

Title (en)

ELECTROCHEMICAL PROCESS FOR PRODUCING PLATINGS OF CHROMIUM AND SIMILAR METALS, BY MEANS OF PULSATING CURRENT WITH PERIODIC REVERSING POLARITY, AND RELEVANT EQUIPMENT

Publication

EP 0330722 B1 19920212 (EN)

Application

EP 88105380 A 19880405

Priority

IT 1964488 A 19880304

Abstract (en)

[origin: EP0330722A1] Electrochemical process for producing platings of such metals as chromium, nickel and the like, consisting in depositing on the support to be plated at least a first layer of plating metal such as chromium, nickel and the like, by using a current rectifier equipped with an electronic device for the periodic and adjustable reversal of polarity, in such a way as to obtain said first layers with no cracks, then in subsequently depositing on said first layer at least a second layer by using the only positive polarity obtainable from said rectifier, so as to endow said second layer with the required values of hardness and elasticity. Equipment for carrying out such a process, which consists in a generator of double-level pulsating electrical waves, comprising means for independently adjusting the time intervals between two consecutive negative pulses and the duration time and amplitude of the negative waves.

IPC 1-7

C25D 3/04; **C25D 3/12**; **C25D 5/18**

IPC 8 full level

C25D 3/04 (2006.01); **C25D 3/12** (2006.01); **C25D 5/18** (2006.01)

CPC (source: EP US)

C25D 5/14 (2013.01 - EP US); **C25D 5/18** (2013.01 - EP US)

Cited by

CN102330127A; EP0972861A3; DE19745811A1; DE19745811C2; EP0596589A1; GB2236763A; GB2236763B; US10941502B2; US6296951B1; WO2013053097A1; US10457405B1; US11577845B2; US11952131B2; US10449749B1; US11440288B2

Designated contracting state (EPC)

AT CH DE ES FR GB LI NL SE

DOCDB simple family (publication)

EP 0330722 A1 19890906; **EP 0330722 B1 19920212**; AT E72587 T1 19920215; BR 8901046 A 19891024; DE 3868400 D1 19920326; IT 1215985 B 19900222; IT 8819644 A0 19880304

DOCDB simple family (application)

EP 88105380 A 19880405; AT 88105380 T 19880405; BR 8901046 A 19890302; DE 3868400 T 19880405; IT 1964488 A 19880304