Title (en)

TREATING SOLUTION FOR FORMING BLACK HEXAVALENT CHROMIUM-FREE CHEMICAL COATING ON ZINC OR ZINC ALLOY PLATED SUBSTRATE, AND METHOD FOR FORMING BLACK HEXAVALENT CHROMIUM-FREE CHEMICAL COATING ON ZINC OR ZINC ALLOY PLATED SUBSTRATE

Title (de)

BEHANDLUNGSLÖSUNG ZUR HERSTELLUNG EINES SCHWARZEN, KEIN SECHSWERTIGES CHROM ENTHALTENDEN CHEMISCHEN ÜBERZUGS AUF MIT ZINK ODER ZINKLEGIERUNG PLATTIERTEM SUBSTRAT UND VERFAHREN ZUR HERSTELLUNG EINES SCHWARZEN, KEIN SECHSWERTIGES CHROM ENTHALTENDEN CHEMISCHEN ÜBERZUGS AUF MIT ZINK ODER ZINKLEGIERUNG PLATTIERTEM SUBSTRAT

Title (fr)

SOLUTION DE TRAITEMENT POUR LA FORMATION D'UN REVETEMENT CHIMIQUE EXEMPT DE CHROME HEXAVALENT NOIR SUR UN SUBSTRAT RECOUVERT DE ZINC OU D'ALLIAGE DE ZINC, ET PROCEDE DE FORMATION DE REVETEMENT CHIMIQUE EXEMPT DE CHROME HEXAVALENT NOIR SUR UN SUBSTRAT RECOUVERT DE ZINC OU D'ALLIAGE DE ZINC

Publication

EP 1484432 B1 20100825 (EN)

Application

EP 03708593 A 20030313

Priority

- JP 0302994 W 20030313
- JP 2002070175 A 20020314

Abstract (en)

[origin: EP1484432A1] It is an object of the present invention to provide a processing solution used for forming a hexavalent chromium free, black conversion film, which is applied onto the surface of zinc or zinc alloy plating layers, and which has corrosion resistance identical to or higher than that achieved by the conventional hexavalent chromium-containing conversion film. <??>According to an aspect of the present invention, there is provided a processing solution for forming a hexavalent chromium free, black conversion film on zinc or zinc alloy plating layers, the processing solution comprising: nitrate ions and trivalent chromium in a mole ratio (NO<3->/Cr<3+>) of less than 0.5/1, wherein the trivalent chromium is present in the form of a water-soluble complex with a chelating agent; and cobalt ions and / or nickel ions, wherein the cobalt ions and / or nickel ions are stably present in the processing solution without causing any precipitation by forming a hardly soluble metal salt with the chelating agent; wherein the solution reacts with zinc when it is brought into contact with the zinc or zinc alloy plating to form a hexavalent chromium free, black conversion film containing zinc, chromium, cobalt and / or nickel, and the chelating agent on the plating.

IPC 8 full level

C23C 22/10 (2006.01); **C23C 22/13** (2006.01); **C23C 22/46** (2006.01); **C23C 22/47** (2006.01); **C23C 22/53** (2006.01); **C23C 22/74** (2006.01); **C23C 28/00** (2006.01); **C23C 28/02** (2006.01)

CPC (source: EP KR)

C23C 22/10 (2013.01 - EP); **C23C 22/46** (2013.01 - EP); **C23C 22/47** (2013.01 - EP); **C23C 22/53** (2013.01 - EP KR); **C23C 22/74** (2013.01 - EP); **C23C 28/023** (2013.01 - EP); **C23C 28/025** (2013.01 - EP); C23C 2222/10 (2013.01 - EP)

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Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 1484432 A1 20041208; **EP 1484432 A4 20091230**; **EP 1484432 B1 20100825**; AT E478976 T1 20100915; AU 2003213350 A1 20030922; CN 100457969 C 20090204; CN 1729311 A 20060201; DE 60333904 D1 20101007; JP 2003268562 A 20030925; JP 3774415 B2 20060517; KR 100627029 B1 20060921; KR 20040101294 A 20041202; WO 03076686 A1 20030918

DOCDB simple family (application)

EP 03708593 A 20030313; AT 03708593 T 20030313; AU 2003213350 A 20030313; CN 03810915 A 20030313; DE 60333904 T 20030313; JP 0302994 W 20030313; JP 2002070175 A 20020314; KR 20047014220 A 20030313