

Title (en)
Multi-step corrosion-resistant treatment of metallic workpieces having at least partially zinc or zinc alloy surfaces

Title (de)
Mehrstufige korrosionsschützende Behandlung metallischer Bauteile, die zumindest teilweise Oberflächen von Zink oder Zinklegierungen aufweisen

Title (fr)
Traitement en plusieurs étapes de protection contre la corrosion des pièces métalliques ayant au moins partiellement une surface en zinc ou en alliages de zinc

Publication
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Application
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Priority
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Abstract (en)
[origin: EP2503025A1] Anticorrosive treatment of the metal surfaces of a component comprising at least partially surfaces of zinc or zinc alloys comprises contacting the component with an alkaline aqueous composition (A) and subsequently contacting with an acidic aqueous composition (B) for zinc phosphating, optionally with an intermediate rinsing step, and optionally with a preceding activation step. Anticorrosive treatment of the metal surfaces of a component comprising at least partially surfaces of zinc or zinc alloys comprises contacting the component with an alkaline aqueous composition (A) and subsequently contacting with an acidic aqueous composition (B) for zinc phosphating, optionally with an intermediate rinsing step, and optionally with a preceding activation step, where: the composition (A) comprises (a) at least 50 mg/l of iron(III) ions and (b) at least 100 mg/l of complexing agents (C) comprising organic compounds (C1) having at least one functional group of formula (-COOX), (-OPO 3X) and/or (-PO 3X) and/or condensed phosphates (C2); the composition (A) has a free alkalinity of at least one point, but less than 6 points and a pH value of 10.5-14; the composition (B) comprises (a1) 0.2-3 g/l of zinc(II) ions, (b1) 5-30 g/l of phosphate ions evaluated as phosphorus pentoxide and (c) less than 0.1 g/l of ionic compounds of metals of nickel and cobalt; and the composition (B) has a pH value of 2.5-3.6. X : H or an alkali metal and/or alkaline earth metal atom. An independent claim is included for a component, which at least partially contains zinc surfaces, where the zinc surfaces are coated by a two-layer system consisting of a first inner, iron-containing passive layer located on the zinc surface and a second outer, crystalline zinc phosphate layer located on the inner layer, the coating of the inner layer contains 20-150 mg/m² based on the element iron, and the coating of the outer layer is 0.5-3.5 g/m².

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Cited by
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