

Title (en)

Process for regulating the flow rate and bottom tap hole for metallurgical vessel

Title (de)

Verfahren zur Regelung des Durchflusses sowie Bodenausguss für ein metallurgisches Gefäß

Title (fr)

Procédé pour le réglage du débit ainsi qu'orifice de coulée pour récipient métallurgique

Publication

EP 1661645 A3 20061108 (DE)

Application

EP 05024382 A 20051109

Priority

DE 102004057381 A 20041126

Abstract (en)

[origin: EP1661645A2] A method for controlling flow through the bottom outlet of a metallurgical vessel with an upper nozzle (3) in the base (1), a lower nozzle (7) below (3), inert gas inlet(s) (13) and a sensor (10) on or in the lower nozzle (7) to measure the thickness of solid in the nozzle (clogging), in which the inert gas feed to the outlet is controlled by means of the signal from the sensor. Independent claims are also included for (1) a bottom outlet as described above (BO1) in which the inert gas inlet(s) and connection(s) are below the upper nozzle (3) and the sensor (10) is on or in the outside of the lower nozzle (7) and is also connected to an inert gas flow controller (2) a bottom outlet as above (BO2) in which the wall of the connecting opening between (3) and (7) is liquid-tight, at least with regard to molten metal, and the two nozzles (3, 7) are surrounded by a gas-tight housing (14) which forms a gas-tight seal with (7) at the bottom of the housing (14), with part of its inside on the outside of (7) and with a thermally-insulating solid between the wall of the connection (3:7) and the housing (14) .

IPC 8 full level

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CPC (source: EP KR US)

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Citation (search report)

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- [Y] WO 2004035249 A1 20040429 - DESAI PRIYADARSHI GAUTAM [US], et al
- [YD] PATENT ABSTRACTS OF JAPAN vol. 015, no. 452 (M - 1180) 18 November 1991 (1991-11-18)
- [XY] PATENT ABSTRACTS OF JAPAN vol. 1999, no. 09 30 July 1999 (1999-07-30)
- [Y] PATENT ABSTRACTS OF JAPAN vol. 2003, no. 12 5 December 2003 (2003-12-05)
- [Y] PATENT ABSTRACTS OF JAPAN vol. 008, no. 262 (M - 341) 30 November 1984 (1984-11-30)

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Designated extension state (EPC)

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