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**Datasheet for the decision
of 13 November 2007**

Case Number: W 0005/07 - 3.2.05
Application Number: PCT/BE 2006/000025
Publication Number: WO 2006/099700
IPC: B29B 11/08, B29B 11/14,
B29C 49/22, B29C 49/06
Language of the proceedings: EN

Title of invention:

Preform for blowmolding thereof into a container and process
for manufacturing thereof

Applicant:

RESILUX

Opponent:

-

Headword:

-

Relevant legal provisions:

PCT Art. 17
PCT R. 13, 40.2(c)

Keyword:

-

Decisions cited:

G 0001/89, G 0002/89, W 0026/91

Catchword:

-



Case Number: W 0005/07 - 3.2.05

International Application No. PCT/BE 2006/000025

D E C I S I O N
of the Technical Board of Appeal 3.2.05
of 13 November 2007

Applicant: RESILUX
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Subject of this decision: Protest according to Rule 40.2(c) of the Patent Cooperation Treaty made by the applicants against the invitation (payment of additional fees) of the European Patent office (International Searching Authority) dated 22 August 2006.

Composition of the Board:

Chairman: W. Zellhuber
Members: H. Schram
S. Hoffmann

Summary of Facts and Submissions

I. International application PCT/BE2006/000025 entitled "Preform for blowmolding thereof into a container and process for manufacturing thereof" comprising 44 claims was filed on 27 March 2006.

II. Independent claims 1, 29, 30, 35, 38 and 44 of the application as filed read as follows:

"1. Preform for producing containers (90) comprising a neck section (8), an adjoining wall section (6) and a bottom section (7) which forms the base of the preform, which is composed of a multilayer structure comprising at least three layers, the one of which (1) is directed inwardly respective the preform and is composed of a primary material (PM) thereby forming a primary basis layer (1), wherein said primary material consists of a synthetic material, and wherein a further layer (3) is directed outwardly with respect to said primary layer (1), in such a way that it forms the outer surface layer (3) of the preform, thereby consisting of a tertiary material (TM) forming a tertiary surface layer (3), wherein said tertiary layer is composed of a further synthetic material, characterized in that there is provided an intermediate layer (2) between the primary and tertiary layers (1, 3) which is composed of a secondary material (SM) consisting of a fluid."

"29. Container characterised in that it consists of an injection piece obtained from blowing a preform as defined in one of the preceding claims."

"30. Method for producing a preform in an injection moulding mould, in particular according to one of the preceding claims 1 to 28, wherein a predetermined quantity of a primary, respectively tertiary synthetic material (PM, TM) is injected in a hollow mould space under a relatively high pressure p and temperature T , characterised in that a predetermined quantity of a secondary material (SM) is further fed in the hollow mould space under conditions of pressure and/or temperature which are substantially lower than said primary and tertiary injection pressure p , resp. temperature T ."

"35. Method for producing a preform in an injection moulding mould, in particular according to claim 29, wherein a predetermined quantity of a primary, resp. tertiary synthetic material (PM, TM) is injected in a hollow mould space under relatively high pressure p and temperature T , characterised in that a predetermined quantity of secondary material (SM) is further fed in the hollow mould space under conditions of pressure and/or temperature which are substantially lower than said primary and tertiary injection pressure p , respectively temperature T ."

"38. Device for producing a preform as defined in one of the claims 1 to 28, characterised in that there is provided a secondary feeding unit (120), which is independent from a hot primary feeding unit (110) and which is arranged outwardly respective said primary feeding unit (110), through which (120) secondary material (SM) can be fed from an independent feeding unit (121) through a feed channel (122) provided therefor."

"44. Device for carrying out a method as defined in one of the claims 30 to 37."

III. On 22 August 2006 the European Patent Office, acting as International Searching Authority (ISA), in compliance with Article 17(3)(a) PCT and Rule 40.1 PCT issued an "Invitation to pay Additional Fees" (hereinafter "Invitation") stating that the application did not comply with the requirements of unity of invention according to Rule 13 PCT and inviting the applicant to pay, within a time limit of one month, four additional search fees.

