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**Datasheet for the decision  
of 28 October 2022**

**Case Number:** T 1515/16 - 3.2.07

**Application Number:** 08834164.9

**Publication Number:** 2190794

**IPC:** B65D1/00, C03B9/193, C03B9/197,  
C03B9/31, C03B9/32, C03B9/325,  
C03B9/347

**Language of the proceedings:** EN

**Title of invention:**

METHOD OF MANUFACTURING A NARROW NECK GLASS CONTAINER WITH  
INTERNAL EMBOSSEMENTS

**Patent Proprietor:**

Owens-Brockway Glass Container INC.

**Opponents:**

Wiegand-Glashüttenwerke GmbH  
Vetropack Holding AG  
Saint-Gobain Emballage

**Headword:**

**Relevant legal provisions:**

EPC Art. 56, 112(1) (a)

**Keyword:**

Inventive step - main request (no) - auxiliary requests (no)  
Referral to the Enlarged Board of Appeal - (no)

**Decisions cited:**

**Catchword:**



**Beschwerdekammern**

**Boards of Appeal**

**Chambres de recours**

Boards of Appeal of the  
European Patent Office  
Richard-Reitzner-Allee 8  
85540 Haar  
GERMANY  
Tel. +49 (0)89 2399-0  
Fax +49 (0)89 2399-4465

**Case Number: T 1515/16 - 3.2.07**

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.07**  
**of 28 October 2022**

**Appellant:** Vetropack Holding AG  
(Opponent 2) Schützenmattstrasse 48  
8180 Bülach (CH)

**Representative:** Hepp Wenger Ryffel AG  
Friedtalweg 5  
9500 Wil (CH)

**Respondent:** Owens-Brockway Glass Container INC.  
(Patent Proprietor) One Michael Owens Way  
Perrysburg, OH 43551 (US)

**Representative:** Blumbach · Zinngrebe Patentanwälte PartG mbB  
Alexandrastraße 5  
65187 Wiesbaden (DE)

**Party as of right:** Wiegand-Glashüttenwerke GmbH  
(Opponent 1) Otto-Wiegand-Strasse 9  
96361 Steinbach am Wald (DE)

**Representative:** Hepp Wenger Ryffel AG  
Friedtalweg 5  
9500 Wil (CH)

**Party as of right:** Saint-Gobain Emballage  
(Opponent 3) 18 avenue d'Alsace  
92400 Courbevoie (FR)

**Representative:** Saint-Gobain Recherche  
Département Propriété Industrielle  
39 Quai Lucien Lefranc  
93300 Aubervilliers (FR)

**Decision under appeal:** Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
10 March 2016 concerning maintenance of the  
European Patent No. 2190794 in amended form.

**Composition of the Board:**

**Chairman** A. Cano Palmero  
**Members:** A. Pieracci  
O. Loizou

## **Summary of Facts and Submissions**

- I. An appeal was filed by opponent 2 (appellant) in the prescribed form and within the prescribed time limit against the interlocutory decision of the opposition division maintaining the European patent No. 2 190 794 in amended form according to the main request.
- II. The opposition division found the subject-matter of claim 1 of the main request to be inventive and therefore that the patent in amended form according to the main request met the requirements of the EPC.
- III. In preparation for oral proceedings the Board communicated its preliminary assessment of the case to the parties in a communication pursuant to Article 15(1) RPBA 2020 to which the patent proprietor (respondent) responded in substance with submissions of 30 December 2019 and 1 March 2020 and opponent 2 with submission of 11 February 2020.
- IV. The following documents, also part of the opposition proceedings, are referred to in the present decision:
- E1: JP55-56021;
  - E2: JP60-112631;
  - E3: JP08-175824;
  - E31: Graphic overview of forming processes.
- V. Oral proceedings before the Board took place on 28 October 2022. No one attended the oral proceedings on behalf of opponent 1 and of opponent 3 (both parties as of right) as announced with letters dated 6 September 2022 and 5 June 2020 respectively.

According to Rule 115(2) EPC and Article 15(3) RPBA 2020 the proceedings were continued in their absence.

VI. At the conclusion of the proceedings the decision was announced. Further details of the oral proceedings can be found in the minutes.

VII. The final requests of the parties are as follows:

for opponent 2 (appellant):

that the decision under appeal be set aside and that the patent be revoked in its entirety.

for the patent proprietor (respondent):

that the appeal be dismissed and that the patent be maintained as amended according to the decision under appeal (main request) or in the alternative, that the patent be maintained in amended form according to one of auxiliary requests 1 to 6 filed together with the reply to the statement setting out the grounds of appeal.

Further during the oral proceedings the patent proprietor requested a referral to the Enlarged Board of Appeal pursuant to Article 112(1) EPC.

Further the patent proprietor with letter dated 1 March 2020 requested that document E10' be not admitted into the proceedings and in case it was admitted, postponement of the oral proceedings set for 11 March 2020 and remittal to the opposition division as well as apportionment of costs.

Opponents 1 and 3 (parties as of right) had no requests.

