



SHANDONG ZHONGPENG SPECIAL CERAMICS CO., LTD (ZPC)

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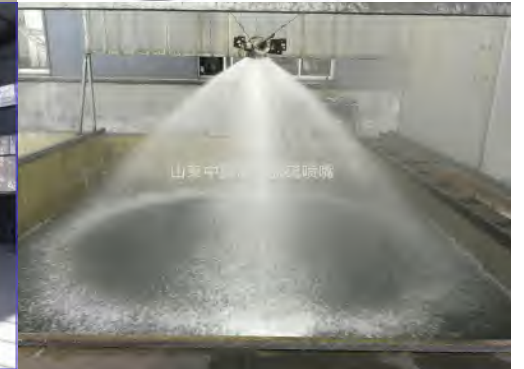
COMPANY PROFILE

- Shandong ZhongPeng Special Ceramics Co., Ltd. (ZPC) is a professional company engaged in production, R&D and sales of high-performance silicon carbide products, RBSiC/SiSiC/Sic-Sic (Reaction Bonded Silicon Carbide).
- ZPC plant is set on the purchased land. Our factory covers an area of 60000 square meters located in Weifang City, Shandong, China. We have wonderful cooperation with the local university professor who makes a study of the heat-resistant composite. ZhongPeng Company is also the research base for the local university. Main brand is 'ZPC'. We have our professional research and development team for serving customer.
- With more than 10 years' production experience, our technological team could provide the 3D effects drawings design of their own nozzle and the spray testing experiments. And other products have the fine theory structure which could ensure the competitive performance. Our RBSiC products are comparable to the products from USA, Germany and so on.



ADVANTAGES

- ZPC is a factory specializing in the production of RBSiC/SiSiC products.
- Professional technical support, production process and equipments.
- Complete production managing system, OEM/ODM is available.
- Creditable company and competitive products.
- Being committed to becoming the largest and most professional desulphurizing nozzles manufacturer in Asia.



SILICON CARBIDE



- Silicon carbide is a synthetic material that exhibits high performance characteristics including: high hardness approaching that of diamond, high strength (gains strength at temperature), excellent chemical resistance, excellent thermal shock resistance and excellent wear resistance. Silicon carbide retains most of its mechanical strength at elevated temperatures and exhibits very low levels of creep, making it the first choice for load-bearing applications in the range 1300°C to 1650°C (2400°C to 3000°F).
- Silicon carbide components provide outstanding thermal shock resistance but unlike traditional ceramics, they also combine low density with high mechanical strength. Additionally, these products offer extreme hardness/abrasion resistance and outstanding chemical stability in aggressive environments.
- However, unlike metals and their alloys, there are no standardized industry performance criteria for silicon carbide. With a wide range of compositions, densities, manufacturing techniques and company experience, silicon carbide components can differ drastically in consistency, as well as mechanical and chemical properties. Your choice of supplier determines the level and quality of the material you receive.

Silicon Infiltrated SiSiC (also know as Reaction-bonded RBSiC)

- Corrosion / oxidation resistance
- Outstanding chemical stability in aggressive environments
- Extreme hardness/abrasion resistance
- Combine low density with high mechanical strength
- Outstanding thermal shock resistance
- Excellent load-bearing ability at higher temperatures
- Good themal conductivity and High temperature creep resistance

