

Title (en)

Process for applying phosphate coatings on metal surfaces.

Title (de)

Verfahren zum Aufbringen von Phosphatüberzügen auf Metalloberflächen.

Title (fr)

Procédé pour appliquer des couches de phosphates sur des surfaces métalliques.

Publication

EP 0454211 B1 19940622 (DE)

Application

EP 91200844 A 19910411

Priority

DE 4012795 A 19900421

Abstract (en)

[origin: CA2040859A1] The activating agent which is based on titanium(IV) phosphate and intended for use in the activation of metal surfaces before a zinc phosphating treatment contains one or more copper compounds and has a Ti:Cu weight ratio of 1:100 to 60:1 and optionally contains in addition at least one of the components consisting of condensed phosphate, silicate, complexing agent, water-soluble organic polymer, thickening agent, and surfactant. It is used to prepare aqueous activating baths for activating iron, steel, galvanized steel, zinc, alloy-plated steel, aluminum-plated steel and aluminum before a zinc phosphating treatment, which baths contain 0.001 to 0.060 g/l Ti, 0.020 to 1.2 g/l orthophosphate (calculated as P₂O₅), and 0.001 to 0.1 g/l Cu and so much alkali that the bath has a pH value of 7 to 11, preferably of 7.5 to 10.

IPC 1-7

C23C 22/80

IPC 8 full level

C23C 22/80 (2006.01); **C23C 22/18** (2006.01); **C23C 22/36** (2006.01); **F16L 37/084** (2006.01); **F16L 37/098** (2006.01); **F16L 37/12** (2006.01)

CPC (source: EP US)

C23C 22/80 (2013.01 - EP US)

Cited by

DE102008054407A1; WO2010066765A1; US5503733A; DE102018216216A1; EP0554179A1; DE102019134298A1; EP4339324A1; CN106947967A; DE102008054407B4; WO9531588A1; WO2015155163A3; DE102008047533A1; US10480080B2; US9358574B2; US9364855B2; WO2014124866A1; WO2021116318A1; EP2731730B1

Designated contracting state (EPC)

AT BE CH DE ES FR GB IT LI SE

DOCDB simple family (publication)

EP 0454211 A1 19911030; EP 0454211 B1 19940622; AT E107711 T1 19940715; BR 9101616 A 19911210; CA 2040859 A1 19911022; CA 2040859 C 20001121; CA 2040872 A1 19911022; DE 4012795 A1 19911024; DE 59101978 D1 19940728; ES 2055518 T3 19940816; JP 3063921 B2 20000712; JP H04254589 A 19920909; US 5160551 A 19921103; ZA 912943 B 19921230

DOCDB simple family (application)

EP 91200844 A 19910411; AT 91200844 T 19910411; BR 9101616 A 19910422; CA 2040859 A 19910419; CA 2040872 A 19910419; DE 4012795 A 19900421; DE 59101978 T 19910411; ES 91200844 T 19910411; JP 11801391 A 19910422; US 68682591 A 19910417; ZA 912943 A 19910419