



ANHUI COOLERVIE WIRE DRAWING DIE CO.,LTD.  
**安徽酷勒威拉丝模有限公司**



提供优质拉丝模具  
PROVIDE HIGH QUALITY WIRE DRAWING DIES



**酷勒威**<sup>TM</sup>  
**COOLERVIE**

# 公司简介

质量赢得市场 诚信铸就品质

COMPANY PROFILE

Quality wins market Honesty casts quality

经过二十余年的发展，安徽酷勒威拉丝模有限公司已成为中国拉丝模行业的领导品牌之一，拥有切割、镶嵌、激光打孔、研磨、抛光等完整的生产体系。酷勒威专业从事开发、生产和销售包括人造聚晶金刚石(PCD)、人造单晶金刚石(SSCD)、天然钻石(ND)、钨钢(TC)等材料为模芯的拉丝(伸线)模具以及绞线模、束线模、涂漆模、镀锡模、挤出模(押出眼模)等特殊模具。为电线电缆、五金、管材、建筑材料、医疗等行业提供设备支持。所有产品均通过ISO9001质量管理体系认证，并具备进出口资质。

公司目前占地面积30000平方米，生产面积12000平方米，固定资产3000多万元，生产设备800台套，生产员工400余人，技术人员45人，技术力量雄厚，管理体系完善，各种模具型号齐全。酷勒威致力于与客户建立长期合作关系，为合作伙伴提供精准耐用的拉丝模具和优质满意的服务。

After more than 20 years of development, Anhui Coolervie Wire Drawing Die Co., Ltd. has become one of the leading brands in China's wire drawing die industry, with complete production systems including casing cutting, blank setting, laser drilling, grinding, and polishing. Coolervie specializes in the development, production and sale of wire drawing dies with different blanks including polycrystalline diamond (PCD), Synthetic single crystal diamond (SSCD), natural diamond (ND), tungsten carbide (TC), and other special dies such as bunching and stranding dies, enameling dies, tinning dies, nipple guide, etc., We provide equipment support for wire and cable, hardware, pipe, building materials, medical and other industries. All products have passed ISO 9001 quality management system certificate, and have import and export qualifications.

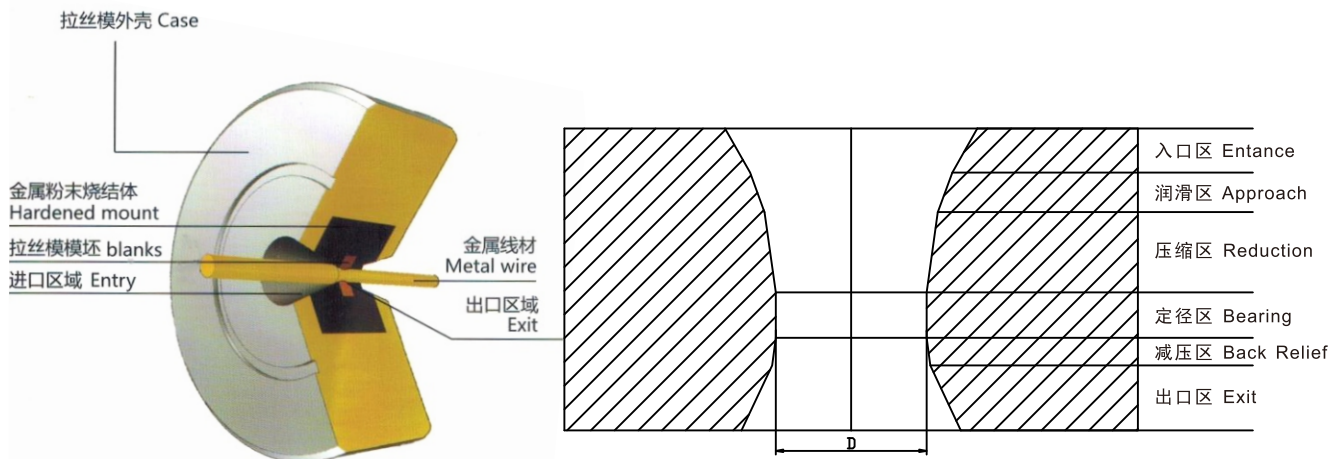
Our company currently covers an area of 30,000 square meters, production area of 12,000 square meters, more than 30 million yuan in fixed assets, 800 sets of production equipment, more than 400 production staff, 45 technical staff, strong technical force, perfect management system, various die types complete. Coolervie is committed to building long-term relationships with its customers, providing partners with precision and durable dies and superior and satisfactory service.







