Title (en)

APPARATUS FOR GAS-DYNAMIC APPLYING COATINGS AND METHOD OF COATING

Title (de)

VERFAHREN ZUM GASDYNAMISCHEN AUFBRINGEN VON BESCHICHTUNGEN UND BESCHICHTUNGSVERFAHREN

Title (fr)

APPAREIL POUR L'APPLICATION GAZ DYNAMIQUE DE REVETEMENTS ET PROCEDE DE REVETEMENT

Publication

EP 1888803 A1 20080220 (EN)

Application

EP 06733241 A 20060315

Priority

- RU 2006000116 W 20060315
- RU 2005115327 A 20050520

Abstract (en)

[origin: WO2006123965A1] The invention relates to the technology of applying coatings to the surfaces of articles, and in particular, to gas-dynamic methods of applying coatings with the use of an inorganic powder, and it can be used in different branches of mechanical engineering. A compressed gas is delivered to the heater (1) to be heated to the required temperature that keeps the particles from sticking to the nozzle walls. The heated gas enters the supersonic nozzle (2) wherein it sequentially passes through a converging portion, the throat (3) and a diverging portion of the nozzle and acpelerates up to supersonic velocity. The powders to be sprayed are introduced into said supersonic gas flow through powder injection components (5). The powder particles are accelerated by a high-velocity gas flow in the acceleration portion (7) of the nozzle and then they are directed to the substrate surface. The gist of the invention is the disclosure of the parameters of a nozzle portion, positioned downstream of the powder injection point and intended for the acceleration of the powder, providing the increase of sprayed powder deposition efficiency and the retention of the possibility to use an elevated temperature of the compressed gas and to use the powders having hard particles.

IPC 8 full level

C23C 16/513 (2006.01); **H05H 1/34** (2006.01); **H05H 1/42** (2006.01)

CPC (source: EP)

B05B 7/1486 (2013.01); **C23C 24/04** (2013.01)

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2006123965 A1 20061123; CN 100572584 C 20091223; CN 101208447 A 20080625; EA 011084 B1 20081230; EA 200702536 A1 20080428; EP 1888803 A1 20080220; EP 1888803 A4 20110309; EP 1888803 B1 20141217; JP 2008540115 A 20081120; JP 5184347 B2 20130417; RU 2288970 C1 20061210

DOCDB simple family (application)

RU 2006000116 W 20060315; CN 200680023113 A 20060315; EA 200702536 A 20060315; EP 06733241 A 20060315; JP 2008512240 A 20060315; RU 2005115327 A 20050520