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**Datasheet for the decision
of 22 February 2016**

Case Number: T 1774/11 - 3.4.02

Application Number: 04754839.1

Publication Number: 1631805

IPC: G01M3/20, G01M3/32

Language of the proceedings: EN

Title of invention:

METHODS AND APPARATUS FOR LEAK DETECTION BY THE ACCUMULATION
METHOD

Applicant:

Agilent Technologies, Inc.

Relevant legal provisions:

EPC 1973 Art. 56, 84
EPC 1973 R. 67
EPC Art. 123(2)

Keyword:

Added subject-matter (main request - yes)
Clarity (main and first auxiliary request - no)
Inventive step (amended first auxiliary request - yes)



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Case Number: T 1774/11 - 3.4.02

D E C I S I O N
of Technical Board of Appeal 3.4.02
of 22 February 2016

Appellant: Agilent Technologies, Inc.
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 10 February
2011 refusing European patent application No.
04754839.1 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman B. Müller
Members: F. J. Narganes-Quijano
A. Hornung

Summary of Facts and Submissions

- I. The appellant (applicant) lodged an appeal against the decision of the examining division refusing European patent application No. 04754839.1.

In its decision the examining division held that the sets of claims of the main and the first auxiliary requests then on file did not comply with the requirements of Article 123(2) EPC and that the subject-matter of the claims of the main, the first and the second auxiliary requests then on file did not involve an inventive step (Article 56 EPC 1973) in view of documents

D1: US-A-5661229

D3: DE-A-4228149

and the common general knowledge of the person skilled in the art.

- II. With the statement setting out the grounds of appeal the appellant filed sets of claims amended according to a main and first to fifth auxiliary requests and requested that the decision under appeal be set aside and a patent be granted. The appellant also alleged two procedural violations in the first-instance proceedings and requested the reimbursement of the appeal fee.

As a precaution, the appellant also requested oral proceedings.

- III. In a communication annexed to the summons to attend oral proceedings the Board gave a preliminary assessment of the appellant's case on appeal. In particular, as

regards independent claims 1 and 9 of the main request the Board reasoned as follows:

"2.1 - Claim 1 is directed to an apparatus for detecting leaks in a test piece located in a chamber and the claim has been amended so that the chamber of the apparatus "is isolated, during leak detection by the ion pump, from gas communication with a vacuum pumping device other than the trace gas sensor and from any inlet to the sealable chamber". This feature was not mentioned - at least not expressis verbis - in the application as originally filed, and the examining division held in the decision under appeal that this feature extended beyond the content of the application as originally filed (Article 123(2) EPC).

In the preliminary opinion of the Board the mentioned feature gives rise to a series of objections under Article 84 EPC 1973 (lack of clarity and lack of support in the description) and under Article 123(2) EPC for the following reasons:

While claim 1 is directed to an apparatus, the amended feature concerns the way the apparatus is operated and it is not unambiguously clear (Article 84 EPC 1973) what technical features - if any - of the apparatus are implied by the operation defined in the amended feature. Thus, the amended feature refers to "a vacuum pumping device other than the trace gas sensor" and to "any inlet to the sealable chamber", and it is unclear in the context of the claim (Article 84 EPC 1973) whether the feature should be interpreted as requiring that the claimed apparatus comprises the vacuum pump and the inlet(s) mentioned in the feature. If the answer is negative, the claim would be unclear in that it attempts to define the apparatus in terms of features that are

not present in the apparatus. If the answer is affirmative, it would then be unclear

- what vacuum pump device is referred to, and whether it specifically corresponds to the vacuum pump required in order to operate the permeable member at vacuum as mentioned on page 4, lines 27 to 29 of the description, and

- what inlet to the chamber is referred to, and whether it specifically corresponds to the inlet required by the connection between the test piece and a helium source as mentioned on page 3, lines 21 to 23 of the description and/or to the inlet required by the operation of flushing the chamber with a gas such as nitrogen as mentioned on page 4, lines 32 to 34, or to any other inlet.

