

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NESPRESSO USA, INC.,
Petitioner,

v.

K-FEE SYSTEM GMBH,
Patent Owner.

IPR2024-00254
Patent 11,465,829 B2

Before GRACE KARAFFA OBERMANN, JAMES J. MAYBERRY, and
AVELYN ROSS, *Administrative Patent Judges*.

MAYBERRY, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. *Background and Summary*

Petitioner, Nespresso USA, Inc., filed a Petition (“Pet.”) requesting *inter partes* review of claims 1–19 (“Challenged Claims”) of U.S. Patent No. 11,465,829 B2 (Ex. 1001, the “’829 patent”). Pet. 1. Patent Owner, K-fee System GmbH, filed a Preliminary Response (“Prelim. Resp.”) to the Petition. Paper 7.

We have authority under 35 U.S.C. § 314 to determine whether to institute review. 35 U.S.C. § 314 (2018); *see also* 37 C.F.R. § 42.4(a) (2023) (permitting the Board to institute trial on behalf of the Director). To institute an *inter partes* review, we must determine that the information presented in the Petition shows “a reasonable likelihood that the petitioner would prevail with respect to at least [one] of the claims challenged in the petition.” 35 U.S.C. § 314(a). For the reasons set forth below, upon considering the Petition, Preliminary Response, and evidence of record, we institute an *inter partes* review.

B. *Real Parties-in-Interest*

Petitioner identifies itself and Nestlé USA, Inc., Nestlé Nespresso SA, and Société Des Produits Nestlé SA as the real parties-in-interest. Pet. 87.

Patent Owner identifies itself as the sole real party-in-interest. Paper 3, 1 (Patent Owner Mandatory Notices). Patent Owner adds that it “is a wholly owned subsidiary of Kruger GmbH & Co. KG, along with Kruger North America, Inc.” *Id.*

C. *Related Matters*

The ’829 patent is the subject of litigation in the U.S. District Court for the Central District of California, in a case styled *K-Fee System GmbH v. Nespresso USA, Inc.*, Case No. 2:22-cv-09295-GW. Pet. 87; Paper 3, 1.

Patent Owner indicates that patents related to the '829 patent are challenged in IPR2022-01574, IPR2023-00485, IPR2023-00502, IPR2024-00239, IPR2024-00257, IPR2024-00299, and IPR2024-00304. Paper 3, 1. Patent Owner adds that the '829 patent is part of the same family of patents challenged in IPR2021-01221, IPR2021-01222, and IPR2021-01223. *Id.* Also, Patent Owner indicates that the present *inter partes* review proceeding “may be affected by a decision in *K-fee System GmbH v. Nespresso USA, Inc.*, No. 2022-2042, pending at the United States Court of Appeals for the Federal Circuit and involving U.S. Patent Nos. 10,858,176, 10,858,177, and 10,870,531. *Id.* at 2.

D. The '829 Patent

The '829 patent, titled “Portion Capsule Having an Identifier,” issued October 11, 2022, from an application filed February 14, 2022, and ultimately claims priority to three German patent applications, the earliest of which was filed July 22, 2010. Ex. 1001, codes (54), (45), (22), (30). The application that matured into the '829 patent is related, through a series of continuation and divisional applications, to application PCT/EP2011/003677, filed on July 22, 2011. *Id.* at code (60).

The '829 patent is directed “to a beverage system for making a beverage that includes a portion capsule and a beverage machine.” Ex. 1001, 1:6–8. We reproduce Figure 2A from the '829 patent below.

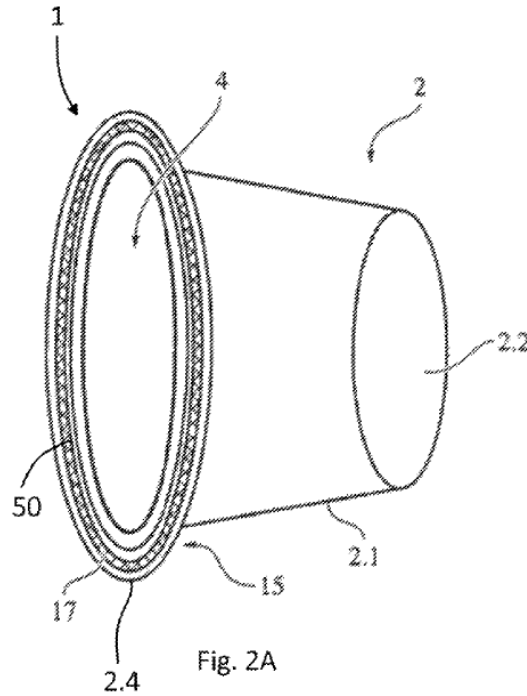


Figure 2A depicts “a portion capsule containing a barcode.”

Ex. 1001, 7:33–34. Portion capsule 1 includes base element 2 with wall region 2.1 and bottom area 2.2. *Id.* at 8:44–47. Portion capsule 1 includes barcode 50 on the top surface of membrane 4. *Id.* at 8:47–48. Alternatively, barcode 50 could be placed on the edge region of flange 17, opposite membrane 4, as indicated by arrow 15. *Id.* at 8:54–56. “Such a barcode is read out by a detector 13 placed, for example, in the media chute. The barcode represents the identifier according to invention.” *Id.* at 8:57–59.

We reproduce Figures 16A and 17A from the ’829 patent below.

