Heat-Resistant Refractory Materials For Float Glass Kilns

Our Product Introduction

Basic Information

- Place of Origin: Zhengzhou,China
- Brand Name: Rongsheng Xinwei
- Certification: ISO9001
- Model Number: Rongsheng
- Minimum Order Quantity: 1 Ton
- Price: 200-800USD
- Packaging Details: Packed on wooden pallets, with water-proof cover, and tightened with plastic/steel bandages
- Delivery Time: 10-20 Days
- Payment Terms: TT; L/C
- Supply Ability: 2000tons /month

Product Specification

- Highlight: **Float Glass Kilns Refractory Materials**, **Float Glass Kilns Refractory**, **Furnace Refractory Bricks Heat-Resistant**

Our Product Introduction

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Product Description

Product Description of Refractory Materials For Float Glass Kilns

Refractory materials for float glass kilns are high-performance materials designed to meet the stringent requirements of the float glass manufacturing process. These materials include a range of products such as high-alumina bricks, zircon bricks, silica bricks, fused cast AZS (alumina-zirconia-silica) blocks, and insulating refractories. They are engineered to withstand prolonged exposure to extreme temperatures, corrosive glass melts, and thermal shocks while ensuring energy efficiency and operational stability.

Product Features of Refractory Materials For Float Glass Kilns
Exceptional Thermal Stability: Designed to perform at temperatures exceeding 1600°C.
High Corrosion Resistance: Withstands chemical attacks from molten glass and alkali vapors.
Low Thermal Conductivity: Reduces heat loss and improves energy efficiency.
Thermal Shock Resistance: Minimizes cracking and degradation caused by rapid temperature changes.
Precise Dimensional Accuracy: Ensures seamless installation and structural integrity.

Product Advantages of Refractory Materials For Float Glass Kilns
Enhanced Kiln Longevity: Superior wear resistance extends the service life of critical kiln components.
Improved Glass Quality: Low impurity levels prevent contamination of the glass melt, ensuring optical clarity and surface smoothness.
Operational Efficiency: High strength and durability minimize downtime and maintenance costs.
Wide Range of Options: Tailored materials for various zones of the kiln, including the melting tank, regenerator, and crown.
Energy Savings: Optimized insulation properties reduce energy consumption during operation.

Applications of Refractory Materials For Float Glass Kilns
Refractory materials for float glass kilns are used across different zones of the kiln, each with specific requirements:
Melting Tank: Fused cast AZS blocks for the sidewalls and floor, providing excellent corrosion resistance against molten glass.
Crown: Silica bricks with high thermal stability to withstand intense heat.
Regenerator Chambers: High-alumina or silica checker bricks to maximize heat recovery.
Feeder Channels: Zircon bricks or fused cast materials to maintain the thermal and chemical integrity of the glass.
Cooling Zones: Insulating refractories to manage gradual temperature reduction without compromising the glass quality.

Advantages of Refractory Materials in Float Glass Kilns
Optimized Thermal Performance: High thermal efficiency ensures consistent temperature distribution, crucial for producing uniform float glass.
Resistance to Glass Melt Erosion: The materials' durability against aggressive glass melts prevents structural damage and leakage.
Reduced Maintenance Costs: Long-lasting refractories minimize the need for frequent replacements, cutting operational expenses.
Energy Efficiency: Insulating materials reduce heat loss, leading to lower fuel consumption and enhanced sustainability.

Improved Productivity: Stable kiln operation ensures continuous and efficient float glass production.
Enhanced Environmental Compliance: Energy-efficient materials reduce carbon emissions, aligning with industry sustainability goals.

Refractory Materials in Various Parts of The Molten Pool

Position	Refractory Material	Remarks
Pool Walls	Fused cast AZS bricks, AZS bricks, Zircon mullite bricks	Contain zircon, alumina, silica; no or low content of boron oxide glass phase.
Pool Bottom	Fused cast AZS bricks (pressed bricks, fused cast ramming materials)	(Clay bricks) (Insulation layer)
Feeding Pool	Fused cast AZS 41 bricks	Resistant to dust and erosion from glass liquid.
Flow Channels	Boron-free AZS bricks, sintered zircon bricks	Large flow of glass liquid, severe erosion, and accelerated wear.
Cooling Sections	Fused cast AZS bricks produced with oxidation technology	Cannot introduce defects into the glass liquid.
Forming Sections	α-Al2O3 bricks, αβ-Al2O3 bricks	High temperature requirements for the material.
Crown Section	Fused cast AZS bricks	High load capacity, resistant to thermal shock, and good structural integrity.
Furnace Roof	Fused cast AZS bricks	Withstand chemical corrosion and structural load fluctuations well.
Front Wall	Fused cast AZS 33 bricks (reduced silica content, cold compression AZS types)	Frontal wall abrasions still depend on aggressive abrasion and flame blow.

Conclusion
Refractory materials for float glass kilns are integral to the efficient and reliable production of high-quality float glass. Their superior thermal, mechanical, and chemical properties ensure optimal performance in one of the most demanding industrial processes.

If you want to inquiry and purchase refractory materials for float glass furnaces, please feel free to contact **Henan Rongsheng Xinwei New Materials Research Institute Co., Ltd**.

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