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# ZGCC

# PRODUCTS FOR COAL MINING



**CMT ZIGONG CEMENTED CARBIDE CORP.,LTD**



APPLICATION



**CMT ZIGONG CEMENTED CARBIDE CORP.,LTD**





ISO9001:  
CN-CQC08Q10970  
ISO14001:  
CN-CQC08E22096



体系认证  
CNAS C001-Q

# 品质成就未来

QUALITY ACCOMPLISHES THE FUTURE

## 自贡硬质合金有限责任公司

- 世界500强企业中国五矿的核心成员
- 中国第一家自主设计建设的大型硬质合金企业
- 国内领先的硬质合金及配套工具制造商
- 世界先进水平的表面工程技术服务提供者
- 国内领先的钨钼制品制造商

### ZIGONG CEMENTED CARBIDE CO., LTD.

- Zigong Cemented Carbide Co.,Ltd(ZGCC) is a core member of China Minmetals which is one of the world 500 top companies.
- It is the first home-designed and built large scale cemented carbide manufacturing enterprise in China.
- It is one of the leading manufacturers of cemented carbides and related tools at home.
- It's a reliable supplier of the surface engineering technology with advanced world levels and their application services.
- It holds the leadership position in the tungsten and molybdenum product manufacture in China.



### 我们的优势 Our superiority

- Special design and development of materials
- Complete production procedure-from manufacturing of materials to making finished wear parts
- Advanced equipments and powerful systematic secure capability
- Quality control in wide range

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Underground Mining—Mining

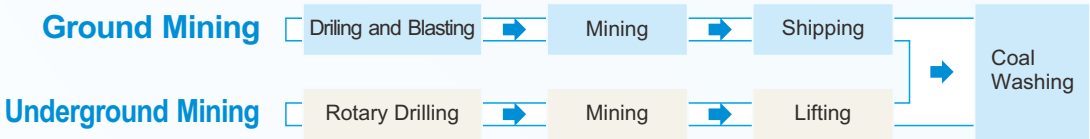
### CONTACT US

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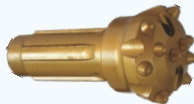
Solutions

Flow Chart for Coal Mining




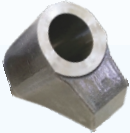






Applcation Classification




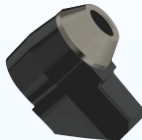


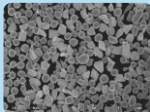



Ground Mining—Drilling and Blasting

Equipments	Products	Application Parts
Downhole Driller	Cemented Carbide Parts Engineering tips	
		

Ground Mining—Coal Mining

Equipments	Products	Application Parts
Ground Coal Cutter	Miner Tools Shear tools	
		
	Miner Tools Holder system	
		Cemented Carbide Parts Mining tips
		
	Hardfacing Materials Welding wire	
		

Underground Mining—Rotary Drilling

Equipments	Products		Application Parts
Rotary Drilling Rig	<b>Miner Tools</b> Shear tools		
	<b>Miner Tools</b> Holder system		
	<b>Cemented Carbide Parts</b> Mining tips		
	<b>Hardfacing Materials</b> PTA welding powder		
	<b>Hardfacing Materials</b> Welding wire		



Solutions

Underground Mining—Mining

Equipments	Products	Application Parts	
Longwall Shearer Continuous Shearer	Miner Tools Shear tools	 	
	Miner Tools Holder system		
	 	Cemented Carbide Parts Mining tips	 
		Hardfacing Materials PTA welding powder	
End Shearer	Hardfacing Materials Welding wire	 	
	Cemented Carbide Parts Mining tips		

Ground and Underground Mining-Coal Washing

Equipments	Products	Application Parts
<p>Coal Washer</p> 	<p><b>Wear Resistance Service</b> Sieving basket</p> 	

Longwall Shearer





Introduction

Parts Selection

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Ground Mining——Products for Drilling and Blasting

Carbide Products★Engineering Tips

Products	Application Parts	Applications
		It is used for manufacturing column teeth bit and drill bit, and it is mostly used for ground mining.

Advantage:

After about 40 years' development, ZGCC accumulated special technology. For raw materials, The Top-quality WC powder is produced by European high temperature carbonization furnace. For the technology, advanced paraffin hexane process and spraying process are adopted. For the equipment, Has introduced foreign advanced ALD low pressure sintering furnace, automatic manipulator press. For the inspection, It has obtained the national CNAS laboratory recognized quality testing center, with first-class product composition analysis, physical and metallographic performance testing and product size precision measurement capabilities.

R & D as per requirements:

We have a professional technical team, and constantly looking for new materials technology breakthroughs in order to improve the service life of the product, has formed cutter tooth alloy tools, mining drilling alloy, roller press column nails, rotary drilling teeth, alloy matrix PDC, geological exploration and so on six big series of products, used in coal mining, road surface maintenance, metallurgical processing, oil and gas, iron and steel, cement, railway and water conservancy and highway bridge construction and other new fields at present.