## 模具结构 Die Structure



1.入口区: 为润滑液提供入口, 并引导线材进入下一区域。

Entrance: It provides access to lubricants and guides the wire to the next zone.

2.润滑区: 为润滑液充分接触核心区提供工作空间, 线材由此区域进入模芯工作区。

Approach: It keeps space for lubricants and works as the first major part of die blanks.

3.压缩区: 线材的变形发生在该区域中, 夹角称为压缩角度。压缩角度由减面率和拉伸材料确定。

Reduction: The deformation of wire takes place in this zone and the included angle is called reduction angle, which is determined by percentage area reduction and material being drawn.

4.定径区: 它由直径等于, 略小于或大于所需线径的平行部分组成。定径区长度一般在孔径的20%至80%之间。公差范围和定径长度依据线材的材质而定。

Bearing: It consists of a parallel portion of diameter equal to, little less or more than desired wire diameter. Bearing length is between 20% and 80% of the wire diameter. Diameter tolerance and Bearing length depend on material being drawing.

5.减压区: 这使得线材可以顺利地定径区中离开, 避免接触任何可能划伤线材的锋利边缘。

Back Relief: This allows the wire to exit freely from the bearing, avoiding contact with any sharp edge that could scratch the wire.

6.出口区: 线材通过出口区域从模具中离开, 该区域有足够的高度为轴向机械应力提供支撑。

Exit: The wire exits the die through exit zone, which has enough height to provide support for the axial mechanical stress.



