

Title (en)

Method for smoothing the surface of a coating

Title (de)

Verfahren zur Glättung der Oberfläche einer Beschichtung

Title (fr)

Procédé pour lisser la surface d'un revêtement

Publication

EP 2977487 A1 20160127 (EN)

Application

EP 14178573 A 20140725

Priority

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Abstract (en)

The present application refers to a method for reducing the roughness (Ra) of a first coating (1) with a defined coating composition and thermal expansion coefficient, said coating (1) covering the surface of a component (3) to be thermally high loaded, wherein in a first step the roughness (Ra) of said coating (1) is measured and in a following step a second slurry coating (2) is prepared for applying onto the surface of the first coating (1), whereby the coating composition of the second coating (2) is tailored to have a similar thermal expansion coefficient like the first coating (1). The method is characterized in calculating a minimum number of coating spray passes (N) necessary to provide the second slurry coating (2) with a thickness (T) that is at least two times of the roughness (Ra) of the first coating (1), then applying the slurry coating (2) with said calculated number of spray passes (N) onto the surface of the first coating (1), then fully curing, but only partially sintering the slurry coating (2) at a temperature in the range of 300 to 800°C and finally in polishing the second coating (2) to a reduced thickness (T') such that finally the second coating (2) does cover the first coating (1) only locally.

IPC 8 full level

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CPC (source: EP)

C23C 24/082 (2013.01); **C23C 28/042** (2013.01); **F01D 5/288** (2013.01); **F05D 2230/90** (2013.01)

Citation (search report)

- [XD] EP 1088908 A2 20010404 - GEN ELECTRIC [US]
- [A] EP 2287129 A2 20110223 - GEN ELECTRIC [US]
- [AD] EP 2236650 A1 20101006 - ROLLS ROYCE CORP [US]
- [A] WO 2009030049 A1 20090312 - ALCAN INT LTD [CA], et al

Cited by

CN115044898A

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)

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DOCDB simple family (publication)

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