

Title (en)

OIL WELL PIPE MARTENSITIC STAINLESS SEAMLESS STEEL PIPE AND PRODUCTION METHOD FOR SAME

Title (de)

NAHTLOSES ROHR AUS MARTENSITISCHEM EDELSTAHL FÜR ÖLBOHRLOCH UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

TUYAU SANS SOUDURE EN ACIER INOXYDABLE À BASE DE MARTENSITE POUR TUBAGE DE PUITS DE PÉTROLE, ET PROCÉDÉ DE FABRICATION DE CELUI-CI

Publication

EP 3690073 A4 20200805 (EN)

Application

EP 18861269 A 20180904

Priority

- JP 2017190075 A 20170929
- JP 2018032685 W 20180904

Abstract (en)

[origin: EP3690073A1] The invention is intended to provide a martensitic stainless steel seamless pipe for oil country tubular goods having a yield stress of 758 MPa (110 ksi) or more, and excellent sulfide stress corrosion cracking resistance. A method for manufacturing such a martensitic stainless steel seamless pipe is also provided. The martensitic stainless steel seamless pipe for oil country tubular goods having a yield stress of 758 MPa or more has a composition that contains, in mass%, C: 0.010% or more, Si: 0.5% or less, Mn: 0.05 to 0.24%, P: 0.030% or less, S: 0.005% or less, Ni: 4.6 to 8.0%, Cr: 10.0 to 14.0%, Mo: 1.0 to 2.7%, Al: 0.1% or less, V: 0.005 to 0.2%, N: 0.1% or less, Ti: 0.06 to 0.25%, Cu: 0.01 to 1.0%, and Co: 0.01 to 1.0%, in which C, Mn, Cr, Cu, Ni, Mo, W, Nb, N, and Ti satisfy the predetermined relations, and the balance is Fe and incidental impurities.

IPC 8 full level

C22C 38/00 (2006.01); **C21D 1/22** (2006.01); **C21D 8/10** (2006.01); **C21D 9/08** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01);
C22C 38/06 (2006.01); **C22C 38/42** (2006.01); **C22C 38/44** (2006.01); **C22C 38/46** (2006.01); **C22C 38/48** (2006.01); **C22C 38/50** (2006.01);
C22C 38/52 (2006.01); **C22C 38/54** (2006.01)

CPC (source: EP US)

C21D 1/22 (2013.01 - EP US); **C21D 8/10** (2013.01 - EP); **C21D 8/105** (2013.01 - EP US); **C21D 9/08** (2013.01 - EP);
C21D 9/085 (2013.01 - EP US); **C22C 38/00** (2013.01 - EP); **C22C 38/001** (2013.01 - EP US); **C22C 38/002** (2013.01 - EP US);
C22C 38/005 (2013.01 - EP); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP); **C22C 38/06** (2013.01 - EP US);
C22C 38/42 (2013.01 - EP US); **C22C 38/44** (2013.01 - EP US); **C22C 38/46** (2013.01 - EP US); **C22C 38/48** (2013.01 - EP US);
C22C 38/50 (2013.01 - EP US); **C22C 38/52** (2013.01 - EP US); **C22C 38/54** (2013.01 - EP); **C21D 2211/008** (2013.01 - US)

Citation (search report)

- [I] JP 2001026820 A 20010130 - NIPPON KOKAN KK
- [A] JP 2004091812 A 20040325 - JFE STEEL KK
- [A] EP 1143024 A1 20011010 - NIPPON KOKAN KK [JP]
- [A] US 200317789 A1 20031127 - YOSHIZAWA MITSURU [JP], et al
- [A] US 2009017238 A1 20090115 - MIYATA YUKIO [JP], et al
- See also references of WO 2019065115A1

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 3690073 A1 20200805; EP 3690073 A4 20200805; AR 113185 A1 20200205; BR 112020004808 A2 20200924;
BR 112020004808 B1 20240220; JP 6540920 B1 20190710; JP WO2019065115 A1 20191114; MX 2020002857 A 20200724;
US 2020407814 A1 20201231; WO 2019065115 A1 20190404

DOCDB simple family (application)

EP 18861269 A 20180904; AR P180102774 A 20180927; BR 112020004808 A 20180904; JP 2018032685 W 20180904;
JP 2018564431 A 20180904; MX 2020002857 A 20180904; US 201816646667 A 20180904