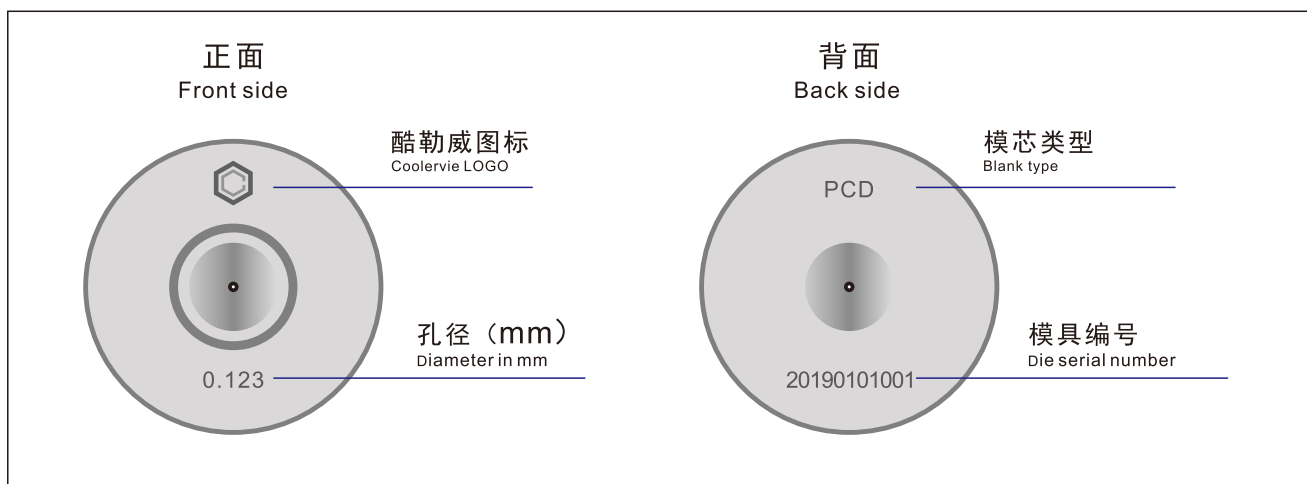
## 模具规格 Die Specifications

拉丝模典型压缩区角及定径长度 Reduction angle and Bearing length		
减面率 Surface reduction rate	软质线 Soft wire products	硬质线 Hard wire products
5%-8%	$12^{\circ} \pm 2^{\circ}$	$8^{\circ} \pm 1^{\circ}$
8%-12%	$14^{\circ} \pm 2^{\circ}$	$10^{\circ} \pm 1^{\circ}$
12%-16%	$16^{\circ} \pm 2^{\circ}$	$14^{\circ} \pm 1^{\circ}$
16%-25%	$20^{\circ} \pm 2^{\circ}$	$15^{\circ} \pm 1^{\circ}$
25%-35%	$23^{\circ} \pm 1^{\circ}$	$17^{\circ} \pm 1^{\circ}$
定径长度 Bearing length	0.2-0.5d	0.3-0.8d

○ 软质线..... 铜线、铝线、金线、其它  
 ○ 硬质线..... 不锈钢、镀铜铜线、合金钢线、镀铝线、钨丝线、其它  
 ○ Soft wire products..... Copper wire, aluminum wire, brass wire, gold wire, etc.  
 ○ Hard wire products..... Stainless steel wire, copper plated steel wire, galvanizde steel wire, brass plated steel wire, tungsten wire, etc.

○ 其它应线材需求有不同之标准形状  
Standard configurations for other wire types also available.

## 标准产品外观 Standard Product Coding



## 聚晶拉丝模具 PCD Wire Drawing Dies

聚晶金刚石模芯是由金刚石微粉在金属催化剂（钴）作用下烧结而成。主要分为三种类型：无加强环型，带硬质合金加强环型以及耐高温型。

根据线材表面质量要求，聚晶模芯的颗粒度可选择1至50微米。

酷勒威使用的聚晶模芯主要采用新亚、四方达等优秀国内供应商的人造钻石模芯以及日本住友Sumidia和美国康派丝Compax（原GE）等国际著名金刚石供应商的进口人造钻石模芯。

Polycrystalline diamond is sintered from micron-sized diamond particles and a binder (cobalt). There are three types: non-reinforced ring type, with reinforced ring type and heat stable type.

Blank grain sizes of 1 to 50 microns can be selected according to the surface quality requirements of the wire.

PCD die blanks selected by Coolervie mainly come from excellent Chinese diamond manufacturers like [New Asia](#) and [SF Diamond](#), and famous global diamond manufacturers including [Japanese Sumidia](#) and [American Compax\(GE\)](#).



特点:	Features:
· 孔径范围0.05-8.0mm	· Diameter range 0.05-8.0mm
· 使用寿命长, 适合长时间使用生产运行	· Long lasting tooling, ideal for long production runs
· 即使是重大磨损, 生产的线材也可以保持圆形	· Wire remains round, even with significant wear
· 可靠的线材表面质量	· Reliable wire surface quality
· 适用于干拉,油拉和湿拉工艺	· Suitable for dry, oil and wet lubricant

适用线材:	Applicable wire:
· 铜线	· Copper wire
· 铝线	· Aluminum wire
· 钨丝	· Tungsten wire
· 钼丝	· Molybdenum wire
· 不锈钢丝	· Stainless steel wire
· 电镀钢丝	· Electroplated steel wire
· 特殊合金丝	· Special alloy wire

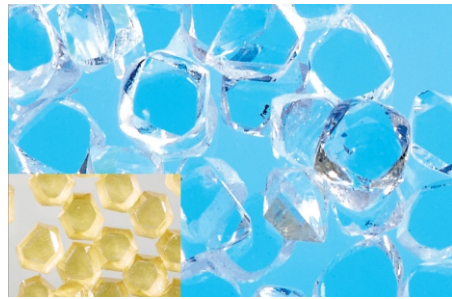




## 单晶拉丝模具 Mono Diamond Wire Drawing Dies

单晶金刚石，是一种在受控条件下人工合成的金刚石，它具有高纯净度，无杂质及无裂纹的特点。这些质量特性也使得拉丝模具的使用寿命比较稳定并具有可预测性。我司可提供**优质国产单晶**拉丝模和**爱尔兰元素六进口单晶**拉丝模

Mono /SSCD(Synthetic single crystal diamond) is a synthetic diamond under controlled conditions. It has high purity, no impurities and no cracks. These quality characteristics also make the life of the wire drawing die stable and predictable. Our company can provide **domestic high quality single crystal** drawing die and **Irish Element Six imported single crystal** drawing die.



