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**Datasheet for the decision
of 6 October 2015**

Case Number: T 2415/13 - 3.3.09

Application Number: 07733626.1

Publication Number: 2013013

IPC: B32B17/10, C03C27/12, G02F1/17,
B62D25/06

Language of the proceedings: EN

Title of invention:
GLAZING

Patent Proprietor:
Pilkington Group Limited
Pilkington Automotive Limited

Opponents:
RESEARCH FRONTIERS INCORPORATED
AGC Glass Europe

Headword:

Relevant legal provisions:
EPC Art. 114, 100(c)
RPBA Art. 13(1)

Keyword:

Reversal of decision of the opposition division to admit claim request (no)
Grounds for opposition - added subject-matter (yes)
Late-filed auxiliary requests - admitted (no)

Decisions cited:

G 0007/93, G 0002/10

Catchword:



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Case Number: T 2415/13 - 3.3.09

D E C I S I O N
of Technical Board of Appeal 3.3.09
of 6 October 2015

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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted on
29 October 2013 concerning maintenance of the
European Patent No. 2013013 in amended form.

Composition of the Board:

Chairman W. Sieber
Members: M. O. Müller
E. Kossonakou

Summary of Facts and Submissions

- I. This decision concerns the appeal filed by the opponents Research Frontiers Incorporated (opponent 1) and AGC Europe (opponent 2) against the decision of the opposition division that European patent No. 2 013 013 as amended met the requirements of the EPC.
- II. The opponents had requested revocation of the patent in its entirety on the grounds under Article 100(a) EPC (lack of novelty and inventive step), Article 100(b) EPC (later withdrawn) and Article 100(c) EPC.
- III. The opposition division's decision was based on a main request (claims as granted) and a first auxiliary request filed at the oral proceedings before the opposition division.

Claim 1 of the main request read as follows:

"1. A laminated glazing comprising first and second plies of glass having an interlayer structure laminated there-between, the interlayer structure comprising a first sheet of an interlayer material framing a suspended particle device film incorporated therein, the first sheet of interlayer material being laminated between a second and third sheet of interlayer material, the suspended particle device film being in contact with the second and third sheets of interlayer material, at least one of which is in contact with and co-extensive with one of the first and second plies of glass wherein the interlayer material components do not comprise a plasticiser."

Claim 1 of the first auxiliary request differed from claim 1 of the main request in the addition, at the end

of the claim, of "further wherein the first sheet of interlayer material is one of ethylene vinyl acetate copolymer, polyurethane, polycarbonate, poly vinyl chloride or a copolymer of ethylene and methacrylic acid."

- IV. The opposition division held that Article 100(c) EPC did not prejudice the maintenance of the patent in the form of the main request but rejected this request for lack of novelty.

As regards Article 100(c) EPC, the opposition division reasoned that the skilled person would perceive how to implement additional layers into the glazing of claim 2 as filed in order to arrive at the glazing of claim 1 of the main request. Furthermore, this claim was in agreement with the arrangements shown in figures 2, 5 and 6 as filed. Finally, starting from claim 1 as filed, "it was allowed in terms of the provisions of Article 123(2) EPC to formulate a claim which covers any one of the individual embodiments exemplified and therefore reflects the gist of the invention".

The first auxiliary request was admitted into the proceedings since the amendment made therein was neither unforeseeable nor difficult to grasp. This amendment furthermore was found to meet the requirements of Article 123(2) EPC. Novelty of the first auxiliary request had not been contested and this request was furthermore considered to be inventive.

- V. Both opponents 1 and 2 (hereinafter "appellants 1 and 2") filed their statements of grounds of appeal on 27 February 2014, whereby appellant 2's statement of grounds of appeal contained:

D21: US 2005/0233125.

Both appellants requested that the decision under appeal be set aside and that the patent be revoked. Appellant 1 *inter alia* maintained its objection that claim 1 as maintained by the opposition division contained added matter (Article 100(c) EPC). Appellant 1 additionally requested that the decision of the opposition division to admit the first auxiliary request be reversed.