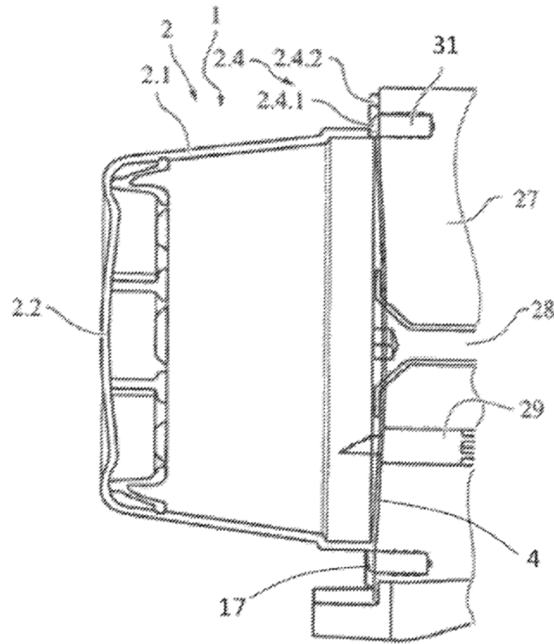


Fig. 16A

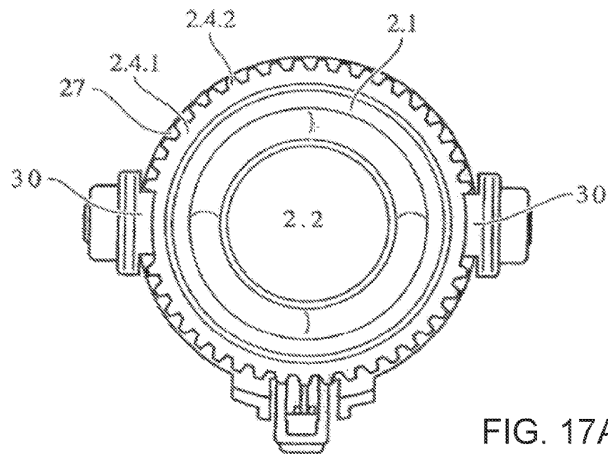


FIG. 17A

Figure 16A depicts “a portion capsule with a gearwheel placed in the brewing chamber,” and Figure 17A depicts an embodiment of the portion capsule of Figure 16A Ex. 1001, 7:58–61. These figures show flange 17/edge region 2.4 that includes a structure for fit locking, friction locking and/or detection 2.4.2 in the outer area (that is, the outer circumference of flange 17/edge region 2.4). *Id.* at 10:19–24. In this example, the structure is a gearwheel that is formed by several recesses/bulges evenly arranged in the edge region. *Id.* at 10:24–28. As

seen in Figure 17A, portion capsule 1 is held by two holding arms 30, which interact with the gearwheel structure. *Id.* at 10:41–44. Without this structure, the holding arms do not hold the portion capsule and the portion capsule is not inserted into the brewing chamber. *Id.* at 10:44–47.

We reproduce Figure 19 below.

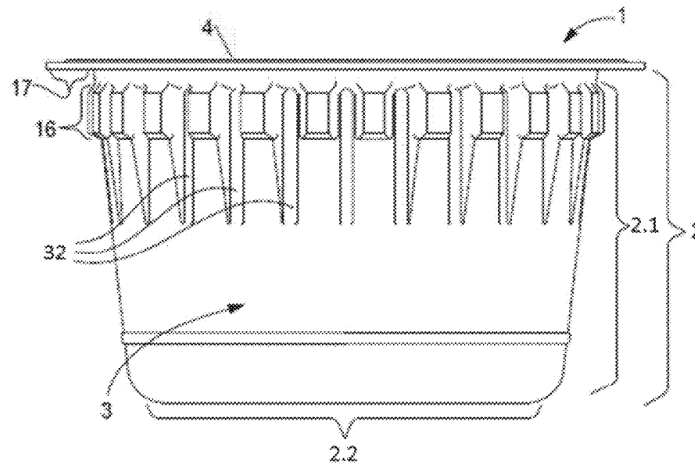


Fig.19

Figure 19 depicts a schematic of a different embodiment of a portion capsule. Ex. 1001, 11:24–26. Portion capsule 1 includes frustoconically-shaped base element 2, which encloses cavity 3 sealed with membrane 4. *Id.* at 11:30–33. Base element 2 includes flange 17. *Id.* at 11:40–41. The wall region of base element 2 includes grooves 32. *Id.* at 12:4–8; *see also id.* at Fig. 21 (showing convexities 34, which are in the inside cavity and formed by grooves 32 (*id.* at 12:48–53)).

E. Illustrative Claim

Of the Challenged Claims, claims 1 and 12 are independent claims.

We reproduce the independent claims below.

1. A beverage system for making a beverage, comprising:
A) a portion capsule comprising:

[1.a]¹ i) a base element with a cavity, in which a beverage material is provided, [1.b] the base element being symmetrical about a central longitudinal axis thereof [1.c] and having an open end and a bottom portion, [1.d] the base element having a first height that is defined between the open end and the bottom portion;

[1.e] ii) a rim extending outwardly from the base element, the rim comprising a top side and an opposing bottom side;

[1.f] iii) a cover fastened to the base element to close the cavity, the cover is bowed outwardly in a central region of the cover relative to a peripheral region of the cover, [1.g] the cover includes a region configured to be pierced at a location that is offset from the central longitudinal axis, [1.h] the cover has a second height that is defined between the peripheral region and the central region, wherein the first height of the base element is greater than the second height of the cover;

[1.i] iv) a barrier layer to prevent moisture or aroma from escaping out of the portion capsule; and

[1.j] v) an identifier provided on the bottom side of the rim;

B) a beverage machine comprising:

[1.k] i) a sensor/detector;

[1.l] ii) an insertion shaft configured to receive the portion capsule and to enable detection of the identifier on the bottom side of the rim by the sensor/detector;

[1.m] iii) a chamfered mandrel that is configured to pierce the cover at the location that is offset from the central longitudinal axis;

[1.n] iv) a seal that is configured to bear against a top side of the cover in a region between the peripheral region of the cover and the region of the cover that is pierced by the chamfered mandrel; and

[1.o] v) a pump controlled to supply hot water into the portion capsule only upon detection of the identifier by the

¹ The bracketed reference numerals correspond to Petitioner's identification of limitations of the independent claims. *See* Pet. 94–94, 96–97.

sensor/detector and a determination by the beverage machine that the portion capsule is suitable for use with the beverage machine.

Ex. 1001, 13:29–14:2.

