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D E C I S I O N
of 30 November 2000

Case Number: T 0174/98 - 3.3.5

Application Number: 89112193.1

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Language of the proceedings: EN

Title of invention:
Semiconductive ceramic composition

Patentee:
TDK Corporation

Opponent:
BC Components Holdings B.V.

Headword:
Ceramic compositions/TDK

Relevant legal provisions:
EPC Art. 108, 84, 54, 111(1)

Keyword:
"Admissibility of the appeal (yes), novelty (yes, after amendment)"

Decisions cited:
T 0301/87, T 0472/88, T 0127/85

Catchword:
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Case Number: T 0174/98 - 3.3.5

D E C I S I O N
of the Technical Board of Appeal 3.3.5
of 30 November 2000

Appellant: TDK Corporation
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Respondent: BC Components Holdings B.V.
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Representative: van Westenbrugge, Andries
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 28 November 1997
revoking European patent No. 0 350 770 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: R. K. Spangenberg
Members: M. M. Eberhard
J. H. van Moer

Summary of Facts and Submissions

I. European patent No. 350 770 based on application No. 89 112 193.1 was granted on the basis of eight claims. Granted claim 1 reads as follows:

"1. A semiconductive ceramic composition comprising

- Sr of 0.05 to 0.95 molar parts based on SrO,
- Pb of 0.05 to 0.85 molar parts based on PbO,
- Ti of 0.90 to 2.00 molar parts based on TiO₂,
and
- R of 0.01 to 0.30 molar parts based on its
oxide;

wherein R is at least one material selected from the group consisting of rare earth elements, Bi, V, W, Ta, Nb and Sb, in which

- the amounts of rare earth elements, except Ce, as well as the amounts of Bi and Sb are based on $1/2(R_2O_3)$,
- the amounts of V, Ta and Nb are based on $1/2(R_2O_5)$, and
- the amounts of Ce and W are based on RO₂ and RO₃ respectively; and

wherein the composition is subjected to firing in an oxidizing atmosphere."

- II. The respondent (opponent) filed a notice of opposition requesting revocation of the patent on the grounds of lack of novelty and lack of inventive step. In support of his arguments, the respondent relied on JP-A-63-146 404 and an English translation thereof (hereinafter D1).
- III. The opposition division revoked the patent on the ground of lack of novelty. In its decision, it held that claim 1 as granted was not novel over the disclosure of D1. D1 disclosed a thermistor element having a perovskite-type structure and comprising 0.075 molar parts of SrO and the same amount of PbO together with 0.0022 molar parts of Y₂O₃. The wording of claim 1 encompassed any semiconductive composition which had been fired in an oxidising atmosphere and which contained, among any other component, at least the three components Sr, Pb and R (e.g. Y) in the required amounts. Claim 1 even encompassed compositions rich in Ba. The composition disclosed in D1 fell within the definitions set out in claim 1.
- IV. The appellant (proprietor of the patent) lodged an appeal against this decision. He submitted an auxiliary request with the statement of grounds of appeal. In a communication the parties were informed of the provisional opinion of the board on the novelty of claim 1 according to each of the requests on file. In reply to the said communication, the appellant filed amended claims 1-4 as a new auxiliary request on 27 October 2000. Claim 1 of this request differs from claim 1 of the main request by the incorporation of the additional feature "**with the proviso that barium is not present**" at the end of the claim. Oral proceedings were

held on 30 November 2000 in the absence of the respondent. The latter had informed the board on 20 November 2000 of his intention not to attend the oral proceedings.

V. The appellant's arguments can be summarised as follows:

The respondent's doubts regarding the admissibility of the appeal were not justified since the statement of grounds of appeal contained reasons why the subject-matter of the patent as defined in the auxiliary request fulfilled the requirement of patentability. The decision of the opposition division could only be attacked as a whole.

The clarity objection raised by the respondent was not relevant. The examples of the description which were said to fall outside the scope of the invention will be deleted in order to avoid any discrepancy between the claims and the description. Furthermore, clarity of the claims was not a ground of opposition.

