

Title (en)
PROCESS FOR PRODUCING PHOSPHATE COATINGS

Publication
EP 0264811 B1 19910626 (DE)

Application
EP 87115011 A 19871014

Priority
JP 24608886 A 19861016

Abstract (en)
[origin: EP0264811A1] Phosphate coatings are produced on surfaces of cold-rolled steel or steel galvanised on one or both sides by using, to produce coatings rich in phosphophyllite, a phosphating solution which contains 10 to 20 g/l of phosphate (calculated as PO₄) 1.5 to 2.5 g/l of zinc (calculated as Zn) 5 to 15 g/l of nitrate (calculated as NO₃) 0.5 to 1.5 g/l of fluoride (calculated as F) 0.5 to 1.5 g/l of nickel (calculated as Ni) 2 to 20 mg/l of iron(III) (calculated as Fe) and 160 to 300 mg/l of nitrite (calculated as NO₂) at a temperature in the range from 15 to 39 DEG C, preferably 20 to 30 DEG C. In this phosphating solution, the Zn:PO₄ weight ratio is adjusted to (0.08 to 0.21):1 and the free acid content (FA) is adjusted to a value fixed by the lower limit curve $FA = 0.2 \times Zn - 0.4$ and the upper limit curve $FA = 0.4 \times Zn - 0.5$.

IPC 1-7
C23C 22/36

IPC 8 full level
C23C 22/36 (2006.01)

CPC (source: EP)
C23C 22/362 (2013.01); **C23C 22/364** (2013.01)

Citation (examination)
• DE 3239088 A1 19840426 - KLUTHE GMBH CHEM WERKE [DE]
• JP H06169974 A 19940621 - TERUMO CORP

Cited by
EP0381190A1; EP0759096A4; US5795407A; EP0370535A1; GB2226829B; WO9504842A1

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

DOCDB simple family (publication)
EP 0264811 A1 19880427; EP 0264811 B1 19910626; AU 7978387 A 19880421; BR 8705531 A 19880524; DE 3734596 A1 19880421; DE 3771026 D1 19910801; ES 2022854 B3 19911216; GB 2199047 A 19880629; GB 2199047 B 19901212; GB 8724339 D0 19871118; JP H055899 B2 19930125; JP S63100185 A 19880502; NZ 222135 A 19891221

DOCDB simple family (application)
EP 87115011 A 19871014; AU 7978387 A 19871015; BR 8705531 A 19871016; DE 3734596 A 19871013; DE 3771026 T 19871014; ES 87115011 T 19871014; GB 8724339 A 19871016; JP 24608886 A 19861016; NZ 22213587 A 19871012