These latter issues might also be relevant to the question of whether the amended feature is supported by the description within the meaning of Article 84 EPC 1973 and to the question of whether the feature is clearly and unambiguously derivable from the content of the application as originally filed (Article 123(2) EPC).

2.2 - Independent claim 9 is directed to a method of leak detection and the last feature of the claim ("chamber [...] isolated [...] from gas communication with a vacuum pumping device other than the trace sensor and from any inlet to the sealable chamber") gives rise to analogous objections as those noted in point 2.1 above under Article 84 EPC 1973 and Article 123(2) EPC.

2.3 - As regards the submissions of the appellant in the statement of grounds of appeal (page 4, second paragraph to page 5, penultimate paragraph) in support of the allowability under Article 123(2) EPC of the amended feature of claim 1 referred to above and of the

corresponding feature defined in method claim [8], the Board notes that all the appellant's submissions concern specific embodiments and partial aspects that might well fall within the terms of the amended claims, but that none of the submissions appears to identify a sufficient basis in the application as originally filed in support of the level of generality of the features introduced in independent claims 1 and 8 and referred to in points 2.1 and 2.2 above.

2.4 - Having regard to the above considerations, amended independent claims 1 and 8 do not appear to satisfy the requirements of Article 84 EPC 1973 and Article 123(2) EPC."

As regards independent claims 1 and 8 of the first auxiliary request, the Board reasoned in its communication as follows:

"3. - Claim 1 of the first auxiliary request defines an apparatus for leak detection comprising a trace gas detector assembly "being connected via a vacuum flange to the chamber". This feature is not unambiguously clear as regards the terms "connected" and "via" as they can be interpreted in the technical context of the claim - and in particular in the field of vacuum technology - either in the sense that the trace gas detector assembly is in gas communication with the chamber by some means (for instance, by means of a conduit) including at some point (for instance, at the point of connection between the conduit and the chamber) a vacuum flange, or in the sense that a sealed housing enclosing the permeable member and the trace gas sensor is mechanically attached to the chamber by means of the vacuum flange (see Fig. 1, and compare with the formulation of dependent claim 9 of the application as originally filed and with page 3,

lines 27 and 28 of the description). It is also noted that while the mentioned feature has a literal support in the description (see page 3, line 25), only the second of the alternatives specified above appears to be technically supported by the disclosure of the invention in the description within the meaning of Article 84 EPC 1973, second sentence (see page 3, line 25 of the description together with Fig. 1 and page 5, third paragraph of the description).

The same objections are raised with regard to the corresponding feature defined in independent claim 8.

The Board also notes that the submissions of the appellant as regards novelty and inventive step of the claimed invention appear to rely on the assumption that the housing enclosing the trace gas detector is a sealed housing mechanically attached to the chamber by the vacuum flange so that no other means (for instance, an auxiliary vacuum pumping device) are disposed between the trace gas detector assembly and the chamber, and that only the second of the two alternatives mentioned above would support the arguments of the appellant in this respect."

As regards the request for reimbursement of the appeal fee, the Board reasoned in its communication as follows:

"7.1 - In support of the request for reimbursement of the appeal fee, the appellant has submitted that

i) during the oral proceedings the examining division referred for the first time to common general knowledge in support of its view that the present fifth auxiliary request (corresponding to the second auxiliary request underlying the decision under appeal and to the fourth

auxiliary request discussed during the oral proceedings) did not involve an inventive step,

ii) no evidence in support of this common general knowledge was provided when the representative challenged the alleged common general knowledge,

iii) the examining division referred to document D3 in support of the alleged common general knowledge, but the document is a patent document and it does not demonstrate common general knowledge, and

iv) the mentioned request was therefore refused on the basis of common general knowledge that was challenged and unsubstantiated.

According to the appellant, all these circumstances amounted to a violation of the right to a fair hearing.

