

Filed on behalf of Converter Manufacturing, LLC

By: Joseph A. Farco  
Brian C. Anscomb  
Benjamin D. Schwartz  
NORRIS McLAUGHLIN P.A.  
7 Times Square, 21<sup>st</sup> Floor  
New York, NY 10036  
Tel: (917) 369-8600

IPR2021-00916

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

TEKNI-PLEX, INC.  
Petitioner

v.

CONVERTER MANUFACTURING, LLC  
Patent Owner

---

Case No. IPR2021-00916  
U.S. Patent No. 9,908,281

---

**PATENT OWNER SUR-REPLY**

## TABLE OF CONTENTS

	<u>Page</u>
TABLE OF AUTHORITIES .....	iv
PATENT OWNER SUR-REPLY .....	1
I. EVERY CHALLENGED CLAIM EXCLUDES PAPER AND INJECTION MOLDING .....	2
II. THERMOFORMING IS AN UNPREDICTABLE ART .....	3
III. PORTELLI’S FOURTH EMBODIMENT IS NOT ENABLED (GROUNDS 1, 7).....	4
A. There Are No Pre-Critical Date Working Examples Of Portelli .....	4
B. There Is Abundant Post-Critical Date Evidence of Non- enablement of Portelli .....	5
C. There Is No Evidence That Any Allegedly Commercialized “Portelli” Tray Practices Any Challenged Claim .....	8
D. Portelli’s Figure 8 Is Not Reliable.....	9
IV. PORTELLI’S RELIANCE ON NON-EXISTENT EQUIPMENT RENDERS ITS FIRST EMBODIMENT NONENABLED (GROUNDS 1, 7).....	9
A. There Is No Such Thing As A “Clacker Box” .....	9
B. A POSITA Would Not Use Hot Air to Heat And Manipulate A Thermoformed Flange .....	10
V. PORTELLI DOES NOT ANTICIPATE ANY OF THE CHALLENGED CLAIMS (GROUND 1) .....	12
A. Figure 13 Does Not Contain All Elements Of Challenged Claims .....	12
B. Petitioner’s <i>Kennametal</i> Theory Of Anticipation Should Be Disregarded As An Improper New Unpatentability Argument .....	13

<b>VI.</b>	<b>PETITIONER CANNOT “FIX” ITS UNPATENTABILITY POSITIONS BASED ON PORTELLI’S FIRST AND FOURTH EMBODIMENTS ON REPLY (GROUNDS 1, 7).....</b>	<b>13</b>
<b>A.</b>	<b>If Portelli’s First And Fourth Embodiments Must Be “Fixed,” Then Neither Can Anticipate Any Challenged Claim.....</b>	<b>13</b>
<b>B.</b>	<b>Petitioner Never Argued Obviousness Based On “Fixing” Portelli .....</b>	<b>14</b>
<b>C.</b>	<b>“Fixing” Portelli Requires Contradicting The Reference.....</b>	<b>15</b>
<b>D.</b>	<b>May’s Inept “Rim Height” Distinction Destroys His Credibility .....</b>	<b>16</b>
<b>VII.</b>	<b>LONG IS NOT ENABLED (GROUNDS 2, 6).....</b>	<b>17</b>
<b>A.</b>	<b>There Are No Pre-Critical Date Working Examples Of Long .....</b>	<b>17</b>
<b>B.</b>	<b>There Is No Evidence That Any Allegedly Commercialized “Long Technology” Practices Any Challenged Claim.....</b>	<b>17</b>
<b>C.</b>	<b>Long’s Non-Standard Technology Was Purposefully Not Disclosed .....</b>	<b>18</b>
<b>D.</b>	<b>Petitioner Cannot Show A “Nexus” Between The Alto Trays And Long.....</b>	<b>19</b>
<b>E.</b>	<b>Petitioner Never Applied Clements’ Industry Standard Overhang-to-Sheet Thickness Ratio Calculation To The Alto Trays.....</b>	<b>20</b>
<b>VIII.</b>	<b>LONG DOES NOT ANTICIPATE ANY OF THE CHALLENGED CLAIMS (GROUND 2) .....</b>	<b>23</b>
<b>IX.</b>	<b>PETITIONER ADMITS MEADORS CANNOT ANTICIPATE THE CHALLENGED CLAIMS (GROUND 3).....</b>	<b>24</b>
<b>X.</b>	<b>THE CHALLENGED CLAIMS ARE NOT OBVIOUSNESS (GROUNDS 4-8) .....</b>	<b>25</b>
<b>A.</b>	<b>May’s Obviousness Conclusions Are Fatally Flawed .....</b>	<b>25</b>
<b>B.</b>	<b>A Rolled Rim Design, Regardless of its Specific Appearance, Was Impossible to Implement in a Non-Circular Thermoformed Article Prior to the Critical Date .....</b>	<b>26</b>

C.	Petitioner Seeks to Dissuade the Board from Analyzing Disclosures In Portelli and Long “As A Whole” (Ground 4).....	26
D.	There Is No Reasonable Expectation of Success in any of Petitioner’s Obviousness Combinations Prior to the Critical Date (Grounds 4-8).....	27
E.	May Admitted A POSITA Lacks Motivation To Modify Portelli Figures 8 and 13 (Ground 7).....	27
F.	Meadors and Brown Are Non-analogous Art (Grounds 5, 8).....	28
G.	Petitioner’s Conclusory Long-Meadors Obviousness Combination (Ground 5) .....	29
XI.	PO’s POSITA Definition Should Control .....	29
XII.	CONCLUSION .....	30

## TABLE OF AUTHORITIES

<u>FEDERAL CASES</u>	<u>Page</u>
<i>Apple Inc. v. Corephotonics, Ltd.</i> , 861 Fed. Appx. 443 (Fed. Cir. 2021).....	14
<i>Auto. Techs. Int’l, Inc. v. BMW of N. Am., Inc.</i> , 501 F.3d 1274 (Fed. Cir. 2007) .....	21
<i>Broad Ocean Techs. v. Nidec Corp.</i> , IPR2015-01617, 2019 WL 1869882 (P.T.A.B. Apr. 25, 2019) .....	13
<i>Boston Sci. Scimed, Inc. v. Cordis Corp.</i> , 554 F.3d 982 (Fed. Cir. 2009) .....	28
<i>Edwards Lifesciences, LLC v. Cook, Inc.</i> , 582 F.3d 1322 (Fed. Cir. 2009) .....	2
<i>Henny Penny Corp. v. Frymaster LLC</i> , 938 F.3d 1324 (Fed. Cir. 2019) .....	14
<i>Homeland Housewares, LLC v. Whirlpool Corp.</i> , 865 F.3d 1372 (Fed. Cir. 2017) .....	16
<i>In re Baxter Travenol Labs.</i> , 952 F.2d 388 (Fed. Cir. 1991) .....	20
<i>In re Brown</i> , 329 F.2d 1006 (CCPA 1964) .....	8
<i>In re Chudik</i> , 851 F.3d 1365 (Fed. Cir. 2017) .....	9, 17
<i>In re Clay</i> , 966 F.2d 656 (Fed. Cir. 1992) .....	29
<i>In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Pat. Litig.</i> , 676 F.3d 1063 (Fed. Cir. 2012) .....	14, 27

<i>In re Dowty</i> , 118 F.2d 363 (CCPA 1941) .....	13
<i>In re Gordon</i> , 733 F.2d 900 (Fed. Cir. 1984) .....	28
<i>In re Sheppard</i> , 339 F.2d 238 (CCPA 1964) .....	8
<i>Intel Corp. v. Tela Innovations, Inc.</i> , IPR2019-01522, 2021 WL 886443 (P.T.A.B. Mar. 9, 2021) .....	28
<i>InTouch Techs., Inc. v. VGO Commc'ns, Inc.</i> , 751 F.3d 1327 (Fed. Cir. 2014) .....	26
<i>Kaiser Aluminum v. Constellium Rolled Prods. Ravenswood, LLC</i> , IPR2014-01002, Paper 64 (P.T.A.B. Nov. 2, 2015) .....	30
<i>Kroy IP Holdings, LLC v. Safeway, Inc.</i> , 107 F. Supp. 3d 656 (E.D. Tex. 2015) .....	29
<i>Life Techs., Inc. v. Clontech Labs., Inc.</i> , 224 F.3d 1320 (Fed. Cir. 2000) .....	27
<i>Medtronic, Inc. v. Teleflex Innovations S.à.r.l.</i> , IPR2020-00129, 2021 WL 2524890 (P.T.A.B. June 17, 2021) .....	27
<i>Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.</i> , 851 F.3d 1270 (Fed. Cir. 2017) .....	13
<i>OSI Pharms., LLC v. Apotex Inc.</i> , 939 F.3d 1375 (Fed. Cir. 2019) .....	28
<i>Raytheon Techs. Corp. v. Gen. Elec. Co.</i> , 993 F.3d 1374 (Fed. Cir. 2021) .....	6, 17
<i>Realtime Data, LLC v. Iancu</i> , 912 F.3d 1368 (Fed. Cir. 2019) .....	29
<i>Seabed Geosolutions (US) Inc. v. Magseis FF LLC</i> , 8 F.4th 1285 (Fed. Cir. 2021) .....	3

<i>Sealed Air Corp. v. Ranpak Corp.</i> , IPR2020-01249, 2022 WL 129094 (P.T.A.B. Jan. 12, 2022) .....	17
---	----

