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**Datasheet for the decision
of 11 August 2015**

Case Number: T 0393/14 - 3.3.09

Application Number: 06256137.8

Publication Number: 1800860

IPC: B32B38/14, B41M7/00

Language of the proceedings: EN

Title of invention:

Textured structure and method of making a textured structure

Patent Proprietor:

The Boeing Company

Opponent:

AIRBUS SAS/AIRBUS OPERATIONS/AIRBUS OPERATIONS Ltd
AIRBUS OPERATIONS GmbH/AIRBUS OPERATIONS S.L.

Headword:

Relevant legal provisions:

RPBA Art. 13(1)
EPC Art. 123(2), 84, 56
EPC R. 141(1)

Keyword:

Late-filed documents - admitted (no)
Amendments - added subject-matter (no)
Claims - clarity (yes)
Inventive step (yes)

Decisions cited:

Catchword:



**Beschwerdekammern
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Chambres de recours**

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Case Number: T 0393/14 - 3.3.09

**D E C I S I O N
of Technical Board of Appeal 3.3.09
of 11 August 2015**

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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted on
16 December 2013 maintaining European patent
No.1800860 in amended form.

Composition of the Board:

Chairman W. Sieber
Members: J. Jardón Álvarez
F. Blumer

Summary of Facts and Submissions

- I. This decision concerns the appeal filed by the joint opponents against the interlocutory decision of the opposition division that European patent No. 1 800 860 as amended meets the requirements of the EPC.
- II. The opponents had requested revocation of the patent in its entirety on the grounds of Article 100(a) EPC (lack of novelty and inventive step).

The documents cited during the opposition proceedings included:

O1: US 3 905 849 A;

O2: US 5 942 330 A;

O3: JP 53-94571 A; and

O8: DE 690 15 489 T2.

- III. The set of claims maintained by the opposition division filed as "Replacement 3rd Auxiliary Request" on 26 September 2013 during the oral proceedings included six claims. Claim 1 read as follows:

"1. A method of forming a laminate (25) having a textured surface and bonding the laminate (25) to an aircraft panel, the laminate (25) consisting of:
a first film (20) having a first major surface;
a texture pattern (22) deposited on the first major surface of the film (20), the texture pattern comprising a material having a first thickness and the material is ink, wherein the ink is deposited by a digital printing process; and

a conformable film (24) applied over the texture pattern (22) and deformed around the textured pattern (22) to form a textured surface comprising raised surface portions and lower surface portions of a major surface of the conformable film (24),
the method comprising:

providing the first film (20) having a first major surface;

depositing the texture pattern (22) on the first major surface of the film (20), the texture pattern comprising a material having a first thickness and the material is ink, wherein the ink is deposited by a digital printing process;

applying the conformable film (24) over the texture pattern (22);

subjecting the conformable film (24) to a temperature and pressure sufficient to cause the conformable film (24) to deform around the textured pattern (22) to form a textured surface comprising raised surface portions and lower surface portions of a major surface of the conformable film (24); and

bonding the laminate (25) to an aircraft panel."

Claims 2 to 6 were dependent claims.

IV. The opposition division's finding on the allowed request can be summarised as follows:

- the amendments introduced into claim 1 were intended to overcome a ground of opposition and were therefore admissible under Rule 80 EPC;
- the claimed subject-matter involved an inventive step starting from O3 as the closest prior art. The subject-matter of claim 1 was distinguished from the teaching of O3 by: (i) an additional step

of bonding the laminate to an aircraft panel, (ii) using an ink as the material to form the texture pattern, (iii) depositing the ink by digital printing, and (iv) subjecting the conformable film to a temperature and pressure sufficient to cause the conformable film to deform. The skilled person would have to consider three changes, which were not necessarily obvious, in regard to the disclosure of O3 in order to arrive at the subject-matter of claim 1 of the "Replacement 3rd Auxiliary Request". This effort was considered as involving an inventive step.

