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Datasheet for the decision of 24 May 2011

Case Number: T 1134/09 - 3.2.07

Application Number: 03703067.3

Publication Number: 1498355

IPC: B65D 1/02

Language of the proceedings: EN

Title of invention:
Biaxially oriented blow-molded bottles and preform thereof

Applicant:
Yoshino Kogyosho Co., Ltd.

Headword:
-

Relevant legal provisions:
EPC Art. 54, 111(1), 123(2)

Relevant legal provisions (EPC 1973):
-

Keyword:
"Novelty (main request): no"
"Amendments (auxiliary requests 1 and 3: not allowable, auxiliary request 4: allowable)"
"Remittal for further prosecution"

Decisions cited:
-

Catchword:
-

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Case Number: T 1134/09 **-** 3.2.07

D E C I S I O N
of the Technical Board of Appeal 3.2.07
of 24 May 2011

Appellant: Yoshino Kogyosho Co., Ltd.
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Representative: Gray, James
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 12 December 2008 refusing European patent application No. 03703067.3 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman: P. O'Reilly
Members: K. Poalas
E. Dufrasne

Summary of Facts and Submissions

I. The appellant (applicant) lodged an appeal against the decision of the Examining Division refusing European patent application 03 703 067.3.

II. In its decision, the Examining Division held that the subject-matter of claim 1 according to the main request is not novel (Article 54 EPC) over Dl (EP-A-1 155 807) and that the subject-matter of claim 1 according to the auxiliary request does not meet the requirements of Article 123(2) EPC.

III. Oral proceedings before the Board took place on 24 May 2011.

The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the main request or, in the alternative, of the first auxiliary request, both filed with letter dated 21 April 2009, or of one of the third and fourth auxiliary requests, both filed with letter dated 20 April 2011. The second auxiliary request was withdrawn during the oral proceedings.

IV. The independent claims 1 of the main request and the auxiliary requests 1, 3 and 4 as well as the independent claim 4 of the auxiliary request 4 read as follows (amendments over the independent claims 1 and 6 as originally filed are depicted in bold or struck through):

Main request

"1. A biaxially drawn, blow-molded bottle (1') **formed from a co-injection moulded** [*sic*] **preform (1), the bottle (1')** comprising:
at least a layer of a gas barrier material (3) laminated inside the layers predominantly made of polyethylene terephthalate (2);
a functional portion (5') having a screw thread (8) raised spirally in the upper portion of neck (4') and also having a stop ring (6) disposed under said screw thread (8); and
a neck ring (7) disposed at the lower end of the neck (4'),
~~wherein~~ **characterised in that** the leading edge (3a) of said gas barrier layer (3) is disposed at a position of the neck (4') where the most advanced front of the leading edge (3a) does not reach a half height of said stop ring (6) and wherein the neck (4') is treated for thermal crystallization".

Auxiliary request 1

"1. A biaxially drawn, blow-molded bottle (1') **formed from a co-injection moulded** [*sic*] **preform (1), the bottle (1')** comprising:
at least a layer of a gas barrier material (3) laminated inside the layers predominantly made of polyethylene terephthalate (2);
a functional portion (5') having a screw thread (8) raised spirally in the upper portion of neck (4') and also having a stop ring (6) disposed under said screw thread (8); and
a neck ring (7) disposed at the lower end of the neck

(4’),
~~wherein~~ **characterised in that** the leading edge (3a) of said gas barrier layer (3) is disposed at a position of the neck (4’) **between the half height of the neck ring (7) and a half height of the stop ring (6)** where the most advanced front of the leading edge (3a) does not reach a half height of said stop ring (6) and wherein the neck (4’) is treated for thermal crystallization".

A*uxiliary request 3*

"1. A biaxially drawn, blow-molded bottle (1’) **formed from a co-injection moulded** [*sic*] **preform (1), the bottle (1’)** comprising:
at least a layer of a gas barrier material (3) laminated inside the layers predominantly made of polyethylene terephthalate (2);
a functional portion (5’) having a screw thread (8) raised spirally in the upper portion of neck (4’) and also having a stop ring (6) disposed under said screw thread (8); and
a neck ring (7) disposed at the lower end of the neck (4’),
~~wherein~~ **characterised in that** the leading edge (3a) of said gas barrier layer (3) is disposed at a position of the neck (4’) where the most advanced front of the leading edge (3a) **is positioned above a half height of the neck ring (7) and below** ~~does not reach~~ a half height of said stop ring (6) and wherein the neck (4’) is treated for thermal crystallization".

