

Title (en)
MACHINE PART AND METHOD FOR MANUFACTURING SAME

Title (de)
MASCHINENTEIL UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)
PIECE DETACHEE DE MACHINE ET SON PROCEDE DE FABRICATION

Publication
EP 1548141 A4 20060208 (EN)

Application
EP 03798399 A 20030911

Priority

- JP 0311612 W 20030911
- JP 2002279833 A 20020925
- JP 2003037802 A 20030217

Abstract (en)

[origin: EP1548141A1] A mechanical component 1 composed of a steel is surface-hardened by nitriding, and specifically has a surficial layer 2 raised in the surface hardness by the nitriding, and an inner portion 3 not affected by the nitriding and showing a nearly constant hardness. Vickers hardness of the inner portion 3 is adjusted to 190 to 260 HV, Vickers hardness of the surficial portion 2 measured at a reference position corresponded to a 50 μ m depth from the component surface is adjusted to 340 to 460 HV, and effective depth of hardened layer measured from the component surface 4, where a Vickers hardness of 270 HV is achieved, is adjusted to 0.3 mm or more. This makes it possible to provide a mechanical component which is composed of a steel and surface-hardened by nitriding, and is successfully improved in the strength and bending straightening property, and also to provide a method of fabricating the same. <IMAGE>

IPC 1-7
C22C 38/00; **C23C 8/26**; **C23C 8/50**

IPC 8 full level
C21D 1/06 (2006.01); **C21D 9/30** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/42** (2006.01); **C22C 38/58** (2006.01); **C22C 38/60** (2006.01); **C23C 8/26** (2006.01); **C23C 8/50** (2006.01)

CPC (source: EP US)
C21D 1/06 (2013.01 - EP US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/42** (2013.01 - EP US); **C23C 8/26** (2013.01 - EP US); **C23C 8/50** (2013.01 - EP US)

Citation (search report)

- [A] US 6083455 A 20000704 - KURITA MASATO [JP], et al
- [X] PATENT ABSTRACTS OF JAPAN vol. 1998, no. 02 30 January 1998 (1998-01-30)
- [A] PATENT ABSTRACTS OF JAPAN vol. 1995, no. 04 31 May 1995 (1995-05-31)
- [A] PATENT ABSTRACTS OF JAPAN vol. 1999, no. 05 31 May 1999 (1999-05-31)
- [A] PATENT ABSTRACTS OF JAPAN vol. 1998, no. 13 30 November 1998 (1998-11-30)
- [A] PATENT ABSTRACTS OF JAPAN vol. 1998, no. 04 31 March 1998 (1998-03-31)
- See references of WO 2004029314A1

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EP1803831A3

Designated contracting state (EPC)
DE GB

DOCDB simple family (publication)
EP 1548141 A1 20050629; **EP 1548141 A4 20060208**; **EP 1548141 B1 20111221**; **EP 1548141 B8 20120425**; CN 100594249 C 20100317; CN 1685073 A 20051019; JP 2004162161 A 20040610; JP 4230794 B2 20090225; US 2006048860 A1 20060309; WO 2004029314 A1 20040408

DOCDB simple family (application)
EP 03798399 A 20030911; CN 03822868 A 20030911; JP 0311612 W 20030911; JP 2003037802 A 20030217; US 52731805 A 20050310