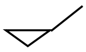 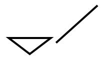

ensure that the distance between the adjacent indentation center and the center to the edge is more than 3 mm; C: normally, the first test is only used to offset the gap between the supporting surfaces, the test results are not counted, should be from the second point statistical test results.

7 The lead screw cover (30) is designed to protect the lead screw (26) from dust. When the hardness meter is not in use or when the specimen height is less than 100 mm, cover it outside the lead screw. When the height of the specimen is more than 100 mm, it must be removed so as not to raise the table and invalidate the test.

10Maintenance and Adjustment of hardness Meter

1、The hardness meter should be used in a clean, vibration-free environment with a temperature of 25 ±10 °C.

2、Cover the machine with a dust-proof cover when the hardness meter is not used for a long time.

3、Regular injection of a small amount of oil at the interface between the lead screw (26) and the handwheel (27).

4、If it is found that the indication error of the hardness meter is large, (1) the worktable can be removed to check whether the contact surface with the lead screw is clean; (2) the lead screw protective sleeve is checked to raise the working table surface; and (3) the pressure head is checked whether the head is damaged or not.

5、If the main test force is applied, the display number starts to rotate quickly and then slowly, indicating that there is too little oil in the buffer. At this time, the felt pad at the upper end of the buffer (7) can be lifted, and the clean oil 20# is slowly injected. At the same time, the handle (15) (16) is pulled multiple times so that the piston moves up and down many times, leaving all the air in the buffer out until oil overflows from the top when the piston sinks to the end. Note: due to the influence of temperature on the oil in the cylinder oil is easy to produce thin and thick changes, thus affecting the loading speed, the oil needle (14) should be adjusted according to the situation to meet the use

requirements.

6、Check the precision of the hardness meter regularly with the standard hardness block worn by the machine。

Wipe the worktable and standard block clean, test on the hardness block working face, never allow the test on the supporting surface.

（2）If the error of indication is great, in addition to checking according to item 4 of this section, we should also check if there are burrs on the support surface of standard hardness blocks, and if there are burrs, use oil stone to polish。

（3）If the error of indication is great, in addition to checking according to item 4 of this section, we should also check if there are burrs on the support surface of standard hardness blocks, and if there are burrs, use oil stone to polish。

（4）The indication value adjustment of the hardness meter: if through the above work, the indication error of the hardness meter is still large, and the precision requirement of the indication value can be achieved by adjusting the front and back position of the plate (22). The method is to loosen two M 3 screws on the adjusting plate (22) and move the position of the adjusting plate (22) back and forth. Note that when moving toward the indicator direction, the indication value increases, otherwise the value decreases. After adjustment, fasten the two M 3 screws that have been released. If it is found that the pointer of the indicator is not vertically upward, the back cap on the M3 screw in the middle of the adjusting plate can be loosened, and the screw can be rotated to make the pointer meet the requirements.

（5）If the user has any other questions, contact the manufacturer in time to get the correct solution. It is strictly forbidden to disassemble by oneself to prevent unnecessary loss.

Ⅱ．State description

1.Power on initial state

Short press [SET] key to set surveyor's rod type, head type and obvious with

change, long press [SET] key to set the time limit, detailed operation see step 7, press [NUM] key, can change the average total, range of 1, 9, Press [CLR] key to clear the most recent measurement data, long press [OUT] key output data, the number of times when the keys are valid, the third row show

"TM12:08" table current time is 12:08 ;

2、Preloading

If the third row "OOO;" continues to increase initially, the third row flashes the EEE warning error when it exceeds 305. After the error, the processing of the next step will not be entered, until the initial measurement is completely removed, the displacement of the probe is 0, and the initial state of the power on is restored. If the probe leaves the component completely and the data is likely to be below zero or negative, press the [ZERO] key to reset, and the [HRC] symbol begins to appear.

3、Applying the main test

After the initial preloading is in place, the main measurement will be applied, the displacement data of the probe will change, and the third row will begin to show the main test addition time, in seconds, the most measured time is 99S.
Note: in this process, if the head displacement continues to decrease back to zero, the system will judge that the operation is incorrect, and the hardness meter will return to the initial state of electrification, requiring a new measurement.

