Title (en)

PULSE REVERSE ELECTROLYSIS OF ACIDIC COPPER ELECTROPLATING SOLUTIONS

Title (de)

PULSUMKEHRELEKTROLYSE VON SAUREN KUPFERGALVANISIERUNGSLÖSUNGEN

Title (fr)

ELECTROLYSE A IMPULSIONS INVERSEES DE SOLUTIONS ACIDES DE GALVANOPLASTIE DU CUIVRE

Publication

EP 1766106 A4 20070905 (EN)

Application

EP 05725574 A 20050315

Priority

- US 2005008502 W 20050315
- US 87679504 A 20040625

Abstract (en)

[origin: US2005284766A1] Pulse reverse electrolysis of acid copper solutions is used for applying copper to printing cylinders, especially gravure printing cylinders. The plating composition generally comprising copper ions, counter ions, chloride ions, a polyalkylene glycol, and a bath-soluble divalent sulfur compound. The benefits include an improved thickness distribution of the copper electrodeposited on the plated article, reduced metal waste, reduced plating times and increased production capacity.

IPC 8 full level

C25D 7/04 (2006.01); **C25D 3/38** (2006.01); **C25D 5/18** (2006.01)

CPC (source: EP US)

C25D 3/38 (2013.01 - EP US); **C25D 5/18** (2013.01 - EP US); **C25D 5/627** (2020.08 - EP US)

Citation (search report)

- [Y] DD 264030 A1 19890118 - LEIPZIG GALVANOTECHNIK [DD]
- [Y] US 3923610 A 19751202 - BERGIN MICHAEL J, et al
- See references of WO 2006011922A2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR LV MK YU

DOCDB simple family (publication)

US 2005284766 A1 20051229; CN 101044269 A 20070926; EP 1766106 A2 20070328; EP 1766106 A4 20070905; JP 2008504435 A 20080214; US 2009223827 A1 20090910; WO 2006011922 A2 20060202; WO 2006011922 A3 20070222

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US 87679504 A 20040625; CN 200580020350 A 20050315; EP 05725574 A 20050315; JP 2007518029 A 20050315; US 2005008502 W 20050315; US 46976009 A 20090521