Title (en)

CONTROL PIN AND SPOUT SYSTEM FOR HEATING METAL CASTING DISTRIBUTION SPOUT CONFIGURATIONS

Title (de)

KONTROLLSTIFT UND AUSGUSSSYSTEM ZUM ERHITZEN DER METALLGUSS-VERTEILUNGSSTIFTKONFIGURATIONEN

Title (fr)

QUENOUILLE DE RÉGULATION ET SYSTÈME DE BUSETTE DE COULÉE POUR LE CHAUFFAGE DES CONFIGURATIONS DES BUSETTES DE COULÉE DISTRIBUANT DU MÉTAL EN FUSION

Publication

EP 2486156 A4 20140723 (EN)

Application

EP 09850303 A 20091008

Priority

US 2009005556 W 20091008

Abstract (en)

[origin: WO2011043759A1] A control pin system, including an apparatus and method, for use in controlling the flow of molten metal in a molten metal distribution system for casting, with some aspects of the control pin including: a control pin body with an internal cavity and an outer surface, wherein the outer surface is sized and configured to operatively interact with an internal surface of a spout to effectively control the flow of molten metal through a spout aperture; and a heater element within the internal cavity of the control pin body. In other embodiments, the heater may be located within the spout body and transferring heat to the control pin.

IPC 8 full level

B22D 41/18 (2006.01); **B22D 41/60** (2006.01); **C21C 5/42** (2006.01); **C21C 5/46** (2006.01)

CPC (source: CN EP KR)

B22D 41/18 (2013.01 - CN EP); **B22D 41/60** (2013.01 - CN EP); **C21C 5/42** (2013.01 - KR); **C21C 5/4653** (2013.01 - CN EP)

Citation (search report)

- [XY] JP H06262329 A 19940920 - UBE INDUSTRIES
- [XY] DE 10035097 A1 20020207 - DIDIER WERKE AG [DE]
- [Y] DE 19603607 A1 19970410 - DIDIER WERKE AG [DE]
- [Y] US 3596804 A 19710803 - BARROW HENRY, et al
- [Y] EP 0379647 A2 19900801 - DIDIER WERKE AG [DE]
- [Y] US 2006283570 A1 20061221 - VINCENT MARK [GB]
- See references of WO 2011043759A1

Citation (examination)

- US 5316071 A 19940531 - SKINNER ANDREW C [US], et al
- US 2008041553 A1 20080221 - SNYDER TODD [US], et al

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)

WO 2011043759 A1 20110414; AU 2009353658 A1 20120419; AU 2009353658 B2 20160526; BR 112012007695 A2 20160823; CA 2775694 A1 20110414; CN 102648297 A 20120822; CN 106334788 A 20170118; EP 2486156 A1 20120815; EP 2486156 A4 20140723; JP 2013507255 A 20130304; JP 5936543 B2 20160622; KR 20120086305 A 20120802; RU 2012118633 A 20131120; RU 2549817 C2 20150427; ZA 201202442 B 20121227

DOCDB simple family (application)

US 2009005556 W 20091008; AU 2009353658 A 20091008; BR 112012007695 A 20091008; CA 2775694 A 20091008; CN 200980162810 A 20091008; CN 201610773846 A 20091008; EP 09850303 A 20091008; JP 2012533122 A 20091008; KR 20127011765 A 20091008; RU 2012118633 A 20091008; ZA 201202442 A 20120403