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Datasheet for the decision of 27 October 2011

Case Number: T 1566/09 - 3.4.02

Application Number: 03251971.2

Publication Number: 1365233

IPC: G01N27/407, F01N7/00, G01N27/12, G01N27/416

Language of the proceedings: EN

Title of invention:
Gas sensor, gas sensor installation structure, and method for installing gas sensor

Applicant:
NGK Insulators, Ltd.

Headword:

Relevant legal provisions:
EPC 1973 Art. 84

Keyword:
Clarity of claims (yes)
Remittal to the department of first instance

Decisions cited:

Catchword:

Europäisches Patentamt | European Patent Office | Office européen des brevets

Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T1566/09 - 3.4.02

D E C I S I O N
of the Technical Board of Appeal 3.4.02
of27 October 2011

Appellant: (Applicant)
NGK Insulators, Ltd.
2-56 Suda-cho,
Mizuho-ku
Nagoya-City, Aichi Pref. 467-8530
JP

Representative:
Paget, Hugh Charles Edward
Mewburn Ellis LLP
33 Gutter Lane
London EC2V 8AS
UK

Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 16 February 2009 refusing European patent application No. 03251971.2 pursuant to Article 97(2) EPC.**

Composition of the Board:

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

Summary of Facts and Submissions

I. The appellant (applicant) has lodged an appeal against the decision of the examining division refusing European patent application No. 03251971.2 (publication No. 1365233).

In its decision the examining division held that the subject-matter of independent claims 1 and 3 then on file was not clear (Article 84 EPC 1973) and that, as no clear limitation was imposed on the scope of the claims, a meaningful comparison with the prior art was impossible for the purposes of both search and substantive examination.

Previously, the search division responsible for drawing up the search report under Article 92 EPC 1973 had informed the appellant with a declaration pursuant to Rule 45 EPC 1973 that the application documents failed to comply with the clarity and conciseness requirements of Article 84 EPC 1973 to such an extent that a meaningful search was impossible, the reasons given in support of the objection of clarity being similar to those subsequently given by the examining division in the decision under appeal for the refusal of the application. Accordingly, no European search report for the present application has been drawn up to date.

II. With the statement setting out the grounds of appeal the appellant submitted amended application documents including an amended set of claims 1 to 4 identical to the set of claims on which the decision under appeal was based.

III. In reply to a consultation by telephone with the rapporteur of the Board, the appellant confirmed by

letter dated 27 September 2011 its main request that the decision under appeal be set aside and the case be remitted to the examining division with an order that a search is carried out and substantive examination continues on the basis of the application as presently amended.

IV. In the mentioned telephone consultation reference was made to the two following documents cited from the Board's own knowledge:

A1: JP-A-2001-221769 and the corresponding abstract published in "Patent Abstracts of Japan"

A2: "Rules of thumb for mechanical Engineers" J. E. Pope *et al.*, Gulf Publishing Company, Houston, Texas, 1997; page 317.

V. The set of claims presently on file comprises independent claims 1 and 3 and dependent claims 2 and 4 referring back to claims 1 and 3, respectively. The wording of claims 1 and 3 reads as follows:

" 1. A gas sensor installation structure comprising:
a sensor element (1), which functions to detect a specific gas component;
a housing (5), containing said sensor element (1), said housing having a housing sealing surface (4) and a threaded section (2) formed outside of the housing; and
an installation section (7) having an installation section sealing area,
wherein said housing is screwed into said installation section so that a sealing section is formed between said housing sealing surface (4) and said installation section sealing area at a position deeper than the

threaded section in a direction in which the sensor element is inserted into said installation section;
the release torque of said housing (5) from said installation section (7), at 850°C (1123 K) is 9 N·m or more; and
an estimated value X_1 of a gap formed at said sealing section between said housing sealing surface (4) and said installation section sealing area at 850°C (1123 K) is 31 m or less, the value X_1 being calculated according to the following equation:

$$X_1 \text{ (m)} = \{(L_1 \times \ _1) - (L_2 \times \ _2)\} \times 1123;$$

in which X_1 represents an estimated value (in m) of the gap, L_1 represents a length (in m) at room temperature from the installation section sealing area of the installation section (7) to a top end of the installation section, L_2 represents a length (in m) at room temperature from the housing sealing surface (4) of the housing to a top end of the threaded section (2) of the housing, $_1$ represents a coefficient of thermal expansion (x 10^{-6}/°C) of the installation section (7), and $_2$ represents a coefficient of thermal expansion (x 10^{-6}/°C) of the housing (15)."

