

Title (en)

Electrolyte composition and method for the deposition of quaternary copper alloys

Title (de)

Zusammensetzung eines Elektrolyten und Verfahren zur Beschichtung von quaternären Kupferlegierungen

Title (fr)

Composition d'un électrolyte et méthode de dépôt d'alliages quaternaires de cuivre

Publication

**EP 1930478 A1 20080611 (EN)**

Application

**EP 06025184 A 20061206**

Priority

EP 06025184 A 20061206

Abstract (en)

The present invention relates to an electrolyte composition as well as a method for the deposition of a quaternary copper alloy on a substrate. The electrolyte composition according to the invention comprises besides the alloying metals copper, tin and zinc, at least one metal from the group consisting of indium, gallium and thallium. The electrolyte composition according to the invention enables to deposit white bronze layers which present a high corrosion resistance and hardness and are free of noxious heavy metals.

IPC 8 full level

**C25D 3/56** (2006.01); **C25D 3/58** (2006.01)

CPC (source: EP)

**C25D 3/56** (2013.01); **C25D 3/58** (2013.01); **C25D 3/40** (2013.01)

Citation (search report)

- [X] US 4389286 A 19830621 - MCCOY EWALD H
- [Y] GB 2071697 A 19810923 - ALIPRANDINI P
- [Y] EP 1091023 A2 20010411 - SHIPLEY CO LLC [US]
- [Y] WO 2005031812 A2 20050407 - ROCKWELL SCIENT LICENSING LLC [US]
- [Y] WO 2006032933 A1 20060330 - MIDDLESEX SILVER CO LTD [GB], et al
- [X] WO 2006120291 A1 20061116 - LUVATA OY [FI], et al

Cited by

WO2015039152A1; FR3118067A1; FR3112559A1; ITUB20152876A1; WO2015000010A1; WO2022128608A1; WO2017021916A3; WO2022012993A1; WO2017086819A3; EP3540097A1; WO2019175270A1; EP3150744A1

Designated contracting state (EPC)

DE FR GB IT NL

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

**EP 1930478 A1 20080611; EP 1930478 B1 20130619**

DOCDB simple family (application)

**EP 06025184 A 20061206**