Title (en)

STEEL SHEET, SURFACE-TREATED STEEL SHEET, AND METHOD FOR PRODUCING THE SAME

Title (de)

STAHLBLECH, OBERFLÄCHENBEHANDELTES STAHLBLECH UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

FEUILLE D'ACIER, FEUILLE D'ACIER TRAITÉE EN SURFACE ET SON PROCÉDÉ DE PRODUCTION

Publication

EP 2371978 A4 20160504 (EN)

Application

EP 09827543 A 20091117

Priority

- JP 2009069464 W 20091117
- JP 2008295897 A 20081119
- JP 2008295898 A 20081119
- JP 2008295899 A 20081119
- JP 2008295900 A 20081119

Abstract (en)

[origin: WO2010058762A1] A high-strength steel sheet having excellent bending strength in the form of a tensile strength of 590 MPa or higher has a chemical composition of C: 0.03 to 0.20%, Si: 0.005 to 2.0%, Mn: 1.2 to 3.5%, P=0.1% or less, S=0.11% or less, sol. Al: 0.001 to 1.0%, N=0.01%, and Bi: 0.0001 to 0.05%; arbitrarily contains Ti:=0.3%, Nb:=0.3%, V:=0.3%, Cr:=1%, Mo:=1%, Cu:=1%, Ni:=1%, Ca:=0.01%, Mg:=0.01%, REM:=0.01%, Zr:=0.01%, and B:=0.01%; and has an Mn segregation ratio (Mnmax/Mnav) of less than 1.30 as calculated from the average Mn concentration (Mnav) and the maximum Mn concentration (Mnmax) at a position of (1/20) the depth of sheet thickness from the steel sheet surface.

IPC 8 full level

B21B 3/00 (2006.01); **B22D 11/00** (2006.01); **C21D 8/02** (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)

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C21D 8/0215 (2013.01 - EP KR); **C21D 8/0226** (2013.01 - EP KR); **C21D 8/0236** (2013.01 - EP KR); **C21D 8/0273** (2013.01 - EP KR); **C22C 38/002** (2013.01 - EP KR); **C22C 38/005** (2013.01 - KR); **C22C 38/02** (2013.01 - EP KR); **C22C 38/04** (2013.01 - EP KR); **C22C 38/06** (2013.01 - EP KR)

Citation (search report)

- [X] EP 1516938 A1 20050323 - NIPPON STEEL CORP [JP]
- [X] JP 2007070649 A 20070322 - NIPPON STEEL CORP
- [X] JP 2007070659 A 20070322 - NIPPON STEEL CORP
- [X] CA 2231760 A1 19990911 - NISSHIN STEEL CO LTD [JP]
- See references of WO 2010058762A1

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Designated contracting state (EPC)

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JP 2009069464 W 20091117; CN 200980154581 A 20091117; EP 09827543 A 20091117; ES 09827543 T 20091117; KR 20117013957 A 20091117; PL 09827543 T 20091117