

Title (en)
Surface treatment of titanium articles.

Title (de)
Oberflächenbehandlung von Titangegenständen.

Title (fr)
Traitement de surface d'objets de titane.

Publication
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Application
EP 87303900 A 19870430

Priority
JP 10053086 A 19860430

Abstract (en)
There is disclosed a titanium or titanium alloy article at least part of the surface of which comprises a surface treatment oxide covering produced by direct oxidation of the titanium or titanium alloy of the surface, the said surface treatment oxide covering comprising a hard titanium oxide outer layer as a wear surface. This process is especially suitable for treating those surfaces of engine parts, for example valves, valve retainers and connecting rods, that are either in contact or in sliding contact with other engine parts.

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C23C 8/16 (2006.01); **C23C 8/10** (2006.01)

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C23C 8/10 (2013.01)

Citation (search report)
• EP 0146284 A1 19850626 - SONY CORP [JP]
• DD 226018 A1 19850814 - ARDENNE MANFRED [DD]
• PATENT ABSTRACTS OF JAPAN, unexamined applications, C field, vol. 9, no. 271, October 29, 1985 THE PATENT OFFICE JAPANESE GOVERNMENT page 136 C 311; JP-A 60 121 276 (SONY K.K.)

Cited by
KR100786359B1; GB2211211B; EP2246582A3; EP0533128A1; EP0605444A4; EP0719874A1; EP0905271A4; EP1174593A3; GB2458518A; GB2458518B; US6210807B1; US8479704B2; US6833197B1; WO9802595A1; WO9904055A1

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