



华岩辊棒

HUA YAN ROLLER

HYCR



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淄博华岩工业陶瓷有限公司
ZIBO HUAYAN INDUSTRIAL CERAMICS CO.,LTD.

■ 淄博华岩工业陶瓷有限公司



■ 企业简介

淄博华岩工业陶瓷有限公司位于山东省淄博市，始建于一九八六年，是专业生产氧化铝陶瓷辊棒的高新技术企业。公司占地面积32000平方米，其中建筑面积13000平方米；员工200余人，其中专业技术人员36人；是全国工业陶瓷标准委员会成员单位，已通过ISO9001:2000质量管理体系认证。

公司目前拥有年产60万支陶瓷辊棒生产线、10万支刚玉质高铝质保护管生产线、3000吨碳化硅制品生产线。

公司立足“自强不息、与时俱进”的精神，努力向着“科技领先、优质高效”的目标奋进。

ZIBO HUAYAN INDUSTRIAL CERAMICS CO.,LTD.

■ COMPANY PROFILE

Zibo Huayan Industrial Ceramics Co., Ltd founded in 1986,located in Zibo City, Shandong Province is a high & new tech enterprise which is specializing in producing alumina ceramic rollers.The company, covers areas of 32000 square meters including the construction areas of 13000 square meters; owns more than 200 employees,including 36 professional technical talents;is a member unit of"the National Industrial Ceramic Standards Committee"; and passed the authentication of "ISO9001:2000 Quality Management System".

The company currently owns 3 production lines. They are, for the ceramic rollers producing with annual output of 600,000 pcs; for corundum protective tubes' producing with annual output of 100,000 and for the silicon carbide products' manufacturing with annual output of 3000 tons.

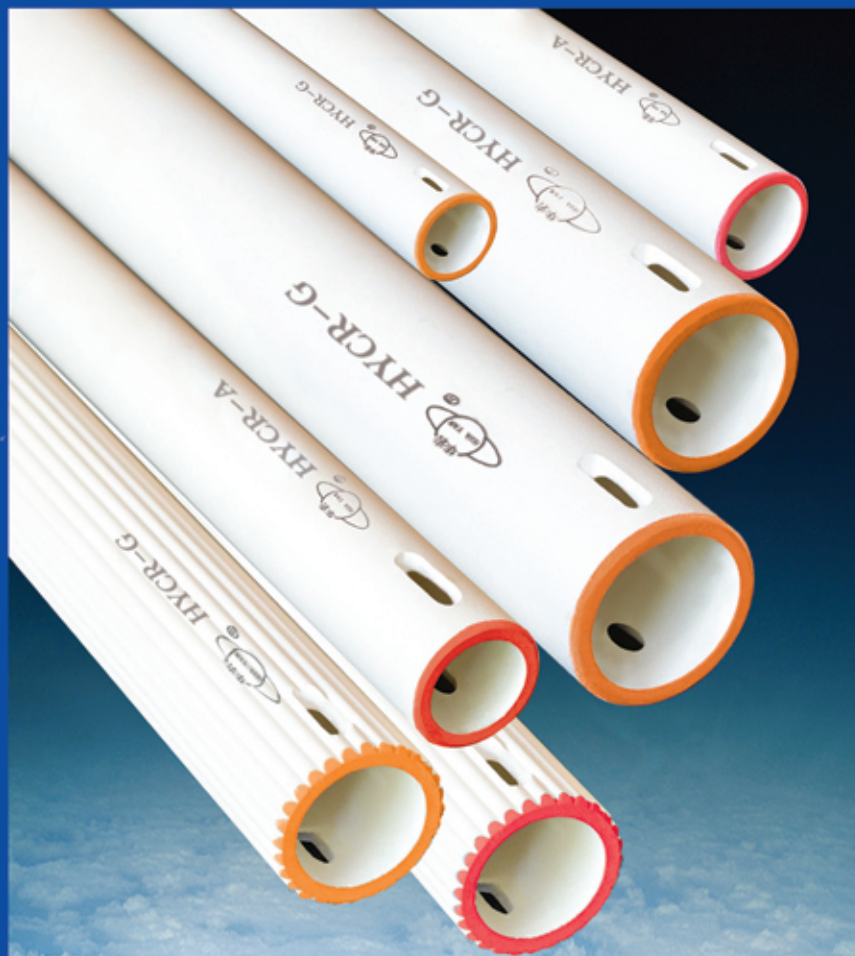
The company based on the mind of "self-reliance and advancing with times",is forging ahead towards the goals of "leading technology, high quality and efficiency".