<i>White Consol. Indus., Inc. v. Vega Servo-Control, Inc.</i> , 713 F.2d 788, 791 (Fed. Cir. 1983) .....	19
---	----

## **REGULATIONS**

37 C.F.R. § 42.23(b) .....	13
----------------------------	----

## PATENT OWNER'S EXHIBIT LIST

EXHIBIT	DESCRIPTION
2001	Transcript of PTAB Conference Call held on December 16, 2021.
2002	Patent Owner's Revised Discovery Requests To Petitioner in IPR2021-00916.
2003	Excerpts of D.I. 26-2 filed in <i>Clearly Clean Prods., LLC et al. v. Tekni-Plex Inc. et al.</i> , Case 2:20-cv-04723-CDJ (E.D. Pa. Dec. 21, 2020).
2004	Excerpts of D.I. 25-1 filed in <i>Clearly Clean Prods., LLC et al. v. Tekni-Plex Inc. et al.</i> , Case 2:20-cv-04723-CDJ (E.D. Pa. Dec. 21, 2020).
2005	Petitioner's U.S. Provisional Patent Application Serial Number 62/793,187 and filing receipt.
2006	Petitioner's Information Disclosure Statement filed in the prosecution of U.S. Patent Application Number 16/739,795.
2007	Expert Declaration of Mr. James Clements
2008	Curriculum Vitae of Mr. James Clements
2009	January 20-21, 2022 Deposition of Mr. Glenn May
2010	August 12, 2015 Request for Examination with Claim Amendments to Intellectual Property Office of New Zealand from Alto Packaging Limited in Australian Patent Application No. 2011326886.
2011	U.S. Patent Application Publication No. US2019/0358890 A1
2012	December 5, 2019 Response and Request for Reconsideration in U.S. Patent Application Serial Number 16/536,843
2013	U.S. Patent No. 3,746,497 to Neil ("Neil")
2014	Declaration of Glenn May in IPR2021-00918
2015	Declaration of Glenn May in IPR2021-00919
2016	Forming Temperature Guidelines
2017	WO2018/007183 to Aplix SA
2018	U.S. Patent No. 10,889,049 to Aplix SA
2019	Apr. 14, 2020 Non-Final Office Action In U.S. Patent Application Ser. No. 16/314,473
2020	JPH08-108494 to Oyama et al. with Certified English Translation
2021	JP 58-205705A to Iguchi with Certified English Translation
2022	U.S. Patent No. 10,189,624 to Wallace
2023	April 13, 2018 Amendment and Request for Reconsideration in U.S. Patent Application Serial No. 15/674,787

<b>EXHIBIT</b>	<b>DESCRIPTION</b>
2024	Slavin-Bond, Chandler, "How to Robotically Handle Trays for Parts Packaging," Packaging Digest, Apr. 23, 2021
2025	Chapter 600 of Manual of Patent Examining Procedure, Revs. 55-56 (July 1978)
2026	Excerpts of July 1, 1978 Title 37 of Code of Federal Regulations
2027	U.S. Patent No. 4,239,727 to Myers et al.
2028	Excerpts from Thomas, Ian MacIntyre, "The Blending and Permeability of Polymers for Packaging Applications," Thesis to Brunel University of West London, Dept. of Materials Technology, Dec. 1995
2029	U.S. Patent No. 3,739,052 to Ayers et al.
2030	Declaration of Jeff Maguire
2031	July 13, 2018 Email from Kevin Grimes to Jeff Maguire
2032	2019 Ameristar Award - Clearly Clean Products, LLC - Roll Over-Wrap Tray from Institute of Packaging Professionals
2033	November 27, 2019 Email from Kevin Grimes to Jeff Maguire
2034	March 18, 2020 Email from Kevin Grimes to Jeff Maguire
2035	Certified File History of AU2011326886 (served but not filed)
2036	Declaration of translation of JPH08-108494 to Oyama et al.
2037	Declaration of translation of JP 56-150606A to Saito et al.
2038	Declaration of Joni Mattera (served but not filed)
2039	Supplemental Declaration of Jeff Maguire (served but not filed)
2040	Supplemental Expert Declaration of Mr. James Clements in Response to Evidentiary Objections
2041	Photographs of a Model 2S tray made and sold by Clearly Clean Products, LLC
2042	Photographs of a Model 3D tray made and sold by Clearly Clean Products, LLC
2043	Photographs of a Model 3P tray made and sold by Clearly Clean Products, LLC
2044	Photographs of a Model 3S tray made and sold by Clearly Clean Products, LLC
2045	Photographs of a Model 4L tray made and sold by Clearly Clean Products, LLC
2046	Photographs of a Model 4P tray made and sold by Clearly Clean Products, LLC

<b>EXHIBIT</b>	<b>DESCRIPTION</b>
2047	Photographs of a Model 4S tray made and sold by Clearly Clean Products, LLC
2048	Photographs of a Model 7S tray made and sold by Clearly Clean Products, LLC
2049	Photographs of a Model 8P tray made and sold by Clearly Clean Products, LLC
2050	Photographs of a Model 10P tray made and sold by Clearly Clean Products, LLC
2051	Photographs of a Model 11D tray made and sold by Clearly Clean Products, LLC
2052	Photographs of a Model 11S tray made and sold by Clearly Clean Products, LLC
2053	Photographs of a Model 15D tray made and sold by Clearly Clean Products, LLC
2054	Photographs of a Dolco Tray 2 made and sold by Real Party In Interest, Dolco LLC
2055	Shipping label for trays sent from Clearly Clean Products, LLC to Mr. James Clements (served but not filed)
2056	JP S56-150606A to Saito et al. with Declaration of English Translation
2057	Form PTO-892 (Rev. 01-2001) accompanying Apr. 14, 2020 Non-Final Office Action In U.S. Patent Application Ser. No. 16/314,473
2058	May 18, 2022 Deposition of Mr. Marc Adler
2059	Translation of archived Dexter MT Dutch-language webpage, with Declaration of Jena van der Kolk
2060	March 5, 2018 Email chain between Pieter-Jans Willemse and Tim McKeever with attachments (served but not filed)
2061	February 26, 2018 Email between Pieter-Jans Willemse and Tim McKeever with attachment (served but not filed)
2062	February 26, 2018 Email between Pieter-Jans Willemse and Tim McKeever with attachment (served but not filed)
2063	Declaration of Millard Wallace (served but not filed)
2064	Altered Screenshot from Ex. 1045 Paragraph 10 (served but not filed)
2065	Annotated version of drawings from Ex. 1045 Paragraph 14 (served but not filed)

<b>EXHIBIT</b>	<b>DESCRIPTION</b>
2066	Australian Patent No. AU2018220971 to Starnes (served but not filed)
2067	Annotated version of drawings from Ex. 1045 Paragraph 14 (served but not filed)
2068	Demonstrative of images from Ex. 1044 and Ex. 2066 (served but not filed)
2069	July 6, 2022 Deposition of Mr. James Naughton
2070	June 30 and July 1, 2022 Deposition of Glenn May
2071	2004 Sealed Air Corp Form 10-K (served but not filed)
2072	Alto Tray (not filed)
2073	Portion taken from Ex. 2072 (not filed)
2074	July 12, 2022 Deposition of Millard Wallace
2075	July 12, 2022 Continued Deposition of Glenn May
2076	Transcript of PTAB Conference Call held on July 11, 2022

## PATENT OWNER SUR-REPLY

Patent Owner (“PO”) explained in its corrected response (“POR”) how and why Petitioner’s cited references neither anticipate nor render obvious any Challenged Claim<sup>1</sup> of U.S. Patent No. 9,908,281 (the “‘281 Patent” or “Challenged Patent”). In reply, Petitioner resorts to fictional comparisons between its cited references and post-critical date photographs of articles whose relevance to the Challenged Claims was never analyzed by its expert, Glenn May (“May”).

Petitioner’s reproduction of a 2016 brochure from global thermoforming company, Dexter Mould Technology (“DexterMT”), on page 14 of the Reply is fatal to its enablement position. In that 2016 brochure, DexterMT stated that rim-rolling non-circular thermoformed articles “has been *impossible* until now!” Ex. 1055 at 5;<sup>2</sup> Ex. 1009, ¶[0003] (as of 2015, “there has not been a process which can remove the sharp flanges and burs on rectangular shaped PET and HDPE packaging at high-speed production levels.”) These exhibits demonstrate how the POSITA could not make any Portelli or Long embodiment without undue experimentation before the earliest effective filing date of the ‘281 Patent, August 31, 2015 (the “critical date”).

Petitioner does not dispute evidence of PO’s commercially successful, industry-acclaimed, patent-practicing Roll Over-Wrap® trays. Petitioner does not

---

<sup>1</sup> See Pet. at 1.

<sup>2</sup> All bold emphasis is added unless otherwise stated as being in the original.

deny it copied PO's patent-practicing trays. Absent evidence of pre-critical date commercial examples, Petitioner cannot deny the testimony of Mr. Jeffrey Maguire that only PO satisfied global food producer demand for a rolled edge rectangular thermoformed food tray. *See* Ex. 1052, 23:12-25. Petitioner's expert, May, *ignored* PO's objective evidence of non-obviousness in formulating his reply obviousness opinions.