12. A beverage system comprising:

A) a portion capsule comprising:

[12.a] i) a base element with a cavity, in which a beverage material is provided, [12.b] the base element being symmetrical about a central longitudinal axis thereof and [12.c] having an open end and a bottom portion, [12.d] the base element having a first height that is defined between the open end and the bottom portion;

[12.e] ii) a rim extending outwardly from the base element, the rim having a top side and an opposing bottom side;

[12.f] iii) a cover fastened to the base element, the cover is bowed outwardly in a central region of the cover relative to a peripheral region of the cover, [12.g] the cover includes a region configured to be pierced at a location that is offset from the central longitudinal axis, [12.h] the cover has a second height that is defined between the peripheral region and the central region, wherein the first height of the base element is greater than the second height of the cover;

[12.i] iv) a barrier layer to prevent moisture or aroma from escaping out of the portion capsule; and

[12.j] v) an identifier provided on the bottom side of the rim;

[12.k] B) a beverage machine comprising:

[12.l] i) an insertion shaft having a wall structure into which the portion capsule is received, the insertion shaft defined by a base portion and an annular portion laterally extending outwardly from the base portion in a direction that is transverse to a longitudinal axis of the insertion shaft;

[12.m] ii) a chamfered mandrel that pierces the cover at the location that is offset from the central longitudinal axis;

[12.n] iii) an optical sensor/detector positioned outside of the base portion of the wall structure of the insertion shaft and below the annular portion, which directs a beam through a portion of the wall structure to read the identifier on the portion capsule;

[12.o] iv) a seal that is configured to bear against a top side of the cover in a region between the peripheral region of the cover and the region of the cover that is pierced by the chamfered mandrel; and

[12.p] v) a pump that supplies hot water into the portion capsule only after the identifier is read by the sensor/detector.

Id. at 14:45–15:22.

F. Prior Art and Asserted Grounds

Petitioner asserts that the Challenged Claims are unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. §²	References/Basis
1–9, 12–18	103(a)	Yoakim, ³ Jarisch, ⁴ Rossi ⁵
10, 11, 19	103(a)	Yoakim, Jarisch, Rossi, Castellani ⁶

Pet. 30.

Petitioner relies on the declaration testimony of Michael Jobin to support its unpatentability contentions. *See* Ex. 1003 (providing the Declaration).

² The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 296–07 (2011), took effect on September 16, 2011. The changes to 35 U.S.C. §§ 102 and 103 in the AIA do not apply to any patent application filed before March 16, 2013. Because neither party, at this juncture, disputes that the application for the patent at issue in this proceeding has an effective filing date before March 16, 2013, we refer to the pre-AIA version of the statute. *See* Pet. 26 (arguing that the earliest possible priority date for the ’829 patent is July 22, 2011).

³ US 2010/0239734 A1, published September 23, 2010 (Ex. 1004, “Yoakim”).

⁴ US 2013/0064937 A1, published March 14, 2013 (Ex. 1005, “Jarisch”).

⁵ WO 2010/099806 A1, published September 10, 2010 (Ex. 1041, “Rossi”).

⁶ US 2008/0105131 A1, published May 8, 2008 (Ex. 1009, “Castellani”).

The following subsections provide brief descriptions of the asserted prior art references.

1. Yoakim

Yoakim, titled “Method for Preparing a Beverage or Food Liquid and System Using Brewing Centrifugal Force,” published September 23, 2010, from an application filed May 7, 2010. Ex. 1004, codes (54), (43), (22). Yoakim “relates to a capsule, device, system and method for preparing a beverage or food liquid from a food substance which is brewed or extracted by using centrifugal forces exerted on a capsule which contains the substance.” *Id.* ¶ 2.

Yoakim’s device identifies different capsules and operates its beverage device based on predetermined parameters for the identified capsule. Ex. 1004 ¶ 25; *see, e.g., id.* ¶ 192 (“[T]he control unit may be associated to a capsule recognition system enabling to recognize the types of capsules, i.e., espresso, lungo, cappuccino, long coffee (e.g., 180-400 ml), latte, tea, etc., and to adjust the speed and/or other brewing parameters (e.g., water temperature) according the capsule which is inserted in the device.”). “A recognition system uses a code on the capsule and recognized by the device, such as a color, a barcode, an RFID, a magnetic code, ferromagnetic micro-wires or labels, shapes and combinations thereof.” *Id.* ¶ 192.

We reproduce Yoakim's Figure 1, below.

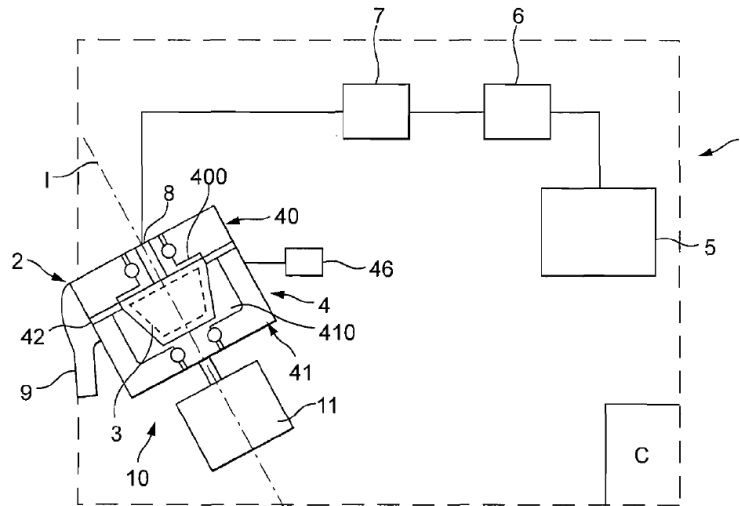


FIG. 1

Figure 1 depicts “a schematic representation of [Yoakim’s] system.” Ex. 1004 ¶ 30. System 1 includes device 2 and capsule 3, with device 2 having brewing module 4, which receives capsule 2 for brewing. *Id.* ¶ 180. After brewing, the capsule is removed and discarded. *Id.* Module 4 is connected to water reservoir 5, with the water delivered to module 4 by low pressure pump 6. *Id.* Water heater 7 heats the water to the desired temperature for the capsule. *Id.*

2. Jarisch

Jarisch, titled “Capsule, System and Method for Preparing a Beverage by Centrifugation,” published March 14, 2013, from an application filed May 12, 2011. Ex. 1005, codes (22), (43), (54). Jarisch is directed to the preparation of a beverage using a capsule and, in particular, “focuses on the detection of the capsule.” *Id.* ¶ 1.