# Introduction

## Ground Mining—Products for Drilling and Blasting

### Miner Tools ★Shear Tools

Products	Application Parts	Applications
		Ground Mining

#### Advantage:

- High-quality raw materials. cold forged steel parts. The wear and breakage resistance improved significantly because of ultra-coarse grain size.
- Advanced technology and equipment. Continuous automatic brazing production line, high stability. special treatment process, great wear resistance.



### Miner Tools ★Holder System

Products	Application Parts	Applications
		Holder matching Great Wall mining tips.

#### R & D as per requirements:

We can cooperate with customers to R&D ground carbide mining tips, tips mating and holders.

### Carbide products ★Shear Bits

Products	Application Parts	Applications
		It is used for constituting Shear tools, applied for all kinds of coal mining.

#### Advantage:

After about 40 years' development, ZGCC accumulated special technology. For raw materials, The Top-quality WC powder is produced by European high temperature carbonization furnace. For the technology, advanced paraffin hexane process and spraying process are adopted. For the equipment, Has introduced foreign advanced ALD low pressure sintering furnace, automatic manipulator press. For the inspection, It has obtained the national CNAS laboratory recognized quality testing center, with first-class product composition analysis, physical and metallographic performance testing and product size precision measurement capabilities.

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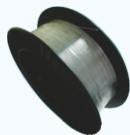

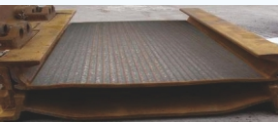
### Hardfacing Materials ★PTA Welding Powder—Casting WC/Ni Based Self-Fluxing Alloy

Products		Application Parts	Applications
		 	It is widely used in pre-strengthening or repairing wear - resistant surface. Application of mining industry shearer, roadheader, cutting teeth, middle slot, hydraulic prop and other surface enhancement surfacing welding.

#### Products Introduction and Its Properties:

It is one kind of dark grey particle, casting WC and Ni – based alloy powder mechanical mixture, Cast WC is irregular shape, high hardness (2200 HV0.1), good wear resistance; Ni – based alloy powder is spherical or nearly spherical, and with good wettability with WC casting. PTA surfacing welding layer has low porosity and good wear resistance.

### Hardfacing Materials ★Welding Wire—Wear Resistant High Chromium Cast Iron Surfacing Welding Wire

Products	Application Parts	Applications
	 	It is used in repairing and remanufacturing wear-resisting plate, hammer head, engineering cutting teeth, propeller and excavator leading edge and so on.

#### Products Introduction and Its Properties:

By filling iron-based alloy powder which contains Cr, Mo, Nb and so on into the steel strip and drawing it into welding wire to different diameters. The deposited metal is high chromium cast iron alloy. The welding layer has high hardness and good wear resistance of abrasive particles. Cracks on the surface can release stress.





# Introduction

## Underground Mining-Rotary Drilling Relevant Products

### Miner Tools ★Shear Tools

Products	Application Parts	Applications
		Rotary drilling, cutting a passage into a coal seam.

#### Advantage:

- High-quality raw materials. cold forged steel parts. The wear and breakage resistance improved significantly because of ultra-coarse grain size.
- Advanced technology and equipment. Continuous automatic brazing production line, high stability. special treatment process, great wear resistance.



### Miner Tools ★Holder System

Products	Application Parts	Applications
		Tip holder matched with 38 mm handle.

#### R & D as per requirements:

We can cooperate with customers to R&D the tips, tips matings and its holders as per requirements.

### Carbide Products ★Shear Bits

Products	Application Parts	Applications
		It is used for constituting Shear tools, applicated for al kinds if coal mining.

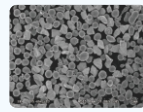
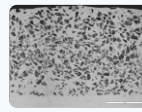


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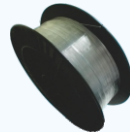
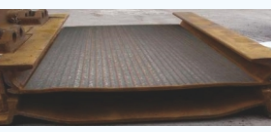
### Hardfacing Materials ★PTA Welding Powder-Casting WC/Ni Based Self-Fluxing Alloy

Products	Application Parts	
 SEM Photo	 Section metallographic photo of welding layer	 
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Introduction

Underground Mining Mining Relevant Products

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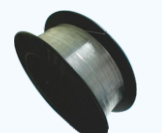
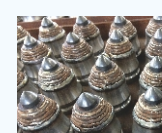
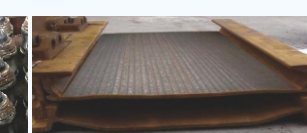
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# Introduction

## Ground and Underground Mining—Coal Washing

### Wear Resistance Service ★ Sieving Basket

Products	Application Parts	Applications
		It is used for manufacturing column teeth bit and drill bit, and it is mostly used for ground mining.

