



(11) **EP 2 325 561 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
26.09.2012 Bulletin 2012/39

(51) Int Cl.:
F23N 5/00 (2006.01) F23G 7/08 (2006.01)

(43) Date of publication A2:
25.05.2011 Bulletin 2011/21

(21) Application number: **10251981.6**

(22) Date of filing: **22.11.2010**

(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

(30) Priority: **23.11.2009 GB 0920457**

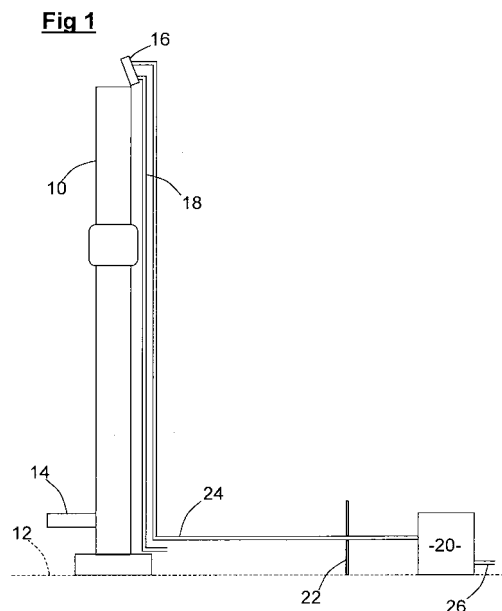
(71) Applicant: **Hamworthy Combustion Engineering Limited**
Poole, Dorset BH17 0LA (GB)

(72) Inventors:
• **Cioria, Giuseppe Eriberto**
20040 Burago H. (MB) (IT)
• **Salani, Cesar Augusto**
Campinas City
Sao Paulo State (BR)
• **Webley, Nigel Peter**
Ferndown BH22 8DS (GB)

(74) Representative: **Harkness, Katherine Joy et al**
Atkinson Wheller Ltd
St Brandon's House
27-29 Great George Street
Bristol BS1 5QT (GB)

(54) **Monitoring flare stack pilot burners**

(57) A flare stack comprises an upwardly extending gas discharge duct 10 and a pilot burner 16 operative at an burner location near the open top end of the duct 10 to ignite gas discharged by way of the duct. Atmospheric samples from the burner location are delivered to a monitoring station 20 remote from the duct 10 and at ground level 12. A sensor at the monitoring station 20 is responsive to a parameter of the sample indicative of combustion at the burner location such as increased CO₂ or NO_x or decreased O₂. An igniter is operatively associated with the sensor and arranged to light the pilot burner 16 automatically if the sensor does not detect said parameter in the sample.



EP 2 325 561 A3



EUROPEAN SEARCH REPORT

Application Number
EP 10 25 1981

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	US 5 813 849 A (SCHWARTZ ROBERT E [US] ET AL) 29 September 1998 (1998-09-29)	1-5,8-14	INV. F23N5/00 F23G7/08
Y	* the whole document *	6,7, 15-17	

X	US 6 164 957 A (WATTERS BILL G [US] ET AL) 26 December 2000 (2000-12-26)	1-5,8-14	
Y	* the whole document *	6,7, 15-17	

Y	US 4 634 369 A (MCGILL JAMES C [US] ET AL) 6 January 1987 (1987-01-06)	15-17	TECHNICAL FIELDS SEARCHED (IPC) F23N F23G
A	* the whole document *	1-5	

Y	US 4 505 668 A (DIBIANO ROBERT J [US] ET AL) 19 March 1985 (1985-03-19)	7	
A	* abstract; figure 1 *	1-5	

The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 16 August 2012	Examiner Munteh, Louis
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			

1
EPO FORM 1503 03.02 (P04C01)

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

EP 10 25 1981

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.

16-08-2012

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5813849	A	29-09-1998	CA 2212403 A1 US 5813849 A	07-02-1998 29-09-1998
US 6164957	A	26-12-2000	NONE	
US 4634369	A	06-01-1987	NONE	
US 4505668	A	19-03-1985	NONE	