

Title (en)
Device for melting inset material in a cupola

Title (de)
Verfahren zum Schmelzen von Einsatzmaterial in einem Kupolofen

Title (fr)
Procédé de fusion de matière utilisée dans un four à coupole

Publication
EP 2213971 A1 20100804 (DE)

Application
EP 09003981 A 20090319

Priority
DE 102009006573 A 20090129

Abstract (en)
Operating a shaft furnace, in particular a cupola furnace, for melting starting material, comprises heating the shaft furnace by a burner, and supplying a gaseous or liquid fuel and a gaseous oxidant, which comprises an oxygen portion of more than 21% to the burner. Operating a shaft furnace, in particular a cupola furnace, for melting starting material, where the shaft furnace is heated by combustion of a solid fuel and where an injection gas, which has an oxygen portion of more than 21%, is injected into the shaft furnace, where the injection gas is accelerated in a driving nozzle and an injector blast is sucked using the low pressure created in response to the acceleration of the injection gas and is combined with the injection gas to form a driving nozzle flow and is fed into the shaft furnace, comprises heating the shaft furnace by a burner, and supplying a gaseous or liquid fuel and a gaseous oxidant, which comprises an oxygen portion of more than 21% to the burner. An independent claim is included for a shaft furnace, in particular a cupola furnace, for melting a starting material, where a feed line for an oxygen-containing injection gas is made, at the downstream end of which a driving nozzle is connected and where an injector blast pipe empties into the feed line for the injection gas or into the driving nozzle, comprising at least one burner provided with a feed line for a gaseous oxidant and with a feed line for a liquid fuel or a gaseous fuel.

Abstract (de)
Die Erfindung betrifft ein Verfahren zum Betreiben eines Schachtofens (1), insbesondere eines Kupolofens, zum Schmelzen von Einsatzmaterial, wobei der Schachtofen (1) durch Verbrennung eines festen Brennstoffs beheizt wird und wobei in den Schachtofen (1) ein Injektionsgas, welches einen Sauerstoffanteil von mehr als 21% besitzt, eingedüst wird. Der Schachtofen (1) wird mittels mindestens eines Brenners (4) beheizt, wobei dem Brenner (4) ein gasförmiger oder flüssiger Brennstoff und ein gasförmiges Oxidationsmittel, welches einen Sauerstoffanteil von mehr als 21% aufweist, zugeführt werden.

IPC 8 full level
C21B 5/00 (2006.01); **C21B 11/02** (2006.01); **F27B 1/16** (2006.01)

CPC (source: EP US)
C21B 5/001 (2013.01 - EP US); **C21B 11/02** (2013.01 - EP US); **F27B 1/16** (2013.01 - EP US)

Citation (applicant)
• EP 0762068 A1 19970312 - LINDE AG [DE]
• DE 1583213 A1 19700730 - AIR REDUCTION

Citation (search report)
• [X] EP 0793071 A2 19970903 - BOC GROUP PLC [GB]
• [XY] US 5346183 A 19940913 - WESTLEY DAVID R [GB]
• [X] EP 1325950 A2 20030709 - UMWELTKONTOR RENEWABLE ENERGY [DE]
• [AY] EP 1997915 A1 20081203 - LINDE AG [DE]

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Designated extension state (EPC)
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DOCDB simple family (application)
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