4、Remove the main test

When the timing time comes, the main test can be removed, the second time display disappears, the HRC symbol is lit up, the hardness meter starts to show the actual hardness value, at this time, the system will show the maximum value recorded in the measurement process; After the stability of the most measured values, the [NUM] bond and [CONV] bond can be long pressed into the lever correction state, and the body operation can be seen in step 8. During this process, if the hardness value display exceeds 100.0 or 130, the third row flash EEE, needs to withdraw the initial remeasurement.

5、Remove preloading

When the data is stabilized, after removing the preload, the probe will begin to decrease, the displacement data will change, but the hardness display position will remain the original data, and the measurement result will be explicit. In the average window, the counting value will be added 1; At this time, press [CLR] key to give up the measured data, the calculated value will be reduced by 1, show the last measurement results, reduced to 0 time back to the initial bound; When the measurement result is explicit, the long press [CONV] key can switch the conversion unit, and the conversion value will change accordingly, but beyond the range will show the FFFF; when the calculated value is equal to the total number of the average, the short press [CON] V] key hardness value will show the average value, and the "-" symbol on the HR will flash, then press [CONV] key to exit the average value display, and the symbol will stop flashing; if the measurement continues, the count will remain the same, and the measured data will not be stored. At this point, you can long press the [OUT] key to output data to a printer or computer.

6、Next measurement

The probe will be lifted again, and when it comes to the next measurement, jump to step 2; You can also press [ZERO] to jump to step 1, that is, to return to the initial state of electrification, and in the process of steps 1 to 4, if you press the [ZERO] key, the hardness meter returns to the initial state of electrification.

7、Time setting

Press the [SET] key at the initial state length and enter the clock setting state,

as shown in the figure：

The position of the dot matrix is Ytable year, the third row is the year.

Of which "14" flashed，

Short press or long press [CLR] to add 1; continue to press SET shortly The keys will flash M, D, H, m in sequence.
Time division, short press in the process

[CLR] key corresponds to flashing data plus 1, long press [CLR] button can be added quickly; shortly press [SET] after the minute setting is completed.Key, exit time modification and save, return to the initial state; throughout the process Press the [ZERO] key to exit the time modification without saving.

8、Leverage correction

In step 4, press the [NUM] key and the [CONV] key to enter the lever correction state.
The third row will be corrected in length, and the initial correction will be 1.000. Press [CONV] to repair.
Is increasing by 0.001, long press is increasing continuously;
[NUM] key correction minus 0.001, long
Press to decrease continuously. The hardness value will change with the coefficient of the example.
The corresponding changes. When the hardness value is adjusted to the value, Press the [SET] key momentarily to save the correction factor and exit the correction status.
Go back to step 4. If you withdraw the initials during this process
The hardness tester will exit the lever correction to display the current measurement result.

