

Title (en)

METHOD FOR THE GALVANIC DEPOSITION OF ZINC AND ZINC ALLOY LAYERS FROM AN ALKALINE COATING BATH WITH REDUCED DEGRADATION OF ORGANIC BATH ADDITIVES

Title (de)

VERFAHREN ZUR GALVANISCHEN ABSCHEIDUNG VON ZINK- UND ZINKLEGIERUNGSÜBERZÜGEN AUS EINEM ALKALISCHEN BESCHICHTUNGSBAD MIT REDUZIERTEM ABBAU VON ORGANISCHEN BADZUSÄTZEN

Title (fr)

PROCÉDÉ DE DÉPÔT PAR PLACAGE DE REVÊTEMENTS EN ZINC ET EN ALLIAGE DE ZINC À PARTIR D'UN BAIN DE REVÊTEMENT ALCALIN À ÉLIMINATION RÉDUITE DES ADDITIFS DE BAIN ORGANIQUES

Publication

EP 3481976 B1 20200415 (DE)

Application

EP 18702306 A 20180205

Priority

- EP 17155082 A 20170207
- EP 2018052779 W 20180205

Abstract (en)

[origin: WO2018146041A1] The present invention relates to a method for electrodepositing zinc and zinc alloy coatings from an alkaline coating bath with reduced depletion of organic bath additives. This involves using as an anode an electrode which is insoluble in the bath, contains metallic manganese and/or manganese oxide and is produced from metallic manganese or a manganese-containing alloy, wherein the manganese-containing alloy contains at least 5% by weight manganese, or is produced from an electrically conductive carrier and a coating containing metallic manganese and/or manganese oxide that is applied thereto, or is produced from a composite material, wherein both the coating containing metallic manganese and/or manganese oxide and the composite material contain with respect to the total amount of manganese at least 5% by weight of manganese that is obtained from metallic manganese and manganese oxide. The method according to the invention is particularly suitable for the electrodepositing of zinc-nickel alloy coatings from alkaline zinc-nickel baths, since the formation of cyanides can be suppressed very effectively.

IPC 8 full level

C25D 3/56 (2006.01); **B23K 5/18** (2006.01); **C23C 4/02** (2006.01); **C23C 4/08** (2016.01); **C23C 4/11** (2016.01); **C23C 4/18** (2006.01);
C23C 28/00 (2006.01); **C25D 17/10** (2006.01); **C25D 21/14** (2006.01); **C25D 21/18** (2006.01)

CPC (source: EP KR RU US)

C23C 4/02 (2013.01 - EP KR US); **C23C 4/08** (2013.01 - EP KR US); **C23C 4/11** (2016.01 - EP KR US); **C23C 4/18** (2013.01 - EP KR US);
C23C 28/3225 (2013.01 - EP KR US); **C23C 28/345** (2013.01 - EP KR US); **C25D 3/22** (2013.01 - US); **C25D 3/56** (2013.01 - RU US);
C25D 3/565 (2013.01 - EP KR); **C25D 17/10** (2013.01 - EP KR US); **C25D 21/14** (2013.01 - US); **C25D 21/18** (2013.01 - US);
C25D 21/14 (2013.01 - EP); **C25D 21/18** (2013.01 - EP)

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

DOCDB simple family (publication)

EP 3358045 A1 20180808; BR 112019004029 A2 20190820; BR 112019004029 B1 20201027; CN 110325669 A 20191011;
CN 110325669 B 20201103; DK 3481976 T3 20200518; EP 3481976 A1 20190515; EP 3481976 B1 20200415; ES 2790584 T3 20201028;
HR P20200760 T1 20201016; HU E049752 T2 20201028; JP 2019530800 A 20191024; JP 6644952 B2 20200212; KR 102086616 B1 20200309;
KR 20190099388 A 20190827; MX 2019002586 A 20190918; PH 12019500424 A1 20190527; PH 12019500424 B1 20190527;
PL 3481976 T3 20201102; PT 3481976 T 20200518; RU 2724765 C1 20200625; SI 3481976 T1 20200831; TW 201842211 A 20181201;
TW I763777 B 20220511; US 11339492 B2 20220524; US 2019376200 A1 20191212; WO 2018146041 A1 20180816

DOCDB simple family (application)

EP 17155082 A 20170207; BR 112019004029 A 20180205; CN 201880003894 A 20180205; DK 18702306 T 20180205;
EP 18702306 A 20180205; EP 2018052779 W 20180205; ES 18702306 T 20180205; HR P20200760 T 20200511; HU E18702306 A 20180205;
JP 2019514818 A 20180205; KR 20197006596 A 20180205; MX 2019002586 A 20180205; PH 12019500424 A 20190227;
PL 18702306 T 20180205; PT 18702306 T 20180205; RU 2019115883 A 20180205; SI 201830052 T 20180205; TW 107103169 A 20180130;
US 201816325374 A 20180205