KASON102-BW Trinocular Inverted Metallurgical Microscope

Infinity optical system
Brightfield--polarized observation
FMIA2023 genuine metallographic software
12 million pixel camera

1 9 YEARS

Development Base of Advanced Testing Machine Of China

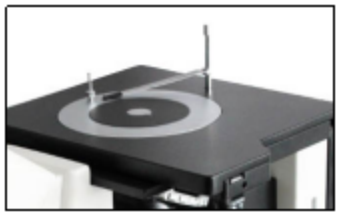
❖ KASON102-BW computerized metallographic microscope:

The KASON102-BW computer-based metallographic microscope is a trinocular inverted metallographic microscope. It adopts an excellent infinity optical system and a modular functional design concept. This machine has functions such as polarization and bright field observation. The compact, stable and highly rigid main body fully reflects the anti-vibration requirements for microscope operation. The ideal design that meets ergonomic requirements makes operation more convenient and comfortable, and the space is wider. It is suitable for microscopic observation of metallographic structure and surface morphology, and is an ideal instrument for metallurgy, mineralogy and precision engineering research.

observation system

The hinged binocular observation tube is tilted at 45°. There is no need to lower your head or look straight down for a long time during operation, effectively releasing the operator's neck and shoulders. The number of flat-field wide-angle eyepieces on the market can reach φ22mm, making visual observation wider and more comfortable, and can be adapted to rubber eyecups.

Mechanical stage



The mechanical moving stage has a built-in rotatable circular stage plate. The special-shaped observation window set in the plate is suitable for microscopic observation of samples of different specifications. The circular stage plate can be rotated during polarized observation to meet the needs of Requirements for polarized microscopy.

Professional semi-apochromatic metallographic objectives

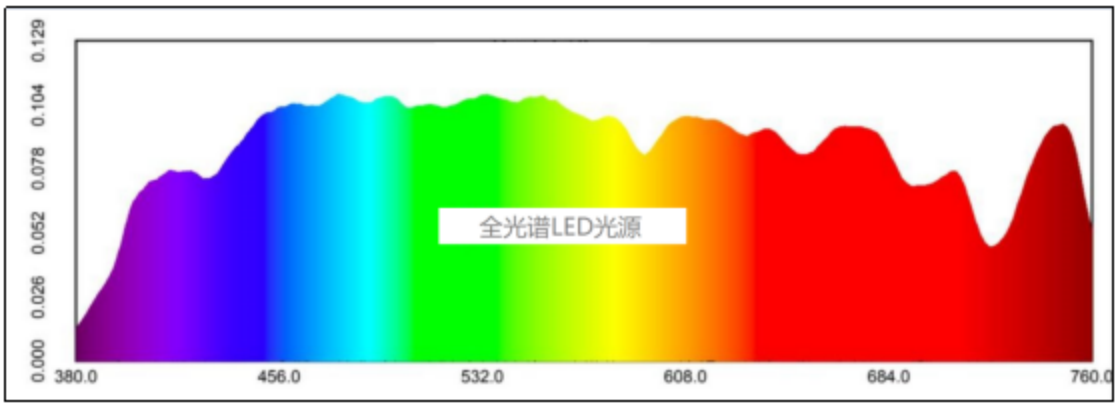
The objective lens strictly uses high transmittance lenses and advanced coating technology, which can truly restore the natural color of the sample. The semi-apochromatic objective lens design has excellent chromatic aberration correction performance, improving the contrast and clarity of the observed image.

Simple polarized observation

Insert the polarizer and analyzer into the designated position for simple polarized observation. Without moving the sample, it is convenient to observe the state of the sample under light with different polarization angles.

Full Spectrum LED Lighting

Full-spectrum LED wavelengths are 400nm-700nm , which can provide a wider spectral range, including all colors in natural light , achieving a more natural lighting effect and better showing all the organizational structures inside the metal . Compared with halogen light sources, full-spectrum LED lighting has longer life, delayed light wave attenuation, low power and low loss.