" 3. A method of installing a gas sensor into an installation section, comprising the steps of:
(i) providing a gas sensor which comprises:
a sensor element (1), which functions to detect a specific gas component;
(ii) providing a housing (5), containing said sensor element (1), said housing having a housing sealing surface (4) and a threaded section (2) formed outside the housing;

(iii) providing an installation section (7) having an installation section sealing area; and
(iv) installing said gas sensor in said installation section by screwing said housing into said installation section (7) so that:
a sealing section is formed between said housing sealing surface (4) and said installation section sealing area;
the release torque of said housing (5) from said installation section (7) at 850°C (1123 K) is 9 N·m or more; and
an estimated value X_1 of a gap formed at said sealing section between said housing sealing surface and said installation section sealing area at 850°C (1123 K) 31 m or less, the value X_1 being calculated according to the following equation:

$$X_1 \text{ (m)} = \{(L_1 \times {}_1) - (L_2 \times {}_2)\} \times 1123;$$

in which X_1 represents an estimated value (in m) of the gap, L_1 represents a length (m) at room temperature from said installation sealing area of said installation section (7) to a top end of said installation section, L_2 represents a length (in m) at room temperature from said housing sealing surface (4) of said housing (5) to a top end of said threaded section (2) of said housing, ${}_1$ represents a coefficient of thermal expansion (x 10^{-6}/°C) of said installation section (7), and ${}_2$ represents a coefficient of thermal expansion (x 10^{-6}/°C) of said housing (5)."

VI. The arguments of the appellant in support of its requests are essentially the following:

The amended claims comply with the requirements of Article 123(2) EPC. In particular, independent claims 1 and 3 are respectively based on original claims 9 and 17 together with page 1, lines 21 to 26 of the original description.

As regards the amendment in the claims specifying that the lengths are measured at room temperature, the disclosure of the original application must be read through the eyes of the skilled person. The claimed mathematical expression defines an estimated value of a gap on the basis of two calculated length changes. The length changes are due to thermal expansion and the gap is due to differences in thermal expansion, and consequently the relevant thermal expansion of the housing 1123 $L_{2\ 2}$ is subtracted from the relevant thermal expansion of the installation section 1123 $L_{1\ 1}$ in order to calculate a value of the gap. In addition, the skilled person understands that the purpose of the claimed algebraic expression is to estimate a gap length based on the thermal expansion of the housing compared with that of the installation section. This expansion must be relative to the temperature at which the housing was screwed into the installation section, which is room temperature as explicitly mentioned at page 35, line 22 of the description. In addition, at room temperature, when the housing is screwed into the installation section, the housing sealing surface and the installation section sealing area are located at the same place, since they must be in contact in order to provide a sealing section. Consequently, the fact that the lengths L_1 and L_2 are measured at room temperature would have been directly and unambiguously disclosed to the skilled person on reading the application.

The claims define a specific solution to a technical problem, namely the problem of a gas sensor housing becoming loose from an installation section due to operating conditions of high temperature and vibration. The claims define the technical solution in terms of

- the torque for releasing the sensor housing from the installation section at 850° C, and
- a mathematical definition of a distance parameter that can be calculated based on measurements of room temperature dimensions and the thermal expansion coefficients of the housing and the installation section.

The claimed features do not amount to claiming a desirable result to be achieved. The desirable result of the present invention is the avoidance of the gas sensor becoming loose at operating temperatures of 850° C. The invention is not limited by a statement of this desirable result. Instead, the invention is limited by structural features of the installation, namely the release torque and the claimed gap at 850° C. This is not a statement of the problem to be solved, but a statement of a specific solution to the problem mentioned above. In particular, the inventors have identified an unexpected behaviour of gas sensor installation structures, as illustrated in Figures 5 and 6 of the application. Where the release torque at 850° C is 9 Nm or more and where the gap has a value of not less than 31 m, no dislodgement of the sensor from the installation section occurs in operation. This is surprising. It might be though that dislodgement would only occur if the release torque is zero or very small at 850° C.

In any case, the skilled person is well aware of how to measure a release torque and he can also easily

determine the value of the gap for a specific installation structure, since it is calculated based on very simple, easily-measured values of distance and well-documented thermal expansion coefficients. Therefore, even if the claims were considered to define a result to be achieved, the claims are clear.

