Title (en)

HIGH-DUCTILITY HIGH-CARBON STEEL WIRE

Title (de)

STARK DEHNBARER HARTSTAHLDRAHT

Title (fr)

FIL D'ACIER À TENEUR ÉLEVÉE EN CARBONE ET DE GRANDE DUCTILITÉ

Publication

EP 2025769 A1 20090218 (EN)

Application

EP 07744836 A 20070531

Priority

- JP 2007061497 W 20070531
- JP 2006153303 A 20060601

Abstract (en)

A high-carbon steel wire rod of high ductility for steel cord and the like is provided that experiences little breakage during drawing. The high-carbon steel wire rod of high ductility is a high-carbon steel wire rod fabricated by hot rolling that that has a carbon content of 0.7 mass% or greater, wherein 95% or greater of the wire rod metallographic structure is pearlite structure and the maximum pearlite block size of pearlite at the core of the hot-rolled wire rod is 65 μm or less. The high-carbon steel wire rod of high ductility has a tensile strength in a range of {248 + 980 x (C mass%)} ± 40 MPa} and a reduction of area of {72.8 - 40 x (C mass%) %} or greater. The high-carbon steel wire rod of high ductility is characterized in that the average pearlite block size at the core of the hot-rolled wire rod constituted by ferrite grain boundaries of an orientation difference of 9 degrees or greater as measured with an EBSP analyzer is 10 μm or greater and 30 μm or less.

IPC 8 full level

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CPC (source: EP KR US)

B21B 1/16 (2013.01 - KR); **C21D 8/065** (2013.01 - EP KR US); **C22C 38/001** (2013.01 - KR); **C22C 38/002** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP KR US); **C22C 38/04** (2013.01 - EP KR US); **C22C 38/18** (2013.01 - EP KR US); **D07B 1/066** (2013.01 - EP US); B21B 1/16 (2013.01 - EP US)

Cited by

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