

Title (en)

METHOD FOR TREATMENT OF GALVANIZED OR GALVANNEALED STEEL

Title (de)

VERFAHREN ZUR BEHANDLUNG VON GALVANISIERTEM ODER GALVANNEALED-STAHL

Title (fr)

PROCÉDÉ DE TRAITEMENT D'ACIER GALVANISÉ OU RECIUT PAR GALVANISATION

Publication

**EP 3381570 A1 20181003 (EN)**

Application

**EP 17163995 A 20170330**

Priority

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Abstract (en)

A method, comprising: - providing a first roll, a second roll, and a nip between the first and second rolls; - passing a substrate through the nip between the rolls at a predetermined line speed; - supplying a coating liquid to the substrate in the nip, wherein the coating liquid has a predetermined contact angle with the substrate; and - smoothing the coating liquid, via the nip, into a substantially uniform layer of liquid coating on the substrate, - providing that the substrate is a galvanized or galvannealed steel strip; - providing that a circumferential speed of a surface area of the rolls contacting the substrate substantially matches the line speed; and - providing that the contact angle of the coating liquid with the substrate is smaller than 97°.

IPC 8 full level

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CPC (source: EP)

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Citation (applicant)

- WO 2016200866 A1 20161215 - 3M INNOVATIVE PROPERTIES CO [US]
- US 5591275 A 19970107 - MIYAFUJI KAZUTOMO [JP], et al
- "Chem. Eng. Common", vol. 5, article "Ribbing Instability of a Two-roll Coater: Newtonian fluids", pages: 73 - 83
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Citation (search report)

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- [XA] US 5591275 A 19970107 - MIYAFUJI KAZUTOMO [JP], et al
- [XA] JP H06335657 A 19941206 - KAWASAKI STEEL CO
- [A] STEPHAN F KISTLER ET AL: "Liquid Film Coating : Scientific principles and their technological implications", 26 October 2012, SPRINGER NETHERLANDS, ISBN: 978-94-010-6246-6, article DENNIS J. COYLE: "SELF-METERED COATING PROCESSES / KNIFE AND ROLL COATING", pages: 538 - 597, XP055406017
- [A] Y.H. CHONG ET AL: "Coating with deformable rolls: An experimental investigation of the ribbing instability", CHEMICAL ENGINEERING SCIENCE, vol. 62, no. 15, 7 May 2007 (2007-05-07), GB, pages 4138 - 4145, XP055406035, ISSN: 0009-2509, DOI: 10.1016/j.ces.2007.04.029

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