陶瓷辊棒

拥有德国式国际最先进的自动化梭式窑，精选国内外高品质原料，专业生产直径16-90MM、使用长度2000-5200MM的各种高温辊棒，年生产能力60万支。



窑炉设备

Furnace equipment



CERAMIC ROLLER

With the German most advanced automatic shuttle kiln in the world, and the well-chosen high quality raw materials from homeland and overseas, the company is specialized in the production of various high temperature rollers of diameter 16-90mm and length 2000-5200mm. The annual production capacity can be 600000pcs.

■ HYCR-G超高温辊棒

HYCR-G Super High Temperature Roller of HuaYan



■ HYCR-A 高温辊棒

HYCR-A High Temperature Roller of HuaYan

■ 该系列辊棒高温抗折强度高，急冷热性能极佳，不易弯曲、断裂，主要适用于烧制普通抛光砖、瓷质砖、仿古砖、外墙砖、微晶玻璃复合板等产品。

■ With the properties of high bending strength in high temperature, excellent thermal shock resistance, no bending and crack, the series rollers are mainly suitable for the producing of normal polished tiles, porcelain tiles, rustic tiles, outer wall tiles, sitall tiles and other products.



Special recommendation

特别推荐

■ 该系列辊棒采用了国内外最先进、全新的配方和工艺，具备超强的抗热震稳定性，具有更高的高温强度和高温承载能力，最适用于超宽体窑，如烧制大型抛光砖、抛釉砖、房顶瓦砖及重负载产品、高产量生产环境的辊道窑，目前该种辊棒最长使用长度可生产至5200MM。

■ The series rollers manufactured with the most advanced and brand new formulations and processes, has super strong thermal shock resistance, higher bending strength and heavy load in high temperature, especially fit for super wide body and large output kiln to produce large polished tiles, glazed tiles, roof tiles and other heavy load products. The maximum length of the series rollers can be 5200mm.

■ HYCR-B高温辊棒

HYCR-B High Temperature Roller of HuaYan

■ 该系列辊棒性能优良，应用广泛，产品性价比高，主要适用于烧制瓷片（内墙砖）、耐磨砖、水晶砖等产品。

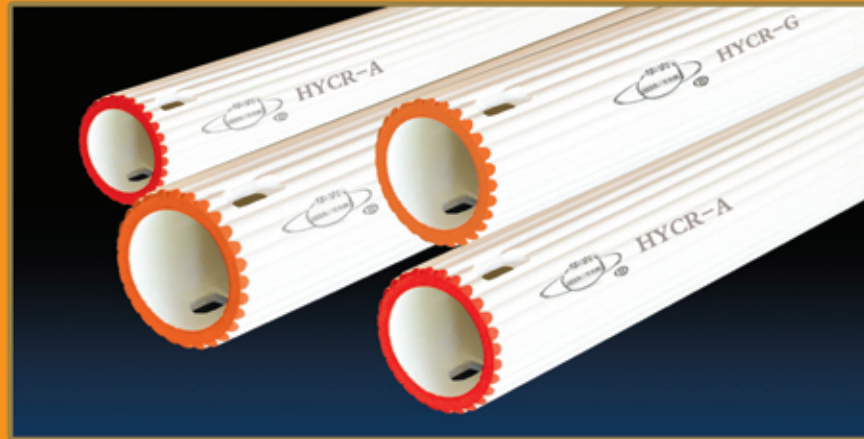
■ The series rollers with excellent performance, high quality and competitive price are used widely, especially suitable for the firing of tiles (inner wall tiles), wear resistant bricks, crystal tiles and other products.



急冷带齿形辊棒 Cooling Roller with Teeth

该系列辊棒结构特别，抗弯强度超高，特别适用于辊道窑的急冷区、缓冷区域。其与众不同的外观设计避免了辊道窑急冷带由于温差大而造成辊棒的弯曲和折断，保障了出砖的整齐。

The series rollers with special structure and super high bending strength, especially satisfied to be used in the fast cooling and slow cooling zone of the roller kilns. Due to their unique appearance design, the rollers can be avoided to be bending and breaking caused by the large temperature difference of the roller kiln fast cooling area, and ensure the tiles producing neatly.