IV. In the Invitation, the ISA defined the following five groups of inventions to which the application related:

Group 1 Claims 1-11, 18, 29

Preform for producing containers ...,
characterized in the type of fluid.

Group 2 Claims 1, 12-17, 29

Preform for producing containers ...,
characterized in the additives contained in
the layers.

Group 3 Claims 1, 19-20, 29

Preform for producing containers ...,
characterized in the shape of the secondary
layer at the bottom of the preform.

Group 4 Claims 1, 21 - 29

Preform for producing containers ..., characterized in the polymer bio-aggregate of the secondary layer.

Group 5 Claims 30 - 44

Method and device for producing a preform ..., characterised in that a predetermined quantity of secondary material (SM) is further fed from an independent secondary feeding unit in the hollow mould space under conditions of pressure and/or temperature which are substantially lower than said primary and tertiary injection pressure p , respectively temperature T .

According to the Invitation, the only features common to the groups of inventions 1 to 4 were the features of independent claim 1. However, since these features were known from documents

D1 US-A 6,066,287 and

D2 US 2002/0005044,

they could not be considered to be special technical features according to Rule 13(2) PCT.

Since each of the problems (i) to (iv) to be solved by the respective group of inventions 1 to 4, namely

(i) to increase the barrier properties of the preform,

- (ii) to neutralize substances that might migrate from outside the container into its inside,
- (iii) to improve the bottom shape of the preform for liquid barrier layers, and
- (iv) to consume the oxygen inside the filled bottle,

was different for each group of inventions and was solved by different features, said different features could not be considered to be special technical features according to Rule 13(2) PCT.

Likewise, the only features common to the groups of inventions 1 and 5 were "an injection moulded preform comprising at least three layers of a primary synthetic material, a secondary material and a tertiary material". Since these features were known from document D1 and were also provided to solve the problem of improving the barrier properties of the preform/bottle as indicated on page 1, lines 34 to 36, of the application as filed (published version), they could not be considered to be special technical features according to Rule 13(2) PCT.

- V. On 21 September 2006, the Applicant paid three additional search fees for the second, fourth and fifth group of inventions under protest according to Rule 40.2(c) PCT.

The applicant requested as main request filed on 22 September 2006 cancellation of the invitation to pay additional fees for all alleged additional inventions 2 to 5 together with a refund of all additional fees paid in full. As a subsidiary request of first order filed on 22 September 2006 cancellation of the invitation to

pay additional fees for the alleged additional inventions 2, 4 and 5 together with a refund of all additional fees paid in full was requested. As a subsidiary request of second order filed on 22 September 2006 cancellation of the invitation to pay additional fees for the alleged additional inventions 2, 4 and 5 at least in part together with a refund of all additional fees paid, at least in part, was requested.

VI. In its reply to the Invitation filed on 22 September 2006 the applicant argued essentially as follows:

Both the characterising parts of claims 11 (i.e. *said secondary material (S) consists of a recycled synthetic material, in particular of polymer, and/or blends thereof with additives*) and 12 (i.e. *at least one of said materials or layers (1, 2, 3, 4, 5) contains a predetermined quantity of additives (71, 73)*) concerned additives. Yet claims 11 and 12 were categorised in different groups of inventions, namely in group 1 and in group 2, respectively. The reasoning in the Invitation to pay additional fees was thus inconsistent and illogical and in breach of Rule 40.1(i) PCT, which required the ISA to specify the reasons for which the international application was not considered as complying with the requirements of unity of invention. Moreover, the Enlarged Board of Appeal had emphasised in its decisions G 1/89 (OJ EPO 1991, 155, 2 May 1990 - Polysuccinate esters) and G 2/98 (OJ EPO 1991, 166, 2 May 1990 - Non-unity a posteriori) that (see point 8.2 of the Reasons) "*the consideration by an ISA of the requirement of unity of invention should, of course, always be made with a view to giving the applicant fair*

treatment and that the charging of additional fees under Article 17(3)(a) PCT should be made only in clear cases".