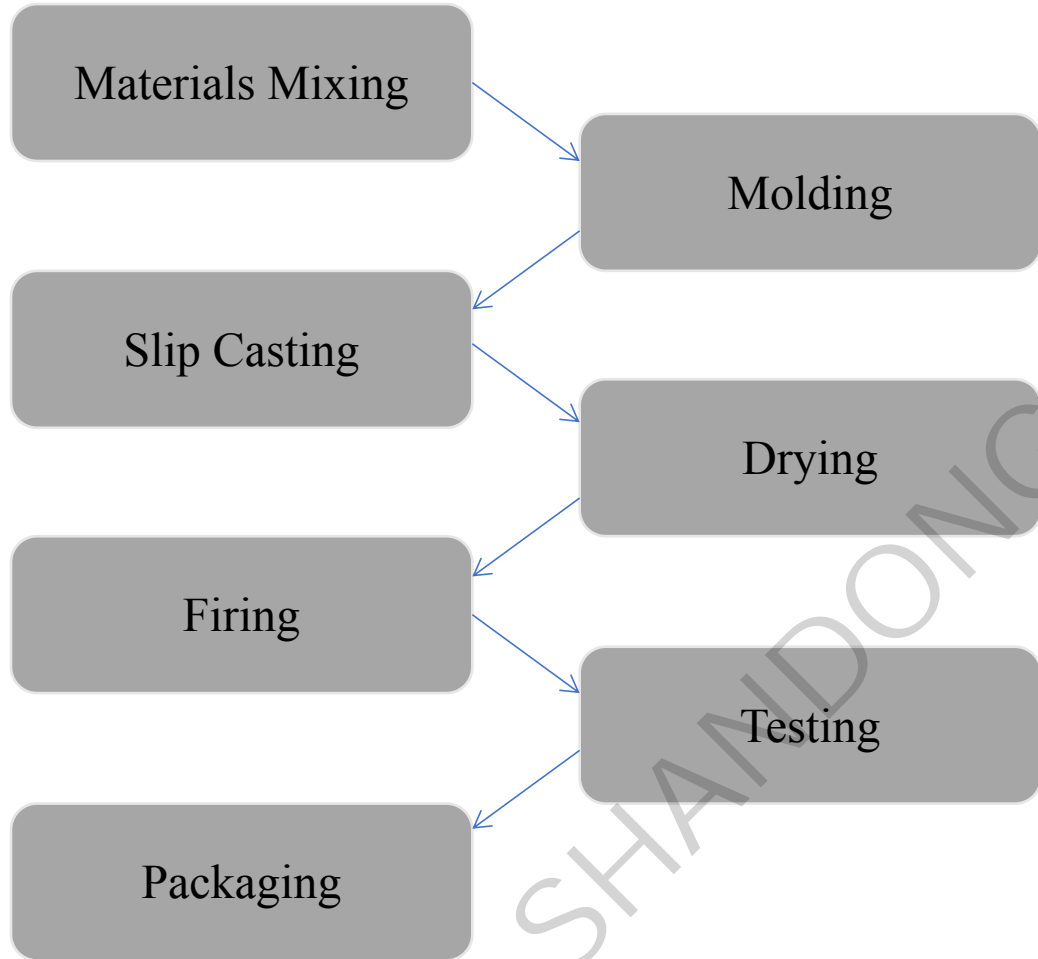


RBSiC (SiSiC) Characterist

Technical Datasheet	Unit	SiSiC (RBSiC)	NbSiC	ReSiC	Sintered SiC	Al ₂ O ₃
		Reaction Bonded Silicon Carbide	Nitride Bonded Silicon Carbide	Recrystallized Silicon Carbide	Sintered Silicon Carbide	Alumina Ceramic
Bulk density	(g.cm ³)	≥ 3.02	2.75-2.85	2.65~2.75	2.8	3.6-3.85
SiC	(%)	83.66	≥ 75	≥ 99	90	Al ₂ O ₃ ≥92%
Si ₃ N ₄	(%)	0	≥ 23	0	0	0
Si	(%)	15.65	0	0	9	0
Open Porosity	(%)	<0.5	10~12	15-18	7~8	
Bending strength	Mpa / 20°C	250	160~180	80-100	500	200
	Mpa / 1200°C	280	170~180	90-110	550	
Modulus of elasticity	Gpa / 20°C	330	580	300	200	300-350
	Gpa / 1200°C	300	~	~	~	
Thermal conductivity	W/(m*k)	45 (1200°C)	19.6 (1200°C)	36.6 (1200°C)	13.5~14.5 (1000°C)	18 (20°C)
Coefficient of thermal expansion	K ⁻¹ *10 ⁻⁶	4.5	4.7	4.69	3	8.3
Mons' hardness scale (Rigidity)		9.5 (Vickers 2050)	~	~	~	6-7 (Vickers 1100)
Max-working temperature	°C	1380	1450	1620 (oxid)	1300	1250

1. This information is given in good faith but does not constitute a specification of guarantee.
2. ZPC Ceramics supplies the most competitive and technically-proven range of Reaction-bonded silicon carbide products.

PRODUCTION SYSTEM



RBSiC/SiSiC PRODUCTS



Not all silicon carbide ceramics are created equal. ZPC plant only use the high quality silicon carbide materials to manufacture ceramic components that meet the high performance requirements of our customers. And ZPC factory are committed to becoming the largest and most professional desulphurizing nozzles manufacturer in Asia.

Our products including reaction-bonded silicon carbide desulfurizing nozzle, inner lining, radiant tube, inner tube, silicon carbide ceramic bush, beam, roller rod, thermocouple protection tube, cold-air tube, case, crucible, Sagger, blast nozzle, axle sleeve, sealing element, and various high-temperature resistant, wear-resistant, corrosion-resistant silicon carbide irregular parts.