In addition, the parameters used in the claims are not unusual. They relate to release torque, distance and thermal expansion coefficients, i.e. parameters that will be easily measured and understood by the skilled person. In particular, the release torque is exactly the parameter that the skilled person would measure if he was interested in how tightly a gas sensor housing was screwed into an installation structure, and the gap is calculated from entirely normal parameters in a well-defined and simple manner. Thus, the claimed parameters are clearly and reliably determinable based on the disclosure of the application.

The claims are therefore clear and can be searched and subsequently examined to determine their patentability with respect to the prior art.

Reasons for the Decision

1. The appeal is admissible.

2. *Amendments*

The present set of claims comprises an independent claim 1 directed to a gas sensor installation structure, an independent claim 3 directed to a method of installing a gas sensor into an installation

section, and dependent claims 2 and 4 referring back to claims 1 and 3, respectively. Thus, the amended set of claims takes account of the objections of lack of conciseness raised during the search (*cf*. point I above, third paragraph) and during the examination procedure with regard to the number of independent claims then on file.

The set of claims on file is identical to the set of claims on which the decision was based, and the Board is satisfied that the amendments comply with the requirements of Article 123(2) EPC. In particular, the subject-matter of independent claims 1 and 3 is based on independent claims 9 and 17 as originally filed, respectively, it being understood in the technical context of the subject-matter of original independent claims 9 and 17 that the sealing section formed by the housing and the installation section at the housing sealing surface is formed at a surface of the installation section defining an "installation section sealing area" as now specified in the claims (see Figure 1 and the corresponding description, in particular page 1, lines 21 to 26). In addition, as submitted by the appellant in connection with the technical understanding of the claimed invention by the skilled reader (*cf*. point IV above, third paragraph), it is apparent from the technical context of the disclosure of the invention and in particular from the examples (page 35, lines 21 to 26 and page 38, lines 12 to 16 of the application as filed) that the lengths L_1 and L_2 referred to in the claims are measured at room temperature as now specified in independent claims 1 and 3 (see also the considerations in point 3.2.1 below). The subject-matter of dependent claims 2 and 4 is based on dependent claim 16 as originally filed.

3. *Clarity*

3.1 Claim 1 is directed to a gas sensor installation structure constituted by a housing comprising a gas sensor element and screwed into an installation section by means of a threaded section formed outside the housing, the arrangement being such that a sealing section is formed between a sealing surface of the housing and a sealing area of the installation section at a position deeper than the threaded section in the direction in which the sensor element is inserted into the installation section. A gas sensor installation structure of this type is already described in the background section of the description of the application (see Figure 1 of the application and the corresponding description in paragraphs [0003] to [0005]) as the starting point for defining the primary technical problem underlying the invention - and it appears to be known in the prior art in view of the disclosure of document A1 originating from the appellant itself, see Figure 5 of the document.

According to the introductory part of the description, operation of a gas sensor installation structure of the type mentioned above at a high temperature of the order of 800 to 900° C and in vibrational environments may cause the housing containing the gas sensor element to be dislodged from the installation section (paragraphs [0001], [0007] to [0009] and [0032]), and according to the claimed invention this technical problem is solved by the remaining claimed features, i.e. by requiring that the gas sensor installation structure satisfies the two following conditions defined in claim 1:

a) the release torque of the housing from the installation section at 850° C (1123° K) is 9 N·m or more, and

b) the value of the gap X_1 formed at the sealing section between the housing sealing surface and the installation section sealing area at 850° C (1123° K) and determined according to the algebraic expression $X_1 = 1123(L_{1\ 1} - L_{2\ 2})$ is 31 m or less, where the quantities L_1, L_2, $_1$ and $_2$ are as defined in the claim.

3.2 In its decision the examining division held that the subject-matter of claim 1 was not clear (Article 84 EPC 1973), and the corresponding objections were specifically raised in connection with the claimed features a) and b) referred to in the former paragraph. The examining division held in particular that features a) and b) were defined in terms of unusual parameters, that the formulation of the claimed subject-matter in terms of features a) and b) constituted an attempt to define the invention in terms of the result to be achieved rather than in terms of the technical features necessary for attaining the desired result, and that the use of these *desiderata* features to define the subject-matter imposed no clear limitation on the scope of the claims and rendered a meaningful comparison of the claimed invention with the prior art impossible for the purposes of both search and substantive examination.

