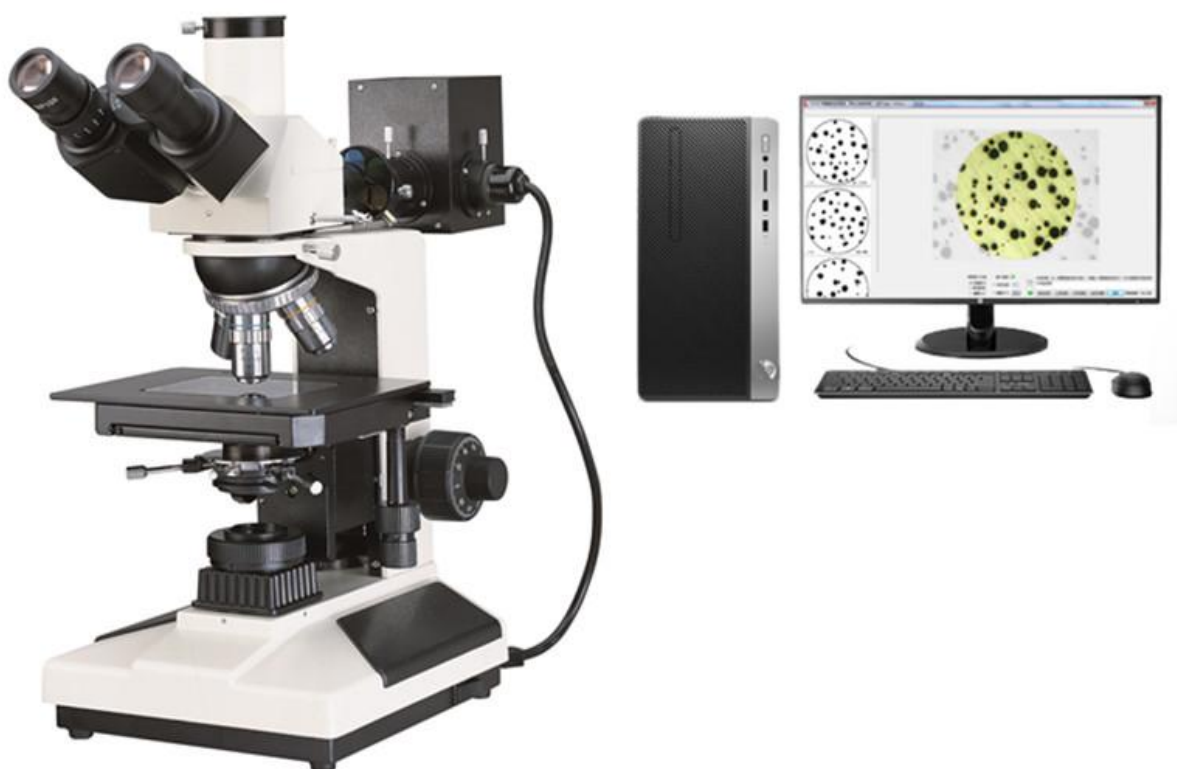


HST301-BW Trinocular Upright Multifunction Metallurgical Microscope



HST Group Co.,LTD.

Development Base of Advanced Testing Machine Of China

Introduction:

HST301-BW series reflected and transmitted metallurgical microscopes are suitable to observe surfaces of non-transparent object or transparent object. They are equipped with vertical illuminator and transmitted illuminator, plan achromatic objectives with long working distance(no cover glass), wide field eyepieces and set polarizer device in trinocular. They provide clear and high-contrast image, convenient control. They are the ideal instruments in research work in biology, metallography, mineralogy, precision engineering, electronics and etc. They are suitable for scientific research, teaching demonstration in the colleges and factory.

Features :

- ▲ With plan achromatic objectives with long working distance (no cover glass) and wide-field eyepieces, can get clear pictures and wide view field.
- ▲ Coaxial coarse/fine focus system, with tensional adjustable and up stop, minimum division of fine focusing: 2 μ m.
- ▲ With vertical illuminator and transmitted illuminator, can observe surfaces of non-transparent object or transparent object.
- ▲ 6V 20W halogen lamp, brightness control.
- ▲ Trinocular, can switch to observe normally or to observe the Polarize, can send 100% of light to the binocular eyepieces or to the top port.



