

Title (en)
COLD-ROLLED STEEL SHEET, METHOD FOR PRODUCING COLD-ROLLED STEEL SHEET, AUTOMOBILE MEMBER, AND EQUIPMENT FOR PRODUCING COLD-ROLLED STEEL SHEET

Title (de)
KALTGEWALZTES STAHLBLECH, VERFAHREN ZUR HERSTELLUNG EINES KALTGEWALZTEN STAHLBLECHS, KRAFTFAHRZEUGELEMENT UND ANLAGE ZUR HERSTELLUNG EINES KALTGEWALZTEN STAHLBLECHS

Title (fr)
TÔLE D'ACIER LAMINÉE À FROID, PROCÉDÉ DE PRODUCTION DE TÔLE D'ACIER LAMINÉE À FROID, ÉLÉMENT D'AUTOMOBILE, ET ÉQUIPEMENT DE PRODUCTION DE TÔLE D'ACIER LAMINÉE À FROID

Publication
EP 3190211 B1 20211110 (EN)

Application
EP 15839041 A 20150812

Priority
• JP 2014177913 A 20140902
• JP 2015004043 W 20150812

Abstract (en)
[origin: EP3190211A1] Provided are a cold-rolled steel sheet having excellent chemical convertibility and excellent corrosion resistance after coating, a method of manufacturing a cold-rolled steel sheet and an automobile member. In the method of manufacturing a cold-rolled steel sheet, first pickling is applied to a steel sheet which is continuously annealed after cold rolling, second pickling is applied to the steel sheet subsequently and, thereafter, neutralizing treatment is applied to the steel sheet using an alkaline solution.

IPC 8 full level
C23G 1/00 (2006.01); **C21D 9/46** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/08** (2006.01); **C22C 38/12** (2006.01); **C22C 38/14** (2006.01); **C22C 38/16** (2006.01); **C22C 38/32** (2006.01); **C22C 38/34** (2006.01); **C23G 1/08** (2006.01); **C23G 3/02** (2006.01)

CPC (source: EP KR US)
C21D 9/46 (2013.01 - EP KR US); **C22C 38/005** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP KR US); **C22C 38/04** (2013.01 - EP KR US); **C22C 38/06** (2013.01 - EP US); **C22C 38/08** (2013.01 - EP US); **C22C 38/12** (2013.01 - EP US); **C22C 38/14** (2013.01 - EP US); **C22C 38/16** (2013.01 - EP US); **C22C 38/32** (2013.01 - EP US); **C22C 38/34** (2013.01 - EP US); **C22C 38/58** (2013.01 - KR); **C23G 1/00** (2013.01 - EP US); **C23G 1/08** (2013.01 - EP KR US); **C23G 1/081** (2013.01 - EP KR US); **C23G 1/085** (2013.01 - EP KR US); **C23G 1/086** (2013.01 - EP KR US); **C23G 1/19** (2013.01 - US); **C23G 3/02** (2013.01 - EP US)

Citation (examination)
JP 2012214883 A 20121108 - JFE STEEL CORP & EP 2692902 A1 20140205 - JFE STEEL CORP [JP]

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 3190211 A1 20170712; EP 3190211 A4 20171011; EP 3190211 B1 20211110; AR 101727 A1 20170111; BR 112017004145 A2 20171205; BR 112017004145 B1 20220118; CN 106605010 A 20170426; JP 2016050354 A 20160411; JP 6137089 B2 20170531; KR 20170032469 A 20170322; MX 2017002726 A 20170509; TW 201610235 A 20160316; TW I586840 B 20170611; US 2017306507 A1 20171026; WO 2016035261 A1 20160310

DOCDB simple family (application)
EP 15839041 A 20150812; AR P150102785 A 20150831; BR 112017004145 A 20150812; CN 201580047106 A 20150812; JP 2014177913 A 20140902; JP 2015004043 W 20150812; KR 20177005871 A 20150812; MX 2017002726 A 20150812; TW 104125503 A 20150806; US 201515507601 A 20150812