

Title (en)
PHOSPHATING TREATMENT BEFORE ELECTROPHORETIC DIP PAINTING

Publication
EP 0287133 B1 19920325 (DE)

Application
EP 88200219 A 19880209

Priority
DE 3712339 A 19870411

Abstract (en)
[origin: EP0287133A1] For the phosphating of workpieces of steel or partially galvanised steel as a pretreatment for electrodeposit coating, the cleaned and rinsed workpieces are first activated with an aqueous, weakly alkaline solution containing titanium phosphate and then treated by a dipping process at a temperature from 40 to 60 DEG C with an aqueous acidic phosphating solution which contains 1.8 to 5 g/l of Zn 0.1 to 7 g/l of Fe(II) 8 to 25 g/l of P2O5 and 5 to 30 g/l of NO3 and in which the free acid/total acid ratio has been adjusted to 0.04 to 0.07. Preferably, the phosphating solution contains at most 3 g/l of zinc and 0.5 to 5 g/l of iron(II) and additionally manganese in a quantity of up to 3 g/l. Further suitable components of the phosphating solution are Co, Ni, hydroxylamine, fluorides, tartaric acid, citric acid and m- nitrobenzenesulphonate.

IPC 1-7
C23C 22/13; C23C 22/18; C23C 22/36

IPC 8 full level
C23C 22/80 (2006.01); **C23C 22/13** (2006.01); **C23C 22/18** (2006.01); **C23C 22/36** (2006.01)

CPC (source: EP)
C23C 22/13 (2013.01); **C23C 22/182** (2013.01); **C23C 22/362** (2013.01)

Cited by
WO9309266A1; EP0380067A1; EP0414296A1; EP0930379A1; EP1290244A4; EP0966554A4; AU664400B2; EP0418634A1; US5261973A; CN1038949C; TR28730A; DE19541285A1; DE19541285C2; US5797987A; US5868874A; US6461450B1; WO9413856A1; WO9721850A1; WO9303198A1; WO9945171A1; WO0008224A3; US6179934B1; WO9504842A1; WO9012901A1; WO0047799A1; WO9015889A1

Designated contracting state (EPC)
BE DE ES FR IT NL SE

DOCDB simple family (publication)
EP 0287133 A1 19881019; EP 0287133 B1 19920325; AU 1442788 A 19881013; BR 8801679 A 19881116; CA 1332910 C 19941108; DE 3712339 A1 19881020; DE 3869455 D1 19920430; ES 2030493 T3 19921101; GB 2204067 A 19881102; GB 2204067 B 19911127; GB 8808478 D0 19880511; JP 2674075 B2 19971105; JP S64277 A 19890105

DOCDB simple family (application)
EP 88200219 A 19880209; AU 1442788 A 19880408; BR 8801679 A 19880408; CA 560326 A 19880302; DE 3712339 A 19870411; DE 3869455 T 19880209; ES 88200219 T 19880209; GB 8808478 A 19880411; JP 8629188 A 19880409