

# 企业简介



济南冶金科学研究所位于济南市章丘圣井高科技园区，是山东省认证的高新技术企业，是中国专业硬质合金生产基地之一，企业集科、工、贸于一体，具有自营进出口权，历经四十多年的发展，企业拥有了雄厚的研发能力和先进的生产设备。我所生产的“齐鲁牌”硬质合金及相关制品，广泛应用于机械、冶金、石油、矿山、建筑、电子、航天航空等领域，产品性能优良，品质卓越，在国内外市场享有很高的声誉。产品远销美国、加拿大、意大利、德国、日本、韩国、台湾等多个国家和地区，年出口创汇1000万美元，企业已通过ISO9001质量管理体系认证，并被评为一等AAA级信誉企业。



## 我所硬质合金制品种类齐全，可提供如下产品：

- 机械加工类焊接刀片、机夹刀片
- 矿用凿岩钎片、球齿、截齿；地质勘探、煤炭采掘工具
- 金刚石生产用顶锤
- 盾构刀具
- 建材加工用刀具
- 木工刀具
- 硬质合金圆棒、圆盘和板材
- 硬质合金轧辊、拉丝模
- 碳化钨粉及混合料

根据客户要求，可按国内、国际标准供货，也可承接各类异型产品的加工生产。热诚欢迎国内外客户惠顾。



## Brief Introduction

Jinan Institute of Metallurgical Science (JIMS) is located in Shengjing Science and Technology Industrial Zone of Zhangqiu, Jinan, certificated as a high-tech enterprise by Shandong Province. JIMS is a specialized base of cemented carbide with scientific research, trade and manufacturing industry in a whole and with self-managing import-export power by the state of China, which assert sufficient ability of R&D, advanced equipment for production for more than 40 years development. The "QiLu" brand cemented carbide and relative products, which widely used in machinery, metallurgy, petroleum, mining, construction, electronics, aerospace and other fields, have excellent performance and high quality. JIMS products enjoy great famous both at home and abroad market, selling well in countries and areas like America, Canada, Italy, Germany, Japan, Korea and Taiwan etc. The annual foreign exchange we earn is more than 10 million U.S.D. JIMS has passed ISO9001 standard of the Quality Manage System Certificate of Conformity and be appraised the first class of the Enterprise Credit Certificate AAA.



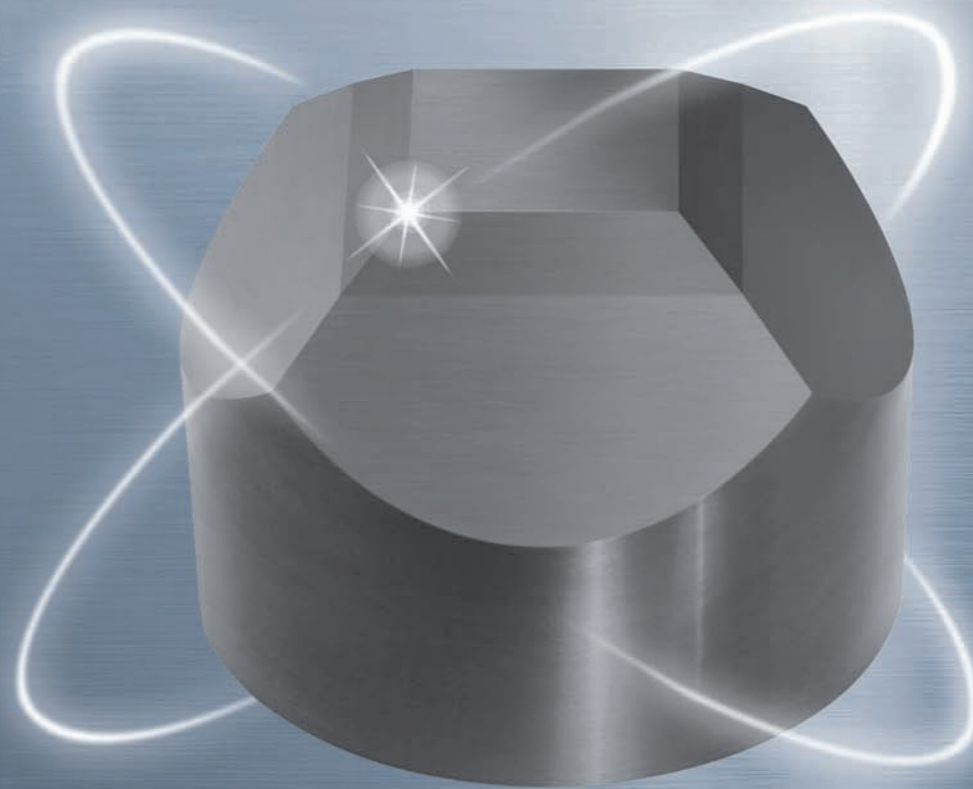
We have a complete Variety and could supply the following cemented carbide products:

- Indexable inserts, mechanically clamped tips.
- Button bits, inserts and tips for mining, coal-cutting tools for coal-excavating.
- Cemented carbide anvil for the diamond industry.
- Cutting tools for woodwork (Rotary burs).
- Solid cemented carbide rod, disk and bar.
- Solid cemented carbide roll, drawing die.
- Cemented carbide powder and mixed powder.