VI. With its response to the grounds of appeal (letter of 15 September 2014), the proprietors (hereinafter: "the respondents") filed first to fourth auxiliary requests, the main request being that the appeals be dismissed (implying maintenance of the patent on the basis of the first auxiliary request admitted and found allowable by the opposition division). The response further contained copies of letters filed during the first-instance proceedings and

D22: US 2,526,728; and

E1: G. M. Sottile, "2004 Survey of United States Architects on the Subject of Switchable Glazings", 47th Annual Technical Conference Proceedings, 2004, preprinted version, pages 1 to 7.

VII. With letter of 8 January 2015, appellant 1 requested that the first to fourth auxiliary requests not be admitted into the proceedings.

VIII. In its preliminary opinion dated 6 February 2015, the board observed that there appeared to be no need to set aside the opposition division's decision to admit the

first auxiliary request (now main request), since the opposition division had applied the right principle in an appropriate way when exercising its discretion to admit this request. The board further observed that claim 2 as filed appeared not to provide a basis for claim 1 of the main request and that the respondents' arguments as to why claim 1 did not contain added matter appeared not to be convincing.

IX. Following the board's communication, further letters were filed by all parties, including further documents.

Appellant 2:

D23: Declaration from Mr P. Boulanger, dated 17 July 2015 including experimental evidence; and

D23a: Complementary experimental results (two photographs).

Appellant 1:

D24: JP 2004-189736 A;

D24a: English translation of D24;

D25: US 4,950,052 A; and

D26: S. J. Kłosowicz, Opto-Electronics Review 2/93, pages 58 to 60.

Respondents:

Comments were filed *inter alia* on the ground under Article 100(c) EPC.

- X. With their letter dated 23 September 2015, the respondents requested that all documents and evidence filed by the appellants in the appeal proceedings not be admitted into the proceedings.
- XI. On 6 October 2015, oral proceedings were held before the board. The respondents filed fifth and sixth auxiliary requests, the admissibility of which was contested by the appellants. All requests filed during the written proceedings were maintained.
- XII. So far as relevant to the present decision, the appellants' arguments can be summarised as follows:

- Main request

The opposition division's decision to admit the first auxiliary request (now main request) into the proceedings should be set aside. The request had been filed late and shifted the subject-matter to be discussed.

Claim 1 of the main request was not based on the application as filed (Article 100(c) EPC). This claim covered embodiments where a plasticiser-containing layer was present between the third interlayer and the adjacent glass ply. Contrary thereto, claim 2 as filed clearly excluded this possibility. For embodiments where a plasticiser-containing layer was present between the third interlayer and the adjacent glass ply, the application as filed, in particular figure 5, required the plasticiser-containing layer to be separated from the third interlayer and the underlying suspended particle device by a PET

barrier layer. This prevented any plasticiser from migrating into the suspended particle device. In contrast thereto, claim 1 of the main request did not require the presence of such a PET barrier layer.

- First to fourth auxiliary requests

For the same reasons as given for the main request, claim 1 of each of these auxiliary requests contained added matter.

- Fifth and sixth auxiliary requests

These requests should not be admitted into the proceedings. The objection under Article 100(c) EPC had already been made in the notice of opposition and repeated in the statement of grounds of appeal. At the latest when the board's preliminary opinion was issued, it should have been clear to the respondents that there was a problem in this regard. Furthermore, claim 2 of the fifth auxiliary request and claim 1 of the sixth auxiliary request still contained added matter. Finally, the amendment had introduced a contradiction into the two claims as regards the presence of additional layers between the third interlayer and glass ply.

XIII. So far as relevant to the present decision, the respondents' arguments can be summarised as follows:

- Main request

Claim 1 of the main request was based on the application as filed. The embodiments with a

plasticiser-containing layer were covered by claim 1 as filed, which did not exclude the presence of additional plasticiser-containing layers. Furthermore, the application as filed would not be construed by a skilled person as narrowly as suggested by appellant 1. In particular, also claim 2 and the second paragraph of page 3 as filed provided an appropriate basis, since these passages allowed for additional plasticiser-containing layers to be present. Further, the presence of an additional plasticiser-containing layer was clearly and unambiguously derivable from figure 5 as filed. Furthermore, the amendment in claim 1 was in line with the inventive concept of the application as filed, was evident from the application as filed, entirely conventional or known for decades, not divergent from the solution as proposed in the application as filed, and provided no difficulties to the skilled person. Lastly, two instances of the EPO, namely the examining division and the opposition division, had decided that amended claim 1 was based on the application as filed.

