

Title (en)

CYANIDE-FREE ELECTROPLATING BATHS FOR WHITE BRONZE BASED ON COPPER (I) IONS

Title (de)

CYANIDFREIE GALVANISCHE BÄDER FÜR WEISSE BRONZE BASIEREND AUF KUPFER (I) IONEN

Title (fr)

BAINS D'ÉLECTRODÉPOSITION SANS CYANURE POUR BRONZE BLANC À BASE D'IONS CUIVRE (I)

Publication

EP 3002350 A1 20160406 (EN)

Application

EP 15185289 A 20150915

Priority

US 201414503389 A 20140930

Abstract (en)

Copper alloy electroplating baths include one or more sources of copper (I) ions and one or more sources of tin ions to electroplate copper/tin alloys of mirror bright white bronze. The copper alloys may also include one or more sources of silver ions to electroplate ternary alloys of bright white bronze containing copper/tin/silver. The copper alloy electroplating baths are cyanide-free.

IPC 8 full level

C25D 3/58 (2006.01); **C25D 5/10** (2006.01); **C25D 5/12** (2006.01)

CPC (source: EP US)

C25D 3/58 (2013.01 - EP US); **C25D 5/10** (2013.01 - EP US); **C25D 5/12** (2013.01 - EP US); **C25D 5/627** (2020.08 - EP US)

Citation (applicant)

- US 7780839 B2 20100824 - EGLI ANDRE [CH], et al
- FREDERICK ADOLPH LOWENHEIM: "Electroplating", 1978, pages: 377
- "Library of Congress Cataloging", MCGRAW-HILL BOOK COMPANY

Citation (search report)

- [XP] EP 2868778 A2 20150506 - ROHM & HAAS ELECT MAT [US]
- [Y] EP 2565297 A2 20130306 - ROHM & HAAS ELECT MAT [US]
- [Y] JP 2001234387 A 20010831 - YUKEN KOGYO CO LTD
- [AD] EP 2071057 A2 20090617 - ROHM & HAAS ELECT MAT [US]
- [A] WO 0224979 A1 20020328 - SCHLOETTER FA DR ING MAX [DE], et al

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CN110678583A; US11535946B2; WO2018219848A1

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)

EP 3002350 A1 20160406; EP 3002350 B1 20171122; CN 105463528 A 20160406; CN 105463528 B 20171208; JP 2016074979 A 20160512; JP 6062010 B2 20170118; KR 101712960 B1 20170308; KR 20160038805 A 20160407; TW 201612363 A 20160401; TW I609102 B 20171221; US 2016298249 A1 20161013

DOCDB simple family (application)

EP 15185289 A 20150915; CN 201510624365 A 20150925; JP 2015187883 A 20150925; KR 20150136441 A 20150925; TW 104131420 A 20150923; US 201414503389 A 20140930