1. Product application

Webster hardness tester

AW-20 series

When you buy this instrument, you are taking a step forward in the field of precision measurement. The watch is a computercentered test tool that, if properly operated, is robust enough to last for many years. Please read this manual carefully before use and keep it in an easily accessible place.



AW-20series Wechsler hardness tester is an instrument that can quickly test the hardness of aluminum alloy in the field. Wechsler hardness tester is easy to use. One card can, hardness value directly read. Used for rapid detection of aluminum alloy profiles, pipes, plates, aluminum workpieces and other soft The hardness of the metal. It is especially suitable for fast and non-destructive batch products at the production site, sales site or construction site Item by item inspection.

2. Product features

Press needle: new material, new process manufacturing of press needle, high hardness, long life, good interchangeability. Handle: forged material, surface anodized upper handle, beautiful, wear resistant, pollution resistant. Hardness block: The standard hardness block is tested by the standard hardness machine. Hardness block: The standard hardness block is tested by the standard hardness machine. High quality: fine parts processing, precision machine assembly, strict quality inspection. Good stability: full degree point stability, correction point stability.

Easy conversion: Wechsler hardness value can be converted into Vickers, Rockwell, Brinell and other hardness values.

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7. Operation method

7-1. Correction Press the handle down and press the button straight Until "CAL" appears on the display.Note: Model AW-20A is fitted with anvil seat cover before calibration.

7-2 Operations

Place the sample between the anvil and the pressor and check the handle until it feels pressed to the bottom. The display appears A reading, this reading is the measured hardness value. Excessive pressure beyond this limit will not hurt Bad hardness tester,

either Any twist or movement will make the reading inaccurate.

7-3 Hardness block test

Test standard Wechsler hardness blocks with a durometer. For the AW 20 series Wechth hardness tester, the reading is the hardness value labeled on the hardness block, the maximum allowable error is ±0.5HW, for the AW-B75, AW-B75B, AW B92 Wechth hardness tester, the reading should be 5HW±0.5HW,AW-BB75B,AW-BB75 Wechth hardness tester, The reading should be 17HW±0.5HW. If the test readings do not meet the requirements, the operator should frequently use the Wechsler hardness block to check the accuracy of the instrument. If any deviation is found, it should be corrected in time. When testing the hardness block, only the positive surface of the hardness block should be used.

3. Technical parameters

range	0~20HW		
precision	0.5HW		
weight	625g		
dimension	220*160*30mm		
battery	2*1.5AAA		
measuring range	Figure 1		

4. Accessories

Standard Accessories		
Host machine	Anvil (AW-20A)	Optional accessories
Standard Wechsler hardness block	specification	Spare presser
Spare presser	Portable	Standard Wechsler hardness bloc
Special wrench	case	

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If you cannot read to 20 by adjusting the adjusting

screw, the pressure needle is worn and should be

Turn the needle support screw, remove the lower

nut with the special wrench equipped with the

handle from the frame, and then remove the meter from

the pressure cylinder, the pressure cylinder remains in

the frame. At this time, a slotted adjusting nut can be

seen in the pressure cylinder. Take out the adjusting

instrument, then take out the pressure needle and

replace it with a new pressure needle. Then you can

correct it. After replacing the pressure pin, adjust the

tightened once (according to the standard Wechsler

or loosen the nut.) During the initial setting, the

damage the pressor tip.

not in use.

pressure of the load spring is too high, which will

9. Maintenance and maintenance

This instrument is a precision instrument, and its

service life depends on whether the use method is

correct and whether the maintenance is timely and

appropriate. Pay attention to anti-fouling, anti-rust,

anti-fall, do not disassemble. Remove the battery when

pressure of the load spring with the adjusting nut. After

feeling the resistance of the load spring, the nut can be

hardness block, if there is any deviation, tighten the nut

8. Replace the pressure pin

replaced with a new pressure needle.

Pressure needle replacement method:

Small screwdriver

5. Instrument model table

model	Applicable material	hardness range	specimensize/mm
AW-20		25~110HRE	thick0.6-6 inner diameter>10
AW-20A	aluminium alloy		thick0.6-13 inner diameter>10
AW-20B			thick0.6-8 inner diameter>6
AW-B75	Hard or semi-hard brass,	63~105HRF	thick0.6-6 inner diameter>10
AW-B75B	superduralumin		thick0.6-8 inner diameter > 6
AW-BB75	Soft brass,	18~100HRE	thick0.6-6 inner diameter>10
AW-BB75B	rea copper		thick0.6-8 inner diameter>6
AW-B92	Cold rolled steel plate, stainless steel	50~92HRB	thick0.6-6 inner diameter>10

6. Instrument structure diagram

The pressure needle of different models of Wechsler hardness tester is different, as shown in the figure:



AW-B75、AW-BB75type AW-B92type AW-20type

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10. Factors affecting measurement accuracy

10-1 Sample: The surface of the sample should be cleaned. Dirt on the sample, especially fine sand particles, may affect it.

10-2 Sensitivity: The sensitivity of the instrument is significantly reduced in the range below 4HW and above 17HW, and the measurement accuracy is also reduced. Other hardness gauges should be considered in the above range.

10-3 Sample edge: During the test, the distance between the measuring point and the sample edge should be greater than 5mm, and close to the sample edge will affect the measurement accuracy.

10-4 Adjacent indentation: When testing, it should be noted that the distance between the two adjacent indentations should be no less than 6mm, otherwise, the former indentation will affect the accuracy of the following measurement.

10-5 oxide film: Although the hard oxide film is very thin, the accuracy of the hardness measurement of aluminum profiles will also be affected, experience shows that the thickness of 10µm oxide film will make the hardness measurement value higher by 0.5~1HW.

10-6 coating: Various coatings will seriously affect the measurement accuracy, so it is required to remove the coating with sandpaper or solvent before hardness measurement.

11. Needle change method



① Unscrew the handle nut



② Remove the pressure cylinder



③ Twist the pressure cylinder with the configuration wrench



④ Take out the pressure needle and replace it with a new needle

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