Jarisch discloses that prior art methods have been disclosed for identifying a capsule using a code, but proposes “an improved way to identify the capsule within a beverage production machine.” *Id.* ¶¶ 4–14. In

a preferred embodiment, a “bit code” is used to identify the capsule and “is present on the bottom of the rim of the capsule which is opposed to the lid of the capsule.” *Id.* ¶¶ 17, 22. Jarisch explains that this position is preferable because the bottom of the rim “is sufficiently away from the liquid injection and beverage delivery areas so that there is a lower risk for the code to become unreadable . . . [due to] beverage residues.” *Id.*

3. *Rossi*

Rossi, titled “System of Edible-Product Making Machine and Load Element and Process for Control of Machine,” published September 10, 2010. Ex. 1041, codes (54), (43). Rossi “relates to a system of an edible-product making machine and a load element [(e.g., a capsule containing coffee powder)], and a process for controlling the operation of the edible-product making machine.” Ex. 1041, 1.⁷

Relevant to our analysis here, Rossi states that using the wrong capsule or operating conditions “may cause the machine to malfunction and can prejudice the safety and integrity of the machine and the may harm the user.” Ex. 1041, 3. To address this and other concerns, Rossi discloses a process for controlling the operation of an edible-product making machine, with a first step of recognizing an identifying element and a validation element, a second step of validating the validation element, and a third step of operating the machine only if the identifying element is recognized and the validation element is validated. *Id.* at 4. Rossi explains that

The use of an identification element and recognition means, as well as the step of recognising the identification element allows the machine to recognise the load element and, hence, its

⁷ Consistent with Petitioner, we reference the pagination for the WO document, rather than the exhibit. For example, we cite to “Ex. 1041, 1” for page 1 of the publication, which appears on page 3 of the exhibit.

contents. This in turn enables the machine to automatically select the operating conditions appropriate for that specific load element. This prevents the user from having to verify the contents of the load element, and from having to know and select the operating conditions appropriate therefor. It also helps to prevent the safety hazard associated with the use of inappropriate operating conditions.

Id. at 5.

4. *Castellani*

Castellani, titled “Delivery Head for Espresso Coffee Machines,” published May 8, 2008. Ex. 1009, codes (54), (43). Relevant to Petitioner’s unpatentability positions, Castellani provides “a delivery head, in which the single-use or disposable capsule loading and unloading operations can be performed in a very easy and safe manner, from a user standpoint.” *Id.* ¶ 10. For example, during operation, “capsule 10 will slide on the fork element 21 and, after having passed the annular portion 22, will fall inside the fork element 21 and, through a specifically designed passage, will be collected in a collecting vessel.” *Id.* ¶ 54; *see, e.g., id.* at Fig. 2 (depicting an embodiment of the delivery head in the capsule ejecting position).

II. ANALYSIS

A. *Legal Standards*

Section 103(a) forbids issuance of a patent when “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art;

(2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when available, evidence such as commercial success, long felt but unsolved needs, and failure of others.⁸ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966); *see KSR Int’l Co.*, 550 U.S. at 407 (“While the sequence of these questions might be reordered in any particular case, the [Graham] factors continue to define the inquiry that controls.”). The Court in *Graham* explained that these factual inquiries promote “uniformity and definiteness,” for “[w]hat is obvious is not a question upon which there is likely to be uniformity of thought in every given factual context.” 383 U.S. at 18.

The Supreme Court made clear that we apply “an expansive and flexible approach” to the question of obviousness. *KSR Int’l Co.*, 550 U.S. at 415. Whether a patent claiming the combination of prior art elements would have been obvious is determined by whether the improvement is more than the predictable use of prior art elements according to their established functions. *Id.* at 417. To support this conclusion, however, it is not enough to show merely that the prior art includes separate references covering each separate limitation in a challenged claim. *Unigene Labs., Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1360 (Fed. Cir. 2011). Rather, obviousness additionally requires that a person of ordinary skill at the time of the invention “would have selected and combined those prior art elements in the normal course of research and development to yield the claimed invention.” *Id.*

⁸ The parties do not direct us to any objective evidence of non-obviousness at this stage of the proceeding.

“[O]bviousness must be determined in light of *all the facts*, and . . . a given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate motivation to combine” teachings from multiple references. *Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006) (emphasis added); *see also PAR Pharm., Inc. v. TWI Pharms., Inc.*, 773 F.3d 1186, 1196 (Fed. Cir. 2014) (“The presence or absence of a motivation to combine references in an obviousness determination is a pure question of fact.”). As a factfinder, we also must be aware “of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning.” *KSR Int’l Co.*, 550 U.S. at 421.

For institution, “[t]he ‘reasonable likelihood’ standard is a somewhat flexible standard that allows the Board room to exercise judgment.” Patent Trial and Appeal Board Consolidated Trial Practice Guide 53 (Nov. 2019), *available at* <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

B. Level of Ordinary Skill in the Art

The level of skill in the art is “a prism or lens” through which we view the prior art and the claimed invention. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). “This reference point prevents . . . factfinders from using their own insight or, worse yet, hindsight, to gauge obviousness.” *Id.* Factors pertinent to a determination of the level of ordinary skill in the art include: (1) educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of workers active in the field. *Env’t Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 696–97 (Fed. Cir. 1983) (citing *Orthopedic Equip. Co. v. All Orthopedic Appliances, Inc.*, 707 F.2d 1376, 1381–82 (Fed. Cir. 1983)). Not all such factors may be present in every case, and one or

more of these or other factors may predominate in a particular case. *Id.* Moreover, these factors are not exhaustive but are merely a guide to determining the level of ordinary skill in the art. *Daiichi Sankyo Co. v. Apotex, Inc.*, 501 F.3d 1254, 1256 (Fed. Cir. 2007). In determining a level of ordinary skill, we also may look to the prior art, which may reflect an appropriate skill level. *Okajima*, 261 F.3d at 1355.

Petitioner contends that a person of ordinary skill in the art would have had “a bachelor’s degree in engineering plus five years of experience in design of mechanical beverage systems, or similar products and experience with sensors for recognizing an identifier.” Pet. 17 (referencing Ex. 1003 ¶ 40; IPR2022-01574, Paper 12, 15).

Patent Owner does not dispute Petitioner’s characterization of the level of ordinary skill in the art of the ’829 patent.