Technical Parameter :

Model	HST301-BW
Eyepiece	Wide field WF10X(Φ 18mm)
Objective	Plan achromatic objectives with long working distance (no cover glass) PL 5X/0.12
	Plan achromatic objectives with long working distance (no cover glass) PL 10X/0.25
	Plan achromatic objectives with long working distance (no cover glass) PL 40X/0.60
	Plan achromatic objectives with long working distance (no cover glass) PL 60X/0.75(Spring)
Eyepieces tube	Trinocular, Inclination of 30°, (Analyzer with field diaphragm to switch)

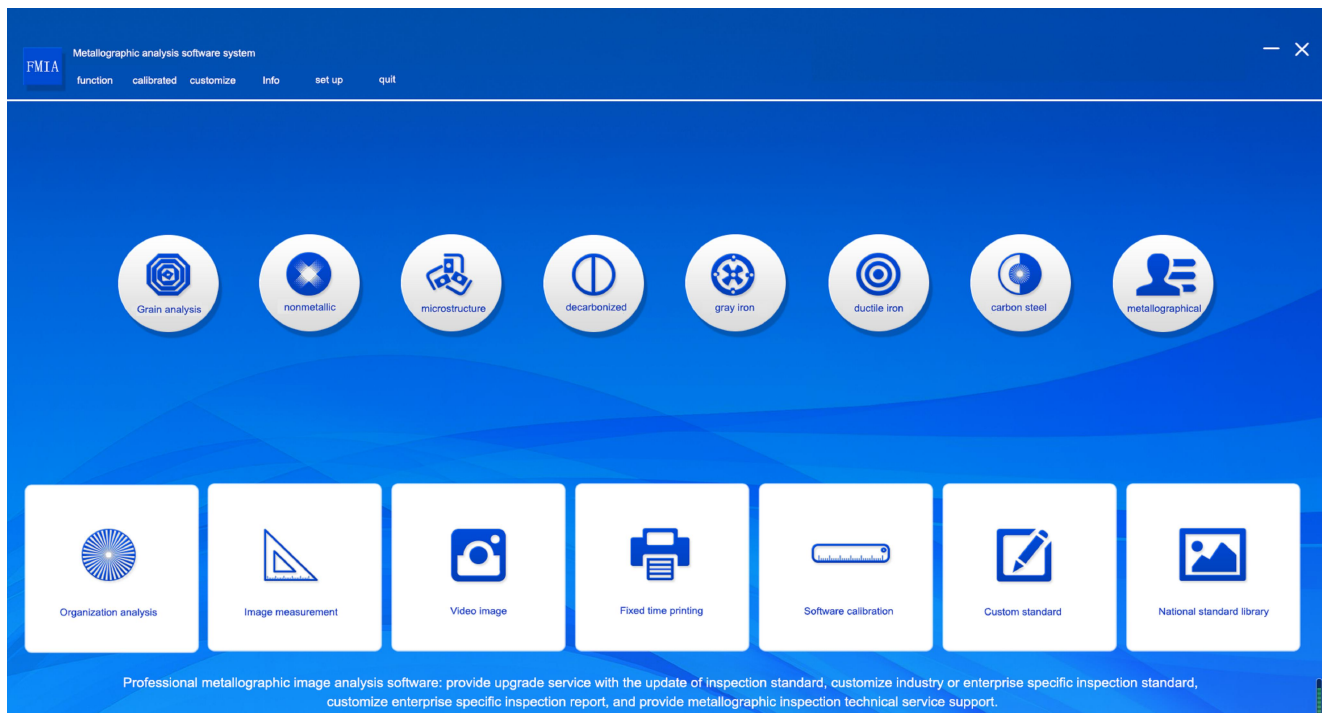
Vertical illumination unit	6V 20w, halogen lamp, brightness control.
	Vertical illumination with field diaphragm, aperture diaphragm and polarizer,(Y,B,G)filter and frosted filter
Focus system	Coaxial coarse/fine focus system, with tensional adjustable and up stop, minimum division of fine focusing: 2 μ m.
Nosepiece	Quadruple(Backward ball bearing inner locating)
Stage	Double layer mechanical (Size:185mmX140mm,movingrange:75mmX50mm)
Vertical illumination unit	Abbe condenser NA.1.25 Rack & pinion adjustable
	Blue filter and frosted filter
	Collector for halogen lamp
	6V 20w halogen lamp, brightness control.
Metallographic analysis system	FMIA2023 genuine metallographic analysis software, Sony chip 5 million camera device, 0.65X adapter mirror interface, high-precision micrometer (100x0.01mm, 100x0.01cm, calibration points: d = 0.15mm, d = 0.07 mm).

