

(19)



(11)

EP 2 450 126 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
06.01.2016 Bulletin 2016/01

(51) Int Cl.:
B22D 17/20 (2006.01) B22D 17/22 (2006.01)

(43) Date of publication A2:
09.05.2012 Bulletin 2012/19

(21) Application number: **11187963.1**

(22) Date of filing: **04.11.2011**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME

- **Castle, Lea Kennard**
Vernon, CT Connecticut 06066 (US)
- **Berczik, Douglas M.**
Manchester, CT Connecticut 06042 (US)
- **Marcin, John Joseph**
Marlborough, CT Connecticut 06447 (US)
- **Verner, Carl R.**
Windsor, CT Connecticut 06095 (US)

(30) Priority: **05.11.2010 US 940263**

(71) Applicant: **United Technologies Corporation**
Hartford, CT 06101 (US)

(74) Representative: **Leckey, David Herbert**
Dehns
St Bride's House
10 Salisbury Square
London
EC4Y 8JD (GB)

(72) Inventors:

- **Bochiechio, Mario P.**
Vernon, CT Connecticut 06066 (US)
- **Shah, Dilip M.**
Glastonbury, CT Connecticut 06033 (US)

(54) Die casting system and method utilizing high melting temperature materials

(57) A die casting system (50) includes a die (52) comprising of a plurality of die components (54, 56) that define a die cavity (60) configured to receive a molten

metal. One of the die components (54, 56) comprises a material that is not reactive with the molten metal and has a melting temperature above 815 degrees Celsius.

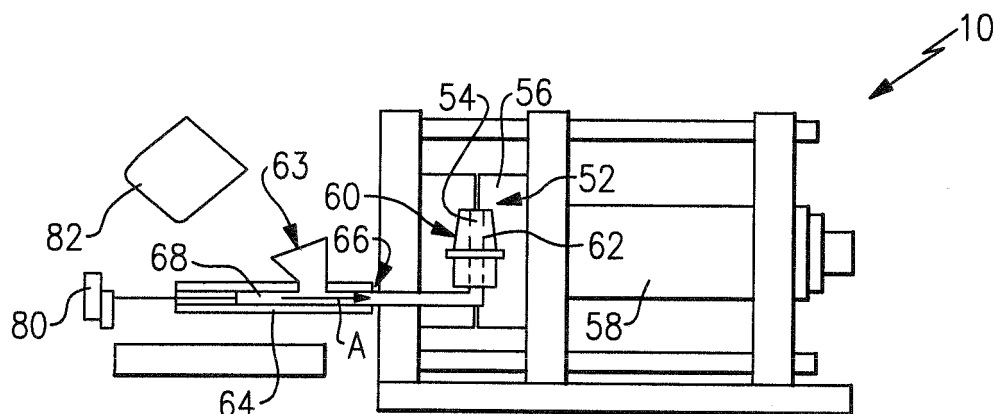


FIG. 1

EP 2 450 126 A3



EUROPEAN SEARCH REPORT

Application Number
EP 11 18 7963

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	EP 1 013 781 A2 (UNITED TECHNOLOGIES CORP [US]) 28 June 2000 (2000-06-28) * paragraphs [0053], [0054] * -----	1-15	INV. B22D17/20 B22D17/22
X	EP 1 013 363 A1 (UNITED TECHNOLOGIES CORP [US]) 28 June 2000 (2000-06-28) * paragraphs [0043], [0044] * -----	1-15	
X	US 3 841 846 A (LARSEN E ET AL) 15 October 1974 (1974-10-15) * the whole document * -----	5,7-9	
X	US 3 532 561 A (BARTO RONALD L ET AL) 6 October 1970 (1970-10-06) * the whole document * -----	5,7-9	
X	JP S63 203262 A (HITACHI METALS LTD) 23 August 1988 (1988-08-23) * the whole document * -----	10,12,14	
X	JP S63 153245 A (MITSUBISHI METAL CORP) 25 June 1988 (1988-06-25) * abstract * -----	10-13,15	TECHNICAL FIELDS SEARCHED (IPC) B22D

The present search report has been drawn up for all claims

Place of search

Munich

Date of completion of the search

25 November 2015

Examiner

Scheid, Michael

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 11 18 7963

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

25-11-2015

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 1013781 A2	28-06-2000	AT 266103 T	15-05-2004
		CN 1279299 A	10-01-2001
		DE 69916983 D1	09-06-2004
		DE 69916983 T2	09-06-2005
		EP 1013781 A2	28-06-2000
		ES 2216453 T3	16-10-2004
		IL 133580 A	12-05-2004
		JP 4125462 B2	30-07-2008
		JP 2000192179 A	11-07-2000
		JP 2000192208 A	11-07-2000
		KR 20000048339 A	25-07-2000
		RU 2235798 C2	10-09-2004
		UA 70300 C2	15-03-2001
		US 2002005233 A1	17-01-2002
EP 1013363 A1	28-06-2000	CN 1260254 A	19-07-2000
		DE 69923930 D1	07-04-2005
		DE 69923930 T2	06-04-2006
		EP 1013363 A1	28-06-2000
		ES 2235445 T3	01-07-2005
		IL 133607 A	28-03-2004
		JP 2000197957 A	18-07-2000
US 3841846 A	15-10-1974	NONE	
US 3532561 A	06-10-1970	NONE	
JP S63203262 A	23-08-1988	NONE	
JP S63153245 A	25-06-1988	JP H0730429 B2	05-04-1995
		JP S63153245 A	25-06-1988

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82