- Fifth and sixth auxiliary requests

These requests should be admitted into the proceedings since they were a serious attempt to overcome the appellants' objection under Article 100(c) EPC and furthermore were clearly allowable.

XIV. The appellants requested that the decision under appeal be set aside and that European patent No. 2 013 013 be revoked.

Appellant 1 furthermore requested that the decision of the opposition division to admit the first auxiliary request (now main request) be set aside and that the first to sixth auxiliary requests not be admitted into the proceedings.

- XV. The respondents requested that the appeals be dismissed or, in the alternative, that the patent be maintained on the basis of one of the first to fourth auxiliary requests filed with letter of 15 September 2014 or either of the fifth or sixth auxiliary requests filed during the oral proceedings.

Reasons for the Decision

Main request

1. Admissibility

1.1 The claims of the main request are those of the first auxiliary request found allowable by the opposition division. These claims had been filed during the oral proceedings before the opposition division and had been admitted into the proceedings.

1.2 Appellant 1 requested that this decision of the opposition division be reversed. Although the discussion on novelty and inventive step during the entire written opposition proceedings had focused on a potential difference in layer structure, this request had put the focus for the first time on a difference in the chemical nature of one of the layers.

1.3 Pursuant to Article 114 EPC, it was at the discretion of the opposition division whether or not to admit such

a late-filed request. In the event of such a discretionary decision being contested in appeal, the board of appeal should overrule the way in which the opposition division has exercised its discretion only if it comes to the conclusion either that this discretion was not exercised in accordance with the right principles or that it was exercised in an unreasonable way (G 7/93; point 2.6).

In the present case, the opposition division admitted the first auxiliary request since the amendment made in this request was "neither unforeseeable nor difficult to grasp" (point 5.1 of the decision). This implies that according to the opposition division, the opponent could be expected to deal with the amendment during the oral proceedings. This is an appropriate criterion to apply when deciding on the admissibility of late-filed requests and the board has no reason to assume - and none has been brought forward by the appellants - that the opposition division applied it in an unreasonable way.

- 1.4 The board therefore decided not to set aside the opposition division's decision to admit the first auxiliary request (now main request) into the proceedings.

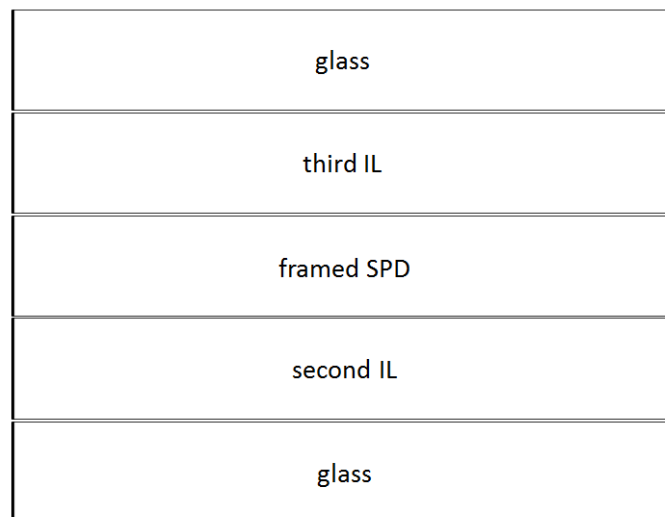
2. Amendments - Article 100(c) EPC

- 2.1 The relevant part of claim 1 of the main request (actually identical to claim 1 as granted) refers to "A laminated glazing **comprising** first and second plies of glass having an interlayer structure laminated between them, the interlayer structure **comprising** a first sheet of an interlayer material framing a suspended particle device film incorporated therein (denoted "framed SPD"

hereinafter), the first sheet of interlayer material (denoted "first IL" hereinafter) being laminated between a second and third sheet of interlayer material (denoted "second IL" and "third IL" hereinafter), **the suspended particle device film being in contact with the second and third sheets of interlayer material, at least one of which is in contact with and co-extensive with one of the first and second plies of glass ...**" (emphasis added by the board).

