

Title (en)

HOT ROLLED BAR OR HOT ROLLED WIRE ROD, COMPONENT, AND MANUFACTURING METHOD OF HOT ROLLED BAR OR HOT ROLLED WIRE ROD

Title (de)

WARMGEWALZTER STAB ODER WARMGEWALZTER WALZDRAHT, KOMPONENTE UND HERSTELLUNGSVERFAHREN FÜR WARMGEWALZTEN STAB ODER WARMGEWALZTEN WALZDRAHT

Title (fr)

BARRE LAMINÉE À CHAUD OU FIL MACHINE LAMINÉ À CHAUD, COMPOSANT ET PROCÉDÉ DE FABRICATION D'UNE BARRE LAMINÉE À CHAUD OU FIL MACHINE LAMINÉ À CHAUD

Publication

**EP 3279361 B1 20200429 (EN)**

Application

**EP 16773271 A 20160331**

Priority

- JP 2015071714 A 20150331
- JP 2016061635 W 20160331

Abstract (en)

[origin: EP3279361A1] The present invention adopts a hot rolled bar or hot rolled wire rod including a chemical composition including, by mass %, C: 0.05 to 0.30%, Si: 0.30 to 0.60%, Mn: 0.40 to 1.0%, S: 0.008 to less than 0.040%, Cr: 1.60 to 2.00%, Mo: 0.1% or less, Al: 0.025 to 0.05%, N: 0.010 to 0.025%, Ti: 0.003% or less, Bi: 0.0001 to 0.0050%, and a remainder including Fe and impurities, in which amounts of P and O in the impurities are respectively P: 0.025% or less and O: 0.002% or less; in which a microstructure includes ferrite-pearlite or ferrite-pearlite-bainite, and an Expression (1) is satisfied.  $1.70 \leq Cr + 2 \times Mo \leq 2.10$

IPC 8 full level

**B21B 1/16** (2006.01); **C21D 6/00** (2006.01); **C21D 8/06** (2006.01); **C21D 9/52** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/20** (2006.01); **C22C 38/22** (2006.01); **C22C 38/26** (2006.01); **C22C 38/28** (2006.01); **C22C 38/42** (2006.01); **C22C 38/50** (2006.01)

CPC (source: EP KR US)

**B21B 1/16** (2013.01 - EP KR US); **C21D 6/002** (2013.01 - EP US); **C21D 6/004** (2013.01 - EP US); **C21D 6/005** (2013.01 - EP US); **C21D 6/008** (2013.01 - EP US); **C21D 8/06** (2013.01 - EP KR US); **C21D 8/065** (2013.01 - EP US); **C21D 9/525** (2013.01 - EP US); **C22C 38/00** (2013.01 - EP US); **C22C 38/001** (2013.01 - EP US); **C22C 38/002** (2013.01 - EP KR US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP KR US); **C22C 38/06** (2013.01 - EP US); **C22C 38/20** (2013.01 - EP US); **C22C 38/22** (2013.01 - EP KR US); **C22C 38/26** (2013.01 - EP US); **C22C 38/28** (2013.01 - EP KR US); **C22C 38/42** (2013.01 - EP US); **C22C 38/50** (2013.01 - EP KR US); **C21D 2211/002** (2013.01 - EP US); **C21D 2211/005** (2013.01 - EP US); **C21D 2211/009** (2013.01 - EP US)

Cited by

CN108906884A

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 3279361 A1 20180207**; **EP 3279361 A4 20181024**; **EP 3279361 B1 20200429**; CN 107429359 A 20171201; CN 107429359 B 20200519; JP 6465206 B2 20190206; JP WO2016159392 A1 20180208; KR 102010684 B1 20190813; KR 20170121267 A 20171101; US 2018355455 A1 20181213; WO 2016159392 A1 20161006

DOCDB simple family (application)

**EP 16773271 A 20160331**; CN 201680018922 A 20160331; JP 2016061635 W 20160331; JP 2017510277 A 20160331; KR 20177027440 A 20160331; US 201615562321 A 20160331