

Title (en)

METHOD FOR FORMING PHOSPHATE COATINGS ON NONFERROUS METALS AND PLATED STEEL SHEETS

Title (de)

VERFAHREN ZUR HERSTELLUNG VON PHOSPATSCHICHTEN AUF NICHEISENMETALLE UND PLATIERTE STAHLBLECHE

Title (fr)

PROCEDE POUR FORMER DES REVETEMENTS DE PHOSPHATE SUR DES METAUX NON FERREUX ET DES TOLES D'ACIER PLAQUEES

Publication

EP 1290244 A4 20040915 (EN)

Application

EP 01928375 A 20010406

Priority

- JP 2000107436 A 20000410
- US 0111248 W 20010406

Abstract (en)

[origin: WO0177411A1] The present invention comprises providing a phosphate coating of at least 50 % Zn₂Fe(PO₄)₂·4H₂O on metal having a nonferrous surface by contacting the metal with a phosphate treatment bath that contains zinc ion, phosphate ion, and hydroxylammonium ion and at least 17 weight parts ferrous ion for each 100 weight parts zinc ion. This method can be run on the metal after the metal has been brought into contact with a surface conditioning bath containing divalent or trivalent metal phosphate particles no larger than 5 μm. The hydroxylammonium ion concentration is preferably 0.2 to 5 g/L, the phosphate ion concentration is preferably 5.0 to 30 g/L, the zinc ion concentration is preferably 0.5 to 5.0 g/L, and the ferrous ion concentration is preferably 0.2 to 5.0 g/L.

IPC 1-7

C23C 22/78; C23C 22/12; C23C 22/13; C23C 22/18; C23C 22/22

IPC 8 full level

C23C 22/12 (2006.01); C23C 22/13 (2006.01); C23C 22/18 (2006.01); C23C 22/22 (2006.01); C23C 22/78 (2006.01)

CPC (source: EP)

C23C 22/12 (2013.01); C23C 22/13 (2013.01); C23C 22/182 (2013.01); C23C 22/22 (2013.01); C23C 22/78 (2013.01)

Citation (search report)

- [X] EP 0287133 A1 19881019 - METALLGESELLSCHAFT AG [DE]
- [X] EP 0801149 A1 19971015 - NIPPON PAINT CO LTD [JP]
- [X] WO 9609422 A1 19960328 - HENKEL KGAA [DE], et al
- [A] EP 0175606 A1 19860326 - PRODUITS IND CIE FSE [FR]
- [A] WO 9945171 A1 19990910 - HENKEL KGAA [DE], et al
- [A] WO 9405826 A1 19940317 - HENKEL KGAA [DE], et al
- See references of WO 0177411A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

WO 0177411 A1 20011018; AU 5523901 A 20011023; EP 1290244 A1 20030312; EP 1290244 A4 20040915; JP 2001295063 A 20011026

DOCDB simple family (application)

US 0111248 W 20010406; AU 5523901 A 20010406; EP 01928375 A 20010406; JP 2000107436 A 20000410