2.2 It was agreed by all parties that the requirement in claim 1 that the interlayer material components do not comprise a plasticiser meant that the framed SPD, the second IL and the third IL are free of a plasticiser.

2.3 Embodiments of claim 1 where these plasticiser-free interlayers are the only interlayers present can be visualised as follows:



Hereinafter, such a layer arrangement will be written as

glass/third IL/framed SPD/second IL/glass.

2.4 Due to the "comprising" language of claim 1 of the main request, however, this claim covers embodiments where the laminated glazing includes one or more additional plasticiser-containing layers. It was a matter of dispute between the parties whether these embodiments with a plasticiser-containing layer were based on the application as filed. In this respect, it is important that the "comprising" language is not completely open, because the claim puts some limitations on the position where such a plasticiser-containing layer can be located. It requires in particular that the framed SPD is in contact with the second and third ILs, while only one of the second and third ILs needs to be in contact with one of the first and second glass plies (see point 2.1 above).

Claim 1 thus excludes a plasticiser-containing layer from being present between the second and third ILs and the framed SPD, since the second and third ILs must both be in contact with the framed SPD, thus leaving no room for any additional layer. In fact, the only place where such a layer can be located according to the claim is between the first glass ply and the second IL or between the third IL and the second glass ply, since only one of these ILs needs to be in contact with the glass plies. With the additional plasticiser-containing layer being denoted "--", these two possibilities can be visualised as follows:

glass/--/second IL/framed SPD/third IL/glass

glass/second IL/framed SPD/third IL/--/glass.

2.5 The respondents argued that these two embodiments were covered by claim 1 as filed, and therefore Article 100(c) EPC did not prejudice the maintenance of

the patent. The same argument was used in the decision of the opposition division.

2.5.1 Claim 1 as filed reads as follows:

"A laminated glazing comprising first and second plies of glass having an interlayer structure laminated therebetween, the interlayer structure comprising a first sheet of an interlayer material framing a suspended particle device film incorporated therein, wherein the interlayer material components do not comprise a plasticizer, or comprise a plasticizer that does not migrate into the suspended particle device film".

2.5.2 The board accepts the respondents' and opposition division's position that claim 1 as filed covers the above two plasticiser-containing layer structures of claim 1 of the main request, among many others.

However, this argument and all the other arguments presented by the respondents and the opposition division and summarised in point XIII above are actually irrelevant.

As set out in G 2/10 (point 4.3), the only permissible and generally accepted standard to be applied when examining whether a claim contains added matter is whether the subject-matter of this claim is clearly and unambiguously derivable from the application as filed. This is also referred to as the "gold standard" in G 2/10 and it is this standard, rather than the criterion that the embodiments are covered by claim 1 as filed, that has to be applied in the present case.

2.5.3 This finding cannot be altered by the fact that, as argued by the respondents, two instances of the EPO, namely the examining division and the opposition division, had already found that claim 1 did not contain added matter. If this were to stop the board from overturning the opposition division's decision on Article 100(c) EPC, there would be no point in an opponent appealing on the ground of Article 100(c) EPC.

2.6 Applying the standard of clear and unambiguous derivability, the respondents argued that the two embodiments of claim 1 as per the graphical representations in point 2.4 above were clearly and unambiguously derivable from the explicit and implicit disclosure of the application as filed, in particular from claim 2, the second paragraph of page 3 and figure 5 of the application as filed.

2.6.1 Claim 2 as filed reads as follows:

"The laminated glazing of claim 1, wherein the first sheet of interlayer material is laminated between a second and third sheet of interlayer material, **each in contact with and co-extensive with one of the first and second plies of glass, the suspended particle device film being in contact with at least one sheet of interlayer material.**" (emphasis added by the board)

An almost identical disclosure is present in the second paragraph of page 3 of the application as filed.