VIII. The arguments of the parties are dealt with in detail in the reasons for the decision.

IX. Claim 1 according to the the main request (patent held by the opposition division to meet the requirements of the EPC) reads as follows (additions with respect to claim 1 of the patent as granted being underlined and deletions being stricked-through):

"A method of making a narrow neck press-and-blow glass container having a container neck finish (34) and a container (39) body with at least one internal embossment in a press-and-blow manufacturing operation, which includes the steps of:

(a) providing a blank mold (10) that includes a mold body (16) ~~said mold body provided in said step (a) that~~ has an internal surface with at least one debossment (20,22,24) of predetermined geometry, and

a neck ring (12), ~~said neck ring~~ that has an internal surface for forming a container neck finish having an external closure attachment diameter of not more than 36mm,

(b) placing a gob of molten glass in said blank mold,

(c) moving a plunger (28) through said neck ring into said mold body to form said molten glass gob against said internal surfaces of said neck ring and said mold body and thereby form a glass parison (26) ~~and said step (c) forms a glass parison~~ having said container

neck finish and a parison body (35) with at least one external embossment (20a, 22a, 22b) corresponding to said internal debossment in said mold body internal surface,

(d) removing said glass parison from said blank mold,

(e) placing said glass parison (26) into a blow mold (32) having an internal surface (36), and

~~characterized in that~~

(f) after step (e) directing blow gas ~~is directed~~ through said container neck finish into said parison body to stretch said parison body against said blow mold internal surface, and thereby push said at least one external embossment on said parison through said parison body wherein said parison body stretches at least 45% and forming a stretched container body having at least one internal embossment (20b, 22b, 24b) corresponding to said external embossment, and

(g) removing the narrow neck glass container from said blow mold."

X. Claim 1 according to auxiliary request 1 reads as follows (additions with respect to claim 1 of the patent as granted being underlined and deletions being stricked-through):

"A method of making a narrow neck press-and-blow glass container having a container neck finish (34) and a container (39) body with at least one internal embossment in a press-and-blow manufacturing operation, which includes the steps of:

(a) providing a blank mold (10) that includes

a mold body (16) ~~said mold body provided in said step~~  
~~(a)~~ that has an internal surface with at least one  
debossment (20,22, 24) of predetermined geometry, and

a neck ring (12), ~~said neck ring~~ that has an internal  
surface for forming a container neck finish having an  
external closure attachment diameter of not more than  
36mm,

(b) placing a gob of molten glass in said blank mold,

(c) moving a plunger (28) through said neck ring into  
said mold body to form said molten glass gob against  
said internal surfaces of said neck ring and said mold  
body and thereby form a glass parison (26) ~~and said~~  
~~step (c) forms a glass parison~~ having said container  
neck finish and a parison body (35) with at least one  
external embossment (20a, 22a, 22b) corresponding to  
said internal debossment in said mold body internal  
surface,

(d) removing said glass parison from said blank mold,

(e) placing said glass parison (26) into a blow mold  
(32) having an internal surface (36), and

~~characterized in that~~

(f) after step (e) directing blow gas ~~is directed~~  
through said container neck finish into said parison  
body to stretch said parison body against said blow  
mold internal surface, and thereby push said at least  
one external embossment on said parison through said  
parison body wherein said parison body stretches in the

range of at least 45% to 70% and forming a stretched container body having at least one internal embossment (20b, 22b, 24b) corresponding to said external embossment, and

(g) removing the narrow neck glass container from said blow mold."

XI. Claim 1 according to auxiliary request 2 reads as follows (additions with respect to claim 1 of the patent as granted being underlined and deletions being stricked-through):

"A method of making a narrow neck press-and-blow glass container having a container neck finish (34) and a container (39) body with at least one internal embossment in a press-and-blow manufacturing operation, which includes the steps of:

(a) providing a blank mold (10) that includes a multi-section blank mold body (16) ~~said mold body provided in said step (a)~~ that has an internal surface with ~~at least one~~ a plurality of internal debossments (20, 22, 24) of predetermined geometry, in a predetermined geometric pattern and having a spacing parallel to the axis of said mold body (16), and

a neck ring (12), ~~said neck ring~~ that has an internal surface for forming a container neck finish having an external closure attachment diameter of not more than 36mm,

(b) placing a gob of molten glass in said blank mold,

(c) moving a plunger (28) through said neck ring into said mold body to form said molten glass gob against

said internal surfaces of said neck ring and said mold body and thereby form a glass parison (26) ~~and said step (c) forms a glass parison~~ having said container neck finish (34) of final geometry and a parison body (35) with ~~at least one~~ a plurality of external embossments (20a, 22a, 22b) corresponding to said plurality of internal debossments in said blank mold body internal surface,

(d) removing said glass parison from said blank mold,

(d) removing said glass parison from said blank mold,

(e) placing said glass parison (26) into a multi-section blow mold(32) having an internal surface (36), and

~~characterized in that~~

(f) after step (e) directing blow gas is directed through said container neck finish into said parison body to stretch said parison body against said blow mold internal surface, and thereby push said ~~at least one~~ plurality of external embossments on said parison through said parison body wherein said parison body stretches at least 45% and forming a stretched container body having ~~at least one~~ a plurality of internal embossments (20b, 22b, 24b) corresponding to said plurality of external embossments, wherein as the parison (26) expands and stretches, the external embossments (20a, 22a, 24a) on said parison simultaneously expand and stretch, and wherein the internal embossments (20b, 22b, 24b) have geometries and patterns corresponding to the geometries and patterns of the internal debossments (20, 22, 24) in

the blank mold (16) as stretched and displaced during the blow molding operation, and

(g) removing the narrow neck glass container from said blow mold."