❖ KASON102-BW computer-based metallographic microscope configuration table:

Standard configuration		**Machine model**
part	Specification	KASON102-BW
Optical system	Infinity chromatic aberration correction optical system	■
Observation tube	Hinged binocular tube, 45° tilt; interpupillary distance adjustment range 53~75mm.	■
eyepiece	Flat field wide field eyepiece WF10X/22mm	■
Standard objective lens (infinity plan achromatic objective)	PL L10X/0.25 WD20.2mm	■
	PL L20X/0.40 WD8.8mm	■
	PL F L50X/0.7 5 WD3.68 mm (semi-complex objective lens)	■
	PL F L100X/0.85 WD 2.0 mm (semi-complex objective)	■
converter	Ball internal positioning five-hole adapter	■
Focusing mechanism	Coarse and micro motion coaxial focusing, with locking device, micro motion grid value: 2μm.	■
Stage	Mechanical moving stage, overall dimensions (242*200mm), moving range (30*30mm)	■
	Circular rotatable stage plate size : maximum outer diameter Φ130mm , minimum clear aperture less than 20mm.	■
Lighting system	Full spectrum 5W LED light source , preset center, adjustable brightness. With adjustable aperture diaphragm and field diaphragm .	■
Polarizing accessories	Analyzer group, polarizer group	■

color filter	Equipped with frosted glass, yellow, green and blue color filters	▪
Metallographic analysis system	FMIA202 3 genuine metallographic analysis software, 12 -megapixel Sony chip camera device, 0.65X adapter mirror interface, micrometer (equipped with: specifications 100x0.01mm, 100x0.01cm, calibration points d = 0.15mm, d = 0.07mm).	▪
Optional configuration		
Part	Specification	
eyepiece	Flat field large field of view differentiation eyepiece WF10X/22mm	O
Optional objective lens (infinity plan achromatic objective)	PL L5X/0.12 WD26.1mm	O
	PL L40X/0.60 WD3.98mm	O
	PL L60X/0.75 WD1.22mm	O
	PL L80X/0.80 WD1.25mm	O
computer	HP Business Jet	O

Note: " ▪ " is standard configuration; " O " is optional

FMIA2023 New Version of Metallographic Image Analysis Software

Overview:

The FMIA202 version 3 metallographic image analysis software system is designed by our company to improve the metallographic testing needs of casting companies, auto parts companies, heat treatment companies, bearing steel industries, power system industries, railway parts industries, and related testing companies. The product qualification rate helps improve the inspection level of each laboratory. We collected the needs and opinions of experts and teachers in various industries to develop this set of FMIA202 version 3 metallographic image analysis software system.

The national standard library of the software system contains about 700 commonly used sub-modules in 150 categories, basically covering commonly used metallographic standards and adapting to the metallographic analysis and inspection requirements of most units. Designate and open relevant categories according to the needs of different industries to meet industry testing requirements. All modules can be called for free for life, and standards can be upgraded for free for life.

In view of the continuous increase in new materials and imported grade materials, materials and evaluation standards that have not yet been entered in the software can be customized and entered.

Characteristic:

Software installation is more intuitive and concise

The new software installation, registration, calibration and boot mode are simple and clear, and can be completed through default prompts.

Genuine software assurance system

After the software is installed, first activate the genuine software, and then register the computer hardware ID to ensure customers' genuine rights and interests.

Demand standards can be customized

In addition to standard detection modules, special detection modules can be customized according to customer needs, such as corporate standards, special industry standards, etc.

Quick access to 7 major inspection categories

Statistics create 7 categories of quick entry: grain size, non-metallic inclusions, microstructure of steel, decarburization layer analysis, gray iron, ductile iron, carbon steel spheroidization, etc., plus a metallographic tutorial.

Report template can be modified

Report templates can be tailored for different businesses.

Genuine software can be upgraded

According to the National Standardization Committee standard implementation time, the software will be upgraded free of charge.

Applicable to a wide range of computer systems

This software can be installed and run under Windows 10 and Windows 11 .

