

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, $\bar{A} \text{ HV}$ represents a standard deviation of a Vickers hardness of the surface of the drawn steel wire, and $R_p 0.2$ represents a yield strength of the drawn steel wire, $\bar{A} \text{ HV} < (-9500 \times \ln(D) + 30000) \times \exp(-0.003 \times R_p 0.2)$ 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)
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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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