XII. Claim 1 according to auxiliary request 3 reads as follows (additions with respect to claim 1 of the patent as granted being underlined and deletions being stricked-through):

"A method of making a narrow neck press-and-blow glass container having a container neck finish (34) and a container (39) body with at least one internal embossment in a press-and-blow manufacturing operation, which includes the steps of:

(a) providing a blank mold (10) that includes a multi-section blank mold body (16) ~~said mold body provided in said step (a) that~~ has an internal surface with ~~at least one~~ a plurality of internal debossments (20, 22, 24) of predetermined geometry, in a predetermined geometric pattern, and

a neck ring (12), ~~said neck ring~~ that has an internal surface for forming a container neck finish having an external closure attachment diameter of not more than 36mm,

(b) placing a gob of molten glass in said blank mold,

(c) moving a plunger (28) through said neck ring into said mold body to form said molten glass gob against said internal surfaces of said neck ring and said mold body and thereby form a glass parison (26) ~~and said~~

~~step (c) forms a glass parison~~ having said container neck finish (34) of final geometry and a parison body (35) with ~~at least one~~ a plurality of external embossments (20a, 22a, 22b) corresponding to said plurality of internal debossments (20,22,24) in said blank mold body internal surface,

(d) removing said glass parison from said blank mold,

(e) placing said glass parison (26) into a multi-section blow mold (32) having an internal surface (36), and

~~characterized in that~~

(f) after step (e) directing blow gas ~~is directed~~ through said container neck finish into said parison body to stretch said parison body against said blow mold internal surface, and thereby push said ~~at least one~~ plurality of external embossments on said parison through said parison body wherein said parison body stretches ~~at least~~ in the range of 45% to 70% and forming a stretched container body having ~~at least one~~ a plurality of internal embossments (20b, 22b, 24b) corresponding to said plurality of external embossments, wherein as the parison (26) expands and stretches, the external embossments (20a, 22a, 24a) on said parison simultaneously expand and stretch, wherein the internal embossments (20b, 22b, 24b) have geometries and patterns corresponding to the geometries and patterns of the internal debossments (20, 22, 24) in the blank mold (16) as stretched and displaced during the blow molding operation, and wherein the geometries of the internal embossments (20b, 22b, 24b) are less sharp than those of the original external embossments (20a, 22a, 24a) due to the stretching and

displacement through the container wall that takes place during blowing,

(g) removing the narrow neck glass container from said blow mold."

XIII. Claim 1 according to auxiliary request 4 reads as follows (additions with respect to claim 1 of the patent as granted being underlined and deletions being stricked-through):

"A method of making a narrow neck press-and-blow glass container having a container neck finish (34) and a container (39) body with at least one internal embossment in a press-and-blow manufacturing operation, which includes the steps of:

(a) providing a blank mold (10) that includes a mold body (16) ~~said mold body provided in said step (a)~~ that has an internal surface with at least one ~~debossment~~ pocket (20, 22, 24) of predetermined geometry, and

a neck ring (12), ~~said neck ring~~ that has an internal surface for forming a container neck finish having an external closure attachment diameter of not more than 36mm,

(b) placing a gob of molten glass in said blank mold,

(c) moving a plunger (28) through said neck ring into said mold body to form said molten glass gob against said internal surfaces of said neck ring and said mold body and thereby form a glass parison (26) ~~and said step (c) forms a glass parison~~ having said container neck finish and a parison body (35) with at least one

external embossment (20a, 22a, 22b) corresponding to said internal ~~debossment~~ pocket in said mold body internal surface,

(d) removing said glass parison from said blank mold,

(e) placing said glass parison (26) into a blow mold (32) having an internal surface (36), and

~~characterized in that~~

(f) after step (e) directing blow gas ~~is directed~~ through said container neck finish into said parison body to stretch said parison body against said blow mold internal surface, and thereby push said at least one external embossment on said parison through said parison body wherein said parison body stretches in the range of at least 45% to 70% and forming a stretched container body having at least one internal embossment (20b, 22b, 24b) corresponding to said external embossment, and

(g) removing the narrow neck glass container from said blow mold."

XIV. Claim 1 according to auxiliary request 5 reads as follows (additions with respect to claim 1 of the patent as granted being underlined and deletions being stricked-through):

"A method of making a narrow neck press-and-blow glass container having a container neck finish (34) and a container (39) body with at least one internal embossment in a press-and-blow manufacturing operation, which includes the steps of:

(a) providing a blank mold (10) that includes a multi-section blank mold body (16) ~~said mold body provided in said step (a) that~~ has an internal surface with ~~at least one~~ a plurality of internal debossments (20, 22, 24) of predetermined geometry, in a predetermined geometric pattern, wherein the respective series of debossments (20, 22, 24) are in linear arrays parallel to the axis of the blank mold body (16), and

a neck ring (12), ~~said neck ring that~~ has an internal surface for forming a container neck finish having an external closure attachment diameter of not more than 36mm,

(b) placing a gob of molten glass in said blank mold,

(c) moving a plunger (28) through said neck ring into said mold body to form said molten glass gob against said internal surfaces of said neck ring and said mold body and thereby form a glass parison (26) ~~and said step (c) forms a glass parison having~~ said container neck finish (34) of final geometry and a parison body (35) with ~~at least one~~ a plurality of external embossments (20a, 22a, 22b) corresponding to said plurality of internal debossments (20, 22, 24) in said blank mold body internal surface,

(d) removing said glass parison from said blank mold,

(e) placing said glass parison (26) into a multi-section blow mold (32) having an internal surface (36), and

~~characterized in that~~

(f) after step (e) directing blow gas ~~is directed~~ through said container neck finish into said parison body to stretch said parison body against said blow mold internal surface, and thereby push said ~~at least one~~ plurality of external embossments on said parison through said parison body wherein said parison body stretches ~~at least~~ in the range of 45% to 70% and forming a stretched container body having ~~at least one~~ a plurality of internal embossments (20b, 22b, 24b) corresponding to said plurality of external embossments, wherein as the parison (26) expands and stretches, the external embossments (20a, 22a, 24a) on said parison simultaneously expand and stretch, and wherein the internal embossments (20b, 22b, 24b) have geometries and patterns corresponding to the geometries and patterns of the internal debossments (20, 22, 24) in the blank mold (16) as stretched and displaced during the blow molding operation, and

(g) removing the narrow neck glass container from said blow mold."