However, the Board does not find the arguments given by the examining division in support of its objections of lack of clarity persuasive for the following reasons:

3.2.1 Feature b) defines a condition to be satisfied by the coefficients of thermal expansion ($_1$ and $_2$) of the materials of the installation section and of the housing and by two specific lengths of the installation section and of the housing, namely the length from the

installation section sealing area to a top end of the installation section and the length from the housing sealing surface to a top end of the threaded section of the housing (L_1 and L_2). In particular, the claim requires that the value of $1123(L_{1\ 1}—L_{2\ 2})$ is 31 m or less. The claimed feature therefore defines a predetermined relationship between structural features (coefficients of thermal expansion and dimensions) of structural components (the housing and the installation section) of the claimed device and in these circumstances the claimed feature does not constitute the formulation of a result to be achieved, but a structural feature of the claimed device imposing a clear technical restriction to the structural features of its components and also imposing - contrary to the examining division's finding - a clear limitation on the scope of the claimed invention.

In addition, even if the aforementioned claimed feature were to be interpreted as a result to be achieved, no objection of lack of clarity would arise because it would be a simple matter for the skilled person to achieve the claimed feature by simply dimensioning the components of the device (and more specifically the lengths of the parts of the installation section and of the housing specified in claim 1) and selecting the materials of the housing and of the installation section according to their respective coefficients of thermal expansion in such a way that the claimed relationship is satisfied.

In its decision the examining division also held that feature b) was formulated in terms of unusual parameters. The Board, however, does not agree with this finding. Feature b) defines a requirement in terms of the lengths and of the coefficients of thermal

expansion of two mechanical parts engaged to one another, i.e. in terms of two physical parameters that are common in the general field of mechanical engineering and are known by the skilled person working in the particular technical field to which the invention relates. In addition, it is immediately apparent to the skilled person that the claimed quantity $1123(L_{1\ 1}-L_{2\ 2})$ expresses nothing else than the differential thermal expansion between the threaded sections of the housing and of the installation section at an operating temperature of 1123° K. This view is not only supported by what the skilled person would understand when reading the disclosure of the application relating to the claimed quantity $1123(L_{1\ 1}-L_{2\ 2})$, but also supported by what he would understand when reading the claim alone since - as submitted by the appellant, see point VI above, third paragraph - the skilled person is fully aware of the technical meaning of the thermal expansion of a mechanical part and it is also a matter of the common general knowledge in this field that the difference in coefficient of thermal expansion of two joint members runs counter to maintaining the tightening load between the members when operating in different thermal conditions (see for instance document A2, page 317, first column, penultimate paragraph). In these circumstances, the Board cannot follow the examining division's view that feature b) is defined in terms of parameters or quantities that could be qualified as unusual in the technical field of the invention.

In its decision the examining division also expressed doubts as to whether the quantity $1123(L_{1\ 1}-L_{2\ 2})$ defined in claim 1 as constituting an "estimated value" of the gap formed at the sealing section between the housing sealing surface and the installation section

sealing area at 850° C (1123° K) would actually constitute an estimation of the gap. However, the claim provides a clear and precise quantitative definition of what is understood by the "estimated value" of the gap in terms of the algebraic expression $1123(L_{1\ 1}—L_{2\ 2})$, and the question of to what extent this algebraic expression constitutes a valid estimation of the actual gap formed at the sealing section between the structural parts specified in the claim is not relevant to the issue of clarity of the claimed subject-matter within the meaning of Article 84 EPC 1973 because it is the value given by the algebraic expression, and not the actual value of the gap, which constitutes a limiting technical feature of the claimed subject-matter.

The Board also notes in this respect that the claimed invention is defined in terms of a gap formed at 850° C (1123° K) and that, as submitted by the appellant in connection with the technical understanding of the invention by the skilled reader (point VI above, third paragraph), the lengths L_1 and L_2 in the aforementioned claimed algebraic expression are measured at room temperature, so that the skilled person working in this field would then expect on the basis of the technical disclosure of the application and/or on the basis of the technical meaning of the claimed algebraic expression as derivable from the common general knowledge in this field referred to above (see document A2, *supra*) that an estimation of the gap would then rather be given by $(1123\text{-}T_0)(L_{1\ 1}—L_{2\ 2})$, where T_0 is the room temperature (°K), and not by $1123(L_{1\ 1}—L_{2\ 2})$ as claimed. However, the question - not addressed by the examining division - whether and, if so, to what extent the value of the algebraic expression $1123(L_{1\ 1}—L_{2\ 2})$ - if correct - constitutes a technically significant

estimation of the gap between the housing sealing surface and the installation section sealing area at 1123° K pertains, by its very nature, not to an evaluation of the requirements of clarity of Article 84 EPC 1973, but rather to a question that might possibly be relevant, if at all, under Article 83 and/or Article 56 EPC 1973. As the examination proceedings to date have focused exclusively on the question of whether the claimed subject-matter satisfies the requirements of Article 84 EPC 1973, the Board refrains from considering this issue further.

