Title (en)

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

Title (de)

HOCHFESTES STAHLBLECH FÜR SAUERGASRESISTENTE LEITUNGSROHRE UND HOCHFESTES STAHLROHR DAMIT

Title (fr)

TÔLE D'ACIER À HAUTE RÉSISTANCE POUR TUYAU DE CANALISATION RÉSISTANT À L'ACIDITÉ ET TUYAU EN ACIER À HAUTE RÉSISTANCE L'UTILISANT

Publication

EP 3674433 A4 20200729 (EN)

Application

EP 17929314 A 20171019

Priority

JP 2017037891 W 20171019

Abstract (en)

[origin: EP3674433A1] The present disclosure provides a high strength steel plate for sour-resistant line pipes that has excellent HIC resistance in which variation in the HIC resistance in the plate width direction is suppressed. A high strength steel plate for sour line pipes disclosed herein includes a chemical composition containing C, Si, Mn, P, S, Al, and Ca in predetermined amounts, with the balance being Fe and inevitable impurities, in which in a cross-section perpendicular to a rolling direction of the steel plate, the number of Mn-concentrated spots that are approximated to an elliptical shape having a major axis length of more than 1.5 mm, in a measuring region located ±5 mm from a plate thickness center toward a plate thickness direction, is 3 or less per 100 mm in length in a plate width direction, HIC resistance is 10 % or less in terms of CAR at a W/4 position, a W/2 position, and a 3W/4 position from one end in the plate width direction of the steel plate, where W denotes a plate width, variation in the HIC resistance in the plate width direction in terms of 3σ is 5 % or less when σ denotes a standard deviation of CARs, and a tensile strength is 520 MPa or more.

IPC 8 full level

C21D 8/02 (2006.01); **C21D 9/46** (2006.01); **C22C 38/00** (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); **C22C 38/14** (2006.01); **C22C 38/16** (2006.01); **C22C 38/18** (2006.01); **C22C 38/58** (2006.01)

CPC (source: EP KR)

C21D 8/0226 (2013.01 - EP); **C21D 8/0263** (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); **C22C 38/08** (2013.01 - EP); **C22C 38/12** (2013.01 - EP); **C22C 38/14** (2013.01 - EP); **C22C 38/16** (2013.01 - EP); **C22C 38/18** (2013.01 - EP); **C22C 38/24** (2013.01 - KR); **C22C 38/26** (2013.01 - KR); **C22C 38/38** (2013.01 - KR)

Citation (search report)

- [X] JP 2013124398 A 20130624 - JFE STEEL CORP
- [A] WO 2011030768 A1 20110317 - NIPPON STEEL CORP [JP], et al
- [A] JP 2013145221 A 20130725 - JFE STEEL CORP
- [A] EP 2980238 A1 20160203 - KOBE STEEL LTD [JP]
- See references of WO 2019077725A1

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

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BA ME

DOCDB simple family (publication)

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DOCDB simple family (application)

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