According to these passages, a plasticiser-containing layer may be present between one of the second and third ILs and the framed SPD (only one of these ILs needs to be in contact with the framed SPD, see above). However, no such layers can be present between the

second IL and the glass ply, or the third IL and the glass ply, since the second and third ILs must both be in contact with the glass plies. This can be visualised as follows:

glass/second IL/--/framed SPD/third IL/glass

glass/second IL/framed SPD/--/third IL/glass

- 2.6.2 Hence, while according to claim 1 of the main request any plasticiser-containing layer must be present between the second or third IL and the corresponding plies of glass, the opposite is true for claim 2 as filed (and the second paragraph on page 3 as filed), namely that any such additional layer must be present between the second or third IL and the framed SPD.

The subject-matter of claim 1 of the main request is thus different from and actually at odds with what is disclosed in claim 2 and the second paragraph of page 3 as filed.

- 2.7 The respondents furthermore argued that the embodiment of claim 1 of the main request with a plasticiser-containing layer was disclosed in figure 5 of the application as filed.

In this figure, there are two specific further layers between the third IL (layer 21) and the glass ply (layer 17a), namely a fourth IL (layer 23, preferably PVB, which contains a plasticiser) and a PET barrier layer 22. With the above terminology, this can be visualised as follows:

glass/second IL/framed SPD/third IL/PET barrier layer/--/glass.

The board acknowledges that, in the same way as claim 1 of the main request, the layer assembly of figure 5 as filed contains an additional plasticiser-containing layer, namely the fourth IL ("--" in the above graphical representation) between the third IL and the glass ply. However, the layer assembly of figure 5 is more specific than that of claim 1 of the main request in that the additional plasticiser-containing layer is separated from the third IL by a PET barrier layer, while no such barrier layer is required by claim 1. The presence of a barrier layer as shown in figure 5 is taught in the application as filed to be necessary in order to prevent the plasticiser present in the additional plasticiser-containing layer from migrating to and deteriorating the SPD film (last sentence in the first paragraph on page 9 of the application as filed). Consequently, the embodiments of claim 1 of the main request, where a plasticiser-containing layer but not necessarily a PET barrier layer is present, are not clearly and unambiguously derivable from figure 5 of the application as filed. The board in particular sees no basis in the application as filed for generalising figure 5 to the subject-matter covered by claim 1.

- 2.8 The subject-matter of claim 1 of the main request including embodiments with a plasticiser-containing layer is thus not based on the application as filed. The ground under Article 100(c) EPC thus prejudices the maintenance of the patent on the basis of the main request.

First to fourth auxiliary requests

3. Amendments - Article 100(c) EPC

Claim 1 of the first to fourth auxiliary requests differs from claim 1 of the main request solely in that the list of materials for the first IL has been restricted. Hence, the layer structure as defined by claim 1 of these auxiliary requests is the same as that in claim 1 of the main request (and in claim 1 as granted). Therefore, as not disputed by the respondents, the ground under Article 100(c) EPC also prejudices the maintenance of the patent on the basis of any of the first to fourth auxiliary requests.

Fifth auxiliary request

4. Admissibility

4.1 The fifth auxiliary request was filed during the oral proceedings after the board had announced its opinion that the main request and first to fourth auxiliary requests were not allowable. The appellants requested that this auxiliary request not be admitted into the proceedings.

4.2 The respondents argued that this request should be admitted since it constituted a serious attempt to overcome appellant 1's objection under Article 100(c) EPC.

However, this objection had been already raised in the notice of opposition and thus was known to the respondents from the very start of the opposition proceedings. Furthermore, it was reiterated in

appellant 1's statement of grounds of appeal and was specifically addressed in the board's preliminary opinion, where it was *inter alia* stated that the respondents' arguments as regards Article 100(c) EPC appeared unconvincing. Hence, the respondents could have filed the fifth auxiliary request, if not in their response to appellant 1's statement of grounds of appeal, then at the very latest in direct response to the board's preliminary opinion, which was already issued 8 months before the oral proceedings.

