

Title (en)  
Hot-work tool-steel article

Title (de)  
Warmarbeitsstahlgegenstand

Title (fr)  
Article d'acier à outil pour travail à chaud

Publication  
**EP 1300482 B1 20051221 (DE)**

Application  
**EP 02450181 A 20020827**

Priority  
AT 15652001 A 20011003

Abstract (en)  
[origin: EP1300482A1] Heat-deviating steel object is made from a composition containing (in wt.%): 0.451-0.598 carbon, 0.11-0.29 silicon, 0.11-0.39 manganese, 4.21-4.98 chromium, 2.81-3.29 molybdenum, 0.41-0.69 vanadium and a balance of iron and impurities. The object has a hardness of at least 58 HRC at an impact bending force of at least 170 J and a notched bar impact work of at least 11 J. <??>Preferred Features: The ratio of the concentration of vanadium to carbon is 0.82-1.38. The ratio of chromium + molybdenum + vanadium is 15.2 to 18.4.

IPC 1-7  
**C22C 38/18**; **C22C 38/22**; **C22C 38/24**

IPC 8 full level  
**C21D 6/00** (2006.01); **C22C 38/00** (2006.01); **C22C 38/22** (2006.01); **C22C 38/24** (2006.01); **C22C 38/60** (2006.01); **C21D 1/18** (2006.01)

CPC (source: EP US)  
**C22C 38/22** (2013.01 - EP US); **C22C 38/24** (2013.01 - EP US); **C21D 1/18** (2013.01 - EP US)

Cited by  
EP2196553A1; DE102018113600A1; EP2194155A1; AU2009240807B2; EP1511872B1; US9328405B2; US8557056B2; EP3228724A1; EP3050986B1; EP2621653B1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

DOCDB simple family (publication)  
**EP 1300482 A1 20030409**; **EP 1300482 B1 20051221**; AT 410447 B 20030425; AT A15652001 A 20020915; AT E313650 T1 20060115; CA 2405278 A1 20030403; CA 2405278 C 20070731; DE 50205334 D1 20060126; DK 1300482 T3 20060418; ES 2254638 T3 20060616; JP 2003155540 A 20030530; JP 3867272 B2 20070110; PT 1300482 E 20060531; SI 1300482 T1 20060430; US 2003098097 A1 20030529; US 6773662 B2 20040810

DOCDB simple family (application)  
**EP 02450181 A 20020827**; AT 02450181 T 20020827; AT 15652001 A 20011003; CA 2405278 A 20020925; DE 50205334 T 20020827; DK 02450181 T 20020827; ES 02450181 T 20020827; JP 2002274052 A 20020816; PT 02450181 T 20020827; SI 200230254 T 20020827; US 26176802 A 20021002