Metallographic image analysis software system

FMIA2023 version of metallographic image analysis software system, is our company combined with the current casting enterprises, auto parts enterprises, heat treatment enterprises, bearing steel industry, power system industry, railway parts industry, as well as the relevant testing companies for metallographic testing needs, improve the product pass rate, help the laboratory inspection level to improve, We collect the needs of experts and teachers in various industries and develop this set of FMIA2023 version of metallographic image analysis software system.

The national standard library of the software system contains about 700 commonly used submodules in 150 categories, which basically covers the commonly used metallographic standards and meets the requirements of the vast majority of metallographic analysis and inspection units. According to the needs of different industries, relevant categories are designated and opened to meet the requirements of industry testing. Free access to all modules for life, free upgrade standards for life.

In view of the increasing number of new materials and imported grade materials, materials and assessment standards that have not been entered in the software can be customized and entered.



Features:

- Software installation is more intuitive and concise

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

- Genuine Software Assurance System

After the software installation is completed, the original software activation is performed first, and then the computer hardware ID registration is performed to ensure the legitimate rights of the customer.

- Quick access to 7 inspection categories

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

- Demand standards can be customized

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

- The report template can be modified

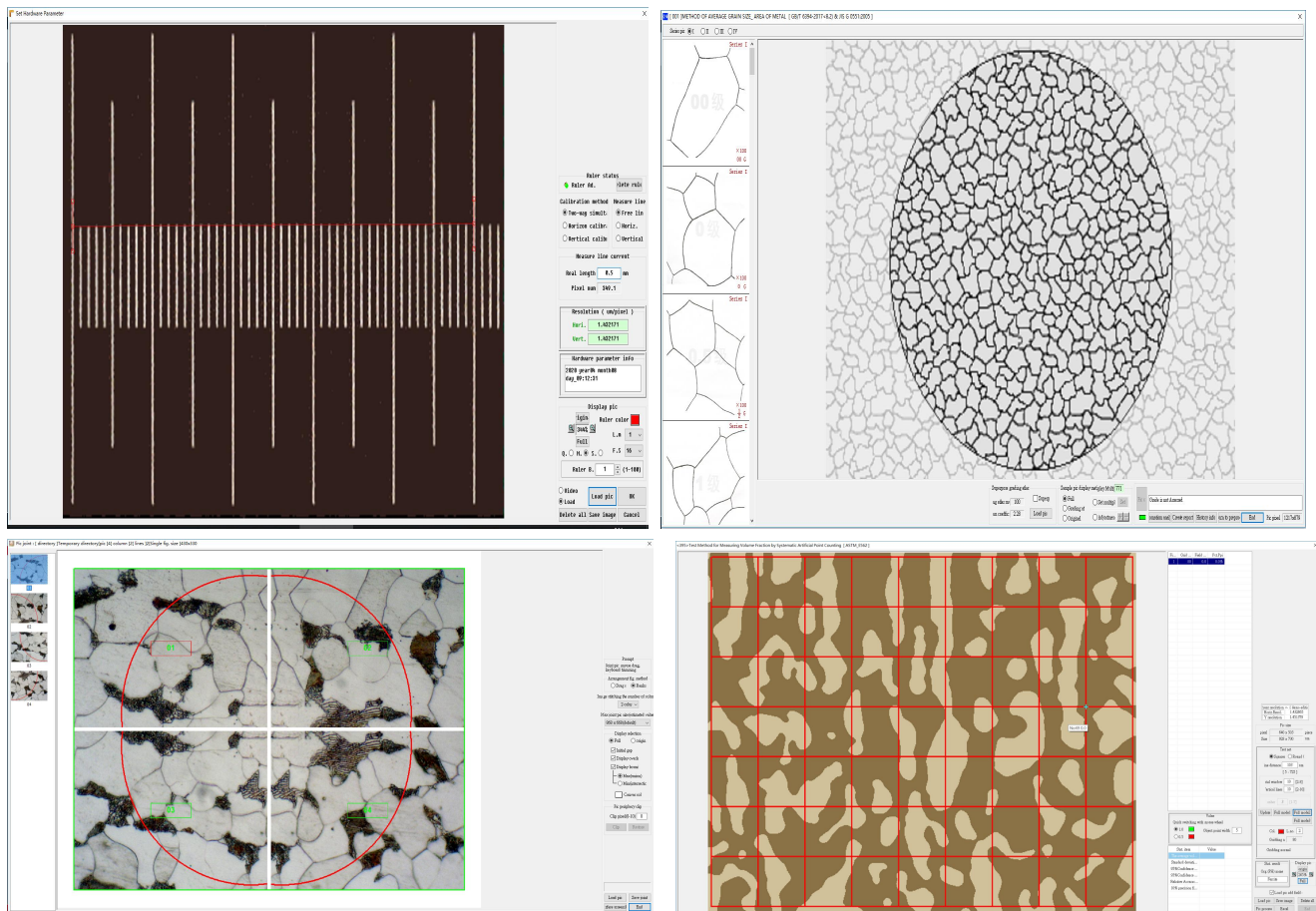
Report templates can be customized for different companies.

