



STOCK CODE  
股票代码  
601609



金田铜业官网

**宁波金田铜业(集团)股份有限公司**  
NINGBO JINTIAN COPPER (GROUP) CO., LTD.

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PRECISION ALLOY  
ROD AND WIRE

**精密合金棒线**





## COMPANY PROFILE

### 企业简介

**致力于5G通讯、新能源汽车、轨道交通、电力物联网、智慧城市等战略性新兴产业发展提供铜材综合解决方案。**

公司立足宁波，放眼世界，持续推进全球化布局，在宁波、江苏、广东、重庆、越南等建设六大生产基地，形成了产业链完整、规模优势显著、产品种类齐全的竞争优势；并在香港、美国、德国、日本等地设立子公司，建立全球供应链体系和销售网络，为国内外客户提供铜产品一站式的采购服务。

公司建立国家级企业技术中心、国家级博士后科研工作站、院士工作站，与乌克兰国家科学院合作，聚

### 宁波金田铜业（集团）股份有限公司

（股票简称：金田铜业，股票代码：601609）  
始建于1986年，专注铜加工三十余年，是全球领先的铜及铜合金材料供应商。

焦重点应用领域关键材料与技术，研发高强、高导、高精度的新型高端铜合金新材料，目前已拥有授权发明专利100多项，主持、参与国家/行业标准制订近30项，获得国家级、省部级科技进步奖10余项。

公司坚持转型升级，不断推进数字化建设。引进ERP、CRM、SRM等管理系统，建立覆盖全业务领域的信息化管理平台；通过自动化升级和SCADA、MES、RFID、WMS等多系统融合应用，建设数字化工厂，推进智能制造。

**Ningbo Jintian Copper (Group) Co., Ltd.** (Stock abbreviation: Jintian Copper, stock code: 601609) was founded in 1986 and has focused on copper processing for more than 30 years. It is the world's leading supplier of copper and copper alloy materials and is committed to providing comprehensive services for the development of strategic emerging industries such as 5G communications, new energy vehicles, rail transit, power Internet of Things, and smart cities.

The company is based in Ningbo, looks at the whole world, and continues to promote globalization. It has built six production bases in Ningbo, Jiangsu, Guangdong, Chongqing, Vietnam, etc., forming a competitive advantage with a complete industrial chain, significant scale advantages, and complete product categories; and in Hong Kong, The United States, Germany, Japan and other places, Jintian has set up subsidiaries to establish a global supply chain system and sales network to provide domestic and foreign customers with one-stop procurement services for copper products.

The company has established a national enterprise technology

center, a national post-doctoral research workstation, and an academician workstation. In cooperation with the National Academy of Sciences of Ukraine, it focuses on key materials and technologies in key application areas, develops new high-end copper alloy materials with high strength, high conductivity, and high precision. Jintian currently has more than 100 authorized invention patents, presided over and participated in the formulation of nearly 30 national / industry standards, and won more than 10 national, provincial and ministerial scientific and technological progress awards.

The company insists on transformation and upgrading, and continuously promotes digital construction. Bring in ERP, CRM, SRM and other management systems that are established to cover all business areas information management platform; through automated upgrades and multi-system integration applications such as SCADA, MES, RFID and WMS. Jintian has built a digital factory, and promoted intelligent manufacturing.



## COMPANY PROFILE 公司简介

**金田高精度棒线公司**成立于2007年，  
为金田铜业铜棒线材生产、经营主体，  
拥有生产车间约5万平方米。

经过10余年的发展，公司已成为国内先进的高精度棒线加工制造基地，位列中国铜棒线材十强企业第一名。公司主要产品有铅黄铜、普黄铜、无铅易切削黄铜棒线，以及锡青铜、铬锆铜等产品，广泛应用于航空航天、汽车制造、电子通讯、精密加工、家用电器、民用五金及焊接材料等领域，与建通集团、公牛集团、菲尼克斯等知名企业建立了良好的合作关系。

在“创造客户价值，打造百年公司，成为行业标杆，为中国工业强国做贡献”的使命愿景牵引下，公司秉承“天天求变、永不自满、勇于竞争、追求卓越”的企业精神，坚持走新型工业化发展道路，不断提升管理水平，建设一流人才队伍，坚持品质立市，强化精益理念，通过ISO9001:2015质量管理体系、ISO14001:2015环境

