

Title (en)

Use of a nitrogen-containing iron base alloy for machine members that are subjected to sliding surface friction

Title (de)

Verwendung einer stickstoffhaltigen Eisenbasislegierung für Maschinenteile, welche auf gleitende Flächenreibung beansprucht sind

Title (fr)

Utilisation d'un alliage ferreux contenant de l'azote pour pièces de machine soumises à une friction de surface coulissante

Publication

**EP 0710731 A3 19961127 (DE)**

Application

**EP 95890181 A 19951011**

Priority

AT 205194 A 19941104

Abstract (en)

[origin: EP0710731A2] The use of a ferrous alloy for the mfr. of machine parts subject to high wear by sliding surface rubbing. The ferrous alloy contains in wt. %: 0.35-1 pref. 0.4-0.8 C; max. 1 Si; max. 1.6, pref. 0.3-1.4 N; max. 1 pref. max. 0.8 Al; max. 2.0 Co; 14-25, pref. 16-19 Cr; 0.5-0.3, pref. 0.8-1.5 Mo; max. 3, pref. max. 1.5 Ni; 0.04-0.4, pref. 0.05-0.2 V; max. 3 W; max. 0.18 Nb max. 0.2 Ti. The sum of C and N is 0.5-1.2 (pref. 0.61-0.95) and the balance is Fe plus usual impurities. Also claimed are: (i) a plunger piston esp. for displacement of corrosive media consisting of the above ferrous alloy coated with a layer of PVD or CVD deposited carbide and/or oxide and/or nitride of Al and/or Ti; and (ii) a piston ring esp. for internal combustion engines consisting of the above ferrous alloy and opt. at least partly, esp. on the surface subject to rubbing, a nitride layer of thickness of at least 0.05 mm, esp. thicker than 0.2 mm.

IPC 1-7

**C22C 38/22**; **C22C 38/24**; **F16J 1/01**; **F16J 9/26**

IPC 8 full level

**C22C 38/22** (2006.01); **C22C 38/24** (2006.01)

CPC (source: EP US)

**C22C 38/22** (2013.01 - EP US); **C22C 38/24** (2013.01 - EP US)

Citation (search report)

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- [A] PATENT ABSTRACTS OF JAPAN vol. 018, no. 313 (C - 1212) 15 June 1994 (1994-06-15)
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DOCDB simple family (application)

**EP 95890181 A 19951011**; AT 205194 A 19941104; US 55387095 A 19951106