XV. Claim 1 according to auxiliary request 6 reads as follows (additions with respect to claim 1 of the patent as granted being underlined and deletions being stricked-through):

"A method of making a narrow neck press-and-blow glass container having a container neck finish (34) and a container (39) body with at least one internal embossment in a press-and-blow manufacturing operation, which includes the steps of:

(a) providing a blank mold (10) that includes a multi-section blank mold body (16) ~~said blank mold provided in said step (a)~~ that has an internal surface

with at least one a plurality of internal debossments (20, 22, 24) of predetermined cross-shaped (20), part-spherical (22) or triangular (24) geometry, in a predetermined geometric pattern, wherein the respective series of debossments (20, 22, 24) are in linear arrays parallel to the axis of the blank mold body (16), and

a neck ring (12), ~~said neck ring that~~ has an internal surface for forming a container neck finish having an external closure attachment diameter of not more than 36mm,

(b) placing a gob of molten glass in said blank mold,

(c) moving a plunger (28) through said neck ring into said mold body to form said molten glass gob against said internal surfaces of said neck ring and said mold body and thereby form a glass parison (26) ~~and said step (c) forms a glass parison~~ having said container neck finish (34) of final geometry and a parison body (35) with ~~at least one a plurality of~~ external embossments (20a, 22a, 22b) corresponding to said plurality of internal debossments (20, 22, 24) in said blank mold body internal surface,

(d) removing said glass parison from said blank mold,

(e) placing said glass parison (26) into a multi-section blow mold(32) having an internal surface (36), and

(f) after step (e) directing blow gas ~~is directed~~ through said container neck finish into said parison body to stretch said parison body against said blow mold internal surface, and thereby push said ~~at least one~~ plurality of external embossments on said parison

through said parison body wherein said parison body stretches ~~at least~~ in the range of 45% to 70% and forming a stretched container body having ~~at least one~~ a plurality of internal embossments (20b, 22b, 24b) corresponding to said plurality of external embossments, wherein as the parison (26) expands and stretches, the external embossments (20a, 22a, 24a) on said parison simultaneously expand and stretch, and wherein the internal embossments (20b, 22b, 24b) have geometries and patterns corresponding to the geometries and patterns of the internal debossments (20, 22, 24) in the blank mold (16) as stretched and displaced during the blow molding operation, and

(g) removing the narrow neck glass container from said blow mold."

## **Reasons for the Decision**

1. Inventive step of the subject-matter of claim 1 according to the main request (Article 56 EPC)
- 1.1 The opposition division (see the reasons for the decision under appeal, page 12, second paragraph and page 10 last two paragraphs) considered that the subject-matter of claim 1 is distinguished from the known narrow neck press-and-blow (NNPB) process by the following features:
  - a parison body with at least one external embossment corresponding to internal debossment in the mold surface,

- forming a container neck finish having an external closure attachment diameter of not more than 36 mm,
- after step (e) of claim 1 directing blow gas through said container neck finish so that the parison body stretches at least 45%.

The opposition division found that the second and third combination of features above are enough for indicating the presence of an inventive step in the subject-matter of claim 1 since there is no direct and unambiguous disclosure of such combination of features in the cited documents of the prior art (see the reasons for the decision, page 11, third and fourth paragraphs).

The parties agree on the distinguishing features identified by the opposition division, with the patent proprietor referring to the specific wording used in the claim for the distinguishing groups of features identified by the opposition division (see page 7, second last paragraph to page 8 first paragraph of the letter dated 30 December 2019).

1.2 Opponent 2 argues in writing and at the oral proceedings before the Board that the features of the external closure attachment diameter and of the stretching of the parison body cannot provide an inventive step since these are common values just providing an alternative manufacturing process with respect to the prior art (see *inter alia* point 7.2 a), point 7.3 last paragraph, and page 18, last paragraph, of the statement setting out the grounds of appeal).

Opponent 2 further argues (see the statement setting out the grounds of appeal, page 21, third to fifth

complete paragraph) that even if a technical purpose were to be acknowledged for the internal embossment, the person skilled in the art would not have any problem in implementing the teaching of E1, E2 and E3 in a known NNPB process (as depicted by document E31) thus arriving at the subject-matter of claim 1. The patent in suit is in fact silent about which specific measure needs to be taken in relation to the provision of debossments in a NNPB process.

1.3 In the written procedure (see letter dated 30 December 2019, page 8, second last paragraph) the patent proprietor formulated the objective technical problem to be solved starting from E31 as

"to introduce structural amendments/alterations of any kind in the container wall affecting the wall thickness of the container, such as - but not limited to - introducing internal embossments into the container wall"

while at the oral proceedings before the Board the patent proprietor formulated the objective problem to be solved as:

"a method for making a NNPB container having at least one embossment having specific shape and low stress level".

