

Title (en)

Process and device to inject solid particles in a shaft furnace

Title (de)

Verfahren und Vorrichtung zum Einblasen von festen Teilchen in einen Schachtofen

Title (fr)

Procédé et dispositif pour insuffler des particules solides dans un four à cuve

Publication

EP 1020696 B1 20031029 (DE)

Application

EP 99124593 A 19991210

Priority

DE 19857306 A 19981214

Abstract (en)

[origin: DE19857306A1] Solid particle injection into a shaft furnace uses high pressure gas introduction to increase carrier gas flow velocity and cause particle spiral motion towards a lance outlet. Solid particles are injected into a shaft furnace by entrainment in a carrier gas stream through an injection lance into the hot blast in a tuyere, a higher pressure gaseous medium being introduced into the carrier gas stream, immediately prior to entry into the lance, to increase the flow velocity and cause spiral motion of the particles towards the lance outlet. An Independent claim is also included for equipment for carrying out the above process.

IPC 1-7

F27B 1/10; C21B 5/00; F27D 3/18; F27B 1/16; C21B 5/02; C21C 5/52

IPC 8 full level

C21B 5/00 (2006.01); **C21B 5/02** (2006.01); **C21C 5/52** (2006.01); **F27B 1/10** (2006.01); **F27B 1/16** (2006.01); **F27D 3/18** (2006.01)

CPC (source: EP)

C21B 5/003 (2013.01); **C21B 5/023** (2013.01); **F27B 1/16** (2013.01)

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

EP 1020696 A2 20000719; **EP 1020696 A3 20030102**; **EP 1020696 B1 20031029**; AT E253210 T1 20031115; DE 19857306 A1 20000615; DE 19857306 C2 20030528; DE 59907537 D1 20031204; ES 2210951 T3 20040701

DOCDB simple family (application)

EP 99124593 A 19991210; AT 99124593 T 19991210; DE 19857306 A 19981214; DE 59907537 T 19991210; ES 99124593 T 19991210