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## 电子万能试验机

Electronic universal testing machine

厂家：美国·美特斯工业系统（中国）有限公司

型号：CMT-5-504

**特点：**主机为高刚性结构，采用进口全数字式交流伺服器控制高精度、高响应频率伺服电机保证传动系统低噪音、传动平稳。测量装置采用高稳定性、高精度应变力传感器，配以高稳定测量系统保证试验力全程不分档，变形分辨力全程不变；试验机准确度等级0.5级，最大试验力为50KN。

**应用：**主要用于各金属、非金属材料的拉伸、压缩、弯曲等力学性能指标的检测和试验。

**Manufacturer:** American MST system (China) Co., Ltd.

**Model:** CMT-5-504

**Features:** The main engine is of high rigidity structure, which adopts imported full digital AC server to control high precision. High frequency response electric motor ensures the transmission system stable and low noise. The measuring device adopts high stability, high precision sensor and high stability measurement system to ensure the test force stable the whole process and deformation resolution the same the whole process. The accuracy of the testing machine is 0.5. The maximum test force is 50KN.

**Application:** Mainly used for tensile strength, compression, bending and other mechanical properties of metal and non-metallic material.



## 电液伺服万能试验机

Electro hydraulic servo universal testing machine

厂家：美国·美特斯工业系统(中国)有限公司

型号：CHT-4-605

特点：试验机准确度等级 0.5 级，主机为双空间结构、液压夹具，采用压向负荷传感器，独立、直接测量试验力及进口抽出式位移传感器直接测量位移。采用基于 DSP 的全数字测量系统，试验力、变形测量全程不分档，试验力分辨率高达 300000 码，最大试验力达 600KN。

应用：用于紧固件、线材等产品以及生产所用原料的拉伸、压缩等力学性能指标的检测。

Manufacturer: American MST system (China) Co., Ltd.

Model: CHT-4-605

**Features:** Test machine accuracy grade 0.5. The host is double space structured, with hydraulic pressure clamp, the load sensor, vertical and direct measurement of test force. Import-draw type displacement sensor measures displacement. The digital measurement system is based on DSP. The test force, deformation measuring range is not divided into stalls. Test force resolution up to 300000 . Max test strength: 600kN.

Application: Used for the mechanical properties such as tensile, compression, bending, shear of fasteners and wire, and also their materials.



## 电子万能试验机高温炉试验

Electronic universal testing machine

厂家：美国·美特斯工业系统（中国）有限公司

型号：CMT5205+GW900

特点：可安装多套高温炉设备，实现高温试验的连续进行。试验机并配有高温引伸计可方便的直接对试样进行变形测量。试验机最大试验力 200KN、准确度等级 0.5 级、位移分辨力 0.015 $\mu$ m，高温炉试验温度 300-1100 $^{\circ}$ C，温控精度 0.2 级，最小显示分辨率 0.1 $^{\circ}$ C。

应用：主要用于各金属材料的高温拉伸试验。

**Manufacturer:** American MST system  
(China) Co., Ltd.      **Model:**  
CMT5205+GW900

**Features:** May be install multiple sets of high-temperature furnace equipment has been continuous high-temperature tests. Testing machine and is equipped with high-temperature extensometer, can be easily directly on the specimen deformation measurement. Tester biggest test of 200KN, accuracy class 0.5, the displacement resolution of 0.015  $\mu$  m, high-temperature furnace test temperature 300-1100  $^{\circ}$ C, temperature control accuracy of 0.2, the minimum display resolution of 0.1  $^{\circ}$ C.

**Application:** Mainly used for high-temperature tensile test of each metal material.



## 电液伺服万能试验机

Electro hydraulic servo universal testing machine



厂家： 美国·美特斯工业系统（中国）有限公司  
型号： SHT5206

特点： 主机为全钢性无间隙单空间结构；采用进口“工”字型负荷传感器，抗测拉（压）能力强，线性、稳定性好；采用抽出式光电编码器测量位移，精度高、抗冲击；采用基于 DSP 的全数字测量系统，试验力、变形测量全程不分档。最大试验力达 2000 千牛，试验机准确度等级 0.5 级，位移测量分辨率：0.013 毫米，变形分辨率 300000 码。

应用： 用于金属棒材、板材的拉伸试验，螺纹钢拉伸试验，钢绞线拉伸试验，高强度、高硬度金属材料拉伸试验。

**Manufacturer:** American MST system (China) Co., Ltd.

**Model:** CHT5206

**Features:** The host for the all - steel structure of a single space without gaps; Use of imported "H" - type load sensor, it has the high tensile(compressive) strength, it has good linearity and stability ;The optical encoder form of draw-out type are used to measure the displacement, it has high accuracy, high impact resistance, The digital measurement system is based on DSP. The maximum test force of 2,000

kN, the test machine accuracy class 0.5, the displacement measurement resolution: 0.013 mm, deformation resolution 300,000 yds.

**Application:** Tensile test apparatus is used a metal rod, sheet, steel tensile test, tensile test strand, high strength, high hardness tensile test of metallic materials.

## 高频红外碳硫分析仪

High frequency infrared absorption spectrometer



厂家：上海德凯仪器有限公司

型号：HCS-140

**特点：**HCS 系列红外碳硫分析仪是以热释电传感器为核心，由高频感应燃烧炉和计算机组成的智能化红外分析计量仪器。检测碳、硫元素含量；其中碳的检测范围为 0~10.0%，硫的检测范围为 0~1.0%；样品称重：0.2g~0.5g。

**应用：**主要用于冶金、机械、商检、研、化工等行业中的黑色金属、有色金属、稀土金属、无机物、矿石、陶瓷等物质中的碳、硫元素含量分析。

**Manufacturer:** Shanghai Dekai Instrument Co., Ltd.

**Model:** HCS-140

**Features:** HCS series infrared carbon and sulfur analyzer is the intelligent infrared analysis and measurement instrument, composed of high frequency induction combustion furnace and computer. Detection range of Carbon is 0~10.0%; detection range of sulfur is 0~1.0%; sample weight: 0.2g~0.5g.