Lacking evidence of pre-critical date enablement in an unpredictable art field, such as thermoforming, and relying on expert opinions devoid of consideration of PO's undisputed objective indicia of non-obviousness, Petitioner cannot establish unpatentability by a preponderance of evidence.

## **I. EVERY CHALLENGED CLAIM EXCLUDES PAPER AND INJECTION MOLDING**

Petitioner misapprehends the intrinsic evidence cited in the POR at 8-9. That evidence shows that the paper-ply sheet in Drummond was distinguished, and thereby excluded, from the scope of "thermoformable sheet" recited in the Challenged Claims.

Applicant's argument to the USPTO in Ex. 2012 at 8 shows two different acts of lexicography: "thermoplastic sheet (i.e., not paperboard...)" and "thermoformed (i.e., not injection molded ...)." *See Edwards Lifesciences, LLC v. Cook, Inc.*, 582 F.3d 1322, 1334 (Fed. Cir. 2009) (affirming that "i.e." is signal for lexicography to narrow ordinary meaning of claim term). For something to be

“thermoformed,” it must be “thermoformable.” According to the applicant, “thermoformed” means something other than “injection molded.” May’s contrary extrinsic evidence does not control. *See* Ex. 1044, ¶327; *see Seabed Geosolutions (US) Inc. v. Magseis FF LLC*, 8 F.4th 1285, 1287 (Fed. Cir. 2021).

## II. THERMOFORMING IS AN UNPREDICTABLE ART

Petitioner cites nothing that proves “predictability” in thermoforming. Thermoforming is an interdisciplinary art encompassing chemistry, physics, materials, mechanical engineering, and thermodynamics competences. Ex. 2070, 8:5-18; Ex. 1036 at “x”. May admitted that thermoformed article rim shapes can “vary considerably” based on numerous factors and deviations of “a fraction of a millimeter” in trimming thermoformed flanges can have unintended consequences. *See* Ex. 2070, 45:21-47:9; Ex. 1002, ¶74.

May’s 1996 Florian textbook describes thermoforming as an unpredictable art field:

- “[W]ith a newly acquired thermoforming product or project, the outcome could be *uncertain*. *A multitude of trial approaches has to be made before satisfaction can be claimed*. ... [M]anufacturing problems may require complete retooling, a new thermoforming method, or even a change of equipment to achieve satisfactory results.”

See Ex. 1056 at 361-362. Even as of 2001, Illig provided that “[t]hermoforming is still a process of high craftsmanship and experience.” Ex. 1035 at 4.

PO provided evidence that the rim/flange of a thermoformed article is “[its] *most frustratingly-inconsistent feature*” due to cutting tolerances and shrinkage, each of which “*isn’t an exact science*,” but “is a calculation based on experience, and *trial and error*.” Ex. 2024 at 2, 4. As recently as of 2018, global thermoforming manufacturer, DexterMT, admitted that its processes could not produce a specific rim geometry without an “extensive series of tests and optimisations” to “see if what [they] think will happen, really happens.” Ex. 2060 at 1. This is consistent with Petitioner’s “authoritative” Throne textbook: “*there appears to be no science in determining the dimensions of a rim in a rim roll design... .*” Ex. 1049 at 570; *accord* POR at 70-73.

In sum, PO clearly proves unpredictability in thermoforming, which Petitioner identifies as one of the “most relevant *Wands* factors,” and which militates towards non-enablement of Portelli, Long, and Meadors.

### **III. PORTELLI’S FOURTH EMBODIMENT IS NOT ENABLED (GROUNDS 1, 7)**

#### **A. There Are No Pre-Critical Date Working Examples Of Portelli**

Petitioner tacitly admits there are **no** working examples of Portelli’s First Embodiment (Figures 1-2, 9-11) and focuses on alleged working examples of Portelli’s Fourth Embodiment (Figures 7-8). See Reply at 11-13, 18-20; Ex. 2070,

117:6-19. Petitioner’s “working examples” are not double-stage (two step) thermoforming processes, like Portelli, but single step, in-mold cup-molding technologies: rolled rim technology (“RRIM”) offered by DexterMT and an undefined process offered by OMV. *See* Reply at 4-6, 12-20.<sup>3</sup>

Moreover, all of Petitioner’s commercialized “working examples” of Portelli’s Fourth Embodiment existed in or after 2016, *viz.*, ***after*** the critical date.<sup>4</sup> *See* Ex. 2070, 179:2-6, 188:14-22; 191:14-192:3, 200:9-23; *see also* Reply at 7-14; Ex. 1044, ¶¶42; Ex. 1051 (October 22, 2016); Ex. 2054-2055 (flashcard media from 2016 K-Show); Ex. 2059.

**B. There Is Abundant Post-Critical Date Evidence of Non-enablement of Portelli**

According to DexterMT’s 2016 brochure provided to attendees at the “widely attended” K-show in Dusseldorf, Germany:

“[T]he RRIM technology allows new shapes like triangular or square to be rim-rolled, ***which has been impossible until now!***”

Ex. 1055 at 5; Ex. 1044, ¶¶42-43. That Portelli’s depicted results “had not been achieved through other means as of the [Challenged Patent’s] priority date” proves

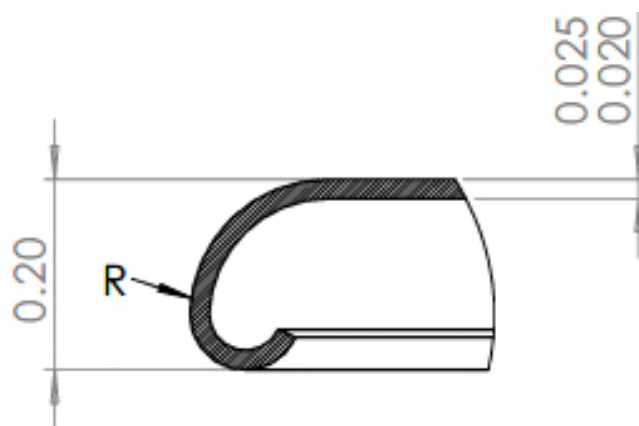
---

<sup>3</sup> Screw-fed cup rim-rolling processes (Ex. 1049 at 569-571) could not be used to roll the edge of a non-circular article. *See* Ex. 1001, 4:9-21; Ex. 1009, ¶¶0003; Ex. 2059 (as of 2016 “[r]olling the edge has only been possible with round products.”)

<sup>4</sup> Petitioner’s pre-critical date “evidence” of working examples of Portelli’s Fourth Embodiment are all inauthentic hearsay. *Compare* Ex. 2070, 122:24-123:21, 125:15-126:24, 131:13-132:25, 136:25-139:18, 211:25-214:16.

non-enablement. *Raytheon Techs. Corp. v. Gen. Elec. Co.*, 993 F.3d 1374, 1382 (Fed. Cir. 2021).

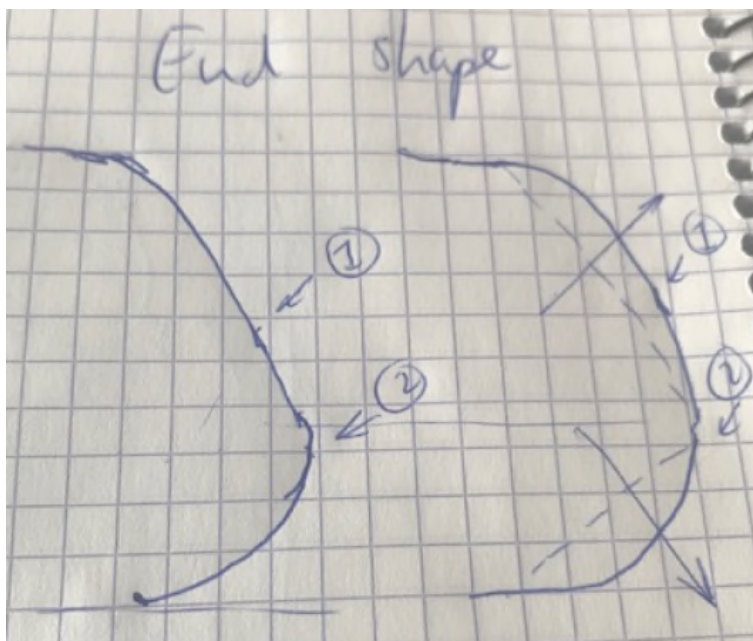
Additionally, PO provides evidence in the form of a 2018 email from Pieter-Jans Willemse (“Willemse”) of DexterMT to PO’s licensee, Clearly Clean Products, LLC (“CCP”) providing his present sense impression that “all engineers involved in the RRIM® technology” at DexterMT could not roll a rim with a smooth radius on the outside “without performing quite an extensive series of tests and optimisations... .” The rim that DexterMT was asked to make is shown below:



DETAIL B

SCALE 4 : 1

Ex. 2060 at 4, 34; Ex. 2061 at 3, Ex. 2062 at 2; Ex. 2063, ¶¶3-5. This is the rim of CCP’s patent-practicing 3P tray that is suitable for overwrapping. Ex. 2074, 35:5-36:3; Ex, 2062 at 2, Ex. 2007, A25-A27. Willemse admitted that DexterMT could not use RRIM to make the 3P rim without creating a “sharp point” at point 1:



Ex. 2060 at 1-2, 34.