- Genuine software can be upgraded

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

- Wide application of computer systems

This software can be installed and run under Windows 7, Windows 10.



The latest metallographic software standard:---partial excerpt

- GB/T 6394-2017 Grain size measurement 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, pearlite quantity, carbide quantity, etc.
- GB/T 9441-2009 Ductile Iron: Spheroidization Rate, Graphite Size, Pearlite Quantity, Carbide Quantity, etc.
- GB/T 26656-2011 Vermicular graphite cast iron: graphite morphology, creep rate, pearlite quantity, phosphorus eutectic quantity, carbide quantity, etc.
- GB/T 18254-2016 Metallographic examination of high carbon chromium bearing steel
- 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 1299-2014 tool steel
- GB/T 3246.1-2012 Microstructural test methods for wrought aluminum and aluminum alloy products_Part 1_Microstructure test methods
- GB/T 13925-2010 cast high manganese steel: grades of undissolved carbides, grades of precipitated carbides, grades of superheated carbides
- JB/T 7946-2017 Metallography of cast aluminum alloys
- JB/T 1255-2014 Rolling bearings_Technical conditions for heat treatment of high carbon chromium bearing steel parts

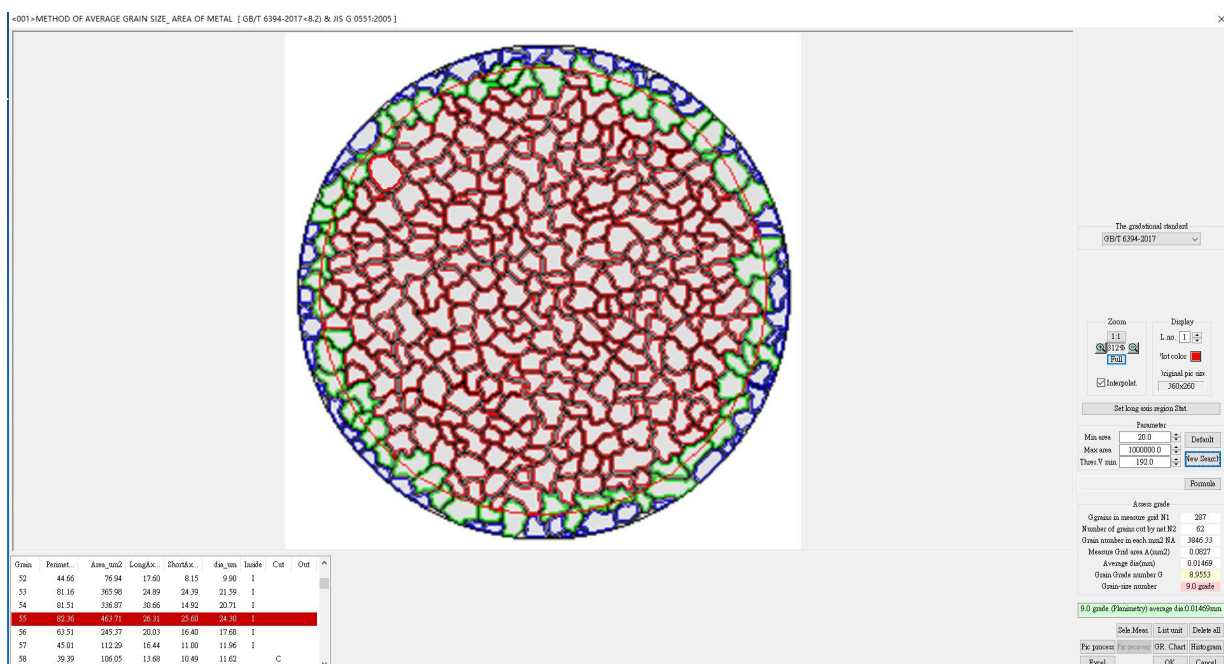
- JB/T 9986-2013 Tool Heat Treatment Metallographic Examination
- QC/T 262-1999 Metallographic examination of automobile carburized gears: martensite needle length, carbide, austenite rating, austenite content
- QC/T 502-1999 metallographic inspection of automobile induction hardening parts
- QC/T 553-2008 Metallographic Examination of Cast Aluminum Pistons for Automobile Engines
- TB/T2942.2-2018 Steel Castings for Locomotives and Rolling Stock Part II: Metallographic Examination Chart.
- TB/T 2478-1993 Metallographic Structure Grading Chart of Spring Bar
- TB/T 2451-1993 Metallographic examination of non-metallic inclusions in cast steel
- TB/T 2944-1999 Carbon steel forgings for railway
- DL/T 773-2016 Standard for spheroidization rating of 12Cr1MoV steel for thermal power plants_Characteristics of ferrite plus pearlite spheroidization
- DL/T 773-2016 Spheroidization rating standard for 12Cr1MoV steel for thermal power plants_Features of ferrite plus bainite or bainite spheroidization
- DL/T 1422-2015 18Cr-8Ni series austenitic stainless steel boiler tube microstructure aging rating standard
- ISO 4499-2016 Cemented carbide -- Metallographic determination of microstructure
- ASTM A262-2015 Test procedure for susceptibility to intergranular corrosion of austenitic stainless steel
- ASTM E45-2013 Evaluation method of inclusion content in steel

