

Title (en)

HIGH STRENGTH STEEL PLATE SUPERIOR IN STRETCH FLANGE FORMABILITY AND FATIGUE CHARACTERISTICS

Title (de)

HOCHFESTE STAHLPLATTE MIT HERVORRAGENDEN STRETCHFLANSCHVERFORMBARKEITS- UND ERMÜDUNGSEIGENSCHAFTEN

Title (fr)

TOLE D'ACIER À HAUTE RÉSISTANCE SUPÉRIEURE DANS LA FORMABILITÉ DES BORDS D'ÉTIRAGE ET LES CARACTÉRISTIQUES DE FATIGUE

Publication

EP 2048254 B1 20200819 (EN)

Application

EP 07738099 A 20070302

Priority

- JP 2007054614 W 20070302
- JP 2006193893 A 20060714

Abstract (en)

[origin: EP2048254A1] The present invention provides high strength hot rolled steel plate superior in stretch flange formability and fatigue characteristics comprising steel plate containing C: 0.03 to 0.20%, Si: 0.08 to 1.5%, Mn: 1.0 to 3.0%, P: 0.05% or less, S: 0.0005% or more, N: 0.0005 to 0.01%, acid soluble A1: 0.01% or less, acid soluble Ti: less than 0.008%, and a total of one or both of Ce or La: 0.0005 to 0.04%, having a balance of iron and unavoidable impurities and having a number ratio of 20% or less of stretched inclusions present in the steel plate having a circle equivalent diameter of 1 µm or more and a long axis/short axis of 5 or more.

IPC 8 full level

C22C 38/00 (2006.01); **C21D 9/46** (2006.01); **C22C 38/14** (2006.01); **C22C 38/38** (2006.01)

CPC (source: EP KR US)

C21D 8/0426 (2013.01 - EP KR US); **C21D 9/46** (2013.01 - EP KR US); **C21D 9/48** (2013.01 - EP KR US); **C22C 38/001** (2013.01 - KR);
C22C 38/005 (2013.01 - EP KR US); **C22C 38/02** (2013.01 - EP KR US); **C22C 38/04** (2013.01 - EP KR US);
C21D 2211/002 (2013.01 - EP KR US)

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

EP 2048254 A1 20090415; EP 2048254 A4 20121107; EP 2048254 B1 20200819; AU 2007273767 A1 20080117; AU 2007273767 B2 20100812;
CA 2657587 A1 20080117; CA 2657587 C 20131126; CN 101490295 A 20090722; CN 101490295 B 20120919; KR 20090018167 A 20090219;
TW 200804607 A 20080116; TW I424069 B 20140121; US 2009317285 A1 20091224; WO 2008007477 A1 20080117

DOCDB simple family (application)

EP 07738099 A 20070302; AU 2007273767 A 20070302; CA 2657587 A 20070302; CN 200780026824 A 20070302;
JP 2007054614 W 20070302; KR 20087031704 A 20081229; TW 96107646 A 20070306; US 37357007 A 20070302