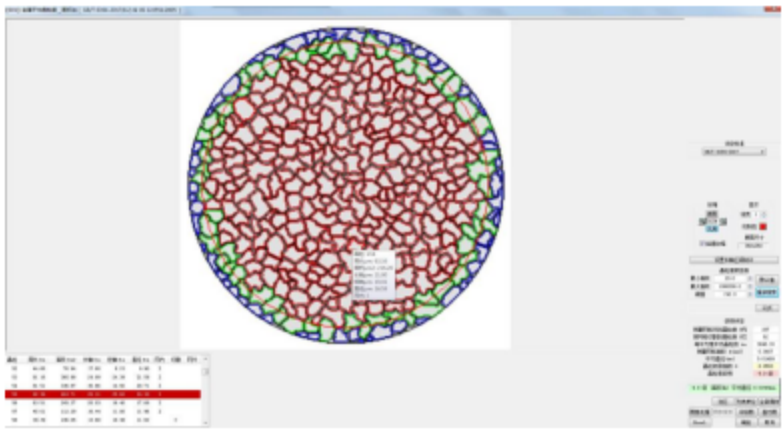
❖ The latest metallographic software standards :---Partial excerpts

GB/T 6394-2017 Grain size measurement and rating (grain boundary extraction, grain boundary reconstruction, single phase, dual phase, grain size measurement, rating)
GB/T 10561-2005/ISO 4967:1998 Determination of non-metallic inclusion content in steel
GB/T 7216-2009 Gray cast iron: graphite distribution shape, graphite length, number of pearlite, number of carbides, etc.
GB/T 9441-20 21 Ductile iron: nodularity rate, graphite size, number of pearlite, number of carbides, etc.
GB/T 26656-2011 Vermicular graphite cast iron: graphite morphology, creep rate, number of pearlite, number of phosphorus eutectic, number of carbides, etc.
GB/T 34891-2017 Rolling bearings_Technical conditions for heat treatment of high carbon chromium bearing steel parts
GB/T 1499.2-2018 Steel for reinforced concrete Part 2: Hot-rolled ribbed steel bars
GB/T 3246.1-2012 Structural inspection method of deformed aluminum and aluminum alloy products_Part 1_Microstructural inspection method
JB/T 1255-2014 Rolling bearing_Technical conditions for heat treatment of high carbon chromium bearing steel parts
QC/T 262-1999 Metallographic inspection of automobile carburized gears: martensite needle length, carbide, austenite rating, austenite content
TB/T2942.2-2018 Steel castings for rolling stock Part 2: Metallographic structure inspection chart.
DL/T 773-2016 Spheroidization rating standard for 12Cr1MoV steel used in thermal power plants_Spheroidized structure characteristics of ferrite plus pearlite
ISO 4499-2016 Cemented Carbide—Metallographic Determination of Microstructure
ASTM E45-2013 Evaluation method for inclusion content in steel
The national standard library contains about 700 commonly used sub-modules in 150 categories, basically covering commonly used metallographic standards and adapting to the requirements of most units for metallographic analysis and inspection; the software randomly releases about 120 commonly used sub-modules, and the others are Lifetime free upgrade call.

❖ basic skills:

1.organizational analysis

To correctly select the implementation standards of materials, capture and take pictures of the metallographic structure of the sample through the camera system of the metallographic microscope, and enter the assessment level interface:
1)Automatic grading: If there are quantitative standards in the metallographic standards (such as calculation formulas, percentage ranges, etc.), the software automatically grades, gives the metallographic grade, and generates a metallographic inspection report.
2)Comparative rating: The software can also compare the sample images with the images in the gallery to determine the grade manually.
3)Multi-module rating: multiple modules can be counted at the same time

