

Title (en)

PROCESS FOR ACTIVATING METALLIC SURFACES PRIOR TO ZINC PHOSPHATING

Publication

EP 0224190 A3 19890118 (DE)

Application

EP 86116027 A 19861119

Priority

DE 3541997 A 19851128

Abstract (en)

[origin: US4707193A] A method for activating a metal surface during a phosphating process by treating the surface with an activating solution containing titanium ions, phosphate ions, and borate ions, after initial cleaning and rinsing but before phosphation.

IPC 1-7

C23C 22/80

IPC 8 full level

C23C 22/07 (2006.01); **C23C 22/80** (2006.01)

CPC (source: EP US)

C23C 22/80 (2013.01 - EP US)

Citation (search report)

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- [A] US 3425876 A 19690204 - STEINBRECHER LESTER
- [AD] EP 0031103 A1 19810701 - COLLARDIN GMBH GERHARD [DE]
- [AD] EP 0091627 A2 19831019 - COLLARDIN GMBH GERHARD [DE]
- [A] US 3795548 A 19740305 - HANSEN H, et al
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US5597465A; US5714047A; RU2680040C2; WO2014124866A1

Designated contracting state (EPC)

BE DE FR GB IT SE

DOCDB simple family (publication)

EP 0224190 A2 19870603; EP 0224190 A3 19890118; EP 0224190 B1 19910918; CA 1267062 A 19900327; DE 3541997 A1 19870604; DE 3681562 D1 19911024; ES 2002664 A6 19880916; JP S62133082 A 19870616; US 4707193 A 19871117; ZA 868990 B 19870729

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EP 86116027 A 19861119; CA 523837 A 19861126; DE 3541997 A 19851128; DE 3681562 T 19861119; ES 8603187 A 19861126; JP 28581686 A 19861128; US 93383286 A 19861124; ZA 868990 A 19861127