The subject-matter of claim 1 was novel. The characterising part of claim 1 required that there was "an intermediate layer (2) between the primary and tertiary layers (1, 3) which is composed of a secondary material (SM) consisting of a fluid" (emphasis added by the applicant). A layer was fundamentally characterised by its materiality. The materiality of the intermediate layer 2 followed also from claim 8, which required said layer to have a "contact surface". In the preform known from documents D1 and D2 the "object" between the primary and tertiary layers was not a layer at all. In document D2 this object was defined as "outer compartment 16" (see paragraph [0030], line 6, and claim 1, line 5), whereas in document D1 this object was not even defined as such in claim 1, but only referred to indirectly as follows: "between said inner layer and said outer layer". According to the decisions G 1/89 (loc. cit.) and G 2/89 (loc. cit.) *"the ISA should exercise restraint in the assessment of novelty and inventive step and in border-line cases preferably refrain from considering an application as not complying with the requirement of unity of invention on the ground of lack of novelty or inventive step"* (see point 8.2 of the Reasons). In W 26/91 the Board concluded that the ISA had contravened the principles laid down by the Enlarged Board of Appeal in decisions G 1/89 (loc. cit.) and G 2/89 (loc. cit.). *"The mere citation of three extensive documents without any analysis of what was disclosed in these documents and the undifferentiated allegation that with regard to*

these documents there is no novelty or inventive step cannot be considered as a fair treatment", see Case Law of the Boards of Appeal of the European Patent Office, 4th Edition 2001, Section IX.C.2.1. This statement applied to the present case: the allegations in the Invitation "The only features common to the groups of inventions 1 to 4 are the features of independent claim 1. These features are well known from the prior art, as disclosed by documents US 2002/0005044 A1 (see figure 1; abstract; paragraphs [0030] to [0032]) and US-A 6,066,287 A1 (see figure 1; abstract; column 1, line 66 - column 3, line 55)." cannot be considered as a fair treatment of the applicant.

The problem to be solved by the alleged group of inventions 2 identified by the ISA, viz. *to neutralize substances that might migrate from outside the container into its inside*, was merely a special case of the problem to be solved by the alleged group of inventions 1 identified by the ISA, namely *"to increase the barrier properties of the preform"*. The problem of the group of inventions 2 was solved according to the ISA by *"the additives contained in the layers"*. As pointed out above, the larger problem of the group of inventions 1 was *inter alia* solved (see claim 11) by additives in the secondary layer. In "Case Law of the Boards of Appeal of the European Patent Office", Edition 1996, it was stated in Section II.C.4 that where there was a lack of unity in an international application, in particular if the objection was evident *"a posteriori"*, the search examiner may decide to supplement the international search with a search on the additional inventions as well as on the first invention first mentioned, in particular if the

concepts of the inventions were very close and none of them required a search in different classification units. In such a case, no objection of lack of unity of invention should be raised, because charging further fees would be incompatible with the principle of equity vis-à-vis the applicant. Searching for "additives" claimed in the alleged group of inventions 2 did not require additional search work, since the "additives" claimed in the alleged group of inventions 1 had already been searched. The "Invitation to pay Additional Fees" for the group of inventions 2 thus demonstrated for all of these reasons a lack of fairness to the applicant.

The above reasoning also applied to the alleged group of inventions 4 identified by the ISA, since the corresponding problem "to consume the oxygen inside the filled bottle" was also a special case of the more general problem to be solved by the group of inventions 1 identified by the ISA, namely "*to increase the barrier properties of the preform*". The solution to the narrower problem was using a so-called polymer bio-aggregate. This polymer bio-aggregate merely was a particular fluid and thus a special case of the special features defining the solution to the problem solved by the group of inventions 1.

