

Title (en)

Process for obtaining a brochantit patina on a copper surface

Title (de)

Verfahren zur Erzeugung von Brochantit-Patina auf einer aus Kupfer bestehenden Oberfläche

Title (fr)

Procédé pour obtenir une patine de brochantit sur une surface en cuivre

Publication

EP 0780495 B1 20010509 (DE)

Application

EP 96119420 A 19961204

Priority

DE 19548261 A 19951222

Abstract (en)

[origin: EP0780495A2] A brochantite patina is generated on a copper surface in a continuous process in which the surface is first roughened and then made the anode in an electrolysis bath containing Na₂CO₃ and/or NaHCO₃ and a salt of a sulphur containing acid. The temperature is 30-90 degrees C, the current density 1-20 A/dm² and the dwell time 10 seconds to 12 minutes. After rinsing it is then treated in a fixing bath containing at least one oxidising agent selected from H₂O₂, KClO₃, K₂S₂O₈, KMnO₄ or CuSO₄. The temperature is 35-95 degrees C and the dwell time 10-120 seconds. Finally it is rinsed and dried.

IPC 1-7

C25D 11/34

IPC 8 full level

C25D 11/34 (2006.01)

CPC (source: EP US)

C25D 11/34 (2013.01 - EP US)

Cited by

CN101805917A; CN101812715A

Designated contracting state (EPC)

AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

EP 0780495 A2 19970625; EP 0780495 A3 19970827; EP 0780495 B1 20010509; AT E201059 T1 20010515; CA 2190419 A1 19970623; CA 2190419 C 20001107; DE 19548261 A1 19970626; DE 59606874 D1 20010613; DK 0780495 T3 20010611; ES 2156248 T3 20010616; GR 3036263 T3 20011031; PT 780495 E 20010927; US 5714052 A 19980203

DOCDB simple family (application)

EP 96119420 A 19961204; AT 96119420 T 19961204; CA 2190419 A 19961115; DE 19548261 A 19951222; DE 59606874 T 19961204; DK 96119420 T 19961204; ES 96119420 T 19961204; GR 20010401112 T 20010724; PT 96119420 T 19961204; US 77220096 A 19961220