

Title (en)
STEEL WIRE AND COATED STEEL WIRE

Title (de)
STAHLDRAHT UND BESCHICHTETER STAHL DRAHT

Title (fr)
FIL D'ACIER ET FIL D'ACIER REVÊTU

Publication
EP 3527682 A4 20200311 (EN)

Application
EP 16918697 A 20161011

Priority
JP 2016080066 W 20161011

Abstract (en)
[origin: EP3527682A1] A steel wire includes, as a chemical composition, by mass%, C: 0.40% to 1.10%, Si: 0.005% to 0.350%, Mn: 0.05% to 0.90%, Cr: 0% to 0.70%, Al: 0% to 0.070%, Ti: 0% to 0.050%, V: 0% to 0.10%, Nb: 0% to 0.050%, Mo: 0% to 0.20%, B: 0% to 0.0030%, and a remainder including Fe and impurities; in which a metallographic structure in a cross section includes 80 area% or more of a pearlite structure having a lamellar cementite; an average lamellar spacing which is a spacing between lamellar cementites is 28 nm to 80 nm; an average length of the lamellar cementite is 22.0 μm or less; among the pearlite structure, a pearlite structure having the lamellar cementite of which an inclination with respect to a longitudinal direction of the steel wire is 15° or less is 40 area% or more; an integration degree of a {110} plane of a ferrite with respect to the longitudinal direction is in a range of 2.0 to 8.0, and a diameter of the steel wire is 1.4 mm or more.

IPC 8 full level
C22C 38/00 (2006.01); **C21D 8/06** (2006.01); **C21D 9/52** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (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); **C23C 2/06** (2006.01); **C23C 2/38** (2006.01)

CPC (source: EP KR US)
C21D 8/065 (2013.01 - EP US); **C21D 9/525** (2013.01 - EP KR US); **C22C 38/001** (2013.01 - EP US); **C22C 38/002** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/06** (2013.01 - EP US); **C22C 38/22** (2013.01 - EP KR US); **C22C 38/24** (2013.01 - EP KR US); **C22C 38/26** (2013.01 - EP US); **C22C 38/28** (2013.01 - EP US); **C22C 38/32** (2013.01 - EP KR US); **C23C 2/04** (2013.01 - KR); **C23C 2/06** (2013.01 - EP US); **C23C 2/12** (2013.01 - EP); **C23C 2/38** (2013.01 - US); **C21D 2211/003** (2013.01 - EP US); **C21D 2211/009** (2013.01 - EP KR US)

Citation (search report)
• [A] JP 2016056438 A 20160421 - NIPPON STEEL & SUMITOMO METAL CORP
• [A] WO 2015186701 A1 20151210 - NIPPON STEEL & SUMITOMO METAL CORP [JP] & EP 3150738 A1 20170405 - NIPPON STEEL & SUMITOMO METAL CORP [JP]
• [A] WO 2016021556 A1 20160211 - NIPPON STEEL & SUMITOMO METAL CORP [JP] & EP 3165626 A1 20170510 - NIPPON STEEL & SUMITOMO METAL CORP [JP]
• See references of WO 2018069955A1

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