

Title (en)
HOT-ROLLED BAR MEMBER, PART, AND HOT-ROLLED BAR MEMBER MANUFACTURING METHOD

Title (de)
WARMGEWALZTES STANGENELEMENT, TEIL UND HERSTELLUNGSVERFAHREN FÜR WARMGEWALZTES STANGENELEMENT

Title (fr)
ÉLÉMENT LAMINÉ À CHAUD DE TYPE BARRE, PIÈCE ET PROCÉDÉ DE FABRICATION D'UN ÉLÉMENT LAMINÉ À CHAUD DE TYPE BARRE

Publication
EP 3279361 A1 20180207 (EN)

Application
EP 16773271 A 20160331

Priority
• JP 2015071714 A 20150331
• JP 2016061635 W 20160331

Abstract (en)
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.
$$1.70 \leq \text{Cr} + 2 \times \text{Mo} \leq 2.10$$

IPC 8 full level
C22C 38/00 (2006.01); **B21B 1/16** (2006.01); **C21D 6/00** (2006.01); **C21D 8/06** (2006.01); **C21D 9/52** (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

Designated extension state (EPC)
BA ME

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