As concerns the method claims 30 to 37 and the device claims 38 to 44 assigned by the ISA to the alleged group of inventions 5 it was to be noted that these claims formally depended on the product claims 1 to 28. Since claim 1 was novel, its special technical features provided a technical relationship between the inventions claimed in claims 30 to 44 and in claims 1

to 28, respectively. These inventions were thus linked by a single general inventive concept, so that the requirement of unity of invention was met for the alleged group of inventions 5 and the alleged group of inventions 1.

VII. On 8 February 2007, the ISA invited the applicant to pay a protest fee within one month. In the annex to this communication, the Review Panel concluded that the request for payment of the additional fees was in line with Article 17(3)(a) PCT and Rule 40.1 PCT. Therefore, no refund of additional fees was ordered.

VIII. On 2 March 2007, the applicant paid the protest fee.

Reasons for the Decision

1. Additional search fees were paid in time for the alleged group of inventions 2, 4 and 5 identified by the ISA under protest, cf. Rules 40.1 (ii) and 40.2 (b), (c) PCT. The protest was accompanied by a reasoned statement to the effect that the international application complied with the requirement of unity of invention, cf. Rule 40.2(c), (e) PCT. The protest fee was paid in time, Rules 40.1(iii) PCT. The protest is thus admissible.

Since no additional search fee was paid for the alleged group of inventions 3 identified by the ISA, the legal framework of the protest is limited to the question whether or not the further additional search fees paid for the alleged groups of inventions 2, 4 and 5 identified by the ISA should be refunded.

2. *Groups of inventions 1, 2 and 4*

2.1 The groups of inventions 1, 2 and 4 identified in the Invitation by the ISA have claims 1 and 29, directed to a preform and a container, respectively, in common. The independent claims 1 and 29 satisfy the requirement of unity of invention, since the container according to claim 29 is characterised in that it consists of an injection piece obtained from blowing a preform as defined in one of the preceding claims (here claims 1 to 28). If the independent claim 1 avoids the prior art, no problem of lack of unity arises in respect of any claims that depend on independent claim 1. If however independent claim 1 does not avoid the prior art, then the question whether there is still an inventive link between all claims dependent on that claim needs to be carefully considered, see Chapter 10.08 of the PCT International Search and Preliminary Examination Guidelines as in force from March 25, 2004.

2.2 Claim 1 is directed to a preform for producing containers comprising

- (i) a neck section (8),
- (ii) an adjoining wall section (6) and
- (iii) a bottom section (7),

which is composed of (at least) three layers:

- an (inner) layer (1) composed of a primary material (PM) consisting of a synthetic material,
- an intermediate layer (2) composed of a secondary material (SM) consisting of a fluid, and

- an (outer) layer (3) composed of a tertiary material (TM) consisting of a (further) synthetic material

The synthetic materials of the inner and outer layers 1, 3 referred to as primary and tertiary material, respectively, may be same or may be different, see page 9, lines 14 to 16 and 23 to 25, of the application as filed (published version). According to claim 1, the secondary material (SM) is a "fluid". However, this "fluid" need not be a liquid, it can also be a gas, see page 4, lines 19 and 20 and page 4, lines 27 to 29, of the application as filed (published version).

- 2.3 In the Invitation, the ISA referred to document D1, in particular to Figure 1, abstract, and column 1, line 66 to column 3, line 55, and to document D2, in particular to Figure 1, abstract, and paragraphs [0030] to [0032].

Document D1 discloses in Figure 1 a double-layered parison 12 ("preform") having a neck section, an adjoining wall section and a bottom section, from which a double-layered container may be blow molded (see column 1, line 66 to column 2, line 2). Parison 12 comprises three layers: inner layer 14 and outer layer 16 composed of a thermoplastic material, e.g. polyethylene terephthalate (i.e. a synthetic material) having a void space 18 between the inner and outer layers 14, 16, whereby an inert gas is introduced forming said void space (see column 2, lines 3 to 6 and 11 to 15).