Assuming DexterMT's RRIM had a "nexus" with Portelli, then Ex. 2060 corroborates the findings of Long, Alto, and PO's Expert, Mr. James Clements ("Clements"), that Portelli's process results in "puckering and distortions" of the rim. POR at 13-18; Ex. 1004, 6:29-33; Ex. 2007, ¶¶40-44, 55; Ex. 2010, p. 1; Ex. 2040, ¶¶9-10, 39. Petitioner cannot dispute that "puckering and distortions" result more often than not from use of Portelli's methods. Reply at 21; *see* Ex. 2070, 416:25-417:14.

Thermoforming's unpredictability is further evidenced by Willemse's stating that, "[f]or each step there are some parts that we [DexterMT] know and have experience in (by now), but also some that are new (due to the design), and these lead to the necessity to perform tests, to see if what we think will happen, really

happens.” *See* Ex. 2060 at 1. Willemse admitted the rim-rolling task required “work in partially unexplored territory” and “testing and finding good solutions for all unknowns [sic.] that are in the process now.” *Id.* at 2. These unbiased statements would easily suffice as non-enablement/“considerable experimentation” according to May. *See* Ex. 2009, 242:3-16 (“considerable experimentation” includes “tests that have unpredictable results ... outside [POSITA’s] normal scope of work....”)

Reports of failure to achieve Portelli’s prophetic outcomes both before and after the critical date indisputably prove non-enablement of its teachings. *Cf.* POR at 13-15; *In re Sheppard*, 339 F.2d 238, 242 (CCPA 1964); *In re Brown*, 329 F.2d 1006, 1011 (CCPA 1964) (“unsuccessful attempts to prepare fluorine-containing silicone homopolymers”).

**C. There Is No Evidence That Any Allegedly Commercialized “Portelli” Tray Practices Any Challenged Claim**

To anticipate or render obvious, the alleged prior art must enable an embodiment within the scope of the claim. *See In re Chudik*, 851 F.3d 1365, 1372 (Fed. Cir. 2017). May never determined whether any DexterMT tray met any Challenged Claim. Ex. 2070, 307:19-311:15. The same is true for any OMV article. Therefore, Petitioner cannot prove that any allegedly commercialized “Portelli” tray was an embodiment within the scope of any Challenged Claim.

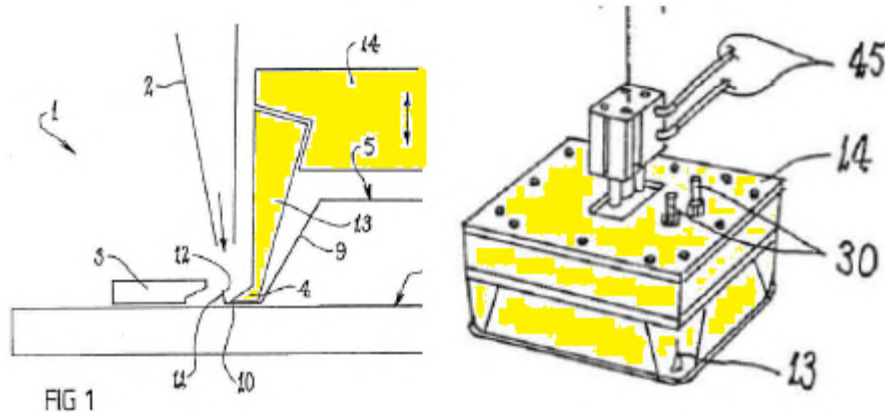
#### **D. Portelli's Figure 8 Is Not Reliable**

May uses circular reasoning to explain how a POSITA should dismiss the myriad “anomalies” in Portelli’s Figure 8 and accept an interpretation that favors Petitioner’s case. *Cf.* Ex. 2070, 237:7-238:12; *see also* Ex. 1044, ¶59. Yet, he originally said Portelli’s Figure 8 doesn’t show “actual thermoforming processing.” *Cf.* Ex. 1002, ¶305. Despite scrutinizing drawings in PO’s evidence, Ex. 2070, 172:18-174:13, May’s practiced ability to ignore abnormalities in Portelli’s Figure 8 is as convenient as it is untrustworthy. Portelli’s Figure 8 is ambiguous at best and cannot be relied upon for anticipation. *See* POR at 15 n. 7.

#### **IV. PORTELLI’S RELIANCE ON NON-EXISTENT EQUIPMENT RENDERS ITS FIRST EMBODIMENT NONENABLED (GROUNDS 1, 7)**

##### **A. There Is No Such Thing As A “Clacker Box”**

Portelli’s First Embodiment requires an unspecific “clacker box,” (highlighted in yellow below), which uses pivotally mounted clamping feet 13 and forming anvils 4.



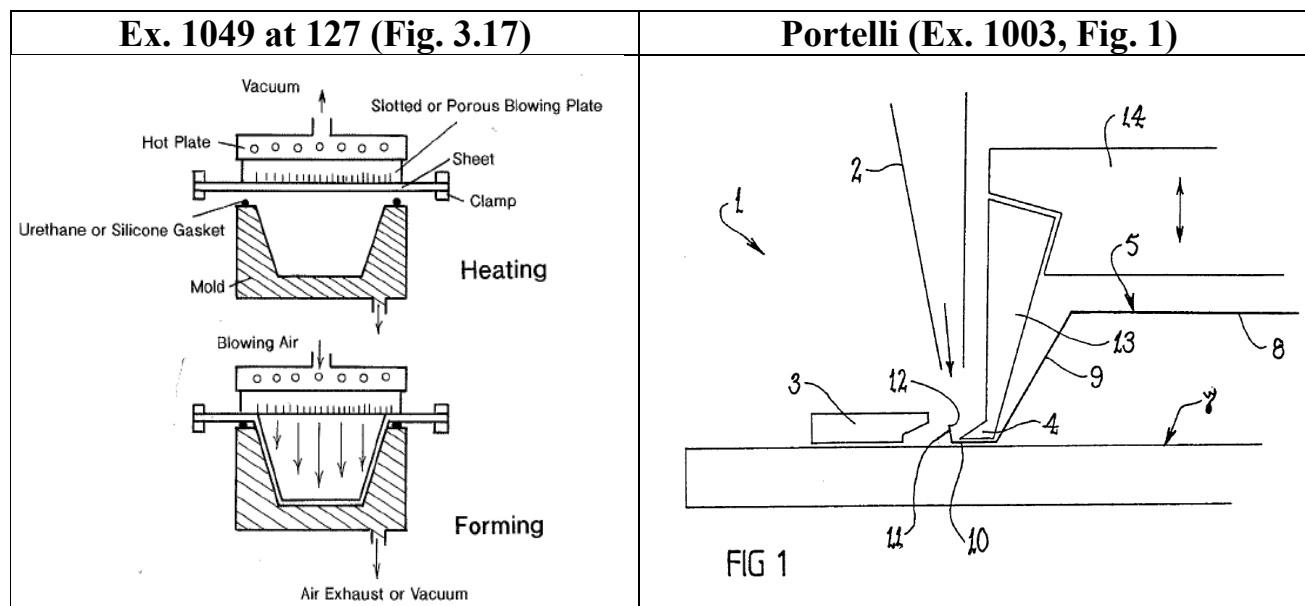
See Ex. 2007 at ¶¶36, 45-46. Petitioner contends that Portelli’s “clacker box” is a “typical hot-air manifold.” Reply at 25-26. Neither Petitioner nor May identifies a manifold with pivotally mounted clamping feet with anvils. See Ex. 2070, 302:3-303:12. Even, Mr. James Naughton (“Naughton”), Petitioner’s other fact witness with over 40 years of thermoforming manufacturing experience, testified he “[did]n’t know what a clacker box is.” See Ex. 2069, 20:12-21:9. There is no evidence of the identity of a “clacker box” anywhere in the record, including May’s textbooks. Cf. POR at 28-29. According to May, “clacker box” would be “indefinite” and “non-standardized.” See Ex. 1044, ¶295.

**B. A POSITA Would Not Use Hot Air to Heat And Manipulate A Thermoformed Flange**

Clements testified that “attempting to use hot air in the relatively small area as depicted in Portelli would be a non-standard occurrence.” Ex. 1048, 195:10 – 198:14. May conceded that while “[h]ot-air heating is employed with thermoforming” it is used “[m]ore rarely as self-contained heating system.” See

Ex. 2070, 281:17-284:17; Ex. 1035 at 135. May knew of no other publication or commercial reference that used hot air to heat a plastic flange of a rectangular thermoformed article other than Portelli. *See* Ex. 2070, 290:2-291:9, 306:18-307:10.

Contrary to the Reply's argument at page 25, Throne shows a "hot plate" in contact with the center of the sheet (not the flange), which is nothing like Portelli's First Embodiment.



