Title (en)

PROTECTIVE COATING FOR A COPPER ALLOY SUBSTRATE AND CORRESPONDING PROCESS

Title (de)

SCHUTZSCHICHT FÜR EIN KUPFERLEGIERUNGSSUBSTRAT UND ENTSPRECHENDES VERFAHREN

Title (fr)

REVÊTEMENT PROTECTEUR D'UN SUBSTRAT EN ALLIAGE CUIVREUX ET PROCÉDÉ CORRESPONDANT

Publication

EP 4294958 A1 20231227 (FR)

Application

EP 22704397 A 20220216

Priority

- FR 2101496 A 20210217
- EP 2022053816 W 20220216

Abstract (en)

[origin: WO2022175325A1] A protective coating (1) for a copper alloy substrate (2), said coating (1) comprising a layer of a transition metal, referred to as primer layer (3), and a corrosion protection layer (4) formed by at least one portion of the primer layer (3) comprising said transition metal combined with said oxidized transition metal. A process for depositing a protective coating (1) for a copper alloy substrate (2) by PVD technology, wherein: - said substrate (2) is positioned in a chamber, with a target made of a transition metal, the chamber being supplied with various gases, - said copper alloy substrate (2) is dehumidified and descaled, - a thin primer layer of said transition metal is deposited on said substrate, - the primer layer (3) is bombarded with a mixture of argon ions and oxygen ions and a corrosion protection layer (4) is formed by oxidizing the transition metal of said primer layer (3).

IPC 8 full level

C23C 14/02 (2006.01); **C23C 14/08** (2006.01); **C23C 14/16** (2006.01); **C23C 14/58** (2006.01); **C23C 28/00** (2006.01)

CPC (source: EP US)

C23C 14/021 (2013.01 - US); **C23C 14/025** (2013.01 - EP US); **C23C 14/083** (2013.01 - EP); **C23C 14/16** (2013.01 - EP US); **C23C 14/34** (2013.01 - US); **C23C 14/5826** (2013.01 - EP); **C23C 14/5853** (2013.01 - EP US); **C23C 28/321** (2013.01 - EP); **C23C 28/322** (2013.01 - EP); **C23C 28/3455** (2013.01 - EP)

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

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

WO 2022175325 A1 20220825; CN 117120656 A 20231124; EP 4294958 A1 20231227; US 2024158905 A1 20240516

DOCDB simple family (application)

EP 2022053816 W 20220216; CN 202280025367 A 20220216; EP 22704397 A 20220216; US 202218546897 A 20220216