

Title (en)

METHOD TO CREATE FUNCTIONAL COATINGS ON MAGNESIUM

Title (de)

VERFAHREN ZUR ERZEUGUNG FUNKTIONELLER BESCHICHTUNGEN AUF MAGNESIUM

Title (fr)

PROCÉDÉ DE CRÉATION DE REVÊTEMENTS FONCTIONNELS MINCES SUR DU MAGNÉSIUM

Publication

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Application

EP 21792130 A 20210423

Priority

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- NZ 2021050068 W 20210423

Abstract (en)

[origin: WO2021215940A1] In example implementations, a method for producing a coating is provided. The method includes placing a magnesium substrate into an anodizing bath, applying a voltage for a first amount of time to form a micro-porous anodizing layer having a thickness of between (1) to (50) microns on the magnesium substrate, placing the magnesium substrate with the micro-porous anodizing layer in plating bath, wherein the plating bath comprises a metal and a complexing agent with a pH between (8) and (14), applying a first current to the plating bath for a second amount of time to form an interlock layer on the micro-porous anodizing layer, and applying a second current to the plating bath for a third amount of time to form a coating on the interlock layer.

IPC 8 full level

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CPC (source: AU EP KR US)

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Citation (search report)

- [YD] WO 2005017235 A1 20050224 - OKAYAMA PREFECTURE [JP], et al
- [Y] US 2018051388 A1 20180222 - HOU FENGYAN [NZ], et al
- [A] JP 2002235182 A 20020823 - TAIYO KAGAKU KOGYO CO LTD
- [Y] CN 103911645 A 20140709 - JIAXING LIGHT ALLOY TECHNOLOGY ENGINEERING CT CHINESE ACADEMY OF SCIENCES
- [Y] CN 102747406 A 20121024 - UNIV CHONGQING
- See also references of WO 2021215940A1

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