体系、ISO 45001:2018职业健康安全管理体系及IATF16949汽车行业质量管理体系认证，拥有德国舒玛格拉拔机、精矫机、3150吨挤压机、2200吨挤压机等多套先进设备，2019年公司铜棒线材产能总计26.5万吨。

面向未来，公司继续坚持“依法经营、诚信经营、自主创新、科学发展”的经营理念，讲质量、守诚信、铸品牌，以市场为导向，以客户为中心，坚持科技兴企，加快转型升级，推进产品结构优化，以高端品质引领市场，致力成为国内专业生产精密铜合金棒线的领军企业，为实现“世界级500强”的金田梦而不懈奋斗！

SINCE **2007**

Ningbo Jintian Copper (Group) Co., Ltd. (abbreviation: Jintian Copper, SSE stock code: 601609) was founded in 1986 and has focused on copper processing for more than 30 years. We are the world's leading supplier of copper and copper alloy materials. We are committed to providing comprehensive copper product solutions for the development of strategic emerging industries such as 5G tele-

Jintian High-Precision Rod and Wire Company is a business entity of Ningbo Jintian Copper (Group) Co., Ltd for the production of copper rod and wire. Jintian High-Precision Rod and Wire Co. was established in 2007 and has a production workshop of about 50,000 square meters.

After more than 10 years of development, Jintian High-Precision Rod and Wire Company has become an advanced high-precision copper bar processing and manufacturing base, ranking first among the top ten copper rod and wire companies in China. The company's main products include ordinary brass, leaded brass, lead-free brass, tined bronze and chrome zirconium copper rods and wires. The products are widely used in aerospace industry, automotive manufacturing, electronic communications, precision processing, household appliances and welding materials. The company has established good cooperative relationships with well-known enterprises such as Suzhou Jiantong, Xiamen Xiahui and Bull Group.

Through the Jintian Group mission of “Create customer value, Build a century-old company, Become a benchmark in the industry, and Contribute to China's industrial growth” and the enterprise spirit of “Seek change everyday, Never be self-satisfied, Dare to innovate, Pursue excellence”, the company adheres to further develop circular economy and new industrialization, continuously improve its management level, and nurture first-class talents. The company has passed ISO9001:2015 Quality management system, ISO14001:2015 Environmental management system, ISO45001:2018 Occupational health and safety management system certifications, IATF16949 Automotive Industry Quality Management System Certification. The company has several advanced manufacturing equipment such as German Schumag drawing machine, high-precision leveler, 3150 ton extruder and 2200 ton extruder. In 2018, the company's copper rod and wire production capacity totaled 265,000 tons.

In the future, the company continues to adhere to the business philosophy of "Operate according to law, Do business with integrity, Innovate independently, Contribute to scientific development". In addition, the company is committed to becoming a leading domestic manufacturer of precision copper alloy rods and working towards Jintian Group's dream of becoming one of Global 500 companies through quality, integrity, brand building, market-oriented & customer-centric attitude, relying on science and technology, accelerating transformation & upgrading, optimizing product structure and improving product quality.



## ENTERPRISE'S HONOR 企业荣誉

国家重点高新技术企业  
国家级企业技术中心  
国家级实验室

National Level High-tech Enterprise  
National Level Enterprise Technology Center  
National Level Laboratory

精益生产，品质为先。专门的质检机构，专业的检测中心，先进的检测设备，为金田集团构建起了科学完善的质量控制体系。金田集团已通过ISO9001:2015质量认证、ISO14001:2015环境认证、ISO45001:2018职业健康安全管理体系及IATF16949汽车行业质量管理体系认证，并获得了UL、ASTM、EN、TUV、等国际标准认证。

Keep meliorating in the production. Quality is above all. The Specialized QC department, the professional test center, the advanced test equipment have provided us scientific and perfect quality system. We have been ISO9001:2015 certified for quality, ISO14001:2015 certified for environment protection, ISO45001:2018 Occupational health and safety management system certifications, IATF16949 Automotive Industry Quality Management System Certification. Furthermore, we have attained international approvals including UL, ASTM, EN, TUV certifications,etc.



# PRODUCTION STRENGTH MODERN EQUIPMENT

生产实力，现代设备



努力创造第一，全新打造一流。  
走精益生产之路，尽全力消除浪费。  
Strive for cresting the first,work hard to build  
top grade.Process efficiently and precisely to  
eliminate waste.

