

Title (en)

High strength plate with 980 MPa or above tensile strength excellent in bending workability

Title (de)

Hochfeste Platte mit mindestens 980 MPa Zugfestigkeit und ausgezeichneter Verbiegeverarbeitbarkeit

Title (fr)

Plaque haute résistance avec 980 MPA ou au-dessus de l'excellente résistance à la traction pour la maniabilité de pliage

Publication

**EP 2105515 A3 20100324 (EN)**

Application

**EP 09001913 A 20090211**

Priority

JP 2008088309 A 20080328

Abstract (en)

[origin: EP2105515A2] The high strength steel plate contains C: 0.1-0.25% (means mass%, hereinafter the same with respect to the chemical componential composition), Si: 0.1-0.5%, Mn: 0.5-2.0%, Cr: 0.1-1.5%, Mo: 0.1-0.5%, Ti: 0.01-0.05%, and Nb: 0.01-0.05% respectively, and contains V: 0.01-0.05% and/or B: 0.0001-0.005%, and the balance comprises iron with inevitable impurities, wherein the average grain size of prior austenite is 20  $\mu\text{m}$  or below, the standard deviation ( $\text{\AA}$ ) of prior austenite grain size distribution is 5  $\mu\text{m}$  or below, and the tensile strength is 980 MPa or above. With such constitution, high strength can be maintained while bending workability becomes excellent as well.

IPC 8 full level

**C22C 38/12** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01)

CPC (source: EP)

**C22C 38/02** (2013.01); **C22C 38/04** (2013.01); **C22C 38/22** (2013.01); **C22C 38/26** (2013.01); **C22C 38/28** (2013.01)

Citation (search report)

- [AD] JP 2002088440 A 20020327 - SUMITOMO METAL IND
- [A] JP 2007332455 A 20071227 - NISSAN MOTOR, et al
- [A] JP 2000282175 A 20001010 - KAWASAKI STEEL CO
- [A] JP 2001081533 A 20010327 - SUMITOMO METAL IND
- [A] JP H0953119 A 19970225 - SUMITOMO METAL IND
- [AP] WO 2008133062 A1 20081106 - JFE STEEL CORP [JP], et al

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CN110952020A; US10941471B2

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 TR

Designated extension state (EPC)

AL BA RS

DOCDB simple family (publication)

**EP 2105515 A2 20090930; EP 2105515 A3 20100324; EP 2105515 B1 20130424**; CN 101545074 A 20090930; CN 101545074 B 20110216; JP 2009242832 A 20091022; JP 5156453 B2 20130306

DOCDB simple family (application)

**EP 09001913 A 20090211**; CN 200910130141 A 20090327; JP 2008088309 A 20080328