



## 引进国际先进工艺

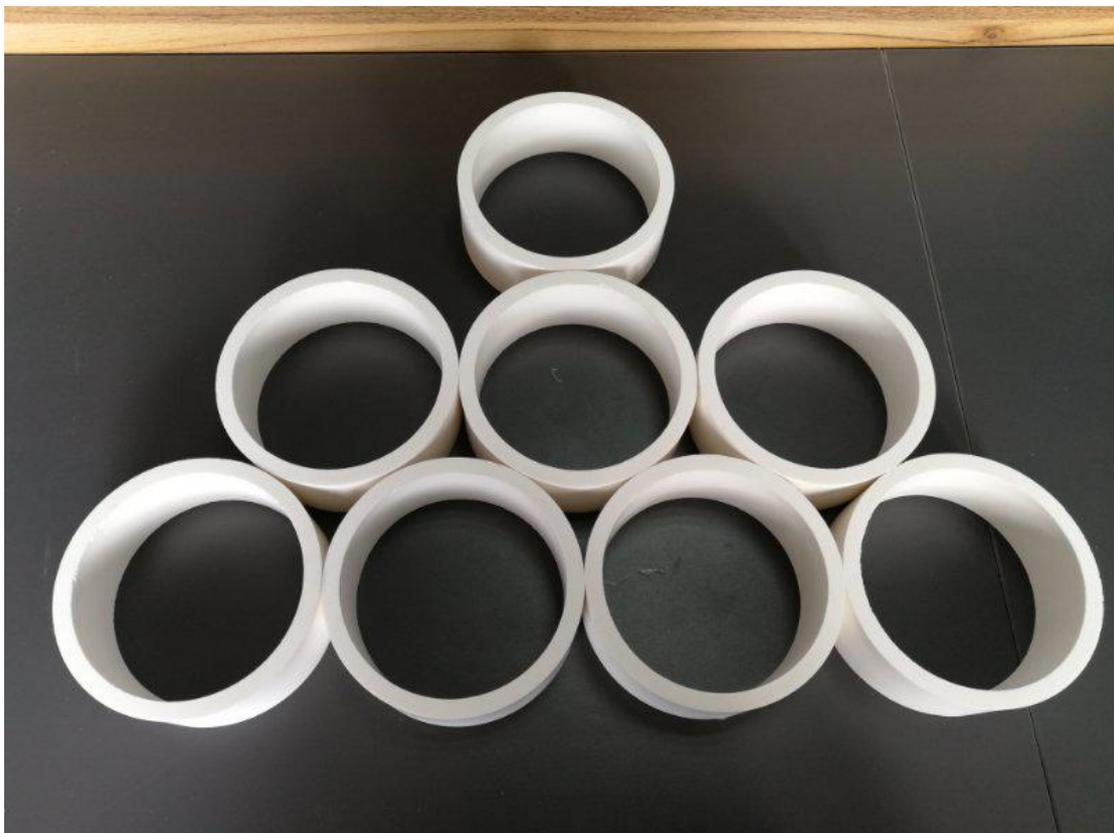
强大工程技术团队 千锤百炼锻精品!

- ◆ 高温耐热钢、高耐磨合金材料打造
- ◆ 耐高温耐磨耐腐蚀高效节能
- ◆ 调节方便 操作直观 工艺精细
- ◆ 使用寿命比普通设备延长2倍不止



## Wear-resistant ceramic ring composite steel pipe Technical Comparison explanation

In the electric power, metallurgy, chemical industry, mining, cement, paper-making and other industries, because the conveying medium for conveying equipment wear-resistant requirements are relatively high, ordinary steel pipe cannot meet the actual use needs, which requires better wear-resistant conveying equipment.



For different production environments, our company has developed a wear-resistant pipe for a variety of media, based on the temperature, wear and corrosion requirements of the field media, and for the initial

application of the scene, our company to provide wear-resistant ceramic ring for the Lined composite straight pipe design to meet the on-site wear resistance, heat resistance and corrosion resistance requirements, in view of this program for the new design (formerly ceramic chip technology, there are many gaps, easy to wear).