Auxiliary request 4

"1. A biaxially drawn, blow-molded bottle (1') **formed from a co-injection moulded** [*sic*] **preform (1), the bottle (1')** comprising:
at least a layer of a gas barrier material (3) laminated inside the layers predominantly made of polyethylene terephthalate (2);
a functional portion (5') having a screw thread (8) raised spirally in the upper portion of neck (4') and also having a stop ring (6) disposed under said screw thread (8); and
a neck ring (7) disposed at the lower end of the neck (4'),
~~wherein~~ **characterised in that** the leading edge (3a) of said gas barrier layer (3) is disposed at a position of the neck (4') where the most advanced front of the leading edge (3a) does not reach a half height of said stop ring (6), **the trailing edge (3b) of said gas barrier layer (3) is disposed in the lower portion of body (10') where said trailing edge (3b) does not reach the bottom (11') of said bottle (1')** and ~~wherein~~ the neck (4') is treated for thermal crystallization".

"4. **A co-injection moulded** [*sic*] preform (1) of a biaxially drawn, blow-molded bottle (1') comprising:
at least a layer of a gas barrier material (3) laminated inside the layers (2) predominantly made of a polyethylene terephthalate resin;
a functional portion (5) having a screw thread (8) raised spirally in the upper portion of neck (4) and also having a stop ring (6) disposed under said screw thread (8); and
a neck ring (7) disposed at the lower end of the neck

(4), **the preform further comprising a body (10) and a bottom (11),** ~~wherein~~ **characterised in that** the leading edge (3a) of said gas barrier layer (3) is positioned at a half height of the neck ring (7) so that the most advanced front of the leading edge (3a) neither reaches a half height of said stop ring (6) nor extends to said functional portion (5), **the trailing edge (3b) of said gas barrier layer (3) is disposed in the lower portion of the body (10) so that said trailing edge (3b) does not reach the bottom (11) of said body (10)** and wherein the neck (4) is treated for thermal crystallization".

V. The appellant argued essentially as follows:

Claim 1 of the main request - Novelty, Article 54 EPC

Dl is directed firstly to a container where there is no gas barrier layer in the mouth/neck portion and secondly to a container where the mouth/neck portion is almost fully provided with a gas barrier layer, see paragraphs [0013] and [0014]. Figure 4a. shows the situation whereby the gas barrier layer 4b extends to the neck ring, while figure 4b. shows the gas barrier layer 4b extending all the way to the screw thread. Dl neither in figure 4 nor in the body of the description discloses the possibility of the gas barrier layer extending up to the neck ring but not reaching the stop ring.

The photographs filed with letter dated 2 January 2008 demonstrate the "wavy edge" problem in the manufacture of biaxially drawn, blow-molded bottles. While figure 4 of Dl could show either the lowermost margin of a wavy barrier layer edge, the uppermost margin of a wavy

barrier layer edge or an intermediate point thereof. The fact that it is impossible to determine the position of this edge relative to the remaining, hidden edge means that it is impossible to determine whether the remaining hidden edge reaches or does not reach the half height of the stop ring. For this reason Dl cannot be relied upon to deprive the subject-matter of claim 1 of novelty.

Claim 1 of the auxiliary request 1 - Amendments, Article 123(2) EPC

On page 3, lines 31 to 33 is stated that the most advanced front of the leading edge does not reach a half height of the stop ring of the neck. This limitation is again recited on page 8 in lines 3 to 5 and lines 8 to 10 and on page 11, lines 11 to 12. Page 2, lines 6 to 10 disclose the phenomena of the leading edge of the gas barrier layer moving towards the mouth from the set position on the circumference on the neck at the time of preform moulding. Page 7, lines 37 to 38 discloses the preform being moulded in such a manner that the leading edge is set at a half height of the neck ring.

Given that the set position for the leading edge is the half height of the neck ring and, in the event that displacement occurs, the most advanced front of the leading edge does not reach a half height of the stop ring, the position of the leading edge must be between the half height of the neck ring and a half height of the stop ring, i.e. within the range as now recited in claim 1 of auxiliary request 1.

