

PATENT COOPERATION TREATY

Owens-Illinois, Inc.

APR 17 2017

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:
SUSAN L. SMITH
OWENS-ILLINOIS, INC.
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PCT

NOTIFICATION OF TRANSMITTAL OF
INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Rule 71.1)

Date of mailing
(day/month/year)

Applicant's or agent's file reference

19330WO

IMPORTANT NOTIFICATION

International application No.

PCT/US16/20832

International filing date (day/month/year)

04 March 2016 (04.03.2016)

Priority date (day/month/year)

12 March 2015 (12.03.2015)

Applicant

OWENS-BROCKWAY GLASS CONTAINER INC.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices)(Article 39(1))(see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the *PCT Applicant's Guide*.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed invention is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

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Sameh Tawfik

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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 19330WO	FOR FURTHER ACTION		See Form PCT/IPEA/416																								
International application No. PCT/US16/20832	International filing date (<i>day/month/year</i>) 04 March 2016 (04.03.2016)	Priority date (<i>day/month/year</i>) 12 March 2015 (12.03.2015)																									
International Patent Classification (IPC) or national classification and IPC IPC: B65B 7/16 (2006.01) CPC: B65B 7/2878; 7/164																											
Applicant OWENS-BROCKWAY GLASS CONTAINER INC.																											
1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of <u>3</u> sheets, including this cover sheet. 3. This report is also accompanied by ANNEXES, comprising: a. ☒ (<i>sent to the applicant and to the International Bureau</i>) a total of <u>8</u> sheets, as follows: ☒ sheets of the description, claims and/or drawings which have been amended and/or sheets containing rectifications authorized by this Authority, unless those sheets were superseded or cancelled, and any accompanying letters (see Rules 46.5, 66.8, 70.16, 91.2, and Section 607 of the Administrative Instructions). ☐ sheets containing rectifications, where the decision was made by this Authority not to take them into account because they were not authorized by or notified to this Authority at the time when this Authority began to draw up this report, and any accompanying letters (Rules 66.4bis, 70.2(e), 70.16 and 91.2). ☐ superseded sheets and any accompanying letters, where this Authority either considers that the superseding sheets contain an amendment that goes beyond the disclosure in the international application as filed, or the superseding sheets were not accompanied by a letter indicating the basis for the amendments in the application as filed, as indicated in item 4 of Box No.I and the Supplemental Box (see Rule 70.16(b)). b. ☐ (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____ containing a sequence listing, in the form of an Annex C/ST.25 text file, as indicated in the Supplemental Box Relating to Sequence Listing (see paragraph 3ter of Annex C of the Administrative Instructions).																											
4. This report contains indications relating to the following items: <table style="width: 100%; border: none;"> <tr> <td style="width: 10%;">☒</td> <td style="width: 20%;">Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td>☐</td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td>☐</td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td>☐</td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td>☒</td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td>☐</td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td>☐</td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td>☐</td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>				☒	Box No. I	Basis of the report	☐	Box No. II	Priority	☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	☐	Box No. IV	Lack of unity of invention	☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement	☐	Box No. VI	Certain documents cited	☐	Box No. VII	Certain defects in the international application	☐	Box No. VIII	Certain observations on the international application
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Date of submission of the demand 29 December 2016 (29.12.2016)		Date of completion of this report 04 April 2017 (04.04.2017)																									
Name and mailing address of the IPEA/ US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-8300		Authorized officer Hemant Desai Telephone No. (703) 308-1148																									

Box No. I Basis of the report1. With regard to the **language**, this report is based on:

- ☒ the international application in the language in which it was filed.
- ☐ a translation of the international application into English which is the language of a translation furnished for the purposes of:
- ☐ international search (Rules 12.3(a) and 23.1(b)).
- ☐ publication of the international application (Rule 12.4(a)).
- ☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a) and (b)).

2. With regard to the **elements** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-28 as originally filed/furnished
- pages* NONE received by this Authority on _____
- pages* NONE received by this Authority on _____
- ☒ the claims:
- Nos. NONE as originally filed/furnished
- Nos.* none as amended (together with any statement) under Article 19
- Nos.* 29-34 received by this Authority on 07 February 2017
- ☒ the drawings:
- pages 1-5 as originally filed/furnished
- pages* NONE received by this Authority on _____
- pages* NONE received by this Authority on _____

☐ a sequence listing - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since either they are considered to go beyond the disclosure as filed, or they were not accompanied by a letter indicating the basis for the amendments in the application as filed, as indicated in the Supplemental Box (Rules 70.2(c) and (c-bis)):

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____

5. ☐ This report has been established:

- ☐ taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rules 66.1(d-bis) and 70.2(e)).
- ☐ without taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rules 66.4bis) and 70.2(e)).

