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File No.: T 0640/91 - 3.4.1
Application No.: 88 105 342.5
Publication No.: 0 308 576
Classification: H05K 1/00
Title of invention: A printed wiring board

D E C I S I O N
of 29 September 1993

Applicant: Nippon CMK Corp.
Proprietor of the patent: -
Opponent: -

Headword: Examination Procedure/Nippon

EPC: Art. 54,56,96,113(1)
Rule 51,67

Keyword: "Observations on novelty by applicant" - "immediate refusal of the application because of finding of lack of proper collaboration and good faith by the applicant" - "such finding unjustified" - necessity to invite observations" - "unreasonable exercise of discretion"

Headnote

- I. *The requirement in Article 96(2) EPC that the Examining Division shall invite the applicant to file his observations "as often as necessary" implicitly recognises that in certain circumstances, there is a legal obligation upon the Examining Division to invite further observations from the applicant before issuing a decision which adversely affects the applicant.*
- II. *Having regard to Article 113(1) EPC, there is a "necessary" legal obligation for an Examining Division to invite further observations from an applicant, before issuing a decision adversely affecting the applicant in which the immediate issue of the decision is justified on the ground that the applicant has shown lack of good faith in his previous observations.*

III. A Board of Appeal should only overrule the way in which a first instance department has exercised its discretion in a decision in a particular case if the Board comes to the conclusion that the first instance department in its decision has exercised its discretion according to the wrong principles, or without taking into account the right principles, or in an unreasonable way.

IV. It is in principle not the function of an Examining Division to assess either the degree of collaboration from an applicant or his good faith, when deciding whether or not to invite further observations in the exercise of its discretion under Article 96(2) EPC. The exercise of such discretion depends primarily upon whether or not there is a reasonable prospect that such an invitation could lead to the grant of the patent application (following Decisions T 162/82, OJEPO 1987, 533, and T 84/82 OJEPO 1983, 451).



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Boards of Appeal

Chambres de recours

Case Number: T 0640/91 - 3.4.1

D E C I S I O N
of the Technical Board of Appeal 3.4.1
of 29 September 1993

Appellant: Nippon CMK Corp.
1106 Fujikubo
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Iruma-Gun
Saitama (JP)

Representative: Schickedanz, Willi, Dipl.-Ing
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Decision under appeal: Decision of the Examining Division 045 of the
European Patent Office dated 23 April 1991
refusing European patent application
No. 88 105 342.5 pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: G.D. Paterson
Members: R.K. Shukla
U.G.O.M. Himmler

Summary of Facts and Submissions

- I. This European patent application was filed on 2 April 1988. It concerns a printed wiring board, having a film covering at least part of the outer surface of the circuit conductors on the printed wiring board. The object of the invention is to improve the heat dissipation during operation.

Claim 1 of the application as filed reads:

"A printed wiring board which forms circuit conductors on at least one surface of a base plate, characterised in that a radiating film covers at least a portion of the outer surface of said circuit conductors".

- II. A communication was issued by the Examining Division on 29 October 1990, which *inter alia* raised the objection of lack of novelty of Claim 1 having regard to:
D1 New Electronics, Vol. 17, No. 13, June 1984, page 76.

The Examining Division considered that a printed wiring board as described and shown in D1 has by definition circuit conductors formed on at least one surface of a base plate.

Objections were also raised against all of the dependent Claims 2 to 9, *inter alia* on the ground of lack of inventive step having regard to

D2: FR-A-2 480 488.

It was stated that it was not apparent which part of the application could serve as a basis for a new allowable claim.

III. In a reply dated 27 February 1991, the applicant contested the objections to all of the claims. As to Claim 1, it was submitted that document D1 does not disclose any circuit conductors, since these are neither shown nor described; Figure 1 of D1 shows a plate comprising electronic elements, but not circuit conductors.

The suggestion that a printed wiring board has circuit conductors by definition was said to be irrelevant with respect to novelty, since such a definition is given in another document, and when considering novelty, the disclosure of a prior document must be considered in isolation - see Decision T 153/85 (OJ EPO 1988, 1). Allowance of the claims as filed was requested.

IV. The application was refused in a decision of the Examining Division dated 23 April 1991, on the grounds set out in the communication dated 29 October 1990, specifically on the ground of lack of novelty of Claim 1.

The refusal of the application after issue of only one communication was justified in the decision on the following basis: "...the applicant's statement with respect to the way in which novelty has to be assessed and the citation of (Decision T 153/85) are regarded not only as unjustified but also as a lack of proper collaboration and good faith from the applicant's side. Due to this lack of real effort to deal with the objections of the examining division, the application has to be refused immediately: see (Decision T 84/82, OJ EPO 1983, 451)."

