Title (en)

HIGH-RIGIDITY HIGH-STRENGTH THIN STEEL SHEET AND METHOD FOR PRODUCING SAME

Title (de)

HOCHSTEIFES HOCHFESTES DÜNNES STAHLBLECH UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

FEUILLE MINCE D'ACIER A HAUTE RIGIDITE ET HAUTE RESISTANCE ET PROCEDE DE FABRICATION DE LADITE FEUILLE

Publication

EP 1731626 B1 20170719 (EN)

Application

EP 05727349 A 20050331

Priority

- JP 2005006288 W 20050331
- JP 2004106721 A 20040331
- JP 2004347025 A 20041130

Abstract (en)

[origin: EP1731626A1] There is provided a high-stiffness high-strength thin steel sheet having a tensile strength of not less than 590 MPa and a Young's modulus of not less than 225 GPa, which comprises C: 0.02-0.15%, Si: not more than 1.5%, Mn: 1.5-4.0%, P: not more than 0.05%, S: not more than 0.01%, Al: not more than 1.5%, N: not more than 0.01% and Nb: 0.02-0.40% as mass%, provided that C, N and Nb contents satisfy 0.01 #¤C+(12/14)×N-(12/92.9)×Nb #¤ 0.06 and N #¤ (14/92.9)×(Nb-0.01) and the remainder being substantially iron and inevitable impurities, and has a texture comprising a ferrite phase as a main phase and having a martensite phase at an area ratio of not less than 1%.

IPC 8 full level

C22C 38/00 (2006.01); **C21D 8/02** (2006.01); **C21D 9/46** (2006.01); **C22C 38/48** (2006.01); **C22C 38/58** (2006.01)

CPC (source: EP KR US)

C21D 8/0205 (2013.01 - EP KR US); **C21D 9/46** (2013.01 - EP KR US); **C22C 38/02** (2013.01 - EP KR US); **C22C 38/04** (2013.01 - EP KR US); **C22C 38/12** (2013.01 - KR); **C22C 38/14** (2013.01 - KR); C21D 2211/005 (2013.01 - EP KR US); C21D 2211/008 (2013.01 - EP KR US)

Cited by

RU2507295C1; RU2507296C1; US10214792B2; US10428400B2

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 1731626 A1 20061213; **EP 1731626 A4 20071031**; **EP 1731626 B1 20170719**; AU 2005227556 A1 20051013; AU 2005227556 B2 20080214; CA 2546003 A1 20051013; KR 100881048 B1 20090130; KR 20060134030 A 20061227; TW 200604347 A 20060201; TW I307721 B 20090321; US 2008118390 A1 20080522; WO 2005095663 A1 20051013

DOCDB simple family (application)

EP 05727349 A 20050331; AU 2005227556 A 20050331; CA 2546003 A 20050331; JP 2005006288 W 20050331; KR 20067014873 A 20060724; TW 94110204 A 20050331; US 57852506 A 20060508