Title (en)
METHOD FOR THE CONTINUOUS CASTING OF A METAL STRAND

Title (de)
VERFAHREN ZUM STRANGGIESSEN EINES METALLSTRANGS

Title (fr)
PROCÉDÉ DE COULÉE CONTINUE D'UNE BARRE MÉTALLIQUE

Publication
EP 2279053 A1 20110202 (DE)

Application
EP 09749695 A 20090422

Priority
• EP 2009054776 W 20090422
• AT 8152008 A 20080521

Abstract (en)
[origin: WO2009141205A1] The invention relates to a method for the continuous casting of a metal strand in a continuous casting plant, according to which a strand comprising a liquid core enclosed by a strand shell is withdrawn from a cooled in-line die, supported in a strand support unit downstream of said die and cooled using a coolant, the thermodynamic changes in the entire strand being calculated in a mathematical simulation model. The aim of the invention is to create a method which can be used to increase the accuracy of the simulation of the thermodynamic changes in the entire strand and to improve both the product quality of the metal strand in conjunction with the strand cooling process and the production output of the continuous casting process. This is achieved by a method, according to which a three-dimensional thermal conduction equation is solved numerically in real time in the mathematical simulation model and the cooling of the strand is set by taking into consideration the calculated changes.

IPC 8 full level
B22D 11/22 (2006.01)

CPC (source: EP KR)
B22D 11/22 (2013.01 - KR); **B22D 11/225** (2013.01 - EP)

Citation (search report)
See references of WO 2009141205A1

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 TR

Designated extension state (EPC)
AL BA RS

DOCDB simple family (publication)
WO 2009141205 A1 20091126; AT 506847 A1 20091215; AT 506847 B1 20110715; CN 102083573 A 20110601; CN 102083573 B 20141210; EP 2279053 A1 20110202; EP 2279053 B1 20150826; ES 2548978 T3 20151022; KR 101573666 B1 20151202; KR 20110020828 A 20110303; SI 2279053 T1 20151231

DOCDB simple family (application)
EP 2009054776 W 20090422; AT 8152008 A 20080521; CN 200980118394 A 20090422; EP 09749695 A 20090422; ES 09749695 T 20090422; KR 20107028210 A 20090422; SI 200931321 T 20090422