Title (en)

METHOD OF PRODUCING A WEARING COAT FOR CYLINDER BARRELS

Title (de)

VERFAHREN ZUM HERSTELLEN EINER VERSCHLEISSSCHICHT BEI ZYLINDERLAUFBAHNEN

Title (fr)

PROCEDE DE PRODUCTION D'UNE COUCHE D'USURE SUR DES SURFACES DE GLISSEMENT DE CYLINDRES

Publication

EP 1119651 B1 20020710 (DE)

Application

EP 99969454 A 19990917

Priority

- DE 19842608 A 19980917
- EP 9906890 W 19990917

Abstract (en)

[origin: DE19842608A1] An electromagnetic alternating field having a frequency of 10 kHz - 5 MHz is radiated onto the wear layer of the tracks of light metal cylinders for I.C. engines within the cylinder chamber. The light metal alloy of the cylinder is partially melted in a boundary surface region corresponding to the penetration depth of the alternating field into the light metal alloy. The metal alloy of the wear layer is partially melted in a boundary surface region and boundary surface diffusion processes are produced. Production of a wear layer on the tracks of light metal cylinders for I.C. engines comprises applying a metal alloy whose electrical conductivity is lower than that of the light metal alloy of the cylinder of a thickness of 10-600 microns on the inside of the cylinder chamber forming the cylinder tracks. An electromagnetic alternating field having a frequency of 10 kHz - 5 MHz is radiated onto the wear layer of the tracks of light metal cylinders for I.C. engines within the cylinder chamber. The light metal alloy of the cylinder is partially melted in a boundary surface region corresponding to the penetration depth of the alternating field into the light metal alloy. The metal alloy of the wear layer is partially melted in a boundary surface region and boundary surface diffusion processes are produced.

IPC 1-7

C23C 26/00; C23C 4/18

IPC 8 full level

C23C 4/18 (2006.01); **C23C 26/00** (2006.01); **C23C 26/02** (2006.01); **F02B 77/02** (2006.01); **F02B 77/08** (2006.01)

CPC (source: EP)

C23C 4/18 (2013.01); **C23C 26/02** (2013.01); **F02B 77/02** (2013.01); **F02B 77/08** (2013.01)

Designated contracting state (EPC)

CH DE FR GB LI

DOCDB simple family (publication)

DE 19842608 A1 20000323; DE 59902003 D1 20020814; EP 1119651 A1 20010801; EP 1119651 B1 20020710; WO 0017415 A1 20000330

DOCDB simple family (application)

DE 19842608 A 19980917; DE 59902003 T 19990917; EP 9906890 W 19990917; EP 99969454 A 19990917