

INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP2018/074135

A. CLASSIFICATION OF SUBJECT MATTER		
<i>B22F 3/105</i> (2006.01)i; <i>B33Y 30/00</i> (2015.01)i; <i>B23K 26/342</i> (2014.01)i; <i>B29C 64/153</i> (2017.01)i		
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) B22F; B33Y; B23K; B29C		
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 practicable, search terms used) EPO-Internal, WPI Data, INSPEC, COMPENDEX		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 102009024957 B3 (FRAUNHOFER GES FOERDERUNG ANGEWANDTEN EV) 23 September 2010 (2010-09-23)	1,3-10
Y	paragraphs [0011], [0018], [0020], [0032], [0046], [0051], [0055] claims 1-24 figures 1-6	2
X	WO 2015127271 A1 (DMG MORI ADVANCED SOLUTIONS DEV [US]) 27 August 2015 (2015-08-27) paragraphs [0006] - [0008], [0012] - [0014], [0065], [0066] claims 1-20 figures 1-16	1,8,10
X	DE 102014018080 A1 (UNIV PIECK ROSTOCK WILHELM) 09 June 2016 (2016-06-09) paragraphs [0013], [0016], [0019], [0020] claims 1-10 figures 1-3	1,8,10
Y	EP 3112135 A1 (MITSUBISHI HEAVY IND LTD [JP]) 04 January 2017 (2017-01-04) paragraph [0060]	2
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> 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 application or patent 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 12 October 2018		Date of mailing of the international search report 18 October 2018
Name and mailing address of the ISA/EP European Patent Office p.b. 5818, Patentlaan 2, 2280 HV Rijswijk Netherlands Telephone No. (+31-70)340-2040 Facsimile No. (+31-70)340-3016		Authorized officer Reich, Claus Telephone No.

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A	US 2017136578 A1 (YOSHIMURA HITOSHI [JP]) 18 May 2017 (2017-05-18) paragraphs [0002], [0059], [0060], [0101]	1-10
A	DE 102014220082 A1 (HOCHSCHULE FÜR ANGEWANDTE WISSENSCHAFTEN COBURG [DE]) 21 April 2016 (2016-04-21) paragraphs [0162], [0169], [0215]	1-10
A	DE 102015014016 B3 (O R LASERTECHNOLOGIE GMBH [DE]) 15 December 2016 (2016-12-15) paragraphs [0012], [0019], [0020]	1-10

INTERNATIONAL SEARCH REPORT
Information on patent family members

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