

Title (en)

METHOD FOR PRODUCING TINPLATE AND PRODUCT PRODUCED THEREWITH

Title (de)

VERFAHREN ZUR PRODUKTION VON WEISSBLECH, UND DAMIT HERGESTELLTER GEGENSTAND

Title (fr)

PROCÉDÉ DE FABRICATION DE FER BLANC ET ARTICLE FABRIQUÉ AVEC CELUI-CI

Publication

EP 2867390 B1 20170906 (EN)

Application

EP 13733301 A 20130702

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Abstract (en)

[origin: WO2014006031A1] The invention relates to a method for forming a passivation layer on a strip of packaging steel for producing a packaging container or a can, said strip having at least one tinplated surface having excellent sulphide staining resistance. The method comprises the steps of: (i) subjecting said tin-plated surface to an anodic treatment at a pH of from 8 to 12 in a suitable aqueous electrolyte, wherein the suitable electrolyte is a phosphate solution, borate solution, sulphate solution or a carbonate solution, wherein the electrolyte for the anodic treatment does not contain mono-atomic halogen anions (Group 17) such as Cl⁻, F⁻, wherein the thickness of the tin oxide layer (D), expressed in Coulomb/m² and representing the total charge needed to reduce the layer to metallic tin is related to anodic treatment time (t), current density (A) by $D = E \times A \times t$, where E is the efficiency of the electrochemical reaction, and wherein D is at least 30 C/m²; wherein the electrolyte comprises monoatomic cations from Group 1 or 2 from the periodic table or polyatomic cations, and polyatomic anions; (ii) optionally rinsing and drying the anodically treated tin-plated surface - subjecting the anodically treated tin-plated surface to a chemical passivation treatment free from using hexavalent chromium compounds; (iii) drying of the passivated anodically treated tin-plated surface; (iv) final processing such as oiling, winding, cutting etc.

IPC 8 full level

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CPC (source: EP)

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Citation (examination)

WO 2013104530 A2 20130718 - THYSSENKRUPP RASSELSTEIN GMBH [DE]

Citation (opposition)

Opponent : ArcelorMittal

CA 2858004 A1 20130718 - THYSSENKRUPP RASSELSTEIN GMBH [DE]

Cited by

CN108796584A; EP4276219A1; WO2023217652A1

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