



## ABOUT CYC

CY CARBIDE MFG. CO., LTD., established in 2003, is a professional manufacturer and exporter of high performance tungsten carbide products, RTP powders and CERMET materials.

CYC boasts a strong manufacturing capability with 4 production facilities in China, two of which producing carbide rods and preforms, are located in Kunshan, a city 50km away from Shanghai, while the other two specialize in powder & rods production in Jiangxi and inserts production in Changshu. We also have state-of-the-art laboratories and R&D facilities, along with 800+ skilled employees, including an excellent on-site engineering team comprised of experts in material, tooling and technology.



Strictly implement full-process quality control ensuring material consistency  
Spray granulation and HIP overpressure sintering, with good product density and superior impact toughness



ISO9001:2015



20<sup>+</sup>  
Since Foundation



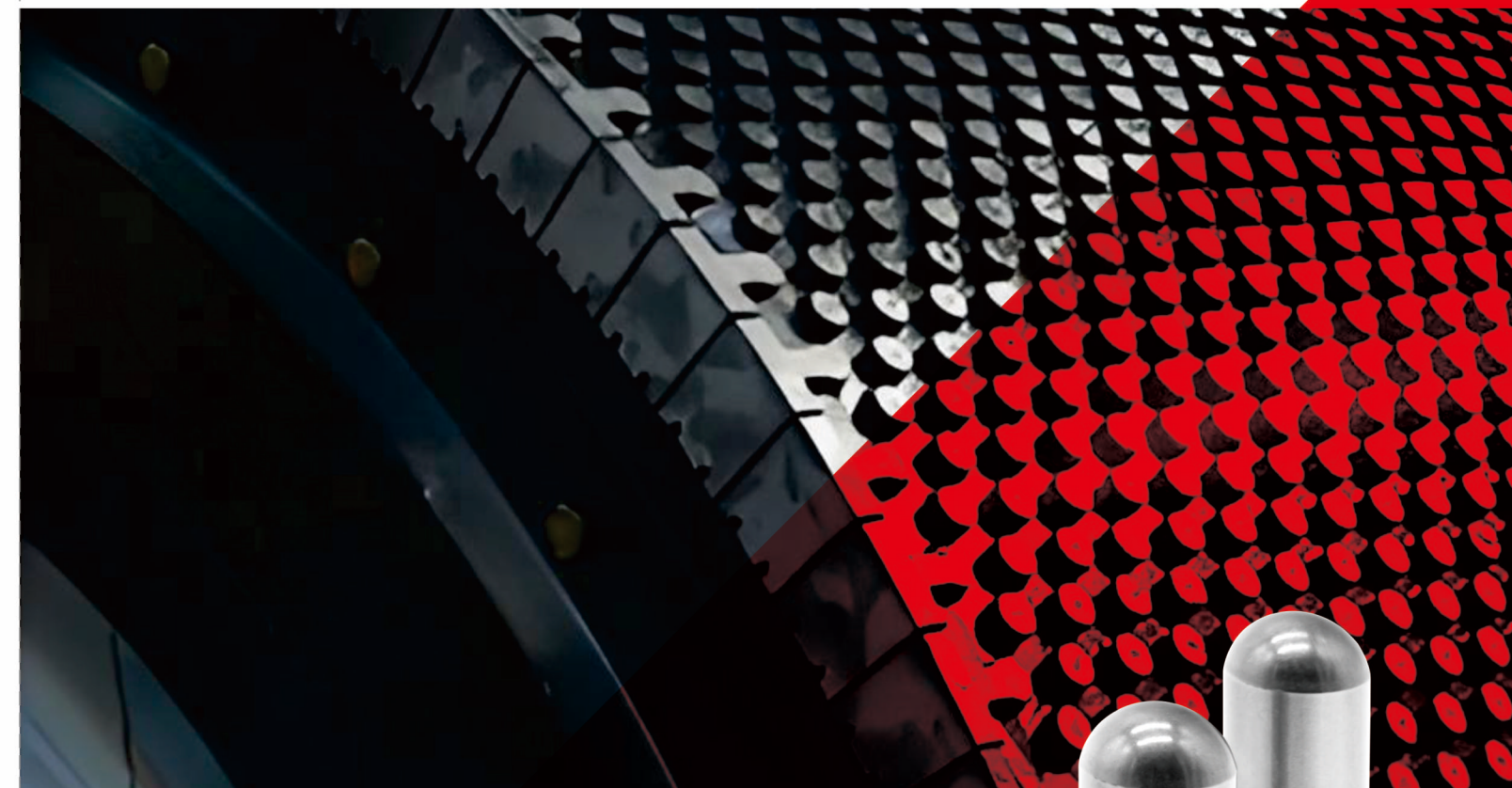
4  
Plants



2500  
Annual Capacity



## Tungsten Carbide Studs for High-Pressure Grinding Roller (HPGR)



CY CARBIDE MFG. CO., LTD.

Add: 215316, No. 67, Yucheng Road (N.), Kunshan,  
Jiangsu, China  
Tel: +86 400-863-2919  
Email: info@cycarbide.com  
www.cycarbide.com

The largest private owned hardmetal  
manufacturer in China



# TUNGSTEN CARBIDE STUDS INTRODUCTION



Tungsten carbide studs are core wear-resistant components of HPGR, mounted on two same size rollers surface, rollers rotate towards each other to crush hard materials (rocks, ores, cement, coal), Protect rollers from direct wear/impact by forcing abrasion to occur on the studs, enhance roller service life and efficiency through extreme hardness (8000–20,000+ hours life time)

## Carbide Selection Guidelines

In crushing applications, require to balance the wear resistance, impact resistance, and fatigue resistance based on specific conditions.

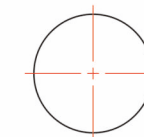
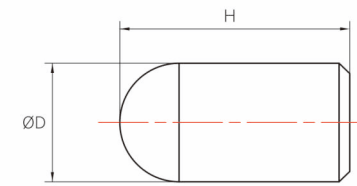
The performance of tungsten carbide studs determines the operating status of the HPGR, we can assist in selecting suitable materials based on different customer usage environments.

## Material Specification

Grade	Binder %	Grain Size	Density g/cm <sup>3</sup>	Hardness HRA	Hardness HV30	T.R.S N/mm <sup>2</sup>
CZ11C	11.2	Medium	14.3	88.1	1170	2600
Suitable for milling iron ore.						
MH12	12.0	Submicron	14.15	90.8	1450	3800
Suitable for crushing small particle iron ore, high processing efficiency.						
CG50	12.0	Medium	14.2	88.2	1180	3500
Suitable for milling iron ore and composite iron ore, strong universality.						
CK402	15.0	Medium	14.0	87.6	1120	3000
Suitable for milling iron ore, steel slag and bauxite, strong universality.						
CZ18M	18.0	Medium	13.6	86.9	1060	3000
Suitable for crushing cement clinker.						
CZ20M	20.0	Medium	13.4	86.5	1030	3000
Suitable for crushing cement meal.						

Remark: Custom material (e.g., corrosion-resistant) available for special requirements.

## Tungsten carbide stud shape and size



TYPE	D	H
BH1040	10	40
BH1640	16	40
BH1645	16	45
Bh1850	18	50
BH1855	18	55
BH2040	20	40

Shape: Ball headed stud, flat headed stud

Size: Outer diameter 5-22mm, height 20-70mm

OD tolerance: can meet 0.01mm demand

