

Title (en)

CONTINUOUS CASTING NOZZLE FOR A ROD, WIRE OR PIPE IN UPWARD VERTICAL METAL CASTING

Title (de)

STRANGGIESSDÜSE FÜR EINE STANGE, EINEN DRAHT ODER EIN ROHR BEIM AUWÄRTSGERICHTETEN VERTIKALEN METALLGIESSEN

Title (fr)

BUSE DE COULÉE CONTINUE POUR UNE TIGE, UN FIL OU UN TUYAU DANS UNE COULÉE DE MÉTAL VERTICALE ASCENDANTE

Publication

EP 2501507 B1 20160601 (EN)

Application

EP 10795408 A 20101117

Priority

- FI 20096197 A 20091118
- FI 2010050930 W 20101117

Abstract (en)

[origin: WO2011061397A1] The invention relates to a continuous casting nozzle, which is suitable for the continuous upward vertical casting of a metal (M) for uninterrupted castings (P). A nozzle (1) comprises a cooling mantle (30), as well as a mold component (2) which consists of a refractory material. The mold component has its upper end (2y) extending coaxially into an interior of the cooling mantle and in attachment therewith by a heat transfer joint (9). The mold component is provided with an internal cross-section surface (12), which defines an elongated continuous casting mold cavity (20) co-directional with a center axis and which matches the presently produced casting (P) in terms of the latter's outer shape and outer dimensions (11). The mold component comprises one or more tangential melt feed holes (3) at a first distance (R1) from a center axis (10), said distance being greater than a second distance (R2) of the continuous casting mold cavity's (20) internal surface (12) from the center axis, as well as an annular flow gap (4) connecting said one or more tangential melt feed holes (3) with the continuous casting mold cavity (20). The flow gap has its inner edge (4s) provided with a circumferential gap cross-section area (A4) which is smaller than a sum of the melt feed holes' (3) cross-sectional hole areas (A3).

IPC 8 full level

B22D 11/10 (2006.01); **B22D 11/114** (2006.01); **B22D 11/14** (2006.01)

CPC (source: EP FI)

B22D 11/04 (2013.01 - FI); **B22D 11/041** (2013.01 - FI); **B22D 11/10** (2013.01 - EP FI); **B22D 11/114** (2013.01 - EP); **B22D 11/145** (2013.01 - EP FI)

Cited by

KR20190121819A; EP3603850A4; US11351600B2

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)

WO 2011061397 A1 20110526; CL 2012001287 A1 20121116; EP 2501507 A1 20120926; EP 2501507 B1 20160601; ES 2589410 T3 20161114; FI 124847 B 20150213; FI 20096197 A0 20091118; FI 20096197 A 20110519; PL 2501507 T3 20161230

DOCDB simple family (application)

FI 2010050930 W 20101117; CL 2012001287 A 20120517; EP 10795408 A 20101117; ES 10795408 T 20101117; FI 20096197 A 20091118; PL 10795408 T 20101117