



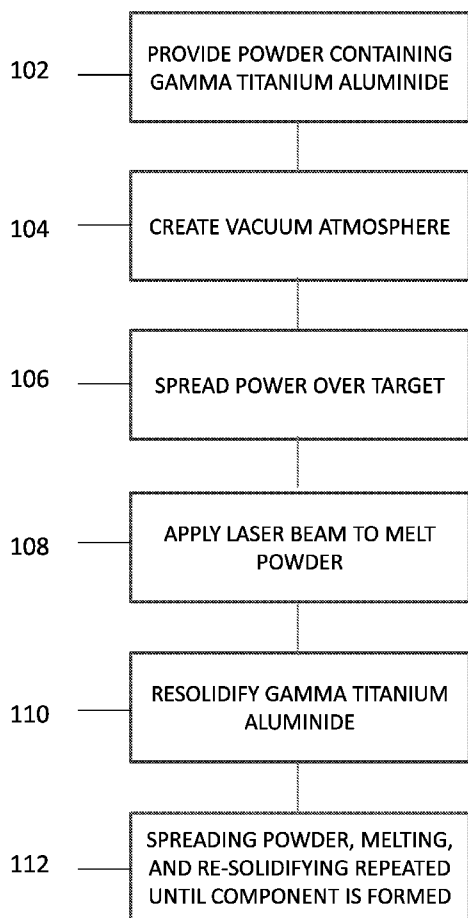
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[Continued on next page]

(54) Title: PROCESS FOR MANUFACTURING A GAMMA TITANIUM ALUMINIDE TURBINE COMPONENT

(57) Abstract: A process for manufacturing a turbine engine component includes the steps of: providing a powder containing gamma titanium aluminide; and forming a turbine engine component from said powder using a direct metal laser sintering technique.



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(81) **Designated States** (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/078182**A. CLASSIFICATION OF SUBJECT MATTER****B22F 3/105(2006.01)i, B22F 7/02(2006.01)i**

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

B. FIELDS SEARCHEDMinimum documentation searched (classification system followed by classification symbols)
B22F 3/105; C22F 1/18; C22C 14/00; B32B 15/00; B22F 1/00; B21B 1/46; B22F 7/02Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean utility models and applications for utility models
Japanese utility models and applications for utility modelsElectronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKOMPASS(KIPO internal) & keywords: titanium aluminide, additive manufacturing, laser sintering, turbine component, resolidifying, powder, and layer**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	HERNANDEZ et al. Microstructures for Two-Phase Gamma Titanium Aluminide Fabricated by Electron Beam Melting, Metallography, Microstructure, and Analysis, 28 February 2012, Volume 1, Issue 1, pp. 14-27. See the whole document.	1-5
Y		6
Y	US 2010-0000635 A1 (APPEL et al.) 07 January 2010 See abstract and paragraphs [0003]-[0004],[0031]-[0046].	6
A	US 2007-0107202 A1 (DAS, GOPAL) 17 May 2007 See abstract, paragraphs [0018]-[0021], and claim 1.	1-6
A	US 5634992 A (KELLY et al.) 03 June 1997 See abstract, column 1, line 8 - column 2, line 25, and claim 1.	1-6
A	US 5540792 A (QUADAKKERS et al.) 30 July 1996 See abstract and claim 3.	1-6

 Further documents are listed in the continuation of Box C. See patent family annex.

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"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

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

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