The wording of claim 1 according to the auxiliary request excluded the presence of barium by means of a disclaimer. As D1 solely dealt with barium titanate which was modified by replacing Ba with both Sr and Pb, the subject-matter of this claim was novel with respect to D1. It also involved an inventive step since a document relying fully on Ba could not render obvious a material not containing this element.

VI. The respondent submitted the following arguments:

The statement of grounds of appeal did not contain any argument in favour of the main request. Therefore, it

appeared that the provisions of Article 108 EPC had not been fulfilled in connection with the main request, and thus, part of the appeal would be inadmissible.

There was a contradiction between claim 1 of the auxiliary request and the description. A considerable number of ceramic compositions, which were said not to be included in the scope of the invention, did fall within the ranges defined in claim 1. This discrepancy resulted in a lack of clarity and lack of support of the claims. Apparently a further limiting feature should have been incorporated in claim 1, which feature could, however, not be directly derived from the application. Furthermore, the added feature that barium was not present might also lead to clarity problems in view of the preference given in the specification for the presence of barium. The reference to compositions free of barium on page 3 of the description was made in the context of a prior art application rather than with respect to the patent in suit.

Claim 1 of the auxiliary request lacked an inventive step. It was clear from the description that the claimed compositions did not exhibit the alleged effect over the claimed range. According to the EPO case law, inventive step could not be acknowledged if the problem to be solved according to the invention was not solved by a substantial part of the claimed range. Reference was made to FR-A-2 317 742 in connection with the inventive step of barium-free compositions.

VII. The appellant requested that the decision of the opposition division be set aside and that the patent be maintained as granted (main request) or, alternatively, on the basis of amended claims 1 to 4 according to the

auxiliary request submitted on 27 October 2000. The respondent requested in writing that the appeal be dismissed.

Reasons for the Decision

1. The respondent argued that part of the appeal appeared to be inadmissible. In the respondent's opinion the requirements of Article 108 EPC had not been fulfilled because the statement of grounds of appeal contained only the following sentence in connection with the main request: "It is the patent proprietor's assessment that claim 1 according to the main petition is allowable". These arguments are not convincing for the following reasons:

The statement of grounds of appeal contains reasons why the subject-matter of the patent in suit restricted to barium-free compositions would meet the requirement of novelty with respect to D1. Therefore, it contains legal and factual reasons why the decision should be set aside in the case of the auxiliary request filed with the statement of grounds of appeal. This was not contested by the respondent. The fact that the statement of grounds of appeal contains no substantiation as regards the main request cannot render the appeal inadmissible since an appeal cannot be partly admissible (it is admissible or not) and the statement of appeal contains reasons why the arguments given in the contested decision do not apply to barium-free compositions according to the auxiliary request. Therefore, the board considers that by submitting reasons in favour of the novelty of the limited claim, the appellant has sufficiently dealt with the grounds

of the decision of the first instance and thus, the requirement of Article 108, third paragraph, is met. As the appeal also complies with the other requirements set out in Articles 106, 107, 108 and Rule 64 EPC, it is admissible.

Main request (claims as granted)

2. D1 discloses a sintered thermistor element having a perovskite-type structure and positive characteristics. This thermistor element has the composition $(\text{Ba}_{0.85}\text{Sr}_{0.075}\text{Pb}_{0.075})\text{Ti}_{1.01}\text{O}_3 + 0.0022 \text{ Y}_2\text{O}_3 + \text{MnO}_2 + 0.024 \text{ SiO}_2$. It has been obtained by simultaneously mixing of the "switching temperature shifting materials" Sr and Pb (see page 1, last paragraph; page 3, last paragraph; page 4, lines 18 to 21; Table 2 and Fig to 2). This composition comprises 0.075 molar parts of SrO, 0.075 molar parts of PbO, 1.01 molar parts of TiO₂ and 0.0022 molar parts of Y₂O₃. These values fall within the ranges defined in claim 1 of the main request. The semiconductive ceramic compositions according to claim 1 are defined as "**comprising**" Sr, Pb, Ti and R. As this wording does not exclude the presence of other components in addition to Sr, Pb, Ti and R, the claimed composition may also include Ba. Therefore, the composition of the thermistor element disclosed in D1 falls within the claimed definition. Furthermore, the appellant has neither argued nor shown that the process feature stated in claim 1, ie the firing step in an oxidizing atmosphere, would lead to a ceramic composition which differs from the sintered thermistor element disclosed in D1. In these circumstances, the board considers that subject-matter of claim 1 according to the main request is not novel over the disclosure of D1. As claim 1 does not meet the

