

### Title (en)

AQUEOUS, ALKALINE BATH, DEVOID OF CYANIDE, FOR DEPOSITING ELECTROPLATED ZINC ALLOY COATINGS

Title (de)

## WÄSSRIGES ALKALISCHES, CYANIDFREIES BAD ZUR GALVANISCHEN ABSCHEIDUNG VON ZINKLEGIERUNGSÜBERZÜGEN

### Title (fr)

BAIN AQUEUX, ALCALIN ET SANS CYANURE PERMETTANT LE DÉPÔT GALVANIQUE DE COUCHES D'ALLIAGE DE ZINC

## Publication

EP 2032742 A2 20090311 (DE)

## Application

EP 07726121 A 20070621

## Priority

- EP 2007005491 W 20070621
  - EP 06012766 A 20060621
  - EP 07726121 A 20070621

## Abstract (en)

[origin: EP1870495A1] Aqueous alkaline, cyanide free electrolyte bath (A) for depositing zinc and zinc alloy coatings on substrate surfaces comprises a zinc ion source and optionally a source for additional metal ions; hydroxide ions; a soluble polymer (I); and at least a pyridinium compound (Q). Aqueous alkaline, cyanide free electrolyte bath (A) for depositing zinc and zinc alloy coatings on substrate surfaces comprises a zinc ion source and optionally a source for additional metal ions; hydroxide ions; a soluble polymer (I) of formula  $(-N +>(R 1>)(R 2>)-(CH 2)$  m-NH-C(=O)-NH-(CH 2) m-N +>(R 3>)(R 4>)-R 5>-) n (2nX -); and at least a pyridinium compound (Q) of formula (II) or (III). In formula (I): R 1>R 4>optionally substituted 1-6C-hydrocarbon or -CH 2CH 2(OCH 2CH 2) y-OH; m : 1-5; n : greater than 1; y : 0-6; R 5>(CH 2) p, -(CH 2) 2-O-(CH 2) 2- or -(CH 2 ) 2-O-(CH 2) 2-; p : 2-12; and X ->counter ion. In formula (II) and (III): R 1>optionally substituted, saturated, aliphatic or aliphatic 1-12C-hydrocarbon, preferably methylene or pyridinium group; R1a : optionally substituted, optionally saturated, aliphatic or araliphatic bivalent 1-12C-hydrocarbon, preferably methylene or pyridinium group; X 1>, X 2>NR xR y; R x, R yH or 1-12C-alkyl; and Y1 ->counter ion, preferably halo or pseudohalo. An independent claim is included for a method for galvanic deposition of glossy and uniform zinc or zinc alloy coating comprising bringing a substrate to be coated into (A). [Image].

IPC 8 full level

**C25D 3/22** (2006.01); **C07D 211/00** (2006.01); **C25D 3/56** (2006.01)

CPC (source: EP US)

**C07D 213/82** (2013.01 - EP US); **C25D 3/22** (2013.01 - EP US); **C25D 3/565** (2013.01 - EP US)

## Citation (search report)

See references of WO 2007147604A2

## Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

## Designated extension state (EPC)

DB simple family (publication)  
**EP 1870495 A1 20071226**; BR PI0713489 A2 20121023; BR PI0713500 A2 20120124; EP 2032742 A2 20090311; EP 2038453  
JP 2009541580 A 20091126; JP 2009541581 A 20091126; US 2010155257 A1 20100624; US 2010236936 A1 20100923;  
WO 2007147603 A2 20071227; WO 2007147603 A3 20080515; WO 2007147604 A2 20071227; WO 2007147604 A3 20080529;  
WO 2007147605 A2 20071227; WO 2007147605 A3 20080522

## DOCDB simple family (application)

**EP 06012766 A 20060621;** BR PI0713489 A 20070621; BR PI0713500 A 20070621; EP 07726120 A 20070621; EP 07726121 A 20070621;  
EP 2007005490 W 20070621; EP 2007005491 W 20070621; EP 2007005492 W 20070621; JP 2009515771 A 20070621;  
JP 2009515772 A 20070621; US 30861407 A 20070621; US 30861507 A 20070621