# PRODUCTION STRENGTH AND EQUIPMENT 生产实力及设备

精良的制造工艺，一流的设备装置，  
不懈的追求，开创恒久的辉煌。

Advanced production technology, first-class  
production equipments untiring pursuing,  
initiate permanent resplendence.



# QUALITY ASSURANCE

品质保证



# PRODUCT INTRODUCTION

## 产品简介



### 普黄铜线 COIL BRASS WIRE

可适用于各种冷变形和弯折制造的受力零件，如：消费电子、汽车零部件、精密电子元件等。

It can be applied to all kinds of cold deformation and bending parts, such as consumer electronics, auto parts, precision electronic components, etc.



### 易切削黄铜 FREE CUTTING BRASS

适用于自动车床、数控车床加工产品，如五金件、电器接插件、连接器、精密电子元件等。

Applicable for automatic lathe, CNC lathe machined products, such as hardware, electrical plugs, connectors, precision electronic components, etc.



### 铅黄铜 LEAD BRASS

适用于以热冲和切削加工制作的各种结构零件，如汽车零部件、通讯连接器、精密五金等。

Used in spare parts which need hot punching and free cutting processing, such as electrical hardware, communication connector, precision metal.



### 黄铜扁线 BRASS FLAT WIRE

适用于各种深引伸和弯折制造的受力零件，如电子插头、电器插头、拉链等。

Used in a lot of deepdrawability parts, such as electronic plug, electrical plug, zippers, etc.

# KEEP IMPROVING

## 精益求精

营造国际品牌，构筑百年企业。  
Elevate an International Brand  
Construct a Centenary Enterprise.



## LEAD BRASS 铅黄铜

应用最广泛，具有良好的切割和机械性能，能承受冷、热压力加工，易钎焊和焊接，有良好的耐腐蚀性。

With excellent machinability, good performance in cutting, good corrosion resistance, and with good processing in cold & hot working, easy to joint and braze.



## FREE CUTTING BRASS 易切削黄铜

具有极好的切削、钻孔性能，并可适应热锻、冷镦、铆接等各种加工方式。强度高、韧性好，耐腐蚀防变色性强。

Excellent cutting & drilling performance, suitable in a variety of processing method like hot forging, cold heading, riveting, high strength, high toughness & corrosion resistance, anti-tarnish.

| 牌号<br>Alloy Grade | CU        | Pb       | Al   | Fe<br>(max) | Sn        | As        | Zn  | 杂质<br>Impurity Total       |
|-------------------|-----------|----------|------|-------------|-----------|-----------|-----|----------------------------|
| HPb63-3           | 62.0-65.0 | 2.4-3.0  | -    | 0.1         | -         | -         | REM | 0.75                       |
| HPb63-0.1         | 61.5-63.5 | 0.05-0.3 | -    | 0.15        | -         | -         | REM | 0.5                        |
| HPb62-2           | 60.0-63.0 | 1.5-2.5  | -    | 0.15        | -         | -         | REM | 0.65                       |
| HPb60-3           | 58.0-61.0 | 2.5-3.5  | -    | 0.3         | 0.3       | -         | REM | 0.8                        |
| HPb59-1           | 57.0-60.0 | 0.8-1.9  | -    | 0.5         | -         | -         | REM | 1.0                        |
| HPb58-3           | 57.0-59.0 | 2.5-3.5  | -    | 0.5         | 0.5       | -         | REM | 1.0                        |
| C3601             | 59.0-63.0 | 1.8-3.7  | -    | 0.3         | Fe+Sn:0.5 | -         | REM | -                          |
| C3602             | 59.0-63.0 | 1.8-3.7  | -    | 0.5         | Fe+Sn:1.0 | -         | REM | -                          |
| C3603             | 57.0-61.0 | 1.8-3.7  | -    | 0.35        | Fe+Sn:0.6 | -         | REM | -                          |
| C3604             | 57.0-61.0 | 1.8-3.7  | -    | 0.5         | Fe+Sn:1.0 | -         | REM | -                          |
| CW602N            | 61.0-63.0 | 1.7-2.8  | 0.05 | 0.1         | 0.1       | 0.02-0.15 | REM | Ni 3.0<br>others total 0.2 |
| CW614N            | 57.0-59.0 | 2.5-3.5  | 0.05 | 0.3         | 0.3       | -         | REM | Ni 3.0<br>others total 0.2 |
| CW617N            | 57.0-59.0 | 1.6-2.5  | 0.05 | 0.3         | 0.3       | -         | REM | Ni 3.0<br>others total 0.2 |
| C36000            | 60.0-63.0 | 2.5-3.0  | -    | 0.35        | -         | -         | REM | -                          |

