

Title (en)

ELECTRIC RESISTANCE WELDED STEEL PIPE FOR LINEPIPE

Title (de)

WIDERSTANDSGESCHWEISSTES STAHLROHR FÜR LEITUNGSROHRE

Title (fr)

TUYAU EN ACIER SOUDÉ PAR RÉSISTANCE ÉLECTRIQUE DESTINÉ À DES TUYAUX DE CANALISATION

Publication

EP 3960891 B1 20240424 (EN)

Application

EP 19942655 A 20190823

Priority

JP 2019033068 W 20190823

Abstract (en)

[origin: EP3960891A1] The present invention provides an electric resistance welded steel pipe for a linepipe, in which a base metal portion includes, in terms of % by mass, 0.03% or more and less than 0.10% of C, from 0.30 to 1.00% of Mn, from 0.010 to 0.100% of Nb, from 0.010 to 0.500% of Si, and a balance including Fe and impurities, in which a value of C_{Neq} is from 0.12 to 0.25, a ratio Mn/Si is 2.0 or more, and a value of LR is 0.25 or more; in which the base metal portion has a metallographic microstructure which has a ferrite ratio of from 80 to 98%, with a balance structure including pearlite and/or bainite, and which has a difference in hardness (balance structure - ferrite) of from 50 to 100 Hv; in which the electric resistance welded steel pipe satisfies a YS of 360 MPa or more, a TS of 465 MPa or more, and a YR of 0.90 or less; and in which each of the base metal portion and an electric resistance welded portion has a Charpy absorbed energy at 0°C of 100 J or more. C_{Neq}=C+Mn/6+Cr/5+Ni/Cu/15+Nb+Mo+VLR=2.1C+Nb/Mn

IPC 8 full level

C22C 38/00 (2006.01); **C21D 1/02** (2006.01); **C21D 8/02** (2006.01); **C21D 8/10** (2006.01); **C21D 9/08** (2006.01); **C21D 9/46** (2006.01); **C21D 9/50** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/08** (2006.01); **C22C 38/12** (2006.01); **C22C 38/14** (2006.01); **C22C 38/16** (2006.01); **C22C 38/20** (2006.01); **C22C 38/26** (2006.01); **C22C 38/28** (2006.01); **C22C 38/42** (2006.01); **C22C 38/46** (2006.01); **C22C 38/48** (2006.01); **C22C 38/50** (2006.01)

CPC (source: EP KR)

C21D 8/005 (2013.01 - KR); **C21D 8/0226** (2013.01 - EP); **C21D 8/0263** (2013.01 - EP); **C21D 9/08** (2013.01 - KR); **C22C 38/001** (2013.01 - EP KR); **C22C 38/005** (2013.01 - EP); **C22C 38/02** (2013.01 - EP); **C22C 38/04** (2013.01 - EP); **C22C 38/08** (2013.01 - EP); **C22C 38/12** (2013.01 - EP); **C22C 38/14** (2013.01 - EP); **C22C 38/16** (2013.01 - EP); **C22C 38/20** (2013.01 - EP); **C22C 38/26** (2013.01 - EP); **C22C 38/28** (2013.01 - EP); **C22C 38/42** (2013.01 - EP KR); **C22C 38/44** (2013.01 - KR); **C22C 38/46** (2013.01 - EP KR); **C22C 38/48** (2013.01 - EP); **C22C 38/50** (2013.01 - EP KR); **C21D 1/02** (2013.01 - EP); **C21D 8/105** (2013.01 - EP); **C21D 9/08** (2013.01 - EP); **C21D 9/46** (2013.01 - EP); **C21D 9/50** (2013.01 - EP); **C21D 2211/005** (2013.01 - EP KR)

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

DOCDB simple family (publication)

EP 3960891 A1 20220302; **EP 3960891 A4 20220727**; **EP 3960891 B1 20240424**; JP 6693610 B1 20200513; JP WO2021038632 A1 20210927; KR 102630980 B1 20240130; KR 20220002484 A 20220106; WO 2021038632 A1 20210304

DOCDB simple family (application)

EP 19942655 A 20190823; JP 2019033068 W 20190823; JP 2019568795 A 20190823; KR 20217038488 A 20190823