

Title (en)

METHOD AND DEVICE FOR THE CONTROLLED SECONDARY COOLING OF A CONTINUOUS CASTING INSTALLATION

Title (de)

VORRICHTUNG UND VERFAHREN ZUR GEREGLTEN SEKUNDÄRKÜHLUNG EINER STRANGGIEßANLAGE

Title (fr)

DISPOSITIF ET PROCÉDÉ PERMETTANT LE REFROIDISSEMENT SECONDAIRE RÉGULÉ D'UNE INSTALLATION DE COULÉE CONTINUE

Publication

**EP 2643109 B2 20180328 (DE)**

Application

**EP 11760498 A 20110926**

Priority

- DE 102010052247 A 20101123
- EP 2011066647 W 20110926

Abstract (en)

[origin: WO2012069234A1] A device for controlled secondary cooling, comprising a network of a continuous casting installation through which a cooling medium flows and which has segments (31) for guiding a strand of metal, in particular a strand of steel, can be adapted to the respective casting task, in particular with regard to the grade of steel and special tasks arising during the casting process, characterized in that the at least one pressure network comprises at least one self-regulating pressure control element.

IPC 8 full level

**B22D 11/124** (2006.01); **B22D 11/22** (2006.01)

CPC (source: EP)

**B22D 11/1246** (2013.01); **B22D 11/225** (2013.01)

Citation (opposition)

Opponent :

- DE 1961507 A1 19710616 - MAROTTA SCIENTIFIC CONTROLS
- JP S62224467 A 19871002 - NIPPON STEEL CORP
- JP H0740018 A 19950210 - KAWASAKI STEEL CO
- DE 2344438 A1 19740411 - CONCAST AG
- Seite 1 des Eintrags "Regler" in der deutschen Wikipedia; Ausdruck 11.11.2015
- BACKÉ W. ET AL: "Grundlagen der Ölhydraulik", vol. 10. AUFL, 1994, INSTITUT FÜR FLUIDTECHNISCHE ANTRIEBE UND STEUERUNGEN DER RWTH AACHEN, AACHEN, pages: 251-266 - 333-341
- Auszug aus dem Fachbuch "Digitale Regelkreise - Ein einfacher Einstieg mit dem Programm µLINSY" von F. Gausch et al., Institut für Regelungstechnik der TU Graz, 1991
- J. Frick et al. "New Secondary Cooling Systems and Practices", 6th ECCC 2008, Riccione, Italy
- Conference Programm of 6th ECCC 2008, Riccione, Italy (für D8 siehe den Vortrag von Herrn Frick am Donnerstag, 5. Juni 2008 um 9:40
- Auszug aus dem Fachbuch "The Making, Shaping and Treating of Steel (MSTS). The AISE Steel Foundation, Pittsburgh, PA, 2003
- Samson AG: Data Sheet for Pneumatic Control Valves Type 241-1 and Type 241-7, November 2002.
- Samson AG: Data Sheet for Pneumatic Actuator Type 3277, July 2001
- Samson AG: Data Sheet for Electropneumatic Positioner Type 3730-2 and Type 3730-3

Cited by

EP3354372A1; DE102017201128A1

Designated contracting state (EPC)

AL 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 RS SE SI SK SM TR

DOCDB simple family (publication)

**DE 102010052247 A1 20120524**; CN 103459065 A 20131218; CN 103459065 B 20160330; EP 2643109 A1 20131002; EP 2643109 B1 20150304; EP 2643109 B2 20180328; WO 2012069234 A1 20120531

DOCDB simple family (application)

**DE 102010052247 A 20101123**; CN 201180065773 A 20110926; EP 11760498 A 20110926; EP 2011066647 W 20110926