

Title (en)

HIGH STRENGTH SEAMLESS STEEL PIPE AND RISER

Title (de)

HOCHFESTES NAHTLOSES STAHLROHR UND STEIGROHR

Title (fr)

TUYAU ET COLONNE MONTANTE EN ACIER SANS SOUDURE DE HAUTE RÉSISTANCE

Publication

EP 3492612 A1 20190605 (EN)

Application

EP 17833981 A 20170705

Priority

- JP 2016148646 A 20160728
- JP 2017024739 W 20170705

Abstract (en)

A high-strength seamless steel pipe providing both high strength and low hardness in a stable manner while weldability is maintained is provided.
A high-strength seamless steel pipe has a chemical composition of, in mass %: 0.10 to 0.18 % C; 0.03 to 1.0 % Si; 0.5 to 2.0 % Mn; up to 0.020 % P; up to 0.0080 % S; 0.10 to 0.60 % Cr; 0.10 to 0.40 % Mo; 0.02 to 0.40 % V; 0.004 to 0.020 % Ti; 0.0005 to 0.005 % B; up to 0.10 % Al; up to 0.008 % N; 0.0004 to 0.0040 % Ca; 0.1 to 1.0 % Cu; 0.2 to 1.0 % Ni; 0 to 0.05 % Nb; and the balance being Fe and impurities, wherein the following formula, F (1), is satisfied:
$$C+Si/30+(Mn+Cu+Cr)/20+Ni/60+Mo/15+V/10+5 \times B \leq 0.28$$
 F (1) For the element symbols in F (1), the contents of the corresponding elements in mass % are substituted.

IPC 8 full level

C22C 38/00 (2006.01); **C21D 8/10** (2006.01); **C21D 9/08** (2006.01); **C22C 38/58** (2006.01)

CPC (source: EP)

C21D 6/004 (2013.01); **C21D 6/005** (2013.01); **C21D 8/10** (2013.01); **C21D 8/105** (2013.01); **C21D 9/08** (2013.01); **C22C 38/00** (2013.01); **C22C 38/001** (2013.01); **C22C 38/002** (2013.01); **C22C 38/02** (2013.01); **C22C 38/04** (2013.01); **C22C 38/06** (2013.01); **C22C 38/42** (2013.01); **C22C 38/44** (2013.01); **C22C 38/46** (2013.01); **C22C 38/48** (2013.01); **C22C 38/50** (2013.01); **C22C 38/54** (2013.01)

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 3492612 A1 20190605; **EP 3492612 A4 20190807**; AR 109055 A1 20181024; BR 112018015533 A2 20181226; JP 6642715 B2 20200212; JP WO2018020972 A1 20181101; MX 2018011404 A 20190328; WO 2018020972 A1 20180201

DOCDB simple family (application)

EP 17833981 A 20170705; AR P170101966 A 20170714; BR 112018015533 A 20170705; JP 2017024739 W 20170705; JP 2018529468 A 20170705; MX 2018011404 A 20170705