Title (en)

METHOD FOR CONTINUOUSLY CASTING FERRITIC STAINLESS STEEL STRIPS FREE OF MICROCRACKS

Title (de)

VERFAHREN ZUM STRANGGIESSEN ZWISCHEN ZYLINDERN VON FERRITISCHEN ROSTFREIEN STAHLBÄNDERN OHNE MIKRORISSE

Title (fr)

PROCEDE DE COULEE CONTINUE ENTRE CYLINDRES DE BANDES D'ACIER INOXYDABLE FERRITIQUE EXEMPTES DE MICROCRIQUES

Publication

EP 1187691 A1 20020320 (FR)

Application

EP 00915238 A 20000329

Priority

- FR 0000781 W 20000329
- FR 9905053 A 19990422

Abstract (en)

[origin: US6622779B1] The invention concerns a method for continuously casting a ferritic stainless steep strip with thickness not more than 10 mm directly from liquid metal between two cooled rolls with horizontal axes and driven in rotation, characterized in that: the liquid metal composition in weight percentages is as follows: % C+% N<=0.12; % Mn<=1; % P<=0.4; % Si<=1; % Mo<=2.5; % Cr between 11 and 19; A1<=1%; % Ti+%Nb +% Zr<=1; the rest being iron and the impurities resulting from preparation; the Upsilp index of the liquid metal ranges between 35% and 60%, Upsilp being defined by the formula: gammap=420% C+470% N+23% Ni+9% Cu+7% Mn 11.5% Cr 11.5% Si 12% Mo 23% V 47% Nb 49% Ti 52% A1+189: the surface roughness of said rolls being more than 5 mum; in the proximity of the meniscus metal liquid present between the rolls an inerting gas is used consisting of at least 60% by volume of a gas soluble in steel.

IPC 1-7

B22D 11/06; C22C 38/18; C22C 38/26; C22C 38/28

IPC 8 full level

B22D 11/00 (2006.01); **B22D 11/06** (2006.01); **B22D 11/117** (2006.01); **C22C 38/00** (2006.01); **C22C 38/18** (2006.01); **C22C 38/26** (2006.01); **C22C 38/28** (2006.01)

CPC (source: EP KR US)

B22D 11/002 (2013.01 - KR); **B22D 11/0622** (2013.01 - EP KR US); **B22D 11/0651** (2013.01 - EP US); **B22D 11/0697** (2013.01 - EP US); **B22D 27/003** (2013.01 - KR); **C22C 38/18** (2013.01 - EP US); **C22C 38/26** (2013.01 - EP US); **C22C 38/28** (2013.01 - EP US); C22C 38/001 (2013.01 - KR); C22C 38/02 (2013.01 - KR); C22C 38/04 (2013.01 - KR); C22C 38/06 (2013.01 - KR); C22C 38/22 (2013.01 - KR); C22C 38/26 (2013.01 - KR)

Citation (search report)

See references of WO 0064613A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

US 6622779 B1 20030923; AT E228905 T1 20021215; AU 3661900 A 20001110; AU 757307 B2 20030213; BR 0009881 A 20020108; CN 1210121 C 20050713; CN 1347352 A 20020501; CZ 20013777 A3 20020313; CZ 295816 B6 20051116; DE 60000938 D1 20030116; DE 60000938 T2 20030528; DK 1187691 T3 20030324; EP 1187691 A1 20020320; EP 1187691 B1 20021204; ES 2187456 T3 20030616; FR 2792561 A1 20001027; FR 2792561 B1 20010622; JP 2002542040 A 20021210; JP 4582916 B2 20101117; KR 100647147 B1 20061117; KR 20010113823 A 20011228; PL 193187 B1 20070131; PL 351310 A1 20030407; PT 1187691 E 20030228; RU 2242325 C2 20041220; SI 1187691 T1 20030430; SK 14612001 A3 20020509; SK 285817 B6 20070906; TR 200103013 T2 20020521; TW 520306 B 20030211; WO 0064613 A1 20001102; ZA 200108667 B 20021127

DOCDB simple family (application)

US 95911802 A 20020114; AT 00915238 T 20000329; AU 3661900 A 20000329; BR 0009881 A 20000329; CN 00806542 A 20000329; CZ 20013777 A 20000329; DE 60000938 T 20000329; DK 00915238 T 20000329; EP 00915238 A 20000329; ES 00915238 T 20000329; FR 0000781 W 20000329; FR 9905053 A 19990422; JP 2000613595 A 20000329; KR 20017013391 A 20011019; PL 35131000 A 20000329; PT 00915238 T 20000329; RU 2001131422 A 20000329; SI 200030034 T 20000329; SK 14612001 A 20000329; TR 200103013 T 20000329; TW 89106845 A 20000413; ZA 200108667 A 20011022