V. The Applicant appealed. In the Grounds of Appeal the Appellant protested against the allegation of lack of proper collaboration and good faith made by the

Examining Division, and submitted *inter alia* that it is important for a proper functioning of the European Patent System that points in dispute between examiner and applicant can be fully argued before a refusal is issued. Refund of the appeal fee according to Rule 67 EPC was requested having regard to the premature refusal of the application.

The Appellant also contested the finding of lack of novelty having regard to D1. As a first auxiliary request, it was proposed that Claim 1 should specify "a heat radiating film", and as a second auxiliary request, that Claim 1 should also be reformulated to take account of the disclosure in D1. A third auxiliary request was also proposed.

VI. In a communication dated 7 May 1993, the Board suggested that if Claim 1 was amended to make it clear that the heat radiating film is of a material which is sufficiently thermally conducting so that the heat produced in the circuit conductor during use is effectively dissipated, the novelty objection would not arise.

In reply, the Appellant filed the following Claim 1 as a new main request on 1 July 1993:

"1. A printed wiring board (13, 17, 18) which forms circuit conductors (11) on at least one surface of a base plate (10), **characterized in that** a heat radiating film (12) covers at least a portion of the outer surface of said circuit conductors (11), said *heat radiating film (12) being of a material which is sufficiently thermally conducting so that the heat produced in the circuit conductors (11) during the use of the printed wiring board is effectively dissipated.*"

Claims 2 to 4 require amendment to refer to a "heat" radiating film. Claims 5 to 9 remain unamended.

Reasons for the Decision

1. *Amendments*

In the new Claim 1 under consideration (i) the term "heat radiating film" is used instead of the term "radiating film" and (ii) it is further stated that the heat radiating film is of a material which is sufficiently thermally conducting so that the heat produced in the circuit conductors during the use of the printed wiring board is effectively dissipated.

Referring to Claims 2 and 5 and the description (see column 1, lines 44 to 46) as filed, it is evident that the heat radiating nature of the film has a basis in the application documents as originally filed. Moreover, in the original description (see column 3, lines 10 to 13) the radiation film is disclosed to be composed of a metal or non-organic material, e.g. ceramics such as aluminium oxide. These materials are known to be thermally conducting in the art, and when the advantageous effects of these materials as disclosed in column 2, lines 2 to 13 are taken into consideration, in the Board's view the amendment as set out in (ii) above does not go beyond the content of the application as originally filed.

Amended Claim 1 thus complies with the requirement of Article 123(2) EPC.

2. *Novelty of Claim 1*

The article in document D1 deals with conformal coatings for the protection of printed circuit boards (PCBs) against water vapour, dirt, dust and corrosion. The conformal coating covers the baseboard of the PCB as well as the component mounted thereon, and the coating materials including acrylics, polyurethanes, epoxy resins, polyimides and silicones. Having regard to the widely accepted meaning of the term "printed circuit board (PCB)" in the art, the Board agrees with the Examining Division that it is implicit in document D1 that the PCBs are provided with **printed** interconnection conductors or wiring on at least one surface of the baseboard. When the conformal coating is formed by dip coating as disclosed in column 3, lines 33 to 37, it is evident that both surfaces of the board, and consequently also the printed wiring, are covered by the coating. The coating is disclosed to be sufficiently thin so that it permits heat to be dissipated from the components (see column 1, last paragraph; column 2). Nevertheless, the coating materials disclosed in the document are all thermally insulating and do not improve or aid the removal of heat from the conductors. Thus, for example, silicone employed as a coating material is known to have a thermal conductivity of about 20×10^{-2} W/m.K. It is merely on account of the small thickness of the coating, and not due to the thermal properties of the coating material that the heat dissipation is possible. The heat radiating film as now claimed and disclosed, on the other hand, is of a material which is sufficiently thermally conducting so that the heat produced in the circuit conductors during the use of the printed wiring board is effectively dissipated. The printed wiring board as claimed is thus new over the prior art PCB as disclosed in document D1, within the meaning of the Article 54(1) EPC.

3. *Inventive step*

The technical problem to which the patent application in suit aims to provide a solution is to dissipate heat effectively from the printed conductors so that they are not overheated during operation (see column 1, lines 20 to 37).

The conformal coating in document D1 is provided with a view to protecting the printed circuit board and electrical components mounted thereon from the adverse effects of moisture, dirt and corrosion on their electrical characteristics, and the coating materials used for this purpose are known to be thermally insulating. This document is therefore not concerned with the problem of dissipation of heat from the printed conductors, and also does not suggest the use of a thermally conducting material as a coating.

Document D2 is concerned with a thermally conducting adhesive material for bonding an electronic component to a heat sink, and does not suggest the use of such a material on a printed circuit conductor.