The national standard library contains about 700 commonly used sub-modules in 150 categories, basically covering the commonly used metallographic standards and meeting the requirements of metallographic analysis and inspection in most units; the software randomly releases about 120 commonly used sub-modules, and the others are all Lifetime free upgrade calls.

Basic skills:

1. Organization analysis

Correctly select the execution standard of the material, capture and take pictures of the metallographic structure of the sample through the camera system of the metallographic microscope, and enter the evaluation level interface:

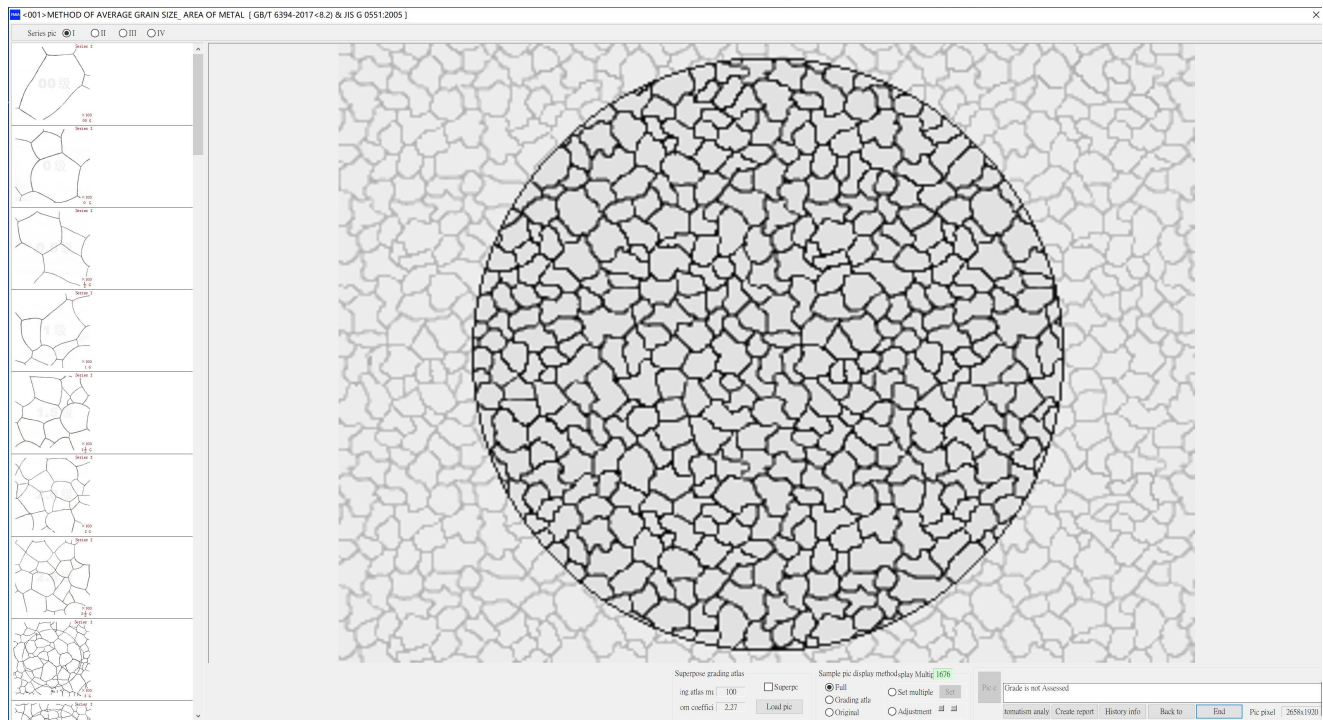


(1) Automatic grading: If there are quantitative standards in metallographic standards (such as calculation formulas, percentage ranges, etc.), the software automatically grades, gives metallographic grades, and generates metallographic inspection reports.

