Title (en)

ELECTROPHORETIC WEAR-RESISTANT METAL-CERAMIC COATING CONSOLIDATED BY ELECTROLYTIC NICKEL PLATING

Publication

EP 0368753 B1 19930526 (FR)

Application

EP 89403069 A 19891108

Priority

FR 8814607 A 19881109

Abstract (en)

[origin: EP0368753A1] According to the invention, to produce a protective coating 30 resistant to wear in alternating friction at medium temperature on a substrate of steel or of especially nickel-based superalloy, the following stages are performed: a) electrophoretic deposition of a metal-ceramic structure consisting of a mixture of 85% to 50% of metal powder and of 15% to 50% of ceramic powder, in which mixture the metal powder is a cobalt-based superalloy of the KC 25 NW type or of the M - Cr Al Y type where M denotes a metal chosen from the group consisting of Ni, Co and Fe or a mixture of these with optional addition of Ta, and in which the ceramic powder is chosen from the group consisting of oxides, especially Al2O3 or Cr2O3, carbons, especially SiC or Cr3C2, nitrides, especially BN or TiN or borides, especially TiB2; b) electrolytic preliminary nickel-plating in an electrolysis bath at a pH of between 6 and 8; c) electrolytic nickel-plating in an acidic bath of sulphamate type. <??>Application to motor components subject to alternating friction at a temperature close to or higher than 700 DEG C.

IPC 1-7

C25D 13/02; C25D 15/00

IPC 8 full level

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