

Title (en)
Hot work tool steel and steel product using the same

Title (de)
Warmarbeitsstahl und Stahlprodukt damit

Title (fr)
Acier pour outil de travail à chaud et produit d'acier l'utilisant

Publication
EP 2270246 A1 20110105 (EN)

Application
EP 10006151 A 20100614

Priority
JP 2009143376 A 20090616

Abstract (en)
The present invention provides a hot work tool steel containing: 0.20#C#0.50 mass%, 0.01#Si#0.25 mass%, 0.50<Mn#1.50 mass%, 5.24<Cr#9.00 mass%, 1.24<Mo<2.95 mass%, and 0.30<V<0.70 mass%, with the balance being Fe and unavoidable impurities; and a steel product using the hot work tool steel. The hot work tool steel of the present invention is assured of machinability industrially allowing for working into a die shape and enhanced in the thermal conductivity and impact value as compared with general-purpose die steel (for example, JIS SKD61).

IPC 8 full level
C22C 33/00 (2006.01); **C22C 33/04** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/22** (2006.01); **C22C 38/24** (2006.01)

CPC (source: EP KR)
C21D 6/002 (2013.01 - EP KR); **C21D 7/13** (2013.01 - EP KR); **C22C 38/02** (2013.01 - EP KR); **C22C 38/04** (2013.01 - EP KR); **C22C 38/22** (2013.01 - EP KR); **C22C 38/24** (2013.01 - EP KR); **C22C 38/26** (2013.01 - EP KR); **C22C 38/28** (2013.01 - EP KR); **C22C 38/30** (2013.01 - EP KR); **C22C 38/42** (2013.01 - EP KR); **C22C 38/60** (2013.01 - KR)

Citation (applicant)
• JP H06322483 A 19941122 - DAIDO STEEL CO LTD
• JP H03402 A 19910107 - SUMITOMO METAL IND
• JP H0762494 A 19950307 - DAIDO STEEL CO LTD
• JP S6059053 A 19850405 - DAIDO STEEL CO LTD
• JP H08100239 A 19960416 - DAIDO STEEL CO LTD
• JP 2008056982 A 20080313 - DAIDO STEEL CO LTD
• JP 2004183008 A 20040702 - SUMITOMO METAL IND
• JP 2005307242 A 20051104 - HONDA MOTOR CO LTD, et al
• JP S6462444 A 19890308 - KAWASAKI STEEL CO
• JP 2008121032 A 20080529 - DAIDO STEEL CO LTD

Citation (search report)
• [X1] EP 1696045 A1 20060830 - DAIDO STEEL CO LTD [JP]
• [X1] JP 2003268486 A 20030925 - NIPPON KOSHUHA STEEL CO LTD
• [X1] JP 2007146263 A 20070614 - DAIDO STEEL CO LTD

Cited by
US10975460B2; CN111187968A; US2016215375A1; EP3636791A1; EP3550051A1; US11377718B2; US10988823B2; US11319621B2; EP4095281A1; US2022380874A1; US2016144468A1; US9434034B2; EP3173500A4; CN117385287A; US10533235B2; TWI818549B; EP3050649A1

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 SE SI SK SM TR

Designated extension state (EPC)
BA ME RS

DOCDB simple family (publication)
EP 2270246 A1 20110105; CN 101921959 A 20101222; JP 2011001572 A 20110106; KR 20100135205 A 20101224

DOCDB simple family (application)
EP 10006151 A 20100614; CN 201010203511 A 20100612; JP 2009143376 A 20090616; KR 20100057288 A 20100616