

Title (en)

PROCESS FOR INJECTING GASES RICH IN OXYGEN INTO A MOLTEN BATH CONTAINING NON-FERROUS METALS

Publication

EP 0053848 B1 19841024 (DE)

Application

EP 81201257 A 19811111

Priority

DE 3045992 A 19801205

Abstract (en)

[origin: ES8300871A1] The gases are injected through double-tube nozzles which extend through the wall of the reactor into the molten bath. A cooling protective fluid is injected through one tube of each double-tube nozzle. To reduce or avoid a wear of the double-tube nozzles and the surrounding brickwork, the flow rate of the protective fluid is so selected in dependence on the composition of the slag and on the difference between the temperature of the slag and its solidification point that crusts will be formed on the nozzles but will not exceed a desired thickness.

IPC 1-7

C22B 9/05; **C22B 13/02**; **C22B 15/06**; **C22B 5/02**

IPC 8 full level

C22B 5/02 (2006.01); **C22B 5/08** (2006.01); **C22B 5/12** (2006.01); **C22B 9/05** (2006.01); **C22B 13/02** (2006.01); **C22B 15/00** (2006.01); **C22B 15/06** (2006.01); **F27D 3/16** (2006.01)

CPC (source: EP KR US)

C22B 5/02 (2013.01 - EP US); **C22B 5/12** (2013.01 - KR); **C22B 9/05** (2013.01 - EP US); **C22B 13/02** (2013.01 - EP US); **C22B 15/003** (2013.01 - EP US); **C22B 15/0041** (2013.01 - EP US)

Cited by

EP0832987A1; EP2302082A1; EP0339644A1; DE4014835A1; DE4014835C2; WO9509250A1; WO9606195A1

Designated contracting state (EPC)

BE DE FR GB IT SE

DOCDB simple family (publication)

EP 0053848 A1 19820616; **EP 0053848 B1 19841024**; **EP 0053848 B2 19871014**; AU 542613 B2 19850228; AU 7827981 A 19820610; BR 8107861 A 19820908; CA 1180194 A 19850102; DE 3045992 A1 19820722; DE 3166865 D1 19841129; ES 507717 A0 19821101; ES 8300871 A1 19821101; FI 68659 B 19850628; FI 68659 C 19851010; FI 813743 L 19820606; IN 152960 B 19840512; JP H0147532 B2 19891016; JP S57120626 A 19820727; KR 830007855 A 19831107; KR 890002800 B1 19890731; MA 19349 A1 19820701; MX 156287 A 19880808; PH 19449 A 19860418; PL 234079 A1 19820719; US 4435211 A 19840306; YU 283681 A 19840430; YU 42003 B 19880430; ZA 817664 B 19821027

DOCDB simple family (application)

EP 81201257 A 19811111; AU 7827981 A 19811204; BR 8107861 A 19811203; CA 391522 A 19811204; DE 3045992 A 19801205; DE 3166865 T 19811111; ES 507717 A 19811204; FI 813743 A 19811124; IN 290CA1981 A 19810317; JP 19618581 A 19811204; KR 810004557 A 19811125; MA 19553 A 19811202; MX 19042181 A 19811204; PH 26577 A 19811204; PL 23407981 A 19811203; US 32629781 A 19811201; YU 283681 A 19811204; ZA 817664 A 19811105