For purposes of this Decision, based on the prior art, the sophistication of the technology at issue, and Mr. Jobin’s Declaration testimony, we adopt Petitioner’s unopposed definition of the level of ordinary skill. The ’829 patent, as well as the prior art of record, includes systems that use identifiers on a capsule to control the operation of a beverage machine. *See, e.g.*, Ex. 1001, 1:29–35 (“[T]he present invention . . . has an identifier, which allows to individualize the respective portion capsule.”); Ex. 1004 ¶ 25 (discussing the system’s “identification means”); Ex. 1005 ¶ 1 (“The invention relates to the preparation of a beverage by use of a capsule containing beverage ingredient in a beverage production device. The present invention in particular focuses on *the detection of the capsule.*” (emphasis added)); Ex. 1041, code (57) (“The process for controlling the operation of an edible-product making machine [includes] . . . “recogni[zing] an identifying element . . .”). *Cf. Nespresso USA, Inc. v. K-Fee Sys.*

GmbH, Paper 29, 19–20 (PTAB April 10, 2024) (finding, for a related patent claiming similar subject matter, that the level of ordinary skill in the art is “is a bachelor’s degree in engineering plus five years of experience in design of mechanical beverage systems, or similar products, as well as experience with sensors for recognizing an identifier”).

C. Claim Construction

We construe each claim “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b).” 37 C.F.R. § 42.100(b). Under this standard, claim terms are generally given their ordinary and customary meaning as would have been understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc) (“We have frequently stated that the words of a claim ‘are generally given their ordinary and customary meaning.’” (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996))).

Petitioner contends that it “applies, for purposes of this Petition, the apparent interpretations that [Patent Owner] offered in its infringement contentions.” Pet. 18 (referencing Ex. 1049). Petitioner then provides certain examples. *Id.* at 18–21. Petitioner concludes “that for this proceeding, no claim terms require formal construction.” *Id.* at 21 (referencing Ex. 1003 ¶¶ 148–151).

Patent Owner states that, “[f]or purposes of this Preliminary Response, Patent Owner believes claim construction is unnecessary to resolve the issues before the Board.” Prelim. Resp. 7.

We agree with Petitioner and Patent Owner that, for the purposes of this Decision, we need not expressly construe any claim terms to resolve the

parties' disputes. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) ("The Board is required to construe 'only those terms that . . . are in controversy, and only to the extent necessary to resolve the controversy.'" (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))). To the extent that the scope of any particular claim term requires discussion, however, we provide it in our assessment of the challenges.

D. Priority date for the '829 patent

"A petitioner in an inter partes review may request to cancel as unpatentable 1 or more claims of a patent . . . only on the basis of *prior art* consisting of patents or printed publications." 35 U.S.C. § 311(b) (emphasis added). Petitioner contends that "[t]he earliest possible priority date for the '829 [p]atent is the date of its [Patent Cooperation Treaty] application filed on July 22, 2011" Pet. 26. Patent Owner does not dispute this contention at this stage of the proceeding. Applying this date to the asserted references, all qualify as prior art. *See* Pet. 22–26 (describing the asserted references, including how each qualifies as prior art).

E. Ground 1: Claims 1–9 and 12–18 as unpatentable over Yoakim, Jarisch, and Rossi

Petitioner contends that the combination of Yoakim, Jarisch, and Rossi teaches or suggests each limitation of claims 1–9 and 12–18. Pet. 21–22, 37–72. We first address Petitioner's reasons for combining the teachings of Yoakim, Jarisch, and Rossi, then the challenged claims under Ground 1.

1. Motivation for combining Yoakim, Jarisch, and Rossi

We first analyze Petitioner’s reasons for combining the teachings of Yoakim, Jarisch, and Rossi to arrive at the subject matter of the claims challenged in Ground 1.

a) Petitioner’s contentions

As an initial matter, Petitioner contends that Yoakim, Jarisch, and Rossi are “analogous art in the field of portion capsule beverage extraction, each disclosing an invention that may be applied in automatic coffee/expresso machines.” Pet. 37 (referencing Ex. 1004 ¶¶ 2–3; Ex. 1005 ¶¶ 1–2; Ex. 1041, 3); *cf. In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004) (“References within the statutory terms of 35 U.S.C. § 102 qualify as prior art for an obviousness determination only when analogous to the claimed invention.”). Patent Owner does not dispute this contention.

Petitioner contends that Jarisch expressly teaches using its invention in a brewing system like that disclosed in Exhibit 1007, which is, in turn, similar to Yoakim’s system, suggesting combining Jarisch’s teachings with Yoakim’s teachings. Pet. 37–38. Also, Petitioner contends that Jarisch expressly teaches “positioning an optical code ‘on the bottom of the rim of the capsule which is opposed to the lid of the capsule.’” *Id.* at 38 (referencing Ex. 1005 ¶¶ 22). Petitioner adds that

Jarisch explains that its proposed code positioning is desirable because it is ‘sufficiently away from the liquid injection and beverage delivery areas so that there is a lower risk for the code to become unreadable such as if partly or totally hidden or soiled by beverage residues or otherwise (e.g., coffee particles). As a result, the reading is made more reliable.

Id. (referencing Ex. 1005 ¶ 22; Ex. 1003 ¶ 201). Petitioner concludes that a person having ordinary skill in the art would have been motivated to position

Jarisch's optical code on the bottom of a portion capsule's rim for this reason. *Id.* (referencing Ex. 1003 ¶¶ 200–202).

Petitioner contends that a person having ordinary skill in the art would have had a reasonable expectation of success in combining the teachings of Jarisch's optical code on the bottom of a portion capsule's rim with Yoakim's teachings to arrive at the claimed invention. Pet. 38–39. Petitioner contends that “Jarisch expressly discloses how to modify a brewing chamber like Yoakim's to position an optical reader to read a code positioned on the bottom of the capsule rim.” *Id.* at 39 (referencing Ex. 1003 ¶ 203). Petitioner explains that “Jarisch discloses placing the light source at the bottom of the capsule support chamber, i.e., the centrifugal cell 3, and configuring the capsule support chamber to be a light conductive material such that a light source will reach the bottom of the capsule flange.” *Id.* (referencing Ex. 1005 ¶ 82); *see also id.* at 40 (depicting an annotated version of Jarisch's Figure 4, showing the movement of light through the capsule support chamber).

