

Title (en)

COLD GAS SPRAY COATING METHODS AND COMPOSITIONS

Title (de)

VERFAHREN UND ZUSAMMENSETZUNGEN FÜR KALTGASSPRÜHBESCHICHTUNG

Title (fr)

PROCÉDÉS DE REVÊTEMENT PAR PULVÉRISATION AU GAZ FROID ET COMPOSITIONS

Publication

**EP 3314037 A4 20190130 (EN)**

Application

**EP 15897313 A 20150629**

Priority

US 2015038320 W 20150629

Abstract (en)

[origin: WO2017003427A1] Cold gas spray coating methods, compositions and articles. A cold gas spray method is described including spraying a composition containing at least one nickel or iron based material blended with a softer, shear-deformable, secondary phase metal and/or metal alloy, onto a surface to deposit a dense, porous coating. The compositions used in and articles produced by such methods are also described.

IPC 8 full level

**C23C 24/04** (2006.01); **B22F 1/148** (2022.01)

CPC (source: EP US)

**C22C 1/0433** (2013.01 - EP US); **C22C 19/055** (2013.01 - EP US); **C22C 19/056** (2013.01 - EP US); **C22C 33/02** (2013.01 - EP US);  
**C22C 38/00** (2013.01 - EP US); **C23C 24/04** (2013.01 - EP US); **B22F 1/148** (2022.01 - EP US); **B22F 9/026** (2013.01 - US);  
**B22F 2009/041** (2013.01 - US); **B22F 2998/10** (2013.01 - EP US); **C22C 19/07** (2013.01 - EP US)

Citation (search report)

- [XA] US 8591986 B1 20131126 - AJDELSZTAJN LEONARDO [US], et al
- [XI] US 2006093736 A1 20060504 - RAYBOULD DEREK [US], et al
- [XI] EP 1672175 A1 20060621 - HONEYWELL INT INC [US]
- [XI] WO 2005079209 A2 20050901 - UNIV CALIFORNIA [US], et al
- [XI] WO 2008057710 A2 20080515 - STARCK H C GMBH CO KG [DE], et al
- [XA] A. SOVA ET AL: "Potential of cold gas dynamic spray as additive manufacturing technology", THE INTERNATIONAL JOURNAL OF ADVANCED MANUFACTURING TECHNOLOGY, vol. 69, no. 9-12, 2 August 2013 (2013-08-02), London, pages 2269 - 2278, XP055536854, ISSN: 0268-3768, DOI: 10.1007/s00170-013-5166-8
- [XA] S. GRIGORIEV ET AL: "Cold spraying: From process fundamentals towards advanced applications", SURFACE AND COATINGS TECHNOLOGY, vol. 268, 1 April 2015 (2015-04-01), AMSTERDAM, NL, pages 77 - 84, XP055536856, ISSN: 0257-8972, DOI: 10.1016/j.surfcoat.2014.09.060
- [XA] WANG H T ET AL: "Cold spraying of Fe/Al powder mixture: Coating characteristics and influence of heat treatment on the phase structure", APPLIED SURFACE SCIENCE, ELSEVIER, AMSTERDAM, NL, vol. 255, no. 5, 30 December 2008 (2008-12-30), pages 2538 - 2544, XP025711823, ISSN: 0169-4332, [retrieved on 20080731], DOI: 10.1016/J.APSUSC.2008.07.127
- See references of WO 2017003427A1

Cited by

US11898986B2; US11935662B2; US11662300B2

Designated contracting state (EPC)

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DOCDB simple family (application)

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JP 2017564736 A 20150629; US 201515568703 A 20150629