The patent proprietor argues that in E31 there is no reference to any embossments or deviation from a plain surface and that documents E1, E2 and E3 do not refer to a NNPB but rather to press-and-blow (PB) and blow-and-blow (BB) processes, so that the subject-matter of the claim is not obvious (see letter dated 30 December 2019, page 7, first to third paragraph and

page 8, last paragraph to page 9, third complete paragraph).

The patent proprietor essentially argues with reference to various prior art documents, that since it is known that NNPB containers have thinner wall thicknesses and are very sensitive to thicknesses variations due to the corresponding strain and stresses, the person skilled in the art would not introduce the teaching of documents E1, E2 and E3 in the known process of E31 to provide embossments in a container manufactured by the same (see letter dated 30 December 2019, page 10, second and third paragraph and letter dated 1 March 2020, page 33, third paragraph to page 38, second complete paragraph). The patent proprietor also argued at the oral proceedings before the Board that the NNPB process was known well before the filing date of E1, E2 and E3, so that if the inventors of E1, E2 and E3 would have considered the method therein disclosed to be applicable to NNPB processes, they would have indicated so in these documents.

The patent proprietor further argues that the claimed stretch of the parison body of at least 45% has the technical effect of maintaining the stress levels of the wall material and/or its thickness in an operational range (see letter of 30 December 2019, page 12, first complete paragraph) and that this is not suggested by the prior art.

- 1.4 The Board cannot follow the line of argument of the patent proprietor and the opposition division and concurs with opponent 2 that the subject-matter of claim 1 of the patent as maintained by the opposition division is not inventive.

The combination of features identified above, which are related to the embossment on the parison body and to the corresponding debossment on the mold surface, are considered to provide the technical effect of allowing to obtain a method of making a narrow neck glass container in a press-and-blow manufacturing process having at least one internal embossment on the glass container body (see also paragraph [0010] of the patent in suit).

It is undisputed that documents E1, E3, and in particular document E2 teach to provide a debossment in the mold internal surface and thus an embossment on the parison body so that a neck glass container with at least one internal embossment can be obtained.

The Board concurs with opponent 2 that the person skilled in the art would introduce that teaching of documents E1, E2 and E3 in a generally known NNPB process, as depicted by E31, to solve the above problem mentioned in the patent in suit without the need of any inventive skill.

The Board cannot follow the argument of the patent proprietor that the person skilled in the art would not make use of the teaching of E1, E2 and E3 in the context of manufacturing a body with a narrow neck because of the different kind of processes referred to in these documents in comparison to the generally known NNPB process and due to the lower thickness associated with narrow neck bodies and the stress and strain associated with variation of their thickness.

Although the argument that the NNPB process is somehow different from the press-and-blow process can be followed, these processes are clearly in the same

technical field. The fact that a careful design and setting should be considered when planning to use the NNPB process does not mean that a person skilled in the art would be led away from introducing the teaching of any of E1, E2 or E3 in a generally known NNPB process but would rather lead him to carefully design and set the NNPB process when applying the teaching of these documents.

It is not required that E1, E2 and E3 explicitly mention the applicability of their teaching to NNPB process. This is for the person skilled in the art to judge on the basis of the common general knowledge.

The Board therefore concurs with opponent 2 that the person skilled in the art would apply the teaching of E1, E2 and E3 to a known NNPB process with the aim of obtaining a narrow neck press-and-blow product having an internal embossment without the need of any inventive skills.

With regard to the distinguishing features linked to the stretch of the parison body the following is noted.

The only passage of the original application where the claimed stretching of the parison body is mentioned is at page 5, lines 6 and 7, which reads:

"The glass of the parison body normally is stretched more than 45% during the blowing operation, and typically is stretched in the range of 45% to 70%",

and in claim 3 of the application as originally filed, reading:

"the method set forth in claim 2 wherein said parison body stretches at least 45% during said step (f)".

A technical effect for the parison body stretching at least 45% when gas is blown through the container neck is not to be derived from the application as originally filed.

Accepting the argument of the patent proprietor that it is known to the person skilled in the art that the stretch of the parison body affects the stress and strain level in the final product, the Board considers within the reach of the person skilled in the art to set the parameters of the manufacturing process such as to have the appropriate stretch level in the parison body for having the desired levels of stress and strain in the final product.

The Board thus considers that the distinguishing feature of the stretch of the parison body of at least 45% cannot justify in itself the presence of an inventive step for the subject-matter of claim 1.

The Board further concurs with opponent 2 that no specific technical effect can be derived from the application as originally filed for the distinguishing feature linked to the external closure attachment diameter.

As admittedly indicated by the patent proprietor (see point VII.4.2, first paragraph, of the reply to the statement setting out the grounds of appeal) the aim of the feature of the external closure attachment diameter of not more than 36 mm is that of distinguishing the subject-matter of the claim from a process of making wide neck bodies. No specific technical effect for this

feature has been suggested by the patent proprietor nor can be derived from the application as originally filed. This has not been contested by the patent proprietor. Therefore this distinguishing feature is to be seen as a mere design feature which cannot provide a basis for acknowledging an inventive step of the subject-matter of claim 1.

In addition, it is undisputed that the distinguishing features indicated above do not provide any combinative effect, *i.e.* to interact synergistically so as to provide a technical effect which goes beyond the sum of the technical effects which they provide independently from each other (see Case Law of the Boards of Appeal [CLB], 10<sup>th</sup> Edition, 2022, I.D.9.3.1).

