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PRECISION ALLOY
ROD AND WIRE

精密合金棒线



## COMPANY PROFILE 企业简介

致力于为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、包头、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、泰国、韩国等地设立分支机构,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, Baotou, 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, Thailand, Korea 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 tech -nological 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 areasInformation manage—ment 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

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。

在"创造客户价值,打造百年公司,成为行业标杆,为现代工业文明做贡献"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

**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。

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、EJP拉拔机,SMS在线精矫机、3150吨挤压机、SMS挤压机等一流设备,2021年公司精密铜合金棒线材产能12万吨以上。

面向未来,公司继续坚持"依法经营、诚信经商、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!

CE 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

-communications, new energy vehicles, rail transit, Internet of Things, and smart cities.

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.

Through the Jintian Group mission of "Create customer value, Build a century-old company, Become a benchmark in the industry, and Contribute to modern industrial development" 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 manage—ment 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 sms extruder. In 2021, the company's copper rod and wire production capacity totaled 120, 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

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。

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 Cente National Level Laboratory

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









www.jtcopper.con

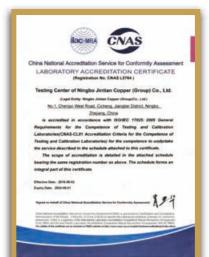


## **QUALITY ASSURANCE**

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 motal.





#### 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.





## **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。 A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 Alloy Grade	CU	Pb	Al	Fe (max)	Sn	As	Zn	杂质 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 < 0.3 others total<0.2
CW511l	61.5-63.5	0.2	0.05	0.1	0.1	0.02-0.15	REM	Ni < 0.3 others total<0.2
CW614N	57.0-59.0	2.5-3.5	0.05	0.3	0.3	-	REM	Ni < 0.3 others total<0.2
CW617N	57.0-59.0	1.6-2.5	0.05	0.3	0.3	-	REM	Ni < 0.3 others total<0.2
C36000	60.0 <sup>-</sup> 63.0	2.5-3.0	-	0.35	-	-	REM	-

牌号 Alloy Grade	cu	Pb	Al	Fe (max)	Sn	Zn	杂质 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 < 0.3 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 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

牌号 Alloy Grade	CU	Pb	Al	Fe (max)	Sn	Zn	杂质 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	-

牌号 Alloy Grade	CU	Pb	Al	Fe (max)	Sn	Zn	杂质 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. 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: M , Y2 , Y , Y4 生产范围 Production range 线材 Wire: Φ2mm-Φ20mm 棒材 Rod: Φ2mm-Φ60mm 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、热加工性能和机制性

With good mechanical and physical properties, good cold & howarding, and free cutting performance.



## **COPPER ROD**

紫铜

导电性能佳

High electric conductivity

牌号 Alloy Grade	cu	Pb	Ві	Fe (max)	Sn	Zn	杂质 Impurity Total
НВі60-1.3	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
C6801	57.0-64.0	0.01	0.5-4.0	0.5	0.1-2.5	REM	-
CW724R	75.0-77.0	0.1	-	0.3	0.3	REM	0.2
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 Alloy Grade	cu	Pb	Ni	Fe (max)	Sn	Al	Zn	杂质 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.

状态 Temper: Y2

生产范围 Production range 直径 Diameter: Φ2mm-Φ50mm

长度 Length: 2m-4.5m

牌号 Alloy Grade	CU+Ag	Р	Ві	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	-	-
C1100	99.90	-	-	-	-	-	-	-	-	-	-	-
C10200	99.95	-	-	-	-	-	-	-	-	-	-	0.001

适用于电器、电力机柜等。

Used in electric appliance, power panel etc.

状态 Temper: M , Y2 , Y 生产范围 Production range 直径 Diameter: Φ5mm-Φ40mm

长度 Length: 2m-4.5m





### **BRONZE**

易書铜

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.



## **CUCRZR**

铬锆铌

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 Alloy Grade	CU	Pb	Al	Fe	Sn	Zn	P	杂质 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	-
	CuSn6	REM	0.02	-	0.1	5.5-7.0	0.2	0.01-0.4	Ni < 0.2 others total<0.2
	CuSn8	REM	0.02	-	0.1	7.5-8.5	0.2	0.01-0.4	Ni < 0.2 others total<0.2

牌号 Alloy Grade	си	Cr	Zr	Fe	Pb	杂质 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
стсz	REM	0.2-1.0	0.02-0.2	-	-	≤ 0.1
јтсг	REM	0.2-1.0	0.02-0.2	-	-	≤ 0.1

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 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: Th04 生产范围 Production range 直径 Diameter: Φ3mm-Φ50mm