



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
25.12.2013 Bulletin 2013/52

(51) Int Cl.:
A62C 37/50 (2006.01) A62C 99/00 (2010.01)

(43) Date of publication A2:
03.07.2013 Bulletin 2013/27

(21) Application number: **11466041.8**

(22) Date of filing: **28.12.2011**

(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

(71) Applicant: **K.B.K. Fire, s.r.o.**
70200 Ostrava-privoz (CZ)

(72) Inventor: **Bebcak, Petr**
73911 Frýdlant nad Ostravici (CZ)

(74) Representative: **Rylkova, Iva**
Polska 1525
CZ-708 00 Ostrava-Poruba (CZ)

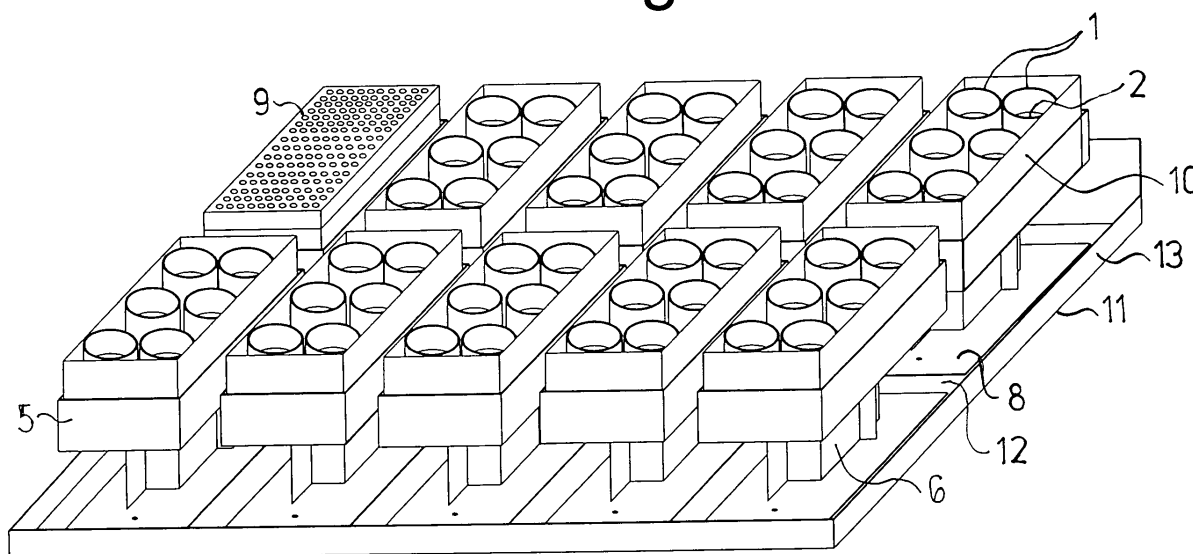
(30) Priority: **27.12.2011 CZ 20110883**

(54) **Method of fire ventilation function test and the testing device**

(57) Generator of non-toxic aerosol of solid and gaseous phase simulating combustion smoke products is placed into the tested space, compositions (2) of which are activated, then propagation of the aerosol cloud is monitored and recorded and the functionality of the fire ventilation is evaluated. The aerosol consists of a mixture based on potassium carbonate, potassium hydrogen carbonate, carbon, carbon dioxide, water vapours, nitrous

gases, nitrogen, and ammonia generated at temperature 600 to 1300° C in quantity of 3 to 100 m³/s while the tested devices for smoke and heat removal are in operation. The device includes generator with vessels (1) containing composition (2) and firing device (3), placed by 4 to 10 in a bed (5) of stands fixed by 1 to 20 in a tub (11) and covered with perforated covers (9). The tub (11) is preferably mounted on a bearing structure (14) of a vehicle.

Fig.1





EUROPEAN SEARCH REPORT

Application Number
EP 11 46 6041

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	CN 102 162 375 A (CHINA ACADEMY OF SAFETY SCIENCE AND TECHNOLOGY CHINA ACADEMY OF SAFETY) 24 August 2011 (2011-08-24)	1,3-6	INV. A62C37/50 A62C99/00
Y	* abstract *	2,7	
A	* claims 1-8; figure 3 *	8-14	

X	WO 2010/139815 A1 (FUNDACION LABEIN [ES]; DE LA QUINTANA PEREZ JESUS [ES]; UGARTETXE FERN) 9 December 2010 (2010-12-09)	8-13	
Y	* abstract *	7,14	
A	* page 3, paragraphs 2, 3, 4 *	1-6	
	* page 4, paragraph 3 *		
	* page 8, paragraphs 2, 3 *		
	* figures 1, 3, 4, 7, 15, 16 *		

Y	WO 94/19060 A1 (SPECTRONIX LTD [IL]; SPECTREX INC [US])	2,14	
	1 September 1994 (1994-09-01)		
A	* page 1, lines 1-5 *	1,3-13	
	* page 5, lines 18-19, 22-23 *		
	* page 11, line 18 *		
	* page 16, line 26 *		
	* page 17, lines 1, 13-15 *		

A	US 2007/125359 A1 (BOSCH GARRETT E [US] ET AL BOSCH GARRETT EUGENE [US] ET AL)	1-7	
	7 June 2007 (2007-06-07)		
	* abstract; figure 1 *		

The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		19 November 2013	Dał Bó, Paolo
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			

5

EPO FORM 1503 03.82 (P04C01)



Application Number

EP 11 46 6041

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:
- ☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



LACK OF UNITY OF INVENTION
SHEET B

Application Number
EP 11 46 6041

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-7

Method for verifying the functionality of the fire ventilation system.

2. claims: 8-14

Device for the generation of non-toxic smoke.

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

EP 11 46 6041

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.

19-11-2013

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
CN 102162375 A	24-08-2011	NONE	
-----	-----	-----	-----
WO 2010139815 A1	09-12-2010	EP 2438964 A1	11-04-2012
		WO 2010139815 A1	09-12-2010
-----	-----	-----	-----
WO 9419060 A1	01-09-1994	AU 682682 B2	16-10-1997
		AU 6166694 A	14-09-1994
		JP 3766685 B2	12-04-2006
		JP H08511958 A	17-12-1996
		US 5441114 A	15-08-1995
		US 5492179 A	20-02-1996
		US 5492180 A	20-02-1996
		US 5588493 A	31-12-1996
		US 5610359 A	11-03-1997
		WO 9419060 A1	01-09-1994
-----	-----	-----	-----
US 2007125359 A1	07-06-2007	NONE	
-----	-----	-----	-----