We could supply the products according to the standard of ISO and the domestic; moreover, we could work according to the drawings from customers.

Welcome your patronage of domestic and overseas customers to our company!

# 硬质合金顶锤





# 顶锤生产简介

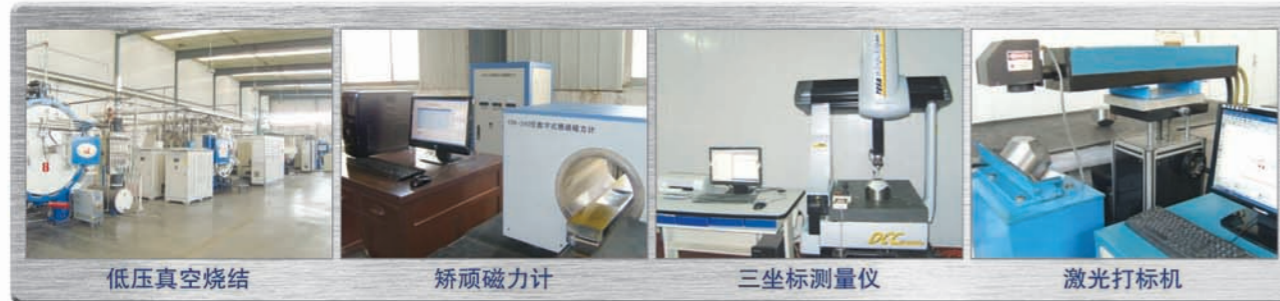
## Brief of Cemented Carbide Anvil

济南市冶金科学研究所是国内最早研发并批量生产硬质合金顶锤的企业之一，目前是全国最大的硬质合金顶锤生产厂家，产品的质量水平及稳定性处于全国领先地位。

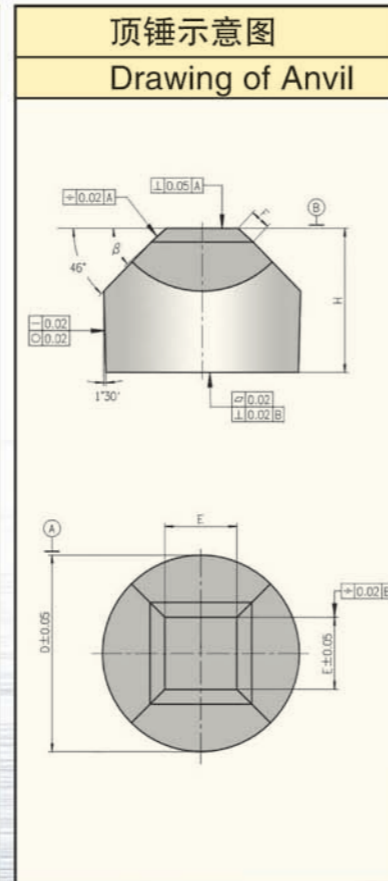
我所自主研发的JN8系列硬质合金顶锤已成为我单位的主导产品，年生产能力近千吨。我们秉承“质量第一、用户至上”的经营理念，始终高度重视顶锤的质量控制和新产品的研发，可生产各种规格的硬质合金顶锤。“JN8硬质合金顶锤”已荣获“国家重点新产品”称号，“齐鲁”顶锤已成为国内外金刚石生产厂家的首选品牌。

Jinan Institute of Metallurgical Science (JIMS) is one of the earliest R&D, mass production specialized production enterprises in China, to engage in the cemented carbide anvils. At present, our company is the biggest manufacturer in producing the cemented carbide anvils. The anvils have maintained a leading position in quality and performance throughout the country.

The JN8 series cemented carbide anvils independently developed by our company has been our leading product, and its annual production capacity is about 1000 tons. We insist on the business tenet “customer first, quality first” to attach much importance to the quality control and new products development. We can produce various specifications of cemented carbide anvils. The JN8 series cemented carbide anvils won the honor of national key new products. The cemented carbide anvil of “QILU” has become the diamond manufacturers’ preferred brand to purchase at home and abroad.