- V. On 17 February 2014 the joint opponents (in the following: the appellants) lodged an appeal and paid the prescribed fee. The statement setting out the grounds of appeal was filed on 15 April 2014, including document E4, an English translation of O3 (in the following the references to O3 refer to this English translation). The appellants requested that the decision under appeal be set aside and that the patent be revoked in its entirety. They further requested that the appeal fee be refunded for at least two substantial procedural violations.
- VI. With its reply dated 29 August 2014, the patent proprietor (in the following: the respondent) disputed the arguments submitted by the appellants and requested that the appeal be dismissed.
- VII. In a communication dated 14 April 2015, the board indicated the points to be discussed during the oral proceedings.
- VIII. The respondent filed with letter dated 10 July 2015 amended claim sets corresponding to auxiliary

requests 1 to 3 and with letter dated 3 August 2015 amended description pages for the 2nd and 3rd auxiliary requests.

IX. On 6 August 2015 the appellants filed a further submission requesting the admission of five further documents, all belonging to the parallel US prosecution proceedings of the patent family of the opposed patent:

E5: Office action of the United States Patent and Trademark Office (USPTO) dated 13 March 2014 (8 pages);

E6: Claims rejected by the USPTO action E5 (3 pages);

O11: US 5 296 340 A;

O12: US 8 801 887 B2 (granted US patent corresponding to the patent in suit); and

O13: US 4 693 926 A.

X. Oral proceedings before the board were held on 11 August 2015. During the oral proceedings, the appellants withdrew their request for reimbursement of the appeal fee. Further, the respondent filed a "new main request" and an adapted description. Claim 1 of this request is identical to claim 1 before the opposition division (see point III above). The only amendment made to the claims maintained by the opposition division was the addition of the word "additionally" after the wording "conformable film (24)" in dependent claim 6.

XI. The arguments of the appellants, insofar as they are relevant for the present decision, may be summarised as follows:

- The subject-matter of claim 1 extended beyond the content of the application as filed because the term "consisting of" was neither explicitly nor implicitly disclosed in the application as filed.
- The subject-matter of claim 1 lacked clarity due to the use of the indefinite article "a" in terms such as "a material", "a first thickness", "a digital printing process", etc. Additionally, claim 1 left it completely open whether a finished, semi-finished or unfinished laminate was bonded to the aircraft panel.
- The documents filed on 6 August 2015 should be admitted into the proceedings because they were *prima facie* highly relevant and in any case well known to the respondent from the proceedings in the United States. Moreover, the respondent had neglected its duty pursuant to Rule 141 EPC and had acted in bad faith.
- The claimed subject-matter lacked inventive step starting from O3 and/or O1 as the closest prior-art document. The features which distinguished the claimed method from the closest prior art were obvious to the skilled person. The use of digital printing for the formation of the texture pattern or the bonding of the laminate to an aircraft panel were obvious alternatives to the skilled person wishing to provide a further method to prepare a textured structure (one-way street).

XII. The relevant arguments of the respondent may be summarised as follows:

- The term "consisting of" was supported by the application as filed. Paragraph [0021] indicated that the presence of film (27) was merely optional.
- The subject-matter of claim 1 of the new main request complied with Article 84 EPC because it was clear from the context of the claim that the features recited in the second part of the claim corresponded to the same features in the first part of the claim. Additionally, it was irrelevant whether the laminate was called "finished", "semi-finished" or "unfinished"; the claim required only that a laminate was formed, had a textured surface, and then bonded to an aircraft panel.
- The documents filed by the appellants shortly before the oral proceedings were no more relevant than the documents already in the proceedings and should not be admitted at this late stage. In fact, a family member of O11, namely O8, had already been cited in the opposition proceedings and not used when filing the appeal. As regards the allegation of bad faith, Rule 141(1) EPC had entered into force after the patent had been granted. Therefore any argument in this context was irrelevant.
- O2 represented the closest prior art because it was the only document which considered the application of textured surfaces to aircraft panels. The objective problem to be solved by the patent over O2 was to furnish a method of

providing a textured surface to an aircraft panel without the need to use texturing mediums such as steel rolls or plates. The solution according to claim 1, wherein the textured pattern was formed by using digital printing, was not obvious from O2 itself or the other documents cited, which were not in the field of aircraft panels.

- Even starting from O3 or O1 as closest prior art, the claimed subject-matter involved an inventive step. To arrive at the claimed method, at least three selections were necessary. The skilled person had no incentive to make this multiple selection.

XIII. The appellants requested that the decision under appeal be set aside and that the patent be revoked in its entirety.

