

Title (en)
GAS PURGING ELEMENT WITH ITS CORRESPONDING GAS SUPPLY LINE

Title (de)
GASSPÜL-ELEMENT UND ZUGEHÖRIGE GASZUFÜHR-LEITUNG

Title (fr)
ÉLÉMENT DE LAVAGE DE GAZ AVEC CONDUITE D'ALIMENTATION EN GAZ CORRESPONDANTE

Publication
EP 3106813 A1 20161221 (DE)

Application
EP 16181865 A 20120827

Priority
• EP 16181865 A 20120827
• EP 12181902 A 20120827

Abstract (en)
[origin: EP2703761A1] Gas purging element (10) comprises (a) a refractory ceramic body having a first end and a second end. The second end is in the installed state of the gas purging element in contact with a molten metal. The first end is externally covered by a metal sheath (12) having an opening (16) which is followed by a gas connection pipe (20). The gas purging element, the body and the gas connection pipe are designed such that a treatment gas flows through the body, which is supplied via the gas connection pipe and emerges from the body at the second end. Gas purging element (10) comprises (a) a refractory ceramic body having a first end and a second end. The second end is in the installed state of the gas purging element in contact with a molten metal. The first end is externally covered by a metal sheath (12) having an opening (16) which is followed by a gas connection pipe (20). The gas purging element, the body and the gas connection pipe are designed such that a treatment gas flows through the body, which is supplied via the gas connection pipe and emerges from the body at the second end. The gas connection pipe is connected to the metal sheath and is formed as a plug or socket of a plug connection for connecting to a corresponding socket, or a corresponding connector of a gas supply line (30). An independent claim is also included for a gas supply line for a gas purging element, comprising a first end and a second end for connection to the gas connection socket of the gas purging element, where the second end corresponds to the gas connection pipe as a plug or socket of the plug-in connection between the gas connection pipe.

Abstract (de)
Die Erfindung betrifft ein Gasspül-Element an einem metallurgischen Gefäß sowie eine zugehörige Gaszuführ-Leitung.

IPC 8 full level
C21C 5/34 (2006.01); **F27D 3/16** (2006.01)

CPC (source: EP KR US)
B22D 1/002 (2013.01 - EP KR US); **C21C 5/34** (2013.01 - US); **C21C 5/35** (2013.01 - EP KR US); **C21C 5/48** (2013.01 - US); **C21C 7/072** (2013.01 - EP KR US); **F27D 3/16** (2013.01 - EP KR US)

Citation (applicant)
• EP 0148337 A1 19850717 - BROHLTAL DEUMAG AG [DE]
• DE 3833502 C2 19901004

Citation (search report)
• [XY] DE 19948848 C1 20000713 - DOLOMITWERKE GMBH [DE]
• [Y] DE 4029024 A1 19920319 - BEDA OXYGENTECH ARMATUR [DE]
• [A] WO 2005107979 A1 20051117 - MUNDING STEFAN [DE], et al
• [A] WO 2011118477 A1 20110929 - KROSAKIHARIMA CORP [JP], et al
• [A] EP 0234852 A1 19870902 - INJECTALL LTD [GB]
• [A] US 3834685 A 19740910 - TORRENCE J, et al
• [A] AT 365958 B 19820225 - VOEST ALPINE AG [AT]
• [A] US 5112029 A 19920512 - LAZCANO-NAVARRO ARTURO [MX], et al

Designated contracting state (EPC)
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