by-side comparison. Additional reference images can be purchased separately.
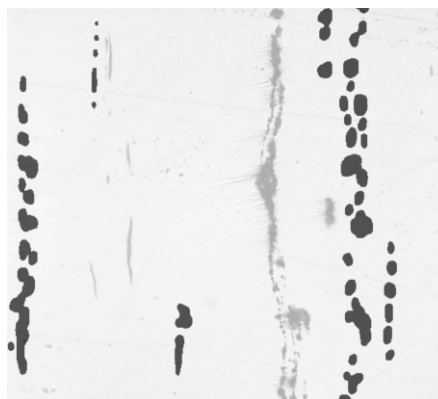**Supported standards: ISO, EN, ASTM, DIN, SEP**

**Microstructure with ferritic grains**



**Chart comparison solution**

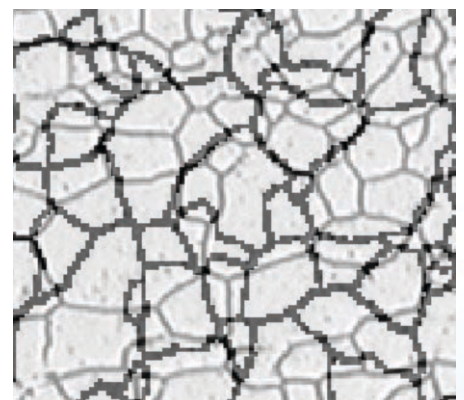**Steel with nonmetallic inclusions**



**Chart comparison solution**

# USER-FRIENDLY

## A Design That Emphasizes User Comfort

The microscope's ergonomic design helps users stay comfortable while they work, contributing to a more efficient inspection. When used with our software, operators can easily acquire images of diverse samples, conduct a variety of analyses, and generate professional reports.

### Observe large, heavy samples

Samples up to 5 kg can be inspected simply by placing the polished surface on the stage.

### Easily switch observation methods

The microscope supports brightfield, darkfield, differential interference contrast (DIC), and simple polarized light observations. Use a dedicated level to quickly switch between brightfield and darkfield. Add DIC simply by adding a slider.

### Instantly record observation images

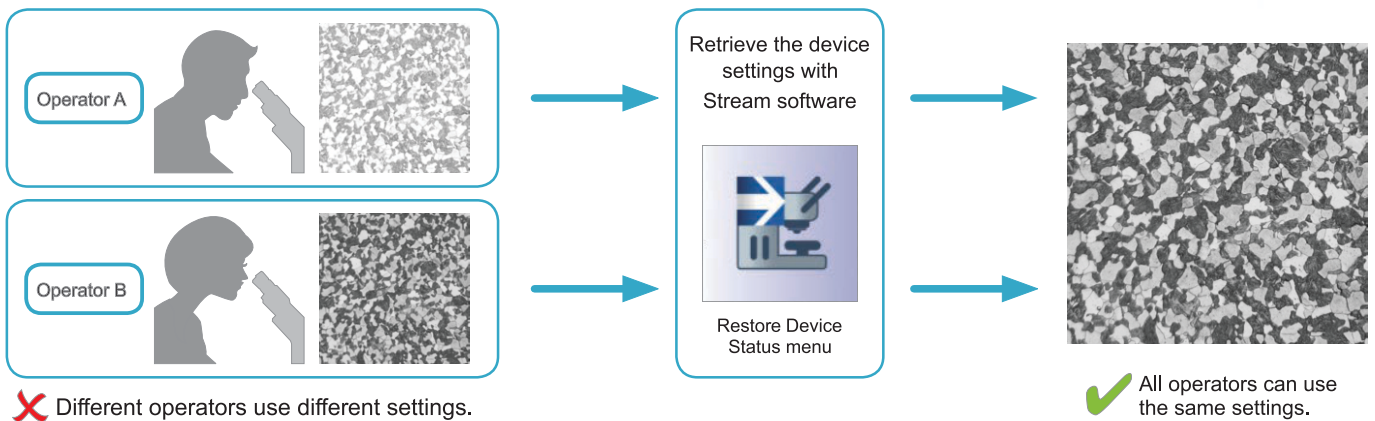With the touch of a button (optional), observed images can be instantly saved.

### Easily control the stage during observation

Use the dedicated handle to control the stage while you are looking through the eyepieces.

# EASILY RESTORE MICROSCOPE
## SETTINGS: Coded Hardware

Coded functions integrate the microscope's hardware settings with image analysis software. The observation method, illumination intensity, and magnification can be recorded by the software and stored with the associated images. Since the settings can easily be reproduced, different operators can conduct the same quality inspections with limited training.



Operator A

Operator B

✘ Different operators use different settings.

Retrieve the device settings with Stream software

Restore Device Status menu

✔ All operators can use the same settings.

# EFFICIENT REPORT GENERATION

Creating a report can often take longer than capturing the image and taking the measurements. our software provides intuitive report creation to repeatedly produce smart and sophisticated reports based on predefined templates. The software can be configured so that the magnification is printed along with individual images.



W Word

X Excel

P PowerPoint