Petitioner also contends that a person having ordinary skill in the art would have been motivated to include Rossi's recognition process in the Yoakim/Jarisch system “for the predictable benefit of ‘providing a safe and simple system and process for ensuring that an appropriate [portion capsule] is used’ in the system.” Pet. 40 (referencing Ex. 1041, 5; Ex. 1003 ¶ 204). Petitioner contends that Yoakim discloses using a piston pump to generate higher pressure water and discloses using high temperature water. *Id.* (referencing Ex. 1004 ¶¶ 188, 199, 369, 428, 506). Petitioner contends that a person having ordinary skill in the art would have had reason to “look to Rossi to address ‘the use of high pressure, high temperature water, which poses a potential health hazard if the machine is not used correctly or

malfunctions.” *Id.* at 40–41 (referencing Ex. 1041, 5); *see also id.* at 42 (“Rossi includes information about the proper capsule and operating conditions that ‘helps to prevent [] safety hazard[s],’ and prevents ‘re-use’ of capsules that can cause ‘incorrect functioning of the machine and the associated health hazard.’” (referencing Ex. 1041, 7)).

Petitioner adds that a person having ordinary skill in the art would have also been motivated to combine Rossi’s teachings of its capsule recognition process with the combined teachings of Yoakim and Jarisch “for the predictable benefit of greater specificity and accuracy of brewing conditions, and increased safety in the machine from preventing operation with unsuitable capsules.” Pet. 41 (referencing Ex. 1003 ¶ 204); *see id.* (explaining that Rossi discloses that an incorrect capsule could cause a beverage machine to malfunction and that Rossi’s validation step avoids inferior product quality and ensures the machine functions properly). Petitioner concludes that a person having ordinary skill in the art would have understood “that Rossi provides motivation for using an optical code to ensure the capsule is suitable for use with the machine, and only initiates the brewing process upon such a determination.” *Id.* (referencing Ex. 1003 ¶¶ 204–205); *see also id.* at 42–43 (“[A person having ordinary skill in the art] would have been motivated to use Rossi’s safety features with Yoakim to improve safety, ensure proper functioning of the machine, and avoid inferior quality beverage.” (referencing Ex. 1003 ¶ 207)).

Petitioner also contends that a person having ordinary skill in the art would have had a reasonable expectation of success in combining the teachings of Yoakim, Jarisch, and Rossi as Petitioner proposes. Pet. 41–43. Petitioner contends that Rossi discloses that its system is intended for use with a beverage system using capsules. *Id.* at 41 (referencing Ex. 1041, 5).

Petitioner adds that Rossi discloses that its identification system uses barcodes or optically measured identifiers. *Id.* at 41–42.

b) Patent Owner’s responsive arguments and our analysis

We now turn to Patent Owner’s responsive arguments and our analysis of those arguments.

i. Combining embodiments in Yoakim

First, Patent Owner argues that Petitioner combines elements from different embodiments in Yoakim without providing a rationale for combining the teachings. Prelim. Resp. 9–20. Patent Owner argues that Yoakim “reveals a complex ancestral lineage to nearly one dozen application filings spanning from June 2007 to May 2010,” that “aggregates (without interrelating) . . . discrete embodiments from among those filings.” *Id.* at 9.

We have considered Patent Owner’s arguments and determine, on the current record, that they do not demonstrate a deficiency in Petitioner’s position for purposes of instituting trial. We determine, on the current record, that Petitioner does not unfairly combine features from different embodiments in Yoakim. Instead, it appears that the Petition presents common features across different capsules, selecting the image that best illustrates Petitioner’s contentions. *See, e.g.*, Pet. 45 (showing Figure 26 to illustrate a base element symmetrical about a central longitudinal axis), Pet. 59 (showing holes pierced by multiple chamfered mandrels). Also, to the extent that Petitioner does rely on different portion capsule embodiments, we view, on the current record, the combination of features from different portion capsules as a “predictable variation” that does not “require a leap of inventiveness.” *See Boston Scientific Scimed, Inc. v. Cordis Corp.*, 554 F.3d 982, 991 (Fed. Cir. 2009). For example, Yoakim

describes its capsule in general terms. *See, e.g.*, Ex. 1004 ¶¶ 14–16, 19 (describing general features of its “enclosure” or “capsule”). Yoakim then presents different capsule arrangements that have in common these general features. *See, e.g., id.* at Figs 6, 7, 23, 26, 27, 29. Often, a capsule is depicted conceptually, with a certain feature emphasized. *See, e.g.*, Fig. 6 (depicting the relationship between the upper edge 72, sidewall 76, and bottom wall 77), Fig. 7 (showing water inlet 73 and pierced outlets 74), Fig. 29 (showing features for lid 108). That is, it appears that Yoakim’s different figures emphasize specific features of its capsule that may be used in other capsules.

Patent Owner argues that Yoakim’s embodiments are not interchangeable. Prelim. Resp. 12. Patent Owner argues that there are significant differences between brewing systems and capsules. *Id.* (comparing Ex. 1004, Figures 35 and 38, with Figures 61 and 62); *see id.* at 12–16 (providing a detailed comparison of the differences between the brewing systems of Figures 35 and 38 and Figures 61 and 62). Patent Owner also argues that an affiliate of Petitioner’s distinguished the systems of Figures 61 and 62 (and Figures 54 and 55) over a related Yoakim reference (“Yoakim I”). *Id.* at 16–17.

Patent Owner also argues that “the Petition has not explained how or why the use of the complex spring arrangement of Yoakim Fig[ure] 35 would or could have been modified for use in the system of Fig[ures] 54, 55, 61, and 62 to accommodate a multi-capsule set with different capsule volumes.” Prelim. Resp. 18. Patent Owner argues that

Due to the different back pressures alone, which would have been experienced when brewing beverages from among the respective different volume capsules of the capsule set, it has not been explained how a spring having a single spring constant

would have accommodated the different backpressures without ongoing spring adjustment or other significant modifications from capsule to capsule.

Id. Patent Owner adds that the machine of Figure 61 does not need the seal of the machine of Figure 35. *Id.*; *see also id.* at 18–20 (discussing other distinctions between the machines of Figures 35 and 61).

