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- (71) **Applicant (for all designated States except US):** UNIVERSITY OF EXETER [GB/GB]; The Queen's Drive, Exeter, Devon EX4 4QJ (GB).
- (72) **Inventors; and**
- (75) **Inventors/Applicants (for US only):** FELSTEAD, Michael, William [GB/GB]; Durrance, Clyst Honiton, Exeter, Devon EX52AN (GB). SEWELL, Neil, Thomas [GB/GB]; 11 Bagshot Avenue, St. Leonards, Exeter, Devon EX24RN (GB).
- (74) **Agent:** BAILEY, Richard; Marks & Clerk LLP, 27 Imperial Square, Cheltenham GL50 1RQ (GB).
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- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

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18 November 2010

(54) **Title:** ADDITIVE MANUFACTURING DEVICE AND METHOD

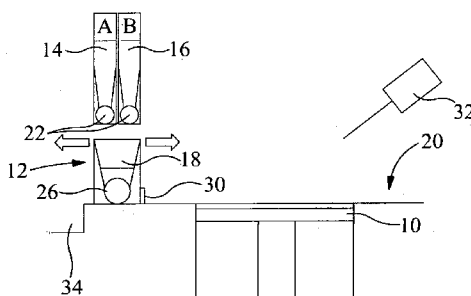


Figure 1

(57) **Abstract:** A manufacturing device comprising a hopper/wiper device (18, 26, 30) operable to apply layers of material to a bed, and heater means (32) operable to heat selected areas of each layer to form a product, wherein the hopper/wiper device (18, 26, 30) is operable so that the product includes at least a first part of a first material or material blend (A) and a second part of a second material or material blend (B).



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INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER
INV. B29C67/00 B22F3/105

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
B29C B22F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	EP 1 700 686 A2 (3D SYSTEMS INC [US]) 13 September 2006 (2006-09-13) abstract figures 5, 6, 7, 8 page 3, lines 41-43 page 6, lines 41-42 page 7, lines 30-33 page 9, lines 13-14	1-4 5-14,16
X Y	WO 01/07239 A1 (FRAUNHOFER GES FORSCHUNG [DE]; MEINERS WILHELM [DE]; GASSER ANDRES [DE]) 1 February 2001 (2001-02-01) abstract figure 1 page 7, lines 16-29 page 12, lines 11-16, 27-33 - page 13, lines 1-3	15 8-14,16

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

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European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Gasner, Benoit

INTERNATIONAL SEARCH REPORT

International application No
PCT/GB2009/002730

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	EP 1 600 281 A1 (3D SYSTEMS INC [US]) 30 November 2005 (2005-11-30) figure 6 page 4, column 6, lines 40-46 -----	5-7
A	US 6 209 420 B1 (BUTCHER TRENT N [US] ET AL) 3 April 2001 (2001-04-03) column 14, lines 39-47 -----	15,16
A	US 2005/104257 A1 (GU PEIHUA [CA] ET AL) 19 May 2005 (2005-05-19) figures 1, 2, 3 -----	1-14
A	EP 1 911 568 A1 (SHOFU INC [JP]) 16 April 2008 (2008-04-16) figure 26 -----	1-14

INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB2009/002730

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-16

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-16

Device and method to deliver a controllable quantity of a first and second material to a bed

2. claims: 17, 18

Device for compacting a layer of material

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/GB2009/002730

Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
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