However, as acknowledged by the appellant, during the oral proceedings the examining division referred to document D3 in support of the common general knowledge under consideration (minutes of the oral proceedings before the examining division, page 2, sixth paragraph), so that the appellant's submission that the examining division did not provide any evidence in support of the alleged common general knowledge cannot be followed. Furthermore, the question of whether a patent document as document D3 is sufficient to substantiate an allegation of common general knowledge pertains, by its very nature, to the assessment of a substantive issue and not to a procedural right. In addition, the right to be heard cannot be said to have been infringed because, as acknowledged by the appellant, during the oral proceedings the representative did challenge the common general knowledge alleged by the examining division (minutes, sixth to last of the paragraphs on page 2). Finally, the question of whether the common general knowledge was sufficiently substantiated or not by

reference to document D3 may affect the correctness of the decision (see decision under appeal, points 18.4 and 18.5 of the reasons), but does not affect per se the fact that the refusal of the request was sufficiently reasoned.

Therefore, in the preliminary opinion of the Board none of the allegations of the appellant would be sufficient to conclude that the decision was not sufficiently reasoned (Rule 111(2) EPC), or that the examining division infringed the appellant's right to be heard (Article 113(1) EPC), or - as alleged by the appellant - that the procedural right to a fair hearing was infringed.

7.2 - The appellant has also submitted in support of the request for reimbursement of the appeal fee that

i) the reasons for the refusal of the present first auxiliary request (corresponding to the first auxiliary request underlying the decision under appeal and to the third auxiliary request discussed during the oral proceedings) refer to the combination of document D1 and common general knowledge (point 14 of the reasons of the decision),

ii) it is not explained what this common general knowledge is and it is not stated how this common general knowledge is relevant to inventive step, and

iii) this common general knowledge has been mentioned for the first time in the decision and the appellant has had no opportunity to comment on it.

In point 14 of the reasons for the decision the examining division substantiated its objection of lack of inventive step "in view of document D1 and the common general knowledge of the person skilled in the art of leak detection" and, as submitted by the appellant, this

common general knowledge was not further explained in the decision. However, the detailed reasoning subsequently given by the examining division in points 14.1 and 14.2 of the decision is exclusively based on the disclosure of document D1, and the appellant has not specified in what respect the examining division's reference to the common general knowledge had an impact on the examining division's finding of lack of inventive step. On the contrary, the appellant itself appears to acknowledge that the reference to the common general knowledge was not relevant to the finding of lack of inventive step. Thus, irrespective of the correctness of the reasoning of the examining division, the mere fact that the examining division referred for the first time in its decision to (unspecified) common general knowledge of the skilled person did not constitute a procedural violation, let alone a substantial one as the reference to the common general knowledge did not appear to play any substantial role in the decision under appeal.

7.3 - In view of the above considerations, the board cannot identify any substantial procedural violation that would justify - in the event that the board finds the appeal allowable - the reimbursement of the appeal fee under Rule 67 EPC 1973 as requested by the appellant."

- IV. In reply to the summons to oral proceedings, with a letter dated 4 January 2016 the appellant submitted a set of amended claims 1 to 17 labelled "auxiliary request 1.5" and hierarchically inserted between the first and the second auxiliary requests on file. With the same letter the appellant submitted amended pages 2, 3 and 5 of the description and withdrew the request for

oral proceedings in respect of the request for reimbursement of the appeal fee.

In reply to a telephone consultation with the rapporteur of the Board, with a letter dated 14 January 2016 the appellant submitted a revised page 3 of the description, and withdrew the auxiliary request for oral proceedings in respect of all the requests on condition that the application can be granted on the basis of auxiliary request 1.5.