Claim 1 of the auxiliary request 3 - Amendments, Article 123(2) EPC

For the added feature in claim 1 of the auxiliary request 3 that "the most advanced front of the leading edge is positioned above a half height of the neck ring" basis can be found in the following passages of the originally filed description: page 2, lines 6 to 10; page 3, lines 31 to 34; page 7 lines 37 to 38; page 8, lines 3 to 6 and lines 8 to 10; and page 11, lines 9 to 14.

Claims 1 and 4 of the auxiliary request 4 - Amendments, Article 123(2) EPC

A basis for the amendments in the independent claims 1 and 4 of the auxiliary request 4 can be found in the originally filed claims 1, 5, 6, 7, on page 8, lines 25 to 26 and on page 7, lines 32 to 33 of the originally filed description and in the figures.

Reasons for the decision

1. *Claim 1 of the main request - Novelty, Article 54 EPC*

1.1 Given that the appellant does not dispute that a bottle according to the preamble of claim 1 with its neck being treated for thermal crystallization is known from D1 the question at stake is whether also the remaining characterising feature of claim 1 that the leading edge of said gas barrier layer is disposed at a position of the neck where the most advanced front of the leading

edge does not reach a half height of the stop ring is also known from D1.

1.2 As shown in figure 3 of the application in suit the neck 4' comprises the screw thread 8, the stop ring 6, the part of the bottle lying between the stop ring 6 and the neck ring 7, the neck ring 7 and also a further tubular portion underneath the neck ring, whereby on page 7, lines 29 to 30 it is stated that the neck ring is disposed in the lower portion of the neck.

1.3 In figure 4a. of D1 a bottle is shown having a gas barrier layer 4b with its leading edge extending to a position lying within the neck ring. Since according to the definition of the present application the neck ring is part of the neck then said leading edge is disposed at a position in the neck and it also does not reach a half height of the stop ring.

1.4 Thus, also the remaining feature of the characterising part of claim 1 is known from D1.

1.5 Although the Board can agree with the argumentation of the appellant that the photographs filed with its letter dated 2 January 2008 demonstrate manufacturing tolerances for bottles produced by the appellant's production line the Board cannot consider these photographs as evidence for the appellant's allegation that the person skilled in the art trying to manufacture a bottle according to figure 4a. would "normally" arrive due to manufacturing tolerances to a bottle with the leading edge of the gas barrier layer lying higher than half height of the stop ring. For

such an allegation neither the prior art nor the filed photographs give supporting evidence.

1.6 For the above-mentioned reasons the subject-matter of claim 1 is not novel over the bottle known form D1 and the requirements of Article 54 EPC are thus not met.

2. *Claim 1 of the auxiliary request 1 - Amendments, Article 123(2) EPC*

2.1 Claim 1 of auxiliary request 1 discloses *inter alia* the added feature that "the leading edge of said gas barrier layer is disposed at a position of the neck **between the half height of the neck ring and a half height of the stop ring"**. This means that claim 1 requires now that the leading edge of the gas barrier layer is positioned in the biaxially drawn, blow-molded bottle within the above mentioned range, said range having a lower limit defined by the half height of the neck ring.

2.2 The question at stake in assessing the requirements of Article 123(2) EPC is therefore whether such a lower limit for the positioning of the leading edge is directly and unambiguously derivable from the originally filed application.

2.3 From the passages of the originally filed application referred to by the appellant, i.e. page 2, lines 6 to 10; page 3, lines 31 to 34; page 7 lines 37 to 38; page 8, lines 3 to 6 and lines 8 to 10; and page 11, lines 9 to 14, only an upper limit is derivable for the most advanced front of the leading edge and also that the leading edge and its most advanced front **is/are set**

in the **preform** at half height of the neck ring, see also figure 1.

2.4 There exists no further information in these passages regarding the position of the leading edge in the finished product, i.e. in the biaxially drawn, blow-molded bottle, other than that its most advanced front would not reach a half height of the stop ring.

2.5 On page 2, lines 6 to 10 of the originally filed application with reference to the prior art it is stated that "... there occurs a phenomenon, in which **a part** of the **leading edge** or the flow front of the gas barrier layer **moves toward the mouth** from the set position on the circumference of the neck at the time of preform molding while the rest of the leading edge remains on the body side from the set position" (emphasis added by the Board).
On page 8, lines 3 to 6 is stated further that depending on the "somewhat" displacement of the leading edge from its set position in the preform **the most advanced front** of the **leading edge** can be positioned **within ±7 mm** from a half height of the neck ring.

