Title (en)

METAL SUBSTRATE OF IMPROVED SURFACE MORPHOLOGY

Publication

EP 0407349 A3 19920205 (EN)

Application

EP 90810492 A 19900628

Priority

US 37442989 A 19890630

Abstract (en)

[origin: EP0407349A2] A metal surface is now described having enhanced adhesion of subsequently applied coatings. The substrate metal of the article, such as a valve metal as represented by titanium, is provided with a highly desirable surface characteristic for subsequent coating application. This can be initiated by selection of a metal of desirable metallurgy and heat history, including prior heat treatment to provide surface grain boundaries which may be most readily etched. In subsequent etching operation, the surface is made to exhibit well defined, three dimensional grains with deep grain boundaries. Subsequently applied coatings, by penetrating into the etched intergranular valleys, are desirably locked onto the metal substrate surface and provide enhanced lifetime even in rugged commercial environments.

IPC 1-7

C23F 1/00; C25D 17/10; C25B 11/10

IPC 8 full level

C23C 18/08 (2006.01); **C21D 1/26** (2006.01); **C22C 14/00** (2006.01); **C23C 4/02** (2006.01); **C23C 4/06** (2006.01); **C23C 8/02** (2006.01); **C23C 26/00** (2006.01); **C23C 28/00** (2006.01); **C23F 1/00** (2006.01); **C23F 1/26** (2006.01); **C25B 11/00** (2006.01); **C25B 11/10** (2006.01); **C25C 7/02** (2006.01); **C25D 17/10** (2006.01); **C25D 17/12** (2006.01)

CPC (source: EP KR)

C23C 4/02 (2013.01 - EP); **C23C 4/06** (2013.01 - EP); **C23C 8/02** (2013.01 - EP); **C23C 26/00** (2013.01 - EP); **C23F 1/00** (2013.01 - EP); **C23F 1/26** (2013.01 - EP); **C25B 11/00** (2013.01 - EP); **C25C 7/02** (2013.01 - EP); **C25D 17/10** (2013.01 - EP); **C25F 3/00** (2013.01 - KR)

Citation (search report)

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- [A] EP 0063540 A2 19821027 - DIAMOND SHAMROCK CORP [US]
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Designated contracting state (EPC)

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