

Title (en)

PROCESS FOR THE PREPARATION OF WORK PIECES FROM TITANIUM OR TITANIUM ALLOYS

Publication

EP 0288853 B1 19910710 (DE)

Application

EP 88106110 A 19880416

Priority

JP 9721687 A 19870420

Abstract (en)

[origin: JPS63262500A] PURPOSE:To improve the lubricity of Ti or a Ti alloy, to facilitate the cold working and to prevent the seizing by immersing the metal in an acidic zinc phosphate soln. for chemical treatment and forming a zinc phosphate film on the surface of the metal by electrolysis as the cathode. CONSTITUTION:Ti or a Ti alloy is previously treated with an aq. soln. of a colloidal Ti type surface treating agent as required. The metal is immersed in as acidic zinc phosphate soln. for chemical treatment and a zinc phosphate film is formed on the surface of the metal by electrolysis as the cathode. The zinc phosphate soln. is an aq. soln. contg. zinc primary phosphate as an essential component ad having a long service life. The proper concn. of zinc ions in the soln. is about 1-50g/l and that of phosphate ions is about 3-140g/l (expressed in terms of PO₄). The electrolysis is carried out with zinc or the like as the anode for about 10sec-5min at about 30-80 deg.C, about 5-30cm interval between the electrodes and about 0.2-30A/dm² current density to deposit zinc phosphate by about 2-20g/m². A conventional lubricant is then applied to the formed film and cold working is carried out. Thus, a product having a fine finished surface is easily and stably obtd.

IPC 1-7

C25D 9/08; C25D 11/36

IPC 8 full level

C25D 11/36 (2006.01)

CPC (source: EP US)

C25D 11/36 (2013.01 - EP US)

Citation (examination)

SOVIET INVENTIONS ILLUSTRATED; Sektion Ch, Woche C36, 15. Oktober 1080, DERWNT PUBLICATIONS LTD., London M11 * SU-709720 (AS UKR GEN INORG CH)

Cited by

US5401381A; EP1119652A4; WO9119836A1; WO9217628A1

Designated contracting state (EPC)

BE DE ES FR IT SE

DOCDB simple family (publication)

EP 0288853 A1 19881102; EP 0288853 B1 19910710; DE 3812692 A1 19881124; DE 3863577 D1 19910814; ES 2023681 B3 19920201; JP S63262500 A 19881028; US 4874480 A 19891017

DOCDB simple family (application)

EP 88106110 A 19880416; DE 3812692 A 19880416; DE 3863577 T 19880416; ES 88106110 T 19880416; JP 9721687 A 19870420; US 18454888 A 19880420