We have considered Patent Owner’s arguments and determine, on the current record, that they do not demonstrate a deficiency in Petitioner’s position for purposes of instituting trial. We determine, on the current record, that Petitioner’s identification of Figure 35 illustrates the broader concept of a flow restriction means. *See* Pet. 59–60 (“Yoakim discloses a seal in the form of a ‘flow restriction means which is arranged after the outlet(s) of the capsule.’”); Ex. 1004 ¶ 370 (“In a possible mode, the device comprises a flow restriction means which is arranged after the outlet(s) of the capsule.”); Ex. 1003 ¶¶ 279–280 (discussing Yoakim’s general disclosure of a flow restriction means that may be part of the device). That is, on the current record, we determine that Petitioner’s unpatentability position relies on the general teaching of a flow restriction means, with the arrangement in Figure 35 being exemplary.

Patent Owner’s reliance on distinguishing arguments over Yoakim I in the prosecution of a patent owned by Petitioner’s affiliate are unavailing on the current record. Even if the arguments are directed at differences between Yoakim’s machines depicted in Figures 35 and 61, the arguments, in and of themselves, do not indicate that Petitioner’s reliance on these figures in illustrating a flow restriction means is improper in its obviousness contentions.

With respect to the spring arrangement of Figure 35, as we discuss above, we determine, on the current record, that Petitioner uses this configuration to illustrate a flow restriction means generally. Also, we determine, on the current record, that Patent Owner's specific argument that the spring arrangement of Figure 35 would be subject to different backpressures for different volume capsules is merely attorney argument, and not evidence to be weighed against Petitioner's evidence. *See In re Pearson*, 494 F.2d 1399, 1405 (CCPA 1974) ("Attorney's argument in a brief cannot take the place of evidence.").

Our determinations here are based on the current record and the parties may explore these preliminary determinations in greater detail at trial.

ii. Combining Yoakim and Jarisch

Next, Patent Owner argues that a person having ordinary skill in the art would not have had reason to modify Yoakim with Jarisch. Patent Owner argues that Petitioner does not address that the machine of Yoakim's Figure 61 reads a code on a stationary capsule, and Jarisch's system reads a code on the capsule as it spins. Prelim. Resp. 21. Patent Owner argues that Petitioner does not adequately demonstrate that the machine of Yoakim's Figure 61 would experience the problem alleged by Petitioner—the soiling of the top of a capsule by beverage residue, such that there would be a benefit of putting the code on the bottom rim of the capsule. *Id.* at 21–22.

Patent Owner also argues that there is insufficient space on the rim of Yoakim's capsules to include Jarisch's code. Prelim. Resp. 23.

We have considered Patent Owner's arguments and determine, on the current record, that they do not demonstrate a deficiency in Petitioner's position for purposes of instituting trial. Petitioner provides a reason to

position a code on the bottom said of the rim of a capsule, taken directly from Jarisch. *See* Pet. 38 (referencing Ex. 1005 ¶ 22); *see also* Ex. 1005 ¶ 22 (“The bottom of the rim is sufficiently away from the liquid injection and beverage delivery areas so that there is a lower risk for the code to become unreadable . . . by beverage residues or otherwise (e.g., coffee particles). As a result, the reading is made more reliable.”); *cf. KSR Int’l Co.*, 550 U.S. at 418 (stating that, to facilitate the analysis of an obviousness position, the proponent should provide “some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”). On the current record, Patent Owner’s attorney argument does not identify sufficiently a deficiency in Petitioner’s reasoning.

We also do not agree, on the current record, that Petitioner’s position is deficient for not accounting for Jarisch reading its code as the capsule spins or that Yoakim’s rim is not sufficiently sized for Jarisch’s code. These arguments are based on bodily incorporating features from Jarisch, rather than considering how a person having ordinary skill in the art would understand the teachings. *See In re Keller*, 642 F.2d 413, 425 (CCPA 1981) (“[The] test for obviousness,” however, “is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference. . . . Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.”).

Patent Owner argues that the differences in capsule holders of Jarisch and Yoakim would have discouraged placing Jarish’s code on Yoakim’s capsule. Prelim. Resp. 25–30. Patent Owner argues that Yoakim discloses that its capsules should have a snug fit. *Id.* at 25–26, 28. Patent Owner argues that, in contrast, Jarisch teaches a gap between its capsule and the holder. *See id.* at 27 (pointing to a “Gap” illustrated in Jarisch’s Figure 4).

Patent Owner argues that “[g]iven the differences between Yoakim and Jarisch,” a person having ordinary skill in the art would not have modified Yoakim with Jarisch’s teachings, “[e]specially since the snug fit in Yoakim performs a safety function.” *Id.* at 28.

We do not agree, on the current record, that the differences between Jarisch’s and Yoakim’s holders would have discouraged Petitioner’s proposed modification. Petitioner’s proposed modification is directed to locating a code on the bottom rim of a capsule. Again, Patent Owner seems to be incorporating aspects of Jarisch’s system into the proposed combination rather than taking account of what the combined teachings of the prior art fairly would have suggested to the ordinarily skilled artisan.

Patent Owner argues that an affiliate of Petitioner’s argued against Petitioner’s proposed modification during the prosecution of Jarisch. *Id.* at 24–25. At this preliminary stage of the proceeding, we find unavailing Patent Owner’s reliance of the prosecution history of Jarisch. The passages upon which Patent Owner relies merely state that the references asserted by the examiner fail to disclose or suggest placing a code on the bottom. *See* Ex. 2005, 6–9. Such statements do not support a finding that a person having ordinary skill in the art, *armed with Jarisch’s teachings of a code on the bottom side of a capsule’s rim*, would not have placed a code on the bottom of Yoakim’s capsule’s rim.

