

Title (en)

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

Title (de)

STAHLDRAHSTANGE MIT HOHEM KOHLENSTOFFANTEIL UND HERVORRAGENDEN DRAHTZIEHBARKEITSEIGENSCHAFTEN

Title (fr)

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

Publication

EP 3228721 A1 20171011 (EN)

Application

EP 15865720 A 20151202

Priority

- JP 2014247258 A 20141205
- JP 2015083879 W 20151202

Abstract (en)

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, $5\text{ }\mu\text{m} < \text{pearlite block size} < 15\text{ }\mu\text{m}$.

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)

C21D 8/06 (2013.01 - KR); **C21D 8/065** (2013.01 - EP); **C21D 9/52** (2013.01 - EP); **C22C 38/02** (2013.01 - EP KR); **C22C 38/04** (2013.01 - EP KR); **C22C 38/06** (2013.01 - EP KR); **C22C 38/18** (2013.01 - EP); **C22C 38/22** (2013.01 - EP KR); **C22C 38/24** (2013.01 - EP); **C22C 38/26** (2013.01 - EP KR); **C22C 38/28** (2013.01 - EP); **C22C 38/32** (2013.01 - EP KR); **C22C 38/34** (2013.01 - EP); **C22C 38/38** (2013.01 - EP); **C21D 2211/009** (2013.01 - EP KR)

Cited by

EP3936629A4; EP4060073A4

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)

BA ME

DOCDB simple family (publication)

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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