

Title (en)
HIGH-STRENGTH COLD-ROLLED STEEL SHEET EXCELLENT IN WELDABILITY AND PROCESS FOR PRODUCTION OF SAME

Title (de)
HOCHFESTES KALTGEWALZTES STAHLBLECH MIT HERVORRAGENDER SCHWEISSBARKEIT UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)
TÔLE D'ACIER LAMINÉE À FROID DE HAUTE RÉSISTANCE, PRÉSENTANT UNE EXCELLENTE APTITUDE AU SOUDAGE, ET SON PROCÉDÉ DE FABRICATION

Publication
EP 2312007 A4 20120801 (EN)

Application
EP 09804914 A 20090724

Priority
• JP 2009063622 W 20090724
• JP 2008201735 A 20080805

Abstract (en)
[origin: EP2312007A1] A high strength cold rolled steel sheet with excellent weldability in which humping bead is not formed by performing plasma welding at high speed and that has a TS of 440 MPa or more, which does not deteriorate the formability of a tailor-welded-blank, and a method for manufacturing the high strength cold rolled steel sheet are provided. The high strength cold rolled steel sheet that is excellent in weldability and has a TS of 440 MPa or more includes a composition including C: 0.0005 to 0.005%, Si: 0.1 to 1.0%, Mn: 1 to 2.5%, P: 0.01 to 0.2%, S: 0.015% or less, sol. Al: 0.05% or less, N: 0.007% or less, Ti: 0.01 to 0.1%, B: 0.0005 to 0.0020%, Cu: 0.05 to 0.5%, and Ni: 0.03 to 0.5% by mass with the balance Fe and incidental impurities; and a microstructure constituted by a ferrite single phase.

IPC 8 full level
C22C 38/00 (2006.01); **B21B 3/00** (2006.01); **C21D 9/46** (2006.01); **C22C 38/16** (2006.01); **C22C 38/60** (2006.01)

CPC (source: EP KR US)
C21D 6/005 (2013.01 - EP KR US); **C21D 9/46** (2013.01 - EP KR US); **C22C 38/001** (2013.01 - EP KR US); **C22C 38/02** (2013.01 - EP KR US); **C22C 38/04** (2013.01 - EP KR US); **C22C 38/08** (2013.01 - EP KR US); **C22C 38/14** (2013.01 - EP KR US); **C22C 38/16** (2013.01 - EP KR US); **C22C 38/60** (2013.01 - EP KR US); **C21D 2211/005** (2013.01 - EP KR US)

Citation (search report)
• [A] EP 0632141 A1 19950104 - NIPPON KOKAN KK [JP]
• [A] JP H10183253 A 19980714 - NISSHIN STEEL CO LTD
• [A] JP H03150315 A 19910626 - KOBE STEEL LTD
• [A] US 5156690 A 19921020 - ASANO HIROHIDE [JP], et al
• See references of WO 2010016430A1

Cited by
US11008635B2; US10272513B2

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 MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)
EP 2312007 A1 20110420; EP 2312007 A4 20120801; EP 2312007 B1 20140226; CA 2731843 A1 20100211; CA 2731843 C 20141028; CN 102119234 A 20110706; CN 102119234 B 20130821; JP 2010037595 A 20100218; JP 5391606 B2 20140115; KR 101335826 B1 20131203; KR 20110025877 A 20110311; MX 2011000901 A 20110329; TW 201012945 A 20100401; TW 201402833 A 20140116; TW I506146 B 20151101; TW I557238 B 20161111; US 2011290383 A1 20111201; WO 2010016430 A1 20100211

DOCDB simple family (application)
EP 09804914 A 20090724; CA 2731843 A 20090724; CN 200980131036 A 20090724; JP 2008201735 A 20080805; JP 2009063622 W 20090724; KR 20117002627 A 20090724; MX 2011000901 A 20090724; TW 102134054 A 20090729; TW 98125503 A 20090729; US 200913057573 A 20090724