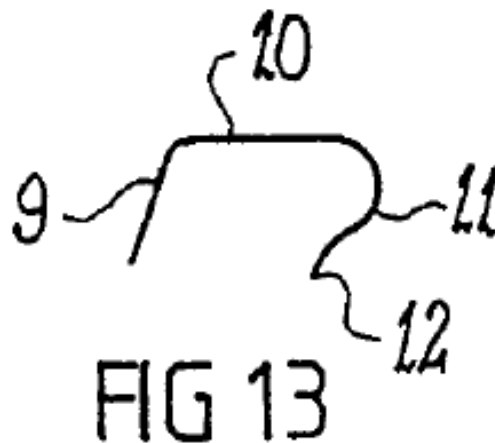
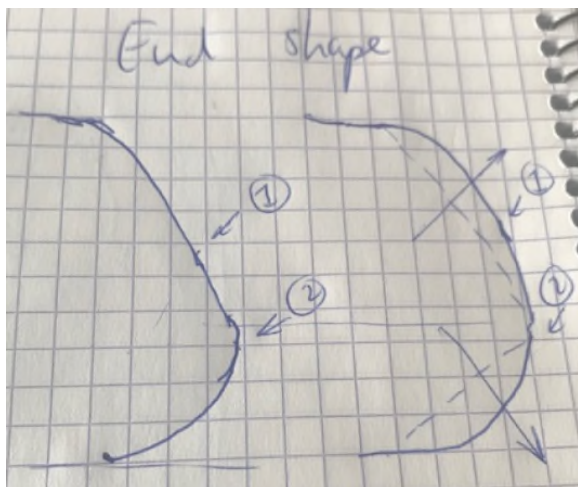
Regardless of whether Clements considered "heat-shielding and water-cooling" in his simulation of Portelli's First Embodiment, both Clements and May agree that there would be uneven thermal expansion and contraction at Portelli's rim. *See* Ex. 2007 at ¶¶39-40; Ex. 1044, ¶110 ("unsupported thermoformed shapes such as the rolled-in shape ... in Portelli Fig. 13 typically vary ... due to uneven thermal expansion and contraction.")

**V. PORTELLI DOES NOT ANTICIPATE ANY OF THE CHALLENGED CLAIMS (GROUND 1)**

**A. Figure 13 Does Not Contain All Elements Of Challenged Claims**

Petitioner incorrectly asserts that “PO does not dispute that the tray in [Portelli’s] Fig. 13 contains all elements of Claims 1, 9, 13, 17, and 20-22.” Reply at 26. PO showed that Portelli’s Fourth Embodiment was inoperative to form the desired Figure 13 “smooth periphery” about the entire periphery of a thermoformed non-circular article, especially in the corners. *See* POR at 21-23, 29-31 (citing Ex. 2007, ¶¶39-44, 83-84). Petitioner omits Clements’ testimony that there is no proof that Portelli’s Figure 13 represents the periphery of an entire tray. *See* Ex. 1047, 224:24-225:7; Ex. 1048, 37:25-38:15, 218:8-219:2.

Willemse confirmed that using the RRIM process (which Petitioner analogizes to Portelli’s Fourth Embodiment), the rim formed will have a sharp point “1” on its outside surface.



Ex. 2060 at 1-2, 34. If Portelli is inoperable to form an article with a Figure 13 periphery, then that same article cannot be used to anticipate any Challenged Claim. *In re Dowty*, 118 F.2d 363, 366 (CCPA 1941) (“[A]n inoperative prior art device may not be relied upon as an anticipation.”)

**B. Petitioner’s *Kennametal* Theory Of Anticipation Should Be Disregarded As An Improper New Unpatentability Argument**

Violating 37 C.F.R. § 42.23(b), the Reply raises a *Kennametal* theory of anticipation not raised in the Petition. *See* Reply at 29-30; *see also Broad Ocean Techs. v. Nidec Corp.*, IPR2015-01617, 2019 WL 1869882, at \*8 (P.T.A.B. Apr. 25, 2019). But, merely saying “at once envisage” does not make Petitioner’s untimely *Kennametal* argument plausible. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 851 F.3d 1270, 1274 (Fed. Cir. 2017).

Moreover, May’s conclusory “at once envisage” opinion is contradicted by his testimony that a POSITA had no reason to modify Portelli’s Figures 8 and 13. *Compare* Ex. 1044, ¶120 *with* Ex. 2009, 301:24-302:22.

**VI. PETITIONER CANNOT “FIX” ITS UNPATENTABILITY POSITIONS BASED ON PORTELLI’S FIRST AND FOURTH EMBODIMENTS ON REPLY (GROUNDS 1, 7)**

**A. If Portelli’s First And Fourth Embodiments Must Be “Fixed,” Then Neither Can Anticipate Any Challenged Claim**

The Reply suggests that a POSITA can remediate Portelli’s inoperable First and Fourth Embodiments; however embodiments in need of remediation cannot

anticipate. *See* Reply at 20, 25-26; *see also Apple Inc. v. Corephotonics, Ltd.*, 861 Fed. Appx. 443, 451 (Fed. Cir. 2021).

**B. Petitioner Never Argued Obviousness Based On “Fixing” Portelli**

First, Petitioner never raised an obviousness theory based on remediating defects in Portelli. “[A]n IPR petitioner may not raise in reply ‘an entirely new rationale’ for why a claim would have been obvious.” *Henny Penny Corp. v. Frymaster LLC*, 938 F.3d 1324, 1330–31 (Fed. Cir. 2019).

Second, May never explains how a POSITA would use the cherry-picked excerpts from textbooks (*see, e.g.*, Ex. 1044, ¶¶65-82) to remediate the issues in Portelli. Ex. 2070, 246:2-250:14, 255:4-258:23; *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Pat. Litig.*, 676 F.3d 1063, 1070-71 (Fed. Cir. 2012) (obviousness cannot be based on “merely throw[ing] metaphorical darts at a board”).

Petitioner calls Ex. 1049 an “authoritative book,” Reply at 4, but its expert did not follow its simulation techniques and did not show use of any of its formulas. Ex. 2070, 90:18-93:14, 94:20-95:15, 102:5-106:10, 110:9-114:20. Apparently, May could determine heat transfer in three dimensional drawings using his imagination alone. *Id.* at 110:24-115:25. Since its expert avoided doing his own simulations, any “flaw” Petitioner strains to make about Clements’ analyses is unsupported attorney argument. *Cf.* Reply at 24-25. Moreover,

Clements explained that Petitioner’s isolated alleged simulation “flaw” would not eliminate the defects and other deformations that result from Portelli’s First Embodiment. *See* Ex. 1048, 208:3–211:18.

Unlike May, Clements used SolidWorks® simulations that mirror Throne’s modeling techniques. *Compare* Ex. 2007, ¶¶61-100, 126-143 *with* Ex. 1049 at 524-527. Clements’ chosen tool for thermoforming simulations, SolidWorks®, is considered by Naughton, Petitioner’s witness, as “the best in the world.” Ex. 2069, 165:3-10.

### C. “Fixing” Portelli Requires Contradicting The Reference

The Board should disregard May’s unproven “fixes” for Portelli’s First and Fourth Embodiments to the extent they are conclusory and contradict the reference. For example, May claims a POSITA can remove tapers from Portelli’s First Embodiment, *see* Ex. 1044, ¶73, but he doesn’t explain how to do so or its plausibility. He also disregards the fact that Portelli teaches tapers that will inevitably result in the corners. *See* Ex. 1003, 11:5-8, Fig. 10, annotation 42.

Further, May admitted that “[i]f an edge adheres to a die,” just as Portelli says it does (*see id.* at 13:27-29), then “it’s **very likely** that article would be defective and would be discarded or recycled.” Ex. 2009, 277:2-18. Neither Petitioner nor May explains how a POSITA would use Teflon coating to resolve this defect in spite of Portelli’s use of ejector 27 as the sole means for releasing the

article from the die. *See* Ex. 1003, 13:29-14:6; Ex. 2070, 244:19-250:14. May's conclusory and unsubstantiated contradictions of the Portelli reference should be disregarded. *See Homeland Housewares, LLC v. Whirlpool Corp.*, 865 F.3d 1372, 1378-79 (Fed. Cir. 2017).

**D. May's Inept "Rim Height" Distinction Destroys His Credibility**

At the start of May's reply deposition, he testified that "it's quite evident that [DexterMT's] articles are made, as I've depicted here, and according to the teachings of Portelli." *See* Ex. 2070, 116:22-117:5. But when faced with Willemse's statements in Ex. 2060 that RRIM could not make a rolled rim in a rectangular thermoformed article, May declared there was "something" about what Willemse said in Ex. 2060 that required his statements to be "outside the scope of this case." *See* Ex. 2070, 164:8-165:12, 183:5-189:14, 198:22-200:23.<sup>5</sup> May opined that Willemse's reference to a "very high rim" meant that the tray in question was not made for overwrapping. *Id.* at 207:4-25. The rim in question was depicted in the attached drawing of CCP's patent-practicing 3P tray (Ex. 2062 at 2), whose rim height indisputably enables overwrapping with plastic film. Ex. 2074, 35:5-36:3; Ex. 2007, A19, A25-A27. Regardless of the truth, May declared nothing would make him change his opinions about Portelli. Ex. 2070, 211:6-16.

---

<sup>5</sup> Despite Willemse's statements of "unknowns," May refused to agree that these were statements of unpredictability in molding rims of thermoformed articles. *See id.* at 208:23-209:17.

It is unsupportable and circular opinions like the ones above that should cause this Board to seriously question May’s credibility. *See Sealed Air Corp. v. Ranpak Corp.*, IPR2020-01249, 2022 WL 129094, at \*9 (P.T.A.B. Jan. 12, 2022) (“Mr. May provides insufficient support in the record for this testimony...” and “Mr. May’s contrary testimony ... lacks sufficient evidentiary basis... .”)

