(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau

(43) International Publication Date 5 November 2009 (05.11.2009)



(10) International Publication Number WO 2009/134299 A3

(51) International Patent Classification:

A62C 2/06 (2006.01) **A62C 3/08** (2006.01) **C6**

A62C 3/10 (2006.01) **C01B 31/04** (2006.01)

(21) International Application Number:

PCT/US2009/001590

(22) International Filing Date:

13 March 2009 (13.03.2009)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/069,511 14 March 2008 (14.03.2008) US 61/192,637 19 September 2008 (19.09.2008) US

(71) Applicant (for all designated States except US): KANE-KA CORPORATION [JP/JP]; 2-4 Nakanoshima 3chome, Kita-ku, Osaka 530-8288 (JP).

(72) Inventors; and

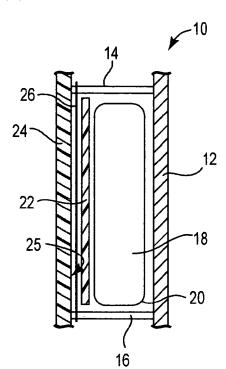
(75) Inventors/Applicants (for US only): ONO, Kazuhiro [JP/US]; 811 Rustic Harbor Court, Houston, Texas 77062 (US). NISHIKAWA, Yasushi [JP/JP]; #302, 1-15 Mat-

subaracho, Takatsuki, Osaka 566-0072 (JP). INADA, Takashi [JP/JP]; #D-109, 5-2-23, Torikai-Nishi, Settsu, Osaka 566-0072 (JP).

- (74) Agents: BJORKMAN, Dale, A. et al.; Kagan Binder, PLLC, Suite 200, Maple Island Building, 221 Main Street North, Stillwater, MN 55082 (US).
- (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, BR, BW, BY, BZ, CA, CH, 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, IS, JP, KE, KG, KM, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ,

[Continued on next page]

(54) Title: FIRE BARRIER PROTECTION FOR AIRPLANES COMPRISING GRAPHITE FILMS



(57) Abstract: A fire barrier system for use in aircraft, ship or offshore drilling platform comprises a flexible graphite sheet. Methods of providing fire barrier protection in an aircraft, ship or offshore drilling platform comprise installing the described fire barrier system in the aircraft, ship or offshore drilling platform. Additionally, the fire barrier system when installed in the aircraft, ship or offshore drilling platform is described.

Fig. 1

TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

- TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, (88) Date of publication of the international search report: ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV,
 - (15) Information about Correction:

Previous Correction:

see Notice of 23 December 2009

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2009/001590 A. CLASSIFICATION OF SUBJECT MATTER
INV. A62C2/06 A62C3/08 A62C3/10 C01B31/04 According to International Patent Classification (IPC) or to both national classification and IPC Minimum documentation searched (classification system followed by classification symbols) A62C C01B 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 EP 0 527 046 A2 (UCAR CARBON TECH [US]) 1-3,5-910 February 1993 (1993-02-10) 14-29. 33 - 35column 1, line 4 - line 45 Υ 4,10-13,column 3, line 10 - column 4, line 19 30 - 32US 6 670 291 B1 (TOMPKINS THOMAS L [US] ET Υ 4,10-13AL) 30 December 2003 (2003-12-30) cited in the application column 5, line 34 - column 7, line 21 figures 1,2 US 2007/032589 A1 (NISHIKAWA YASUSHI [JP] Υ 30 - 32ET AL) 8 February 2007 (2007-02-08) cited in the application paragraph [0007] - paragraph [0017] X X Further documents are listed in the continuation of Box C. See patent family annex. Special categories of cited documents : 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 "A" document defining the general state of the art which is not considered to be of particular relevance invention *E* earlier document but published on or after the international "X" document of particular relevance; the claimed invention filing date cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another "Y" document of particular relevance; the claimed invention citation or other special reason (as specified) 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 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 '&' document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 13 October 2009 21/10/2009 Name and mailing address of the tSA/ Authorized officer European Patent Office, P.B. 5818 Patentlaan 2

Nehrdich, Martin

NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040

Fax: (+31-70) 340-3016

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2009/001590

(Continuat		PCT/US2009/001590					
	tion). DOCUMENTS CONSIDERED TO BE RELEVANT						
ategory*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.					
	US 5 376 450 A (GREINKE RONALD A [US] ET AL) 27 December 1994 (1994-12-27) cited in the application column 1, line 15 - line 46						
	US 6 143 218 A (MERCURI ROBERT ANGELO [US]) 7 November 2000 (2000-11-07) cited in the application column 2, line 47 - line 65	1-3, 16-29, 33-35					
	GB 2 181 093 A (MANN MCGOWAN FABRICATIONS LIMI MANN MCGOWAN FABRICATIONS LIMI [GB]) 15 April 1987 (1987-04-15) page 1, line 29 - line 119 sentence 88 - sentence 119	1-29, 32-35					

INTERNATIONAL SEARCH REPORT

information on patent family members

International application No PCT/US2009/001590

Patent document cited in search report			Publication date	Patent family member(s)			Publication date
EP	0527046	A2	10-02-1993	DE	69204399	D1	05-10-1995
				DE	69204399	T2	14-03-1996
				JP	2960610	B2	12-10-1999
				JP	6024723	Α	01-02-1994
				US	5176863	Α	05-01-1993
US	6670291	B1	30-12-2003	AT	345212		15-12-2006
				AU	1129502	Α	29-04-2002
				CA	2425156	A1	25-04-2002
				CN	1469807		21-01-2004
				DE	60124578	T2	06-09-2007
				EP	1326745	A1	16-07-2003
				JP	2004511364	T	15-04-2004
				MX	PA03003327	Α	15-10-2003
				WO	0232663	A1	25-04-2002
US	2007032589	A1	08-02-2007	AU	2003261889		29-03-2005
				CN	1826288		30-08-2006
				WO	2005023713	A1	17-03-2005
US	5376450	Α	27-12-1994	NONE			
US	6143218	Α	07-11-2000	AT	221034	T	15-08-2002
				ΑU	6538098	Α	12-10-1998
				BR	9809050		01-08-2000
				DE	69806737	D1	29-08-2002
				EP	0968149	A1	05-01-2000
				JP	2001515450	T	18-09-2001
				TW	384277	В	11-03-2000
				WO	9841486	A1	24-09-1998
				US	5985452		16-11-1999
				US	6017633	Α	25-01-2000
GB	2181093	A	15-04-1987	NONE			