

Title (en)
WIRE MATERIAL FOR STEEL WIRE, AND STEEL WIRE

Title (de)
DRAHTMATERIAL FÜR STAHL DRAHT SOWIE STAHL DRAHT

Title (fr)
MATÉRIAU DE FIL POUR FIL D'ACIER, ET FIL D'ACIER

Publication
EP 3165625 A1 20170510 (EN)

Application
EP 15814624 A 20150602

Priority
• JP 2014136222 A 20140701
• JP 2015065863 W 20150602

Abstract (en)
An object of the present invention is to provide a wire rod for a steel wire, which is excellent in low cycle fatigue characteristics and is useful as a material for a high-strength steel wire such as a wire rope or a PC steel wire, and to provide a steel wire that can exhibit such characteristics. A wire rod for a steel wire of the present invention comprises by mass: C: 0.70 to 1.3%; Si: 0.1 to 1.5%; Mn: 0.1 to 1.5%; N: 0.001 to 0.006%; Al: 0.001 to 0.10%; Ti: 0.02 to 0.20%; B: 0.0005 to 0.010%; P: 0% or more and 0.030% or less; and S: 0% or more and 0.030% or less, with the balance being iron and inevitable impurities, wherein, the wire rod has pearlite as a main phase, an area ratio of proeutectoid ferrite is 1.0% or less, and an average thickness of the proeutectoid ferrite is 5 μ m or less.

IPC 8 full level
C22C 38/00 (2006.01); **C21D 8/06** (2006.01); **C21D 9/52** (2006.01); **C22C 38/14** (2006.01); **C22C 38/54** (2006.01)

CPC (source: EP KR US)
C21D 8/065 (2013.01 - EP US); **C22C 38/00** (2013.01 - EP US); **C22C 38/001** (2013.01 - EP KR US); **C22C 38/002** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP KR US); **C22C 38/04** (2013.01 - EP KR US); **C22C 38/06** (2013.01 - EP KR US); **C22C 38/08** (2013.01 - EP US); **C22C 38/105** (2013.01 - EP US); **C22C 38/12** (2013.01 - EP KR US); **C22C 38/14** (2013.01 - EP KR US); **C22C 38/16** (2013.01 - EP US); **C22C 38/28** (2013.01 - EP US); **C22C 38/32** (2013.01 - EP US); **C22C 38/54** (2013.01 - KR); **C21D 8/06** (2013.01 - EP US); **C21D 9/52** (2013.01 - EP US); **C21D 2211/009** (2013.01 - EP KR US)

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)
EP 3165625 A1 20170510; **EP 3165625 A4 20171122**; CA 2951799 A1 20160107; CN 106661687 A 20170510; CN 109576448 A 20190405; EP 3378964 A1 20180926; JP 2016014168 A 20160128; KR 20170013340 A 20170206; MX 2016017005 A 20170512; US 2017198375 A1 20170713; WO 2016002413 A1 20160107

DOCDB simple family (application)
EP 15814624 A 20150602; CA 2951799 A 20150602; CN 201580034203 A 20150602; CN 201810973135 A 20150602; EP 18171309 A 20150602; JP 2014136222 A 20140701; JP 2015065863 W 20150602; KR 20167036839 A 20150602; MX 2016017005 A 20150602; US 201515321034 A 20150602