

Title (en)

Apparatus for electrochemical deposition on surfaces and electrochemical system

Title (de)

Vorrichtung zur galvanischen Abscheidung von Oberflächen und Galvanisierungssystem

Title (fr)

Appareil pour placage électrochimique sur des surfaces et système de placage

Publication

EP 1865094 A1 20071212 (DE)

Application

EP 06115181 A 20060608

Priority

EP 06115181 A 20060608

Abstract (en)

The position of the return roller (5) between two adjacent contact rollers (2) can be varied. This varies the returned length of substrate between the two contact rollers. Variation is carried out in accordance with extension of the starter layer to be coated. Return roller position is varied by an electrical- or mechanical actuator. The electrolyte (3) is replenished from an anode basket (11) filled with metal bodies. The basket is height-adjustable in the electroplating bath (4). The contact rollers carry the substrate through the electroplating bath. Each has a speed-controlled drive with timing belt transmission. The contact rollers are ground to a barrel-profile, to retain the substrate in a central position during transport. The return roller has an airturn, i.e. a non-contacting pneumatic levitation device. The electroplating bath includes an overflow. On the side of the contact rollers which first touches the substrate leaving the bath, a wiper (8) is provided. On the opposite side there is a scraper (10) removing adherent electrolyte from the roller. Slip rings on both sides of the contact rollers supply electrical current. A potential divider, or segmented contact rollers with suitable voltage supply, ensure uniform voltage distribution. The return roller is carried in glass ball bearings. Spacer units intervene between the contact roller bearing housings and the bath sidewalls. A flap in the bath permits anode basket replacement. Outside the bath, there is an electrolyte replenishment system. The substrate is supplied from a feeder and is taken up on leaving. The electroplating unit (1) has a preliminary electrolyte bath ahead of it. Between two or more electroplating baths, an instrument measures the starter layer thickness and/or variation in its resistance. Individual electroplating units can be taken off line from the electroplating system, to carry out maintenance work. A cleaning and/or inerting module is included.

Abstract (de)

Die Erfindung betrifft eine Vorrichtung (1) zur galvanischen Abscheidung einer elektrisch leitfähigen Schicht auf einem Träger (6), an dem zumindest bereichsweise eine zur Galvanisierung geeignete Starterschicht (7) angeordnet ist. Die Vorrichtung (1) weist ein Galvanikbad (4) auf, in dem ein Elektrolyt (3) zur Abscheidung von leitfähigem Material angeordnet ist, mindestens zwei Kontaktierwalzen (2), welche außerhalb des Galvanikbades (4) angeordnet sind und die als Kathode und/oder Anode schaltbar sind, sowie mindestens eine Umlenkrolle (5), welche den Kontaktierwalzen (2) zwischengeschaltet ist, wobei die Position der Umlenkrolle (5) zwischen zwei Kontaktierwalzen (2) derart veränderbar ist, dass über die Änderung der Position der Umlenkrolle (5) eine vom Träger (6) zurückzulegende Strecke, die zwischen zwei Kontaktpunkten zweier benachbarter Kontaktierwalzen (2) gebildet ist, der Ausdehnung der zu beschichteten Starterschicht (7) entspricht.

IPC 8 full level

C25D 7/06 (2006.01); **C25D 17/00** (2006.01)

CPC (source: EP US)

C25D 7/0628 (2013.01 - EP US); **C25D 17/00** (2013.01 - EP US)

Citation (search report)

- [AD] DE 10234705 A1 20030528 - INFINEON TECHNOLOGIES AG [DE]
- [A] EP 0167868 A1 19860115 - KRUPP STAHL AG [DE]
- [A] FR 2554833 A1 19850517 - COCKERILL SAMBRE SA [BE]
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Designated extension state (EPC)

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