

Title (en)

Process for surface treatment and for deposition of polyaniline for absorbing light

Title (de)

Prozess zur Oberflächenbehandlung und zur Deponierung von Polyanilin for absorbierendes Licht

Title (fr)

Procédé de preparation de surface et de dépôt de polyaniline pour absorber la lumière

Publication

EP 1029953 A1 20000823 (FR)

Application

EP 00400295 A 20000203

Priority

FR 9901440 A 19990208

Abstract (en)

Deposition of polyaniline layer on titanium comprises electropolymerization after hydrofluoric/nitric acid pickling, chemical conversion treatment and hydrolysis. Preferred Features: A titanium (alloy) substrate may be initially treated by alkaline degreasing for 10-15 minutes at 55-65 degrees C in a bath containing 36-44 g/l sodium tripolyphosphate (Na₅P₃O₁₀), 40 g/l sodium tetraborate (Na₂B₄O₇·10H₂O), 10 ml/l Ref. 631 surfactant and sodium hydroxide to give pH 8.5-9.5 and by abrasive grit blasting to a surface roughness (Ra) of 10-30 µm. The hydrofluoric/nitric acid pickling is carried out for 2-2.5 minutes at 18-22 degrees C in a bath containing 100-180 ml nitric acid (41 degrees Be), 40-60 ml hydrofluoric acid (48%), 1 g F68 additive, 1.5 g TA6V (metal) and 11 qsp distilled water. The deposit is baked at 40-160 degrees C for 30 minutes to 2 hours.

Abstract (fr)

L'invention est relative à un procédé de dépôt de polyaniline absorbant la lumière, en particulier sur un substrat de titane, le procédé comportant : un décapage fluonitrique ; un traitement de conversion chimique ; une hydrolyse ; et un dépôt de polyaniline par électropolymérisation. <IMAGE> <IMAGE>

IPC 1-7

C25D 13/20; **C25D 13/08**; **C25D 5/38**

IPC 8 full level

G02B 5/22 (2006.01); **C08G 73/06** (2006.01); **C23F 1/30** (2006.01); **C25D 5/38** (2006.01); **C25D 9/02** (2006.01); **C25D 13/06** (2006.01); **C25D 13/20** (2006.01)

CPC (source: EP US)

C25D 5/38 (2013.01 - EP US); **C25D 13/20** (2013.01 - EP US)

Citation (search report)

- [AD] US 5294694 A 19940315 - EPSTEIN ARTHUR J [US], et al
- [A] JINGSHUANG Z ET AL: "A NEW PROCESS OF ELECTROPLATING ON TITANIUM AND TITANIUM ALLOY FOR AEROSPACE", TRANSACTIONS OF THE INSTITUTE OF METAL FINISHING, vol. 74, no. PART 01, 1 January 1996 (1996-01-01), pages 25 - 27, XP000551992, ISSN: 0020-2967
- [A] CHEMICAL ABSTRACTS, vol. 117, no. 8, 24 August 1992, Columbus, Ohio, US; abstract no. 78637, GESKIN, V. M.: "Electrodeposition of polyaniline onto non-noble metals. I. Titanium" XP002120668 & J. CHIM. PHYS. PHYS.-CHIM. BIOL. (1992), 89(5), 1215-20, 1992

Cited by

WO03035933A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

US 6258242 B1 20010710; AT E244779 T1 20030715; DE 60003734 D1 20030814; DE 60003734 T2 20040415; DK 1029953 T3 20031027; EP 1029953 A1 20000823; EP 1029953 B1 20030709; ES 2202009 T3 20040401; FR 2789408 A1 20000811; FR 2789408 B1 20010420; JP 2000239894 A 20000905

DOCDB simple family (application)

US 50001500 A 20000208; AT 00400295 T 20000203; DE 60003734 T 20000203; DK 00400295 T 20000203; EP 00400295 A 20000203; ES 00400295 T 20000203; FR 9901440 A 19990208; JP 2000030501 A 20000208