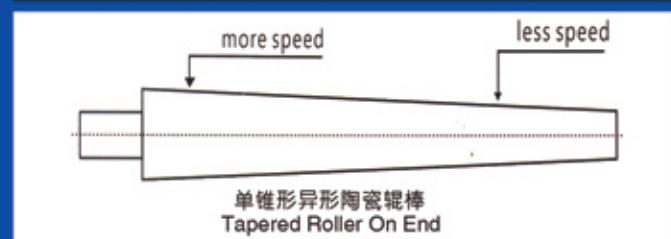


异形棒 Profiled Roller

该系列辊棒在窑炉预热带和烧成带之间的区域使用，可有效解决超宽体和超长窑炉乱砖、慢砖现象。先进的加工设备，针对性强，定位灵活，调整准确，从根本上解决了瓷砖跑偏问题。

The series rollers applied between the preheating and firing zone, can effectively solve the problem of tiles disordered transfer and slow speed transfer in the super wide and long kilns.

Advanced process equipment, with properties of highly targeted, flexible positioning, and accurate adjustment basically solved the problem of non-synchronization in tile transfer.



陶瓷辊棒涂料 Ceramic Roller Coating

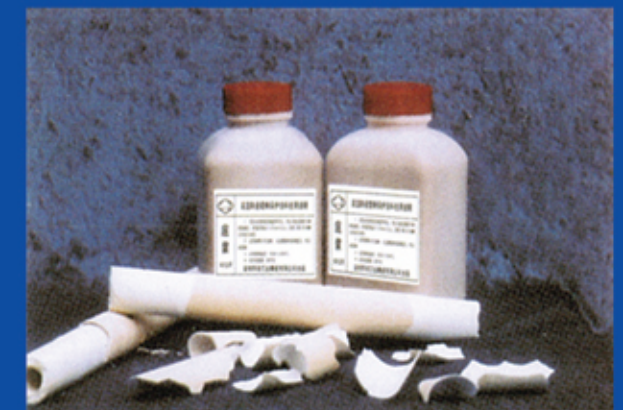
用途:

陶瓷辊棒涂料是辊道窑用陶瓷辊棒的专用产品。该产品使用时涂敷在陶瓷辊棒表面形成厚度均匀的保护层有效减少釉料对陶瓷辊棒的粘结和侵蚀。本产品施工方便且更换陶瓷辊棒时极易清理，可以延长陶瓷辊棒的使用寿命，降低建筑陶瓷生产厂家的成本。

APPLICATION:

Ceramic roller coating is special products for the ceramic roller in roller kiln. The products painted on the roller surface to form a uniform protective layer to effectively reduce the glaze bond and erosion to the ceramic rollers.

The products are constructed and cleaned conveniently and easily when replacing rollers, with the products, the service life of the ceramic rollers can be extended and the producing cost of the manufacturer of construction ceramics can be decreased.



异形棒加工设备 Profiled roller Processing Equipment

陶瓷辊棒主要技术指标

Roller main technical indicators

技术指标 Technical index	产品代码 Code	单位 Unit	HYCR-G	HYCR-A	HYCR-B
Al ₂ O ₃ +ZrO ₂		%	80-82	78-80	76-78
吸水率 Water absorption		%	5-7	6-8	7-9
抗弯强度 Bending strength		MPa	60-70	50-60	40-50
体积密度 Bulk density		g/cm ³	2.70-2.90	2.55-2.70	2.50-2.60
热膨胀系数 Coefficient of thermal expansion		X10 ⁻⁶ /°C	6.1-6.6	5.9-6.3	5.4-5.9
耐急冷急热性 thermal shock resistance		/	很好 very good	很好 very good	很好 very good
最高使用温度 Maximum operating temperature		°C	1350	1300	1250
标识颜色 Color scheme		/	橙色 orange	红色 Red	蓝色 Blue

备注：以上数据均来自本公司实验室测试样品，这些数据仅供在实际使用不同规格的产品时参考。

NOTE: This is not a product specification but only our company's lab test for reference. The actual figures may vary due to different sizes and conditions.

陶瓷辊棒使用说明 Instructions:

正确使用陶瓷辊棒，不仅关系到辊棒的使用寿命，而且影响到窑炉系统的正常运作。选择何种型号和规格的辊棒主要依据窑炉的最高烧成温度和辊棒的负载；辊棒的转速、中心间距和气氛也是选择合适辊棒的重要因素；除高温承重外，窑炉中一些气体和熔融物质的侵蚀，以及急冷急热造成的热冲击等因素也会影响辊棒的使用寿命。为此，我们建议：