(2) Comparison and rating: The software can also compare the sample map with the map in the gallery, and manually determine the level.

(3) Multi-module rating: Multiple modules can be counted at the same time

2. Image measurement

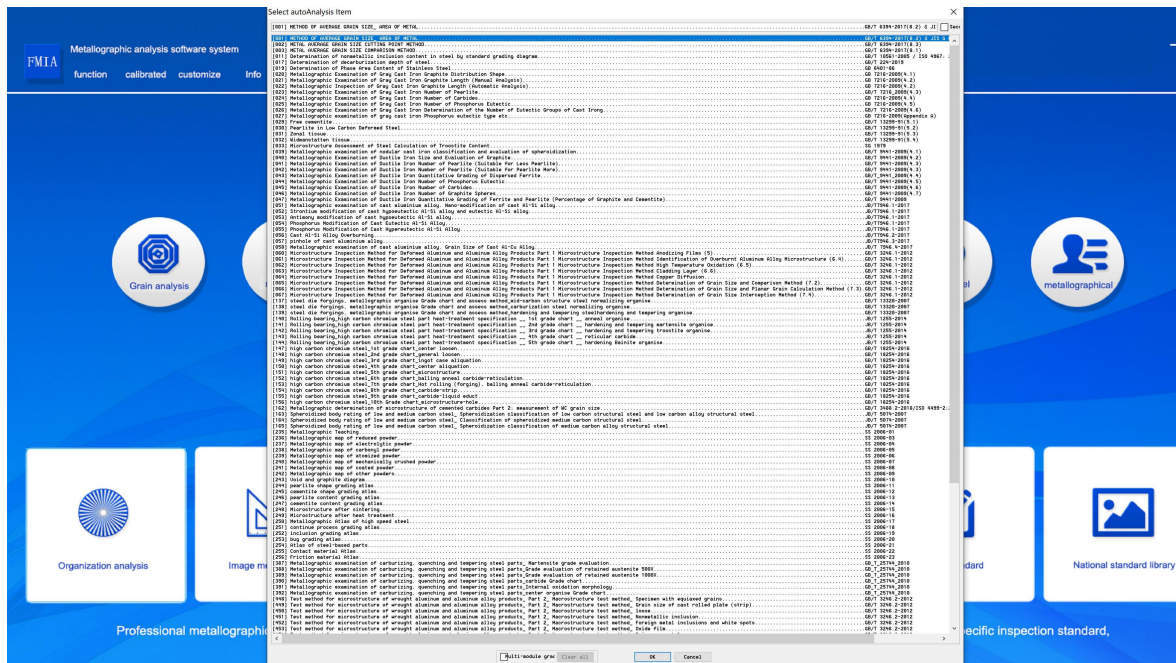


The software provides a variety of measurement tools such as distance, rectangle, circle, polygon, polyline length, angle, line angle, radian, point to circle center measurement, etc., to meet the user's basic geometric measurement functions and obtain relevant measurement data.

(1) Data export: The measured data can generate a dedicated measurement report with pictures and texts, and can also be directly imported into EXCEL.