6. ☒ With regard to top-up searches (Rules 66.1ter and 70.2(f)):

- ☒ A top-up search was carried out by this Authority on 04 April 2017 (04.04.2017)
- ☐ Additional relevant documents have been discovered during the top-up search.
- ☐ No top-up search was carried out by this Authority because it would serve no useful purpose.

7. ☐ Supplementary international search report(s) from Authority(ies) _____ has/have been received and taken into account in establishing this report (Rule 45bis.8(b) and (c)).

* If item 4 applies, some or all of those sheets may be marked "superseded."

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims <u>1-18</u>	YES
	Claims <u>NONE</u>	NO
Inventive Step (IS)	Claims <u>1-18</u>	YES
	Claims <u>NONE</u>	NO
Industrial Applicability (IA)	Claims <u>1-18</u>	YES
	Claims <u>NONE</u>	NO

2. Citations and Explanations (Rule 70.7)

Claims 1-18 meet the criteria set out in PCT Article 33(2)-(4), because the prior art does not teach or fairly suggest an apparatus for sealing a foil liner to a sealing surface of a container comprising among other features, one or more fluid paths in the seal head for passing fluid through and out of the seal head and onto a portion of the foil liner, the use of insulating disc carried at a first end of the seal head body, aligning a sealing surface of a seal head with the sealing surface of the container.

----- NEW CITATIONS -----

REPLACEMENT SHEET**Claims**

1.

An apparatus (12, 112) for sealing a foil liner (14) to a sealing surface (24) of a container (10), comprising:

5 a seal head (26, 126) including:

a body (32, 132) having a first end (34, 134), a second end (36, 136) opposite said first end (34, 134), and an axis (B) extending through said first and second ends, said body (32, 132) further comprising an axially-facing sealing surface (38, 138) at said second end (36, 136) thereof facing away from said first end (34, 134) of said body (32, 132) characterized in that said

10 seal head comprises:

one or more fluid paths (48, 148) in said seal head (26, 126) for passing fluid through and out of said seal head (26, 126) and onto at least a portion of said foil liner (14).

2.

15 The apparatus (12, 112) set forth in claim 1, wherein said seal head (26, 126) further includes:

a recess (42) in said body (32, 132) at said second end (36, 136) thereof disposed radially inward of said axially-facing sealing surface (38, 138); and

an inlet passageway (44, 144) and an outlet passageway (46, 146) both extending through
20 said body (26, 126) and in fluid communication with said recess (42), said inlet passageway (44, 144), outlet passageway (46, 146), and recess (42) defining said one or more fluid paths (48, 148) in said seal head (26, 126).

REPLACEMENT SHEET

3.

The apparatus (112) set forth in claim 1, wherein said seal head (126) further includes an inlet passageway (144), one or more outlet passageways (146), and one or more fluid pathways (182) in fluid communication with said inlet passageway (144) and said outlet passageway(s) (146), said inlet passageway (144), outlet passageway(s) (146), and fluid pathway(s) (182) defining said one or more fluid paths (148) in said seal head (126).

4.

The apparatus (12, 112) set forth in claim 1, further comprising a facing (28, 128) carried by the body (32, 132) of the seal head (26, 126) and disposed adjacent to said axially-facing sealing surface (38, 138) of said body (32, 132) of said seal head (26, 126).

5.

The apparatus (12) set forth in claim 4, wherein said facing (28) extends both radially across and axially into said recess (42).

REPLACEMENT SHEET

6.

The apparatus (12) set forth in claim 4, wherein said facing (28) comprises a first aperture (54₁) and a second aperture (54₂) therein that, when said facing (28) is coupled to said seal head body (32), correspond to said inlet passageway (44) and outlet passageway (46) extending
5 through said seal head body (32) to allow fluid to flow from said inlet passageway (44) into said recess (42) and onto said foil liner (14), and from said recess (42) into said outlet passageway (46), respectively.

7.

10 The apparatus (12, 112) set forth in claim 4, further comprising an insulating disc (30) carried at said first end (34, 134) of said seal head body (32, 132).

