

Title (en)

Purging plug for blowing gas into a metal treatment recipient

Title (de)

Spülstein zum Einblasen von Gas in einen Metallbehandlungsbehälter

Title (fr)

Bouchon de purge par gaz de soufflage dans un récipient de traitement métallique

Publication

**EP 2111938 B1 20170419 (EN)**

Application

**EP 08155102 A 20080424**

Priority

EP 08155102 A 20080424

Abstract (en)

[origin: EP2111938A1] A purging plug (1) for blowing gas to be attached to an opening (41) of a molten metal treatment recipient, comprises a core (2) having a shape extended along a longitudinal axis (40) from a bottom side (5) to a top side (6), wherein the core is substantially made of a first material, wherein the first material has a first permeability, and a surrounding layer (4) arranged around the core in direction of the longitudinal axis from the bottom side to the top side, wherein the surrounding layer is substantially made of a second material, wherein the second material has a second permeability, the second permeability being of higher value than the first permeability. The purging plug further comprises at least one gas passage duct (7) allowing a gas to flow through the gas passage duct from the bottom side to the top side, the gas passage duct being formed according to one of the following configurations: the at least one gas passage duct is formed as an interstice (7) between the core and the surrounding layer; the at least one gas passage duct is formed as a channel (308) in the core; or the at least one gas passage duct is formed as an interstice between the core and the surrounding layer and at least a further gas passage duct is formed as a channel in the core.

IPC 8 full level

**B22D 1/00** (2006.01); **C21C 5/48** (2006.01)

CPC (source: EP)

**B22D 1/005** (2013.01); **C21C 5/48** (2013.01); **C21C 5/34** (2013.01); **C21C 2250/08** (2013.01); **C22B 9/05** (2013.01)

Citation (opposition)

Opponent : Refractory Intellectual Property GmbH & Co. KG

- WO 03103877 A1 20031218 - VESUVIUS CRUCIBLE CO [US], et al
- EP 1797976 A2 20070620 - PA HA GE FEUERFESTE ERZEUGNISS [DE]
- DE 3727938 C1 19880908 - DIDIER WERKE AG
- US 2003111778 A1 20030619 - ARAMAKI KEIZO [JP], et al
- DE 19504941 A1 19960822 - KNOELLINGER HORST [DE]
- DE 19846524 A1 20000413 - KNOELLINGER KERAMISCHE ERZEUGN [DE]
- EP 0490062 A1 19920617 - DIDIER WERKE AG [DE]
- RU 2132395 C1 19990627 - OTKRYTOE AKTSIONERNOE OBSHCHE
- JP H09272915 A 19971021 - TOKYO YOGYO KK
- EP 1101825 A1 20010523 - VEITSCH RADEX GMBH [AT]
- W. HAMMERER ET AL.: "Gasspülsteine für Stahlpfannen", RADEX RUNDSCHAU, vol. 4, December 1992 (1992-12-01), pages 217 - 226, XP000770551

Cited by

CN105087869A; CN105087870A

Designated contracting state (EPC)

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DOCDB simple family (publication)

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