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**D E C I S I O N**  
**of 12 July 2005**

**Case Number:** T 0628/01 - 3.3.2

**Application Number:** 91112312.3

**Publication Number:** 0468435

**IPC:** A61K 6/00

**Language of the proceedings:** EN

**Title of invention:**

Dental ceramic composition for titanium prostheses

**Patentee:**

DENTSPLY GmbH

**Opponent:**

Vita Zahnfabrik H. Rauter GmbH & Co.

**Headword:**

Dental ceramic material/DENTSPLY GMBH

**Relevant legal provisions:**

EPC Art. 54

**Keyword:**

"Novelty - no: no evidence for a distinguishing feature  
vis-à-vis prior use"

**Decisions cited:**

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**Catchword:**

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Case Number: T 0628/01 - 3.3.2

**D E C I S I O N**  
**of the Technical Board of Appeal 3.3.2**  
**of 12 July 2005**

**Appellant:** Vita Zahnfabrik H. Rauter GmbH & Co  
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**Representative:** Werner, Hans-Karsten  
Patentanwälte  
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**Respondent:** DENTSPLY GmbH  
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**Representative:** Wächtershäuser, Günter  
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**Decision under appeal:** Interlocutory decision of the Opposition  
Division of the European Patent Office posted  
3 April 2001 concerning maintenance of European  
patent No. 0468435 in amended form.

**Composition of the Board:**

**Chairman:** U. Oswald  
**Members:** J. Riolo  
P. Mühlens  
G. Rampold  
J. Seitz

## Summary of Facts and Submissions

- I. European patent N° 0 468 435 based on application No. 91 112 312.3 was granted on the basis of 8 claims.

Independent claim 1 as granted read as follows:

1. A dental ceramic material that can be fused to dental prostheses made of titanium or titanium alloys, comprising:

COMPOUND/WEIGHT-PERCENT

SiO<sub>2</sub>/54-64

Al<sub>2</sub>O<sub>3</sub>/5-12

B<sub>2</sub>O<sub>3</sub>/8-17

Li<sub>2</sub>O/0-6

Na<sub>2</sub>O/3-10

K<sub>2</sub>O/0-8

MgO/0-2

CaO/0-6

BaO/0-2

wherein said material has a coefficient of thermal expansion of  $7.8 \times 10^{-6}/K$  to  $9.0 \times 10^{-6}/K$  (25-500°C) and can be fused to titanium or titanium alloys at temperatures between 740° and 850°C.

- II. Notice of opposition was filed against the granted patent.

The patent was opposed under Article 100(a) EPC for lack of novelty and lack of inventive step and under Article 100(b) EPC for insufficiency of disclosure.

The following document *inter alia* was cited during the proceedings:

Annex F of an alleged prior use consisting of an analytical report dated 14 June 1999 and admitted into the proceedings during the oral proceedings before the Opposition Division.

- III. The decision of the Opposition Division pronounced on 6 December 2000 maintained the European patent in an amended form under Article 106(3) EPC.

The Opposition Division held that claim 1 of the main request filed on 6 November 2000 restricting the amount of  $B_2O_3$  to "8 to 13% by weight" instead of the original range of "8 to 17" did not contravene Article 123(2) EPC as it was usual case law to allow the combination of the lower value (8 to 17) of one range disclosed in the application as originally filed with the upper value of another range (10 to 13) disclosed in the application as originally filed.

It also decided not to examine the clarity objection relating to the feature "coefficient of thermal expansion of from  $7,8 \times 10^{-6}/K$  to  $9,0 \times 10^{-6}/K$ " in claim 1, as this feature was already present in claim 1 as granted.

Concerning the objection of insufficiency of disclosure, it was of the opinion that, in the light of the numerous examples identifying specific means of carrying out the invention, the requirements of Article 100(b) EPC were met.

As regards the novelty objection vis-à-vis the prior use, it considered, in the light of the various pieces of evidence provided by the opponent and of the testimony of the witnesses, that the compositions according to the prior use, as well as their internal structure, ie their chemical constituents, were available to the public before the priority date of the patent in suit.

It decided however that the claimed compositions were novel vis-à-vis said the prior art item and also vis-à-vis the other available documents, because a "coefficient of thermal expansion of from  $7,8 \times 10^{-6}/K$  to  $9,0 \times 10^{-6}/K$ " as required in claim 1 of the contested patent was not disclosed in the prior art.

The Opposition Division was moreover of the opinion that the claimed subject-matter was inventive because the available prior art did not suggest that the specific combination of ingredients according to claim 1 led to the surprising result of an improved coefficient of thermal expansion and a higher bonding strength to titanium.

- IV. The appellant (opponent) lodged an appeal against the said decision.
- V. Oral proceedings were held before the Board on 12 July 2005 during which an auxiliary request was submitted by the respondent.
- VI. The appellant did not maintain its objection relating to Article 123(2) EPC during the oral proceedings.

It did however contest the conclusions of the Opposition Division as to sufficiency of disclosure. It repeated its main arguments in that respect, namely that the patent did not provide a general teaching enabling the preparation of dental ceramic material containing the ingredients of claim 1 and having a coefficient of thermal expansion of  $7.8 \times 10^{-6}/K$  to  $9.0 \times 10^{-6}/K$  (25-500°C).

Concerning the novelty objection vis-à-vis the prior art and in particular vis-à-vis the prior use, it submitted that the feature in claim 1 relating to the "thermal expansion of  $7.8 \times 10^{-6}/K$  to  $9.0 \times 10^{-6}/K$  (25-500°C)" could not be considered as being the distinguishing feature, because this feature was not clear and because the patent did not teach how to achieve it.