**Application:** Mainly used for Carbon and Sulfur content analysis in field of metallurgy, machinery, commodity inspection, research, chemical industry and other ferrous metals, nonferrous metals, rare earth metals, inorganic materials, minerals, ceramics and other substances.



## 数显显微硬度计

Digital micro Vickers hardness tester

厂家：上海联尔试验设备有限公司

型号：HVS-1000

特点：采用大显示屏 LCD 显示，界面操作采用菜单式结构，具有良好的操作性、直观性；可在操作面板上选择维氏（HV）和努氏（HK）硬度标尺测量硬度并按照需求在各种硬度值之间转换，测试结果可自动储存、处理、打印；测量显微镜放大倍率：100<sup>x</sup>（观察时）、400<sup>x</sup>（测量时），最小检测单位每格：0.0291 $\mu$ m，最大量程：150 $\mu$ m；硬度测试范围：8HV<sub>0.25</sub>~2900HV<sub>1</sub>，试样最大高度：100 mm。

应用：用于测定微小、薄形、表面渗镀层试件的显微硬度及较脆而又硬材料的努普硬度。

Manufacturer: Shanghai Lianer Testing Equipment Co., Ltd.

Model: HVS-1000

Features: Large screen LCD display, operation interface with menu structure of good operability and readability; HV and HK measurement and conversion between hardness scale of hardness values according to the requirements, the test result can be automatically stored, processed and printed out. Magnification of microscope: 100x (observation), 400X (measurement), the minimum detection unit of each grid: 0.0291mm, the maximum range: 150 m; hardness test range: 8HV<sub>0.25</sub>~2900HV<sub>1</sub>, maximum height of specimen: 100 mm.

Application: Micro hardness determination of small, thin, surface coating test pieces; and HK hardness determination of brittle and hard materials.



## 洛氏硬度计

### Rockwell hardness testing

厂家：美国·依工测试测量仪器（上海）有限公司

型号：Rockwell 574T

特点：采用 LCD 显示，界面外观新颖，操作简单；硬度计内置 USB 接口方便于将数据导入 Microsoft Excel 或其他应用程序，配备了先进的自动刹车系统保证初试验力精确加载，高精度的深度测量系统确保了硬度测试结果的高精确性和重复性。最大允许试样高度：11.43in（280 mm），分辨率为 0.01 洛氏单位，能够满足普通洛氏和表面洛氏硬度测试的要求，涵盖 31 个标准标尺、5 个自定义标尺。

应用：通过变换试验标尺可测定钢、合金、非铁金属材料及极薄工件的硬度。

Manufacturer: American ITW measuring instruments (Shanghai) Co., Ltd.

Model: Rockwell 574T

Features: LCD display, operation interface with menu structure of good operability and readability; Built-in USB interface easily facilitates the data into Microsoft Excel or other applications. Advanced automatic braking system ensures accurate loading for the preliminary test force. The deep measurement of high precision ensures high accuracy and repeatability of test results. The maximum allowable height of specimen: 11.43in (280 mm), resolution 0.01 Rockwell units. Meet the common Rockwell hardness and Rockwell hardness test requirements, covering 31 standard gauge and 5 custom gauges.

Application: The hardness of steel, alloy, non-ferrous material and extra thin workpiece can be determined with conversion of test scales.





## 布氏硬度计

### Brinell Testers



厂家：美国·依工测试测量仪器（上海）有限公司

型号：BH3000

特点：采用 LCD 显示，界面外观新颖，操作简单；配备独立的测量显微镜用于测量压痕直径；内置热敏打印机或 232 接口；采用全自动闭环式传感器控制技术，测试结果精确、重复性高；分辨率：0.1 度（当 HB < 100）、1.0 度（当 HB > 100），试验力范围：187.5 – 3000Kgf，测试空间：280 mm (最大测试高度)、130 mm (最大测试深度)。

应用：用于铸件、锻件、原材料的硬度测量。

Manufacturer: American ITW measuring instruments (Shanghai) Co., Ltd.

Model: BH3000

**Features:** LCD display, the appearance of new interface, simple operation; with separate measuring microscope measure indentation diameter; built-in thermal printer, or 232; using automatic closed-loop sensor control technology, test results are accurate, repeatable; Resolution: 0.1 degrees (when HB < 100), the 1.0 degree (when HB > 100), the test force range: 187.5 - 3000Kgf, Test space: 280 mm (maximum test height), 130 mm (maximum test depth).

**Application:** For hardness measuring castings, forgings, raw materials.

## 洛氏硬度计

### Rockwell hardness testing

厂家：美国·依工测试测量仪器（上海）有限公司

型号：Rockwell 600MRD

特点：采用 LCD 显示，界面外观新颖，操作简单；菜单式结构，具有良好的操作性、直观性；可在操作面板上选择 15 种硬度标尺并可进行各种硬度值（布氏、维氏、洛氏、表面洛氏）转换，内置打印机将测试结果打印出来，可通过 RS-232 接口与计算机联机；最大允许试样高度：170 mm。

应用：测定各种金属、合金、非金属及硬度较高的材料的硬度。

**Manufacturer:** American ITW measuring instruments (Shanghai) Co., Ltd.

**Model:** Rockwell 600MRD



**Features:** LCD display; Menu operated LCD screen with good operability and readability; Digital LCD reading of 15 regular hardness scales and can convert to all other hardness scales such as Brinell, Vickers, Rockwell and Rockwell Superficial; Integrated printer for test result and RS232 data output to computer. Maximum allowable sample height is 170mm.