Opponent 2 has thus convincingly demonstrated the incorrectness of the decision of the opposition division with respect to the non-obviousness of the subject-matter of claim 1 of the patent as maintained in opposition proceedings. The subject-matter of claim 1 is therefore not inventive in the sense of Article 56 EPC and the decision under appeal is to be set aside.

2. Inventive step of the subject-matter of claim 1 according to auxiliary request 1 (Article 56 EPC)

2.1 Claim 1 of auxiliary request 1 differs from claim 1 of the main request in particular in that the feature

"said parison body stretches at least 45%"

has been amended in

"said parison body stretches in the range of 45% to 70%".

The patent proprietor argues that with a stretching factor in the range of 45% to 70% the container would not suffer from excess strain in the container material and this allows in a surprising manner, to introduce structural amendments such as embossments in a container made with a NNPB process (see letter dated 1 March 2022, page 41, last paragraph - page 42, fourth paragraph).

As there is no indication to realize embossments in an NNPB container and to use the claimed stretch range for the parison body the subject-matter of claim 1 would be inventive.

2.2 The Board disagrees.

Similarly to what discussed for the main request is noted that the only passage of the original application where the claimed stretching range of the parison body is mentioned is at page 5, lines 6 and 7, which reads:

"The glass of the parison body normally is stretched more that 45% during the blowing operation, and typically is stretched in the range of 45% to 70%",

and in claim 4 as originally filed reading:

"the method set forth in claim 3 wherein said parison body stretches in the range 45% to 70% during said step (f)".

A technical effect for the parison body stretching in the range 45% to 70% when gas is blown through the container neck is not to be derived from the application as originally filed.

Similarly to the main request the Board considers that accepting the argument of the patent proprietor that it is known to the person skilled in the art that the stretch of the parison affects the stress and strain level in the final product, the Board considers within the reach of the person skilled in the art to set the parameters of the manufacturing process such as to have the appropriate stretch range in the parison body for having the desired levels of stress and strain in the final product.

The Board thus considers that the distinguishing feature of the stretch of the parison body in the range of 45% to 70% in itself cannot establish the presence of an inventive step for the subject-matter of claim 1 of auxiliary request 1.

2.3 The Board is thus not convinced by the arguments of the patent proprietor that the amendments introduced in claim 1 of auxiliary request 1 overcome the objection of lack of inventive step of the main request.

3. Inventive step of the subject-matter of claim 1 according to auxiliary request 2 (Article 56 EPC)

3.1 Claim 1 of auxiliary request 2 differs from claim 1 of the main request among other features in that the following underlined features have been added to step a) of claim 1 of the main request while the striked-through features have been deleted:

"...the mould body has an internal surface with ~~at least one~~ a plurality of internal debossments (20, 22, 24) of predetermined geometry, in a predetermined

geometric pattern and having a spacing parallel to the axis of said mold body (16)...".

- 3.2 The patent proprietor argued at the oral proceedings that the above distinguishing features allow to have lower stress level in the product obtained by the claimed process and that since the introduction of these features in a generally known NNPB process is not hinted to by the prior art, the subject-matter of claim 1 according to auxiliary request 2 is inventive.

The patent proprietor indicated as a basis for the amendments to step a) of claim 1 page 4, lines 1 to 4 and 6 to 8 together with figures 1 and 2 of the original application (see page 30, third paragraph of the reply to the statement setting out the grounds of appeal).

The technical effect alleged by the patent proprietor cannot be derived either from this passage or from any other passage of the original application. The line of argument the patent proprietor is therefore not convincing. The problem to be solved can therefore only be formulated less ambitiously as how to provide an alternative manufacturing process and the subject-matter of the claim is therefore obvious (see also CLB, *supra*, I.D.4.4.3.b).

- 3.3 In the reply to the statement setting out the ground of appeal the patent proprietor argued that since the added features were not disclosed in any of the cited documents, the subject-matter of the claim has to be considered inventive (see page 32, second to fifth paragraph).

This line of argument is not convincing since the objective technical problem to be solved had not been

identified by the patent proprietor. As indicated in the previous paragraph, in the absence of a technical effect derivable for the distinguishing features in the application as originally filed, the problem to be solved can then only be formulated as how to provide an alternative manufacturing process and the subject-matter of the claim is therefore obvious.

3.4 The Board is thus not convinced by the arguments of the patent proprietor that the amendments introduced in claim 1 of auxiliary request 2 overcome the objection of lack of inventive step of the main request that is also valid for auxiliary request 2.

4. Inventive step of the subject-matter of claim 1 according to auxiliary request 3 (Article 56 EPC)

Claim 1 of auxiliary request 3 differs from claim 1 of the main request among other features in that the following underlined features have been added to step f) of claim 1 of the main request:

"wherein as the parison (26) expands and stretches, the external embossments (20a, 22a, 24a) on said parison simultaneously expand and stretch, wherein the internal embossments (20b, 22b, 24b) have geometries and patterns corresponding to the geometries and patterns of the internal debossments (20, 22, 24) in the blank mold (16) as stretched and displaced during the blow molding operation, and wherein the geometries of the internal embossments (20b, 22b, 24b) are less sharp than those of the original external embossments (20a, 22a, 24a) due to the stretching and displacement through the container wall that takes place during blowing".