3.2.2 As regards feature a) requiring a minimum value of the release torque of the housing from the installation section at 850° C, the Board cannot follow the contention of the examining division that the feature is defined in terms of an unusual parameter either since it is commonly known in mechanical engineering, and in particular in the technical field of the invention, that a component screwed into another one requires a minimum load for the screwed assembly to be effective and that the most common way of determining this screw load is to measure it in terms of the tightening torque or in terms of the release torque which itself depends on the tightening torque. In addition, as acknowledged in the decision by the examining division itself, the skilled person is well aware of how to measure a release torque (*cf*. paragraph [0033] of the description of the application).

In its decision the examining division also objected that feature a) constituted a result to be achieved. As already mentioned in the former paragraph, the feature requires a minimum release torque of the housing from the installation section at a predetermined temperature and in the opinion of the Board the claimed feature

constitutes a technical feature of the claimed device and - contrary to the examining division's finding - also a clear limitation of the scope of the claim. The Board is aware that when the release torque of the housing from the installation section is 9 N·m or more at 850° C the housing would only hardly be dislodged from the installation section at temperatures of the order of 850° C and the primary problem considered in the application (see point 3.1 above, second paragraph) would be solved, so that in this respect feature a) can be interpreted as a statement of the extent to which the primary problem that the application intends to solve is actually solved by the claimed subject-matter, thus amounting itself to the formulation of a problem or - as objected by the examining division - to a result to be achieved. However, the fact that a claim specifies the problem solved by the features defined in the claim or, as a limiting feature, the extent to which the problem is solved is not in itself objectionable under Article 84 EPC 1973. In the present case, claim 1 not only defines feature a), but also feature b), and according to the technical teaching of the application feature b) appears to contribute to solve the primary problem considered in the application and also to achieve feature a) (*cf*. paragraphs [0008], [0032], [0047], [0061], [0075], [0076], [0082], [0084] and [0085] of the description), it being also noted that according to the experimental results reported in Figures 5 and 6 features a) and b) appear to correlate, at least to a certain extent, to each other. It follows that, even if feature a) is construed according to the examining division's view as a result to be achieved, the skilled person would know how to achieve the claimed feature without undue burden, for example by selecting the materials of the housing and of the installation section having a coefficient of thermal

expansion such that the value of the quantity $1123(L_{1\ 1} - L_{2\ 2})$ is negative, or positive but as low as possible, and in any case equal or lower than 31 m as required by feature b), and then screwing the housing into the installation section with a tightening torque such that at 850° C the release torque is 9 N·m or more as claimed. Accordingly, the mere finding that feature a), taken alone, may constitute a result to be achieved or the formulation of a problem to be solved is not objectionable *per se* under Article 84 EPC 1973 in the context of the whole claimed subject-matter because the feature is achievable in the context of the claimed features, particularly in view of feature b) also required by the claimed subject-matter.

3.2.3 In the decision under appeal the examining division included additional considerations in support of its view that the claimed subject-matter is unclear. These considerations - insofar as not already addressed in points 3.2.1 and 3.2.2 above - are not found persuasive either for the following reasons:

As concluded in points 3.2.1 and 3.2.2 above, contrary to the examining division's view, the claimed features, and more specifically features a) and b), impose clear limitations on the scope of the claim and, in addition, are defined in terms of parameters that are common in the technical field of the invention and cannot therefore be considered as unusual in this technical field. Accordingly, the further argument of the examining division that a meaningful comparison, for the purposes of both search and substantive examination, between the claimed subject-matter and the prior art is rendered impossible due to the absence of such clear limitations and due to the use of unusual parameters cannot be accepted. In these circumstances,

the allegation of the examining division that in the prior art documentation the value of the release torque at 850° C and/or of the differential thermal expansion of the corresponding threaded components are not used may render a comparison with the prior art difficult, but it does not necessarily render the corresponding parameters unusual in the corresponding technical field or even unclear within the meaning of Article 84 EPC 1973, not at least to the extent that a meaningful technical comparison with the prior art is rendered impossible because, as concluded above, the parameters are common in this technical field and their value can be directly measured and verified in the corresponding devices.

