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**Datasheet for the decision
of 30 November 2012**

Case Number: T 0548/11 - 3.2.05

Application Number: 02100306.6

Publication Number: 1245407

IPC: B42D15/10

Language of the proceedings: EN

Title of invention:

Data sheet

Patentee:

Setec Oy

Opponent:

Bundesdruckerei GmbH

Headword:

Relevant legal provisions:

EPC 1973 Art. 54(2), 56, 82

EPC Art. 123(2)

RPBA Art. 12(4), Art. 13(1), Art. 13(3)

Keyword:

Novelty (main request and auxiliary requests 1 and 2 - no,
auxiliary request 3 - yes)

Admission of late filed request (auxiliary request 3 - yes)

Added subject-matter (auxiliary request 3 - no)

Inventive step (auxiliary request 3 - yes)

Decisions cited:

G 1/91

Catchword:



**Beschwerdekammern
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Chambres de recours**

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Case Number: T 0548/11 - 3.2.05

D E C I S I O N
of the Technical Board of Appeal 3.2.05
of 30 November 2012

Appellant:
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Decision under appeal:

**Decision of the Opposition Division of the
European Patent Office posted 10 January 2011
revoking European patent No. 1245407 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chairman: M. Poock
Members: P. Lanz
G. Weiss

Summary of Facts and Submissions

- I. The appeal by the patentee is against the decision of the opposition division revoking the contested patent EP-B-1 245 407.

- II. During the opposition proceedings, the opponent raised the grounds for opposition according to Articles 100(a) (lack of novelty and lack of inventive step) and 100(b) EPC 1973.

With respect to the patentee's main request, the opposition division held that independent claim 1 lacked novelty.

Regarding the first auxiliary request, the opposition division decided that the amendments carried out during the opposition proceedings rendered independent claim 1 unclear, contrary to the provisions of Article 84 EPC 1973.

As regards the second auxiliary request, the opposition division concluded that the subject-matter of claim 1 extended beyond the content of the patent application as filed, thereby violating the requirements of Article 123(2) EPC.

In view of the above, the opposition division decided to revoke the contested patent.

- III. Oral proceedings were held before the board of appeal on 30 November 2012.

- IV. The appellant (patentee) requested that the decision under appeal be set aside and that the patent be granted on the basis of claims 1 to 4 (main request)

filed with letter dated 27 June 2007, or in the alternative on the basis of claims 1 to 4 (auxiliary requests 1 or 2) filed as second and third auxiliary requests with letter dated 11 November 2010 or on the basis of claims 1 to 4 (auxiliary request 3) filed with letter dated 31 October 2012.

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

V. The documents referred to in the appeal proceedings included the following:

D1: US-A-6 135 503;

D5: US-A-4 032 691;

D6: WO-A-99/54148;

D8: US-A-5 618 630;

D13: Excerpt from Wikipedia on polyethylene.

VI. Independent claim 1 of the main request reads as follows:

"1. A layer-structured and flexible data sheet (2) of a passport (1) comprising:

a laser inscription layer (4) made of polycarbonate, on which at least some of the data of the data sheet can be printed utilizing laser inscription technique, and a tail part for attaching said data sheet (2) to the passport at a fold of the passport,

characterized in that

a flexible back layer (5) that endures bending and extends to the tail part of the data sheet (2) is

attached to the laser inscription layer (4) by means of a laminate layer (6), and the laser inscription layer (4) does not extend to the tail part of the data sheet."

Independent claim 1 according to auxiliary request 1 differs from claim 1 of the main request in that the following feature was amended:

"a flexible back layer (5) of a material that is flexible, wear-resistant and ~~that~~ endures bending and extends to the tail part of the data sheet (2) is attached to the laser inscription layer (4) of a material whose bending endurance is poor by means of a laminate layer (6)"

Independent claim 1 according to auxiliary request 2 differs from claim 1 of the main request in that the following feature was added:

"the tail part has a layer structure in which the material of the flexible back layer (5) is attached to the laminate layer (6)"

Independent claim 1 according to auxiliary request 3 is distinguished from claim 1 of the main request in that the following feature was amended:

"a flexible back layer (5) that endures bending, and extends to the tail part of the data sheet (2) and is made of HDPE is attached to the laser inscription layer (4) by means of a laminate layer (6)"

Auxiliary request 3 comprises a further independent claim 4, which differs from claim 1 of the main request by the following amendment:

"a flexible back layer (5) that endures bending, and extends to the tail part of the data sheet (2) is attached to the laser inscription layer (4) by means of

a laminate layer (6) consisting of filled foamed polyethylene ..."

