

Title (en)
STEEL ALLOY

Title (de)
STAHLLEGIERUNG

Title (fr)
ALLIAGE D'ACIER

Publication
EP 2396440 A1 20111221 (DE)

Application
EP 10703075 A 20100210

Priority
• EP 2010051622 W 20100210
• DE 102009008285 A 20090210

Abstract (en)
[origin: WO2010092067A1] The invention relates to an alloy for a tool steel, comprising the following alloy components in weight percent: 0.5% - 0.7% carbon, 1.80% - 2.50% chromium; 0.90 - 1.20% molybdenum; 3.50% - 5.50% nickel, and 0.60% - 1.50% vanadium. The correspondingly alloyed steel is outstandingly suited for heat treatments to influence the strength. By means of a carbon component of less than 0.7%, a partially martensitic metal microstructure that still has a high ductility can be provided by way of a hardening method. By means of case hardening, the carbon component can be greater than 0.7% in some areas on the outside of workpieces.

IPC 8 full level
C22C 38/02 (2006.01); **C22C 38/04** (2006.01); **C22C 38/44** (2006.01); **C22C 38/46** (2006.01)

CPC (source: EP US)
C21D 1/06 (2013.01 - EP US); **C21D 6/004** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/44** (2013.01 - EP US); **C22C 38/46** (2013.01 - EP US); **C21D 2211/001** (2013.01 - EP US); **C21D 2211/008** (2013.01 - EP US); **Y10T 83/9447** (2015.04 - EP US)

Citation (search report)
See references of WO 2010092067A1

Citation (third parties)
Third party :
SPIEKERMANN P.: "LEGIERUNGEN - EIN BESONDERES PATENTRECHTLICHES PROBLEM? - LEGIERUNGSPRÜFUNG IM EUROPÄISCHEN PATENTAMT", MITTEILUNGEN DER DEUTSCHEN PATENTANWÄLTE, 1 January 1993 (1993-01-01), pages 178 - 190, XP000961882

Cited by
CN107699824A

Designated contracting state (EPC)
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 SE SI SK SM TR

Designated extension state (EPC)
AL BA RS

DOCDB simple family (publication)
WO 2010092067 A1 20100819; CN 102308014 A 20120104; DE 102009008285 A1 20101125; DE 202010018445 U1 20161017; EP 2396440 A1 20111221; US 2012000336 A1 20120105

DOCDB simple family (application)
EP 2010051622 W 20100210; CN 201080014016 A 20100210; DE 102009008285 A 20090210; DE 202010018445 U 20100210; EP 10703075 A 20100210; US 201113207330 A 20110810