

Title (en)

GALVANIC BATH OR MIXTURE FOR USE IN A GALVANIC BATH FOR DEPOSITING A GLOSS NICKEL LAYER AND METHOD FOR PRODUCING AN ITEM WITH A GLOSS NICKEL LAYER

Title (de)

GALVANISCHES BAD ODER MISCHUNG ZUR VERWENDUNG IN EINEM GALVANISCHEN BAD ZUR ABSCHEIDUNG EINER GLANZNICKELSCHICHT SOWIE VERFAHREN ZUR HERSTELLUNG EINES ARTIKELS MIT EINER GLANZNICKELSCHICHT

Title (fr)

BAIN GALVANIQUE OU MÉLANGE À UTILISER DANS UN BAIN GALVANIQUE POUR LA SÉPARATION D'UNE COUCHE DE NICKEL BRILLANT ET PROCÉDÉ DE PRODUCTION D'UN ARTICLE DOTÉ D'UNE COUCHE DE NICKEL BRILLANT

Publication

EP 2937450 B1 20170405 (DE)

Application

EP 15164491 A 20150421

Priority

DE 102014207778 A 20140425

Abstract (en)

[origin: JP2015212417A] PROBLEM TO BE SOLVED: To provide an electrolytic bath for production of a bright nickel layer on a constituent element of a part for a water conduit tube and a mixture for use in an electrolytic bath. SOLUTION: An electrolytic bath or a mixture comprises (c) benzoic acid sulfimide and/or benzoic acid sulfimide anion, (h) one or more or all the compounds selected from chloral hydrate, bromal hydrate, formic acid, formate, acetic acid, acetate and substituted/unsubstituted aliphatic aldehydes, (a) nickel ion, (b) one ore more acids, (e) one or more acetylene-based unsaturated compounds of formula (I), (f) one or more betaines of formula (II) and (g) one or more humectants.

IPC 8 full level

C25D 3/18 (2006.01); **C25D 3/12** (2006.01); **C25D 3/16** (2006.01); **C25D 5/14** (2006.01)

CPC (source: EP)

C25D 3/16 (2013.01); **C25D 3/18** (2013.01)

Citation (opposition)

Opponent : ATOTECH

- WO 2014180595 A1 20141113 - ATOTECH DEUTSCHLAND GMBH [DE]
- US 4430171 A 19840207 - LEMKE KENNETH W [US], et al
- US 4421611 A 19831220 - CAMERON JAMES C [US]
- WO 9116474 A1 19911031 - SCHERING AG [DE]
- EP 1489201 A2 20041222 - RASCHIG GMBH [DE]
- US 4820388 A 19890411 - KURZE WERNER [DE], et al
- WO 2010092622 A1 20100819 - NISSAN MOTOR [JP], et al
- WO 9735049 A1 19970925 - BASF AG [DE], et al
- DE 2450527 A1 19760506 - HENKEL & CIE GMBH
- WO 2010006800 A1 20100121 - ATOTECH DEUTSCHLAND GMBH [DE], et al
- EP 2532771 A2 20121212 - KEUNE & CO KG P [DE]
- DE 102008056470 B3 20100422 - ATOTECH DEUTSCHLAND GMBH [DE]
- US 5164069 A 19921117 - CERWONKA EDWARD J [US]
- EP 0343559 A1 19891129 - RASCHIG AG [DE]
- US 4148797 A 19790410 - PLUSS KURT, et al
- WO 9315241 A1 19930805 - BASF AG [DE]
- DE 19610361 A1 19970918 - BASF AG [DE]
- CH 514683 A 19711031 - M & T CHEMICALS INC [US]
- JADECHEM: "PPS Pyridinium propyl sulphobetaine", PRODUCT DETAIL, 2012, pages 1, XP055451965, Retrieved from the Internet <URL:http://www.jadechem-intl.com/product_detail_en/id/71.html>
- JADECHEM: "PPS-OH liquid Pyridinium hydroxyl propyl sulphobetaine", PRODUCT DETAIL, 2012, XP055451972, Retrieved from the Internet <URL:http://www.jadechem-intl.com/product_detail_en/id/72.html>
- FALBE J. ET AL: "Römpf Chemie Lexikon 9", vol. 5, 1995, article "Definition von Sulfobetainen", pages: 4381, XP055450260
- "Sulfobetaine", WIKIPEDIA, 5 June 2017 (2017-06-05), pages 1, XP055450245, Retrieved from the Internet <URL:<https://de.wikipedia.org/wiki/Sulfobetaine>> [retrieved on 20171130]
- M. SCHLESINGER ET AL.: "Modern Electroplating", 2010, JOHN WILEY & SONS INC., article ELECTRODEPOSITION OF NICKEL, pages: 79 - 113, XP055450247

Cited by

CN105200462A; CN105170922A; CN113366156A; US2022064811A1; WO2021095909A1

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)

DE 102014207778 B3 20150521; EP 2937450 A1 20151028; EP 2937450 B1 20170405; HU E035050 T2 20180502;
JP 2015212417 A 20151126; JP 6687331 B2 20200422; PL 2937450 T3 20170831; PT 2937450 T 20170630; SI 2937450 T1 20170731

DOCDB simple family (application)

DE 102014207778 A 20140425; EP 15164491 A 20150421; HU E15164491 A 20150421; JP 2015090607 A 20150427; PL 15164491 T 20150421;
PT 15164491 T 20150421; SI 201530067 A 20150421