

ZIBO JINGGAN REFRACTORY IMPORT AND EXPORT CO.,LTD

Address:NO. 3, Yanhe Road, Boshan, Zibo, Shandong, China
Email:wp@cnjingganrefractory.com/sdwenping@163.com
Contact:Rose Tel/Wechat:+86-13275332819
Tel:86-533-4188518 Fax:86-533-4188518

High Thermal Conductivity Silicon Brick



1,Description of High Thermal Conductivity Silicon Brick:

Based on the production process of ordinary silicon brick, the optimum raw materials and particle size distribution were adopted, and organic binders and additives were added. The forming pressure and times of pressing are increased, as a result, the density of the product is increased, the porosity of the product is reduced, the strength and thermal conductivity of the product are increased, and the high density and thermal conductivity of the product are achieved.

2,Main features of High Thermal Conductivity Silicon Brick

- * High density, $\geq 1.85\text{g/cm}^3$
- * The thermal conductivity of high thermal conductivity silicon brick is higher by 15-20% than that of ordinary silicon brick at 800-1200℃.
- * High strength and wear resistance. The strength of high thermal conductivity compact silicon brick is 20-40 Mpa higher than that of ordinary silicon brick, and its wear resistance is 40% higher than that of ordinary silicon brick.
- * The thermal capacity of high thermal conductivity silicon brick is higher than that of ordinary silicon brick by more than 25%.

3,High Thermal Conductivity Silicon Brick Advantages

- * Energy saving: With the increase of thermal conductivity and heat capacity of high thermal conductivity compact silicon brick, the flue temperature is reduced by about 40℃, and the gas consumption is saved by more than 3%.
- * The environmental protection effect is good. The flue temperature is reduced by about 40℃, and the NOX content in waste is reduced by about 80 ppm.

ZIBO JINGGAN REFRACTORY IMPORT AND EXPORT CO.,LTD

* It saves space,the use of high thermal conductivity and compact silicon brick can reduce the number of coke oven holes by 15-20% compared with the use of ordinary silicon brick, thus saving land occupation.

* The coke oven life is prolonged,the strength of high thermal conductivity compact silicon brick is increased by more than 40%, the wear of wall and floor of carbonization chamber is slowed down, the porosity of product is reduced, and the corrosion of alkali metal in coke coal to furnace wall is also slowed down, so the service life of coke oven is prolonged.

4,Use effect

High Thermal Conductivity Dense Silicon Brick was first used in Huaibei Coking Company of Anhui Province and Zhengda Coking Company of Shandong Xintai City. Huaibei Coking Company passed the calculation, heat consumption decreased by 7%,according to the calculation of coking time of 22 hours and annual production time of 8760 hours, the use of high thermal conductivity dense silica brick in 4 cm 50 hole coke oven can save 124 million m3 mixed gas per year, equivalent to 20682 tons of standard coal. It can be seen that high thermal conductivity and compact silicon bricks are used in the coke oven carbonization chamber, and the economic benefit is remarkable.

Comparison of index between high thermal conductivity compact silicon brick and common silicon brick

ITEM	Silicon Brick for General Coke Oven	High Thermal Conductivity Dense Silicon Brick
SIO2 %	94.5	95
Al2O3 %	1.2	1
Fe2O3 %	1.2	0.8
CaO %	3.0	2.5
Apparent porosity %	22	17
B.D g/cm3	1.85	1.95
True specific gravity g/cm3	2.33	2.335
Cold crushing strength Mpa	40	60
Reheating linear change 1450℃*2h,%	0--+0.2	0--+0.2
Refractoriness under load To.6 ℃	1650	1660
Thermal expansion rate 20℃-1000℃ %	1.28	1.22
Residual quartz %	1.5	0.5
Creep rate 1500℃,20-50h,%		0.2
	4.5	3
Thermal conductivity1100℃ w/m.k	1.9-2.1	2.30

ZIBO JINGGAN REFRACTORY IMPORT AND EXPORT CO.,LTD

High temperature flexural strength Mpa	3-5	6-7
---	-----	-----

5.Good feedback of product use effect,the products have been exported to Australia, Oman, the United State

6.We are a professional supplier, who can provide customers with free product technology, use and other issues.

Do you want to find a professional supplier of refractory products?

Do you want to find a professional supplier of graphite electrodes?

Do you want to find a stable and credible supplier?

Then let's contact with jinggan company

Contact me:

Email:wp@cnjingganrefractory.com/sdwenping@163.com

TEL: 86-0533-4188518 / **FAX:** 86-0533-4188518

Rose:+86-13275332819(wechat/whatsapp number)