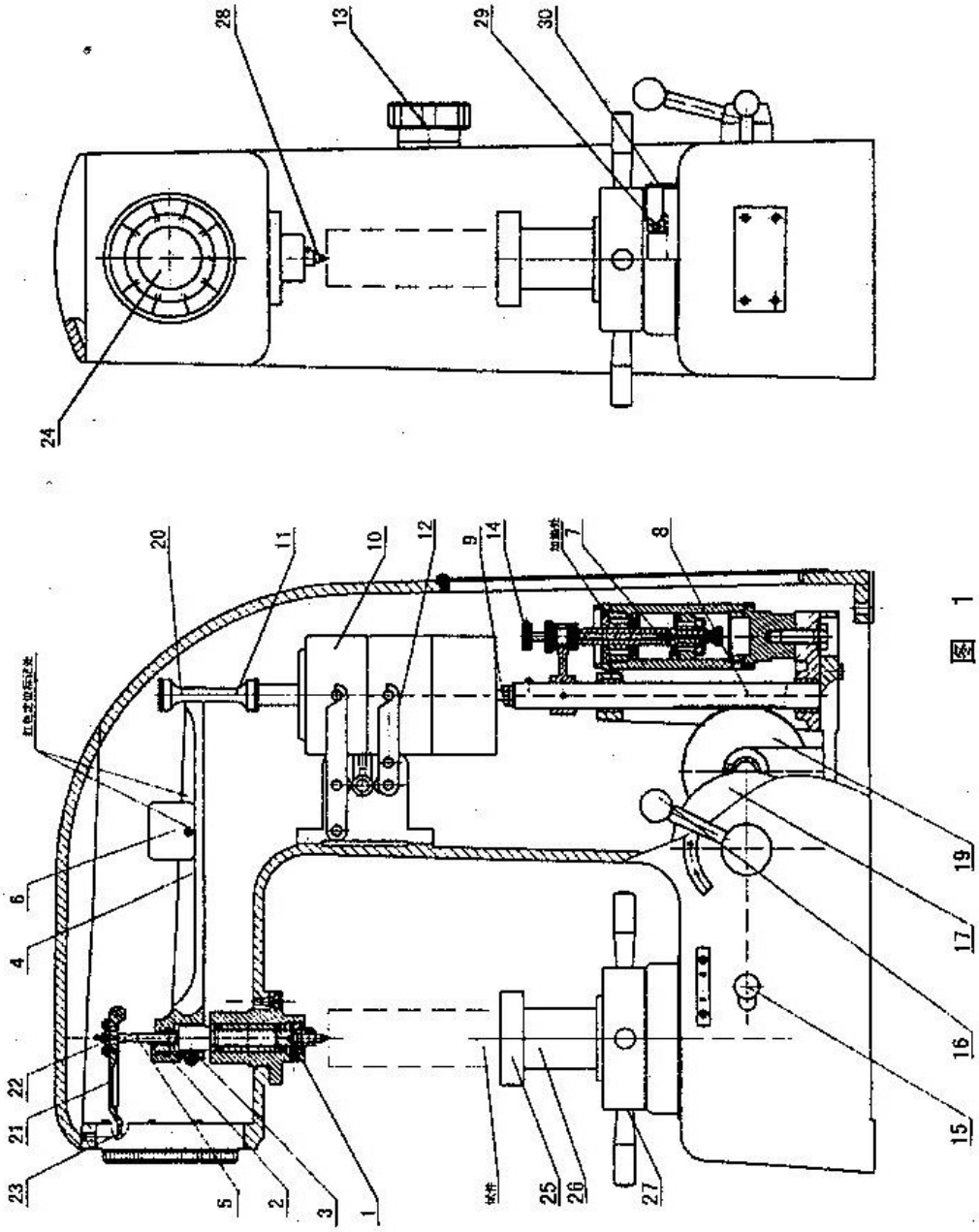

图 1

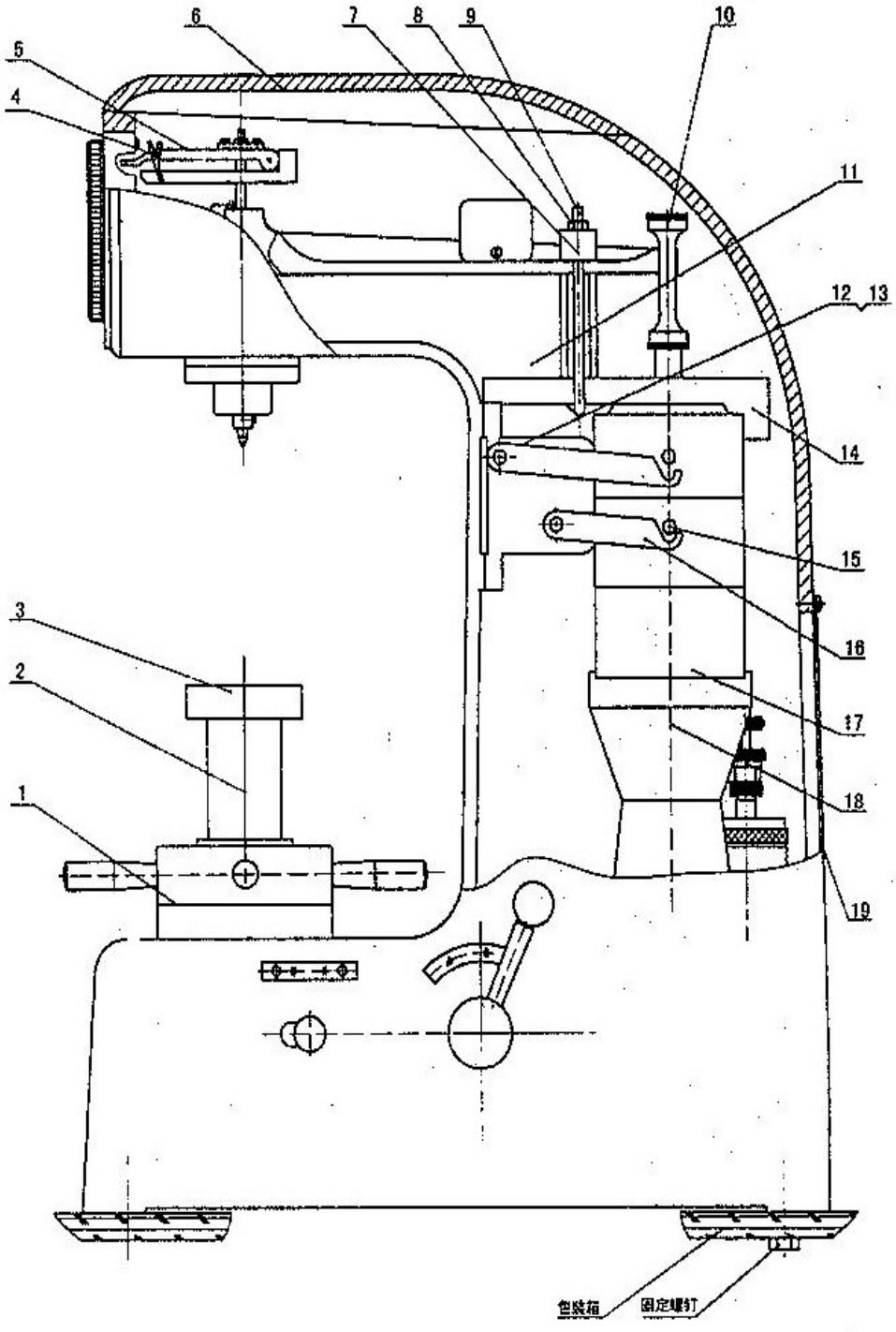

图 2

Serial number	name	specification	unit	Quantity
1	Rockwell hardness	XRock-S304	station	1
2	bigWorkbench		One	1
3	smallWorkbench		One	1
4	VWorkbench		One	1
5	Diamond cone indenter	120°	One	1
6	Steel ball indenter	φ1.588mm	One	1
7	Steel ball	φ1.588mm	One	5
8	StandardRockwellhardness block	80-88HRA	Piece	1
9	StandardRockwellhardness block	85-100HRB	Piece	1
10	StandardRockwellhardness block	60-70 HRC	Piece	1
11	StandardRockwellhardness block	35-55HRC	Piece	1
12	StandardRockwellhardness block	20-30HRC	Piece	1
13	Small screwdriver		Piece	1
14	Dust cover		One	1
15	Accessory box		One	1
16	manual		Piece	1
17	Certificate		Piece	1
18	Packing List		Piece	1
19	Bottom angle		Piece	4

XRock-S304 Rockwell hardness gauge packing list

Warranty registration card	
Product number	

Host number	
Warranty call	
Warranty time	**One year warranty (except for purchase time, accessories/wear parts)**
User Info	
Purchase date	
company name	
contact address	
Contact	
contact number	
Copy of the invoice copy	

Digital display Rockwell hardness tester test record

name	**Digital display manual Rockwell hardness meter**
model	**HR-150AS**
Manufacturing number	**R20071819**
Calibration date	**2020-7-14**
temperature	**20°C**
Test basis	GB/T230.1GB/T230.2 JJG112检定规程 ASTME18
examination clerk	

Indication accuracy

Hardness	**1**	**2**	**3**	**4**	**5**	**Actual average**
HRC62	**62.8**	**62.**	**62**	**61.**	61.	±1.5
HRC25	**25.6**	**25.**	**25**	**24.**	**24**	±1.5
HRB92	**90**	**91**	**90**	**91**	**92**	±2

Theory of knot

Appearance, pressure head，assembly accuracy and test

force, are qualified after inspection.