V. The Board subsequently cancelled the oral proceedings.

VI. Claim 1 of the main request reads as follows:

"Apparatus for leak detection, comprising:

a chamber (10) configured to receive a test piece (12) that, while in the chamber (10), contains a trace gas;

a trace gas permeable member (30) mounted in gas communication with the chamber (10); and

a trace gas sensor (20) in gas communication with the permeable member (30) and configured to sense trace gas that passed from the chamber (10) through the permeable member (30) to the trace gas sensor (20);

characterised in that:

the trace gas sensor (20) comprises an ion pump; and

the chamber (10) is a sealable chamber for enclosing the test piece (12) and that is isolated, during leak detection by the ion pump, from gas communication with a vacuum pumping device other than the trace gas sensor (20) and from any inlet to the sealable chamber (10)."

Claim 1 of the first auxiliary request reads as follows:

"Apparatus for leak detection, comprising:

a sealable chamber (10) configured to receive a test piece (12) that, while in the chamber (10), contains a trace gas; and

a trace gas detector assembly (20) including a trace gas sensor;

characterised by:

the trace gas detector assembly (20) further including a trace gas permeable member (30) mounted in gas communication with the chamber (10);

the trace gas sensor comprising an ion pump (24) and being in gas communication with the permeable member (30) and configured to sense trace gas that passed from the chamber (10) through the permeable member (30);

the trace gas detector assembly (20) being connected via a vacuum flange (22) to the chamber (10); and

the trace gas detector assembly (20) having zero pumping speed in the chamber (10) except for the trace gas."

Independent claims 1 and 8 of the auxiliary request 1.5 read as follows:

"1. Apparatus for leak detection, comprising:

a sealable chamber (10) configured to receive a test piece (12) that, while in the chamber (10), contains a trace gas; and

a trace gas detector assembly (20) including a trace gas sensor;

characterised by:

the trace gas detector assembly (20) further including a trace gas permeable member (30) mounted in gas communication with the chamber (10);

the trace gas sensor comprising an ion pump (24) and being in gas communication with the permeable member (30) and configured to sense trace gas that passed from the chamber (10) through the permeable member (30);

a sealed housing (32) enclosing the permeable member (30) and the trace gas sensor;

a vacuum flange (22) for attaching the sealed housing (32) to the chamber (10); and

the trace gas detector assembly (20) having zero pumping speed in the chamber (10) except for the trace gas."

"8. A method for leak detection, comprising:

providing a sealable chamber (10) and a trace gas detector assembly (20) including a trace gas sensor;

placing in the chamber (10) a test piece (12) that, while in the chamber (10), contains a trace gas;

sensing the trace gas with the trace gas sensor, characterised by:

the trace gas detector assembly (20) further including a trace gas permeable member (30) in gas communication with the chamber (10);

providing a sealed housing (32) enclosing the permeable member (30) and the trace gas sensor;

providing a vacuum flange (22) attaching the sealed housing (32) to the chamber (10);

passing the trace gas from the chamber (10) through the permeable member (30);

the trace gas sensor (20) comprising an ion pump (24) and being in gas communication with the permeable member (30); and

the trace gas detector assembly (20) having zero pumping speed in the chamber (10) except for the trace gas."

Auxiliary request 1.5 also includes dependent claims 2 to 7 and dependent claims 9 to 17 referring back to claims 1 and 8, respectively.

Reasons for the Decision

1. The appeal is admissible.
2. *Main and first auxiliary requests*

In the communication annexed to the summons to oral proceedings the Board explained in detail (see section "Summary of Facts and Submissions" above, point III, sub-points 2.1 to 2.4 and 3) why in its preliminary opinion

- independent claims 1 and 8 of the main request did not appear to satisfy the requirements of Article 84 EPC 1973 and Article 123(2) EPC, and

- independent claims 1 and 8 of the first auxiliary request did not appear to satisfy the requirements of Article 84 EPC 1973.

In reply to this communication the appellant made no substantive submission in respect of the objections raised by the Board with regard to the main and the first auxiliary request, and the request for oral proceedings was withdrawn in respect of the main and the first auxiliary request on condition that the application can be granted on the basis of auxiliary request 1.5 (see section "Summary of Facts and Submissions" above, point IV). Since the Board considered the auxiliary request 1.5 to be allowable (see point 3 below), the oral proceedings were cancelled, and in the absence of any attempt by the appellant to refute in writing the aforementioned objections, the Board sees no reason to depart from the preliminary opinion expressed in the communication.

