

Title (en)

Steel for manufacturing of high strength elements with an excellent low temperature toughness and use thereof

Title (de)

Stahl zur Herstellung von hochfesten Bauteilen mit herausragender Tieftemperaturzähigkeit und Verwendungen eines solchen Stahls

Title (fr)

Acier pour la fabrication d'éléments à haute résistance mécanique et excellente ténacité aux basses températures et son utilisation

Publication

EP 1561833 B1 20070411 (DE)

Application

EP 04002612 A 20040205

Priority

EP 04002612 A 20040205

Abstract (en)

[origin: EP1561833A1] Steel contains (in wt.%): 0.08-0.25 carbon, 0.10-0.30 silicon, 0.80-1.60 manganese, not more than 0.020 phosphorus, not more than 0.015 sulfur, 0.40-0.80 chromium, 0.30-0.50 molybdenum, 0.70-1.20 nickel, 0.020-0.060 aluminum, 0.007-0.018 nitrogen, not more than 0.15 vanadium, not more than 0.07 niobium and balance iron. The sum of phosphorus and sulfur is not more than 0.030 wt.% and the sum of vanadium and niobium is at least 0.020 wt.%.

IPC 8 full level

C22C 38/00 (2006.01)

CPC (source: EP US)

C22C 38/02 (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/44** (2013.01 - EP US)

Cited by

CN110484818A; WO2007009517A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 1561833 A1 20050810; **EP 1561833 B1 20070411**; AT E359382 T1 20070515; BR PI0503588 A 20060307; BR PI0503588 B1 20130910; CN 1764734 A 20060426; CN 1764734 B 20101208; DE 502004003457 D1 20070524; DK 1561833 T3 20070820; ES 2286518 T3 20071201; JP 2007520633 A 20070726; US 2007107808 A1 20070517; WO 2005075693 A1 20050818; ZA 200507292 B 20070425

DOCDB simple family (application)

EP 04002612 A 20040205; AT 04002612 T 20040205; BR PI0503588 A 20050204; CN 200580000079 A 20050204; DE 502004003457 T 20040205; DK 04002612 T 20040205; EP 2005001163 W 20050204; ES 04002612 T 20040205; JP 2006551811 A 20050204; US 55150605 A 20050204; ZA 200507292 A 20050909