- 4.1 Similarly to auxiliary request 2, the patent proprietor argued at the oral proceedings that the above distinguishing features of the subject-matter of claim 1 according to auxiliary request 3 enable to have lower stress level in the product obtained by the claimed process and that, since the introduction of these features in a generally known NNPB process is not hinted to by the prior art, the subject-matter of claim 1 is inventive.

The patent proprietor indicated as a basis for the amendments to step f) of claim 1 page 5, lines 3 to 5 in combination with figures 4A to 5C (see reply to the statement setting out the grounds of appeal page 33, third paragraph).

The technical effect alleged by the patent proprietor cannot be derived either from this passage or from any other passage of the original application. The line of argument the patent proprietor is therefore not convincing. The problem to be solved can therefore only be formulated less ambitiously as how to provide an alternative manufacturing process and the subject-matter of the claim is therefore obvious (see also CLB, *supra*, I.D.4.4.3.b).

- 4.2 In the reply to the statement setting out the ground of appeal the patent proprietor argued, similarly as for auxiliary request 2, that since the added features were not disclosed in any of the cited documents, the subject-matter of the claim has to be considered inventive (see page 33, second last paragraph - page 34, third paragraph).

For the same reasons as for auxiliary request 2, this line of argument is not convincing since the objective

problem to be solved has not been identified by the patent proprietor. As indicated in the previous paragraph, in the absence of a technical effect derivable for the distinguishing features in the application as originally filed, the problem to be solved can then only be formulated as how to provide an alternative manufacturing process and the subject-matter of the claim is therefore obvious.

4.3 The Board is thus not convinced by the arguments of the patent proprietor that the amendments introduced in claim 1 of auxiliary request 3 overcome the objection of lack of inventive step of the main request.

5. Inventive step of the subject-matter of claim 1 according to auxiliary request 4 (Article 56 EPC)

5.1 Claim 1 of auxiliary request 4 differs from claim 1 of the main request among other features in that the expression "debossment" has been replaced by the expression "pocket".

5.2 Similarly to auxiliary requests 2 and 3, the patent proprietor argued at the oral proceedings that the above distinguishing feature enables to have lower stress level in the product obtained by the claimed process and that, since the introduction of this feature in a generally known NNPB process is not hinted to by the prior art, the subject-matter of claim 1 is inventive.

The patent proprietor indicated as a basis for the amendment of the term "debossment" in "pocket" page 2, lines 6 to 7 and page 4, lines 1 to 4 in combination with figures 1 and 2 (see reply to the statement

setting out the grounds of appeal page 34, sixth paragraph).

The technical effect alleged by the patent proprietor cannot be derived either from this passage or from any other passage of the original application. The line of argument the patent proprietor is therefore not convincing. The problem to be solved can therefore only be formulated less ambitiously as how to provide an alternative manufacturing process and the subject-matter of the claim is therefore obvious (see also CLB, *supra*, I.D.4.4.3.b).

- 5.3 In the reply to the statement setting out the ground of appeal the patent proprietor argued, in the same line as for auxiliary requests 2 and 3, that since the added features were not disclosed in any of the cited documents, the subject-matter of the claim has to be considered inventive (see page 34, second last paragraph - page 35, second paragraph).

For the same reasons as for auxiliary request 2 and 3, this line of argument is not convincing since the objective problem to be solved has not been identified by the patent proprietor. As indicated in the previous paragraph, in the absence of a technical effect derivable for the distinguishing features in the application as originally filed, the problem to be solved can then only be formulated as how to provide an alternative manufacturing process and the subject-matter of the claim is therefore obvious.

- 5.4 The Board is thus not convinced by the arguments of the patent proprietor that the amendments introduced in claim 1 of auxiliary request 4 overcome the objection of lack of inventive step of the main request.

6. Inventive step of the subject-matter of claim 1 according to auxiliary request 5 (Article 56 EPC)

6.1 Claim 1 of auxiliary request 5 differs from claim 1 of the main request among other features in that the following underlined features have been added to step a) of claim 1 of the main request:

"...has an internal surface with ~~at least one~~ a plurality of internal debossments (20, 22, 24) of predetermined geometry, in a predetermined geometric pattern, wherein the respective series of debossments (20, 22, 24) are in linear arrays parallel to the axis of the blank mold body (16)."

6.2 Similarly to auxiliary requests 2, 3 and 4, the patent proprietor argued at the oral proceedings that the above distinguishing features enable to have lower stress level in the product obtained by the claimed process and that, since the introduction of these features in a generally known NNPB process is not hinted to by the prior art, the subject-matter of claim 1 is inventive.

The patent proprietor indicated as a basis for the amendment page 4, lines 6 to 7 (see reply to the statement setting out the grounds of appeal, page 35, second last paragraph).

As it was the case for auxiliary requests 2, 3 and 4, the technical effect alleged by the patent proprietor cannot be derived either from this passage or from any other passage of the original application. The line of argument the patent proprietor is therefore not convincing. The problem to be solved can therefore only

be formulated less ambitiously as how to provide an alternative manufacturing process and the subject-matter of the claim is therefore obvious (see also CLB, *supra*, I.D.4.4.3.b).

6.3 In the reply to the statement setting out the ground of appeal the patent proprietor argued as for auxiliary requests 2, 3 and 4, that since the added features were not disclosed in any of the cited documents, the subject-matter of the claim has to be considered inventive (see page 36, second paragraph).