**Application:** Hardness test of all kinds of metal, alloy, nonmetal and materials with higher hardness.

## 固定式金属直读光谱仪

Direct reading high frequency infrared absorption spectrometer

厂家：德国斯派克分析仪器公司

型号：LAB-M9

特点：火花直读光谱仪用火花的高温使样品中各元素从固态直接气化并被激发而发射出各元素的特征波长，用光栅分光后，成为按波长排列的“光谱”，这些元素的特征光谱线通过出射狭缝，射入各自的光电倍增管，光信号变成电信号，经仪器的控制测量系统将电信号积分并进行模/数转换，后由计算机处理，并打印出各元素的百分含量。

应用：用于金属样品中的元素含量分析。

**Manufacturer:** Germany SPECTRO.

**Model:** LAB-M9

**Features:** Spark direct reading spectrometer with high temperature of spark makes each element in the sample directly from the solid state gasification and motivates characteristic wavelength of each element, and become arranged in a wavelength spectrum after grating light. Those characteristic spectral lines go through the exit slit and are launched into the respective photomultiplier tube. Then electrical signal transferred into digital signal and post processed by the computer, and print out the percent content of each element

**Application:** Element content analysis for metal sample.



## 分析级正立式材料显微镜

Analysis level vertical material microscope

厂家：德国卡尔蔡司股份公司

型号：Axio Lab.A1 Mat

**特点：**显微镜光学系统采用无限远复消色差增强型光学系统（ICCS 光学系统），镜体严格按照 FEM 标准要求设计。采用 Push&Click 技术的 4 位功能模块盒便于在不同观察方式下分析观察，明暗场 5 孔物镜转盘结构不仅提供充裕的操作空间且在保证快速完成样品检测的同时让您在选择物镜时操作更加舒适，优化光路（反射光）设计为样品提供最佳的照明并增加了微分干涉技术，为分析观察提供最出众的对比度。根据分析观察材料选择合适物镜倍数（5X 10X 20X 50X 100X）和目镜倍数（10X）目镜倍数。

**应用：**用于钢中非金属夹杂物，钢的显微组织、晶粒度等微观方面检验以及钢的结晶状态，热处理零件的淬硬层、渗碳层、裂纹，试片低倍组织和客观断口观察等宏观方面检验。

**Manufacturer:** Germany ZEISS.

**Model:** Axio Lab.A1 Mat

**Features:** The microscope adopts ICCS optical system. The mirror body is in strict accordance with the FEM standard design requirements. The module box of Push & Click 4-bit function is good for observation. The 5-hole rotating nosepiece of bright and dark field provides, not only plenty of space for the operation and to ensure the rapid completion of the testing sample, but also let you in the choice of objective lens more comfortable operation, optimizing the optical path design (reflected light) for samples provide the best lighting and increase the differential inter-ferometric technique, for the analysis of observation provide the most superior contrast under different modes of observation analysis. Right objective (5X 10X 20X 50X multiple 100X) and multiple (10X) eyepiece magnification eyepiece is chosen according to the observation and analysis of material selection.

**Application:** Used for non-metal inclusions, microstructure, grain size, microstructure and the crystal state of the steel. Used for heat treatment parts of the hardened layer, carburizing layer, crack, test piece low times microstructure and objective fracture observation, etc..



## 摆锤式冲击试验机

### Film Impact Tester

厂家：济南天辰试验机制造有限公司

型号：JB-300B

**特点：**利用摆锤冲击前位能与冲击后所剩位能之差在刻度盘上显示出来的方式，得到试样的吸收功。配套 DWC-60 型低温槽和高温加热装置，可实现高温和低温冲击试验最大冲击能量 300J，并附带 150J 摆锤一个，所用试样断面为 10\*10 mm，摆锤预仰角 150°，冲击速度 5.2m/s，摆长 750 mm。

**应用：**用于检测金属材料、非金属材料在动负荷下抵抗冲击的性能，以便判断材料在动负荷下的性质。



**Manufacturer:** Ji'nan Tianchen Testing Machine Manufacturing Co. Ltd **Model:** JB-300B

**Features:** The pendulum impact and after impact left before the potential energy difference displayed on the dial of the way, get absorbed energy of sample. DWC-60 type low temperature tank and high temperature heating device can realize high temperature and low temperature impact test. Pendulum pre elevation 150 degrees, pendulum length is 750 mm, the impact velocity of 5.2m/s, the section is 10×10 mm, the maximum impact energy 300J (with a 150J pendulum).

**Application:** In order to detect the performance of metal materials and nonmetal materials under dynamic load, so as to judge the nature of the material under dynamic loading.

## 盐雾腐蚀试验机

### Salt spray corrosion test machine

厂家：东莞市科迪仪器有限公司

型号：KD-60A

特点：利用设备制造人工模拟盐雾环境条件来考核金属类产品或原料其防护层的耐腐蚀能力。

试验温度：室温~35℃（盐水试验）、室温~50℃（耐腐蚀试验）；温度均匀度： $\leq \pm 2^\circ\text{C}$ ；

温度波动度： $\leq \pm 0.5^\circ\text{C}$ ；试验定时：1~999（s、m、h）可调；

应用：适用于零部件、电子元件、金属材料的防护层以及工业产品的盐雾腐蚀试验。

**Manufacturer:** Dong guan Kedi Instrument Co. Ltd.

**Model:** KD-60A

**Features:** To evaluate the corrosion resistance of the metal products or materials in the protection layer of the metal products by using the equipment to simulate salt spray environment. Test temperature: room temperature 35 degrees Celsius (saline test), room temperature to 50℃, resistance to corrosion test; Temperature uniformity: less than 2 °C; temperature fluctuation: less than 0.5℃; test timing: 1 ~ 999 (s, m, H) adjustable.