Accordingly, the Board concludes that the main request does not satisfy the requirements of Article 84 EPC 1973 and Article 123(2) EPC and that the first auxiliary request does not satisfy the requirements of Article 84 EPC 1973 for the reasons already communicated to the appellant and reproduced in section "Summary of Facts and Submissions" above, point III, sub-points 2.1 to 2.4 and 3.

3. *Auxiliary request labelled "1.5"*

3.1 Amendments

The Board is satisfied that the application documents amended according to the auxiliary request 1.5 satisfy the formal requirements of the EPC. In particular, independent claims 1 and 8 are based on independent claims 1 and 10 as originally filed, respectively, in combination with the features of dependent claims 7 and 9 as originally filed and the passages on page 3, lines 27 and 28, and page 5, lines 12 to 14 of the description as originally filed; and dependent claims 2 to 7 and 9 to 17 are based on dependent claims 2 to 6, 8, and 11 to 19 as originally filed, respectively.

In the decision under appeal the examining division held with respect to claim 1 of the first auxiliary request then on file that the passage of the description on page 5, lines 12 and 13 according to which the detector assembly "has essentially zero pumping speed in chamber 10, except for helium" did not constitute a basis for the corresponding feature of claim 1 as the claim failed to specify "except for helium". Present independent claims 1 and 8 have been amended to specify that the detector assembly has "zero pumping speed in the chamber except for the trace gas". This feature is based on the

passage of the description mentioned above, together with the fact that helium is consistently disclosed in the description only as one example of the trace gas (see description, page 3, lines 21 to 24, and page 4, lines 4 and 5, lines 24 and 25, and lines 31 and 32).

As regards the description, its content has been revised and brought into conformity with the claimed invention (Article 84 and Rule 27(1) (c) EPC 1973) and the pertinent prior art has been appropriately acknowledged in the introductory part of the description (Rule 27(1) (b) EPC 1973).

3.2 Novelty

Novelty was not disputed by the examining division or by the board so that this issue needs no detailed substantiation.

3.3 Inventive step

3.3.1 In the contested decision the examining division held with regard to the requests then on file that the claimed invention did not involve an inventive step. In particular, the examining division based its reasoning on document D3 as closest state of the art in combination with document D1, and also on document D1 as closest state of the art in combination with document D3. The examining division also referred to the common general knowledge in the field of vacuum technology.

3.3.2 Document D1 discloses a test gas detector connected to a test chamber and operating on the basis of the detection of test or trace gas pumped from the test chamber (abstract and column 2, lines 44 to 46, together with

Fig. 1 and 2 and the corresponding description). The detector (detector 5) comprises a trace gas sensor constituted by an ion pump (ionization vacuum gauge 8, column 2, line 65 to column 3, line 5) coupled to a member (diaphragm 7) permeable to the trace gas (column 2, lines 53 to 64, and Fig. 2), the permeable member being in gas communication with the test chamber via a detection gas line branched to a main gas line (line 2) coupled to the test chamber. Gas from the test chamber is pumped through the main gas line by means of a vacuum pump (vacuum pump 4), and the ion pump is configured to pump gas from the main gas line through the detection gas line coupled to the permeable member, so that only trace gas reaches the ion pump and the pressure variations detected by the ion pump are used to assess the amount of trace gas pumped from the test chamber (column 3, line 36 to column 4, line 6, and the paragraph bridging columns 1 and 2).

