

Title (en)

Improvement of zinc phosphate treatment for cold working.

Title (de)

Zinkphosphatbehandlung vor der Kaltverformung.

Title (fr)

Traitement amélioré au phosphate de zinc avant le travail à froid.

Publication

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Application

EP 89310196 A 19891005

Priority

JP 25243588 A 19881006

Abstract (en)

The present invention provides a zinc phosphating method for cold working which hardly produces sludge and can be carried out in a short period of time. The method comprises treating a steel material with a surface conditioning solution comprising 1 to 20 ppm of titanium ion and having a pH of 8 to 11, and then treating it with a chemical solution comprising zinc ion in a concentration of 1 to 20 g/l, phosphate ion in a concentration of at least 5 g/l, nitrate ion in a concentration sufficient to have a concentration ratio of phosphate ion / nitrate ion of at least 1/3, pyrophosphate or tripolyphosphate ion in a concentration of 0.2 to 2 g/l, Fe (II) ion in a concentration of 0.1 to 20 g/l and a material decomposing nitrite ion and not oxidizing the Fe (II) ion in a concentration of at least 0.05 g/l.

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Cited by

EP0979880A1; US6068710A; EP0946786A4; US5908512A; US5370909A; CN113677826A; US6309477B1; WO9504842A1; WO9119828A1

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