

Title (en)

THERMAL SPRAY METHOD INTEGRATING SELECTED REMOVAL OF PARTICULATES

Title (de)

THERMISCHES SPRÜHVERFAHREN MIT INTEGRATION AUSGEWÄHLTER PARTIKELENTFERNUNG

Title (fr)

PROCÉDÉ DE PULVÉRISATION THERMIQUE INTÉGRANT LA SUPPRESSION SÉLECTIONNÉE DE PARTICULES

Publication

**EP 3227032 A4 20180822 (EN)**

Application

**EP 15864746 A 20150717**

Priority

- US 201414560456 A 20141204
- US 2015040898 W 20150717

Abstract (en)

[origin: WO2016089452A1] A thermal spray system and method includes a hot gas generator with nozzle accelerating heated gas towards a substrate in the form of a gas column projecting onto the substrate surface as a spot. One or more feedstock injectors proximate the nozzle exit, directed towards the gas column, are connected to a feedstock source. The hot gas stream transfers heat and momentum to the feedstock, causing the feedstock particles to impact the substrate to form a coating. The system further comprises one or more liquid injectors proximate the nozzle exit, directed towards the axis, and connected to a source of liquid. The system controls the flow and velocity with which the liquid is injected, permitting control of the depth of penetration of the liquid into the gas column. The method selectively prevents suboptimal feedstock particulates from adhering to the substrate and provides for the in-situ removal of suboptimal deposits.

IPC 8 full level

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CPC (source: EP KR US)

**B05B 1/34** (2013.01 - US); **B05B 7/205** (2013.01 - EP KR); **B05B 7/226** (2013.01 - EP KR); **C23C 4/134** (2016.01 - EP KR)

Citation (search report)

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- [Y] P. FAUCHAIS ET AL: "Parameters Controlling Liquid Plasma Spraying: Solutions, Sols, or Suspensions", JOURNAL OF THERMAL SPRAY TECHNOLOGY, vol. 17, no. 1, 1 March 2008 (2008-03-01), pages 31 - 59, XP055201509, ISSN: 1059-9630, DOI: 10.1007/s11666-007-9152-2
- See references of WO 2016089452A1

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**WO 2016089452 A1 20160609**; CA 2967578 A1 20160609; CA 2967578 C 20210316; CN 107107097 A 20170829; CN 107107097 B 20210427; EP 3227032 A1 20171011; EP 3227032 A4 20180822; EP 3227032 B1 20221123; JP 2018508644 A 20180329; JP 6644070 B2 20200212; KR 102459847 B1 20221026; KR 20170091735 A 20170809

DOCDB simple family (application)

**US 2015040898 W 20150717**; CA 2967578 A 20150717; CN 201580066252 A 20150717; EP 15864746 A 20150717; JP 2017530220 A 20150717; KR 20177018529 A 20150717