Document D3 discloses a test gas detector of the type disclosed in document D1 (abstract, column 1, lines 3 to 10, and Fig. 2a, together with the corresponding description), i.e. a test gas detector comprising a vacuum pump (pump 30) for pumping gas from a test chamber (chamber 40a) through a main gas line (line 41), a detection gas line (line 42) branched to the main gas line, and a trace gas sensor (detector 50) in the detection gas line for detecting the trace gas present in the gas pumped from the main gas line through the detection gas line. In addition, in document D3 the test chamber is specifically configured to receive a test piece (test piece 10a) containing a trace gas for detecting leaks in the test piece (column 1, lines 3 to 10 and lines 39 to 47, and column 4, lines 62 to 68), gas from the main gas line is pumped through the detection gas line by means of a turbo-molecular pump

(pump 31, column 5, lines 17 to 21), and the trace gas sensor is a mass detector (detector 50 and column 2, lines 17 to 20) arranged to detect the trace gas present in the gas pumped by the turbo-molecular pump (column 5, lines 41 to 59).

It follows from the above that, as regards the apparatus defined in claim 1 of auxiliary request 1.5, documents D1 and D3 are complementary in the sense that they disclose different partial aspects of the claimed apparatus. Thus, while document D1 is generally directed to an apparatus for detecting trace gas from a test chamber, document D3 is specifically directed to an apparatus for detecting trace gas leaked from a test piece disposed inside a sealable chamber for the purposes of detecting leaks in the test piece. The same is true for the apparatus of claim 1. In addition, while in document D3 the trace gas is detected by means of a mass detector, in document D1 the trace gas is detected by means of an ion pump coupled to a member permeable to the trace gas. The same applies to the apparatus of claim 1.

However, assuming that the skilled person had an incentive to combine these partial aspects disclosed in documents D1 and D3, then he would arrive at an apparatus comprising some of the aspects of the apparatus of claim 1, but he would not arrive at the claimed apparatus. Indeed, claim 1 as presently amended requires that the permeable member and the trace gas sensor comprising the ion pump are enclosed by a sealed housing, and a vacuum flange for attaching the sealed housing to the test chamber. It follows from these features that in the claimed apparatus the ion pump is arranged to directly pump trace gas from the test chamber through the permeable member and to sense the

corresponding amount of trace gas. This arrangement is neither taught in documents D1 and D3 nor would it emerge in an obvious way from the combination of documents D1 and D3. On the contrary, each of documents D1 and D3 is based on the principle of pumping gas from the test chamber through a main gas line by means of a vacuum pump and then pumping part of this gas along a detection gas line for the purposes of detecting the test or trace gas present in the gas. As submitted by the appellant during the proceedings, there is no suggestion in documents D1 and D3 or in the remaining prior art on file to depart from this principle and to discard the main gas line and the vacuum pump so as to detect trace gas directly pumped from the test chamber, let alone to directly attach to the test chamber the trace-gas permeable member coupled to the ion pump so that the ion pump - as expressly required by the claimed subject-matter - only pumps trace gas directly from the test chamber and senses the amount of trace gas pumped through the permeable member.

- 3.3.3 In its decision the examining division held that the vacuum pump 4 of the apparatus disclosed in document D1 was only optional and that it would be obvious for the skilled person operating with this apparatus to save the vacuum pump, the gas lines and the corresponding valves. The examining division referred, on the one hand, to the common general knowledge in general terms and, on the other hand, to the passage in column 2, lines 50 to 52 of document D1 reading "the possibly necessary evacuation of the test specimen or a test chamber can be performed with the aid of vacuum pump 4".

The passage of document D1 mentioned by the examining division, however, only refers to the possibility of using the vacuum pump for evacuating the test chamber

when it is considered appropriate to evacuate the same (see in this respect document D1, column 3, lines 31 to 35), and this passage does not render the vacuum pump optional because the disclosure of document D1 consistently requires the presence of the vacuum pump 4 for the purpose of pumping gas from the test chamber so that part of the pumped trace gas can then be pumped and detected by the ion pump (cf. document D1, column 2, lines 46 to 49, and column 3, line 36 *et seq.*).

