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**Datasheet for the decision  
of 21 September 2006**

**Case Number:** T 0251/05 - 3.2.06

**Application Number:** 97942816.6

**Publication Number:** 0929376

**IPC:** B23K 26/06

**Language of the proceedings:** EN

**Title of invention:**

A method for processing a material by means of a laser beam

**Patentee:**

L'AIR LIQUIDE, Société Anonyme à Directoire et Conseil de  
Surveillance pour l'Etude et l'Exploitation des Procédés  
Georges Claude

**Opponent:**

LINDE AKTIENGESELLSCHAFT

**Headword:**

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**Relevant legal provisions:**

EPC Art. 114(2)

**Keyword:**

"Late-filed document - not admitted"

"Appeal introducing a new line of argumentation based on the  
late-filed document - not founded"

**Decisions cited:**

T 0389/95, T 1002/92, T 1042/01

**Catchword:**

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Case Number: T 0251/05 - 3.2.06

**DECISION**  
of the Technical Board of Appeal 3.2.06  
of 21 September 2006

**Appellant:**  
(Opponent)

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**Respondent:**  
(Patent Proprietor)

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**Decision under appeal:**

Interlocutory decision of the Opposition  
Division of the European Patent Office posted  
30 December 2004 concerning maintenance of the  
European patent No. 0929376 in amended form.

**Composition of the Board:**

**Chairman:** P. Alting Van Geusau  
**Members:** G. Pricolo  
K. Garnett

## Summary of Facts and Submissions

- I. The appeal stems from the interlocutory decision of the Opposition Division posted on 30 December 2004 maintaining European patent No. 0 929 376 in amended form in accordance with the patent proprietor's first auxiliary request.

Claim 1 according to this request reads as follows:

"1. A method of processing a material with a first and second surface (8,9) by means of a laser beam (2) delivered by a cutting head (10), which by means of a multilens objective located above the first surface, is focused in a number of focal points ( $F_1, F_2, \dots F_n$ ), which are positioned approximately on a common axis forming an angle with the first surface, and which are spaced apart from one another, used for cutting plates, several focal points being utilized for melting/cutting the plate material, the central portion of the laser beam (2) being focused in the focal point ( $F_2$ ) adjacent the second surface (9), characterized in that the focal point ordinarily being positioned adjacent the second surface (9) during the cutting is caused to be positioned, during the starting procedure of the cutting, on the first surface (8)."

- II. In coming to its decision the Opposition Division considered that starting from the closest prior art known from:

E2: EP-A-706 072;

it would not be obvious for a skilled person, taking into account other available prior art, including:

E1: JP-A-01-143783;

to arrive at the solution to the problem according to claim 1 of the patent in suit of reducing the risk of damaging the optical instruments by metal sprayings during the starting procedure.

III. The appellant (opponent) lodged an appeal against this decision, received at the EPO on 22 February 2005, and simultaneously paid the appeal fee. With the statement setting out the grounds of appeal, received at the EPO on the same day, the appellant filed the additional document

E6: Article "Führung mit System", published in "trennen + fügen 22" by Messer Griesheim GmbH, Frankfurt/M., February 1992.

IV. In an annex to the summons for oral proceedings pursuant to Article 11(1) Rules of Procedure of the boards of appeal the Board expressed the following preliminary opinion:

E6 should count as late-filed since claim 1 under consideration resulted from the combination of granted claims 1 and 5 and thus contained subject-matter for which the opponent could have been expected to substantiate the ground of opposition of lack of inventive step within the 9-months opposition period. E6 did not relate to a method of laser processing in which the laser beam was focussed in a number of focal

points, and included no indication suggesting to position the focal point ordinarily being positioned adjacent the second surface on the first surface during the starting procedure of the cutting. Accordingly, it appeared that document E6 was not *prima facie* relevant. Therefore E6 should be disregarded pursuant to Article 114(2) EPC.

Apart from stating that the formulation of the technical problem by the Opposition Division was not correct, it appeared that the appellant in its grounds of appeal did not further criticize the decision but rather introduced a new line of argumentation in respect of lack of inventive step based on the new evidence E6. If E6 were disregarded, then the appeal appeared to be without substantive merit and should therefore be dismissed.