**Application:** Salt spray corrosion test for components, electronic components, metal materials, and industrial products.





## 机动弯折试验机

### Motorized bending test machine



厂家：宁夏青山试验机有限公司

型号：WJJ-6C 型

特点：作为一种工艺性能试验设备，将试样固定在夹具上，并加一定荷重，试验时夹其左右摆动，经一定次数后，检视其断线率；或至无法通电、无法承受试验负载时，查看其总计摆动次数；本机能自动计数，试样弯折至无法通电时，并自动停车。试样（线材类）规格：0.30 mm~6.00 mm（线材类）、0 mm~3.00 mm（板材类），试样长度：150 mm~250 mm，弯折角度：90° ± 3°，弯折速度：60 次/分，计数范围：1-99 次。

应用：用来做金属线材及板材的反复弯折试验，以检验制品在反复弯折中承受塑性变形的适应能力。

**Manufacturer:** Ningxia Qingshan testing machine Co. Ltd.

**Model:** WJJ-6C

**Features:** As a kind of process performance test equipment, the specimen was fixed on the fixture and a certain load, test clamp the left and right swing, after a certain number of examine the breakage rate; or to no electricity, unable to withstand the load test, check the total times of swing; it has the functions of automatic counting, bending specimen to no electricity, and the machine will stop automatically. Specimen (wire) specifications: 0.30 mm ~ 6.00 mm (wire), 0 mm ~ 3.00 mm (plate), the specimen length: 1.5 mm to 2.5 mm, the bending angle: 90 degrees plus or minus 3 degrees, the bending speed: 60 beats per minute, counts: 1-99.

**Application:** Repeated bending test for metal wire and plate, in order to test the product in repeated bending compromise subjected to plastic deformation ability.

Dongguan Zhongwang Precision Instrument Co. Ltd.

## 线材缠绕试验机

Wire wrapping test machine

厂家：宁夏青山试验机有限公司

型号：CR-6 型

特点：试样在没有任何扭转的情况下以每秒不超过一圈的恒定速度沿螺旋线方向紧密缠绕在芯棒上，设备可根据试验要求进行解圈或解圈后再缠绕；试样直径：0.50 mm~6.00 mm，缠绕速度：15r/min、20r/min、60r/min。

应用：用于测定金属线材在缠绕试验过程中承受塑性变形的能力。

**Manufacturer:** Ningxia Qingshan testing machine Co. Ltd.

**Model:** CR-6

**Features:** Samples in the absence of any torsional per second does not exceed a circle of constant velocity along the direction of a helical line tightly wound on the mandrel, the equipment can according to requirements, test solution of circle or circle solution and wound; specimen diameter: 0.50 mm ~ 6.00 mm, winding speed: 15 r/ min , 20r/ min, 60r/ min.

**Application:** For the determination of bearing capacity of plastic deformation of metal wire during the winding process test.



## 金属线材扭转试验机

### Metal wire torsion testing machine

厂家: 上海华龙测试仪器有限公司

型号: SXN-3 型

特点: 采用液晶触摸屏显示, 操作便捷简单。试样直径:  $<3.00\text{ mm}$ , 扭转方式: 单向正、反扭转和双向扭转, 扭转次数设置范围: 1-999 次, 转速设置范围: 60-180 r/min, 转速精度: 优于  $\pm 10\%$ 。

应用: 用于检测金属线材在单向或双向扭转中承受塑性变形的能力及显示线材表面和内部的缺陷。

**Manufacturer:** Shanghai Hualong  
Testing Instrument Co. Ltd.

**Model:** SXN-3

**Features:** The LCD touch screen display, simple and convenient operation  
Sample size:  $<3.00\text{ mm}$ ,  
torsional mode:  
unidirectional positive, anti torsion and torsion, torsion  
frequency setting range:  
1-999, speed setting range:  
60-180 r/min, the precision of speed: better than 10%.

**Application:** For the detection of metal wire under the plastic deformation ability and wire surface and internal defects in one-way or two-way reversing.



## 手持式 X 射线荧光光谱仪

Handheld X - ray fluorescence spectrometer

厂家：德国斯派克分析仪器公司

型号：SPECTRO xSORT

**特点：**手持式 X 荧光光谱仪是紧凑型仪器，坚固耐用，符合人体工程学设计。小型化，高性能 X 射线管，保证了仪器对待测元素的高效的激发。特殊开发的 SDD 检测器，数据采集速度 10 倍于传统的检测器，具有独特的适应性及灵活性。仪器符合严格的德国 X 射线辐射标准，为用户提供一流的安全防护。其强大的数据传输及处理功能，可在现场打印，储存数据。GPS 可将数据与大地坐标绑定，为数据回溯提供可靠的依据。

**应用：**主要用于地质，矿物，环境，RoHS，玩具等样品中各种元素的检测，及现场分析。

**Manufacturer:** Germany SPECTRO

**Model:** SPECTRO xSORT

**Features:** Portable X fluorescence spectrometer is a compact instrument, durable, in accordance with human engineering design. Miniaturized, high performance X ray tube, which ensures the high efficiency of the instrument to measure the excitation. Special development of SDD detector, data acquisition speed of 10 times in the traditional detector, with a unique adaptability and flexibility. The instrument conforms to the strict German X - ray radiation standard, providing the user with the first-class safety protection. Its powerful data transmission and processing functions, can be printed on the scene, storage data. GPS can be used to bind the data and the geodetic coordinates to provide a reliable basis for data back.