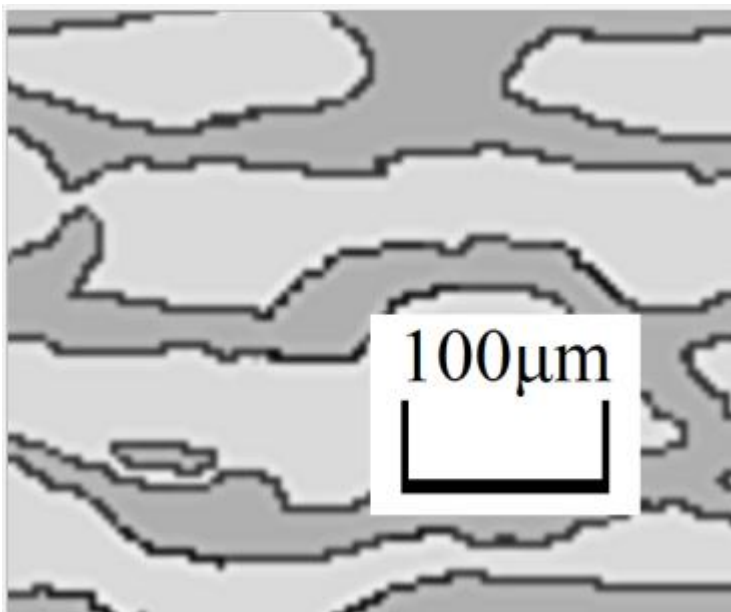
(2) Save the image: the measured data can be automatically fused with the picture, and the accuracy of the measured part can be displayed intuitively and clearly.

3. Standard library



The software provides the function of viewing the gallery, providing users with the latest national standard gallery.

4. Fixed-time printing (English)

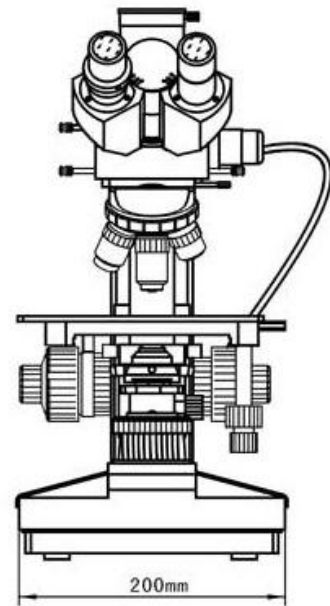
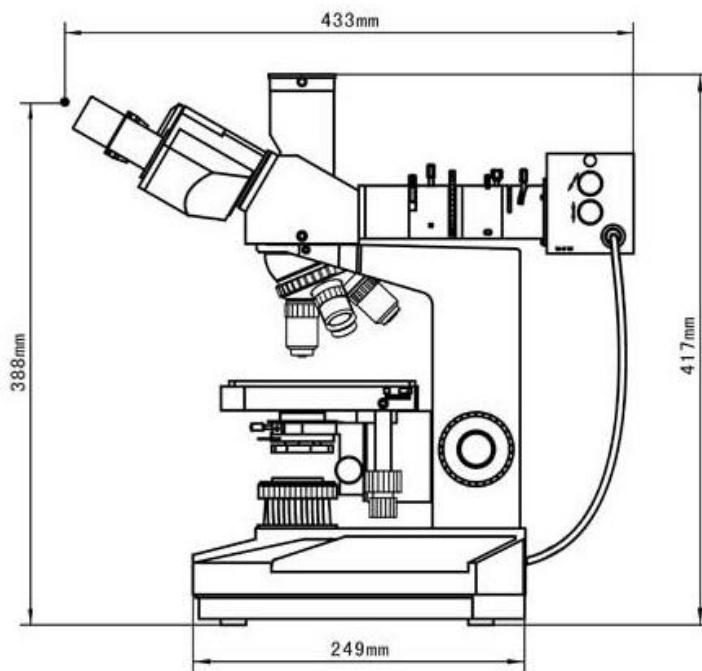


The software provides a fixed-time printing function, and users can realize fixed-time printing of pictures according to the actual printing multiple requirements.

5. Inspection report

Metallographic analysis software system composition:

1. Software program FMA2023 (U disk);
2. Dongle: USB type + dynamic code verification;
3. Text information: "Instruction Manual" (on the U disk);
4. 0.01mm micrometer ruler.

Size of microscope



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