

HST-HVS1000PC Integrated intelligent visual hardness tester



Application:

1. Iron and steel, non-ferrous metals, metal foils, hard alloys, metal sheets, microstructures
2. Carburizing, Nitriding and Decarburization Layers, Surface Hardening Layers, Plating, Coatings
3. Glass, wafers, ceramics

Function:

Integrated intelligent visual hardness tester, just need to operate a touch tablet computer to easily complete the measurement! And all the parameters required for the test can be directly selected, modified and analyzed on the computer. The PC terminal is connected with the hardness tester through communication protocol to control the mechanical moving parts of the hardness tester. It can realize: automatic multi-function tower position, automatic identification of objective lens and indenter, automatic loading, automatic load keeping, automatic unloading, and light brightness. By linking the built-in CCD measurement and acquisition system, clear indentation image dynamics can be displayed on the PC in real time, and the indentation can also be directly locked to automatically measure the hardness value, automatically save the test data, and generate a report. The operation is very simple and fast, eliminating man-made measurement errors. Integrated intelligent visual hardness tester, with tablet computer as the platform, can expand more application functions through the Internet, and can also be connected to external displays, printers and other devices. The side swing lifting screw adopts worm gear and worm structure, and the transmission is stable.

This machine is equipped with Vickers automatic measurement and control system: it can carry out

successive experiments of each loading and each reading of indentation. The ccd camera with convenient observation is adopted, and the indentation can be directly observed on the display. The measurement accuracy is high, and the manual measurement error is avoided. The set test conditions and display results can be operated and displayed clearly and quickly. Through the measurement control software, it is easy to operate on the built-in computer, and the single point measurement can randomly measure multiple points and make statistics of the measurement data. The distance between two points or multiple points can be arbitrarily set for the depth measurement of the infiltration layer. The measurement data can be measured and made statistics along the X or Y directions, and the hardened layer depth can be automatically calculated according to the judgment value entered by the user. Statistical calculation, conversion Display curve to judge whether it is qualified, etc. Save and print the graph of measurable part length, etc

Features:

1. Industrial tablet integration, USB expansion
2. Equipped with the latest Windows operating system,
3. Built in CCD image automatic measurement system
4. Visual display of indentation and automatic measurement of hardness
5. Dual screens can synchronously display real-time indentation, and can synchronously operate and automatically measure,
6. Automatically record the measurement data, generate the hardness depth curve, and save it as a WORD file

Software features:

1. Hardness tester control: the system provides serial communication to control the operation of the hardness tester, such as rotating objective lens, loading, setting load holding time, adjusting light brightness, and adjusting feedback of test force;
2. Automatic measurement: the system automatically measures the indentation, automatically draws the hardening curve, and updates the statistical results;
3. Manual measurement: the system provides manual measurement, including four point measurement and diagonal measurement;
4. Hardness value conversion, correction and effective verification: the system can simultaneously convert the measured micro Vickers hardness value to other multiple hardness scales such as HB, HR, etc; The measured value of the spherical cylinder sample can be corrected; The measured value of the sample can be effectively verified;
5. Data statistics: automatically calculate the average value, variance, Cp, Cpk and other statistical values of measured hardness, and automatically save them;
6. Data storage: single measurement data and images can be saved in a file for later retrieval, and can be automatically saved;
7. Test report: automatically generate WORD or EXCEL document reports; The user can customize the report format; The standard format includes each single hardness measurement value, statistical value, indentation image, and hardening curve;
8. Knoop hardness: Knoop hardness measurement can be set;
9. Fracture toughness: it can be set to measure indentation fracture toughness;
10. Other functions: all functions of the microscopic image processing and measurement system,

including image capture, calibration, image processing, geometric measurement, document annotation, album management, and fixed power printing;

Technical Parameters:

Model	HST-HVS1000PC
Turret	Automatic
Test force	10gf (0.098N)、25gf (0.245N)、50gf (0.49N)、100gf (0.98N)、200gf (1.96N)、300gf (2.94N)、500gf (4.9N)、1kgf (9.8N)
Hardness scale	HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1
Range of hardness	(5-3000)HV
Unit conversion:	Brinell, Rockwell, Nussell (and switchable: ASTM、ISO、JJG standard)
hardness value	PC automatic hardness measurement
Eligibility criteria	Can set up qualified range, machine automatically remind whether qualified
Language switching	Chinese and English systems switching at any time
error correction	Calibration of hardness at all times
Scale conversion	HK(Nouri)
Hardness value conversion	Brinell, Rockwell, Vickers
Test report	Auto generate
Load control	Automatic loading, automatic holding, automatic unloading
Objective lens and indenter	Automatic switching
Auto Z-axis	Auto focus
optical system	Support for dual channels
Force retention time	5~60s
Test Force Selection	External force selector knob, test force automatically displayed on computer
magnification factor	10×, 40×
Optical system	Total magnification (μm):100×(observation),400×(measurement); range (μm):200;
Optical system resolution	0.0625μm
XY test	Size (mm):100×100 travel range (mm):25×25 minimum reading (mm):0.01
Maximum height of specimen	150mm
Maximum width of specimen	120mm
supply voltage	AC220V/50HZ
Weight	60kg
Exterior dimensions	620mmX230mmX630mm