4.3 The respondents furthermore argued that the fifth auxiliary request was clearly allowable and for that reason too should be admitted into the proceedings.

4.3.1 Claim 2 of the fifth auxiliary request reads as follows:

"2. A laminated glazing **comprising** first and second plies of glass having an interlayer structure laminated therebetween, the interlayer structure **comprising** a first sheet of an interlayer material framing a suspended particle device film incorporated therein, the first sheet of interlayer material being laminated between a second and third sheet of interlayer material, **the suspended particle device film being in contact with the second and third sheets of interlayer material, at least one of which is in contact with and co-extensive with one of the first and second plies of glass** wherein the interlayer material components do not comprise a plasticiser, further wherein the first, second and third sheets of interlayer material are of ethylene vinyl acetate copolymer, **further comprising a fourth sheet of interlayer material and a barrier layer, the barrier layer being between the third and fourth sheets of interlayer material**" (emphasis added).

Due to the "comprising" language, claim 2 of the fifth auxiliary request covers embodiments where two plasticiser-containing layers are present, namely the fourth IL and a non-specified additional layer. With the above-used terminology, these embodiments of claim 2 of the fifth auxiliary request can be visualised as follows:

glass/second IL/framed SPD/third IL/barrier layer/--/--/glass

- 4.3.2 The respondents argued that this embodiment was based on figure 5 of the application as filed. However, this figure is different from the above embodiment of claim 2 of the fifth auxiliary request in that it contains only one additional plasticiser-containing layer (fourth IL). In fact, an embodiment with two plasticiser-containing layers is only disclosed in figure 6 of the application as filed, which describes the following layer sequence (reference numerals of figure 6 included in brackets):

glass (26b)/second IL (27)/framed SPD (28 and 29)/third IL (30)/PET barrier layer (31)/-- (fourth IL 32)/PET barrier layer (33)/-- (fifth IL 34)/glass (26a)

However, this figure is more specific than claim 2 in that it requires the presence of two PET barrier layers in alternating sequence with the two plasticiser-containing interlayers, while claim 2 contains no restriction on either the number of barrier layers or the nature or sequence thereof.

Hence, not only is the fifth auxiliary request not clearly allowable but it raises new issues under Article 100(c)/123(2) EPC.

- 4.3.3 Furthermore, claim 2 is contradictory in itself. On the one hand, it requires that at least one of the second and third ILs be in contact with the glass plies, thus covering two alternatives, namely a first one where the second but not the third IL is in contact with the adjacent glass ply and a second one where not only the second but also the third IL is in contact with the glass ply. On the other hand, claim 2 requires the presence of a barrier layer and a fourth IL between the third IL and the glass ply. Hence, as far as the second alternative of claim 2 is concerned, this claim at the same time requires and excludes the presence of these two layers.

This contradiction is objectionable under Article 84 EPC since it was not present in the granted claims. More specifically, the two alternatives of claim 2 are present in granted claim 1 while the requirement that there is a fourth IL and a barrier layer between the third IL and glass ply is present in granted claim 4 only. Since granted claim 4 is a dependent claim, the skilled person would know that the presence of the two additional layers as required by claim 4 is optional and only applies to the first alternative of claim 1 where the third interlayer is not in contact with the glass ply. No contradiction is thus present in the granted claims.

Consequently, the fifth auxiliary request is not clearly allowable and also raises new issues under Article 84 EPC.

4.4 In application of Article 13(1) RPBA, the board therefore decided not to admit it into the proceedings.

Sixth auxiliary request

5. Together with the fifth auxiliary request, the respondents also filed a sixth auxiliary request during the oral proceedings before the board. Claim 1 of the sixth auxiliary request is identical to claim 2 of the fifth auxiliary request. Hence, for the reasons given above for the fifth auxiliary request, the board decided not to admit it into the proceedings.

Admissibility of late-filed documents

6. The respondents requested that all documents and evidence filed by the appellants in the appeal proceedings not be admitted into the proceedings. However, since none of these documents and evidence is relevant to the present decision, there was no need to decide on this matter.

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:



M. Cañueto Carbajo

W. Sieber

Decision electronically authenticated