In addition, as is apparent in the considerations in the last paragraph of point 3.3.2 above, the vacuum pump and the gas lines constitute essential elements of the operational principle of the apparatus of both documents D1 and D3. Therefore, in the absence of any appropriate technical teaching in the prior art in support of the examining division's view, the Board cannot accept that the skilled person would have considered getting rid of the vacuum pump, the gas lines and the corresponding valves of the apparatus of any of documents D1 and D3, let alone subsequently attaching the permeable member and the ion pump of document D3 directly to the test chamber by means of a vacuum flange.

Finally, in its decision the examining division referred in general terms to the common general knowledge of the skilled person in this field, without however specifying what specific common general knowledge was referred to and without specifying how the common general knowledge would support its finding of lack of inventive step (see in this respect section "Summary of Facts and Submissions" above, point III, sub-point 7.2). Accordingly, these general references to the common general knowledge have no influence on the above considerations.

- 3.3.4 The remaining documents on file are less relevant than documents D1 and D3.
- 3.3.5 It follows from the considerations in points 3.3.2 to 3.3.4 above that there is no suggestion in the available prior art towards the apparatus of claim 1, nor towards the technical effects achieved therewith, namely a simpler apparatus for leak detection in which - contrary to the apparatus of document D1 (column 3, lines 36 to 39) and document D3 (Fig. 2a) - no gas other than the trace gas is removed from the test chamber and all the trace gas pumped from the test chamber is available for detection (see page 5 of the description of the application, lines 10 to 17); in addition, the claimed apparatus allows operation under less restrictive pressure regimes (description of the application, page 2, lines 21 and 22, and page 4, lines 27 to 34).

The Board concludes that the apparatus defined in claim 1 involves an inventive step over the prior art on file (Article 56 EPC 1973).

- 3.4 Independent claim 8 is directed to a method for leak detection comprising a series of steps that are essentially in one-to-one relationship with the structural and functional features of the apparatus defined in claim 1, and the claimed method also involves an inventive step for reasons analogous to those given in point 3.3 above with regard to claim 1.

The same conclusion applies to dependent claims 2 to 7 and to dependent claims 9 to 17 since they refer back to independent claims 1 and 8, respectively.

- 3.5 The Board is also satisfied that the application documents amended according to auxiliary request 1.5 and

the invention to which they relate meet the remaining requirements of the EPC within the meaning of Article 97(1) EPC.

4. *Request for reimbursement of the appeal fee*

In the communication annexed to the summons to oral proceedings the Board explained in detail (see section "Summary of Facts and Submissions" above, point III, sub-points 7.1 to 7.3) why in its preliminary opinion none of the allegations made by the appellant allowed the conclusion that the first-instance proceedings were tainted by a substantial procedural violation that would justify the reimbursement of the appeal fee requested by the appellant.

In reply to this communication the appellant made no substantive submission on the preliminary opinion of the Board in this respect, and the request for oral proceedings was withdrawn in respect of the request for reimbursement of the appeal fee (see section "Summary of Facts and Submissions" above, point IV). No oral proceedings took place, and in the absence of any attempt by the appellant to refute in writing the preliminary opinion expressed in the communication, the Board sees no reason to depart from it.

Accordingly, the Board concludes that the request for reimbursement of the appeal fee under Rule 67 EPC 1973 is not allowable for the reasons already communicated to the appellant and reproduced in section "Summary of Facts and Submissions" above, point III, sub-points 7.1 to 7.3.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance with the order to grant a patent in the following version:
 - claims: 1 to 17 labelled "auxiliary request 1.5" filed with the letter dated 4 January 2016;
 - description: pages 1 and 4 of the application as originally filed, pages 2 and 5 filed with the letter dated 4 January 2016, and page 3 filed with the letter dated 14 January 2016; and
 - drawings: drawing sheets 1/2 and 2/2 of the application as originally filed.
3. The request for reimbursement of the appeal fee is refused.

The Registrar:

The Chairman:



M. Kiehl

B. Müller

Decision electronically authenticated