

Title (en)
ELECTROSEAMED STEEL PIPE FOR LINE PIPE

Title (de)
ELEKTRONAHTGESCHWEISSTES STAHLROHR FÜR LEITUNGSROHRE

Title (fr)
TUYAU EN ACIER ÉLECTROSOUDE POUR TUYAU DE CANALISATION

Publication
EP 3428299 A4 20190821 (EN)

Application
EP 17823802 A 20170313

Priority
• JP 2016134289 A 20160706
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Abstract (en)
[origin: EP3428299A1] An electric resistance welded steel pipe for a line pipe, in which a base metal portion includes, in terms of % by mass, 0.030 to less than 0.080% of C, 0.30 to 1.00% of Mn, 0.005 to 0.050% of Ti, 0.010 to 0.100% of Nb, 0.001 to 0.020% of N, 0.010 to 0.450% of Si, and 0.001 to 0.100% of Al, and the balance includes Fe and impurities, and wherein CNeq, expressed by Formula (1), is from 0.190 to 0.320, a Mn/Si ratio is 2.0 or more, LR, expressed by Formula (2), is 0.210 or more, in a case in which a metallographic microstructure of the base metal portion is observed using a SEM at a magnification of 1,000 times, an areal ratio of ferrite is from 40 to 80%, and the balance includes tempered bainite; CNeq = C + Mn/6 + Cr/5 + (Ni + Cu)/15 + Nb + Mo + V Formula (1); LR = (2.1 × C + Nb)/Mn Formula (2).

IPC 8 full level
C22C 38/00 (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 38/08** (2006.01); **C22C 38/12** (2006.01); **C22C 38/14** (2006.01); **C22C 38/16** (2006.01); **C22C 38/26** (2006.01); **C22C 38/28** (2006.01); **C22C 38/50** (2006.01)

CPC (source: EP KR)
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Citation (search report)
• [A] US 2015203933 A1 20150723 - TOYODA SHUNSUKE [JP], et al
• [A] US 2015176727 A1 20150625 - TANIZAWA AKIHIKO [JP], et al
• [A] JP 2014189808 A 20141006 - KOBE STEEL LTD
• [A] JP 3214353 B2 20011002
• [A] JP 3303647 B2 20020722
• [A] US 5948183 A 19990907 - OKADA SUSUMU [JP], et al
• See references of WO 2018008194A1

Cited by
WO2021133343A1; TWI738246B

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