

Title (en)

WEAR-RESISTANT CAMSHAFT AND METHOD OF PRODUCING THE SAME

Title (de)

VERSCHLEISSBESTÄNDIGE NOCKENWELLE UND VERFAHREN ZU IHRER HERSTELLUNG

Title (fr)

ARBRE A CAMES RESISTANT A L'USURE ET PROCEDE PERMETTANT DE LE PRODUIRE

Publication

**EP 0925377 A1 19990630 (DE)**

Application

**EP 97943775 A 19970912**

Priority

- DE 9702072 W 19970912
- DE 19637464 A 19960913

Abstract (en)

[origin: DE19637464C1] The invention concerns a wear-resistant camshaft and a method of producing the same. Objects to which the invention is advantageously applicable include all cast-iron parts which are subject to wear as a result of lubricated friction. The wear-resistant camshaft consists of cast-iron and comprises a surface layer consisting of a ledeburitic recast layer with a high cementite portion and, lying therebelow, a martensitic hardening zone. According to the invention, the recast layer consists of finely dispersed ledeburitic cementite with thicknesses of  $\leq 0.1 \mu\text{m}$  and a metallic matrix comprising a phase mixture of martensite and/or bainite, residual austenite and less than 20 % finely laminated perlite with a distance of  $\leq 0.1 \mu\text{m}$  between the laminations. The hardening layer is formed from a phase mixture of martensite and/or bainite, partially dissolved perlite and residual austenite. This wear-resistant camshaft according to the invention is produced by means of a high-energy surface recasting method.

IPC 1-7

**C21D 9/30**; **C21D 5/00**; **C21D 1/09**

IPC 8 full level

**C21D 1/09** (2006.01); **C21D 5/00** (2006.01); **C21D 9/30** (2006.01); **F01L 1/047** (2006.01)

CPC (source: EP US)

**C21D 5/00** (2013.01 - EP US); **C21D 9/30** (2013.01 - EP US); **F01L 1/047** (2013.01 - EP US); **C21D 1/09** (2013.01 - EP US); **C21D 2211/007** (2013.01 - EP US); **Y10S 148/902** (2013.01 - EP US)

Citation (search report)

See references of WO 9811262A1

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

**DE 19637464 C1 19971009**; CZ 295308 B6 20050713; CZ 83899 A3 20000517; DE 59705796 D1 20020124; EP 0925377 A1 19990630; EP 0925377 B1 20011212; JP 2001503104 A 20010306; US 6398881 B1 20020604; WO 9811262 A1 19980319

DOCDB simple family (application)

**DE 19637464 A 19960913**; CZ 83899 A 19970912; DE 59705796 T 19970912; DE 9702072 W 19970912; EP 97943775 A 19970912; JP 51316198 A 19970912; US 25470499 A 19990519