VII. The appellant's arguments, in writing and during the oral proceedings, can be summarised as follows:

The subject-matter of claim 1 of the main request was novel since the finished arrangement of document D1 did not comprise a distinctive laminate layer between the flexible back layer and the laser inscription layer. Although the flexible back layer in document D1 originally consisted of two separate layers 10 and 11, preferably of the same material, they coalesced into one single layer 7 during the manufacturing process. Moreover, the resulting layer 7 needed to have a certain thickness for providing the relief structure 13. Therefore, the resulting data sheet had a single flexible back layer 7 and a laser inscription layer 9, but no laminate layer between them, thereby rendering the subject-matter claimed novel over the disclosure of document D1.

Independent claim 1 according to auxiliary request 1 was limited further by specifying that the flexible back layer was of a flexible and wear-resistant material, while polycarbonate, the material of the laser inscription layer, had a poor bending endurance. In contrast, the corresponding layers 10 and 11 of prior art document D1 were of the same material (see document D1, column 2, lines 29 to 32).

Turning to auxiliary request 2, independent claim 1 contained the additional feature of the tail part having a layer structure in which the material of the flexible back layer was attached to the laminate layer, which was the opposite of the teaching of document D1,

column 1, lines 46 to 52, thereby further distinguishing the claim from the prior art.

Auxiliary request 3 was filed in reaction to the provisional opinion of the board. Since the additional features of the claims were taken from dependent claims present in all previous requests filed during opposition and appeal proceedings it should be admitted into the proceedings. The requirements of Article 123(2) EPC were met, since the basis for the amendments could be found in paragraph [0013] of the description and the claims as originally filed. Moreover, the subject-matter of claims 1 and 4 of auxiliary request 3 was clearly novel since document D1 did not disclose HDPE as the material of the flexible back layer or filled foamed polyethylene as the laminating layer. Furthermore, the claimed material combinations on the basis of (filled foamed) polyethylene and polycarbonate were neither disclosed in any prior art document on file, nor were they obvious to a person skilled in the art being aware of the incompatibility of the materials in question and the reliable bonding of the layers required for security documents. Consequently, the subject-matter of independent claims 1 and 4 was based on an inventive step.

VIII. The respondent's arguments, in writing and during the oral proceedings, were essentially as follows:

The subject-matter of claim 1 of the main request was not novel over document D1 since the foils 10 and 11 could still be identified as individual sub-layers of layer 7 even after having coalesced into a unit at their boundary surface. The sub-layers 10 and 11 of document D1 had different properties due to the different content of additives. Moreover, the sub-

layers did not stick together in the tail area. Hence, they could be recognised as distinctive layers. Consequently, the layer structure of the data sheet of document D1 could be seen as comprising a laminate layer between a flexible back layer and a laser inscription layer, thereby fully anticipating the subject-matter of claim 1 of the main request.

Claim 1 according to auxiliary request 1 contained the additional feature of the flexible back layer being of a flexible and wear-resistant material and that the polycarbonate of the laser inscription layer had a poor bending endurance. It was important to note that the layers were specified independently of each other, the claim did thus not define the mechanical properties of the back layer relative to those of polycarbonate, which was used for the laser inscription layer. In prior art document D1 polycarbonate was already disclosed as one of the preferred materials, both for the laser inscription layer and for the back layer. The subject-matter of claim 1 of auxiliary request 1 was not novel over this teaching, since polycarbonate foils, depending on their thickness, always had some degree of flexibility, wear resistance and bending endurance. Document D1 (see column 1, lines 54 to 59) also mentioned that the back layer had to be flexible.

Furthermore, the subject-matter of claim 1 of auxiliary request 2 was not novel since document D1 disclosed in column 2, lines 34 to 40 the possibility of the cover foils being connected in the area of the seam.

Late-filed auxiliary request 3 should not be admitted into the proceedings since the amended claims were based on original claims 1, 3 and 4 as well as on paragraphs [0013] to [0016] of the description. Thus,

the present combination of features went beyond what was claimed, both at filing and at the grant stage, making an additional search necessary, for which, however, the request was filed too late. Moreover, the description of the application as filed disclosed in paragraphs [0012] to [0016] the tail part design together with the specific arrangement of a laser inscription layer made of polycarbonate, a laminating layer of filled foamed polyethylene and a flexible back layer of high density polyethylene. The amended independent claims generalised this teaching by claiming the tail part design in combination with the layer arrangement, for which, however, the materials of only two of the three layers were specified in the independent claims, contrary to the provisions of Article 123(2) EPC. Moreover, independent claims 1 and 4 were not in line with the requirement of unity of invention. Finally, the independent claims were novel but not based on an inventive step when starting from document D1. The only differing feature of independent claim 1 was the flexible layer being made of HDPE, a material generally known for its flexibility and wear resistance, as shown in document D13 and suggested for use in security documents in prior art documents D6 (see middle of page 5) or D8 (see column 3, lines 42 to 46). The distinguishing element of independent claim 4 was the selection of filled foamed polyethylene for the laminating layer, which was an arbitrary choice rendered obvious by the teaching of document D5, which disclosed a laminating layer made of porous material.