#### Advantage:

Siever, it is a part of coal washing equipment for sieving, used for coal and water separation. Supersonic flame spraying technology can effectively enhance the service life of the face in contact with coal by 2–4 times.

#### R & D as per requirements:

In the field of coal mining and deep processing, our company can specify wear-resistant and corrosion-resistant coating products according to the parts of the equipment under various wear and corrosion conditions of customers, which can effectively extend the service life of relevant parts and improve production efficiency.



## ARTIFICIAL LIFT

Carbide Bushings & Sleeves for ESP



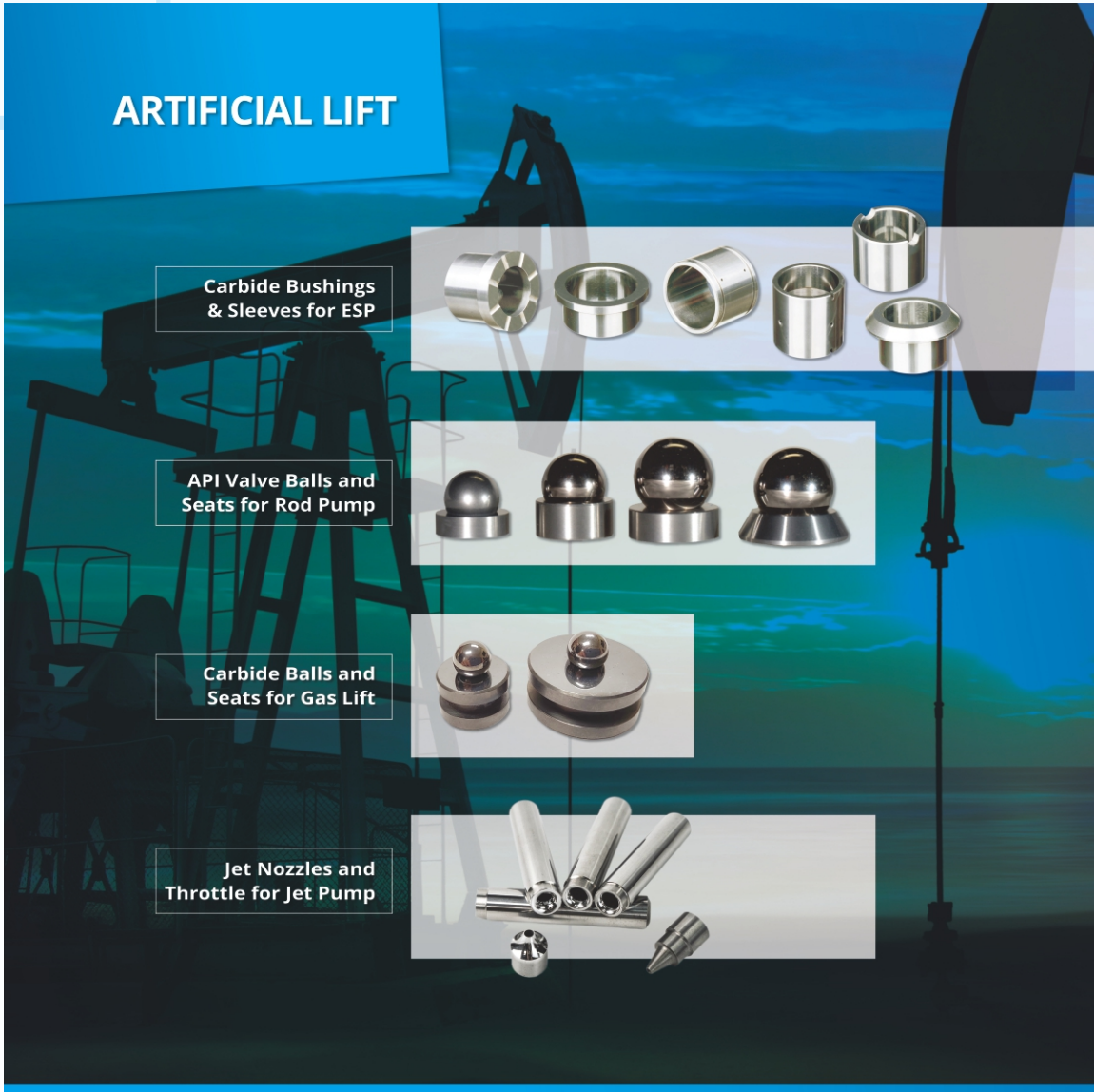
API Valve Balls and Seats for Rod Pump



Carbide Balls and Seats for Gas Lift



Jet Nozzles and Throttle for Jet Pump





Flow Control  
ProductsSOLID CARBIDE  
PARTSTHERMAL SPRAY  
COATED PARTS

## DRILLING SERVICE AND COMPLETION



ZGCC

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