

Does spodumene fluidized bed roasting reduce energy consumption?

The experimental results show that fluidized bed roasting of lithium spodumene can reduce energy consumption by 40-50 %, and the product quality has been significantly improved. After that, our group will continue to develop the spodumene fluidized bed roasting technology through the pilot plant and demonstration projects.

What is magnetization roasting?

Magnetization roasting is to convert non-magnetic poor iron ore such as hematite, siderite, limonite, and other minerals into magnetic magnetite Fe_3O_4 under certain temperature conditions with reducing gases such as hydrogen, carbon monoxide, or solid reducing agents such as coal dust, .

Why is roasting in a fixed bed important?

In the early stages of development, roasting was usually carried out in a fixed bed, during which the process was manually stirred to improve the quality of the roasted product by exposing the unroasted ore to the gas. Fixed bed is too energy inefficient and the quality of the product cannot be guaranteed.

What is a low gas reduction potential during magnetization roasting?

During the magnetization roasting, a gas with low gas reduction potential and a relatively low roasting temperature ($450 \pm 176^\circ\text{C}$) are required to ensure that the ore is not further reduced to wüstite. Fig. 5.

How does pyrite roasting work?

The flue gas from pyrite roasting has a temperature close to $950 \pm 176^\circ\text{C}$, entraining mineral ash of 200-420 g/Nm³, which is cooled down by the waste heat boiler to about $350 \pm 176^\circ\text{C}$. About 30-40 % of the mineral ash in the furnace gas settles in the waste heat boiler, and most of the rest is subsequently removed in the cyclone dust collector.

What is a pyrite fluidized bed roaster?

The vast majority of pyrite fluidized bed roasters are of the Lurgi type, i.e., upper enlarged type, with a significantly enlarged diameter at the upper part of the furnace chamber. Fig. 2 shows the structure of the upper enlarged pyrite roaster.

A carbon roasting furnace and pollutant technology, which is applied in waste heat treatment, combustion methods, heat storage equipment, etc., can solve the problems of energy waste, ...

What is Shell Roasting Furnace Heat Storage Technology, High Efficiency and Energy Saving, Casting Mold Shell Roster Electric Heating Furnace manufacturers & suppliers on Video ...

A technology of roasting furnace and process, which is applied in the field of energy-saving optimization

process of waste heat and gas of roasting furnace, which can solve the problems ...

2.The use of special gas burner, so that the gas under low pressure conditions by high pressure air injection chamber, and then through the rotary body to effectively mix gas and air after ...

Description technical field [0001] The invention relates to a flue gas treatment device and method, in particular to a device and method for treating flue gas from a roasting furnace, which is ...

The combustion chamber supplies the heating gas in the pellet roasting process, and the temperature of the combustion chamber is controlled by adjusting the flow rates of ...

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