**Application:** For the detection of metal wire under the plastic deformation ability and wire surface and internal defects in one-way or two-way reversing.



## 表面粗糙度测量仪

Surface roughness measuring instrument



厂家: 日本·三丰精密量仪有限(中国)公司

型号: SJ-210

特点: 轻便小型, 携带方便; 测量范围广 (达 360μm), 能够进行各种粗糙度参数的运算。

大型彩色 LCD 显示屏、中文操作界面, 易于清晰读取; 使用触控式面板 (显示部达到 IP53 防护标准, 防渗水、防尘, 具抗污性), 操作简易。内藏充电电池, 本体携带方便也可收置检出器。适用于 JIS、VDA、ISO 和 ANSI 各种表面粗糙度标准。

应用: 主要用于检测分析原材料、成品表面, 根据表面粗糙度标准计算并显示表面粗糙度值。

**Manufacturer:** Mitutoyo Corporation

**Model:** SJ-210

**Features:** Portable, easy to carry; wide measuring range (up to 360 μm), to carry out a variety of roughness parameters of transport Large color LCD display, the Chinese operation interface, easy to read; the use of touch panel (display part of the IP53 protection standards, anti seepage, dust, with anti pollution), easy to operate. Inside the hidden rechargeable battery, the main body of the portable can also be collected and detected. for JIS, VDA, ISO and ANSI all kinds of surface roughness standard.

**Application:** Mainly used to detect and analyze the raw material and finished surface. According to the standard of surface roughness, the surface roughness value is calculated and displayed.



## 超声波硬度计

### Ultrasonic hardness tester

厂家：东莞市中旺精密仪器有限公司

型号：SU-300

**特点：**使用大屏幕显示，直接显示当前测量值、累计测量值、最大值、最小值、平均值及上下偏差；操作简便，不需要专业培训即可上手测量；测量精度高，高达 $\pm 3\%$  HV,  $\pm 1.5\text{HR}$ ,  $\pm 3\% \text{HB}$ ；测试压痕小，需用高倍显微镜才能观察到；测量速度快，可在 2 秒内输出测试结果。

**应用：**主要用于法兰盘边缘和齿轮根部冲压件、工模、薄板、表面硬化的齿合齿轮槽、锥度部分的硬度测量；轴和薄壁管道、容器的硬度测量；焊接部位的硬度测量；测量一定孔径深度深孔，弧度较大的凹痕凸痕，不规则平面的硬度测量；能覆盖工业生产的绝大部分黑色金属、有色金属及其合金的硬度测量。

**Manufacturer:** Dongguan Zhongwang Precision Instrument Co. Ltd      **Model:** SU-300

**Features:** The use of large screen display, direct display of the current measurement value, cumulative measurement, maximum, minimum, average and upper and lower deviation; the operation is simple, no need for professional training can get started measurement, high accuracy, up to  $+ 3\%$  HV,  $+ 3\% \text{HB}$ ,  $+ 1.5\text{HR}$ ; test indentation is small, need to use high power microscope can be observed; measuring speed, can output test results in 2 seconds.

**Application:** Mainly used for flange edge and gear root stamping parts, mold, sheet, surface hardened tooth synthetic gear slot, taper portion of hardness measurement; hardness measurement of shaft and thin-wall pipes, containers; welding parts of the hardness measurement; deep hole aperture depth measurement, the larger arc of the dent convex mark, hardness measurement of irregular plane; can cover industrial production of the vast majority of black metal, nonferrous metals and alloy hardness measurements.





## 手持式 X 射线荧光光谱仪

Handheld X - ray fluorescence spectrometer

厂家：美国·赛默飞世尔公司

型号：



XL2 980

特点:大面积 SDD 探测器, 采用最优化几何设计, 灵敏度更高, 检测限更低, 分析速度更快, 对于金属中的夹杂物及痕量元素具有杰出的分析性能, 可精确分析数千种合金牌号中的 30 多种常规合金元素成分在不充氦气或非真空条件下, 具有 Mg, Al, Si, P, S 等轻元素检测能力, 预装 400 多种牌号的智能合金库, 具有 CCD 彩色摄像及小点分析等多功能

应用: 主要用于不锈钢原材料、线材、紧固件等样品中各种元素以及金属镀层厚度的检测。

**Manufacturer:** Thermo Fisher Scientific

**Model:** XL2 980

**Features:** Large SDD probe, using the optimal geometric design, higher sensitivity and lower detection limit, the analysis faster and has outstanding for metal inclusions and trace elements in the analysis of the performance, can be accurate analysis of thousands of more than 30 normal alloy elements in the alloy composition in helium or non vacuum conditions, Mg, Al, Si, P, S lighter elements, such as detection capability, pre-loaded with more than 400 kinds of brand of intelligent vault, with a color CCD camera and small point analysis such as multi-functional please enter text content need to be translated

**Application:** For the detection of metal wire under the plastic deformation ability and wire surface and internal defects in one-way or two-way reversing.