特点:	Features:
· 孔径范围0.01-1.3mm	· Diameter range 0.01-1.3mm
· 采用111面人造单晶金刚石作为模芯，生产的模具定位精确，性能稳定	· 111-faced artificial single crystal diamond blank, accurate and stable
· 极高的硬度和抗磨损度确保了模具的使用寿命很长	· Extremely high hardness and wear resistance ensure long tool life
· 具有极好的散热性能，可用于高温加工工艺	· Excellent heat dissipation properties and can be used in high temperature environment
· 单晶金刚石为人工合成，其质量与一致性得到保证	· Single crystal diamond is synthetic and its quality and consistency are guaranteed
· 模孔表面光洁度极高，摩擦小	· Smooth surface and low friction coefficient

适用线材:	Applicable wire:
· 铜线	· Copper wire
· 铝线	· Aluminum wire
· 镀锡线材	· Tin-plated wire
· 不锈钢丝	· Stainless steel wire
· 切割线	· Saw wire
· 特殊合金丝	· Special alloy wire
· 贵金属线	· Precious metal wire



## 天然钻石拉丝模具 Natural Diamond Wire Drawing Dies

天然金刚石为世界上已知物质中最硬的材料，具有极高的硬度极好的导热性及光热性能。

Natural diamond is the hardest material among the world's known materials. It has extremely high hardness, good thermal conductivity and photothermal properties.



特点:	Features:
· 孔径范围0.01-1.3mm	· Diameter range 0.01-1.3mm
· 热导率高，可承受1700度高温	· High thermal conductivity, can withstand 1700 degrees high temperature
· 极高的硬度和抗磨损度确保了模具的使用寿命很长	· Extremely high hardness and wear resistance ensure long tool life
· 模孔表面光洁度极高，摩擦小	· Smooth surface and low friction coefficient

适用线材:	Applicable wire:
· 铜线	· Copper wire
· 铝线	· Aluminum wire
· 镀锡线材	· Tin-plated wire
· 不锈钢丝	· Stainless steel wire
· 切割线	· Saw wire
· 特殊合金丝	· Special alloy wire
· 贵金属线	· Precious metal wire





## 钨钢拉丝模具和纳米涂层模具 Tungsten Carbide and Nano Coated Wire Drawing Dies

碳化钨，也叫硬质合金，是由碳化钨颗粒和金属钴复合而成。碳化钨是一种非氧化性的硬质合金，即使在很高的温度下也能保持像刚玉或者宝石类似的硬度。碳化钨作为拉丝模具的模芯已有超过100年的历史，现在仍然在广泛应用。

金刚石涂层拉丝模以钨钢模为基体，经修模和特殊预处理后，再经超真空设备涂覆多层微米-纳米级别金刚石膜，明显提高模芯的耐磨能力和模具的使用寿命。

Tungsten carbide, also called cemented carbide, is a composite of tungsten carbide particles and metal cobalt. Tungsten carbide is a non-oxidizing hard alloy that maintains a similar hardness to corundum or gemstones even at very high temperatures. Tungsten carbide has been used as a core for wire drawing dies for more than 100 years and is still widely used.

The nano coated drawing die is made of tungsten carbide die, which is modified and specially pretreated, and then coated with multi-layer micron-nanometer diamond film by ultra-vacuum equipment, which obviously improves the wear resistance of the die core and the service life of the die.