RBSiC/SiSiC PRODUCT CATALOGUE



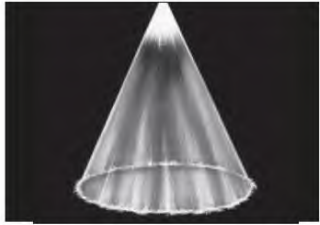
1. Flue Gas Desulfurization nozzles - (FGD Nozzles)
2. Wear Resistant and Corrosion Resistant Products
3. High Temperature Resistance Kiln Furniture
4. Irregular and Special-Shaped SiSiC (RBSiC) Parts
5. Other Customized...



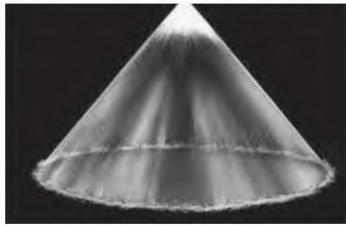
1. FGD Nozzles

Being committed to becoming the largest and most professional desulphurizing nozzles manufacturer in Asia.

ZPC silicon carbide product has long been utilized as the preferred material for aggressive wear applications throughout coal fired power plants. It is widely used in modern, well equipped facilities working to meet current regulatory demands, and in power plants committed to best practice with maximum performance, extended outage cycles and reduced unscheduled downtime. ZPC silicon carbide product is utilized for burner barrel liners, wear blocks, quarl tile, conical diffusers and deflectors, fuel head distributors and transitions in the coal delivery side. It is also utilized in limestone slurry preparation and delivery side including hydrocyclone apexes, inlet heads and flue gas desulfurization spray nozzles.



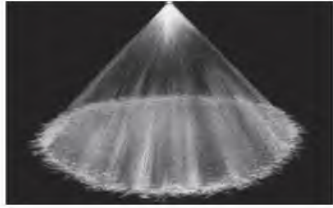
Hollow Cone - Narrow Angle



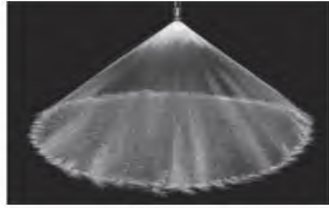
Hollow Cone - Medium Angle

Hollow Cone Sprrial Nozzles





Full Cone 90°



Full Cone 120°

Full Cone Spray Nozzle



0.3-0.6 inch



1-3 inch



4 inch



more than 4 inch



Screw hoop

Other Desulphurization Nozzles



Pulse nozzle



Pulse nozzle



MP nozzle



Liquid column spray nozzle



2. Wear Resistant and Corrosion Resistant Products

ZPC silicon carbide products are the clear choice for the harsh conditions faced in the handling, sizing and transport of mined products. Our materials are known for their outstanding abrasion resistance, corrosion resistance and extremely low thermal expansion. Multiple lining configurations and monolithic sweeps (elbows) are custom manufactured according to specific process requirements. This ensures perfect fit, minimized joints and faster installation. These unique properties lead to reduced downtime, increased productivity and higher material throughput. Mining and material handling components for severe wear applications.

Cyclone Lining



Anti-wear inner lining



Sandblasting Nozzle



Sandspit



Ceramic lining of metal tube



3. High Temperature Resistance kiln furniture

The Main Features:

- a: Good Hardness and Load bearing
- b: Oxidation resistance, Anti-Oxidant
- c: No creep deformation
- d: High abrasion and corrosion resistance

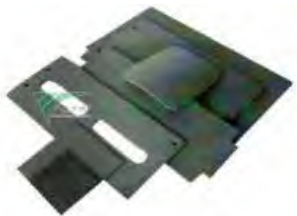
Radiant tube & Burner & Heat exchanger



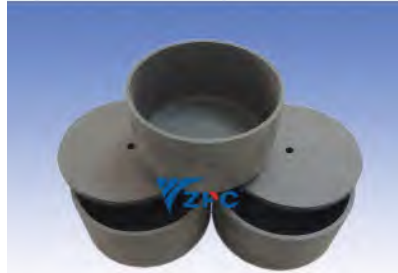
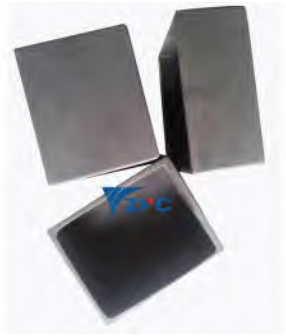
Burner Nozzle & Flame Nozzle & Burner Tube