Document D2 discloses in Figure 1 a double-walled preform 10 having a neck section, an adjoining wall section and a bottom section, from which a double-layered container may be blow molded (see paragraph [0030]). Said preform comprises three layers: inner wall 22 and outer wall 24 composed of the synthetic material polyester, and an air gap or outer compartment 26 between the inner and outer walls 22, 24 (see paragraphs [0022] and [0029]).

It follows that the subject-matter of claim 1 of the present application does not avoid the prior art documents D1 and D2.

The applicant has submitted that the intermediate layer according to the invention was characterised by its materiality. In contrast, the corresponding elements in document D1 and D2 were not layers, did not have a contact surface as the intermediate layer according to the invention had and therefore lacked materiality.

This argument cannot be accepted by the Board. The gas-filled void space 18 of the preform known from document D1 and the air gap 26 of the preform known from document D2 both qualify as "an intermediate layer (2) composed of a secondary material (SM) consisting of a fluid" (gas) as defined in claim 1 of the present application.

2.4 In the Invitation, the ISA assigned the dependent claims to the groups of inventions as follows (see Summary of Facts and Submissions, point IV):

Group of inventions	Dependent claims	Special technical features	Problem to be solved
1	2 - 11, 18	"type of fluid"	"to increase the barrier properties of the preform"
2	12 - 17	"additives contained in the layers"	"to neutralize substances that might migrate from outside the container into its inside"
4	21 - 28	"polymer bio-aggregate of the secondary layer"	"to consume the oxygen inside the filled bottle"

The Board wishes to point out the following. If the problem to be solved for each group of inventions is to a large extent based on narrowly defined "special technical features" characterizing each group, said problem is defined narrowly as well. The narrower the special technical features are defined for each group, the greater the likelihood that the groups have no special technical features in common. This approach thus inevitably leads to the finding of a lack of unity between the groups of inventions, since both the "special technical features" and the "problems to be solved" have nothing in common. However, in the evaluation of unity the overall object is to find out what the claims or inventions have in common, be it the problem to be solved and/or features that solve the problem, cf. Rule 13.1 PCT: The international application shall relate to one invention only or to a

group of inventions so linked as to form a single general inventive concept ("requirement of unity of invention"). On the other hand, if the problems to be solved for each group of inventions is defined too broad, the problem to be solved and/or features that solve the problem are broad as well, with the result that the inventions are indeed linked by a general concept, but a general concept that is known or obvious from the prior art, i.e. a general concept that is not inventive.

- 2.5 Dependent claims 2 - 11 and 18 were assigned by the ISA to the group of inventions 1. Dependent claims 2 to 11 do not relate to the inner and outer layers 1, 2, these claims exclusively concern properties of the intermediate or secondary layer 2, viz. its thickness, the material it is composed of, its physical state and its structure (e.g. the intermediate layer can have additional layers). In claim 18 it is claimed that the materials of the inner and outer layers 1, 2 are different.

Dependent claims 21 to 28 were assigned by the ISA to the group of inventions 4. Also these claims exclusively concern properties of the intermediate layer, namely that said layer is "composed of so-called polymer bio-aggregate which are composed by cells and/or cell products which are worked in a polymer".

In the judgement of the Board, the common problem to be solved by both groups of inventions 1 and 4 with respect to the prior art known from document D1 or D2 is to increase the barrier properties of the multi-layered preform by choosing a particular material for,

or imparting desirable properties to the material of, the intermediate layer alone.

It follows that the group of inventions 1 and 4 are thus so linked as to form a single general inventive concept in the meaning of Rule 13.1 PCT.

2.6 Dependent claims 12 to 17, which were assigned by the ISA to the group of inventions 2, all concern the case that at least one of the materials or layers (1, 2, 3, 4, 5) contains a predetermined quantity of additives (cf. claim 12). In contrast, in claim 11, which was assigned by the ISA as belonging to the group of inventions 1, it is claimed that "said secondary material (S) consists of a recycled synthetic material, in particular of polymer, and/or blends thereof with additives", i.e. only the material of the intermediate layer contains additives.