In view of the above, in the Board's judgment, the subject-matter of Claim 1 is not rendered obvious by the cited prior art and therefor involves an inventive step within the meaning of Article 56 EPC.

4. *Request for refund of the appeal fee*

Rule 67 EPC provides that the reimbursement of appeal fees shall be ordered where a Board of Appeal deems an appeal to be allowable, if such reimbursement is equitable by reason of a substantial procedural violation.

5. As held in paragraphs 1 and 2 above, the application is allowable in the light of the amendments made to Claim 1 as set out in the applicant's main request filed on 1 July 1993, and the appeal is therefore allowable.

6. According to Article 96(2) and Rule 51(3) EPC, if "examination of a European patent application reveals that the application or the invention to which it relates does not meet the requirements of the EPC", any communication by the Examining Division "shall contain a reasoned statement covering, where appropriate, all the grounds against the grant of a European patent". Furthermore, according to Article 96(2)EPC, the Examining Division "shall invite the applicant, in accordance with the Implementing Regulations and as often as necessary, to file his observations..."

The question arises as to what is meant by the phrase "as often as necessary" in Article 96(2)EPC. In particular, following the issue of one communication by an Examining Division and the filing by the applicant of observations in reply, when is it "necessary" for the Examining Division to issue a further communication?

- 6.1 In the Board's view, the use of the word "necessary" in this context implicitly recognises that in certain circumstances, there will be a legal obligation upon an Examining Division to invite further observations from the Applicant before issuing a decision. For example, it would be legally mandatory for an Examining Division to invite further observations from an applicant before issuing a decision based on grounds or evidence on which the Applicant had not previously had an opportunity to present his comments (Article 113(1)EPC); and a failure to invite further observations in such circumstances would be a substantial procedural violation within the meaning of Rule 67 EPC.

6.2 In the absence of circumstances which create such a legal obligation, however, the words "as often as necessary" as used in Article 96(2)EPC indicate that the Examining Division has a discretion in each individual case as to whether or not to invite further observations from an applicant before issuing a decision (following Decision T 162/82, OJ EPO 1987, 533).

As discussed in that Decision, such discretion should be exercised in favour of inviting further observations if there is a reasonable prospect that such an invitation could lead to the grant of the application, after appropriate amendment for example. On the other hand, as discussed in that Decision and also in Decision T 84/82, OJ EPO 1983, 451, if there appears to be no reasonable prospect that the application could proceed to grant after issue of a further invitation, there may be no reason to issue such an invitation before issuing a decision refusing the application. As stated in Decision T 162/82, Article 96(2) EPC, "does not exclude communication with the applicant in other circumstances but it relieves the Examining Division of any obligation to send communications which on a reasonable, objective basis could be considered superfluous."

When discussing a case where the examiner considers that there is little prospect of progress towards grant and that the application should be refused in the light of the Applicant's initial observations in reply, the Guidelines recommend that in such a case, the examiner should not refuse immediately but should first warn the Applicant of the likelihood that the application will be refused in the absence of more convincing arguments or appropriate amendment.

6.3 Furthermore, in the Board's view, if the way in which a first instance department has exercised its discretion

on a procedural matter is challenged in an appeal, it is not the function of a Board of Appeal to review all the facts and circumstances of the case as if it were in the place of the first instance department, and to decide whether or not it would have exercised such discretion in the same way as the first instance department. If a first instance department is required under the EPC to exercise its discretion in certain circumstances, such a department should have a certain degree of freedom when exercising that discretion, without interference from the Boards of Appeal. In the Board's view, a Board of Appeal should only overrule the way in which a first instance department has exercised its discretion if the Board comes to the conclusion that the first instance department in its decision has exercised its discretion according to the wrong principles, or without taking into account the right principles, or in an unreasonable way.

7. In the present case, the application has been refused after only one communication from the Examining Division and observations in reply from the Applicant, with no invitation to the applicant to file further observations, and with no warning letter to the Applicant of the likelihood that the application would be refused. Such a procedure does not *per se* contravene the EPC if the decision of refusal is only based on grounds or evidence on which the applicant has had an opportunity to present comments. However, the only reasons given by the Examining Division in its Decision for immediately refusing the application are that the Applicant's statement with respect to the way in which novelty has to be assessed, and the citation of Decision T 153/85, "are regarded not only as unjustified but also as a lack of proper collaboration and good faith from the applicant's side", and that "due to this lack of real effort to deal with the objections of the examining

division, the application has to be refused immediately", reference being made to Decision T 84/82, identified above. The immediate refusal of the application was therefore based on the ground that the Applicant was said to be guilty of a "lack of proper collaboration and good faith." It may be that the Examining Division did not fully appreciate the serious nature of this finding, so far as the Applicant is concerned.