适用线材:	Applicable wire:
· 铜线(管)	· Copper wire (Pipe)
· 铝线(管)	· Aluminum wire (Pipe)
· 不锈钢丝(管)	· Stainless steel wire (Pipe)
· 特殊合金丝(管)	· Special alloy wire (Pipe)
· 贵金属线(管)	· Precious metal wire (Pipe)

特点:	Features:
· 孔径范围0.05-35mm	· Diameter range 0.05-35mm
· 硬度高，导热性好，摩擦系数小	· High hardness, good thermal conductivity and low friction coefficient
· 成本较低，用在一些损耗很大，硬度很高的线材加工工艺中	· Low cost, used in some wire processing processes with high loss and high hardness
· 使用时均匀磨损	· Uniform wear and tear during use
· 碳化钨模芯可承受2800°C高温	· Can withstand 2800°C high temperature

## 钛合金镀锡模具 Tinning Dies

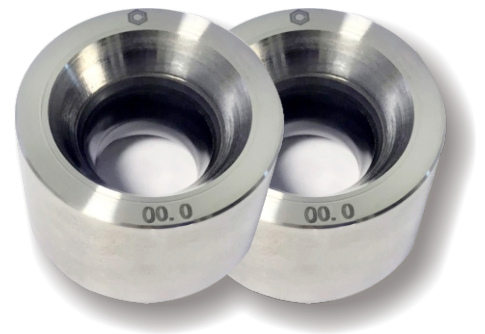
- 优质精选天然钻石，单晶金刚石，聚晶金刚石为原材料。
- 特点:精度高，镀层均匀，寿命长。使用钛合金外套，重量轻。
- 适用于各种镀锡设备。
- Select ND, Mono, PCD as die blank.
- Features: high precision, uniform coating and long life. Use titanium alloy casing, light weight.
- Suitable for all kinds of tin plating equipment.



## 绞线模具束线模具 Bunching and Stranding Dies

绞线模，束线模通常用于引导和压实电线，从而生产通常由几个导电线缆组成的电线。应用于包括高，中和低电压电缆和汽车电线。根据客户要求，我们可以提供聚晶和硬质合金两种材质的绞线模，束线模。

Bunching and stranding dies are commonly used to guide and compact wires to create cables that usually consist of several electrically conducting wires. Applications include high, medium and low voltage cables and automotive wires. According to customer requirements, we can provide stranding die and bunching die with PCD or tungsten carbide blank.



## 挤出模具 Extrusion Tips and Dies

挤出工具通常用于在实心或绞合线周围施加绝缘层。

精选优质聚晶金刚石、碳化钨为原材料。

Extrusion tools are commonly used to apply an insulating layer around a solid or stranded wire.

Can use PCD and TC as die blank.





## 半成品模具 Semi-finished Dies

酷勒威拉丝模有限公司也可为客户提供各类半成品拉丝模具。酷勒威严格挑选优质的模芯进行镶套，再通过成熟的激光技术，一次性钻孔成形。在保证定径区孔径达到要求的前提下，同时激光切割出内孔的形状和角度，大大降低了后期成品研磨的加工难度和成本。

Coolervie also provides customers with semi-finished wire drawing die. After strict selection of high-quality die blank for insertion, Coolervie then finishes one-time drilling forming with mature laser technology. Under the premise that the aperture of the reduction zone meets the requirement, the shape and angle of the inner hole are created by laser, greatly reducing the difficulty and cost of finishing grinding in the later stage.



## 涂漆模具 Enameling Dies

精选优质天然金刚石、聚晶金刚石、碳化钨为原材料，模具孔径控制精确，容易获得漆层均匀的线材表面。

广泛配套各种国产或进口漆包机器。

Select high-quality ND, PCD, TC as die blanks. The die aperture is precise, easy to obtain a uniform paint surface of the wire.

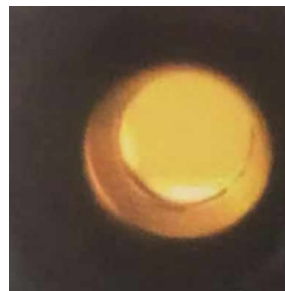
Can be used in a wide range of domestic or imported enamel machines.