## **VII. LONG IS NOT ENABLED (GROUNDS 2, 6)**

### **A. There Are No Pre-Critical Date Working Examples Of Long**

Every finished article supposedly made according to “Long technology” existed in or after February 2017, *viz.*, **years after** the critical date. *See* Ex. 2069, 28:6-29:10.<sup>6</sup> This is consistent with record evidence that attempts to roll rims of non-circular articles were “impossible until [2016]!” *See* Ex. 1055 at 5.

The absence of working examples of Long prior to and after the critical date proves non-enablement. *See Raytheon*, 993 F.3d at 1382.

### **B. There Is No Evidence That Any Allegedly Commercialized “Long Technology” Practices Any Challenged Claim**

May never considered whether any article supposedly made using so-called “Long Technology” satisfied any Challenged Claim. Ex. 2070, 389:9-22, 393:3-16. Petitioner cannot prove that any alleged commercial embodiment is within the scope of any Challenged Claim. *See* Reply at 32-43; *Chudik*, 851 F.3d at 1372.

---

<sup>6</sup> Until Petitioner’s counsel put it in his declaration, Naughton had never used the term “Long Technology.” *See* Ex. 2069, 152:9-15, 201:24-203:3.

### **C. Long's Non-Standard Technology Was Purposefully Not Disclosed**

In the POR, PO stated that Long was “incomplete” and “omitted what equipment to use or how to achieve the desired results.” POR at 4, 36. According to Clements and Naughton, Long merely discloses a “concept.” Ex. 2007, ¶¶120, 122, 153-165; Ex. 2069, 90:10-19. Like Clements, Petitioner’s witnesses cannot find any disclosed equipment in Ex. 1004 to execute Long’s tray “concept.” *See* Ex. 2009, 361:15-19; Ex. 2069, 110:11-112:8, 186:2-25; Ex. 2070, 346:21-348:12, 352:11-353:4, 358:7-359:10, 364:22-368:23. Indeed, despite having access to the Long reference (Ex. 1004), neither Naughton nor his engineers could make Long’s “concept” because they didn’t have the tooling expertise. *See* Ex. 2069, 88:16-90:19.

To make and use the “Long technology,” every known tooling designer of “Long technology” had to learn Alto’s confidential methods under a non-disclosure agreement (“NDA”).<sup>7</sup> *See* Ex. 2069, 32:22-33:11, 33:24-34:8, 91:20-92:23, 103:16-106:13. The design of the tools used by Alto to implement “Long technology” was considered confidential, even between licensed toolmakers. *Id.* at 103:16-106:13. This supports Naughton’s testimony that “Long technology” is *not* standard thermoforming equipment. *See id.* at 132:4-20, 133:8-134:5.

---

<sup>7</sup> This explains why Clements could not find a “readily-available mechanism before the [critical date] that could be used as a ‘second tooling assembly’” in Long. Ex. 2007, ¶159.

The drawings on pages 13-14 of Ex. 1045 contain unexplainable errors and admittedly are just a “conceptual idea” to design the tools necessary to practice Long’s “concept.” *See* Ex. 2069, 100:2-101:14, 153:5-165:2, 167:24-171:16; Ex. 2067. The omission of the “concept” drawings and the equipment on pages 13-14 and 24-25 of Ex. 1045 needed to even begin to accomplish “Long Technology” was purposeful because the stretch-and-cut tooling used by Alto is not publicly available. *See* Ex. 2069, 41:12-25. Naughton admitted that “it would ... defeat the purpose of the NDA if Alto told people what the tooling was in a published document.” *See* Ex. 2069, 110:11-112:13. Alto’s preference to maintain secrecy over the means to make and use Long’s prophetic teachings disqualifies Long as an enabling reference. *Cf. White Consol. Indus., Inc. v. Vega Servo-Control, Inc.*, 713 F.2d 788, 791 (Fed. Cir. 1983) (disclosure not enabling where “integral part of the disclosure to enable [POSITA] to ‘make and use the same’” was a trade secret); *see also* Ex. 1056 at 259 (“[thermoforming equipment] modifications are kept secret ... to keep such customization ideas from being leaked to the competition.”)

**D. Petitioner Cannot Show A “Nexus” Between The Alto Trays And Long**

Petitioner asserts that May demonstrated a “nexus” exists between the “concept” drawings and the Long reference. *See* Reply at 31-32. May admitted, “there would be no way in 2011 that the tooling that was later licensed and then produced by TSL and Marbach would have been in existence.” Ex. 2070, 368:11-

23. Only Alto could know whether tooling that existed in 2011 was the same tooling used in 2016. *See* Ex. 2069, 41:4-43:22.

Furthermore, to create a “nexus” between Long’s non-disclosure of tooling and the tooling in existence after 2016, Petitioner relies on extrinsic evidence in the form of textbooks and 2017 tooling drawings. *See* Reply at 32, 38-40; Ex. 2069, 164:16-171:2; Ex. 2070, 347:6-348:12. Extrinsic evidence may not be used to expand the meaning of Long’s generic recitations (e.g., “second tooling assembly”). *See In re Baxter Travenol Labs.*, 952 F.2d 388, 390 (Fed. Cir. 1991).

Absent disclosure of how to produce Long’s so-called “second tooling assembly,” undue experimentation to make and use the same is required. *See Auto. Techs. Int’l, Inc. v. BMW of N. Am., Inc.*, 501 F.3d 1274, 1283–84 (Fed. Cir. 2007).

**E. Petitioner Never Applied Clements’ Industry Standard Overhang-to-Sheet Thickness Ratio Calculation To The Alto Trays**

Petitioner asserts that Mr. Clements’ opinion that Long depicts a precursor that cannot be demolded is “theoretical.” Reply at 42. But its undisputed that severe overhangs in thermoformed articles prevent demolding. *See* Ex. 1018 at 14; Ex. 1019 at 315, 321. Naughton testified that he ran “lines that have had undercuts where you couldn’t pull them out in a development project.” Ex. 2069, 199:24-200:17.

Critically, Petitioner doesn't dispute Clements' analytical technique, yet none of its witnesses applied that technique to any commercial Alto tray, including to the "minimal undercut" that Naughton stated was used in the commercial samples. *See* Ex. 2069, 200:6-8, 208:12-20.

Petitioner's Illig reference (Ex. 1035) confirms Clements' opinions in Ex. 2007, ¶¶137-141, cited at POR page 40, when it discusses Figure 7.11:

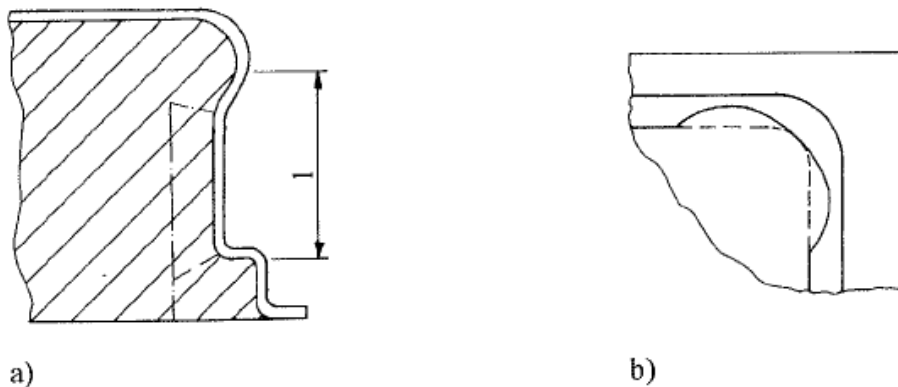
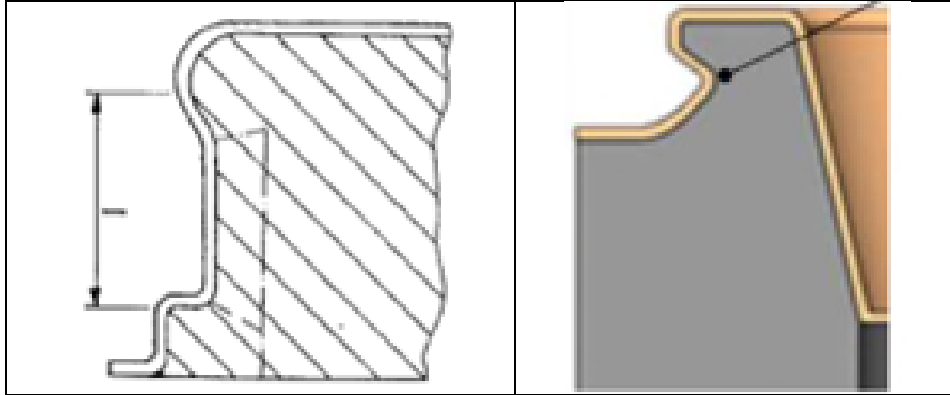


Fig. 7.11 Forced demolding of an undercut at stress-whitening by material-overstretching,  
a) sectional view, b) plan-view  
l length of stress-whitening

Illig states, "If the undercut is too large (Fig. 7.11), white stress-marks ('stress-whitening') or permanent deformations occur on moldings of certain plastics through overstressing." Ex. 1035 at 162. That is what Clements testified. *See* Ex. 2007, ¶¶139, 165. The undercut in Long is much larger than that shown in Illig's "too large" undercut in Fig. 7.11:



Illig’s teaching corroborates Clements’ view that demolding defects would result when a POSITA attempts to demold the Long precursor.