Similar considerations apply to the further objection of the examining division that the combination of features a) and b) defined in claim 1 is unusual. As already concluded above, neither feature a) nor feature b) is defined in terms of unusual parameters and, in addition, as noted in point 3.2.2 above, last paragraph, there is a technical relationship between the two features, and in these circumstances the Board does not see any reason for considering the combination of these two features as giving rise to objections under Article 84 EPC. The fact that the combination of features a) and b) is qualified by the examining division as unusual may, at the most, be seen as an indication that a search or a comparison of the claimed invention with the prior art is difficult, but not impossible, and in any case it does not justify *per se* an objection of lack of clarity under Article 84 EPC 1973. The Board notes in this respect that it is not unusual that a technical problem requires unusual technical measures to be solved, and that the logic followed by the examining division would imply in such

cases depriving the corresponding invention of due legal protection.

The examining division further objected in its decision that in order to find out the full scope of the claim the skilled person would have to vary a large number of parameters (materials of the housing and of the installation structure, diameter, length and lead of the thread, surface roughness of the thread surface, tightening torque, etc.) and to determine in an n-dimensional parameter space the value ranges of all these parameters fulfilling the claimed features, that the description provides no direction at all how to determine the corresponding ranges of values, and that the skilled person would require undue experimentation to fulfil this task, if feasible at all. However, the scope of the claim is determined by the claimed subject-matter which in the present case is defined, not in terms of the large number of parameters mentioned by the examining division, but in terms of relatively few parameters (the value of the release torque and the value of the differential thermal expansion of two of the components which only depends on the respective lengths and on the coefficient of thermal expansion of the respective materials) that are - undisputed by the examining division in the decision under appeal - directly measurable and testable in a device of the claimed type. In addition, the arguments of the examining division do not properly pertain to an evaluation of the clarity of the claim or of the determination of the scope of protection conferred by the claimed subject-matter, but rather to an assessment of whether the skilled person would be in a position to determine every particular implementation encompassed by the claimed subject-matter and understand the physical mechanisms (such as the role played by the

surface roughness of the thread surface) operating behind such implementations, it being noted that this assessment, by its very nature, would pertain, if at all, to the requirements of Article 83 EPC 1973.

Finally, in its decision the examining division referred to the Guidelines for Examination at the EPO, and in particular to paragraphs 4.10 and 4.11 of chapter C-III which in the then current version read respectively as follows: "As a general rule, claims which attempt to define the invention by a result to be achieved should not be allowed, in particular if they only amount to claiming the underlying technical problem [...]" and "Cases in which unusual parameters are employed [...] are *prima facie* objectionable on grounds of lack of clarity, as no meaningful comparison with the prior art can be made". As it is apparent from the above considerations and conclusions, claim 1 defines more than mere results to be achieved and the claim cannot be considered to constitute the mere formulation of the technical problem underlying the claimed invention and, in addition, the parameters specified in claim 1 are not unusual in the technical field of the invention, so that the present case does not fall within the categories of situations envisaged in the paragraphs of the Guidelines referred to by the examining division.

3.3 Independent claim 3 is directed to a method of installing a gas sensor into an installation section and the steps of the claimed method are essentially in one-to-one correspondence with the functional features of the different structural means defined in claim 1. The Board is satisfied that also the subject-matter of claim 3 is clear within the meaning of Article 84 EPC 1973 for essentially the same reasons as those given in

points 3.2 above with regard to the subject-mater of claim 1.

4. *Further prosecution*

The decision under appeal was exclusively based on the grounds of Article 84 EPC 1973 and, as concluded in point 3 above, the reasons given by the examining division in support of the refusal of the application are not found persuasive by the Board.

In addition, the examining division has not yet taken position on other requirements, such as the issues of novelty and inventive step, since not even a search has been carried out for the present application (*cf*. point I above, third paragraph).

In these circumstances, the decision under appeal must be set aside and, in view of the above considerations and in accordance with the appellant's main request, the Board exercises its power under Article 111(1) EPC 1973 to remit the case to the department of first instance for further examination of the application on the basis of the set of claims presently on file, the substantive examination as to patentability requiring that a search is previously carried out.

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 for further prosecution.

The Registrar: The Chairman:

M. Kiehl A. G. Klein

Decision electronically authenticated