

Title (en)

SURFACE TREATMENT METHOD FOR MAGNESIUM ALLOYS AND MAGNESIUM ALLOY MEMBERS THUS TREATED

Title (de)

OBERFLÄCHENBEHANDLUNGSVERFAHREN FÜR MAGNESIUMLEGIERUNGEN UND ENTSPRECHEND BEHANDELTE TEILE AUS MAGNESIUMLEGIERUNG

Title (fr)

PROCEDE DE TRAITEMENT DESTINE AUX ALLIAGES DE MAGNESIUM ET ELEMENTS A BASE D'ALLIAGE DE MAGNESIUM TRAITE PAR CE PROCEDE

Publication

EP 1274881 A1 20030115 (EN)

Application

EP 01922818 A 20010329

Priority

- JP 2000099399 A 20000331
- US 0110031 W 20010329

Abstract (en)

[origin: WO0175190A1] The present invention provides a surface treatment method for magnesium alloys that can form a uniform, fine, and dense conversion coating on a magnesium alloy surface on which mold release agent, an oxide layer, and an alloying component (e.g., aluminum and zinc) segregation layer are potentially present, and also provides magnesium alloy members whose surface has been treated by the aforesaid surface treatment method. The surface treatment method of the present invention comprises a degreasing process to degrease the surface of the magnesium alloy, a chemically etching process to chemically etch the alloy, and a conversion treatment process to form a conversion coating. The chemical etching forms a magnesium phosphate coating having a coating weight of 10 to 2,000 mg/m², measured as phosphorus, by bringing the surface of the magnesium alloy into contact with an aqueous solution containing a phosphoric acid-type compound.

IPC 1-7

C23C 22/78; **C23C 22/73**; **C23C 22/18**; **C23C 22/44**; **C23C 22/12**

IPC 8 full level

C23C 22/08 (2006.01); **C23C 22/07** (2006.01); **C23C 22/12** (2006.01); **C23C 22/18** (2006.01); **C23C 22/23** (2006.01); **C23C 22/34** (2006.01); **C23C 22/36** (2006.01); **C23C 22/40** (2006.01); **C23C 22/44** (2006.01); **C23C 22/73** (2006.01); **C23C 22/78** (2006.01); **C23F 1/22** (2006.01); **C23F 1/40** (2006.01)

CPC (source: EP KR)

C23C 22/07 (2013.01 - KR); **C23C 22/12** (2013.01 - EP); **C23C 22/18** (2013.01 - EP); **C23C 22/34** (2013.01 - EP); **C23C 22/44** (2013.01 - EP); **C23C 22/73** (2013.01 - EP); **C23C 22/78** (2013.01 - EP); **C23F 1/22** (2013.01 - EP); **C23F 1/40** (2013.01 - EP)

Designated contracting state (EPC)

AT BE CH CY DE ES FR GB IT LI

DOCDB simple family (publication)

WO 0175190 A1 20011011; AU 4957901 A 20011015; CA 2405288 A1 20011011; CN 1317598 A 20011017; EP 1274881 A1 20030115; EP 1274881 A4 20041020; JP 2001288580 A 20011019; KR 20010095051 A 20011103; MX PA02009362 A 20030212; TW 544474 B 20030801

DOCDB simple family (application)

US 0110031 W 20010329; AU 4957901 A 20010329; CA 2405288 A 20010329; CN 01110089 A 20010330; EP 01922818 A 20010329; JP 2000099399 A 20000331; KR 20010016277 A 20010328; MX PA02009362 A 20010329; TW 90106833 A 20010323