

Title (en)
Electrode for use in electrolytic processes and process for manufacturing it.

Title (de)
Elektrode für elektrolytische Verfahren und Verfahren zur Herstellung der Elektrode.

Title (fr)
Electrode pour procédés électrolytiques et sa fabrication.

Publication
EP 0407349 B1 19950517 (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 (examination)
US 4068025 A 19780110 - SAHM PETER

Cited by
CN113521384A; US5324407A; CN113755902A; EP0633327A1; EP0493326A3; CN100429332C; EP0576402A1; AU657248B2; EP2851453A1; CN104451764A; US2023092781A1; US9683300B2; WO9717478A1; WO2007045716A1; EP1162288A1

Designated contracting state (EPC)
AT BE CH DE DK ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)
EP 0407349 A2 19910109; **EP 0407349 A3 19920205**; **EP 0407349 B1 19950517**; AT E122735 T1 19950615; AU 5804190 A 19910103; AU 632591 B2 19930107; BR 9003037 A 19910820; CA 2018670 A1 19901231; DE 69019424 D1 19950622; DE 69019424 T2 19950914; ES 2071803 T3 19950701; GR 3017014 T3 19951130; JP 2721739 B2 19980304; JP H0347999 A 19910228; KR 100196661 B1 19990615; KR 910001096 A 19910130; NO 902922 D0 19900629; NO 902922 L 19910102; TW 214570 B 19931011

DOCDB simple family (application)
EP 90810492 A 19900628; AT 90810492 T 19900628; AU 5804190 A 19900629; BR 9003037 A 19900629; CA 2018670 A 19900611; DE 69019424 T 19900628; ES 90810492 T 19900628; GR 950402135 T 19950802; JP 17433590 A 19900629; KR 900009758 A 19900629; NO 902922 A 19900629; TW 79104580 A 19900605