

Title (en)

HIGH-CARBON-STEEL WIRE ROD HAVING EXCELLENT WIRE DRAWING PROPERTIES

Title (de)

STAHLDRABTSTANGE MIT HOHEM KOHLENSTOFFANTEIL UND HERVORRAGENDER DRAHTZIEHBARKEITSEIGENSCHAFTEN

Title (fr)

FIL MACHINE EN ACIER À HAUTE TENEUR EN CARBONE PRÉSENTANT D'EXCELLENTE PROPRIÉTÉS DE TRÉFILAGE

Publication

**EP 3228721 A4 20180711 (EN)**

Application

**EP 15865720 A 20151202**

Priority

- JP 2014247258 A 20141205
- JP 2015083879 W 20151202

Abstract (en)

[origin: EP3228721A1] Provided is a high-carbon steel wire rod after hot rolling, having a steel composition comprising, in mass%, C: 0.60% to 1.10%, Si: 0.02% to 2.0%, Mn: 0.1% to 2.0%, Cr: 0.3% to 1.6%, Al: 0.001% to 0.05%, N: limited to 0.008% or less, P: limited to 0.020% or less, S: limited to 0.020% or less, and a balance: Fe and unavoidable impurities. The high-carbon steel wire rod has a structure containing 95% or more pearlite in an area ratio in a cross section perpendicular to a wire rod longitudinal direction, wherein an average lamellar spacing of the pearlite is 50 to 100 nm, and an average value of a pearlite block size of a central portion that is an area within a circle with a diameter of D/2 with respect to a diameter D of the wire rod from a center of a cross section perpendicular to a wire rod longitudinal direction is as follows, 5  $\mu\text{m}$  < pearlite block size < 15  $\mu\text{m}$ .

IPC 8 full level

**C21D 8/06** (2006.01); **C21D 9/52** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/18** (2006.01); **C22C 38/22** (2006.01); **C22C 38/24** (2006.01); **C22C 38/26** (2006.01); **C22C 38/28** (2006.01); **C22C 38/32** (2006.01); **C22C 38/34** (2006.01); **C22C 38/38** (2006.01)

CPC (source: EP KR)

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Citation (search report)

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- [I] EP 2687619 A1 20140122 - NIPPON STEEL & SUMITOMO METAL CORP [JP]
- [A] JP H06271937 A 19940927 - KOBE STEEL LTD
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- [A] JP H0853737 A 19960227 - KOBE STEEL LTD
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Designated contracting state (EPC)

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DOCDB simple family (application)

**EP 15865720 A 20151202**; CN 201580075308 A 20151202; JP 2015083879 W 20151202; JP 2016562658 A 20151202; KR 20177018113 A 20151202; MX 2017006990 A 20151202