

Title (en)

HIGH STRENGTH STEEL SHEET FOR SOUR-RESISTANT LINE PIPE, METHOD FOR MANUFACTURING SAME, AND HIGH STRENGTH STEEL PIPE USING HIGH STRENGTH STEEL SHEET FOR SOUR-RESISTANT LINE PIPE

Title (de)

HOCHFESTES STAHLBLECH FÜR SAUERGASBESTÄNDIGES LEITUNGSROHR, VERFAHREN ZUR HERSTELLUNG DAVON UND HOCHFESTES STAHLROHR MIT HOCHFESTEM STAHLBLECH FÜR SAUERGASBESTÄNDIGES LEITUNGSROHR

Title (fr)

TÔLE D'ACIER HAUTE RÉSISTANCE POUR TUYAU DE CANALISATION RÉSISTANT À L'ACIDITÉ, SON PROCÉDÉ DE FABRICATION, ET TUYAU EN ACIER HAUTE RÉSISTANCE UTILISANT UNE TÔLE D'ACIER HAUTE RÉSISTANCE POUR TUYAU DE CANALISATION RÉSISTANT À L'ACIDITÉ

Publication

**EP 3604592 A4 20200304 (EN)**

Application

**EP 18774336 A 20180328**

Priority

- JP 2017068431 A 20170330
- JP 2018012956 W 20180328

Abstract (en)

[origin: EP3604592A1] Disclosed is a high strength steel plate for a sour-resistant line pipe that is excellent in HIC resistance and SSCC resistance under more severe corrosion environments and that is also excellent in hardness uniformity in the thickness direction. The high strength steel plate for a sour-resistant line pipe has: a predetermined composition; a steel microstructure at 0.5 mm below a surface of the steel plate being a bainite microstructure having a dislocation density of  $0.5 \times 10^{14}$  to  $7.0 \times 10^{14}$  ( $m^{-2}$ ), in which a difference  $\Delta HV$  between an average value of Vickers hardness at 0.5 mm below the surface of the steel plate and an average value of Vickers hardness at a mid-thickness part of the steel plate is 25 HV or less; and a tensile strength of 520 MPa or more.

IPC 8 full level

**C21D 8/02** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/58** (2006.01)

CPC (source: EP KR)

**C21D 1/02** (2013.01 - EP); **C21D 1/19** (2013.01 - EP); **C21D 6/005** (2013.01 - EP); **C21D 8/02** (2013.01 - EP KR); **C21D 8/0263** (2013.01 - EP); **C21D 9/08** (2013.01 - EP); **C21D 9/085** (2013.01 - EP); **C21D 9/46** (2013.01 - EP); **C22C 38/02** (2013.01 - EP); **C22C 38/04** (2013.01 - EP KR); **C22C 38/06** (2013.01 - EP KR); **C22C 38/58** (2013.01 - KR); **C21D 8/0231** (2013.01 - EP); **C22C 38/00** (2013.01 - EP); **C22C 38/12** (2013.01 - EP); **C22C 38/14** (2013.01 - EP); **C22C 38/18** (2013.01 - EP); **C22C 38/22** (2013.01 - EP); **C22C 38/24** (2013.01 - EP); **C22C 38/26** (2013.01 - EP); **C22C 38/28** (2013.01 - EP); **C22C 38/58** (2013.01 - EP)

Citation (search report)

- [X] JP 5223511 B2 20130626
- [X] EP 2832889 A1 20150204 - JFE STEEL CORP [JP]
- [A] JP 2002327212 A 20021115 - NIPPON KOKAN KK
- [A] JP 2012077331 A 20120419 - JFE STEEL CORP
- [A] EP 3081662 A1 20161019 - JFE STEEL CORP [JP]
- [A] WO 2017018108 A1 20170202 - NIPPON STEEL & SUMITOMO METAL CORP [JP]
- [A] JP 2003013138 A 20030115 - NIPPON KOKAN KK
- See references of WO 2018181564A1

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 3604592 A1 20200205; EP 3604592 A4 20200304; EP 3604592 B1 20220323;** BR 112019020236 A2 20200422; CN 110475894 A 20191119; CN 110475894 B 20220322; JP 6844691 B2 20210317; JP WO2018181564 A1 20191212; KR 20190129097 A 20191119; KR 20210118960 A 20211001; WO 2018181564 A1 20181004

DOCDB simple family (application)

**EP 18774336 A 20180328;** BR 112019020236 A 20180328; CN 201880022412 A 20180328; JP 2018012956 W 20180328; JP 2019510032 A 20180328; KR 20197030351 A 20180328; KR 20217029888 A 20180328