Reasons for the Decision

1. *Main request*

The assessment of the novelty of the subject-matter of claim 1 of the main request hinges on whether or not the finished arrangement of document D1 comprises a distinctive laminate layer between the flexible back layer and the laser inscription layer.

In the board's judgement, the passport disclosed in prior art document D1 comprises a data sheet shown in Figure 2 as having a laser inscription layer 9 and a cover layer 7 consisting of sub-layers 10 and 11 as disclosed in Figure 3. The finished data sheet layers 10 and 11 can still be identified as individual sub-layers of cover layer 7, even after having coalesced into a unit at their boundary surface, since layers 10 and 11 are still present as individual foils in the tail area of the data sheet. Additionally, document D1 suggests in column 3, lines 12 and 13 giving different physical properties to layers 10 and 11 by using different additive contents. This measure aims at having different physical properties in different cross-sectional areas of the finished cover layer 7 in view of the laser tilt image to be achieved, thereby implying the presence of distinctive sub-layers.

Finally, in the assessment of the teaching of document D1 it has to be borne in mind that layer 11 serves, *inter alia*, as an interface which securely bonds or laminates cover layer 7 to the laser inscription layer 9. Given this function it can be designated as a laminating layer.

In summary, the layer structure of the data sheet of document D1 clearly and unambiguously comprises a laminate layer 11 between a flexible back layer 10 and a laser inscription layer 9. The subject-matter of independent claim 1 of the main request is therefore not new (Article 54(1) and (2) EPC 1973).

2. *Auxiliary request 1*

Compared with the main request, independent claim 1 according to auxiliary request 1 is limited further in that it specifies that the flexible back layer is of a flexible and wear-resistant material and that polycarbonate, the material of the laser inscription layer, has a poor bending endurance.

While the appellant essentially argues that according to claim 1 of auxiliary request 1 the flexible back layer has to be of a more flexible and more wear-resistant material than the laser inscription layer made of polycarbonate, the board's view is that the claim in question does not define the mechanical properties of the back layer relative to those of polycarbonate. On the contrary, the definition of the back layer material is independent and makes no reference to polycarbonate. Moreover, document D1 discloses polycarbonate as one of the preferred materials for both the laser inscription layer and the back layer (see column 2, lines 29 to 32). Consequently, the claimed feature of the laser inscription layer being made of polycarbonate and thus having a poor bending endurance is known from document D1. Moreover, as stated by the respondent, polycarbonate foils have, depending on their thickness, at least some degree of flexibility, wear resistance and bending endurance, albeit to a limited extent. This

is underlined by the fact that document D1 explicitly makes reference to the cover layers as being flexible (see column 1, lines 54 to 59). Therefore, the further feature referring to the flexible back layer as being of a flexible and wear-resistant material is likewise derivable from document D1.

The board thus concludes that document D1 not only fully anticipates the features of claim 1 of the main request but also discloses the additional features of claim 1 of auxiliary request 1. The subject-matter of independent claim 1 of auxiliary request 1 is therefore not new (Article 54(1) and (2) EPC 1973).

3. *Auxiliary request 2*

In auxiliary request 2 the independent claim of the main request is limited further by the introduction of the feature of the tail part having a layer structure in which the material of the flexible back layer is attached to the laminate layer. The appellant points out that this is the opposite of the teaching of document D1, column 1, lines 46 to 52, according to which the foils are still present as single separate sheets in the tail area.

However, document D1 mentions in column 2, lines 34 to 40 the further possibility of some of the cover foils being connected in the area of the seam. Taking that into account, all the features of claim 1 of auxiliary request 2 are disclosed in combination in document D1. Hence, in the board's judgement, the subject-matter of independent claim 1 of auxiliary request 2 is likewise not new (Article 54(1) and (2) EPC 1973).

4. *Auxiliary request 3*

4.1 Admissibility

Auxiliary request 3 was filed about one month before the date of the oral proceedings. The respondent is of the opinion that it should not be admitted into the proceedings since the amended claims were, *inter alia*, based on paragraphs [0013] to [0016] of the original description. The present combination of features thus went beyond what was claimed, both at filing and at the grant stage, making an additional search necessary, for which, however, the request was filed too late.