## 维修和保养 Repair & Maintenance

模具是拉拔过程中的一个重要部分，但值得注意的是，它是生产链的一部分，它的性能与机器的其他部分如润滑剂、原料等相联系。所以，应当确保所有这些元素以最佳的方式合作。然而，即使所有的拉拔条件都在控制之下，拉拔过程也必然会导致模具磨损；线材在金刚石表面留下痕迹，使得模具维修成为必要。压缩区环状磨损、定径区孔径增大以及生产的线材表面光洁度降低等问题最终可能会导致模芯破裂，模具报废。

酷勒威拉丝模有限公司为客户提供模具的维修和保养服务。严格按照新模具的标准对使用过的模具进行孔径修改和模芯内表面整形抛光，从而显著延长模具的使用寿命，降低客户的生产成本。



维修前  
BEFORE



维修后  
AFTER

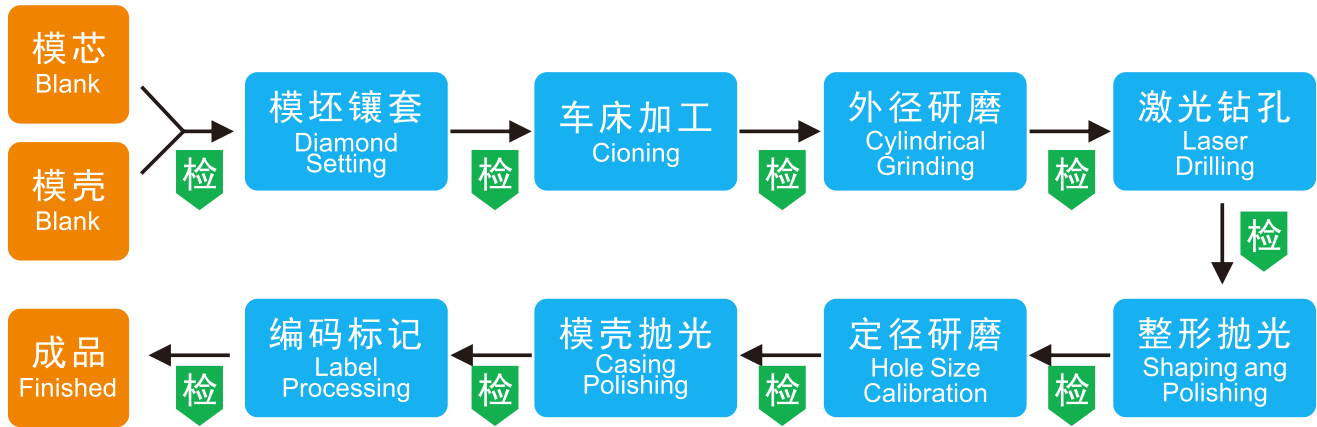
The die is an important part of the drawing process, but it is important to understand that it is part of a chain and that its performance is linked to other parts like the machine, the lubricant, the raw material, etc. So, it is important to make sure that all these elements work together in the best way possible.

Nevertheless, even when all the drawing conditions are under control, the drawing process puts wear in the dies; the wire leaves marks on the diamond surface and die maintenance becomes necessary. Problems such as ring wear in the reduction zone, increase of the aperture in the bearing zone and decrease of the surface finish may eventually lead to blank rupture and die scrap.

Coolervie Wire Drawing Die Co., Ltd. provides customers with die repair and maintenance service. In strict accordance with the standards of new dies, the used dies are modified in aperture and the inner surface of the blank is reshaped and re-polished, thus significantly prolonging the service life of the dies and reducing the production cost for customers.



## 生产流程 Main Production Processes



**检** : 质量检验 Quality Check

酷勒威拉丝模有限公司精选304不锈钢材和钛合金金属等优质材料作为模具的外壳，同时精心挑选有效面积大，无损坏无杂质的模芯作为模具的核心，经过多道生产工序和各项技术检测，最终生产出满足客户需求的精准模具。

Coolervie Wire Drawing Die Co., Ltd. chooses 304 stainless steel and titanium alloy metal as the case of the die. Meanwhile, Coolervie carefully chooses the blank of the die which has large effective area with no damage and no impurities. After many production processes and various technical tests, it finally produces precise dies to meet the requirements of customers.

