

Title (en)

Method for determination and regulating the level of a metal melting bath

Title (de)

Verfahren zur Bestimmung und Regulierung des Badspiegels einer Metallschmelze

Title (fr)

Procédé pour la détermination et le réglage d'un niveau du bain de métal liquide

Publication

**EP 0451929 B1 19970502 (DE)**

Application

**EP 91250076 A 19910315**

Priority

DE 4012039 A 19900411

Abstract (en)

[origin: EP0451929A2] The invention relates to a method for determining and regulating the liquid metal level in a metallurgical vessel, especially an open-ended die of a casting plant. In order to provide a method in which the liquid level can be determined and regulated in a simple and reproducible manner, it is proposed that inert gas be introduced into the molten metal at a certain freely selectable point within the vessel, that the flow rate and absolute pressure of the inert gas introduced be measured, that the absolute pressure measured when the zero value of the flow rate is exceeded be recorded and the actual value of the distance of the surface of the liquid from the point at which the inert gas is introduced be determined from the difference between the absolute pressure and the pressure acting on the surface of the liquid, that the difference from a predetermined setpoint value be determined from the said distance ascertained and fed as an electric actuating signal to an actuator for regulating the liquid metal level and/or the quantity flowing out or withdrawn from the vessel. <IMAGE>

IPC 1-7

**B22D 11/16; B22D 11/20; B22D 11/18**

IPC 8 full level

**B22D 11/16** (2006.01); **B22D 11/06** (2006.01); **B22D 11/10** (2006.01); **B22D 11/18** (2006.01); **B22D 11/20** (2006.01); **B22D 23/00** (2006.01);  
**B22D 37/00** (2006.01)

CPC (source: EP US)

**B22D 11/201** (2013.01 - EP US)

Designated contracting state (EPC)

AT BE DE ES FR GB IT LU NL SE

DOCDB simple family (publication)

**EP 0451929 A2 19911016; EP 0451929 A3 19930317; EP 0451929 B1 19970502**; AT E152380 T1 19970515; AU 639307 B2 19930722;  
AU 7272591 A 19911017; CA 2040238 A1 19911012; CA 2040238 C 19980609; DE 4012039 A1 19911017; DE 59108687 D1 19970605;  
ES 2100926 T3 19970701; JP 2977318 B2 19991115; JP H04228249 A 19920818; US 5170839 A 19921215

DOCDB simple family (application)

**EP 91250076 A 19910315**; AT 91250076 T 19910315; AU 7272591 A 19910307; CA 2040238 A 19910411; DE 4012039 A 19900411;  
DE 59108687 T 19910315; ES 91250076 T 19910315; JP 10033791 A 19910405; US 68378091 A 19910411