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[Continued on nextpage]

(54) Title: AEROSOL EXPOSURE MONITORING

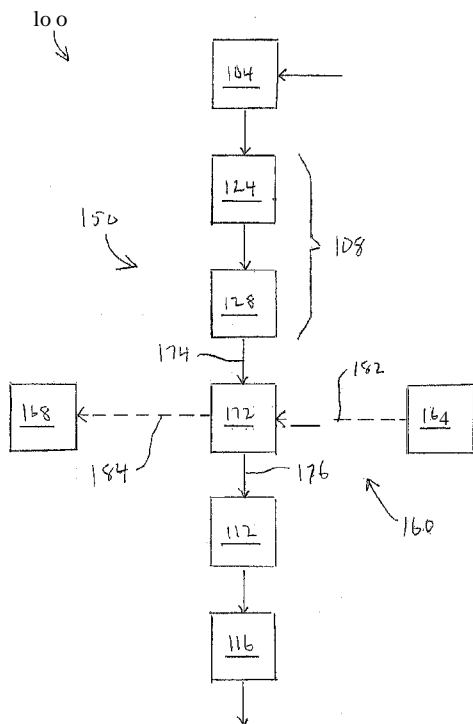


Fig. 1

(57) Abstract: A gas processing device such as an aerosol exposure monitor is configured for acquiring chronic data, acute data, or both simultaneously, and may include a pump and a noise dampening device. The noise dampening device may include an elastomeric membrane between an inlet chamber and an outlet chamber. In another aspect, an aerosol exposure monitor may include an impactor, a collection filter, and a nephelometer that includes a sample chamber integrated with an aerosol flow path associated with the impactor and collection filter.



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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2012/062167

A. CLASSIFICATION OF SUBJECT MATTER
INV. G01N1/22 G01N15/02 G01N21/51
 ADD.
 According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
 Minimum documentation searched (classification system followed by classification symbols)
G01N B01D

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 practicable, search terms used)
EPO-Internal , WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	US 4 942 297 A (JOHNSON STANLEY A [US] ET AL) 17 July 1990 (1990-07-17) abstract figures 1,3,4 column 4, lines 1-7 column 3, lines 13-50 -----	1,3-17 , 32-42 2
X	wo 99/41588 Al (WILLEKE KLAUS [US]) 19 August 1999 (1999-08-19) abstract figure 1A pages 2-5 ----- -/--	1,4-12 , 14-17 , 32-42

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance	"T" 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 invention
"E" earlier application or patent but published on or after the international filing date	"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
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention 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 in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 7 February 2013	Date of mailing of the international search report 22/04/2013
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Seif ter, Achim
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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2012/062167

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 932 818 A (NOVICK VINCENT J [US] ET AL) 3 August 1999 (1999-08-03) abstract figures 1,2,9,10 columns 2-8 -----	1,4-12, 14-17, 32-42
Y	US 5 090 233 A (KOGURE NOBUYUKI [JP] ET AL) 25 February 1992 (1992-02-25) figure 1 -----	2

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/062167

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos. :

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos. :

1-17 , 32-42

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2012/062167
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
us 4942297	A	17-07-1990	NONE

Wo 9941588	AI	19-08-1999	NONE

us 5932818	A	03-08-1999	NONE

us 5090233	A	25-02-1992	DE 4107902 AI 09-01-1992
		JP H0464036 A 28-02-1992	
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FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-17, 32-42

aerosol exposure monitor

2. claims: 18-31, 43-49

noise damping device