The evaluation of unity involves comparing problems solved (or effects achieved) by different claims. Whilst it can be said that the feature "at least one of the materials or layers (1, 2, 3, 4, 5) contains a predetermined quantity of additives", common to all dependent claims of the group of inventions 2, solves the general problem of increasing the barrier properties of the preform, the solution to this problem goes in a different direction as the solution to the common problem identified in point 2.5 for the groups of inventions 1 and 4. Whereas in group of inventions 2 additives are added in any of the layers 1 to 5, in the groups of inventions 1 and 4 additives are only added to the intermediate layer.

For this reason the Board comes to the conclusion that the group of inventions 1 and 2 are not so linked as to form a single general inventive concept in the meaning of Rule 13.1 PCT.

3. *Groups of inventions 1 and 5*

3.1 The group of invention 5 contains two independent method claims 30 and 35 for producing a preform in an injection moulding mould (comprising the optional feature "in particular according to one of the preceding claims 1 to 28" and "in particular according to claim 29" in claims 30 and 35, respectively). It may be noted that the reference in claim 35 "preform, ... in particular according to claim 29" is unclear, since claim 29 pertains to a container. This ambiguity cannot be resolved by redefining the preform as a container as in claim 37. This group 5 also contains two quasi-independent device claims 38 and 44, which refer to "a preform as defined in one of the claims 1 to 28" and "a method as defined in one of the claims 30 to 37", respectively.

Since device claim 38 refers inter alia to claim 1 defining a preform, there is no doubt that there is unity of invention between these claims. If the expression "in particular" is suppressed, this also holds for the method claims 30 and 35 and the device claim 44.

In Chapter 10.12 of the PCT International Search and Preliminary Examination Guidelines as in force from March 25, 2004 (emphasis added) it is stated:

"The method for determining unity of invention under Rule 13 is construed as permitting, in particular, the inclusion of any one of the following combinations of claims of different categories in the same international application:

- (i) in addition to an independent claim for a given product, an independent claim for a process specially adapted for the manufacture of the said product, and an independent claim for a use of the said product, or ... "

In the present case claims 30 and 35 are directed to methods for producing a three-layered preform and are characterised in that a predetermined quantity of (a) secondary material (SM) is further fed in the hollow mould space under conditions of pressure and/or temperature which are substantially lower than said primary and tertiary injection pressure p , respectively temperature T . If polymer bio-aggregates is used as secondary material, the lower pressure and temperature during feeding the secondary material into the mould space prevent degradation of said material.

In the judgement of the Board, claims 30 and 35 can thus be considered as claims for a process specially adapted for the manufacture of a preform according to claim 1, notwithstanding the expression "in particular" in said claims.

- 3.2 It may be noted that the ISA held in the Invitation that the only features common to the group of inventions 1 to 4 and to the group of invention 5 were "an injection moulded preform comprising at least three layers of a primary synthetic material, a secondary

material and a tertiary material", which features were known from the prior art. The approach of the ISA, namely that the problem solved by the group of inventions 1 to 4 and the problem solved by the group of invention 5 were "to provide a preform with improved barrier properties" and "to injection mould a preform using at least two different materials", respectively, appears to be academic in the sense that the two problems solved by the groups of inventions seem to be determined in isolation in an absolute sense. As a result, the ISA found that the problems solved by the group of inventions 1 to 4 and 5, respectively, were different and solved by different technical features, thereby overlooking the inherent commonality between a claim for a given product and a claim for a process specially adapted for the manufacture of that product.

3.3 It follows from point 3.1 above that the group of inventions 1 and 5 are thus so linked as to form a single general inventive concept in the meaning of Rule 13.1 PCT.

Order

For these reasons it is decided that:

1. The protest is partially justified.
2. The reimbursement of two additional search fees is ordered.

The Registrar:

The Chairman:

P. Cremona

W. Zellhuber