The respondent requested that the decision under appeal be set aside and that the patent be maintained on the basis of the new main request (claims 1 to 6) as filed during the oral proceedings before the board on 11 August 2015.

Reasons for the Decision

1. *Admissibility of new evidence*

- 1.1 With letter of 6 August 2015, less than a week before the oral proceedings, the appellants filed five new documents (E5, E6, O11, O12 and O13) and requested that they be admitted into the appeal proceedings.

1.2 E5 is an Office Action of the USPTO dated 13 March 2014 rejecting claims 42 to 51 (filed as E6) before the USPTO as being unpatentable over O11 in view of O1 and O13. Rejected claim 42 basically corresponds to claim 1 of the new main request.

1.3 As justification for the late filing, the appellants stated that the documents only came to their attention on 3 August 2015 and argued that:

- the documents were known to the respondent, who had acted in bad faith in neglecting his duty to file them with the EPO (cf. Rule 141(1) EPC); and
- the documents should be admitted due to their *prima facie* high relevance.

1.4 Concerning the argument based on Rule 141(1) EPC, this rule entered into force on 1 January 2011 and applies to all European and international applications filed on or after 1 January 2011 (OJ EPO; 2009, 585). Since the present application was filed on 30 November 2006, the rule does not apply in the present case and any argument based thereon is irrelevant.

1.5 Concerning the *prima facie* relevance of the documents, the board agrees with the respondent that these documents are no more relevant than the other documents already in the proceedings.

1.5.1 O11, the key document of the appellants' late submissions, is directed to a process for the preparation of a decorative sheet having a three-dimensional beautiful design (see column 1, lines 27 to 29). In the process of O11 a substrate sheet with a pattern-printed layer is embedded in one or more of the

substrate sheets (see claim 1, see also figures 2 to 4 none of them having a textured surface). Only in the embodiment of figure 5 (see also column 10, lines 34 to 37) is a textured surface formed by combining the embedding of the pattern-printed layer with printing of a picture pattern or embossing. However, the preparation of laminates having a textured surface using a printing step or an embossing step is also disclosed in the documents already in the proceedings.

Consequently, O11 does not add anything new to the teaching of the documents in the proceedings. Moreover, as pointed out by the respondent, a family member of O11, namely O8, had been already filed with the notice of opposition but was not relied upon by the appellants when filing the notice of appeal.

1.5.2 E5 does not include any further information that could lead to a different evaluation of the teaching of O11. O13 was used only in combination with O11 and therefore stands and falls with it. Lastly, E6 and O12 were not used by the appellants to attack the patent.

1.6 In view of the above, the board exercising its discretion under Article 13(1) of the Rules of Procedure of the Boards of Appeal decided not to admit these documents into the appeal proceedings.

NEW MAIN REQUEST

2. *Amendments (Article 123(2) EPC)*

2.1 Claim 1 of the new main request results from the combination of granted claims 12, 16 and 18. It has been further amended to specify the laminate (25) as

"consisting of" a first film (20); a texture pattern (22); and a conformable film (24).

2.2 The appellants contested the term "consisting of" as being neither explicitly nor implicitly disclosed in the application as filed. In their view the description as filed always required an additional film (27) when the laminate was bonded to the aircraft panel (see figure 2C and paragraph [0030]).

2.3 The board disagrees. There is indeed support in the application as filed for a laminate "consisting of" the features specified in claim 1. Paragraph [0021] discloses that "FIG. 2B shows one embodiment of a laminate 25, comprising a conformable film 24 formed on textured pattern 22 and film 20, as well as one or more **optional** films 27" (emphasis by the board).

2.4 The sentence of paragraph [0021] quoted above teaches that the film/films (27) is/are optional. By implication this is a clear and unambiguous disclosure of a laminate (25) consisting of films (20), a texture pattern (22) and a conformable film (24). Figure 2C shows the laminate of figure 2B bonded to the aircraft panel. Film (27) remains optional when the laminate is bonded to the aircraft panel.

2.5 Hence the subject-matter of claim 1 fulfils the requirements of Article 123(2) EPC.

3. *Clarity (Article 84 EPC)*

3.1 The appellant contested the clarity of claim 1 because:

- the indefinite article "a" used in terms such as "a material", "a first thickness", etc. in the

second part of the claim left it open whether the corresponding features in the first part of the claim were meant, and

- claim 1 left it completely open whether a finished, semi-finished or unfinished laminate was bonded to the aircraft panel.