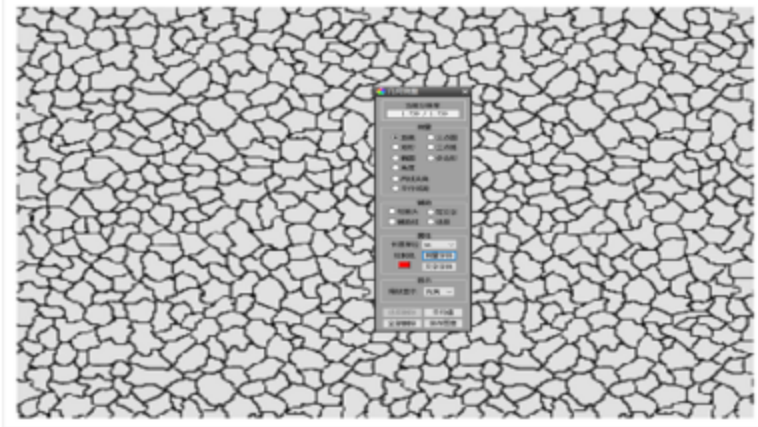


2. Image measurement :

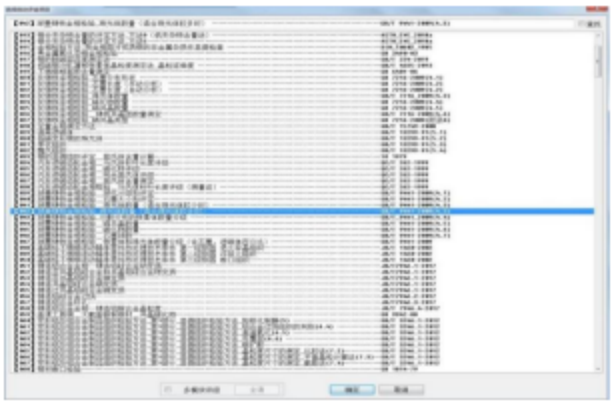
The software provides a variety of measurement tools such as distance, rectangle, circle, polygon, polyline length, angle, straight line angle, radian, point to circle center measurement, etc. to meet the user's basic geometric measurement functions and obtain relevant measurements. data.

1)Data export: After measurement, a special measurement report with pictures and texts can be generated, or it can be directly imported into EXCEL.

2)Save the image: The measured data can be automatically integrated with the picture to intuitively and clearly display the accuracy of the measured part.

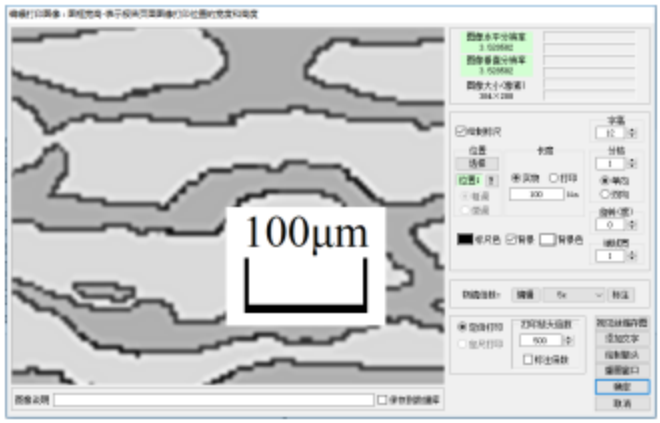


3. National standard library : The software provides the function of viewing the library, providing users with the latest national standard library.

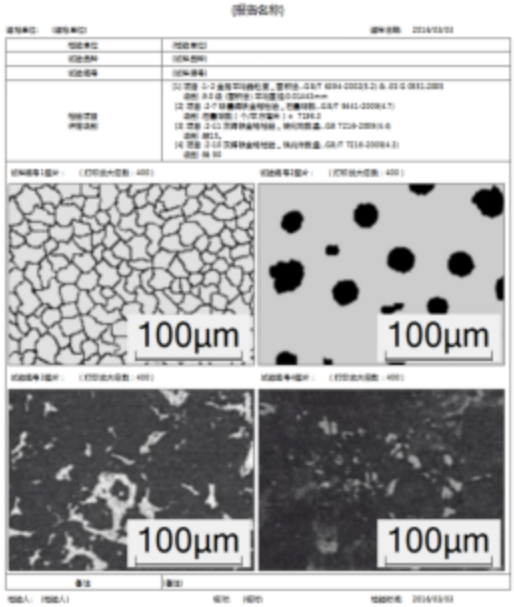


4. Fixed-magnification printing:

The software provides a fixed-magnification printing function. Users can print pictures at a fixed magnification according to the actual printing magnification requirements.



