

Title (en)

Baths or organic sulfonate solution for bismuth and bismuth alloy plating.

Title (de)

Bäder auf Basis von einer ein organisches Sulphonat enthaltenden Lösung für das Plattieren von Wismut und Wismutlegierungen.

Title (fr)

Bains à base d'une solution comportant un sulfonate organique pour le dépôt de bismuth et des alliages de bismuth.

Publication

EP 025558 A1 19880210 (EN)

Application

EP 86113044 A 19860922

Priority

JP 15636186 A 19860704

Abstract (en)

A bismuth or bismuth alloy plating bath comprises as essential ingredients an organic sulfonic acid of the general formula (I) $(X_1)_n R-SO_3H$ (I) wherein R is a C1-5 alkyl radical, X1 is a halogen atom or hydroxyl, aryl, alkylaryl, carboxyl, or sulfonyl radical which may be in any optional position of the alkyl radical, and n is an integer of 0 to 3, or of the formula (II) <CHEM> wherein X2 is a halogen atom or hydroxyl, alkyl, aryl, alkylaryl, aldehyde, carboxyl, nitro, mercapto, sulfonyl, or amino radical, or two X2's which may combine with a benzene ring to form a naphthalene ring, and m is an integer of 0 to 3, and a bismuth salt of the acid or a mixture of the bismuth salt of the acid and one or more other metal salts of the acid.

IPC 1-7

C25D 3/54; C25D 3/56

IPC 8 full level

C25D 3/54 (2006.01); **C25D 3/56** (2006.01)

CPC (source: EP)

C25D 3/54 (2013.01); **C25D 3/56** (2013.01)

Citation (search report)

- [X] CHEMICAL ABSTRACTS, vol. 76, no. 14, 3rd April 1972, page 573, 80287f, Columbus, Ohio, US; SU-A-322 414 (KHARKOV CONSTRUCTION-ENGINEERING INSTITUTE) 30-11-1971
- [X] CHEMICAL ABSTRACTS, vol. 76, no. 14, 3rd April 1972, page 573, 80287f, Columbus, Ohio, US; SU-A-322 414 (KHARKOV CONSTRUCTION-ENGINEERING INSTITUTE) 30-11-1971
- [X] GALVANOTECHNIK, vol. 66, no. 7, 1975, page 50; S. SRIVEERARAGHAVAN: "Galvanische Abscheidung von Wismut"
- METAL FINISHING, vol. 61, no. 5, May 1963, pages 58,59; J.A. McCARTHY: "Bismuth plating on steel from alkaline electrolytes"

Cited by

EP0397663A4; DE102005016819B4; EP1308540A1; AU632464B2; US2022380921A1; US11913128B2; US6736954B2; WO9307309A1

Designated contracting state (EPC)

DE FR GB IT NL

DOCDB simple family (publication)

EP 025558 A1 19880210; EP 025558 B1 19911127; CA 1311713 C 19921222; DE 3682679 D1 19920109; JP H0781196 B2 19950830;
JP S6314887 A 19880122

DOCDB simple family (application)

EP 86113044 A 19860922; CA 519048 A 19860925; DE 3682679 T 19860922; JP 15636186 A 19860704