MIXING TECHNOLOGIES

A New-Generation Mixing Tool
Highly abrasive raw materials in the production of refractory products lead to high wear on mixing blades and tool holders. A mixing tool for vertical intensive mixers enables wear parts to be changed in the shortest possible time with minimal production downtime costs and multiple service life extensions.

OVEN CONSTRUCTION

Debinding and Sintering of Technical Ceramics
A wide variety of manufacturing processes for technical ceramics have become much more extensive due to the possibilities of additive manufacturing. The challenges involved in subsequent debinding and sintering are often underestimated. Therefore, the range of equipment required for this is presented in this article and its safety concept explained.

HIGH TEMPERATURE MATERIALS

High-Temp, High Performance – Technical Ceramics Handle the Heat
Technical ceramics occupy the cutting edge of industrial processing. They are deployed where conventional materials are prone to failure, or to refine equipment for greater throughput and profitability. Their incredibly favorable thermomechanical properties have for decades made them a mainstay in metal works, foundries, and other ultra-high temperature sectors. Certain technical ceramics offer long-lasting performance over multiple cycles – even when in direct contact with molten metals.

SIMULATION

Impact Of MgO-C With CMA- and Nanocarbon-Addition on the Steel Cleanliness Using a Metal Casting Simulator
Non-metallic inclusions in molten steel mainly originate from refractory-slag-steel interactions during continuous casting and remarkably influence its cleanliness. The objective of this paper was to apply a new approach of minimizing non-metallic inclusions by interaction with a suitable MgO-C-based lining material. With the purpose of investigating the efficiency of MgO-C and MgO-CMA-C to reduce endogenous inclusions, immersion tests have been performed in a metal casting simulator.

ANDALUSITE REFRACTORY CASTABLES

Comparison of Thermal Shock Damage and Slag Corrosion Between Castable Refractories
This paper compares the thermal shock resistance and slag corrosion resistance of a high-alumina and an alumina-containing andalusite refractory casting. The alumina-containing andalusite casting showed superior thermal shock resistance, while the alumina-containing casting exhibited superior resistance to slag corrosion. These results were linked to material selection for specific industrial applications.

Termine

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