适用于以热冲和切削加工制作的各种结构零件，如螺钉、垫圈、垫片、衬套、螺帽、喷嘴等。

Used in spare parts with hot-drawability and cutting manufacturing techniques, such as bolts, shims, screw caps, gaskets, linings, etc.

状态 Temper: M , Y2 , Y  
生产范围 Production range  
直径 Diameter: Φ2mm-Φ95mm  
长度 Length: 2m-4.5m

| 牌号<br>Alloy Grade | CU        | Pb      | Al   | Fe<br>(max) | Sn        | Zn  | 杂质<br>Impurity Total       |
|-------------------|-----------|---------|------|-------------|-----------|-----|----------------------------|
| C3601             | 59.0-63.0 | 1.8-3.7 | -    | 0.3         | Fe+Sn:0.5 | REM | -                          |
| C3602             | 59.0-63.0 | 1.8-3.7 | -    | 0.5         | Fe+Sn:1.0 | REM | -                          |
| C3603             | 57.0-61.0 | 1.8-3.7 | -    | 0.35        | Fe+Sn:0.6 | REM | -                          |
| C3604             | 57.0-61.0 | 1.8-3.7 | -    | 0.5         | Fe+Sn:1.0 | REM | -                          |
| CW614N            | 57.0-59.0 | 2.5-3.5 | 0.05 | 0.3         | 0.3       | REM | Ni 3.0<br>others total 0.2 |
| C36000            | 60.0-63.0 | 2.5-3.0 | -    | 0.35        | -         | REM | -                          |

适用于自动车床，数控车床加工产品，如五金件、电器接插件、连接件等。

Used in automatic lathe, CNC lathe machined products, such as the hardware, electrical plugs, connectors, etc.

状态 Temper: M , Y2 , Y  
生产范围 Production range  
直径 Diameter: Φ2mm-Φ95mm  
长度 Length: 2m-4.5m



## ORDINARY BRASS 普通黄铜

有良好的冷加工塑性，高弹性，高强度。  
Excellent cold processing plasticity, high elasticity  
and strength.



## FLAT BRASS WIRE 黄铜扁线

具有良好的机械性能，热状态下塑性好，冷状态下塑性也可以，  
切削性好，易钎接和焊接，耐腐蚀，但易产生腐蚀破裂。  
With excellent machinability, cold plasticity, hot plasticity, free  
cutting and resistance to corrosion, it is easy to joint and braze.

| 牌号<br>Alloy Grade | CU        | Pb   | Al | Fe (max) | Sn | Zn  | 杂质<br>Impurity Total |
|-------------------|-----------|------|----|----------|----|-----|----------------------|
| H70               | 68.5-71.5 | 0.03 | -  | 0.1      | -  | REM | 0.3                  |
| H68               | 67.0-70.0 | 0.03 | -  | 0.1      | -  | REM | 0.3                  |
| H65               | 63.0-68.5 | 0.09 | -  | 0.07     | -  | REM | 0.45                 |
| H63               | 62.0-65.0 | 0.08 | -  | 0.15     | -  | REM | 0.5                  |
| H62               | 60.5-63.5 | 0.08 | -  | 0.15     | -  | REM | 0.5                  |
| H59               | 57.0-60.0 | 0.5  | -  | 0.3      | -  | REM | 1.0                  |
| C2600             | 68.5-71.5 | 0.05 | -  | 0.05     | -  | REM | -                    |
| C2680             | 64.0-68.0 | 0.05 | -  | 0.05     | -  | REM | -                    |
| C2700             | 63.0-67.0 | 0.05 | -  | 0.05     | -  | REM | -                    |
| C2800             | 59.0-63.0 | 0.1  | -  | 0.07     | -  | REM | -                    |

适用于各种深引伸和弯折制造的受力零件，如销钉、铆钉、垫圈、螺帽、导管、散热器零件等。  
Used in a lot of deep-drawability parts, such as hardware, radiator parts, springs, bolts, rivets and machine parts, etc.

