

Title (en)

JETTING LAYERS OF POWDER AND THE FORMATION OF FINE POWDER BEDS THEREBY

Title (de)

STRAHLBESCHICHTUNG MIT PULVERFÖRMIGEM MATERIAL UND DADURCH HERGESTELLTE FEIN-PULVER BETTEN

Title (fr)

COUCHES DE POUDRE DEPOSEES PAR JET ET FORMATION DE LITS DE POUDRE FINE A L'AIDE DE CELLES-CI

Publication

**EP 1009614 A4 20040421 (EN)**

Application

**EP 98929036 A 19980612**

Priority

- US 9812280 W 19980612
- US 5001597 P 19970613

Abstract (en)

[origin: WO9856566A1] A powder bed (32) is built up by repeated deposition of a slurry that contains powder. Layers are made by depositing a liquid dispersion of the desired powdered material, which then slip-casts into the forming powder bed to make a new layer (34). The slurry may be deposited in any suitable manner, such as by raster or vector scanning, or by a plurality of simultaneous jets that coalesce before the liquid slip-casts into the bed, or by individual drops, the deposits of which are individually controlled, thereby generating a regular surface for each layer.

IPC 1-7

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IPC 8 full level

**B05D 1/36** (2006.01); **B22F 3/00** (2006.01); **B22F 3/22** (2006.01); **B23K 26/14** (2006.01); **B23K 26/34** (2006.01); **B29C 41/00** (2006.01); **B29C 41/16** (2006.01); **B29C 41/36** (2006.01); **B29C 48/92** (2019.01); **B29C 67/00** (2006.01); **B32B 15/04** (2006.01); **B32B 37/00** (2006.01)

CPC (source: EP US)

**B22F 3/22** (2013.01 - EP US); **B22F 10/14** (2021.01 - EP US); **B23K 35/0244** (2013.01 - EP); **B23K 35/025** (2013.01 - EP); **B29C 41/003** (2013.01 - EP); **B29C 41/16** (2013.01 - EP); **B29C 41/36** (2013.01 - EP); **B29C 64/165** (2017.07 - EP); **C23C 24/08** (2013.01 - EP); **B22F 2999/00** (2013.01 - EP); **B29K 2995/0094** (2013.01 - EP); **Y02P 10/25** (2015.11 - EP)

Citation (search report)

- [DXY] US 5204055 A 19930420 - SACHS EMANUEL M [US], et al
- [Y] WO 9419112 A2 19940901 - MASSACHUSETTS INST TECHNOLOGY [US]
- [Y] WO 9611117 A1 19960418 - HELISYS INC [US], et al
- [Y] US 5301415 A 19940412 - PRINZ FRITZ B [US], et al
- [Y] US 5510066 A 19960423 - FINK DAVID J [US], et al
- [Y] EP 0666164 A2 19950809 - STRATASYS INC [US]
- [A] US 4944817 A 19900731 - BOURELL DAVID L [US], et al
- [A] PATENT ABSTRACTS OF JAPAN vol. 1996, no. 12 26 December 1996 (1996-12-26)
- See references of WO 9856566A1

Cited by

US10030961B2

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