## 光电比色计

Photoelectric colorimeter

厂家：上海华光仪器仪表厂

型号：581-S

特点：数字显示清晰，精度高；仪器无需进行调零；浓度直读，操作方便，测试迅速。量程范围：T.0-100%A.0-1.999;C.0-199.9；灵敏度： $\geq 0.01$  吸光度；稳定性：预热 15 分钟后，零点漂移 $\leq 1.5\%$ ；重现性：同一溶液读数误差 $\leq 0.5\%(T)$ 。

应用：主要用途是对所测材料的颜色、色调、色值进行测定及分析。

**Manufacturer:** Shanghai Huaguang Instrument Factory

**Model:** 581-S

**Features:** Clear digital display, high precision instruments; without zero; concentration direct reading, convenient operation, rapid test. Range: T.0-100%A.0-1.999; C.0-199.9; sensitivity: more than or equal to 0.01 absorbance; stability; 15 minutes after the preheating, zero drift is less than or equal to 1.5%; reproducibility: the same solution reading error less than or equal to 0.5% (T).

**Application:** The main purpose is to measure and analyze the color, tone and color value of the material.



## 电导率仪

Electrical conductivity meter



厂家：东莞市中旺精密仪器有限公司

型号：DDS-307

特点：采用大屏幕 LCD 段码液晶，可同时显示电导率/温度值或 TDS/温度值，显示清晰；具有电导电极常数补偿功能，具有溶液的手动、自动温度补偿功能。仪器级别：1.0 级；测量范围：0.00  $\mu$  S/cm $\sim$ 100mS/cm；基本误差： $\pm 1.0\%$ FS；稳定性： $(\pm 0.33\%$ FS)/3h。

应用：主要用于测量水溶液的电导率值。

**Manufacturer:** INESA Analytical Instrument Co., Ltd.

**Model:** DDS-307

**Features:** Using large screen LCD screen, the electrical conductivity / temperature value or TDS/ temperature can be displayed at the same time, showing clear, with the function of the electric conductivity of the electrode constant, with the function of manual and automatic temperature compensation. Instrument level: 1, measurement range: 0 S/cm  $\sim$  100mS/cm; basic error:  $\pm 1.0\%$ FS; stability:  $(\pm 0.33\%$ FS) /3h.

**Application:** Mainly used for measuring the electrical conductivity of water solution.

## 金相制样成套设备

Metallographic sample complete sets of equipment



厂家：上海金相机械设备有限公司

型号：QG-4/ZXQ-1/MP-2A

特点：集切割、镶嵌、磨平、粗磨、细磨、研磨、粗抛、精抛于一体。其中 QG-4 型多能切割机采用全封闭结构，并配有强冷却系统，该机最大切割截面高达  $\phi 65\text{mm}$ ；ZXQ-1 自动金相岩相试样镶嵌机具有自动加温、加压，且当压制成型后自动停机卸压功能。

应用：用于金相试样制备。

**Manufacturer:** Shanghai Metallurgical Equipment Co., Ltd.      **Model:** QG-4/ZXQ-1/MP-2A

**Features:** In cutting, inlay, polishing, rough grinding, fine grinding, grinding, polishing and fine polishing in one rough. The QG-4 type multifunctional cutting machine adopts a fully enclosed structure, and is equipped with strong cooling system, the maximum cutting section up to 65mm diameter; ZXQ-1 automatic metallographic specimen inlaying machine with automatic heating and pressurizing, and when pressed when automatic stop pressure relief function.

**Application:** For the preparation of metallographic specimen.

## 激光测径仪

Laser measuring instrument

厂家: 成都奥美加科技有限公司

型号: LGD-02XY



**特点:** 该系列激光测径仪是奥美加公司引进国外先进技术开发设计并生产的新一代测径仪。采用激光扫描技术, 具有测量范围广、精度高、使用寿命长、性能稳定等特点。测量范围: 0.02~2.000 毫米, 测量精度  $\pm 0.0005$  毫米。

**应用:** 主要用于测量各种材料的直径, 对各种电线、电缆、漆包线、软管线、和其它线材进行在线测量和控制。

**Manufacturer:** Auto Measure Gauge Technology Co., Ltd.

**Model:** LGD-02XY

**Features:** This series of laser gauge diameter measuring instrument is a new generation of Omega company to introduce advanced production technology development and design. By using the laser scanning technology, has a wide measuring

range, high precision, long service life and stable performance, etc.

Measuring range: 0.02 to 2 mm, the measurement accuracy:  $\pm 0.0005$  mm.

**Application:** Mainly used to measure the diameter of a variety of materials, wire, cable, wire, hose, and other wire to measure and control.





## 露点仪

### Dew point meter

厂家：西安泰戈分析仪器有限公司

型号：TG-J1530

特点：使用进口氧化铝电容式露点传感器，响应迅速，灵敏度高；采用电子流量控制，无堵塞现象；自带精密过滤器，大大延长传感器寿命；320×240点阵液晶显示，全中文操作菜单，简洁明了；同时显示露点、体积比、绝对湿度，读数直观；测量数据自动存储，记录间隔时间长度可自由设定，记录数据可以以曲线或列表形式显示。测量范围： $+20.0 \sim -100.0^{\circ}\text{C}$ ；精度： $\leq \pm 1.5^{\circ}\text{C}$ （高于 $-60^{\circ}\text{C}$ ）， $\leq \pm 2^{\circ}\text{C}$ （低于 $-60^{\circ}\text{C}$ ）；分辨率： $0.1^{\circ}\text{C}$ 重复性： $\leq \pm 1.5^{\circ}\text{C}$ 。

应用：主要用于测量各种气体中微量水分含量。

**Manufacturer:** Xi'an tiger Analytical Instrument Co., Ltd.

**Model:** TG-J1530

**Features:** The use of imported aluminum oxide capacitive dew point sensor, fast response, high sensitivity; electronic flow control, no blocking phenomenon; with precision filter, greatly prolong the sensor life; 320 \* 240 dot matrix LCD display, full Chinese menu, simple and clear, and show the dew point, volume ratio, reading is intuitive; measuring data is automatically stored, record time length can be set freely. Measuring range:  $+20.0 \sim 100.0^{\circ}\text{C}$ ; accuracy: less than 1.5 degrees Celsius (higher than 60 DEG C), less than 2 degrees Celsius (less than 60 DEG C); resolution: 0.1 DEG repeatability: less than 1.5 DEG C.