六面顶顶锤精加工型号表示规范	
示例:	
103/36*36/75/13/41 ① ② ③ ④ ⑤	
①直径尺寸: 大斜面最低点直径尺寸, 有小数保留小数位, 单位为mm	±0.05
②上方尺寸: 长*宽 有小数保留小数位, 单位为mm	±0.02
③高度尺寸: 有小数保留小数位, 单位为mm	±0.5
④小斜面宽度: 有小数保留小数位, 单位为mm	±0.2
⑤小斜面角度, 有小数保留小数位, 单位为°	±5'
注:	
(1)大斜面角度默认为46°, 有特殊要求, 必须注明。	
(2)外圆锥度默认为1.5°, 有特殊要求, 必须注明。	±5'
Code specification of finish machined 6-facet anvils	
For example:	
103/36*36/75/13/41 ① ② ③ ④ ⑤	
①Diameter dimension: The diameter dimension of the lowest point of the large slopes. If there is a decimal point, please retain the decimal digits. Unit: mm	±0.05
②Top dimension: L*W If there is a decimal point, please retain the decimal digits. Unit: mm	±0.02
③Height dimension: If there is a decimal point, please retain the decimal digits. Unit: mm	±0.02
④Width of little slopes: If there is a decimal point, please retain the decimal digits. Unit: mm	±0.2
⑤Angle of little slopes: If there is a decimal point, please retain the decimal digits. Unit: °	±5'
Note:	
(1)Angle of little slopes is defaulted to 46°. If you have any special requests, be sure to let us know.	
(2)Outer conicity is defaulted to 1.5°. If you have any special requests, be sure to let us know.	±5'



# 顶锤使用注意事项

## Precautions in the Operations of Anvils

### 1.消除内应力:

Residual stress relieving

顶锤在精加工后残余内应力, 使用前应对顶锤进行时效处理, 可采用自然时效、烘箱时效、油煮时效、真空时效、超声波时效等方法。其中, 自然时效时间不低于1个月, 烘箱时效温度控制在250℃以内, 时间不低于72小时。

There is the residual stress of anvils after finish machining. Before the usage, please do the aging treatment such as natural ageing, oven ageing, oil boil ageing, vacuum ageing, super sonic ageing and so on. Natural ageing must do not less than 1 month. The oven ageing temperature must be controlled within 250°C, and time not less than 72 hours.

### 2.顶锤装配要求:

Instruction for assembling of anvils

顶锤与钢环锥度要保持一致接触面≥90%, 压装高度要合理, 一般Φ127mm以下压装高度8—10mm, Φ127mm以上压装高度10—12mm。顶锤与大小垫块配合不能出现点接触, 避免产生应力集中。

The anvils and the steel rings tapers must be maintained consistent with each other. The contact surface must be greater or equal to 90%. The pressing height must be suitable. The pressing height is 8 mm—10 mm under Φ127, and 10 mm—12 mm above Φ127. The anvil and big and small pads should be matched well with each other without any point contact so as to avoid stress concentration.

### 3.对原辅材料的要求:

Requirements of the raw and auxiliary materials

钢环、大小垫块加工精度要符合要求, 钢环内壁光洁度要达到Ra1.6, 圆度、锥度与顶锤形位公差保持一致, 大小垫块平行度≤0.02mm, 硬度适中。

叶腊石焙烧温度、时间要适中, 防止因叶腊石传压性能差、水分过高引起放炮、放气炮事故。

导电钢环要求表面无锈蚀, 边缘无裂纹, 经烘烤后无烘蓝现象, 注意防潮储存。

Machining accuracy of the steel rings as well as big and small pads must meet the requirements. The smooth finish of the steel rings’ inner surface should reach RA1.6. The ovality and taper degrees need to be consistent with the anvil geometric tolerances. The big and small pads’ parallelism shall be less or equal to 0.02 mm and with appropriate hardness.

In order to prevent blasting or air blasting accident caused by bad pyrophyllite pressure-transmitting and excessive moisture, temperature and time of the pyrophyllite roasting must be moderate.

The conductive steel rings must be kept away from moisture to prevent corrosion surface, and without any crack edge. To ensure there is no blue phenomenon occurs after baking.

### 4.对设备的要求

Requirements of the equipment

压机要有良好的调整精度, 不允许有渗漏现象, 同步性、对中性偏差不超过0.2mm

The press should have good adjusting accuracy and without any leaking. The deviation of the synchronism and centricity must not exceed 0.2 mm.

### 5.对操作的要求

Operation requirements

在组装时, 应检查叶腊石块有无裂纹、杂质、薄厚钢片是否错装、反装。上块前6只顶锤表面要擦净, 避免挤锤、电击。每只顶锤合成前必须做到4个面全部划到, 防止塌锤放炮。当空程前进时要检查6缸动作, 定缸是否有误动, 动缸到位时是否暂停。停热卸压时, 保压时间不低于1分钟防止卸压放气炮。

When assembling, please check whether the pyrophyllite have cracks and impurities or not. And to make sure the thin and thick steel discs are not installed wrong or reverse. The surface of the six anvils must be wiped clean before assembling. Crowd touch and electric shock must be prohibited. Please guarantee all the 4 sides of each anvil firmly to avoid blasting. Check the movement of the six cylinders before they reach the parts, to ensure there is no wrong running for the fixed cylinders, and to check whether the act cylinders pause or not when they reaches the point. Pressure-holding time must not less than 1 minute to avoid air blasting after pressure relief.

