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**Declarations under Rule 4.17:**

— of inventorship (Rule 4.17(iv))

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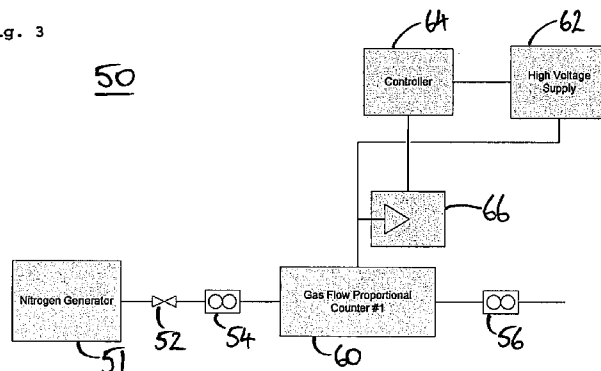
- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

**(88) Date of publication of the international search report:**

19 May 2011

(54) **Title:** BETA RADIATION MONITOR AND METHOD

Fig. 3



(57) **Abstract:** A beta radiation monitor (70,90), comprising a gas flow proportional detector (60) for detecting beta radiation emitted by a beta emitter external to the detector; a fill gas supply (51) configured to supply a fill gas to the detector, wherein the fill gas comprises nitrogen; a temperature sensor (72) for measuring temperature; and a controller (64) in communication with the temperature sensor for adjusting an operational parameter of the monitor in accordance with the measured temperature. The operational parameter may comprise a voltage applied across the fill gas, which may be thermistor controlled, or a beta radiation detection threshold of the detector. The fill gas is supplied by a nitrogen generator. The gas flow proportional detector may be a large-area detector.



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INTERNATIONAL SEARCH REPORT

International application No  
PCT/GB2009/002849

A. CLASSIFICATION OF SUBJECT MATTER  
INV. G01T1/29  
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)  
G01T H01J

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, WPI Data, INSPEC, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	FR 2 553 897 A1 (KERNFORSCHUNGSZ KARLSRUHE [DE]) 26 April 1985 (1985-04-26)  page 1, line 23 - line 25 page 3, line 17 - line 22 page 3, line 1 - line 13; figures page 1, line 3 - line 6  -----  -/--	1,2,5, 7-14,17, 19-24

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

"E" earlier document but published on or after the international filing date

"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)

"O" 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

"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

"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

"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.

"&" document member of the same patent family

Date of the actual completion of the international search  25 March 2011	Date of mailing of the international search report  04/04/2011
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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  Eberle, Katja
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## INTERNATIONAL SEARCH REPORT

International application No

PCT/GB2009/002849

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>AOYAMA T ET AL: "A new type of &lt;3&gt;H surface-contamination monitor", HEALTH PHYSICS, LIPPINCOTT, WILLIAMS &amp; WILKINS, HAGERSTON, MD, USA, vol. 48, no. 6, 1 June 1985 (1985-06-01), pages 773-779, XP008134637, ISSN: 0017-9078 * abstract; figures page 773, line 5 - line 28 page 774, line 1 - line 5 page 775, line 2 - line 6 -----</p>	1,2,6,7, 9-14,18, 19,21-24
Y	<p>US 2 656 476 A (FIRMINHAC RALPH H) 20 October 1953 (1953-10-20)  column 1, line 1 - line 5 column 1, line 15 - line 19 column 1, line 42 - line 54 column 2, line 3 - line 13 column 3, line 5 - line 37 column 4, line 30 - line 55; figures -----</p>	1,2,7, 9-14,19, 21-24
Y	<p>AOYAMA T ET AL: "Sensitive region of air proportional counters and its dependence on the pressure, temperature and humidity of filling air", NUCLEAR INSTRUMENTS &amp; METHODS IN PHYSICS RESEARCH, SECTION A (ACCELERATORS, SPECTROMETERS, DETECTORS AND ASSOCIATED EQUIPMENT) NETHERLANDS, vol. A322, no. 2, 1 November 1992 (1992-11-01), pages 170-176, XP002629604, ISSN: 0168-9002 * abstract; figures page 170, line 1 - line 3 page 171, paragraph 3. page 174, paragraph 5. -----</p>	1,2, 5-14, 17-24

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/GB2009/002849

## 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.: 25, 26  
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:  
see FURTHER INFORMATION sheet PCT/ISA/210
  
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:

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.:

### 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.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

Continuation of Box II.2

Claims Nos.: 25, 26

Present claims 25 and 26 are defined with reference to the figures. Therefore it is not clear which technical features those claims comprise. The subject-matter of claims 25, 26 is therefore unclear with respect to Article 6 PCT. The non-compliance with the substantive provisions is to such an extent that no meaningful search of claims 25 and 26 could be carried out (Article 17(2) PCT).

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.2), should the problems which led to the Article 17(2) declaration be overcome.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/GB2009/002849

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
FR 2553897	A1 26-04-1985	DE 3338454 A1 GB 2150743 A	02-05-1985 03-07-1985
US 2656476	A 20-10-1953	NONE	