

Title (en)  
AS-ROLL ELECTRIC RESISTANCE-WELDED STEEL PIPE FOR LINE PIPE, AND HOT-ROLLED STEEL SHEET

Title (de)  
WIDERSTANDSGESCHWEISSTES STAHLROHR IM WALZZUSTAND FÜR LEITUNGSROHR UND WARMGEWALZTES STAHLBLECH

Title (fr)  
TUBE D'ACIER SOUDÉ PAR RÉSISTANCE ÉLECTRIQUE DE LAMINAGE POUR TUYAU DE CANALISATION, ET TÔLE D'ACIER LAMINÉE À CHAUD

Publication  
**EP 3608434 A4 20200902 (EN)**

Application  
**EP 17914739 A 20170622**

Priority  
JP 2017023086 W 20170622

Abstract (en)  
[origin: EP3608434A1] An as-rolled electric resistance welded steel pipe for a line pipe, in which a base metal portion includes, in terms of % by mass, 0.030 to 0.120% of C, 0.05 to 0.30% of Si, 0.50 to 2.00% of Mn, 0.010 to 0.035% of Al, 0.0010 to 0.0080% of N, 0.010 to 0.080% of Nb, 0.005 to 0.030% of Ti, 0.001 to 0.20% of Ni, and 0.10 to 0.20% of Mo, and the balance includes Fe and impurities, wherein the following F1 is from 0.300 to 0.350, and wherein in a metallographic microstructure of a wall thickness direction central portion of the base metal portion, a polygonal ferrite fraction is from 60 to 90%, an average crystal grain diameter is 15 μm or less, and a coarse crystal grain ratio, which is an areal ratio of crystal grains having a crystal grain diameter of 20 μm or more, is 20% or less;  $F1 = C + Si/24 + Mn/6 + Ni/40 + Cr/5 + Mo/4 + V/3 + Nb/3$ .

IPC 8 full level  
**C22C 38/00** (2006.01); **C21D 6/00** (2006.01); **C21D 8/02** (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 38/12** (2006.01); **C22C 38/14** (2006.01); **C22C 38/58** (2006.01)

CPC (source: EP)  
**C21D 6/005** (2013.01); **C21D 8/0205** (2013.01); **C21D 8/0226** (2013.01); **C21D 8/105** (2013.01); **C21D 9/08** (2013.01); **C22C 38/001** (2013.01); **C22C 38/02** (2013.01); **C22C 38/04** (2013.01); **C22C 38/06** (2013.01); **C22C 38/12** (2013.01); **C22C 38/14** (2013.01); **C21D 6/001** (2013.01); **C21D 6/008** (2013.01); **C21D 2211/002** (2013.01); **C21D 2211/005** (2013.01)

Citation (search report)

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- [A] WO 2013027779 A1 20130228 - NIPPON STEEL & SUMITOMO METAL CORP [JP], et al
- [E] WO 2018179169 A1 20181004 - NIPPON STEEL & SUMITOMO METAL CORP [JP]
- [A] JP 4788146 B2 20111005
- [A] WO 2014051119 A1 20140403 - NIPPON STEEL & SUMITOMO METAL CORP [JP]
- See references of WO 2018235244A1

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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)  
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DOCDB simple family (application)  
**EP 17914739 A 20170622**; CN 201780089464 A 20170622; JP 2017023086 W 20170622; JP 2017552185 A 20170622