requirement of novelty set out in Articles 52(1) and 54, the main request must fail.

Auxiliary request

3. The amendments in claim 1 of this request meet the requirements of Article 123(2) and (3)EPC. It is directly and unambiguously derivable from the application as originally filed and from the patent in suit that the semiconductive ceramic compositions may or may not include barium (see application as filed: claims 1 and 5; page 41, second paragraph; page 43, lines 6 to 8; page 44, lines 2 to 5; Tables 1 to 6 which disclose examples with and without Ba; patent in suit: claims 1 and 5; page 35, lines 22 to 33; page 36, lines 6 to 7 and 24 to 25; Tables 1 to 6). The alternative that the compositions do not contain barium is thus disclosed in both the application as filed and the patent in suit. Claims 2 to 4 correspond to original claims 2 to 4 and to granted claims 2 to 4. By excluding the presence of barium in the compositions, the scope of protection of the amended claims has clearly been restricted over that of the granted claims.

4. Concerning the objection under Article 84 EPC raised by the respondent, the board observes that lack of clarity and lack of support of the claims are not grounds of opposition. According to the case law of the boards, in the case where claims have been amended during the opposition proceedings, the opposition division and the board have in principle the power to deal with such issues only if they arise out of the amendments made to the claims (see decisions T 301/87, OJ EPO 1990, 335; T 472/88 EPOR 1991, 487).

However, objections to lack of clarity may be relevant to opposition proceedings insofar as they may influence the decisions on issues under Article 100 EPC, for example novelty or inventive step. In such cases these objections need not be investigated further than is necessary to enable assessment of the issue already at hand (see T 127/85, OJ OEB 1989, 271).

In the present case, the sole amendment in claim 1 of the auxiliary request is the addition of the proviso that barium is not present. The alleged deficiency, ie the discrepancy between claim 1 and some of the examples marked with an asterisk whose compositions are said not to be included in the scope of the invention although they fall within the claimed range, and the assumption that a further limiting feature might be missing in claim 1, concern both claim 1 of the main request and claim 1 of the auxiliary request. Therefore, the alleged lack of clarity and support by the description does not arise out of the said amendment. Furthermore, the amendment made does not give rise to an ambiguity in the claim which would need to be dealt with in order to examine novelty. The alleged lack of clarity of claim 1 has no influence on the novelty issue and, therefore, it need not be further investigated for the assessment of novelty.

5. Claim 1 of the auxiliary request is directed to semiconductive ceramic composition which do not contain barium. On the contrary, barium is a mandatory component of the thermistor elements disclosed in D1. Therefore, the compositions of claim 1 are novel with respect to the disclosure of D1, as also acknowledged by the respondent.

6. The question whether or not the barium-free ceramic compositions according to claim 1 involve an inventive step with respect to the cited prior art has not been examined by the opposition division. Furthermore, the respondent raised the objection that the compositions defined in claim 1 did not have the alleged effect over the whole claimed range for the first time in his letter of 5 October 2000. Although a number of effects are indicated in the patent in suit, he neither indicated which effect was not achieved, nor developed this point any further in writing and did not attend the oral proceedings. In these circumstances, the board, in the exercise of its discretionary power pursuant to Article 111(1) EPC, finds it appropriate to remit the case to the opposition division for further prosecution.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance for further prosecution on the basis of claims 1 to 4 of the auxiliary request filed on 27 October 2000.

The Registrar:

The Chairman:

S. Hue

R. Spangenberg