

Title (en)

Method for producing corrosion and wear resistant protective coatings on iron based substrates

Title (de)

Verfahren zur Erzeugung von Korrosions- und Verschleisschutzschichten auf Eisenbasiswerkstoffen

Title (fr)

Procédé pour l'obtention de revêtements résistant à la corrosion et l'usure sur des substrats à base de fer

Publication

EP 0753599 B1 19990407 (DE)

Application

EP 96110790 A 19960704

Priority

DE 19525182 A 19950711

Abstract (en)

[origin: EP0753599A1] The method concerns production of corrosion and wear resistant layers on ferrous material, according to which near-surface regions are enriched with nitrogen, carbon and oxygen. It is characterized by the following process steps: (a) carbonitration of the material to produce a connector layer consisting of iron carbonitrides; (b) activation of the material surface by a low-pressure plasma-assisted process; (c) oxidation of the material to produce a closed oxide layer. Also claimed is an appts. for implementation of the method in which processes at normal and low pressures can be carried out.

IPC 1-7

C23C 8/34

IPC 8 full level

C23C 8/22 (2006.01); **C23C 8/32** (2006.01); **C23C 8/34** (2006.01); **C23C 8/38** (2006.01); **C23C 16/36** (2006.01)

CPC (source: EP KR US)

C23C 8/32 (2013.01 - KR); **C23C 8/34** (2013.01 - EP US)

Cited by

WO2022003189A1; EP1757892A1; DE102007046231A1; DE102011053253A1; DE102011053253B4

Designated contracting state (EPC)

AT BE DE FR GB IT NL

DOCDB simple family (publication)

EP 0753599 A1 19970115; EP 0753599 B1 19990407; EP 0753599 B2 20050413; AT E178659 T1 19990415; BR 9603031 A 19980505; CA 2180927 A1 19970112; CA 2180927 C 20061003; DE 19525182 A1 19970116; DE 19525182 C2 19970717; DE 59601585 D1 19990512; JP 3185015 B2 20010709; JP H09104960 A 19970422; KR 100245361 B1 20000302; KR 970006536 A 19970221; US 5679411 A 19971021

DOCDB simple family (application)

EP 96110790 A 19960704; AT 96110790 T 19960704; BR 9603031 A 19960709; CA 2180927 A 19960710; DE 19525182 A 19950711; DE 59601585 T 19960704; JP 20751596 A 19960704; KR 19960027296 A 19960705; US 68092696 A 19960711