

Title (en)  
METHOD OF MANUFACTURING STAINLESS STEELS COMPRISING FINE CARBONITRIDES, AND PRODUCT OBTAINED FROM THIS METHOD

Title (de)  
VERFAHREN ZUR HERSTELLUNG VON ROSTFREIEM STAHL MIT FEINEN CARBONITRIDEN, UND PRODUKT, DAS MIT DIESEM VERFAHREN HERGESTELLT WIRD

Title (fr)  
PROCÉDE DE FABRICATION D'ACIERS INOXYDABLES COMPORTANT DE FINS CARBONITRURES, ET PRODUIT OBTENU À PARTIR DE CE PROCÉDÉ

Publication  
**EP 2197608 B1 20180711 (FR)**

Application  
**EP 08860262 A 20080923**

Priority  
• FR 2008001320 W 20080923  
• EP 07291236 A 20071010  
• EP 08860262 A 20080923

Abstract (en)  
[origin: EP2047926A1] The process for manufacturing a stabilized stainless steel semi-product, comprises supplying a non-stabilized stainless steel in the form of a molten metal in a pocket distributor (1), continuously flowing the molten metal using a hollow jet nozzle (3) disposed between the pocket distributor and an ingot mold, and solidifying the semi-product. The nozzle comprises a distributor body in its upper part for deflecting the molten metal arriving at an inlet of the nozzle. The molten metal is flowed by simultaneously adding a metallic powder (6) in an internal volume of the hollow jet. The process for manufacturing a stabilized stainless steel semi-product, comprises supplying a non-stabilized stainless steel in the form of a molten metal in a pocket distributor (1), continuously flowing the molten metal using a hollow jet nozzle (3) disposed between the pocket distributor and an ingot mold, and solidifying the semi-product. The nozzle comprises a distributor body in its upper part for deflecting the molten metal arriving at an inlet of the nozzle. The molten metal is flowed by simultaneously adding a metallic powder (6) in an internal volume of the hollow jet at a temperature of T l i q u i d u s + 10 [deg] C to T l i q u i d u s + 40 [deg] C. The metallic powder contains an element for the stabilization of stainless steel. The solidification is carried out after 2 seconds of addition of the metallic powder. An independent claim is included for a stainless steel semi-product.

IPC 8 full level  
**B22D 11/108** (2006.01); **B22D 11/11** (2006.01); **C21C 7/00** (2006.01); **C22C 38/18** (2006.01); **C22C 38/24** (2006.01); **C22C 38/28** (2006.01)

CPC (source: EP US)  
**B22D 11/108** (2013.01 - EP US); **B22D 11/11** (2013.01 - EP US); **C21C 5/005** (2013.01 - EP US); **C21C 7/0006** (2013.01 - EP US); **C21C 7/0068** (2013.01 - EP US); **C22C 38/001** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/42** (2013.01 - EP US); **C22C 38/46** (2013.01 - EP US); **C22C 38/50** (2013.01 - EP US)

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 MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)  
AL BA MK RS

DOCDB simple family (publication)  
**EP 2047926 A1 20090415**; EP 2197608 A1 20100623; EP 2197608 B1 20180711; ES 2690310 T3 20181120; KR 101220791 B1 20130111; KR 20100080928 A 20100713; US 2010278684 A1 20101104; WO 2009074736 A1 20090618

DOCDB simple family (application)  
**EP 07291236 A 20071010**; EP 08860262 A 20080923; ES 08860262 T 20080923; FR 2008001320 W 20080923; KR 20107010145 A 20080923; US 68238008 A 20080923