

Title (en)

A METHOD FOR INDUSTRIAL COPPER ELECTROREFINING

Title (de)

VERFAHREN ZUR INDUSTRIELLEN KUPFERELEKTORAFFINATION

Title (fr)

PROCÉDÉ POUR LE RAFFINAGE ÉLECTROLYTIQUE DE CUIVRE INDUSTRIEL

Publication

EP 2783026 B1 20230607 (EN)

Application

EP 12775235 A 20121017

Priority

- PL 39708111 A 20111122
- EP 2012070568 W 20121017

Abstract (en)

[origin: WO2013075889A1] A method of copper electrorefining is disclosed. The method includes arranging at least one anode of copper material to be refined in contact with an electrolyte solution and arranging at least one cathode in contact with the electrolyte solution. The anode and cathode are connected electrically to an electrical source, and the source is operated under potential controlled conditions. The electrical potential at the cathode is -0.30 V to -0.55 V with respect to the copper material at the anode, thereby causing the deposition of electrorefined copper at the cathode. The method also includes potentiostatic pulse electrolysis (PPE) and periodic potential reversal (PPR) in order to produce a copper deposit having a controllable structure, for example in terms of roughness or porosity. An apparatus for performing potential controlled electrolysis is also disclosed.

IPC 8 full level

C25C 1/12 (2006.01); **C25C 7/06** (2006.01)

CPC (source: EP US)

C25C 1/12 (2013.01 - EP US); **C25C 7/00** (2013.01 - US); **C25C 7/06** (2013.01 - EP US)

Citation (examination)

US 2010089763 A1 20100415 - DARRON BRACKENBURY [US], et al

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)

WO 2013075889 A1 20130530; AU 2012342815 A1 20140612; CL 2014001347 A1 20141128; CN 104114750 A 20141022; CN 104114750 B 20181026; EA 201491016 A1 20141128; EP 2783026 A1 20141001; EP 2783026 B1 20230607; JP 2014533778 A 20141215; KR 20140108236 A 20140905; PL 2783026 T3 20230807; PL 397081 A1 20130527; US 2015197867 A1 20150716

DOCDB simple family (application)

EP 2012070568 W 20121017; AU 2012342815 A 20121017; CL 2014001347 A 20140522; CN 201280067648 A 20121017; EA 201491016 A 20121017; EP 12775235 A 20121017; JP 2014542745 A 20121017; KR 20147017101 A 20121017; PL 12775235 T 20121017; PL 39708111 A 20111122; US 201214359521 A 20121017