- 1、新辊棒使用前，应放置窑顶（60-80°C）干燥24小时以上；
- 2、涂有涂料后的辊棒，应放置窑顶干燥72小时以上；
- 3、更换辊棒时，应迅速、快捷，并旋转辊棒；
- 4、从中、高温带取出的辊棒，避免接触到低冷的物品，应放置在有石棉垫层的支架上，并保持旋转状态，600°C以下；
- 5、辊棒表面沾有小面积的釉料颗粒，会影响辊棒的热震性能，应定期处理；
- 6、不合格的原料、燃料会侵蚀辊棒，请谨慎使用。
- 7、窑炉熄火降温时，请继续开启排烟风机，保持辊棒正常运转，并关闭其它所有风机，保持烧成带微正压，以防冷风进入。经过一天冷却后，可适当加大排烟风机，使窑内温度逐步平稳降低；当窑内温度降至500°C以下时即可取出辊棒。
- 8、陶瓷辊棒应尽量避免在碱性气氛下使用，以免碱性物质腐蚀辊棒缩短使用寿命。

How to use the roller affects not only the service life of the rollers but also smooth work of the kiln. Generally, we select the type of roller depending on the maximum firing temperature and load of the rollers. Meanwhile, the rotate speed, span of roller and atmosphere in the kiln are also important factors for us to consider, as well as the factors of the gas, molten materials and thermal shock. Considering the factors mentioned above, our suggestions are as follows:

1. Before used, the new rollers should be placed on the kiln for drying at least 24 hours (60-80°C).
2. Rollers with coating should be placed on the kiln for drying at least 72 hours.
3. Please fast and quickly rotate the rollers when replacing them.
4. The roller taken from the middle and high temperature area should be avoided to contact the cooling items but placed on the bracket with asbestos pad. Rotate it continuously until it cools down to below 600°C.
5. The small area of glaze droplets on the surface of rollers can affect their thermal shock resistance, so they should be cleaned at fixed period.
6. Unqualified raw materials may erode rollers, which should be used carefully.
7. Keep the exhausting fan on and roller rotating after shutting down of kiln, turn off the other fans and prevent cold air coming. After 24 hours, increase the fan speed and take out the roller when the temperature in the kiln is 500°C or below.
8. Avoid using the roller in the alkali atmosphere and the corrosion of alkali materials in order to prolong the service life of rollers.

陶瓷保护管系列 Series of Ceramic Protective Tubes

材质: 1、刚玉质 2、高铝质 Material: 1, corundum 2, high alumina

类别: 1、保护管 2、绝缘管 3、通管 Type: 1. Protective tube 2. Insulating Tube 3. Through Tube

主要技术参数: The main technical specification:

技术指标 Technical index	Al ₂ O ₃	SiO ₂	Fe ₂ O ₃	碱性物质 Alkaline substances	密度 Density	硬度 Hardness	吸水率 Water absorption	抗折强度 Flexura strength
刚玉 Corundum	≥99%	<0.2%	<0.1%	<0.1%	3.9g/cm ³	9M	<0.1%	≥2000kgf/cm ²
	≥95%	<1%	<0.3%	<1.5%	3.5g/cm ³	8.5M	<0.15%	≥1800kgf/cm ²
高铝 High alumim	≥85%	<12%	<0.5%	<2.5%	2.6g/cm ³	7M	<0.2%	≥1300kgf/cm ²

- 气密性: 在1.3KPA负压下, 保持十分钟, 压力下降小于0.3KPA。
- 耐热性: 将管子插入炉内20MM, 加热至1600°C, 保持30分钟, 不弯曲, 不软化。
- 膨胀系数: 刚玉质 8×10^{-8} 高铝质 5×10^{-8}
- 使用温度: 刚玉质 长期1600°C 短期 1800°C 高铝质 长期1300°C 短期1600°C
- 急冷急热性能: 刚玉质 高铝质均为1300°C至室温三次不炸裂

Air Tightness: Kept 10 minutes under 1.3KPA negative pressure, the pressure decreases less than 0.3KPA.

Heat Resistance: Insert the tube into the furnace 20mm and heat to 1600°C for 30 minutes, it won't be bending and soften.

Expansion Coefficient: Corundum 8×10^{-8} ; and high alumina 5×10^{-8}

Operating Temperature: Corundum long term 1600°C, short term 1800°C; High alumina Long term 1300°C, short term:1600°C.

Heat Shock Resistance: For Both Corundum and high alumina, 1300°C to room temperature, three times without cracking.

保护管 Protective Tube

用途: 主要用于测温热电偶外保护管及冶金、钢铁、玻璃等行业化学分析用。

APPLICATION: Mainly used for chemical analysis in thermocouple protection tube and metallurgy, steel, glass and other industries.



