

Title (en)
STEEL COMPOSITION

Title (de)
STAHLZUSAMMENSETZUNG

Title (fr)
COMPOSITION D'ACIER

Publication
EP 3472363 A1 20190424 (FR)

Application
EP 17737334 A 20170616

Priority
• FR 1655664 A 20160617
• FR 2017051584 W 20170616

Abstract (en)
[origin: WO2017216500A1] The present invention relates to a case-hardenable and/or nitridable steel composition comprising, in percentages by weight of the total composition: carbon: 0.05-0.40, preferably 0.10-0.30; chromium: 2.50-5.00, preferably 3.00-4.50; molybdenum: 4.00-6.00; tungsten: 0.01-1.80, preferably 0.02-1.50; vanadium: 1.00-3.00, preferably 1.50-2.50; nickel: 2.00-4.00; cobalt: 2.00-8.00, preferably 3.00-7.00; iron: balance and also the inevitable impurities, optionally additionally comprising one or more of the following elements: niobium: ≤ 2.00 ; nitrogen: ≤ 0.50 , preferably ≤ 0.20 ; silicon: ≤ 0.70 , preferably 0.05-0.50; manganese: ≤ 0.70 , preferably 0.05-0.50; aluminum: ≤ 0.15 , preferably ≤ 0.10 ; the combined content of niobium + vanadium being within the range 1.00-3.50; and the content of carbon + nitrogen being within the range 0.05-0.50. It also relates to the process for the manufacture thereof, to the steel blank obtained and to a mechanical member comprising same.

IPC 8 full level
C21D 9/36 (2006.01); **C21D 1/06** (2006.01); **C21D 1/18** (2006.01); **C21D 9/40** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/44** (2006.01); **C22C 38/46** (2006.01); **C22C 38/52** (2006.01); **C23C 8/22** (2006.01); **C23C 8/26** (2006.01); **C23C 8/32** (2006.01); **C23C 8/80** (2006.01)

CPC (source: EP US)
C21D 1/06 (2013.01 - EP); **C21D 6/004** (2013.01 - EP US); **C21D 6/005** (2013.01 - US); **C21D 6/007** (2013.01 - US); **C21D 6/008** (2013.01 - US); **C21D 8/005** (2013.01 - US); **C21D 9/36** (2013.01 - EP); **C21D 9/40** (2013.01 - EP); **C22C 33/0257** (2013.01 - EP); **C22C 38/001** (2013.01 - US); **C22C 38/002** (2013.01 - US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/06** (2013.01 - US); **C22C 38/42** (2013.01 - US); **C22C 38/44** (2013.01 - EP US); **C22C 38/46** (2013.01 - EP US); **C22C 38/52** (2013.01 - EP US); **C23C 8/22** (2013.01 - EP US); **C23C 8/26** (2013.01 - EP US); **C23C 8/32** (2013.01 - EP US); **C23C 8/80** (2013.01 - EP US); **B22F 2998/10** (2013.01 - EP); **C21D 1/18** (2013.01 - EP); **C21D 2211/001** (2013.01 - US); **C21D 2241/02** (2013.01 - EP)

C-Set (source: EP)
B22F 2998/10 + B22F 9/082 + B22F 3/15

Cited by
WO2024008331A1

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)
WO 2017216500 A1 20171221; CN 109790594 A 20190521; CN 117867408 A 20240412; EP 3472363 A1 20190424; FR 3052789 A1 20171222; FR 3052789 B1 20180713; JP 2019522732 A 20190815; JP 7165128 B2 20221102; US 10865457 B2 20201215; US 2019338383 A1 20191107

DOCDB simple family (application)
FR 2017051584 W 20170616; CN 201780047104 A 20170616; CN 202410051465 A 20170616; EP 17737334 A 20170616; FR 1655664 A 20160617; JP 2019518154 A 20170616; US 201716310267 A 20170616