

Title (en)
PROCESS FOR OBTAINING PHOSPHATE COATINGS ON METAL SURFACES

Publication
EP 0414296 B1 19930630 (DE)

Application
EP 90202104 A 19900802

Priority
DE 3927614 A 19890822

Abstract (en)
[origin: EP0414296A1] In a process for phosphating iron and steel surfaces according to the low-zinc technology, a nitrite-free aqueous acidic phosphating solution of 30 to 65 DEG C is used which contains 0.4 to 1.7 g/l of Zn 7 to 25 g/l of P2O5 2 to 30 g/l of NO3 and in which the weight ratio of free P2O5 to total P2O5 is adjusted to a value in the range from 0.04 to 0.20. H2O2 or alkali metal perborate is added to the phosphating solution in an amount such that - in the incorporated state - its maximum peroxide concentration is 17 mg/l, preferably 8 mg/l (calculated as H2O2), or its maximum Fe(II) concentration is 60 mg/l, preferably 30 mg/l (calculated as Fe). It is particularly advantageous to control the addition of H2O2 and/or alkali metal perborate according to the electrochemical potential determined with a redox electrode. The phosphating solution may additionally contain Mn, Ni, Co, Mg and/or Ca or fluoroborate, fluorosilicate and/or fluoride. The process can be used in particular for the preparation of metal surfaces for coating. <IMAGE>

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C23C 22/16; **C23C 22/77**

IPC 8 full level
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C23C 22/16 (2013.01); **C23C 22/184** (2013.01); **C23C 22/362** (2013.01); **C23C 22/77** (2013.01)

Citation (examination)
• W. Rausch et al. "Die Phosphertierung von Metallen", 1974 Eugen Leuze Verlag, Saulgau/Württ, Deutschland
• W. Rausch "Fortschritte auf dem Gebiet der chemischen Oberflächenbehandlung von Metallen" Interfinish 68, Tagungsberichtsband, Hannover 5.-9. Mai 1968, 162-167.

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