Without any working examples to use in his analyses, Clements was forced to analyze Long’s inoperative “teachings” based on (i) May’s measurements of Long (Ex. 2014, ¶¶92-93;<sup>8</sup> *see also* POR at 41-42); (ii) the teachings of **FOUR** different prior art references from across the globe (Ex. 2018, 1:62-67, 3:67 – 4:3, 10:5-8; Ex. 2020, ¶¶[0013], [0024]-[0025], [0030]-[0031]; Ex. 2021 at 2; Ex. 2056 at Fig. 4; Ex. 2036-2037); (iii) the findings of the USPTO (Ex. 2019 at ¶¶21-26, 46); (iv) the teachings from two of Petitioner’s reference exhibits (Ex. 1018 at 14; Ex. 1019 at 32 (page numbered 315)), and (v) his own experience. *See* Ex. 2007, ¶¶126-149; Ex. 2040, ¶¶15-25.<sup>9</sup>

---

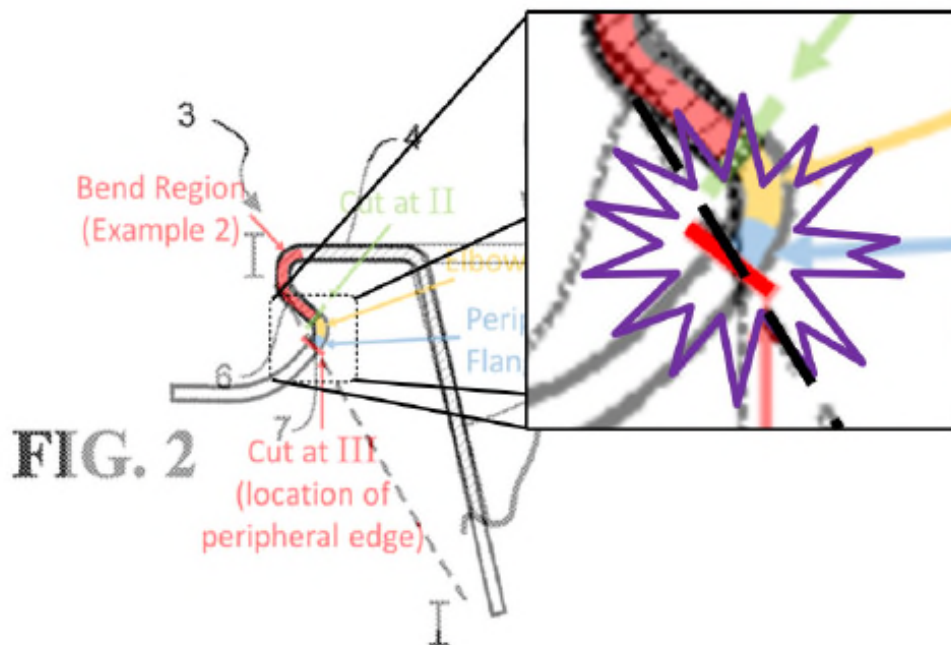
<sup>8</sup> Petitioner itself relied on those same measurements of Long’s figures to show rim heights in “actual” Long articles. *See* Ex. 2070, 433:6-443:17.

<sup>9</sup> Contrary to the Reply at 42, Mr. Clements explained that while thinner sheets of plastic can be removed, they would fail to maintain their conformation during use, i.e., hold food and be overwrapped by plastic. *See* Ex. 1047, 87:9-17; 92:4-17; *see also* Ex. 2007, ¶152.

## VIII. LONG DOES NOT ANTICIPATE ANY OF THE CHALLENGED CLAIMS (GROUND 2)

Petitioner argues that the dislocations between Cuts II-II and III-III of Long “do not appear in Long,” but Petitioner contended that this “extra plastic” resulted from formation of the “elbow” in Long’s periphery due to trimming tolerances. Pet. at 139-140.

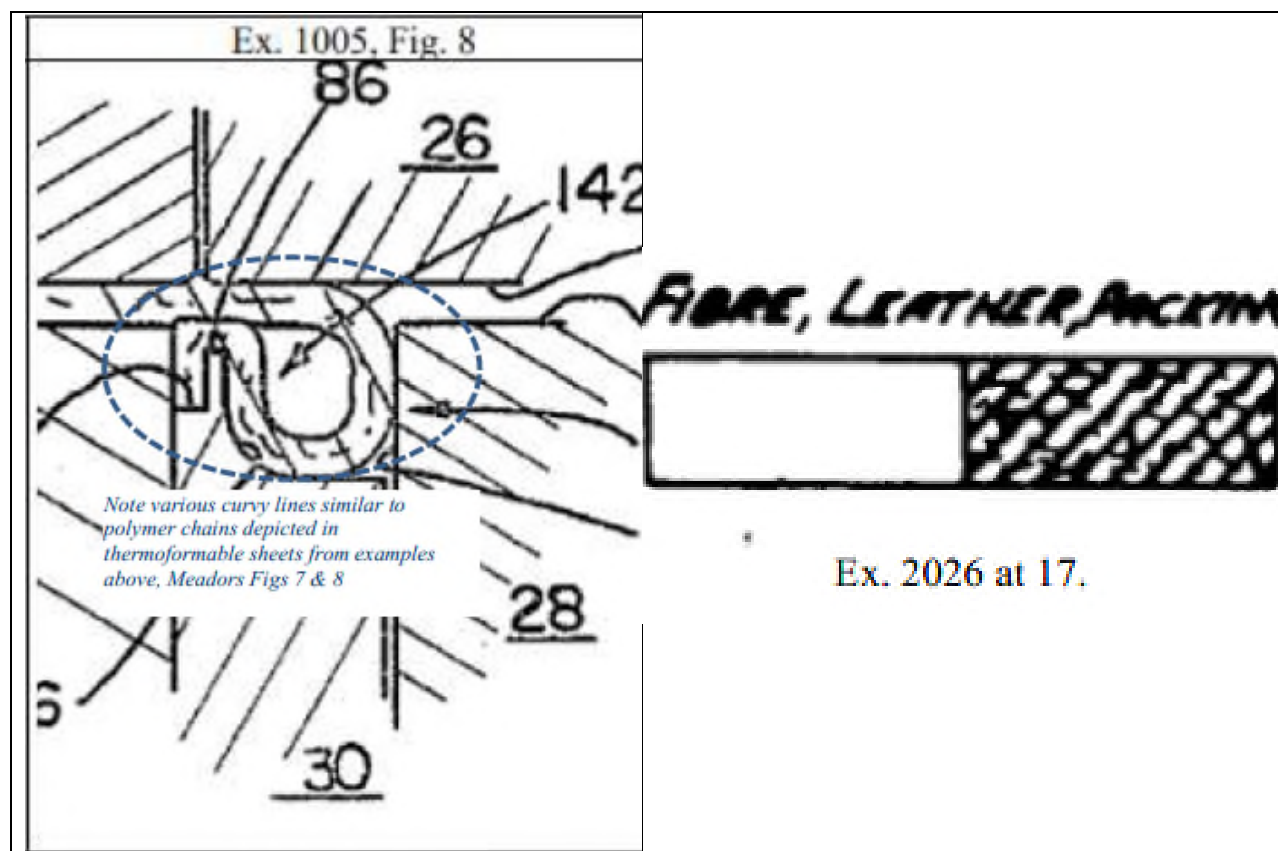
Other than trying to backtrack May’s admission that “an elbow feature that Long teaches surrounding the entire tray” is “necessarily produced,” Ex. 2009, 379:22-380:5, 380:8-20, 381:14-16, Petitioner does not deny that the “necessarily produced” elbow drawn by May and “surrounding the entire tray” places the location of the peripheral edge so that it is displaced toward and would intersect Long’s overwrap path.



*Cf.* Reply at 44; Pet. at 140 (“In the above examples, the peripheral edge is at the line indicated as ‘Cut at III.’”)

# **IX. PETITIONER ADMITS MEADORS CANNOT ANTICIPATE THE CHALLENGED CLAIMS (GROUND 3)**

Knowing that caselaw precludes his prior erroneous Meadors opinion (*see* POR at 61-62), May tries a new theory: the wavy lines in Figures 6-10 of Meadors are actually microscopic “polymer chains” – not the USPTO standard drawing symbol representing paper that was in force as of Meadors’ filing date. *See* Ex. 2025 at 40; Ex. 2026 at 17.



*Cf.* Ex. 1044, ¶¶260-264. May’s ability to “find” plastic polymers in Meadors’ figures is yet another attempt by Petitioner’s expert to contradict the reference’s teaching of “forming paper stock between dies.”

Petitioner also does not dispute that Meadors fails to inherently disclose an article formed in the shape of a rounded rectangular tray. *Cf.* POR at 67.

**X. THE CHALLENGED CLAIMS ARE NOT OBVIOUSNESS (GROUNDS 4-8)**

**A. May’s Obviousness Conclusions Are Fatally Flawed**

May never considered PO’s objective indicia of non-obviousness in rendering his reply obviousness opinions. Ex. 1002, ¶25; Ex. 1044, ¶¶295-366; Ex. 2070, 409:14-410:5. This failure is critical since PO’s evidence of commercial success, industry praise, satisfaction of long-felt but unsolved need, industry skepticism, and copying as well as the required nexus between this evidence and the Challenged Claims stand unrebutted. *Compare* POR at 84-91; Ex. 2007, ¶¶227-237, Appendices A-B; Ex. 2030, ¶¶6-22; Ex. 2040, ¶¶33-35, 49-58; Ex. 2041-2054 *with* Reply at 57-58.

