CCEWOOL Thermomax Inc.

CCEFIRE® SIC Series Silicon Carbide Products

Description:

CCEFIRE® SIC Series Silicon carbide products with advantages of good wear resistance, creep resistance, good corrosion resistance, high strength, low thermal expansion coefficient, good thermal conductivity and thermal stability.

Technical data and Size:

CCEFIRE® SIC Series Silicon carbide products			
Properties Brand	SIC90	SIC20	SIC10
Apparent Porosity(%)	20≥	20≥	20≥
Bulk Density	2.55≤	2.50≤	2.35≤
Cold Crushing Strength (kg/cm^2)	1000≤	900≤	800≤
SIC	90≤	20≤	10≤
AL_2O_3		43≤	42≤

Raw Materials

Own large-scale ore base, professional mining equipment, and stricter selection of raw materials.

The incoming raw materials are tested first, and then the qualified raw materials are kept in a designated raw material warehouse to ensure their purity.

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The raw materials of CCEFIRE fire bricks have low impurity content with less than 1% oxides, such as iron and alkali metals. Therefore, CCEFIRE clay bricks have high refractoriness.

Production Process

The fully automated batching system fully guarantees the stability of the raw material composition and better accuracy in raw material ratio.

With internationally advanced automated production lines of high-temp tunnel furnaces, shuttle furnaces, and rotary furnaces, the production processes from raw materials to finished products are under automatic computer-control, ensuring stable product quality.

Automated furnaces, stable temperature control, low thermal conductivity of CCEFIRE insulation bricks, excellent thermal insulation performance, less than 05% in the permanent line change, stable quality, and longer service life.

Various shapes of clay bricks can be made according to designs. They have precise dimensions with an error of +1mm and are convenient for customers to install.

Quality Control

Each shipment has a dedicated quality inspector, and a test report is provided prior to the departure of products from the factory to ensure the export quality of each shipment of CCEFIRE.

A third-party inspection (such as SGS, BV, etc.) is accepted.

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Production is strictly in accordance with ASTM quality management system certification.

The outer packaging of each carton is made of five layers of kraft paper, and outer packaging + pallet,, suitable for long-distance transportation.

Application Performance

1. The application in non-ferrous metal smelting industry

As high temperature indirect heating materials, such as tank distillation furnace, distillation furnace tray, electrolytic aluminum tank, copper smelting furnace lining, zinc furnace arc plate, thermocouple protection tube. This is the use of silicon carbide's high temperature resistance, high strength, good thermal conductivity and shock resistance.

2. The application in steel industry

The characteristics of corrosion resistance, thermal shock resistance, wear resistance and good thermal conductivity of silicon carbide are used to improve the service life of large blast furnace lining.

3. The application in metallurgical industry

The hardness of silicon carbide is second only to diamond, which has strong wear resistance. It is the ideal material of mine bucket lining, wear resistant pipe, impeller, pump chamber and cyclone. Its wear resistance is 5-20 times the service life of cast iron and rubber, which is also an ideal material of aviation flight runway.

4. The application in building, ceramics and grinding wheel industry

By using silicon carbide's characteristics of high thermal conductivity, thermal radiation and high strength, manufacturing kiln sheet which can not only reduce kiln capacity, but also furnace installed capacity and product quality, shorten production cycle. It is an ideal indirect material for ceramic glaze baking sintering.

5. The application in energy saving

Using good thermal conductivity and thermal stability as heat exchanger, fuel consumption reduced by 20%, saving fuel by 35%, so that productivity increased by 20-30%. In particular, the pipeline discharge in the mine, the wear resistance is 6 ~ 7 times as ordinary wear-resistant materials.