

Title (en)  
WIRE ROD AND MANUFACTURING METHOD THEREFOR

Title (de)  
WALZDRAHT UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)  
FIL MACHINE ET PROCÉDÉ POUR LE FABRIQUER

Publication  
**EP 3533898 A4 20200304 (EN)**

Application  
**EP 17866036 A 20171030**

Priority  
• JP 2016211590 A 20161028  
• JP 2017039166 W 20171030

Abstract (en)  
[origin: EP3533898A1] A wire rod according to an embodiment has a predetermined chemical composition, in which, in a structure observed in a central part of a cross section of the wire rod, the area fraction of pearlite is 90.0% or more, the area fraction of pro-eutectoid cementite is 1.00% or less, the average thickness of the pro-eutectoid cementite is 0.25  $\mu\text{m}$  or less, the total length of the pro-eutectoid cementite per unit area is less than 40.0 mm/mm, the tensile strength satisfies Formula (1), and the diameter is 3.0 to 5.5 mm.

IPC 8 full level  
**C21D 8/06** (2006.01); **C21D 9/573** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/18** (2006.01); **C22C 38/22** (2006.01); **C22C 38/30** (2006.01); **C22C 38/32** (2006.01); **C22C 38/40** (2006.01)

CPC (source: EP KR)  
**C21D 8/06** (2013.01 - EP KR); **C21D 8/065** (2013.01 - EP); **C21D 9/52** (2013.01 - KR); **C21D 9/5732** (2013.01 - EP); **C22C 38/02** (2013.01 - EP); **C22C 38/04** (2013.01 - EP); **C22C 38/18** (2013.01 - EP); **C22C 38/22** (2013.01 - EP); **C22C 38/30** (2013.01 - EP); **C22C 38/32** (2013.01 - EP); **C22C 38/40** (2013.01 - EP); **C22C 38/44** (2013.01 - KR); **C22C 38/54** (2013.01 - KR); **C22C 38/60** (2013.01 - KR); **C21D 2211/009** (2013.01 - EP)

Citation (search report)  
• [A] US 2012318410 A1 20121220 - TARUI TOSHIMI [JP], et al  
• [A] US 2006048864 A1 20060309 - NAGAO MAMORU [JP], et al  
• [A] EP 1900837 A1 20080319 - NIPPON STEEL CORP [JP]  
• [A] US 2016145713 A1 20160526 - YAMASASKI SHINGO [JP], et al  
• [A] US 2005155672 A1 20050721 - NAGAO MAMORU [JP]  
• See references of WO 2018079781A1

Cited by  
US2021395868A1

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

DOCDB simple family (publication)  
**EP 3533898 A1 20190904**; **EP 3533898 A4 20200304**; **EP 3533898 B1 20201202**; CN 109963960 A 20190702; CN 109963960 B 20210409; JP 6733741 B2 20200805; JP WO2018079781 A1 20190919; KR 102247234 B1 20210503; KR 20190073456 A 20190626; WO 2018079781 A1 20180503

DOCDB simple family (application)  
**EP 17866036 A 20171030**; CN 201780065792 A 20171030; JP 2017039166 W 20171030; JP 2018547829 A 20171030; KR 20197014444 A 20171030