Therefore, May’s incomplete obviousness analysis and unsupported conclusions should be accorded no weight. *See InTouch Techs., Inc. v. VGO Commc’ns, Inc.*, 751 F.3d 1327, 1352 (Fed. Cir. 2014).

**B. A Rolled Rim Design, Regardless of its Specific Appearance, Was Impossible to Implement in a Non-Circular Thermoformed Article Prior to the Critical Date**

The Reply (pages 48-49) focuses on the array of potential periphery shapes encompassed by PO's Challenged Claims but it fails to consider that PO's "solutions" that provided those shapes were deemed "impossible" to implement in a non-circular thermoformed articles prior to the critical date. *See* Ex. 1009 at ¶[0003]; *see also* Ex. 1055 at 5.

**C. Petitioner Seeks to Dissuade the Board from Analyzing Disclosures In Portelli and Long "As A Whole" (Ground 4)**

The Reply at 50-51 suggests that the Board can disregard the inconvenient evidence of teaching-away between Long and Portelli. The POR already established that this is contrary to the law. *See* POR at 81-82. Naughton admitted that "Long technology" customers wanted to avoid the heated cup rim-rolling techniques practiced by those like OMV. *See* Ex. 2069:130:9-21.

The record before and after the critical date demonstrates that Petitioner's "intended-purpose-destroying modification" of Long based on Portelli "counsels strongly against an obviousness determination." *Medtronic, Inc. v. Teleflex Innovations S.à.r.l.*, IPR2020-00129, 2021 WL 2524890, at \*16 (P.T.A.B. June 17, 2021).

**D. There Is No Reasonable Expectation of Success in any of Petitioner's Obviousness Combinations Prior to the Critical Date (Grounds 4-8)**

“[T]o render the claimed invention obvious, there must have been, at the time the invention was made, a reasonable expectation of success in applying [the reference's] teachings.” *Life Techs., Inc. v. Clontech Labs., Inc.*, 224 F.3d 1320, 1326 (Fed. Cir. 2000). Here, it is widely known that prior to the critical date rim-rolling of non-circular thermoformed articles was non-existent and “impossible.” *See* Ex. 1055 at 5; Ex. 1009, ¶[0003]. “[T]here can be little better evidence negating an expectation of success than actual reports of failure.” *Cyclobenzaprine*, 676 F.3d at 1081.

Consequently, a POSITA would have no expectation of success in enabling even obvious teachings or suggestions of Long or Portelli, individually.

**E. May Admitted A POSITA Lacks Motivation To Modify Portelli Figures 8 and 13 (Ground 7)**

Petitioner's cited May testimony merely demonstrates what a POSITA “may” or “might” do to modify Figures 8 and 13. Reply at 55. May had already testified that the “purpose” of Portelli is not to further modify Figures 8 or 13. *See* Ex. 2009, 301:24-302:22. *See In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984).

The fact that Portelli describes the Figure 13 embodiment after discussing the Figure 8 embodiment “is not by itself sufficient to show a reason or motivation to combine the features of those embodiments.” *See Intel Corp. v. Tela*

*Innovations, Inc.*, IPR2019-01522, 2021 WL 886443, at \*9 (P.T.A.B. Mar. 9, 2021) (distinguishing *Boston Sci. Scimed, Inc. v. Cordis Corp.*, 554 F.3d 982, 991 (Fed. Cir. 2009)).

Further, the record shows that in addition to failures in attempting Portelli's methods, *see supra*, "there appears to be no science in determining the dimensions of a rim in a rim roll design." Ex. 1049 at 570; *see also* Ex. 2060 at 1-2, 33-34 (unpredictability in using so-called commercialized form of Portelli's Fourth Embodiment (DexterMT's RRIM process)). In this unpredictable art field, the "only reasonable expectation at the time of the invention was failure, not success." *OSI Pharms., LLC v. Apotex Inc.*, 939 F.3d 1375, 1385 (Fed. Cir. 2019).

#### **F. Meadors and Brown Are Non-analogous Art (Grounds 5, 8)**

Petitioner cannot deny that Meadors never mentions "thermoforming" and all of its embodiments are "described in the context of forming paper stock between dies." *See* Ex. 1005, 1:10-11. Aside from a passing reference to ABS, a thermoplastic, Meadors is "too remote to be treated as prior art." *In re Clay*, 966 F.2d 656, 658 (Fed. Cir. 1992).

Petitioner cites Ex. 1044, ¶¶338, 364 in support of its position that Brown (Ex. 1006) is analogous. That litigation-inspired testimony is contradicted by the Illig text, which teaches "[t]he majority of injection moldings cannot be produced

by thermoforming, nor thermoformed articles by injection molding.” Ex. 1035 at 180.

**G. Petitioner’s Conclusory Long-Meadors Obviousness Combination (Ground 5)**

While it identifies Long’s and Meadors’ use of material with similar properties, the Petition merely lumps all of its references together when discussing “similarities” in a generic context.<sup>10</sup> *See* Pet. at 135-136. If the “similarities” were as “striking” as Petitioner claims, the Reply should have at least cited one or illustrated the same. *Cf.* Reply at 56-57.

May’s opinions (Ex. 1002, ¶¶250-258) grossly over-simplify the fact that “every tray has its own characteristics” and some trays (like Alto’s New Zealand trays) are “lighter” in rigidity and “don’t suit the market in North America.” *See* Ex. 2069, 42:1-7, 59:13-13.

**XI. PO’s POSITA Definition Should Control**

PO’s POSITA definition is the only one that accounts for unpredictability and impossibilities in thermoforming before and after the critical date. *See supra*. In contrast, Petitioner’s expert asserts that Petitioner’s POSITA is able to solve “any thermoforming problem.” *See* Ex. 2070, 31:7-12. That would be tantamount

---

<sup>10</sup> Unlike in *Kroy IP Holdings, LLC v. Safeway, Inc.*, 107 F. Supp. 3d 656, 674 (E.D. Tex. 2015) and *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1372 (Fed. Cir. 2019), Petitioner never shows similarities in Long’s and Meadors’ techniques, nor evidence that either one “reinforces” the other.

to “imbu[ing] [the POSITA] with knowledge of the claimed invention, when there is insufficient evidence of record to convey or suggest that knowledge.” *Kaiser Aluminum v. Constellium Rolled Prods. Ravenswood, LLC*, IPR2014-01002, Paper 64 at 16 (P.T.A.B. Nov. 2, 2015).

## **XII. CONCLUSION**

For the foregoing reasons, as well as those in the POR, this Board should find that the Petition has failed to show unpatentability of the Challenged Claims of the ‘281 Patent by the preponderance of the evidence.

Dated: July 14, 2022

Respectfully Submitted,

/s/ Joseph A. Farco

Joseph A. Farco, Reg. No. 59,139  
Brian C. Anscomb, Reg. No. 48,641  
NORRIS McLAUGHLIN, P.A.  
7 Times Square, 21<sup>st</sup> Floor  
New York, NY 10036  
Tel.: (212) 808-0700  
Fax: (212) 808-0844

ATTORNEYS FOR PATENT OWNER  
CONVERTER MANUFACTURING, LLC

## **WORD COUNT CERTIFICATION**

Pursuant to 37 C.F.R. § 42.24(d), I certify that this Corrected Patent Owner Response contains 5,587 words (excluding the title page, table of contents, table of authorities, table of exhibits, mandatory notices, this certificate, and the certificate of service), as determined by Microsoft Word.

Dated: July 14, 2022

/s/ Joseph A. Farco

Joseph A. Farco, Reg. No. 59,139  
NORRIS McLAUGHLIN, P.A.

ATTORNEYS FOR PATENT OWNER  
CONVERTER MANUFACTURING, LLC

## **CERTIFICATE OF SERVICE**

The undersigned hereby certifies that on the 14th day of July, 2022, a true and accurate copy of the foregoing *Patent Owner Sur-Reply* was filed through the Patent Review Processing System and served on the following counsel for Petitioner via email:

<b>Michael A. Fisher</b> <b>Kevin M. Flannery</b> <b>Luke M. Reilley</b> <b>DECHERT LLP</b> Cira Centre, 2929 Arch Street Philadelphia, PA 19104-2808 Tel: (215) 994-2079	<a href="mailto:Michael.fisher@dechert.com">Michael.fisher@dechert.com</a> <a href="mailto:Kevin.flannery@dechert.com">Kevin.flannery@dechert.com</a> <a href="mailto:Luke.reilley@dechert.com">Luke.reilley@dechert.com</a>
---	--

Dated: July 14, 2022

Respectfully Submitted,

/s/ Joseph A. Farco

Joseph A. Farco, Reg. No. 59,139  
Brian C. Anscomb, Reg. No. 48,641  
NORRIS McLAUGHLIN, P.A.  
7 Times Square, 21<sup>st</sup> Floor  
New York, NY 10036  
Tel.: (212) 808-0700  
Fax: (212) 808-0844

ATTORNEYS FOR PATENT OWNER  
CONVERTER MANUFACTURING, LLC