3.2 Concerning the use of the indefinite article, it is at least debatable whether or not its use in the second part of the claim is linguistically correct. However, this "incorrect" use does not make the claim unclear. It is clear from the context of the claim that the features objected to in the second part of the claim correspond to the same features recited in the first part of the claim. This appears to be the only technically meaningful interpretation of claim 1. Otherwise the process to form the laminate (25) would not result in the laminate therein defined. In the board's view there is no room for a different interpretation of the features objected to.

3.3 Concerning the second objection, it is clear from claim 1 that the laminate (25) must have a textured structure when bonded to the aircraft panel because this is required by the process steps therein defined (cf. "depositing the texture pattern (22) on the first major surface of the film ... subjecting the conformable film (24) to a temperature and pressure sufficient to cause the conformable film (24) to deform around the textured pattern").

The fact that additional deformation may occur during the bonding of the laminate to the aircraft panel is not in contradiction with the wording of claim 1.

- 3.4 During the discussion of this clarity issue in the oral proceedings it became apparent that the objection of the appellants resulted from a poor adaptation of the description and dependent claim 6 to the allowed claim 1.

The respondent proposed to adapt paragraphs [0026] and [0030] of the description and claim 6, as allowed by the opposition division, to the wording of claim 1. The appellants then agreed that this objection had been settled by the proposed amendments which were duly carried out.

4. *Inventive step*

- 4.1 The patent is directed to a method of forming a decorative laminate having a textured surface, which laminate is then bonded to an aircraft panel for ornamentation. The invention aims to provide an alternative method to known prior-art processes employing texturing mediums, such as steel rolls or plates, to provide texture (see paragraphs [0002] - [0004] of the specification).

4.2 Closest prior art

- 4.2.1 The appellants relied on O3 and/or O1 as closest prior-art documents. The respondent, on the other hand, regarded the disclosure of O2 as representing the closest prior art.

- 4.2.2 Of the documents cited by the parties, only O2 considers the issue of applying textured surfaces to aircraft panels:

- Thus, O2 relates to curing adhesive film compositions useful to produce structural materials, particularly for making laminated panels, e.g. panels useful for aircraft interiors (see column 1, lines 9 to 12).

- O1 relates to a method of manufacture of sheets of resinous materials having a permanent relief and being particularly well suited for use as floor or wall covering (see column 1, lines 5 to 14). There is no mention in O1 of providing ornamentation for the panels of aircraft.

- O3 describes a method for producing a decorative board with relief surface comprising inserting a melamine resin-impregnated, pattern-forming interlay paper, wherein cut-outs have been provided in portions corresponding to indented portions of a relief pattern to be applied, between a phenolic resin-impregnated core layer and a melamine resin-impregnated surface layer, and hot pressing the laminate (see claim). There is no reference in O3 to a possible use of the laminates to provide ornamentation for the panels of aircraft.

4.2.3 It follows that in the board's view the appellants' choice of O1 or O3 as the starting point for the assessment of inventive step is flawed, because these documents do not address the objectives of the claimed invention relating to aircraft panels.

4.3 Problem to be solved and its solution

4.3.1 According to the respondent, the technical problem to be solved by the patent in suit in view of the closest

prior art O2 is the provision of an alternative method of providing a textured surface to an aircraft panel without the need to use texturing mediums such as steel rolls or plates.

4.3.2 This problem is solved by the method of claim 1, wherein the textured pattern is provided by using ink deposited on the film by a digital printing process, and then applying a conformable film and subjecting it to a temperature and pressure sufficient to deform it around the textured pattern. The ink thus becomes part of the textured surface and there is no need to use other textured mediums such as steel rolls, textured steel plates, or pattern blanks.

4.4 Obviousness

4.4.1 It remains to be decided whether, in view of the available prior art, it would have been obvious for the skilled person to solve the technical problem, as defined above by the means claimed.

4.4.2 O2 itself does not give any hint to the claimed solution. On the contrary, the key teaching of O2 is to use an embossing press (see figure, embossing roll (28)).