VII. The respondent shared the conclusions of the Opposition Division as to sufficiency of disclosure.

It also agreed with the Opposition Division's conclusions that none of the available prior art items disclosed the feature in claim 1 as to "a coefficient of thermal expansion of  $7.8 \times 10^{-6}/K$  to  $9.0 \times 10^{-6}/K$  (25-500°C)", so that the claimed subject-matter was not anticipated.

Furthermore, for the first time during the oral proceedings, it contested the Opposition Division's conclusions as to the prior use and in particular that the compositions according to Annex F were made available to the public before the priority date of the patent in suit.

VIII. The appellant (opponent) requested that the decision under appeal be set aside and that the patent be revoked.

The respondent (patentee) requested that the appeal be dismissed.

### **Reasons for the Decision**

1. The appeal is admissible.

2. *Main request*

2.1 Article 84 EPC

Article 84 EPC is not a ground of opposition under Article 100 EPC. Accordingly, the Board has to deal with the claims as they stand, unless new amendments are introduced.

The Board observes in the present case that claim 1 of the contested patent contains a feature requiring that the composition has "a coefficient of thermal expansion of  $7.8 \times 10^{-6}/K$  to  $9.0 \times 10^{-6}/K$  (25-500°C)". Neither the claims nor the description provide for particular or specific means to achieve this condition, so that it must be assumed that this property of the ceramic material is achieved by using usual and trivial preparation processes.

Under these circumstances, it is up to the respondent to demonstrate that an *a priori* relevant prior art item does not fulfil this criterion.

2.2 Article 123(2) EPC

Since the appellant did not maintain its objection and since the Board agrees with the Opposition Division's findings with respect to the assessment of added matter, there is no need to develop this point further.

2.3 Article 100(b) EPC

The Board shares the Opposition Division's arguments and conclusion as to the sufficiency of disclosure as given in its decision (point 5).

Since the respondent did not present any concrete evidence to show that the information given in the application and in particular in the examples was not sufficient to prepare the compositions as claimed or that it was indeed an unduly difficult task to find the necessary conditions and ingredients to achieve a composition according to claim 1, the Board concludes that the requirements of Article 100(b) EPC are fulfilled.

Moreover, having regard to the Board's conclusions as to novelty, this point does not need to be dealt with in more detail.



## 2.4 Novelty

Annex F of the alleged prior use has been cited as prejudicial to the novelty of the subject-matter of the patent in suit as maintained by the Opposition Division.

This document discloses four compositions comprising all the ingredients of claim 1 as maintained by the Opposition Division.

In the composition referred to as 305.1 for instance, the ingredients are moreover present in the same amounts as required in claim 1.

These findings were not contested by the respondent either in writing or during the oral proceedings.

Accordingly, the Board agrees with the parties and the Opposition Division that the only relevant feature for the assessment of novelty remains the feature of claim 1 requiring that the composition must have "a coefficient of thermal expansion of  $7.8 \times 10^{-6}/K$  to  $9.0 \times 10^{-6}/K$  (25-500°C)".

Having regard to the fact that all the ingredients and the amounts of ingredients used in Annex F (eg 305.1) fall within the scope of claim 1 of the contested patent and in the light of the fact that the patent is silent about any particular measure to achieve "a coefficient of thermal expansion of  $7.8 \times 10^{-6}/K$  to  $9.0 \times 10^{-6}/K$  (25-500°C)", the Board has, in the absence of any concrete evidence to the contrary, no reason to doubt that Annex F discloses a composition also having

"a coefficient of thermal expansion of  $7.8 \times 10^{-6}/K$  to  $9.0 \times 10^{-6}/K$  (25-500°C)".

Accordingly, the Board concludes that the subject-matter of claim 1 of the patent in suit is anticipated by the prior use.

The Board does not agree with the respondent's submission that claim 1 is novel over Annex F because the coefficient of thermal expansion is not indicated and because there is no direct correlation between the constituents of a composition, their amounts and the thermal expansion coefficient of the prepared composition, as the latter also depends on its process of preparation.

In fact, it was the choice of the respondent to seek to establish novelty over the prior art by means of this parameter and to provide very little information about any particular means to achieve it in the patent. It is therefore its task to demonstrate that the prior art does not fulfil this condition, when the only missing information resides precisely therein.

As to the respondent's submission that the alleged prior use was not established and in particular that the compositions according to Annex F were not made available to the public before the priority date of the patent in suit, the Board notes that the Opposition Division's decision posted on 3 April 2001 concluded, on the contrary that, in the light of the various evidence submitted by the opponent and the testimony of the witnesses, that "the product and its internal

structure, ie its chemical components" of the alleged prior use became part of the prior art (see point 6.2).

In this respect, the Board observes that these findings were never contested by the respondent prior to the oral proceedings dated 12 July 2005, ie more than four years after the Opposition Division's decision was issued.

Under these circumstances, the Board cannot accept at this stage in the procedure this line of argumentation, introduced for the first time during the oral proceedings, since neither the appellant nor the Board had any reason to doubt that the Opposition Division's findings relating to the prior use were accepted by the respondent.

In conclusion, the subject-matter of claim 1 of the main request is not novel under Article 54 EPC. There is therefore no need to examine the other claims.

3. *Auxiliary request*

Admissibility

This request was filed during the oral proceedings before the Board, ie *a priori* at a late stage in the procedure.

The only explanation given by the respondent for this submission was that it was intended to further distinguish the claimed subject-matter from the prior use.

It however failed to provide any reason for its filing at the oral proceedings whereas the reference to prior use was in the file for more than four years.

Accordingly, as this request cannot be considered as a direct response to any objection made for the first time during the oral proceedings, it is not admitted into the proceedings.

### **Order**

#### **For these reasons it is decided that:**

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:

A. Townend

U. Oswald