

Title (en)  
Determination of parameters for coating methods

Title (de)  
Parameterermittlung für Beschichtungsverfahren

Title (fr)  
Détermination de paramètres pour des procédés de revêtement

Publication  
**EP 2757175 A1 20140723 (DE)**

Application  
**EP 13152234 A 20130122**

Priority  
EP 13152234 A 20130122

Abstract (en)  
Thermally coating using a material stream and a nozzle, preferably using a powder stream, comprises heating and melting a material of the material stream by plasma or flame. The material is discharged from the nozzle or is injected at the end of the nozzle based on at least one target variable, preferably material flow speed of the material stream, brightness distribution of the material stream, temperature distribution and/or voltage between an electrode and the nozzle. The changes in the target variables are determined, which are used for controlling the target variables in the coating. Thermally coating using a material stream and a nozzle, preferably using a powder stream, comprises heating and melting a material of the material stream by plasma or flame. The material is discharged from the nozzle or is injected at the end of the nozzle based on at least one target variable, preferably material flow speed of the material stream, brightness distribution of the material stream, temperature distribution and/or voltage between an electrode and the nozzle. The power of the nozzle is measurable and controllable. The desired optimal target sizes are achieved and/or maintained starting from at least one optimal initial value of controlled variables, before coating. The method allows the adjustment of parameter sets for different configurations e.g. higher-, lower- and constant control variables. The changes in the target variables are determined, which are used for controlling the target variables in the coating.

Abstract (de)  
Durch die kombinierte Messung der Partikelgeschwindigkeit, -temperatur, -intensität, Brennerspannung und deren Regelung in einem Toleranzbereich ist es möglich, die Schichtstruktur, die Schichtdicke und das Schichtgewicht trotz verschleißbedingter Schwankungen im Beschichtungsprozess konstant zu halten.

IPC 8 full level  
**C23C 4/12** (2006.01)

CPC (source: EP)  
**C23C 4/129** (2016.01); **C23C 4/134** (2016.01)

Citation (applicant)  
• EP 1204776 B1 20040602 - SIEMENS AG [DE], et al  
• EP 1306454 A1 20030502 - SIEMENS AG [DE]  
• EP 1319729 A1 20030618 - SIEMENS AG [DE]  
• WO 9967435 A1 19991229 - SIEMENS AG [DE], et al  
• WO 0044949 A1 20000803 - SIEMENS AG [DE], et al  
• US 6024792 A 20000215 - KURZ WILFRIED [CH], et al  
• EP 0892090 A1 19990120 - SULZER INNOTEC AG [CH]  
• EP 0486489 B1 19941102 - SIEMENS AG [DE]  
• EP 0786017 B1 19990324 - SIEMENS AG [DE]  
• EP 0412397 B1 19980325 - SIEMENS AG [DE]  
• EP 1306454 A1 20030502 - SIEMENS AG [DE]

Citation (search report)  
• [X] US 2004245354 A1 20041209 - SRINIVASAN VASUDEVAN [US]  
• [X] WO 2005085489 A1 20050915 - MTU AERO ENGINES GMBH [DE], et al  
• [X] US 3949266 A 19760406 - VOGTS WILLIAM A, et al  
• [X] US 2004031776 A1 20040219 - GEVELBER MICHAEL ALAN [US], et al

Cited by  
WO2015071011A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 2757175 A1 20140723**; WO 2014114598 A1 20140731

DOCDB simple family (application)  
**EP 13152234 A 20130122**; EP 2014051042 W 20140120