Title (en)
METHOD OF APPLYING PHOSPHATE COATINGS TO METAL SURFACES

Title (de)
VERFAHREN ZUM AUFBRINGEN VON PHOSPHATÜBERZÜGEN AUF METALLOBERFLÄCHEN

Title (fr)
PROCEDE D'APPLICATION DE REVETEMENTS DE PHOSPHATE SUR DES SURFACES METALLIQUES

Publication
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Application
**EP 95941068 A 19951205**

Priority
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Abstract (en)
[origin: US5904786A] PCT No. PCT/EP95/04774 Sec. 371 Date Jun. 6, 1997 Sec. 102(e) Date Jun. 6, 1997 PCT Filed Dec. 5, 1995 PCT Pub. No. WO96/17977 PCT Pub. Date Jun. 13, 1996A method is disclosed for applying phosphate coatings to surfaces of zinc, iron, aluminum, and the alloys thereof by wetting with a phosphatizing solution containing divalent cations and phosphate to form a liquid film, and subsequently drying on the liquid film wherein the metal surfaces are wetted with a phosphatizing solution, which is free from elements of sub-groups 5 and 6 of the Periodic Table, said phosphatizing solution containing: 0.5 to 8 g/l nickel; 2 to 20 g/l manganese; 18 to 170 g/l of phosphate (calculated as $P_2O_5$); and has an acid number of 0.4 to 0.8, such that after drying on, a phosphate layer having a weight per unit area of 0.3 to 3.0 $g/m^2$, is obtained, where in the case of phosphatizing surfaces of iron, aluminum or the alloys thereof, the phosphatizing solution necessarily contains 0.5 to 5 g/l of zinc, and in the case of phosphatizing surfaces of zinc or zinc alloys the phosphatizing solution either contains zinc or is free from zinc.

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Cited by
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**US 5904786 A 19990518**; AT E173034 T1 19981115; AU 4259996 A 19960626; AU 700492 B2 19990107; CA 2207932 A1 19960613; CA 2207932 C 20070508; CN 1066207 C 20010523; CN 1169165 A 19971231; DE 4443882 A1 19960613; DE 59504172 D1 19981210; EP 0796356 A1 19970924; EP 0796356 B1 19981104; ES 2124032 T3 19990116; JP H10510322 A 19981006; KR 970707322 A 19971201; MX 9704126 A 19980228; WO 9617977 A1 19960613; ZA 9510440 B 19970609

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**US 86035097 A 19970606**; AT 95941068 T 19951205; AU 4259996 A 19951205; CA 2207932 A 19951205; CN 95196688 A 19951205; DE 4443882 A 19941209; DE 59504172 T 19951205; EP 9504774 W 19951205; EP 95941068 A 19951205; ES 95941068 T 19951205; JP 51731696 A 19951205; KR 19970702491 A 19970416; MX 9704126 A 19951205; ZA 9510440 A 19951208