■ 绝缘管

Insulating Tube

用途:

热电偶偶丝之间的间隔与绝缘, 有单孔、双孔、四孔等规格。

APPLICATION:

The insulating tubes used as Interval and insulation between thermocouple wires, including single, double and four-hole types



■ 通管

Through Tube

用途:

浮法玻璃线锡槽中的电加热管、太阳能玻璃生产用护管以及电炉钢化炉的加热管、内衬管。

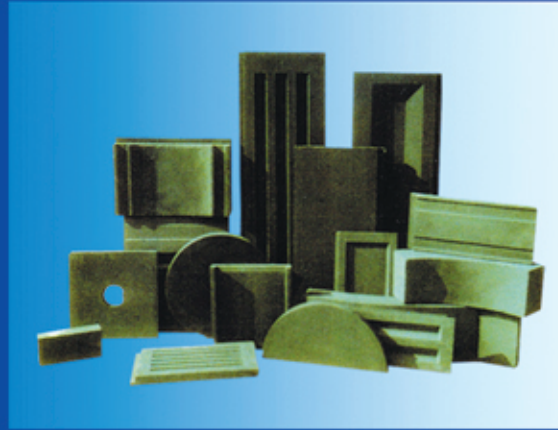
APPLICATION:

Electric heating pipes in float glass line tin bath, Protective pipe using in solar glass production, heating pipe and lined pipe in the Electric furnace annealing furnace.



碳化硅制品

Silicon carbide products



■ 主要生产氧化物结合碳化硅制品、碳化硅棚板等产品,采用宁夏优质碳化硅原料,工艺先进,质量稳定,年生产量3000吨。

■ 用途:
建筑陶瓷日用陶瓷、电瓷、砂轮、化工、冶金行业的隔热、托板、窑具等。

The main production oxide silicon carbide products, silicon carbide shelf boards and other products, using Ningxia hith-quality silicon carbide raw materials,advancedtechnology,stable quality,the annual production capacity of 3000 tons.

■ APPLICATION:
Used as muffle,pallers,kiln furniture in building ceramics,domesticceramics,electroceramics, grinding wheel, chemical,metallurgical industry.

■ 主要技术参数:
The main technical specification:

技术指标 Technical index	体积密度 Bulk density	常温耐压强度 Cold compressive strength	常温抗折强度 Normal temperature Flexural strngth	Sic 含量 Content	显气孔率 The apparent porosity	荷重软化温度 Refractoriness under load	耐火度 Refrac-toriness	使用温度 Using temperature
氧化物结合碳化硅制品 Oxides-bonded -sic products	≥2.6cm ³	100 MPa	35 MPa	85%	18%	1600℃	1790℃	1300℃
碳化硅棚板 Carbide Board	≥2.7cm ³	110 MPa	40 MPa	85%	15%	1650℃	1800℃	1350℃

热电偶 Thermocouple

■ 按照国家标准生产各种型号的测温热电偶。

■ 用途: 用于各种窑炉的温度测量。

In the production of various types of temperature measuring thermocouples according to the national standard.

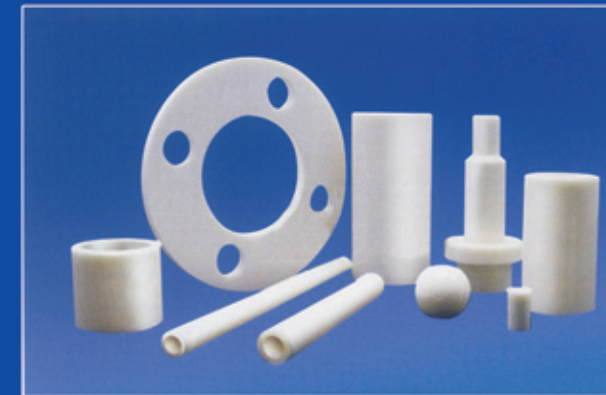
■ APPLICATION:
used for measuring temperature for various kilns.

■ 主要技术参数:
The main technical specification:



热电偶类别 category	型号 Type	分度号 Graduation	测温范围℃ Temperature measuring range
铂铑30-铂铑6 Platinum rhodium30-platinum rhodium 6	WRR	B	0 - 1800
铂铑10-铂 Platinum rhodium10-platinum	WRP	S	0 - 1600
镍铬-镍硅 Ni-Cr and Ni- S	WPN	K	0 - 1300
镍铜 nickel-copper	WRE	E	0 - 600

工业用瓷件 Industrial ceramic



■ 用途:

各种刚玉质、高铝质瓷件,用于浮法玻璃线、电炉等。

APPLICATION:
Application:kinds of Corundum and High-aluminum ceramic,for float glass line,electric furnace,etc.