## 生产检测设备 Production & Testing Equipment



## 质量监控 Quality Control

安徽酷勒威拉丝模有限公司在二十多年的发展过程中，逐渐形成了完善的质量监控体系。

Anhui Coolervie Wire Drawing Die Co., Ltd. has gradually formed a complete quality control system in the development process of more than 20 years.



光学显微镜 Optical Microscope

优质的光学系统和耐用可靠的操作机械,可方便快速地观察模芯内孔情况。

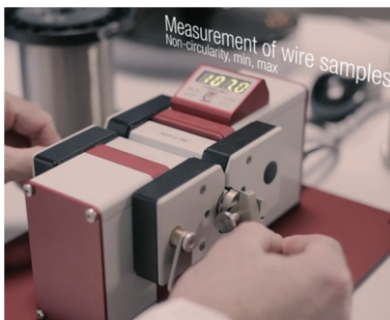
High quality optical system and reliable operation machinery, can observe the inner hole of the blank conveniently and quickly.



辉煌测控模具孔径测径仪  
SPLENDOR Aperture Measuring Instrument

速度快、精度高。模具放置在测量点后，几毫秒的时间内便可获得内孔直径各项数据的测量结果。

Fast speed and high precision. After the die is placed at the measuring point, the measurement results of various data about inner hole diameter can be obtained in a few milliseconds.



法国线径测径仪  
French CERSA-MCI Line  
Diameter Measuring Instrument

在模具定径研磨后帮助测量模具所拉线材的实际直径以及真圆度，从而达到监控模具最终生产效用的目的。

Help to measure the actual diameter and circularity of the wire drawn from the die after the grinding process, so as to achieve the purpose of monitoring the final production efficiency of the die.



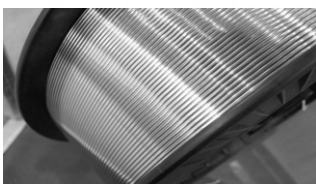
挪威Conoptica CU-10、CU-11激光测量  
Norwegian Conoptica CU-10、CU-11  
laser measuring instrument.

本设备是模具质量监控的最终测控系统，能够全方位的测量模具的内孔，提供包含孔径尺寸，内孔角度等全面的模具质量报告。

This equipment is the final measurement and control system for wire drawing die quality monitoring. It can measure the inner hole of the die in all directions and provide a comprehensive die quality report.



## 模具应用 Applications of Dies



弹簧线 Spring Wire



钢缆 Wire Rope



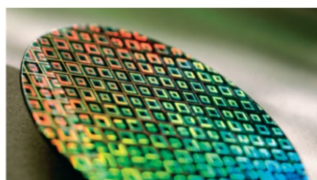
医疗配件 Medical Parts



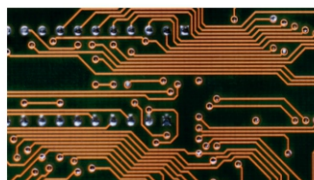
太阳能电板 Solar Cell



焊接 Welding Wire



硅晶片 Silicon Wafer

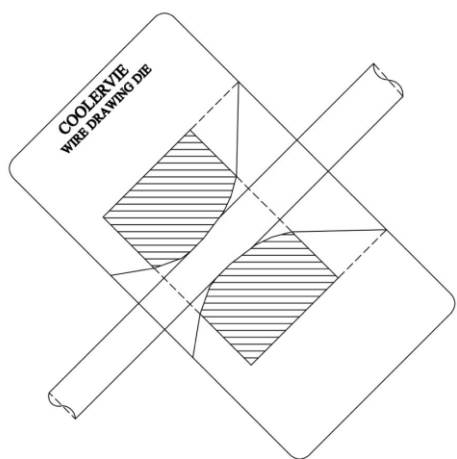


键合线 Bonding Wire



铜线 Copper Wire





DEVELOPMENT OF SCIENCE  
FILL IN YOUR COMPANY

专业专注 · 全心服务



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