

Title (en)  
ELECTRIC RESISTANCE WELDED STEEL PIPE

Title (de)  
WIDERSTANDSGESCHWEISSTES STAHLROHR

Title (fr)  
TUYAU EN ACIER SOUDÉ PAR RÉSISTANCE ÉLECTRIQUE

Publication  
**EP 4206338 A4 20231025 (EN)**

Application  
**EP 20951521 A 20200828**

Priority  
JP 2020032636 W 20200828

Abstract (en)  
[origin: EP4206338A1] This electric resistance welded steel pipe includes a base material portion having a predetermined chemical composition and a weld, when a wall thickness of the base material portion is represented by tB and a wall thickness of the weld is represented by tS, a microstructure at a (1/4)tB position from an outer surface of the base material portion is composed of, by area%, 10% to 50% of bainite, 50% to 90% polygonal ferrite, and 1% or less of a remainder in microstructure, an average grain size is 20 μm or less, a microstructure at a (1/4)tS position from an outer surface of the weld is composed of, by area%, 70% to 90% of bainite, polygonal ferrite, and 1 % or less of a remainder in microstructure, an average grain size is 15 μm or less, a development degree of {001} on a butting surface of the weld is 1.5 or less, a hardness of the weld is 250 Hv or less, Charpy impact absorbed energies of the base material portion and the weld at -20°C are 150 J or more, a yield stress is 360 to 600 MPa, and a tensile strength is 465 to 760 MPa.

IPC 8 full level  
**C21D 8/10** (2006.01); **C21D 1/02** (2006.01); **C21D 1/18** (2006.01); **C21D 1/42** (2006.01); **C21D 8/02** (2006.01); **C21D 9/08** (2006.01); **C21D 9/46** (2006.01); **C21D 9/50** (2006.01); **C22C 38/00** (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 38/26** (2006.01); **C22C 38/28** (2006.01); **C22C 38/58** (2006.01)

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Citation (search report)

- [I] EP 2752499 A1 20140709 - NIPPON STEEL & SUMITOMO METAL CORP [JP]
- [A] JP 2013139051 A 20130718 - JFE STEEL CORP
- [A] WO 2020170333 A1 20200827 - NIPPON STEEL CORP [JP]
- [A] EP 0699773 A1 19960306 - NIPPON KOKAN KK [JP]
- [A] EP 0739678 A1 19961030 - NIPPON KOKAN KK [JP]
- See references of WO 2022044271A1

Designated contracting state (EPC)  
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KH MA MD TN

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