2.6 Thus, in the above mentioned passages there exists also no information about a lower limit of the positioning of the leading edge within the biaxially drawn, blow-molded bottle in the sense of claim 1 of the auxiliary request 1.

2.7 Since no direct and unambiguous disclosure for the lower limit of the positioning of the leading edge within the biaxially drawn, blow-molded bottle claimed now in claim 1 of the auxiliary request 1 can be found

in the originally filed application the Board concludes that claim 1 of the auxiliary request 1 does not meet the requirements of Article 123(2) EPC.

3. *Claim 1 of the auxiliary request 3 - Amendments, Article 123(2) EPC*

3.1 Claim 1 of auxiliary request 3 specifies *inter alia* the added feature that "the most advanced front of the leading edge **is positioned above a half height of the neck ring (7) and below** a half height of said stop ring" (emphasis added by the Board). This means that claim 1 now claims that the most advanced front of the leading edge of the gas barrier layer is positioned in the biaxially drawn, blow-molded bottle within the above mentioned range, said range having a lower limit defined by the half height of the neck ring.

3.2 The question to be answered concerning the requirements of Article 123(2) EPC is therefore whether such a lower limit for the positioning of the most advanced front of leading edge in the finished product, i.e. in the biaxially drawn, blow-molded bottle is directly and unambiguously derivable from the originally filed application.

3.3 From the passages of the originally filed application referred to by the appellant, i.e. page 2, lines 6 to 10; page 3, lines 31 to 34; page 7 lines 37 to 38; page 8, lines 3 to 6 and lines 8 to 10; and page 11, lines 9 to 14, only an upper limit is derivable for the most advanced front of the leading edge and also that the leading edge and its most advanced front **is/are set**

in the **preform** at half height of the neck ring, see also figure 1.

3.4 The only information in said passages concerning the above mentioned lower limit of the positioning of the most advanced edge of the leading edge in the finished product, i.e. in the biaxially drawn, blow-molded bottle, is the passage on page 8, lines 3 to 6 stating that depending on the "somewhat" displacement of the leading edge from its set position in the preform **the most advanced front** of the **leading edge** can be positioned **within ±7 mm** from a half height of the neck ring. This means that by the molding of the preform an uncontrolled displacement of the leading edge takes place so that the most advanced front of the leading edge in the finished product lies within an area extending 7 mm above and 7 mm below the half height of the neck ring. Information that the most advanced front of the leading edge in the finished product would always lie within an area above the half-height of the neck ring is not disclosed in the originally filed application. Therefore, the Board considers that there does not exist a direct and unambiguous disclosure concerning the lower limit for the positioning of the most advanced front of leading edge in the originally filed application.

3.5 Since no direct and unambiguous disclosure for the lower limit of the positioning of the most advanced front of the leading edge within the biaxially drawn, blow-molded bottle claimed now in claim 1 of the auxiliary request 3 can be found in the originally filed application the Board concludes that claim 1 of

the auxiliary request 3 does not meet the requirements of Article 123(2) EPC.

4. *Claims 1 to 4 of the auxiliary request 4 - Amendments, Article 123(2) EPC*

4.1 Independent claim 1 of the auxiliary request 4 differs from the originally filed claim 5 in that it has been redrafted into an independent claim and the feature "formed from a co-injection moulded [*sic*] preform" has been added. Basis for said added feature can be found on page 8, lines 25 to 26 of the originally filed application.

Independent claim 4 of the auxiliary request 4 derives from the combination of the originally filed independent claims 6 and 7 and discloses the additional features that the preform is a "co-injection molded" preform comprising further a body and a bottom. Basis for said added features can be found on page 8, lines 25 to 26 and on page 7, lines 32 to 33 of the originally filed description and in figure 1.

Claims 2 and 3 are identical with the originally filed claims 2 and 3.

4.2 The Board is therefore satisfied that claims 1 to 4 of auxiliary request 4 meet the requirements of Article 123(2) EPC.

5. *Remittal of the case to the department of first instance*

The independent claims 1 and 4 of the auxiliary request 4 involve added features extracted from the dependent claims and from the description, see point 4.1 above. A bottle and a preform as claimed in claims 1 and 4 of said request have therefore not been examined by the examining division. In order not to deprive the appellant of the opportunity to argue the new situation before two instances the Board considers it appropriate to make use of its power under Article 111(1) EPC to remit the case to the department of first instance for further prosecution.

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 for further prosecution.

The Registrar: The Chairman:

G. Nachtigall P. O'Reilly