4.4.3 O1 and O3 also give no hint to the claimed method. First of all the skilled person would not look at these documents, since they do not relate to aircraft panels. Aircraft panels are specialised articles, and their manufacture requires a number of considerations such as weight, flexibility and fire resistance. Accordingly, the skilled person would not look at O1 or O3, since there would be no guarantee that the methods described therein would be suitable for forming a textured

surface on an aircraft panel. Moreover, even if the skilled person did look at these documents, he would not arrive at the claimed method as discussed in detail below (see point 5).

4.4.4 Thus, O2 neither alone nor in combination with O1 and/or O3 provides a pointer or incentive to the claimed method. The board concludes that, starting from O2 as the closest prior art, it would not have been obvious to a person skilled in the art to arrive at the claimed method.

4.4.5 For these reasons, the subject-matter of claim 1 involves an inventive step.

5. *The appellants' objections on inventive step*

5.1 The appellants did not contest the finding that the claimed subject-matter involves an inventive step when starting from O2. However, they argued that O2 did not qualify as closest prior art and that the claimed subject-matter lacked inventive step starting from either O3 or O1 as closest prior art.

5.2 The reasoning behind this argument was that both O1 and O3 disclose the preparation of laminates having a textured surface which are to be laminated to a support medium. The use of aircraft panels as support media would be obvious for the skilled person, who would then start from O3 or O1 as closest prior art. In their view, when starting from O3 or O1 as closest prior art the objective technical problem underlying the patent would be merely the provision of an alternative method of forming a laminate having a textured surface.

5.3 The board disagrees for the reasons already given in point 4.2 above, but notes that, even starting from O1 or O3 as closest prior art, the skilled person faced with the problem of providing an alternative method of forming a laminate having a textured surface would not arrive in an obvious manner at the claimed method for the following reasons:

5.4 O3 as closest prior art

5.4.1 In O3 the texture pattern is a melanine-impregnated pattern-forming interlay paper, and the relief is provided by punching holes in the interlayer (see page 2, fifth full paragraph and figure 1).

5.4.2 In order to arrive at a method according to claim 1, the skilled person would have to: (i) appreciate that the texture pattern could be obtained by selective application of a texture-forming material (rather than by selective removal of material from the interlayer); (ii) appreciate that such a texture-forming material could be ink; and (iii) appreciate that such ink could be applied using a digital printing process.

5.4.3 There is no hint for the skilled person to modify the method of O3 in this way. In fact, modification (i) constitutes the completely opposite approach to that of O3 and the skilled person would have no motivation to leave out the essential feature of the method of O3.

5.4.4 Moreover, the skilled person would not combine the teaching of O3 with that of O1 using a different approach for the formation of the texture pattern, and even then would not arrive at the claimed method because O1 does not disclose the use of digital printing to provide the texture pattern.

5.5 O1 as closest prior art

5.5.1 O1 discloses a method in which ink is applied to a conformable film, with plastisol paste then being applied to the ink layer. In the method of O1, the pattern is applied to the reverse surface of the conformable transparent synthetic sheet. Thereafter, a discontinuous intermediate layer of plastisol is applied over the decoration to provide relief at selected places. Finally, the transparent sheet with the decoration and discontinuous intermediate layer on the reverse surface is laminated to a support layer with the reverse surface of the transparent sheet in contact with the support (see figures 2a-f; see also column 3, lines 32 to 42).

5.5.2 In contrast thereto in the method of claim 1 the texture pattern is applied to the first film and, thereafter, a conformable film is applied over the texture pattern. The argument of the appellants that the skilled person would see no difference between both alternatives is made with knowledge of the invention. But even in this case the skilled person would not arrive at a laminate as claimed. He would still have to omit the decorative coating layer (86) and the second coating layer (90), and use digital printing for the texture pattern.

5.6 It follows from the above that the arguments of the appellants based on O1 and O3 as closest prior art are made *a posteriori*, in the knowledge of the invention.

5.7 For these reasons, the subject-matter of claim 1 and, by the same token, that of dependent claims 2 to 6 involves an inventive step.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division with the order to maintain the patent on the basis of the following documents:
 - claims 1 to 6, filed as new main request during oral proceedings before the board on 11 August 2015;
 - description pages 2 to 5 as filed during those oral proceedings; and
 - figures 1A, 1B, 2A, 2B, 2C, 3A and 3B of the patent specification.

The Registrar:

The Chairman:



M. Cañueto Carbajo

W. Sieber

Decision electronically authenticated