Under the same reasoning as for auxiliary requests 2, 3 and 4, this line of argument is not convincing since the objective problem to be solved has not been identified by the patent proprietor. As indicated in the previous paragraph, in the absence of a technical effect derivable for the distinguishing features in the application as originally filed, the problem to be solved can then only be formulated as how to provide an alternative manufacturing process and the subject-matter of the claim is therefore obvious.

6.4 The Board is thus not convinced by the arguments of the patent proprietor that the amendments introduced in claim 1 of auxiliary request 5 overcome the objection of lack of inventive step of the main request.

7. Inventive step of the subject-matter of claim 1 according to auxiliary request 6 (Article 56 EPC)

7.1 Claim 1 of auxiliary request 6 differs from claim 1 of the main request among other features in that the following underlined features have been added to step a) of claim 1 of the main request while the struck-through feature have been deleted:

"...that has an internal surface with at least one a plurality of internal debossments (20, 22, 24) of predetermined cross-shaped (20), part-spherical (22) or triangular (24) geometry, in a predetermined geometric pattern,..."

- 7.2 Similarly to auxiliary requests 2, 3, 4 and 5, the patent proprietor argued at the oral proceedings before the Board that the above distinguishing features allows to have lower stress level in the product obtained by the claimed process and that, since the introduction of these features in a generally known NNPB process is not hinted to by the prior art, the subject-matter of claim 1 is inventive.

The patent proprietor indicated as a basis for the amendment page 4, lines 4 to 6 (see reply to the statement setting out the grounds of appeal, page 36, fifth paragraph).

As it was the case for auxiliary requests 2, 3, 4 and 5, the technical effect alleged by the patent proprietor cannot be derived either from this passage or from any other passage of the original application. The line of argument the patent proprietor is therefore not convincing. The problem to be solved can therefore only be formulated less ambitiously as how to provide an alternative manufacturing process and the subject-matter of the claim is therefore obvious (see also CLB, *supra*, I.D.4.4.3.b).

- 7.3 In the reply to the statement setting out the ground of appeal the patent proprietor argued as for auxiliary requests 2, 3, 4 and 5 that since the added features were not disclosed in any of the cited documents, the

subject-matter of the claim has to be considered inventive (see the passage bridging pages 36 and 37).

For the same reasons as for auxiliary requests 2, 3, 4 and 5, this line of argument is not convincing since the objective problem to be solved has not been identified by the patent proprietor. As indicated in the previous paragraph, in the absence of a technical effect derivable for the distinguishing features in the application as originally filed, the problem to be solved can then only be formulated as how to provide an alternative manufacturing process and the subject-matter of the claim is therefore obvious.

- 7.4 The Board is thus not convinced by the arguments of the patent proprietor that the amendments introduced in claim 1 of auxiliary request 6 overcome the objection of lack of inventive step of the main request.
8. Since the subject-matter of claim 1 of auxiliary requests 1 to 6 does not overcome the objection of lack of inventive step of the main request, the auxiliary requests are not allowable and any other objection in relation to the admissibility and allowability of these requests raised by opponent 2 does not need to be addressed.

In view of the conclusions above also the question of admittance of document E10' into the proceedings, and the corresponding conditional requests of the patent proprietor of remittal of the case to the opposition division and of apportionment of costs do not need to be addressed.

In view of the above the appeal is to be allowed and the patent to be revoked.

9. Patent proprietor's request for referral of a question to the Enlarged Board of Appeal

The patent proprietor requested at the end of the oral proceedings that the following question be referred to the Enlarged Board of Appeal under Article 112(1) (a) EPC:

*"Wenn in der vorläufigen Meinung der Beschwerdekammer ein expliziter Hinweis getätigt wird, dass der Patentinhaber bereits substantiierte Argumente, insbesondere zur Frage der erfinderischen Tätigkeit des Gegenstands aller Hilfsanträge eingereicht hat und dann erstmals in der mündlichen Verhandlung die Frage aufgeworfen wird, von dieser Meinung abzuweichen, kann dies dazu führen, dass Argumente der Patentinhaberin, die daraufhin zur Stützung der erfinderischen Tätigkeit der Hilfsanträge in der mündlichen Verhandlung vorgebracht werden, als verspätet zurückgewiesen werden können?"*

which is translated as follows by the Board:

"If in the preliminary opinion of the board of appeal there is an explicit indication that the patent proprietor has already submitted substantiated arguments, in particular on the question of inventive step of the subject-matter of all auxiliary requests, and then the question is raised for the first time at the oral proceedings to depart from that opinion, can this result in that arguments of the patent proprietor which are subsequently raised in support of the inventive step of the auxiliary requests at the oral proceedings being rejected as being late-filed?"

In the present appeal case the Board decides on the allowability of the auxiliary requests without addressing the issue of their substantiation in the reply to the statement setting out the grounds of appeal and in doing so, the Board also does not address the issue of the amendments of the patent proprietor's appeal case. As a consequence of the above, the question formulated by the patent proprietor does not need to be answered by the Enlarged Board of Appeal in order to reach a final decision in the present appeal proceedings. The Board thus decides not to refer this question to the Enlarged Board of Appeal and refuses the corresponding request of the patent proprietor.

## Order

**For these reasons it is decided that:**

1. **The decision under appeal is set aside.**
2. **The patent is revoked.**
3. **The request for referral to the Enlarged Board of Appeal is refused.**

The Registrar:

The Chairman:



G. Nachtigall

A. Cano Palmero

Decision electronically authenticated