8.

The apparatus (112) set forth in claim 3, wherein said one or more outlet passageways
15 (146) are disposed radially inward of an outer periphery of said seal head body (132) and are configured to pass fluid out of said seal head (126) and onto said foil liner (14) in an at least partially axial direction.

REPLACEMENT SHEET

9.

The apparatus (112) set forth in claim 3, wherein said seal head (126) includes a plate (184) carried by said body (132) of said seal head (126) and disposed adjacent to said axially-facing sealing surface (138) of said seal head body (132), wherein said one or more fluid
5 pathways (182) and said one or more outlet passageways (146) are disposed within said plate (184).

10.

The apparatus (112) set forth in claim 9, wherein said plate (184) has a central portion
10 (188) and at least one of said one or more outlet passageways (146) is disposed in said central portion.

11.

The apparatus set forth in claim 9, further comprising a facing (128) carried by said body
15 (132) of said seal head (126) and disposed adjacent to said plate (184).

12.

The apparatus (112) set forth in claim 11, wherein said facing (128) comprises an aperture (194) therein that, when said facing (128) is coupled to said seal head body (132),
20 corresponds to one of said one or more outlet passageways (146) in said plate (148).

REPLACEMENT SHEET

13.

The apparatus (112) set forth in claim 11, wherein said body (132) of said seal head (126) comprises a first piece (176) and a second piece (178) that are configured to be coupled together, and further wherein said plate (184) and said facing (128) are disposed between said first piece
 5 (176) and said second piece (178) of said seal head body (132) when said first and second pieces are coupled together.

14.

A method (200) of sealing a foil liner (14) to a sealing surface (24) of a container (10),
 10 comprising:

aligning (202) a sealing surface (38, 138) of a seal head (26, 126) with said sealing surface (24) of said container (10), wherein at least a peripheral edge of said foil liner (14) is disposed between said sealing surface (38, 138) of said seal head (26, 126) and sealing surface (24) of said container (10); and

15 applying (204) heat between said seal head (26, 126) and said container (10) to heat the foil liner (14) and said sealing surface (24) of the container (10); characterized by the step of
 passing (205) fluid through one or more fluid paths (48, 148) in said seal head (26, 126) and out of said seal head (26, 126) and onto said foil liner (14).

20

15.

The method (200) set forth in claim 14, further comprising varying (206) the flow of said fluid through said one or more fluid paths (48, 148) and onto said foil liner (14) to adjust a pressure applied to said foil liner (14) during sealing.

REPLACEMENT SHEET

16.

The method (200) set forth in claim 14, wherein said passing step (205) is performed during the sealing of the foil liner (14) to the sealing surface (24) of the container (10).

5

17.

The method (200) of claim 16, further comprising passing (208) fluid through said one or more fluid paths (48, 148) in said seal head (26, 126) and onto said foil liner (14) following said sealing to cool a head space of said container (10) and thus locking a seal between said foil liner (14) and said sealing surface (24) of said container (10).

10

18.

The method (200) of claim 14, further comprising:

separating said seal head (26, 126) from said container (10); and

blowing (208) fluid onto said foil liner (14) to cool said foil liner (14) and a head space of

15 said container (10) and to cause a vacuum to form in said container (10).

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT COOPERATION TREATY**

International Application No.:	PCT/US2016/020832
Applicant:	Owens-Brockway Glass Container Inc.
International Filing Date:	04 March 2016
Attorney Docket No.:	19330 WO
In Response to:	Written Opinion Mailed 21 June 2016

RESPONSE TO INVITATION TO SUBMIT AMENDMENTS

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Alexandria, VA 22313-1450

This paper is in reply to the Invitation to Submit Amendments mailed on 13 January 2017. The Invitation indicates that Applicant's Article 34 Amendment and Response to Written Opinion submitted on 29 December 2016 did not include a complete set of claims, but rather only included replacement sheets for those pages of the application containing claim amendments (i.e., pages 29 and 33).

Applicant is submitting herewith replacement sheets 29-34 containing a complete set of claims. With this submission, Applicant respectfully requests that the amendments of the claims discussed in Applicant's previously-mentioned Article 34 Amendment and Response to Written Opinion be taken into account.

Respectfully submitted,

REISING ETHINGTON P.C.

/Jeffrey L. Doyle/

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Date: February 7, 2017
SBW/JLD

Enclosures:

Replacement Sheets 29-34 containing new claims 1-18.