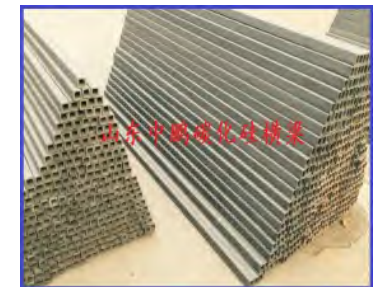
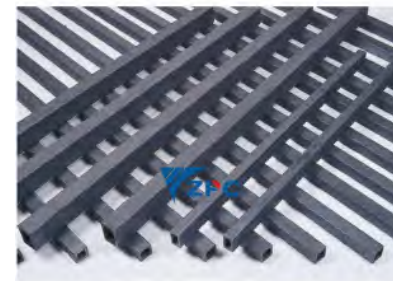
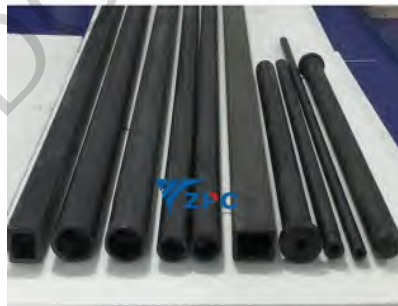
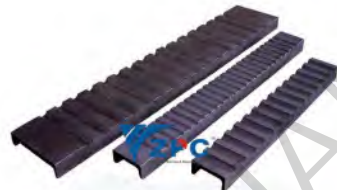
Silicon carbide kiln plate



Crucible & Sagger



Beams & Roller



4. Irregular and Special-Shaped Ceramics

With excellent performance of high strength, high hardness, high wear resistance, high temperature resistance, corrosion resistance, the different kinds of shapes of special parts are suitable for mining, petrochemical, metallurgical manufacturing, aerospace and nuclear industries, such as a specific environment. We can make any sizes provided according to the customer request.

Special parts



Bolt and nut



Wear-resistant component



Wear-resistant domal bodies



Thick walled silicon carbide tube



Wear-resistant conical sleeve



Temperature resistant sleeve



Silicon carbide separator



Silicon carbide separator



Silicon carbide filter separator



Lining pipe



Radian plate



Wear-resistant ring



Impeller



Impeller



Special parts

WHAT WE CAN DO



- **R&D - Product Development**

As reaction-bonded silicon carbide ceramics manufacturer, we provide high-performance silicon carbide ceramic solutions.

- **Precision Production & Communication**

We pursue the fine cooperation with customers in product development, mass production & logistics and supporting. We also pay attention to the communication of customer' after-sale plan.

- **OEM/ODM is Available**

Clients' special requests on sizes/shape are available. Printing your logo or brand on products are accepted with the proper quantity. We will need your 2D &3D drawing artwork or samples for production.

SCHEME PROVIDING



According to your description about the existing problems, our special engineers of R&D Dept. will check and reply with the solving scheme soon.

STEP 1: Contact our sales representative and tell the details.

STEP 2: Problems analyzing. Pictures or videos may be needed.

STEP 3: Reply with the suitable solving scheme for your choice.



ORDER PROCESS



Enquiry	Inform us of specs (material, quantity, destination, transportation mode, etc) by email, phone or fax
Quotation	A detailed quotation from our specific sales person will reach you within one working day.
Order Confirmation	If you accept the quotation or samples (if necessary), please confirm the order and send us the contract.
Production	The sales person will pass the order details to our factory for arranging.
Sample Confirmation	For products of specifications, we will confirm with you after the first sample is completed.
Quantity Control & Packing	The product will go through our strict test procedures and then be packaged and waiting for delivery
Delivery	We will confirm with you again for the transportation mode, consignee and other information. then, we will registered and reached in our delivery system.
Logistics Tracking	The sales person will offer you real-time information of the logistics for your tracking.
After-sale Service	After you receive our products, we will keep in touch with you for our after-sale service.

AFTER-SALE SERVICES



Our responsibility

Reply with the testing result
Exchange/Return arrangement
Record & follow

Non our responsibility

Solving scheme provided based on
communication



SHANDONG ZHONGPENG

CULTURE & HONOR



- Corporate mission:
Creditable Service and Excelsior Quality
- Unswervingly pursue the best quality standards, continuous technological innovation, and high customer satisfaction.

SHANDONG ZHONGPENG

INDUSTRY CASE



PARTNERS



SHANDONG ZHONGPENG

SAC

天原集团
TIANYUAN GROUP

中国航发西安航空
AECC XI'AN AERO-ENGINE LTD.

魏桥创业
WEIQIAO PIONEERING

利华益
LIHUAYI

内蒙古电力集团
INNER MONGOLIA ELECTRIC POWER GROUP

包钢集团
BAOGANG GROUP

JIGANG

China Huadian Corporation

东糖集团
DONTA GROUP

哈尔滨哈飞工业有限责任公司
HARBIN HAFEI INDUSTRY CO., LTD.

云计算·大数据
美利云

兖矿集团
YANKUANG GROUP

国家电网
STATE GRID

青岛能源热电有限公司
Qingdao Energy Power & Heat Co. Ltd.

Power plants



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