

Title (en)  
METHOD OF NO-BATH PLASMA ELECTROLYTIC OXIDATION AND DEVICE FOR IMPLEMENTING THE SAME

Title (de)  
VERFAHREN ZUR ELEKTROLYTISCHEN PLASMAOXIDATION OHNE BAD UND VORRICHTUNG ZUR DURCHFÜHRUNG DES VERFAHRENS

Title (fr)  
PROC& XC9;D& XC9; D'OXYDATION & XC9;LECTROLYTIQUE AU PLASMA SANS BAIN ET DISPOSITIF POUR LA MISE EN & X152;UVRE DE CELUI-CI

Publication  
**EP 3752666 A4 20210407 (EN)**

Application  
**EP 19754582 A 20190212**

Priority  

- US 201862629719 P 20180213
- IL 2019050165 W 20190212

Abstract (en)  
[origin: WO2019159163A1] A method of no-bath plasma electrolytic oxidation of a workpiece made of a valve metal or an alloy thereof is disclosed. The aforesaid method comprises the steps of: (a) deploying the workpiece to form a first electrode; (b) providing an applicator of an electrolyte medium to form a second electrode; (c) forming a working gap between the first and second electrodes; (d) applying a voltage between the first and second electrodes; (e) delivering the electrolyte medium into the working gap between the first and second electrodes. The electrolyte medium selected from the group consisting of a foam electrolyte medium, a gel electrolyte medium, a pasteous electrolyte medium and any combination thereof.

IPC 8 full level  
**C25D 11/00** (2006.01); **C25D 11/02** (2006.01); **C25D 11/06** (2006.01); **C25D 11/26** (2006.01); **C25D 11/30** (2006.01); **C25D 17/12** (2006.01); **C25D 17/14** (2006.01)

CPC (source: EP US)  
**C25D 11/005** (2013.01 - EP US); **C25D 11/026** (2013.01 - EP); **C25D 11/06** (2013.01 - EP US); **C25D 11/26** (2013.01 - EP); **C25D 11/30** (2013.01 - EP); **C25D 17/06** (2013.01 - US); **C25D 17/10** (2013.01 - US); **C25D 17/12** (2013.01 - EP); **C25D 17/14** (2013.01 - EP US); **C25D 21/02** (2013.01 - US); **C25D 21/12** (2013.01 - US); **C25D 21/04** (2013.01 - EP)

Citation (search report)  

- [Y] US 2009250351 A1 20091008 - OSTROVSKY ILYA [IL]
- [XY] WO 2016093782 A1 20160616 - ISTANBUL TEKNİK UNIVERSİTESİ [TR]
- [Y] GB 2147008 A 19850501 - BRITISH AEROSPACE
- [Y] JP 2009013442 A 20090122 - DENKA HIMAKU KOGYO KK
- [A] KHORASANIAN M ET AL: "Microstructure and wear resistance of oxide coatings on Ti 6Al 4V produced by plasma electrolytic oxidation in an inexpensive electrolyte", SURFACE AND COATINGS TECHNOLOGY, ELSEVIER BV, AMSTERDAM, NL, vol. 206, no. 6, 17 September 2011 (2011-09-17), pages 1495 - 1502, XP028333557, ISSN: 0257-8972, [retrieved on 20110924], DOI: 10.1016/J.SURFCOAT.2011.09.038
- See references of WO 2019159163A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**WO 2019159163 A1 20190822**; EP 3752666 A1 20201223; EP 3752666 A4 20210407; US 2020370194 A1 20201126

DOCDB simple family (application)  
**IL 2019050165 W 20190212**; EP 19754582 A 20190212; US 202016992478 A 20200813