

Title (en)

Top-blown lance for a metallurgical converter.

Title (de)

Aufblasbare Injektionslanze für einen metallurgischen Konverter.

Title (fr)

Lance d'injection de gaz pour convertisseur métallurgique.

Publication

EP 0086694 A1 19830824 (FR)

Application

EP 83400234 A 19830204

Priority

FR 8202173 A 19820210

Abstract (en)

[origin: ES8401138A1] A gas-injection lance has a main tube centered on an axis and having a lower end formed adjacent the axis with a plurality of throughgoing inner orifices and an upper end to which is fed a treatment gas under pressure that pressurizes the interior of the tube therewith sufficiently that the gas exits from the lower end through the inner orifices at supersonic speed. An annular array of nozzles traversing the lower tube end around the inner orifices each have an outer end opening outside of the tube and an inner end inside the tube. Respective pressure-reducers each have one side open at the lower tube end inside the tube and another side connected to the inner end of a respective nozzle for passing gas from the interior of the tube into the nozzles with a substantial pressure reduction so that the gas exits from the outer ends of the nozzles at subsonic speed. The pressure-reducers each comprise a body forming a chamber of predetermined flow cross section into which the respective inner nozzle end opens and an inlet on the body having an opening of flow cross section much smaller than that of the chamber and of the respective nozzle.

Abstract (fr)

Lance d'injection de gaz, caractérisée en ce qu'elle comporte une chambre interne (16) d'admission d'un flux gazeux principal à une première série d'orifices de soufflage (12, 47), et à l'intérieur de ladite chambre, des moyens (26, 29) de formation d'un flux gazeux secondaire par prélèvement, mise à vitesse sonique, puis détente d'une fraction du flux principal et des moyens (28) d'amenée de ce flux secondaire à une seconde série d'orifices de soufflage (13, 48) en disposition annulaire autour de la première série.

IPC 1-7

C21C 5/46; **F27D 3/16**

IPC 8 full level

C21C 5/46 (2006.01); **F27D 3/16** (2006.01)

CPC (source: EP US)

C21C 5/4606 (2013.01 - EP US); **F27D 3/16** (2013.01 - EP US); **C21C 5/305** (2013.01 - EP US)

Citation (search report)

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- [Y] DE 845643 C 19520804 - OESTERR ALPINE MONTAN
- [E] EP 0055956 A1 19820714 - SIDERURGIE FSE INST RECH [FR]
- [A] FR 1346214 A 19631213 - DEMAG AG
- [A] DE 1408783 A1 19690206 - ARBED
- [A] US 3411716 A 19681119 - STEPHAN RAYMOND C, et al

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Designated contracting state (EPC)

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EP 0086694 A1 19830824; **EP 0086694 B1 19870506**; AT E27003 T1 19870515; BR 8300661 A 19831108; CA 1194302 A 19851001; DE 3371367 D1 19870611; ES 519658 A0 19831201; ES 8401138 A1 19831201; FR 2521167 A1 19830812; FR 2521167 B1 19870430; JP H0249368 B2 19901030; JP S58147510 A 19830902; US 4432534 A 19840221

DOCDB simple family (application)

EP 83400234 A 19830204; AT 83400234 T 19830204; BR 8300661 A 19830209; CA 421120 A 19830208; DE 3371367 T 19830204; ES 519658 A 19830209; FR 8202173 A 19820210; JP 2139283 A 19830210; US 46555983 A 19830210