

Title (en)

METOD FOR DETECTING THE LIQUID CORE TIP IN A CONTINUOUSLY CAST METAL STRAND AND CONTINUOUS CASTING DEVICE

Title (de)

VERFAHREN ZUM BESTIMMEN DER LAGE DER SUMPFSPIITZE EINES GEGOSSENEN METALLSTRANGS UND STRANGGIESSANLAGE

Title (fr)

PROCÉDÉ DE DETERMINATION DE L'EXTREMITÉ DU CRATÈRE LIQUIDE DANS LES BRAMES MÉTALLIQUES OBTENUS PAR COULÉE CONTINUE ET SYSTÈME À COULÉE CONTINUE

Publication

EP 2448695 B1 20170906 (DE)

Application

EP 10732652 A 20100702

Priority

- EP 2010003942 W 20100702
- DE 102009031651 A 20090703

Abstract (en)

[origin: WO2011000549A1] The invention relates to a method for determining the position of the liquid phase tip (1) of a cast metal strand (2) in a strand casting system, which comprises a supporting roller stand comprising roller segments (3) in succession in the casting direction (G), wherein each roller segment (3) comprises a lower segment frame (4) having a number of rollers (5) and an upper segment frame (6) having a number of rollers (7), wherein the rollers (5) of the lower segment frame (4) and the rollers (7) of the upper segment frame (6) are set to a specified distance (a0) in order to define a lower and an upper pass line (U, O). In order to be able to determine the position of the liquid phase tip more easily, the method comprises the following steps: a) increasing the distance (a0) of the rollers (5, 7) of the lower segment frame (4) and of the upper segment frame (6) of a measuring segment (3') for at least one roller (7') to a value (a1) that is above the provided infeed thickness of the completely solidified metal strand (2) into the measuring segment (3'); b) monitoring at least one operating parameter (F, M, n) of the at least one roller (7') adjusted to have an increased distance, wherein the operating parameter corresponds to a target value if the roller (7') is not in contact with the metal strand (2); c) reporting the position of the liquid phase tip (1) as lying in the area of the roller (7') as soon as the value of the monitored operating parameter (F, M, n) of the at least one roller (7') deviates from the target value. The invention further relates to a strand casting system.

IPC 8 full level

B22D 11/16 (2006.01); **B22D 11/128** (2006.01); **B22D 11/20** (2006.01)

CPC (source: EP)

B22D 11/1285 (2013.01); **B22D 11/16** (2013.01); **B22D 11/207** (2013.01)

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 SE SI SK SM TR

DOCDB simple family (publication)

DE 102009031651 A1 20110105; CN 102470432 A 20120523; CN 102470432 B 20150513; EP 2448695 A1 20120509; EP 2448695 B1 20170906; WO 2011000549 A1 20110106

DOCDB simple family (application)

DE 102009031651 A 20090703; CN 201080031061 A 20100702; EP 10732652 A 20100702; EP 2010003942 W 20100702