Title (en)

FLUORIDE-FREE ZIRCONIUM-BASED METAL PRE-TREATMENT FOR PASSIVATION

Title (de)

FLUORID-FREIE ZIRKONIUM-BASIERTE METALLVORBEHANDLUNG ZUR PASSIVIERUNG

Title (fr)

PRÉTRAITEMENT DE MÉTAUX PAR AGENTS À BASE DE ZIRCONIUM ET EXEMPTS DE FLUORURE À DES FINS DE PASSIVATION

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Application

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Abstract (en)

[origin: WO2017153075A1] The invention relates to a method for the anti-corrosion pre-treatment of metal substrates by using zirconium-based aqueous anti-corrosion agents. The anti-corrosion effect of the zirconium-based agent is based on the presence of polycyclic hydrocarbons that have at least one anellated benzene ring, each having at least two ring-substituted hydroxyl groups in ortho position to each other. The aqueous anti-corrosion agent can be substantially free both of passivating chromium-containing compounds and of fluoride-containing compounds that pickle the metal substrate. According to the invention, pre-treatment by drying (dry-in-place method) is especially advantageous. Accordingly, the method according to the invention is suitable in particular for the pre-treatment of metal strip, wherein excellent anti-corrosion results are achieved on surfaces of aluminum or steel. The invention further relates to a method for producing coated can lids from aluminum strip by using the previously mentioned zirconium-based anti-corrosion agent. A further aspect comprises an aqueous concentrate for providing the ready-to-use anti-corrosion agent.

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