The board does not agree. Independent claims 1 and 4 according to auxiliary request 3 are respectively based on claims 1, 3 plus 4 and claims 1, 3 plus 5 of the main request filed on 27 June 2007 in reaction to the notice of opposition. The combination of features now claimed as independent claims 1 and 4 was present in all requests filed since then, both in opposition and appeal proceedings. Thus, auxiliary request 3 cannot be considered a fresh case, and in particular did not raise issues which the respondent and the board could not be expected to deal with at the oral proceedings. Under these circumstances auxiliary request 3 is admitted into the proceedings (Articles 12(4), 13(1) and 13(3) of the Rules of Procedure of the Boards of Appeal (RPBA)).

4.2 Added subject-matter

In the board's judgement the subject-matter of independent claims 1 and 4 is essentially based on the combination of paragraph [0013] of the application as filed and originally filed claims 1, 3 plus 4, and

claims 1, 3 plus 5, respectively. Contrary to the respondent's assertion, the general presentation of the tail part design in paragraph [0013] does not form part of the specific embodiment subsequently described in paragraph [0014]. The skilled person would thus read the teaching relating to the tail part in paragraph [0013] as being independent of the specific material combination suggested in the example of paragraph [0014]. Consequently, the subject-matter claimed in auxiliary request 4 consists of a combination of features clearly and unambiguously disclosed in the application as filed, thereby meeting the requirements of Article 123(2) EPC.

4.3 Unity of invention

Regarding the respondent's objection that amended independent claims 1 and 4 were non-unitary and hence not in line with the provisions of Article 82 EPC 1973, the board makes reference to decision G 1/91 (published in OJ EPO 1992, 253), according to which the requirement of unity is legally irrelevant in opposition (appeal) proceedings.

4.4 Inventive step

- 4.4.1 The board is in agreement with both parties that document D1 forms the closest prior art, from which the subject-matter of independent claim 1 differs in that the flexible back layer is made of HDPE, while the subject-matter of independent claim 4 is distinguished in that the laminating layer is made of filled foamed polyethylene.

The problem to be solved by the present invention can be seen in selecting a suitable material for the

flexible back layer or the laminating layer of the data sheet of a passport.

- 4.4.2 The solution according to claim 1 proposing HDPE as the material for the flexible back layer and polycarbonate for the laser inscription layer is not rendered obvious by either the prior art on file or the common general knowledge:

The skilled person, when looking for a suitable material for the flexible back layer to combine with the known laser inscription layer made of polycarbonate, would first consult document D1, the closest prior art and only document on file relating to passport data sheets. By suggesting polycarbonate, glycol modified polyethyleneterephthalate (PETG) or high deflection temperature glycol modified polyethyleneterephthalate (HDT-PETG) both for the flexible cover foils and for the laser inscription layer (see column 2, lines 29 to 32), that document teaches away from the claimed invention. The skilled person could further consider documents D6 or D8, which mention HDPE as a layer material, though not in combination with polycarbonate and in the different context of banknotes. Hence, documents D6 or D8 neither provide an indication to combine layers of polycarbonate and HDPE, nor do they suggest the use of HDPE in a data sheet of a passport. The prior art on file thus contains no motivation for the skilled person to select HDPE as the material for the flexible back layer. Furthermore, due the incompatible character of polycarbonate and HDPE on the one hand, and the need for a reliable bonding between the layers required for security documents on the other hand, the claimed choice is not obvious in view of the common general knowledge either. This is because it is not a

straightforward selection but rather goes against the usual approach of combining layers of the same or similar polymeric nature, as exemplified by the material combinations suggested in documents D1, D6 or D8. The subject-matter of claim 1 according to auxiliary request 3 is thus based on an inventive step (Article 56 EPC 1973).

- 4.4.3 The above reasoning applies a *fortiori* to the subject-matter of independent claim 4 of auxiliary request 3 since the available prior art does not mention filled foamed polyethylene at all. The respondent's general reference to increasing the sensitivity for laser inscription by providing a porous material between a laser recording layer and a support layer, as suggested in document D5, column 2, lines 60 to 66 does not come close to the claimed selection of filled foamed polyethylene for securely bonding the layers of a passport data sheet. Hence, the subject-matter of claim 4 according to auxiliary request 3 is likewise based on an inventive step within the meaning of Article 56 EPC 1973.

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 with the order to maintain the patent as amended in the following version:
 - claims 1 to 4 filed with letter of 31 October 2012 as third auxiliary request,
 - description: page 2 submitted during the oral proceedings and page 3 as granted,
 - figures 1 and 2 as granted.

The Registrar:

The Chairman:



D. Meyfarth

M. Poock

Decision electronically authenticated