状态 Temper: M , Y2 , Y , Y4  
生产范围 Production range  
线材 Wire: Φ2mm-Φ20mm  
棒材 Rod: Φ2mm-Φ60mm

| 牌号<br>Alloy Grade | CU        | Pb   | Al | Fe<br>(max) | Sn | Zn  | 杂质<br>Impurity Total |
|-------------------|-----------|------|----|-------------|----|-----|----------------------|
| H65               | 63.0-68.5 | 0.09 | -  | 0.07        | -  | REM | 0.45                 |
| H63               | 62.0-65.0 | 0.08 | -  | 0.15        | -  | REM | 0.5                  |
| H62               | 60.5-63.5 | 0.08 | -  | 0.15        | -  | REM | 0.5                  |
| C2600             | 68.5-71.5 | 0.05 | -  | 0.05        | -  | REM | -                    |
| C2680             | 64.0-68.0 | 0.05 | -  | 0.05        | -  | REM | -                    |
| C2700             | 63.0-67.0 | 0.05 | -  | 0.05        | -  | REM | -                    |
| C2800             | 59.0-63.0 | 0.1  | -  | 0.07        | -  | REM | -                    |

适用于各种深引伸和弯折制造的受力零件，如气压表弹簧、散热器零件、拉链等民用产品。  
Used in a lot of deep-drawability parts, such as springs, and machine parts, zipper etc.

状态 Temper: Y8 , Y4 , Y2 , Y  
生产范围 Production range  
厚度 Thickness: 0.6mm-2.0mm  
宽度 Width: 3mm-10mm



LEAD FREE BRASS

无铅黄铜

具有较好的机械性能和物理性能，以及良好的冷、热加工性能和切削性。  
With good mechanical and physical properties, good cold & hot working, and free cutting performance.



COPPER ROD

紫铜

导电性能佳  
High electric conductivity.

| 牌号<br>Alloy Grade                      | CU        | Pb  | Bi      | Fe (max) | Sn       | Zn   | 杂质<br>Impurity Total |                      |
|----------------------------------------|-----------|-----|---------|----------|----------|------|----------------------|----------------------|
| HBi60-1.3                              | 58.0-62.0 | 0.2 | 0.3-2.3 | 0.1      | 0.05-1.2 | REM  | 0.3                  |                      |
| HBi59-1                                | 58.0-60.0 | 0.1 | 0.8-2.0 | 0.2      | 0.2      | REM  | 0.5                  |                      |
| HSn62-1                                | 61.0-63.0 | 0.1 | -       | 0.1      | 0.7-1.1  | REM  | 0.3                  |                      |
| 无铅易切削黄铜 / LEAD-FREE FREE-CUTTING BRASS |           |     |         |          |          |      |                      |                      |
| 牌号<br>Alloy Grade                      | CU        | Pb  | Ni      | Fe (max) | Sn       | Al   | Zn                   | 杂质<br>Impurity Total |
| JT206                                  | 57.0-59.0 | 0.1 | 0.3     | 0.3      | 0.3      | 0.05 | REM                  | 0.2                  |
| JT506                                  | 59.0-62.0 | 0.1 | 0.2     | 0.1      | 1.0      | -    | REM                  | 0.4                  |

无铅黄铜广泛地应用于仪器仪表、电子、电器、日用五金、饮用水系统等领域。  
Lead free brass widely used in instrumentation, electronics, electrical appliances, daily hardware, drinking water systems and other fields.

无铅易切削黄铜Pb含量符合欧盟ROHS要求，即Pb < 0.1%，易于切削加工，良好的耐应力腐蚀性能，优秀的冷加工成型性能，材料全，生命周期成本低。  
Lead-free free-cutting brass Pb content meets EU ROHS requirements, that is, Pb < 0.1%, Easy to cut, good stress corrosion resistance, excellent cold forming performance, Low material life cycle cost

无铅易切削黄铜应用于精密五金、机械、电子、阀体，如电气接线端子、汽车连接器、消费电子等。  
Lead-free free-cutting brass used in precision hardware, machinery, electronics, valve bodies, such as electrical terminals, automotive connectors, consumer electronics, etc.

| 牌号<br>Alloy Grade | CU+Ag | P     | Bi    | Sb    | As    | Fe    | Ni    | Pb    | Sn    | S     | Zn    | O    |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| T1                | 99.95 | 0.001 | 0.001 | 0.002 | 0.002 | 0.005 | 0.002 | 0.003 | 0.002 | 0.005 | 0.005 | 0.02 |
| T2                | 99.90 | -     | 0.001 | 0.002 | 0.002 | 0.005 | -     | 0.005 | -     | 0.005 | -     | -    |

适用于电器、电力机柜等。  
Used in electric appliance, power panel etc.

