

Title (en)
SEAMLESS STEEL PIPE AND MANUFACTURING METHOD OF SAME

Title (de)
NAHTLOSES STAHLROHR UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)
TUYAU EN ACIER SANS SOUDURE ET SON PROCÉDÉ DE FABRICATION

Publication
EP 3418410 A4 20190109 (EN)

Application
EP 16890483 A 20160216

Priority
JP 2016054381 W 20160216

Abstract (en)
[origin: EP3418410A1] A seamless steel pipe is provided that provides a yield strength of 555 MPa or higher and good SSC resistance in a reliable manner. A seamless steel pipe contains, in mass %, C: 0.02 to 0.15 %; Si: 0.05 to 0.5 %; Mn: 0.30 to 2.5 %; Al: 0.01 to 0.10 %; Ti: 0.001 to 0.010 %; N: up to 0.007 %; Cr: 0.05 to 1.0 %; Mo: not less than 0.02 % and less than 0.5 %; Ni: 0.03 to 1.0 %; Cu: 0.02 to 1.0 %; V: 0.020 to 0.20 %; Ca: 0.0005 to 0.005 %; and Nb: 0 to 0.05 %, among others, where the carbon equivalent Ceq is not less than 0.430 % and less than 0.500 %, the main phase of the microstructure from the surface layer to an in-the-wall portion is tempered martensite or tempered bainite, the size of prior austenite grains is lower than 6.0 in crystal grain size number according to ASTM E112-10, a portion between a position at 1 mm from the inner surface and a position at 1 mm from the outer surface has a Vickers hardness of 250 Hv or lower, and the yield strength is 555 MPa or higher.

IPC 8 full level
C22C 38/00 (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 38/48** (2006.01); **C22C 38/50** (2006.01); **C22C 38/58** (2006.01)

CPC (source: EP RU US)
C21D 6/004 (2013.01 - EP US); **C21D 6/005** (2013.01 - EP US); **C21D 6/008** (2013.01 - EP US); **C21D 8/10** (2013.01 - EP RU); **C21D 8/105** (2013.01 - EP US); **C21D 9/08** (2013.01 - EP RU); **C21D 9/085** (2013.01 - EP US); **C22C 38/00** (2013.01 - EP US); **C22C 38/001** (2013.01 - EP US); **C22C 38/002** (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 38/42** (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 RU US); **C22C 38/58** (2013.01 - EP RU US); **C21D 8/10** (2013.01 - US); **C21D 9/08** (2013.01 - US); **C21D 2211/001** (2013.01 - EP US); **C21D 2211/002** (2013.01 - EP US); **C21D 2211/005** (2013.01 - EP US)

Citation (search report)
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• [XA] EP 2843072 A1 20150304 - NIPPON STEEL & SUMITOMO METAL CORP [JP]
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• [A] US 2014299236 A1 20141009 - ANELLI ETTORE [IT], et al
• [A] WO 2015129617 A1 20150903 - USUI KOKUSAI SANGYO KK [JP], et al
• [A] EP 2415884 A1 20120208 - SUMITOMO METAL IND [JP]
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Designated contracting state (EPC)
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Designated extension state (EPC)
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