

Title (en)

STEEL, CARBURIZED STEEL COMPONENT, AND CARBURIZED STEEL COMPONENT PRODUCTION METHOD

Title (de)

STAHL, KOMPONENTE AUS EINSATZGEHÄRTETEM STAHL UND HERSTELLUNGSVERFAHREN FÜR KOMPONENTE AUS EINSATZGEHÄRTETEM STAHL

Title (fr)

ACIER, CONSTITUANT D'ACIER CÉMENTÉ, ET PROCÉDÉ DE PRODUCTION DE CONSTITUANT D'ACIER CÉMENTÉ

Publication

EP 3382051 A1 20181003 (EN)

Application

EP 16868681 A 20161125

Priority

- JP 2015232118 A 20151127
- JP 2016084997 W 20161125

Abstract (en)

A steel according to an aspect of the present invention has a chemical composition within a predetermined range, in which a hardenability index C_{eq} ranges from greater than 7.5 to smaller than 44.0, an AlN precipitation index I_{AlN} ranges from greater than 0.00030 to smaller than 0.00110, a metallographic structure includes ferrite ranging from 85 to 100 area%, an average distance between sulfides, which are observed in a cross section parallel to a rolling direction of the steel and have an equivalent circle diameter ranging from 1 μm or greater to smaller than 2 μm , is shorter than 30.0 μm , and a presence density of the sulfides, which are observed in the cross section parallel to the rolling direction of the steel and have an equivalent circle diameter ranging from 1 μm or greater to smaller than 2 μm , is 300 pieces/mm² or more.

IPC 8 full level

C22C 38/00 (2006.01); **C21D 1/06** (2006.01); **C21D 8/06** (2006.01); **C21D 9/28** (2006.01); **C21D 9/32** (2006.01); **C22C 38/60** (2006.01); **C23C 8/22** (2006.01); **C23C 8/80** (2006.01)

CPC (source: EP KR US)

C21D 1/06 (2013.01 - KR US); **C21D 8/005** (2013.01 - EP US); **C21D 8/06** (2013.01 - KR); **C21D 8/065** (2013.01 - EP US); **C21D 9/28** (2013.01 - KR US); **C21D 9/32** (2013.01 - KR US); **C22C 38/00** (2013.01 - EP US); **C22C 38/001** (2013.01 - EP KR US); **C22C 38/002** (2013.01 - EP US); **C22C 38/005** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP KR US); **C22C 38/04** (2013.01 - EP KR US); **C22C 38/06** (2013.01 - EP KR US); **C22C 38/20** (2013.01 - EP US); **C22C 38/22** (2013.01 - EP US); **C22C 38/24** (2013.01 - EP US); **C22C 38/26** (2013.01 - EP US); **C22C 38/28** (2013.01 - EP US); **C22C 38/32** (2013.01 - KR); **C22C 38/54** (2013.01 - EP US); **C22C 38/60** (2013.01 - EP US); **C23C 8/22** (2013.01 - EP KR US); **C23C 8/32** (2013.01 - US); **C23C 8/80** (2013.01 - EP KR US); **C21D 2211/004** (2013.01 - EP US); **C21D 2211/005** (2013.01 - EP 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

DOCDB simple family (publication)

EP 3382051 A1 20181003; **EP 3382051 A4 20190619**; CN 108368574 A 20180803; JP 6468366 B2 20190213; JP WO2017090738 A1 20180913; KR 102099767 B1 20200410; KR 20180072778 A 20180629; US 2018347025 A1 20181206; WO 2017090738 A1 20170601

DOCDB simple family (application)

EP 16868681 A 20161125; CN 201680068366 A 20161125; JP 2016084997 W 20161125; JP 2017552734 A 20161125; KR 20187014319 A 20161125; US 201615778153 A 20161125