**For the convenience of customers, are to provide a more specific process is as follows:**

1. Removing rust and decontamination process of outer-layer steel pipe;
2. Must be in strict accordance with the prescribed ratio, the binder a\b accurate measurement, with how many, must be stirred evenly, full stir-mixing must not be less than 4 times, such as adding a mixture of the embedded feed should be mixed with the binder and then add the mixture to stir up not less than 3 times;
3. The binder is applied evenly on the inner wall of the steel tube to ensure the thickness is not less than 0.5mm thickness. Then apply the binder on the outer surface of the ceramic ring to ensure the thickness between the 0.5mm-1mm. Also in the ceramic ring side (with the ceramic ring contact with the

corresponding surface) Daub 0.5mm Adhesive, to ensure that after the installation of the ring and the seal between the ring;

4. After the installation of the ceramic ring in place, it is necessary to repair the gap between the assembled ceramic rings and mend the joints to ensure the sealing between the ring and the ring;
5. According to the NPT standard, we process the two pipe ends of male and female thread processing. The end of the pipe processing, and processing 1x45° groove, to prevent on-site installation in the process of cutting the hands of construction workers, do a good job of safety protection measures, thread processing, need to brush oil to protect the thread;
6. After installing the ceramic ring, check the internal surface of the ceramic ring of the formation, finishing in place, cannot move the position of the pipe, because the binder is not dry, vibration is easily caused by the displacement of ceramic rings, affect the use of the effect of cold weather in winter, binder drying time is longer, need to ensure more than 48 hours.





**Paint process:**

After the ceramic ring in the pipe is installed and the thread is processed, the dirt outside the pipe is cleaned, and the outer surface of the pipe is treated with three layers of anticorrosive paint to meet the export requirements.

**Packaging:**

Pipe fittings using steel skeleton packaging, and the two ends of the pipe with plastic head, to prevent dust and rain into the pipeline inside, to ensure the beauty of the product.



## Note:

### Relevant technical introduction of wear-resistant ceramic ring

The wear resistant ceramic ring is a special kind of ceramic with  $Al_2O_3$  as the main raw material and the rare metal oxide as the flux, which is melted by high temperature at 1700 °C

## Features:

1. The wear-resistant ceramic ring has the characteristics of smooth interior wall and super wear resistance. Widely used in chemical, fine powder conveying pipelines and other industries, with high wear-resistant and anti-corrosion functions.
2. In accordance with the traditional process, the production of wear-resistant ceramic ring is mainly the use of hot-pressing casting or grouting molding. Adopting isostatic pressing forming technology, the ceramic ring with isostatic pressing is better in compactness and more accurate in ceramic size.
3. At present, our ceramic ring lining pipeline in the silicone industry, chemical industry, fine powder conveying industry has been widely used.

## Technical index of wear-resistant ceramic ring:

Item	Data	Note
$Al_2O_3$ (%)	≥95%	
Density (g/cm <sup>3</sup> )	≥3.65g/cm <sup>3</sup>	
Strength (MPa)	1030	
Flexural strength (MPa)	212	
Impact toughness (Kj/m <sup>2</sup> )	10.2	
Hardness (HRV)	≥85Mpa	
Elastic modulus (GPa)	304	
Expansion coefficient (10 <sup>-6</sup> /°C)	6.6	
Acid resistance (24H)	Stability	Test solution : 15%H <sub>2</sub> SO <sub>4</sub>
Alkali resistance (24H)	Stability	Test solution: NaOH

## Technical index of binder:

Item	Data	Characteristics of binder
Density (g/cm <sup>3</sup> )	1.32	We use the Australian <b>Megapoxy</b> high strength structural adhesive, this structural glue is modified epoxy resin polymer, anti-aging ability, and wear-resistant ceramic bonding to form a strong and cushion of the anti-wear layer, cured water, anti-corrosion performance is excellent, toughness, displacement-resistant effect is remarkable.
Compressive strength (MPa)	40	
Shear Strength MPa	26	
Impact toughness Kj/m <sup>2</sup>	10	
Hardness HB	9.5	
Elastic Modulus GPa	2.2	
Expansion coefficient 10 <sup>-6</sup> /°C	20.1	
Softening temperature °C	263	
Coking temperature °C	335	
		
Acid resistance (24H)	Stability	Test solution : 15%H <sub>2</sub> SO <sub>4</sub>
Alkali resistance (24H)	Stability	Test solution: NaOH

## Get in Touch:

If you are interested in our products or cooperating with us, even having a comment or a suggestion please contact us now, for more detailed information.

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