

Title (en)
METHOD FOR PRODUCING A METAL PRODUCT

Title (de)
VERFAHREN ZUR HERSTELLUNG EINES METALLISCHEN PRODUKTS

Title (fr)
PROCÉDÉ DE FABRICATION D'UN PRODUIT MÉTALLIQUE

Publication
EP 3171997 B1 20190807 (DE)

Application
EP 15725362 A 20150601

Priority
• DE 102014214374 A 20140723
• EP 2015062060 W 20150601

Abstract (en)
[origin: WO2016012131A1] The invention relates to a method for producing a metal product, wherein in a strand casting system (1), liquid metal is output as a slab (2) from a mold (3) vertically (V) downward in a conveying direction (F), is guided along a strand guide (4), and is deflected into the horizontal (H), wherein the slab (2) is heated in a furnace (5) or inductively downstream of the stand casting system (1). In order to achieve a microstructure in the material that is as fine and homogeneous as possible, the method provides the following steps: a) in a first cooling zone (6) downstream the mold (3) in the conveying direction (F): intensively cooling the slab (2) in such a way that a microstructure conversion from austenite to ferrite occurs in the surface zone of the slab (2) close to the surface; b) in a first heating zone (7) downstream of the first cooling zone (6) in the conveying direction (F): reheating the slab (2) in such a way that a microstructure conversion from ferrite to austenite occurs in the surface zone of the slab (2) close to the surface; c) in a second cooling zone (8) downstream of the first heating zone (7) in the conveying direction (F): intensively cooling the slab (2) in such a way that a microstructure conversion from austenite to ferrite occurs in the surface zone of the slab (2) close to the surface; d) in a second heating zone (9) downstream of the second cooling zone (8) in the conveying direction (F): reheating the slab (2) in such a way that a microstructure conversion from ferrite to austenite occurs in the surface zone of the slab (2) close to the surface.

IPC 8 full level
B22D 11/12 (2006.01); **B22D 11/041** (2006.01); **B22D 11/124** (2006.01); **B22D 11/22** (2006.01); **C21D 5/00** (2006.01); **C21D 8/02** (2006.01); **C21D 9/00** (2006.01)

CPC (source: EP US)
B22D 11/041 (2013.01 - EP US); **B22D 11/1213** (2013.01 - EP US); **B22D 11/124** (2013.01 - EP US); **B22D 11/225** (2013.01 - EP US); **C21D 8/021** (2013.01 - EP US); **C21D 9/0081** (2013.01 - EP US); **C21D 2211/001** (2013.01 - EP US); **C21D 2211/005** (2013.01 - EP US)

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 102014214374 A1 20160128; EP 3171997 A1 20170531; EP 3171997 B1 20190807; US 10894994 B2 20210119; US 2017211162 A1 20170727; WO 2016012131 A1 20160128

DOCDB simple family (application)
DE 102014214374 A 20140723; EP 15725362 A 20150601; EP 2015062060 W 20150601; US 201515328234 A 20150601