5、Inspection Report



❖ FMIA202 version 3 metallographic analysis software system consists of:

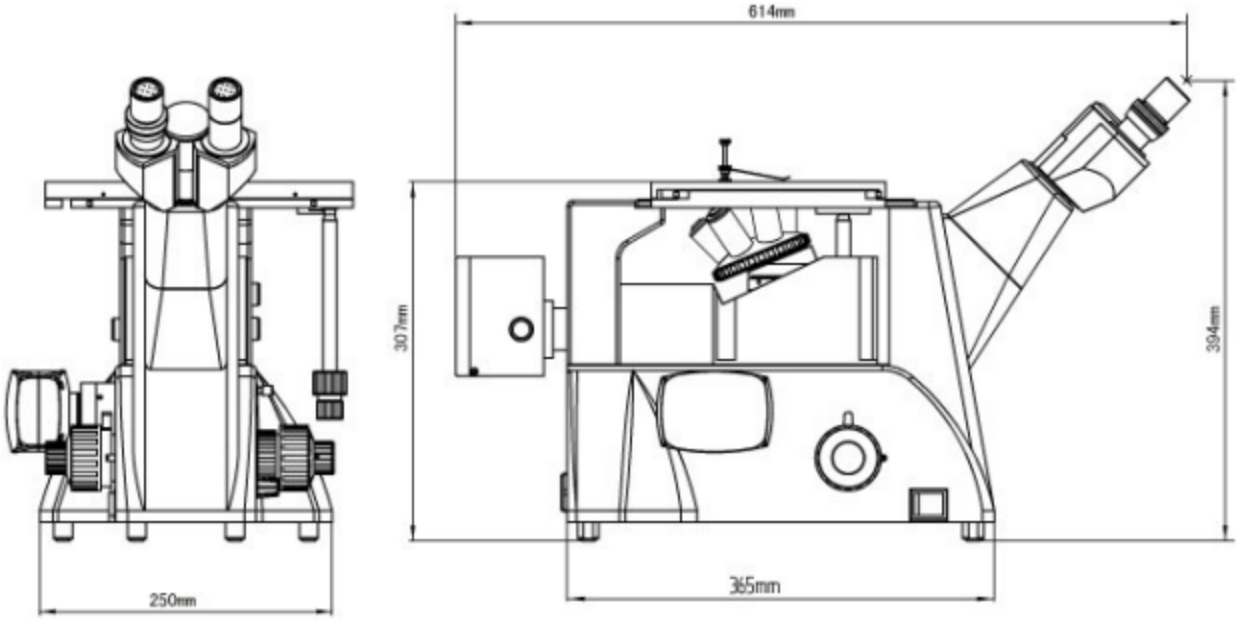
1、Software program FMIA202 3 (USB flash drive);

2、Encryption lock : USB type + dynamic code verification;

3、Text materials: "Instruction Manual" (on USB flash drive);

4、Micrometer scale : grid value 0.01mm .

❖ Dimensional drawing of KASON102-BW inverted metallographic microscope:



Why choose us!

KASON

19 YEARS

Professional focused on testing equipment

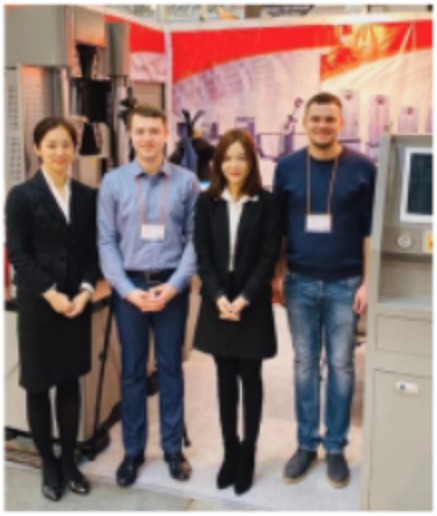
KASON is established in 2003,owns more than 8000 square meters factory.has a professional sales teams, modern enter prise technology center,scientific and technological research and development team.

Machines passed the European CE authentication,American FDA certificate and and ISO 9001.

Products sold to USA, Canada, Australia, Europe, Africa etc,more than 130 countries and supply OEM service for many customers

PROFESSIONAL TEAM

KASON has a professional sales teams, modern enter prise technology center,scientific and technological research and development team.



OUR CERTIFICATE (CE / ISO / SGS)

CE

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