V. Oral proceedings took place on 21 September 2006.

The appellant requested that the decision under appeal be set aside and that the patent be revoked.

The respondent (patentee) requested that the appeal be dismissed (main request), alternatively that the patent be maintained on the basis of the auxiliary request filed with its letter of 10 July 2006.

VI. The arguments of the appellant can be summarized as follows:

Since E6 was filed in reaction to the amendments made by the patent proprietor in accordance with the first auxiliary request filed during the oral proceedings

before the Opposition Division, it was filed in due time and did not count as late-filed. Furthermore, since there was practically no literature describing the starting procedure in laser cutting and since the starting procedure was not one of the main aspects dealt with by E6, recognising the relevance of E6 had been difficult and retrieving it was therefore time-consuming.

The technical problem underlying the patent in suit could not be seen only in reducing the risk of damaging the optical instruments by metal sprayings during the starting procedure, but also, generally, in improving the starting procedure. In order to solve this problem, starting from the prior art disclosed by E1 or E2, the skilled person would turn to E6, which disclosed, in the cutting of thick plates, to position the focal point initially on the upper surface of the material. Although E6 did not relate to a processing method using a laser beam focused in a number of focal points, the skilled person would implement the teaching of E6 in the method of E1 or E2 by positioning the lowest focal point on the upper surface, as this focal point originated from the central portion of the laser beam where the highest concentration of energy was present. Alternatively, the skilled person would consider concentrating all the focal points, i.e. the whole energy of the laser beam, on the upper surface, a possibility which also fell under the wording of claim 1. Accordingly, E6 was *prima facie* highly relevant, in the sense that its introduction into the proceedings was highly likely to prejudice the maintenance of the European patent.

In the statement of grounds of appeal it was stated that the Opposition Division did not correctly state the technical problem solved by the process of claim 1. Therefore, the whole assessment of inventive step was put in question and the grounds of appeal were sufficiently substantiated even if E6 was not taken into consideration.

VII. The respondent relied essentially on the following submissions:

Since the claimed subject-matter in accordance with the main request was already present in the claims of the patent as granted, the filing of document E6 could not be regarded as a reaction to the amendments made. Accordingly, E6 should count as late-filed.

The introduction of E6 did not constitute a manifestly unanswerable challenge to the validity of the opposed patent. E6 did not relate to a method of laser processing of the kind in which a multilens objective was used and it was not concerned with the problem underlying the patent in suit, namely, to reduce the risk of damaging the optical instruments. In fact, E6 was aimed at reducing the time needed for the starting procedure. Therefore, E6 was not *prima facie* relevant and should be disregarded according to Article 114(2) EPC.

If E6 were disregarded, then the appeal grounds were deprived of their entire evidential basis and, as a consequence, the appeal should be dismissed.

## Reasons for the Decision

1. The appeal is admissible.
  
2. *The late filing of E6*

Claim 1 in accordance with the first auxiliary request allowed by the Opposition Division results from the combination of granted claims 1 and 5. It thus relates to subject-matter for which the opponent could have been expected to substantiate the ground of opposition of lack of inventive step within the nine months opposition period referred to in Article 99(1) EPC. Accordingly, the filing of E6 cannot be regarded as having been made in response to amendments made by the patent proprietor.

Nor can the difficulties referred to by the appellant in searching for literature relating to the starting procedure in laser cutting and in retrieving E6 justify the filing of E6 after the nine-months opposition period. This period is generally sufficient to carry out significant documentary searches. Furthermore, the first auxiliary request allowed by the Opposition Division was introduced at an early stage of the opposition proceedings, having been received at the EPO on 17 February 2003, i.e. several months in advance of the oral proceedings held on 9 December 2004 at the end of which the Opposition Division pronounced the decision.

Therefore, there are no reasons (see in this respect for instance decision T 389/95, point 2.2 of the reasons) to consider that E6 was filed in due time in



the sense of Article 114(2) EPC. As a consequence E6 counts as late-filed.

