

Title (en)
Shaft furnace and method for operating same

Title (de)
Schachtofen und Verfahren zum Betreiben desselben

Title (fr)
Fourneau à cuve et procédé de fonctionnement de celui-ci

Publication
EP 2546366 B1 20180124 (DE)

Application
EP 11007675 A 20110921

Priority
DE 102011107326 A 20110714

Abstract (en)
[origin: EP2546366A1] Shaft furnace, preferably a cupola furnace, comprises at least one nozzle device (2) comprising: an outlet nozzle (4) for discharging a residual wind, which is connected with a residual blast pipe present at the downstream end of the outlet nozzle; a driving nozzle (8) for supplying an oxygen-containing conveying medium, which is connected with a conveying medium pipe present at the downstream end of the driving nozzle; an injector wind pipe connected with the conveying medium pipe or driving nozzle; and at least one fuel lance, which is an integral part of the nozzle device. Shaft furnace, preferably a cupola furnace comprises at least one nozzle device (2) comprising: an outlet nozzle (4) for discharging a residual wind, which is connected with a residual blast pipe present at the downstream end of the outlet nozzle; a driving nozzle (8) for supplying an oxygen-containing conveying medium, which is connected with a conveying medium pipe present at the downstream end of the driving nozzle; an injector wind pipe connected with the conveying medium pipe or driving nozzle, where a outlet end (18) of the driving nozzle is provided to an injector lance (19), and the injector lance is arranged in the outlet nozzle such that the outlet nozzle surrounds the injector lance concentrically, where the driving nozzle is formed such that the conveying medium in the driving nozzle is accelerated, an injector wind means during acceleration of the conveying medium sucks the resulting vacuum and merges with the conveying medium to form a driving nozzle flow, and that the driving nozzle flow and the residual wind are directed into the shaft furnace; and at least one fuel lance, which is an integral part of the nozzle device, which is connected with a fuel pipe present at the downstream end of the fuel lance, where the nozzle device is designed such that the driving nozzle flow entrains a fuel, in such a way that the driving nozzle flow is mixed with the residual wind and with the fuel, and the resulting driving nozzle flow is injected into the shaft furnace through the nozzle device. An independent claim is also included for operating the shaft furnace, preferably the cupola furnace, comprising heating the shaft furnace by combustion of the fuel, and accelerating the oxygen-containing conveying medium in the driving nozzle.

IPC 8 full level
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DE 102005032444 A1 20070125 - MALLON JOACHIM [DE], et al

Cited by
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