

Title (en)
THICK STEEL SHEET HAVING EXCELLENT WELDING HEAT-AFFECTED PART TOUGHNESS

Title (de)
DICKES STAHLBLECH MIT HERVORRAGENDER ZÄHIGKEIT DER DURCH SCHWEISSWÄRME BEEINFLUSSTEN TEILE

Title (fr)
FEUILLE D'ACIER ÉPAISSE AYANT UNE EXCELLENTE TÉNACITÉ DE PIÈCE AFFECTÉE PAR LA CHALEUR DE SOUDAGE

Publication
EP 2899289 A4 20160601 (EN)

Application
EP 13838421 A 20130829

Priority
• JP 2012205840 A 20120919
• JP 2013073223 W 20130829

Abstract (en)
[origin: EP2899289A1] A steel plate according to the present invention has a predetermined chemical composition and contains specific oxide particles. The oxide particles include constituent elements excluding oxygen in contents, in mass percent, meeting the conditions: 2% < Ti < 40%, 5% < Al < 30%, 5% < Ca < 40%, 5% < REM < 50%, 2% < Zr < 30%, and 1.5 # REM/Zr. Of the oxide particles, those with an equivalent circle diameter of less than 2 µm are present in a number density of 300 or more per square millimeter, and those with an equivalent circle diameter of 2 µm or more are present in a number density of 100 or less per square millimeter. Of titanium nitride particles, those with an equivalent circle diameter of 1 µm or more are present in a number density of 7 or less per square millimeter, and those with an equivalent circle diameter of 20 nm or more are present in a number density of 1.0x 10⁶ or more per square millimeter. The steel plate meets a condition specified by the relational expression: |da-df|/da # 0.35.

IPC 8 full level
C21D 8/02 (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/14** (2006.01); **C22C 38/58** (2006.01)

CPC (source: EP KR)
C21C 7/04 (2013.01 - KR); **C21D 8/02** (2013.01 - KR); **C21D 8/0226** (2013.01 - EP); **C22C 38/001** (2013.01 - EP KR); **C22C 38/002** (2013.01 - EP); **C22C 38/005** (2013.01 - EP KR); **C22C 38/02** (2013.01 - EP); **C22C 38/04** (2013.01 - EP); **C22C 38/06** (2013.01 - EP); **C22C 38/08** (2013.01 - EP); **C22C 38/12** (2013.01 - EP); **C22C 38/14** (2013.01 - EP KR); **C22C 38/16** (2013.01 - EP); **C22C 38/18** (2013.01 - EP); **C22C 38/44** (2013.01 - EP); **C22C 38/50** (2013.01 - EP); **C22C 38/58** (2013.01 - EP); **C21D 2211/004** (2013.01 - EP)

Citation (search report)
• [XD] JP 2010168644 A 20100805 - KOBE STEEL LTD
• [L] JP 2013127108 A 20130627 - KOBE STEEL LTD
• [A] JP 2011021263 A 20110203 - KOBE STEEL LTD
• [A] JP 2012092425 A 20120517 - KOBE STEEL LTD
• [A] JP 2012092422 A 20120517 - KOBE STEEL LTD
• See references of WO 2014045829A1

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EP3159418A1

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)
EP 2899289 A1 20150729; **EP 2899289 A4 20160601**; **EP 2899289 B1 20180418**; CN 104603314 A 20150506; JP 2014058734 A 20140403; JP 5883369 B2 20160315; KR 101659245 B1 20160922; KR 20150038664 A 20150408; WO 2014045829 A1 20140327

DOCDB simple family (application)
EP 13838421 A 20130829; CN 201380046168 A 20130829; JP 2012205840 A 20120919; JP 2013073223 W 20130829; KR 20157006626 A 20130829