Title (en)

AUSTENITIC HIGH-MANGANESE STAINLESS STEEL

Title (de)

HOCHMANGANHALTIGER AUSTENITISCHER EDELSTAHL

Title (fr)

ACIER INOXYDABLE AUSTÉNITIQUE À HAUTE TENEUR EN MANGANÈSE

Publication

EP 2924131 A1 20150930 (EN)

Application

EP 14162191 A 20140328

Priority

EP 14162191 A 20140328

Abstract (en)

The invention relates to an austenitic high-manganese stainless steel having high strength and ductility. The stainless steel which consists of in weight % 0,03 - 0,1 % carbon, 0,08 - 1,0 % silicon, 14 - 26 % manganese. 10,5 - 18 % chromium, less than 0,8 % nickel, 0,05 - 0,6 % copper, 0,1 - 0,8 % nitrogen and 0,0008 - 0,005 % boron, the rest being iron and inevitable impurities occurred in stainless steels, and the stainless steel is cold deformable utilizing the TWIP (TWinning Induced Plasticity) mechanism.

IPC 8 full level

C21D 6/00 (2006.01); **C21D 8/02** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/06** (2006.01); **C22C 38/42** (2006.01); **C22C 38/44** (2006.01); **C22C 38/50** (2006.01); **C22C 38/54** (2006.01); **C22C 38/58** (2006.01)

CPC (source: CN EP KR US)

C21D 6/002 (2013.01 - CN); **C21D 6/005** (2013.01 - CN); **C21D 8/0205** (2013.01 - CN EP KR US); **C21D 8/0236** (2013.01 - CN EP KR US); **C22C 38/001** (2013.01 - CN EP KR US); **C22C 38/02** (2013.01 - CN EP KR US); **C22C 38/06** (2013.01 - CN EP KR US); **C22C 38/42** (2013.01 - CN EP KR US); **C22C 38/44** (2013.01 - CN EP KR US); **C22C 38/50** (2013.01 - CN EP KR US); **C22C 38/54** (2013.01 - CN EP KR US); **C22C 38/58** (2013.01 - CN EP KR US); C21D 6/002 (2013.01 - EP US); C21D 6/005 (2013.01 - EP US)

Citation (search report)

- [X] FR 2071667 A5 19710917 - NISSHIN STEEL CO LTD
- [X] EP 1069202 A1 20010117 - SCHOELLER BLECKMANN OILFIELD T [AT], et al
- [A] DE 102010026808 A1 20120112 - UNIV FREIBERG TECH BERGAKAD [DE]
- [A] EP 2465954 A1 20120620 - CRS HOLDINGS INC [US]
- [A] DE 728159 C 19421121 - BOEHLER & CO AG GEB

Cited by

CN113913693A; EP3705595A4; CN110103530A; EP3301197A1; EA039436B1; CN114686784A; US11352678B2; WO2018060454A1

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 2924131 A1 20150930; **EP 2924131 B1 20190821**; CN 106133177 A 20161116; CN 106133177 B 20180427; DK 2924131 T3 20191014; ES 2749234 T3 20200319; HR P20191717 T1 20191213; HU E046585 T2 20200330; JP 2017512906 A 20170525; KR 101830563 B1 20180220; KR 20160140828 A 20161207; LT 2924131 T 20190925; MX 2016012672 A 20161214; PL 2924131 T3 20200228; PT 2924131 T 20191030; RS 59347 B1 20191031; SI 2924131 T1 20191231; TW 201540850 A 20151101; US 2017121797 A1 20170504; WO 2015144896 A2 20151001; WO 2015144896 A3 20160317; ZA 201606617 B 20180530

DOCDB simple family (application)

EP 14162191 A 20140328; CN 201580016940 A 20150327; DK 14162191 T 20140328; EP 2015056749 W 20150327; ES 14162191 T 20140328; HR P20191717 T 20190920; HU E14162191 A 20140328; JP 2016559607 A 20150327; KR 20167030176 A 20150327; LT 14162191 T 20140328; MX 2016012672 A 20150327; PL 14162191 T 20140328; PT 14162191 T 20140328; RS P20191231 A 20140328; SI 201431382 T 20140328; TW 104109969 A 20150327; US 201515129502 A 20150327; ZA 201606617 A 20160923