3. *Admissibility of E6*

3.1 It is within the discretion of the Board under Article 114(1) EPC to admit and consider a late-filed document in the proceedings in view of its relevance. As to the degree of relevance required for such a document to be admitted to the proceedings, in accordance with the established case law of the boards of appeal such material should be *prima facie* highly relevant in the sense that it can reasonably be expected to change the eventual result and is thus highly likely to prejudice the maintenance of the European patent (see e.g. T 1002/92; OJ EPO 1995, 605; Reasons, point 3.4).

3.2 In its submissions concerning the relevance of E6, the appellant referred to the passage on page 22 (paragraph bridging the left and central columns), which is the only passage of E6 referring to the starting procedure. In this passage it is disclosed that when thick plates are cut, an initial piercing step ("*Anschnitt in die Materialtafel*"; "*Lochstechen*") is carried out, during which the position of the focal point is displaced such that the energy is concentrated on the upper side of the plate, whereby the duration of the starting procedure is reduced.

In the laser processing method of E6 the laser beam is, conventionally, focused on a single spot. Conversely, in the method according to the preamble of claim 1 of the patent in suit, which is known from either E1 or

E2, a number of focal points is provided. Assuming that the skilled person would consider applying the teaching of E6 to the method of either E1 or E2, and thus concentrate the energy on the upper side of the plate during the initial piercing step, still he would not find any indication in the prior art suggesting the specific selection of the focal point ordinarily positioned adjacent the second (or lower) surface of the material for the focal point which should be positioned, during the starting procedure of the cutting, on the first (or upper) surface. In fact, although E6 discloses where the single laser spot is positioned during the starting procedure, it is silent about where it is positioned during the cutting process.

- 3.3 As regards the appellant's submission that the skilled person would recognise that the lowest focal point should be positioned on the upper surface, as it is the focus originating from the central portion of the laser beam and thus having the highest concentration of energy, the Board notes that, in the absence of a corresponding disclosure in E1 or E2 of the central portion of the laser beam having the highest concentration of laser energy, this submission must be regarded as purely speculative. This also applies to the appellant's further submission that the skilled person would consider concentrating all the focal points on the upper surface of the material, in view of the absence of prior art in which the normally spaced apart foci of a multilens objective are made to converge on a single focus.

3.4 It follows from the above that document E6 is not *prima facie* relevant in the sense that its introduction into the proceedings is highly likely to prejudice the maintenance of the European patent. Accordingly, E6 is disregarded pursuant to Article 114(2) EPC.

4. *Substantive merit of the appeal*

4.1 The appellant did not dispute that in the statement of grounds of appeal it challenged the decision of the Opposition Division only insofar as the formulation of the technical problem was concerned, and that it introduced a new line of argument in respect of lack of inventive step based on the new evidence E6: starting from a method according to the preamble of claim 1 of the patent in suit, as disclosed by E1 or E2, the skilled person would find in E6 an indication to solve the technical problem in accordance with the claimed solution.

4.2 The consequence of disregarding E6 is that this new line of argument is not to be taken into consideration. Accordingly, what remains in substance of the grounds of appeal is the criticism of the formulation of the technical problem when starting from the prior art represented by E1 or E2.

4.3 It is a fact that the formulation of the technical problem is an essential step in the "problem-solution" approach to the assessment of inventive step. However, the mere fact that the problem is not correctly formulated is not *per se* sufficient to undermine the conclusion that the claimed subject-matter involves an inventive step. Even if the technical problem were to

be formulated in a broader manner as suggested by the appellant, there is no indication, in the portion of the statement of grounds of appeal not directly referring to E6, which enable the reader to gather any idea about the appellant's reasons for saying why the skilled person faced with such a technical problem would arrive at the claimed subject-matter in an obvious manner.

- 4.4 The consequence of the above (see decisions T 389/95 and T 1042/01) is that the appeal has lost its entire factual and evidential basis and has therefore no foundation.

## **Order**

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

The appeal is dismissed

The Registrar:

The Chairman:

M. Patin

P. Alting van Geusau