

Title (en)
STEEL WIRE

Title (de)
STAHLDRAHT

Title (fr)
FIL D'ACIER

Publication
EP 3486345 A1 20190522 (EN)

Application
EP 17827748 A 20170714

Priority
• JP 2016139744 A 20160714
• JP 2017025782 W 20170714

Abstract (en)
A drawn steel wire has a predetermined chemical composition; in a region of the drawn steel wire that is closer to an axis line than a depth of 100 µm from a surface of the drawn steel wire in a lengthwise-section that includes the axis line of the drawn steel wire, a metallographic structure includes 90% or more of a drawn pearlite by an area ratio; in a region of the drawn steel wire that is the depth of 100 µm from the surface of the drawn steel wire in the lengthwise-section, the metallographic structure includes 70% or more of the drawn pearlite by the area ratio; when D in units of millimeters represents a diameter of the drawn steel wire, $\bar{A}HV$ represents a standard deviation of a Vickers hardness of the surface of the drawn steel wire, and $Rp\ 0.2$ represents a yield strength of the drawn steel wire, $\bar{A}HV < (-9500 \times \ln(D) + 30000) \times \exp(-0.003 \times Rp\ 0.2)$ is satisfied, and a tensile strength TS of the drawn steel wire is 1770 MPa or higher.

IPC 8 full level
C22C 38/00 (2006.01); **C21D 8/06** (2006.01); **C22C 38/32** (2006.01)

CPC (source: EP KR US)
C21D 6/002 (2013.01 - US); **C21D 6/005** (2013.01 - US); **C21D 6/008** (2013.01 - US); **C21D 8/06** (2013.01 - KR); **C21D 8/065** (2013.01 - US); **C21D 9/525** (2013.01 - EP US); **C21D 9/5732** (2013.01 - EP); **C22C 38/00** (2013.01 - EP); **C22C 38/002** (2013.01 - US); **C22C 38/02** (2013.01 - EP KR US); **C22C 38/04** (2013.01 - EP KR US); **C22C 38/06** (2013.01 - KR US); **C22C 38/12** (2013.01 - EP KR); **C22C 38/14** (2013.01 - EP KR); **C22C 38/18** (2013.01 - KR); **C22C 38/22** (2013.01 - EP US); **C22C 38/24** (2013.01 - EP US); **C22C 38/26** (2013.01 - US); **C22C 38/28** (2013.01 - EP US); **C22C 38/32** (2013.01 - EP US); **C21D 8/06** (2013.01 - EP); **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

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EP 3486345 A1 20190522; **EP 3486345 A4 20191225**; CN 109196132 A 20190111; JP 6687112 B2 20200422; JP WO2018012625 A1 20190228; KR 20180132925 A 20181212; MX 2018014590 A 20190314; US 2020370142 A1 20201126; WO 2018012625 A1 20180118

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