

Title (en)

PROCESS FOR THE ZINC-CALCIUM PHOSPHATIZING OF METAL SURFACES AT A LOW TREATING TEMPERATURE

Publication

**EP 0155547 B1 19881207 (DE)**

Application

**EP 85102057 A 19850225**

Priority

DE 3407513 A 19840301

Abstract (en)

[origin: ES8602963A1] Metal surfaces are phosphated with an acidic phosphating soln. contg. Zn, Ca, phosphate and accelerator and opt. Ni or fluoride. The metal surface, cleaned by degreasing, is contacted, without activation, at 30-65 (48-57) deg. C. with solns. contg. (a) over 0.5-1.5 g/l Ca ions, (b) 0.5-1.5 g/l An ions, (c) 10-50 g/l PO<sub>4</sub> ions, and, as accelerator, (d) 0.5-30 g/l NO<sub>3</sub> ions and/or 0.01-0.6 g/l NO<sub>2</sub> ions and/or 0.2-10 g/l ClO<sub>3</sub> ions and/or 0.1-2 g/l organic nitro cpd. and/or 0.01-0.5 g/l inorganic peroxide, esp. H<sub>2</sub>O<sub>2</sub>. - The solns. have pH 2.2-3.8. The molar ratio of free acid to total acid is 1 : 10 to 1 : 60 Wt. ratio (Ca ions + Zn ions) :PO<sub>4</sub> ions is 1 : over 8 to 1 : 40.

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IPC 1-7

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IPC 8 full level

**C23C 22/12** (2006.01); **C23C 22/13** (2006.01); **C23C 22/14** (2006.01); **C23C 22/16** (2006.01); **C23C 22/17** (2006.01); **C23C 22/22** (2006.01); **C23C 22/36** (2006.01)

CPC (source: EP US)

**C23C 22/22** (2013.01 - EP US); **C23C 22/36** (2013.01 - EP US); **C23C 22/367** (2013.01 - EP US)

Citation (examination)

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