8. Leaving aside for a moment the finding of lack of proper collaboration, a finding of lack of good faith on the part of an applicant or his representative, if justified, is a very serious matter. In the case of a professional representative, such a finding of lack of good faith, if justified, could be relevant to his professional status.

In the Board's view, in accordance with the generally recognised legal principle of a right to a fair hearing, before issuing a decision containing a finding of lack of good faith against a party or his representative, any department of the EPO has a mandatory legal obligation to give that party or his representative an opportunity to present comments.

- 8.1 Furthermore, in the context of the procedure before an Examining Division under Article 96(2)EPC, as discussed in paragraph 6.1 above it would be a "necessary" legal obligation having regard to Article 113(1)EPC for an Examining Division to invite further observations from an applicant before issuing an adverse decision immediately refusing the application, on the ground that the applicant has shown lack of good faith.

- 8.2 For these reasons alone in the Board's judgment the issue of the Decision of the Examining Division

containing the finding of lack of good faith in the present case, without giving the applicant an opportunity to comment or to file observations, constituted a substantial procedural violation within the meaning of Rule 67 EPC.

9. When issuing its decision immediately refusing the application on the basis discussed above, the Examining Division clearly failed to take into account the necessity of inviting comments having regard to Article 113(1)EPC. Beyond this, however, although it purported to exercise its discretion in accordance with Decision T 84/82, the Examining Division failed to consider the principles set out in paragraph 6.2 above when exercising its discretion .

Furthermore, in the Board's view the Examining Division exercised its discretion in the present case in an unreasonable way, because there is nothing in the letter from the Applicant's representative dated 27 February 1991 which could possibly justify a finding of "lack of proper collaboration and good faith". For these reasons also, the exercise of the Examining Division's discretion in an unreasonable way, taking into account the wrong principles, was a substantial procedural violation in the sense of Rule 67 EPC.

10. In fact, this finding by the Examining Division of a "lack of proper collaboration and good faith" appears to be based upon a misconception of what is required from an applicant when replying to objections raised by an Examining Division in its first communication. In that situation the applicant (whether or not through a professional representative) is entitled to put forward any possible arguments (both legal and technical) against the objections raised by the Examining Division,

in support of the text of the application as filed. In addition he may propose one or more auxiliary requests, with supporting arguments if appropriate, but he is not obliged to do that.

If the Examining Division considers that the arguments put forward on behalf of the applicant are weak, it is of course entitled to reject such arguments (and to refuse the application after only one communication if the circumstances justify that). But the presentation of arguments which are considered to be weak is not an indication either of "lack of proper collaboration" or of "lack of good faith" by the applicant. There is no obligation upon an applicant or his representative to "collaborate" with the Examining Division in the sense of accepting the latter's objections. The interest of an applicant may be to obtain a patent with a text which confers a particular extent of protection, and the duty of a professional representative is then to put forward arguments in favour of such text, whereas the duty of the Examining Division is only to grant a patent which complies with the requirements of the EPC. In such a situation there is no possibility of "collaboration", in the above sense, and there is no proper basis for expecting it.

Similarly, weak legal or factual reasons may be put forward by an applicant in good faith in support of an application. In general, lack of good faith by an applicant would only arise in very exceptional circumstances (for example, if an applicant attempted deliberately to mislead the Examining Division in relation to relevant facts).

Decision T 84/82, referred to in paragraph 6.2 above, contains references in Headnote II and paragraph 7 to a requirement for "proper collaboration" from applicants, and "good faith", in order that the EPO can achieve its aim to carry out the substantive examination of applications thoroughly, efficiently and expeditiously. While reasonable cooperation in relation to procedural matters and good faith in general is to be expected from parties before the EPO, there is nevertheless nothing in Decision T 84/82 to justify the immediate refusal of an application after only one previous communication on the ground of lack of proper collaboration and good faith. In this Board's view, in principle, in all normal cases it is not the function of an Examining Division to assess either the degree of "collaboration" from an applicant or his good faith, when deciding whether or not to invite further observations in the exercise of its discretion under Article 96(2) EPC. The proper considerations in this respect are set out in paragraphs 6.1 and 6.2 above.

11. Furthermore, in the Board's judgment reimbursement of the appeal fee is equitable in the present case.

Order:

For these reasons, it is decided that:

1. The Decision of the Examining Division is set aside.
2. The case is remitted to the Examining Division with an order to grant a patent on the basis of the main request filed on 1 July 1993.
3. The appeal fee shall be reimbursed.

The Registrar:

The Chairman:

M. Beer

G. Paterson