

Title (en)

LOW-YIELD RATIO AND HIGH-STRENGTH STEEL HAVING EXCELLENT STRESS CORROSION CRACKING RESISTANCE AND LOW TEMPERATURE TOUGHNESS

Title (de)

HOCHFESTE STAHLPLATTE MIT NIEDRIGER STRECKGRENZE UND AUSGEZEICHNETER SPANNUNGSRISIKORROSIONSBESTÄNDIGKEIT UND NIEDRIGER TEMPERATURZÄHIGKEIT

Title (fr)

ACIER À HAUTE RÉSISTANCE ET À FAIBLE TAUX D'ÉLASTICITÉ PRÉSENTANT UNE EXCELLENTE RÉSISTANCE À LA FISSURATION PAR CORROSION SOUS CONTRAINTE ET UNE EXCELLENTE TÉNACITÉ À BASSE TEMPÉRATURE

Publication

**EP 3395987 A1 20181031 (EN)**

Application

**EP 16879393 A 20161223**

Priority

- KR 20150185496 A 20151223
- KR 2016015156 W 20161223

Abstract (en)

An aspect of the present invention relates to a low yield ratio and high-strength steel having excellent stress corrosion cracking resistance and low temperature toughness, the steel comprising, by weight, 0.02-0.10% of carbon (C), 0.5-2.0% of manganese (Mn), 0.05-0.5% of silicon (Si), 0.05-1.0% of nickel (Ni), 0.005-0.1% of titanium (Ti), 0.005-0.5% of aluminum (Al), 0.005% or less of niobium (Nb), 0.015% or less of phosphorus (P), 0.015% or less of sulfur (S), and the balanced amount of Fe and inevitable impurities, the microstructure of which comprises: by area, 60% or more of acicular ferrite and a balanced amount of one or more phases of bainite, polygonal ferrite and martensite-austenite constituent (MA).

IPC 8 full level

**C22C 38/14** (2006.01); **C21D 8/02** (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)

CPC (source: EP US)

**C21D 6/001** (2013.01 - EP US); **C21D 6/005** (2013.01 - EP US); **C21D 6/008** (2013.01 - EP US); **C21D 8/02** (2013.01 - EP US); **C21D 8/0205** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP 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); **C21D 2211/002** (2013.01 - EP US); **C21D 2211/005** (2013.01 - EP US); **C21D 2211/008** (2013.01 - EP US)

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**EP 3395987 A1 20181031**; **EP 3395987 A4 20181107**; **EP 3395987 B1 20200429**; CA 3009137 A1 20170629; CA 3009137 C 20210413; CN 108431274 A 20180821; CN 108431274 B 20211207; JP 2019504200 A 20190214; JP 6691217 B2 20200428; KR 101767778 B1 20170814; KR 20170075933 A 20170704; US 2018371588 A1 20181227; WO 2017111526 A1 20170629

DOCDB simple family (application)

**EP 16879393 A 20161223**; CA 3009137 A 20161223; CN 201680075892 A 20161223; JP 2018532057 A 20161223; KR 20150185496 A 20151223; KR 2016015156 W 20161223; US 201616063886 A 20161223