状态 Temper: Y2  
生产范围 Production range  
直径 Diameter: Φ2mm-Φ50mm  
长度 Length: 2m-4.5m

状态 Temper: M , Y2 , Y  
生产范围 Production range  
直径 Diameter: Φ5mm-Φ40mm  
长度 Length: 2m-4.5m



BRONZE

锡青铜

高强度、硬度好、耐磨性、弹性好、无火花、耐腐蚀性，无磁性，优良的冷加工性能，具有优良的电镀及焊接性能。  
High strength, good hardness, abrasive resistance, good elasticity, no spark, corrosion resistance, nonmagnetic, excellent cold working performance, and with excellent electroplating and welding performance.

| 牌号<br>Alloy Grade | CU  | Pb      | Al      | Fe     | Sn      | Zn      | P         | 杂质<br>Impurity Total |
|-------------------|-----|---------|---------|--------|---------|---------|-----------|----------------------|
| QSn6.5-0.1        | REM | ≤ 0.02  | ≤ 0.002 | ≤ 0.05 | 6.0-7.0 | ≤ 0.3   | 0.10-0.25 | ≤ 0.4                |
| QSn7-0.2          | REM | ≤ 0.02  | ≤ 0.01  | ≤ 0.05 | 6.0-8.0 | ≤ 0.3   | 0.10-0.25 | ≤ 0.45               |
| C54400            | REM | 3.0-4.0 | -       | ≤ 0.1  | 3.5-4.5 | 1.5-4.5 | 0.01-0.5  | -                    |

适用于导电良好的弹簧接触片或弹簧，航空高度表、升降速度表弹簧、连杆、垫圈、小轴、波纹管，精密仪器齿轮、电刷盒、接触器。  
Good conductive spring contact piece or spring, aviation altimeter, lifting speed indicator spring, connecting bar, shims, small shafe, ripple tube, precision instrument gear, brush box, connectors.

状态 Temper: M , Y4 , Y2 , Y  
生产范围 Production range  
线材 Wire: Φ2mm-Φ14mm  
棒材 Rod: Φ2mm-Φ50mm



CUCRZR

铬锆铜

具有高导电性和导热性，良好的强度和硬度，且耐热耐磨，防变形能力强。  
With high electrical and thermal conductivity, good strength and hardness, heating-resistance, wear-resisting, anti -deformation ability.

| 牌号<br>Alloy Grade | CU  | Cr      | Zr       | Fe  | Pb   | 杂质<br>Impurity Total |
|-------------------|-----|---------|----------|-----|------|----------------------|
| C18150            | REM | 0.5-1.5 | 0.02-0.2 | -   | -    | ≤ 0.1                |
| C18200            | REM | 0.6-1.2 | -        | 0.1 | 0.05 | ≤ 0.1                |
| C15000            | REM | -       | 0.1-0.2  | -   | -    | ≤ 0.1                |
| CTCZ              | REM | 0.2-1.0 | 0.02-0.2 | -   | -    | ≤ 0.1                |
| JTCZ              | REM | 0.2-1.0 | 0.02-0.2 | -   | -    | ≤ 0.1                |

适用于电极的触头材料、电焊电极、电极握杆、电极座、电阻焊电极及设备部件，凸焊机磨具和夹具、缝焊轮、电火花放电电极、烙铁头、高速列车、电子元器件，机械零件等。  
Electrode contact material, spot welding electrodes, electrode grip, electrode holder, resistance welding electrodes and equipment components, welder molds and fixtures, seam welding wheel, EDM electrode, soldering iron tops, high speed train, electronic components, mechanical parts etc.

状态 Temper: T h04  
生产范围 Production range  
直径 Diameter: Φ3mm-Φ50mm