**Application:** It is mainly used for measuring various trace moisture content in the gas.





## 手提式酸碱度/氧化还原测定仪

Portable pH / redox tester

厂家：上泰仪器（昆山）有限公司

型号：TS-1

特点：轻便小型，携带方便，本设备 TEMP℃ 旋钮可手动补偿温度，CALIB 旋钮可用于标准液 PH7.00 校正，SLOPE 旋钮可用于标准液 PH4.00 或 PH10.00 校正。

应用：检测溶液 PH 值。

**Manufacturer:** SUNTEX INSTRUMENTS CO., LTD.

**Model:** TS-1

**Features:** Portable, easy to carry, the equipment can be manual temperature compensation knob TEMP C, CALIB knob can be used for PH7.00 standard solution correction, SLOPE knob can be used for the standard PH4.00 or PH10.00 correction liquid

**Application:** PH value of the solution.



## 电子式推拉力计

Laser measuring instrument



厂家：一诺电子实业有限公司

型号：DS-2

特点：轻小便捷，准确度高、耐久性以及容易使用。  
测量单位：NKgf 或 lbf。能够显示 4 位 LCD，测量方式：峰值、当前值。采样速率：1000 次/秒。过载能力：200%F.S。A/D 转换：16 为，微处理器：8 位 CPU，精度： $\pm 0.2\%F.S$ ， $\pm 1$  位。使用温度：0~+40℃。输出：RS-232C、模拟电压  $\pm 1VF.S$ 。

应用：用于力量的测量。

**Manufacturer:** Yinuo Electronics(Taiwan) Co.,Ltd.

**Model:** DS-2

**Features:** Light, small, convenient, high accuracy, durability and easy to use.

Measurement unit: NKgf or lbf. Can display 4 LCD, measurement mode: peak value, current value. Sampling rate: 1000 times per second. Overload capacity: 200%F.S. A/D conversion: 16, microprocessor: 8 bit CPU, precision;  $\pm 0.2\%F.S$ ,  $\pm 1$ . Use temperature: 0 ~ +40. Output: RS-232C, analog voltage  $\pm 1VF.S$ .

**Application:** Used for power measurement.



## 手持式合金分析仪

Handheld X - ray fluorescence spectrometer



厂家：江苏天瑞仪器股份有限公司

型号：Genius 5000XRF

特点：可准确检测各种高低合金钢、不锈钢、工具钢、镍合金、镍钴耐热合金、钛合金、铜合金、青铜、锌合金等，可通过对其它合金元素的测定，实现对铝等轻合金的牌号检定。本设备属于快速无损检测，1-2秒中对样品进行快速合金牌号分析，10秒即可进行试验精度的测量，具有动态匹配信息的功能，测试结果，样品牌号，匹配信息一同显示在测试界面并和相互切换。

应用：主要用于不锈钢原材料、线材、紧固件等样品中各种元素的检测。

Co., Ltd.

**Manufacturer:** Jiangsu Skyray Instrument  
**Model:** Genius 5000XRF

**Features:** Accurate detection of various high and low alloy steel, stainless steel, tool steel, nickel alloy, heat-resistant nickel and cobalt alloy, titanium alloy, copper alloy, bronze, zinc alloy, through the other alloying elements determination and implementation of aluminum and other light alloy grade verification. The equipment is rapid and nondestructive detection, 1-2 seconds in the samples of fast alloy grade analysis, 10 seconds of test precision measurement, has the function of dynamic matching information and test results, like brand, matching information shown together in the testing interface and switching between.

**Application:** Mainly used in stainless steel raw materials, wire, fasteners and other samples of the various elements of the test.

## 冲击试样缺口电动拉床

Electric impact specimen notch broaching machine

厂家：济南天辰试验机制造有限公司

型号：LVU-2

特点：本设备安装了 V 型、U 型切口专用拉刀，一次拉削可加工两种缺口的试样各一块。拉削速度为 2.5m/min，工作行程为 330mm. 润滑冷却部分采用齿轮泵供油，供给切削刀刃以最佳润滑和冷却效果。本机具有润滑过滤，铁销收集等辅助装置，在保证安全高效加工的同时，使机器内部铁销收集方便，环境更加干净卫生。

应用：用于冲击试样制备

**Manufacturer:** Ji'nan Tianchen Testing Machine Manufacturing Co. Ltd **Model:** LVU-2

**Features:** The installation of V type and U type incision special broach, a sample can be processed two times broaching notch each piece. The cutting speed is 2.5m/min, the working stroke is 330mm. lubricating and cooling part adopts the gear pump to supply oil, and the cutting edge is supplied to the best lubrication and cooling effect. The machine has a lubrication filter, iron pin collection and other auxiliary devices, to ensure safe and efficient processing at the same time, so that the machine internal iron pin collection is convenient, the environment is more clean and health.

**Application:** Preparation of



impact specimen.

