

Title (en)

Apparatus for masking the edges of a metal strip suitable for a radial electroplating cell for preventing dendrites

Title (de)

Vorrichtung zur Maskierung der Ränder eines Metallblechs zur Verwendung in einer Elektroplattierungszelle des Radialtyps um die Dendritbildung zu vermeiden

Title (fr)

Dispositif de masquage de rives de bande métallique adapté à une cellule d'électrodéposition de type radial, pour la prévention des dendrites

Publication

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Application

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Priority

FR 9508202 A 19950707

Abstract (en)

A device is claimed for masking the edges of a metal strip (B) suitable for use in a radial electroplating cell. The cell includes a roller support (1) for the metal strip (B), and soluble anodes (2) arranged facing the roller (1). The device comprises: (i) a mask (4) in the form of a narrow strip arranged over the length of each edge in the immediate proximity of the surface of the roller (1); (ii) a means (14) for anchoring the two ends of the mask (4); and (iii) a means (6) for fixing (ii). The mask (4) consists of an insulating, semi-rigid strip, esp. of a composite material with a polymer matrix, presenting, on its inner face turned towards the roller (1), on the one part of the inner side oriented towards the middle of the roller (1), a disconnection over the whole of its length and on the other part of the opposite outer side, some contacts in an anti-adherent material, regularly spaced and fixed on the inner face. Due to the fixing means (6), the mask (4) is applied against the surface of the roller (1) by the intermediary of the contacts, and positioned such that the edges may be engaged in the disconnection. The total thickness of the mask (4) is less than half the distance separating the anodes (2) from the roller (1). The width of the disconnection is at least 50% of the width of the edges to be masked. The anchoring means (14) comprises a roll (17), with its axis approximately parallel to that of the roller (1), presenting a slot over its whole length, and integral with the fixing means (6) and a fastening crossing the slot, integral with one end of the mask and incorporating a projecting tip embedded in the roll. Its thickness is greater than the width of the slot. The projecting tip is able to slide inside and over the length of the roll in order to modify the position of the mask (4) w.r.t. the edges of the metal strip.

Abstract (fr)

La cellule comprend un rouleau support (1) pour la bande métallique (B) et des anodes solubles (2) disposées face au rouleau et le dispositif de masquage comprend un masque (4) en forme de bande étroite disposé le long de chaque rive (10) de bande à proximité immédiate de la surface dudit rouleau (1). Selon l'invention, le masque (4) est une bande isolante semi-rigide, présentant, sur sa face interne, un décrochement (8) sur toute sa longueur et des plots (9) en matière anti-adhérente, régulièrement espacés. Le masque (4) est appliqué du côté de ces plots (9) contre la surface du rouleau (1) et positionné de telle sorte que les rives (10) soient engagées dans ledit décrochement (8). Ce dispositif est particulièrement adapté à des vitesses élevées de circulation du bain entre le rouleau (1) et les anodes (2). <IMAGE> <IMAGE>

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