## 冲击试样缺口投影仪

Electric impact specimen notch broaching machine

厂家：济南天辰试验机制造有限公司

型号：CST-50

**特点：**本设备安装了V型、U型切口专用拉刀，一次拉削可加工两种缺口的试样各一块。拉削速度为2.5m/min，工作行程为330mm。润滑冷却部分采用齿轮泵供油，供给切削刀刀以最佳润滑和冷却效果。本投影仪发出的光线经聚光镜照射到被测物，再经物镜将被照射物体放大的轮廓投射在投影屏幕上。投影屏直径：Φ180mm，方工作台：110X125mm，圆工作台：Φ90mm，工作台玻璃直径：Φ70mm，工作台转动范围：0-360°，仪器放大倍率：50X，物镜放大倍率：2.5X，投影物镜放大倍率：20X，光源：12V/100W

**应用：**用于判断冲击试样V、U型缺口的几何尺寸加工质量。



**Manufacturer:** Ji'nan Tianchen Testing Machine Manufacturing Co. Ltd **Model:** CST-50

**Features:** The installation of V type and U type incision special broach, a sample can be processed two times broaching notch each piece. The cutting speed is 2.5m/min, the working stroke is 330mm. lubricating and cooling part adopts the gear pump to supply oil, and the cutting edge is supplied to the best lubrication and cooling effect. The light emitted by the projector is irradiated by the light focusing lens to the measured object, and then the object is projected onto the projection screen by the objective lens. Projection screen diameter: diameter of 180mm, workbench: 110X125mm, circle and Taiwan: Phi 90mm, glass diameter: diameter of 70mm, worktable rotation range: 360 degrees, the instrument magnification: 50x. Objective magnification: 2.5x, projection lens magnification: 20x. Source: 12V/100W.

**Application:** The geometric size of the impact specimen V and U notch is used to determine the machining quality.



## 冲击试样低温槽

Electric impact specimen notch broaching machine

厂家：济南天辰试验机制造有限公司

型号：DWC-60

特点：本设备采用复叠式压缩机制冷技术，利用热平衡原理及循环搅拌方式，达到对试样的自动均匀冷却、恒温，降温范围为：25~-60℃，恒温精度：<±0.5℃，保温时间：8min，有效工作空间：120\*120\*70mm，数显温度表：分辨率 0.1℃

应用：用于冲击试样的冷却、恒温。

**Manufacturer:** Ji'nan Tianchen Testing Machine Manufacturing Co. Ltd **Model:** DWC-60

**Features:** The equipment using complex cascade refrigeration compressor technology, using heat balance principle and cycle stirring mode, achieve the sample automatic uniform cooling, constant temperature, cooling temperature range: 25 to 60 DEG C, and the constant temperature precision: < + 0.5c, holding time: 8min, effective work space: 120\*120\* 70mm, digital thermometer: resolution of 0.1 °C

**Application:** For cooling, constant temperature impact test specimens.



## 微机控制电子万能试验机

Electro hydraulic servo universal testing machine

厂家：美国·美特斯工业系统(中国)有限公司

型号：CMT-4-503

特点：试验机准确度等级 0.5 级，主机为双空间结构、夹具，采用压向负荷传感器，独立、直接测量试验力及进口抽出式位移传感器直接测量位移。采用基于 DSP 的全数字测量系统，试验力、变形测量全程不分档，最大试验力达 5KN。

应用：用于不锈钢线材产品以及生产所用原料的拉伸性能指标的检测。

Manufacturer: American MST system (China) Co., Ltd.

Model: CHT-4-503

**Features:** The accuracy level of the testing machine is 0.5. The main machine is of double space structure and fixture. The load sensor is used to measure the test force independently and directly, and the imported extraction displacement sensor is used to measure the displacement directly. The full digital measurement system based on DSP is adopted. The measurement of test force and deformation is not divided into grades. Max test strength: 600kN.

**Application:** used for testing tensile properties of stainless steel wire products and raw materials used in production.



## 露点仪

### Dew point meter

厂家：西安泰戈分析仪器有限公司

型号：TG-1520

特点： 自带先进快速的干燥保护装置，响应速度快，灵敏度高；交直流供电，便携设计，使用操作简便，一体化设计，体积小、重量轻、结构简单、布局合理；定时自动存储功能，可随时查看存储数据；可进行露点℃、PPmV 和绝对湿度之间的相互转换。

测量范围：  $-100.0^{\circ}\text{C} \sim 0^{\circ}\text{C}$ ；精度：  $\leq \pm 1.5^{\circ}\text{C}$ （高于  $-60^{\circ}\text{C}$ ），  $\leq \pm 2^{\circ}\text{C}$ （低于  $-60^{\circ}\text{C}$ ）；分辨率：  $0.1^{\circ}\text{C}$  重复性：  $\leq \pm 1.0^{\circ}\text{C}$ 。

应用： 主要用于测量各种气体中微量水分含量。

**Manufacturer:** Xi'an tiger Analytical Instrument Co., Ltd.

**Model:** TG-1520

**Features:** With advanced and fast drying protection device, it has fast response speed and high sensitivity; AC / DC power supply, portable design, easy operation, integrated design, small volume, light weight, simple structure and reasonable layout; timing automatic storage function, it can view and store data at any time; it can convert dew point  $^{\circ}\text{C}$ , ppmv and absolute humidity.

Measurement range:  $-100.0^{\circ}\text{C} \sim 0^{\circ}\text{C}$ ; accuracy:  $\leq \pm 1.5^{\circ}\text{C}$  (higher than  $-60^{\circ}\text{C}$ ),  $\leq \pm 2^{\circ}\text{C}$  (lower than  $-60^{\circ}\text{C}$ ); resolution:  $0.1^{\circ}\text{C}$ ; repeatability:  $\leq \pm 1.0^{\circ}\text{C}$ .

**Application:** It is mainly used to measure the moisture content in various gases.