Patent Owner adds that there would not have been a reasonable expectation of success for the proposed modification, as Yoakim would have required “extensive modifications.” Prelim. Resp. 30–31. We have considered this argument and determine, on the current record, that it does not demonstrate a deficiency in Petitioner’s position for purposes of instituting trial. Petitioner demonstrates that Jarisch is directed to a beverage

system that expressly discloses an optical code on the bottom of a beverage capsule. *See* Pet. 38. Petitioner further demonstrates that Jarisch expressly discloses an exemplary way to read the optical code. *Id.* at 38–40.

iii. Combining Yoakim and Jarisch with Rossi

Next, Patent Owner argues that Petitioner’s reasoning for combining Rossi’s teaching of a capsule identification system is deficient because Yoakim already achieves a safety function by using a capsule and capsule holder with complementary shapes. Prelim. Resp. 34 (referencing Ex. 1004 ¶ 205); *see also* Ex. 1004 ¶ 205 (describing gripping structure 840 on the bottom of an exemplary capsule that serves as a “lock” into which a “key” structure in the capsule holder fits).

We have considered Patent Owner’s argument and determine, on the current record, that it does not demonstrate a deficiency in Petitioner’s position for purposes of instituting trial. As to Yoakim already incorporating a safety feature to ensure that a compatible capsule is used, this argument is directed to a single embodiment with gripping structure 840, a feature not identified in the Petition as part of the proposed modified apparatus. Even if Yoakim discloses one way to ensure compatible capsules are used, such a disclosure does not mean that a person having ordinary skill in the art would not have found it obvious to use a different method known in the art that could be employed with predictable results for capsules that do not employ a gripping structure. *Cf. KSR Int’l Co.*, 550 U.S. at 417 (“[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.”). Also, Petitioner’s rationale for employing Rossi’s teachings is broader than safety

considerations. The Petition identifies “greater specificity and accuracy of brewing conditions” as well as increased safety. *See* Pet. 41.

Patent Owner argues that Yoakim does not disclose brewing its beverages using high pressure, in contrast to Rossi’s teachings. Prelim. Resp. 34–36.⁹ We determine, however, that Petitioner’s rationale is not so limited. Petitioner identifies “high temperature water” as a concern. Pet. 41. Petitioner also reasons that Rossi’s validation step helps to avoid producing a beverage of inferior quality, another reason supporting the rationale. *See id.*

c) Conclusion – Motivation to combine

To summarize, we determine, on the current record, that Petitioner has sufficiently demonstrated that a person having ordinary skill in the art would have had a reason to combine the teachings of Yoakim, Jarisch, and Rossi as Petitioner proposes, with a reasonable expectation of success in arriving at the claimed invention. We determine, on the current record, that Petitioner sufficiently provides rational underpinnings for its reasoning. *Cf. KSR Int’l Co.*, 550 U.S. at 418 (stating that, to facilitate the analysis of an obviousness position, the proponent should provide “some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”).

2. Independent Claim 1

We next turn to analyzing the scope and content of the prior art, and any differences between the prior art and the claimed invention, on a limitation-by-limitation basis.

⁹ Patent Owner adds that “Rossi does not disclose a pump at all, and a pump is not inherent in Rossi’s teachings.” Prelim. Resp. 36. We address Patent Owner’s arguments concerning a pump in our analysis of limitation 1.o, below.

a) Preamble

The preamble of claim 1 recites “[a] beverage system for making a beverage.” Ex. 1001, 13:29. Petitioner contends that Yoakim discloses a beverage system. Pet. 43 (Ex. 1004 ¶¶ 2, 180; Ex. 1003 ¶¶ 210–212); *see id.* at 44 (reproducing Ex. 1004, Fig. 1).

Upon review of the information in the Petition and corresponding evidence, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that Yoakim teaches or suggests the subject matter of the preamble. In view of this determination, we need not resolve, at this stage of the proceeding, whether the preamble is limiting.

Patent Owner does not dispute Petitioner’s contentions with respect to the subject matter of the preamble at this stage of the proceeding.

b) Portion capsule—base element (limitations 1.a–1.d)

Claim 1 also recites

a portion capsule comprising: [1.a] i) a base element with a cavity, in which a beverage material is provided, [1.b] the base element being symmetrical about a central longitudinal axis thereof [1.c] and having an open end and a bottom portion, [1.d] the base element having a first height that is defined between the open end and the bottom portion.

Ex. 1001, 13:30–36. Petitioner contends that Yoakim discloses a portion capsule that includes a base element as recited in claim 1. Pet. 44–46. Specifically, Petitioner identifies the portion capsules depicted in Figures 6, 26, and 27 as having the recited base element features. *See id.* (referencing Ex. 1004 ¶¶ 14, 125, 129, 180, 197, 198, 308, 414, 415, 473, Figs. 6, 7, 26, 27; Ex. 1003 ¶¶ 213–222). With respect to element 1.d, Petitioner also contends that Jarisch discloses a portion capsule having a first height that is defined between the open end of the base element and a bottom portion of

the base element. *Id.* at 46 (referencing Ex. 1005 ¶ 36, Fig. 4; Ex. 1003 ¶¶ 223–224); *see also id.* (providing an annotated version of Jarisch’s Figure 4, identifying first and second heights).

Upon review of the information in the Petition and corresponding evidence, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that the combination of Yoakim and Jarisch teaches or suggests the portion capsule base element recited in claim 1. Patent Owner does not dispute Petitioner’s contentions with respect to this limitation at this stage of the proceeding.

c) Portion capsule—rim (limitation 1.e)

Claim 1 also recites “a portion capsule comprising: . . . [1.e] ii) a rim extending outwardly from the base element, the rim comprising a top side and an opposing bottom side.” Ex. 1001, 13:30, 37–39. Petitioner contends that Yoakim discloses a capsule with a circumferential rim, rim 72 and rim 104, depicted in Figures 6 and Figures 26 and 27, respectively. Pet. 47 (referencing Ex. 1004 ¶¶ 197, 414, Figs. 6, 26, 27; Ex. 1003 ¶¶ 225–228); *see id.* (reproducing Figures 6, 26, and 27 of Yoakim and identifying the top and bottom sides of rim 72).

Upon review of the information in the Petition and corresponding evidence, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that Yoakim teaches or suggests the portion capsule rim recited in claim 1. Patent Owner does not dispute Petitioner’s contentions with respect to this limitation at this stage of the proceeding.

d) Portion capsule—cover (limitations 1.f–1.h)

Claim 1 also recites

a portion capsule comprising: . . . [1.f] iii) a cover fastened to the base element to close the cavity, the cover is bowed outwardly in

a central region of the cover relative to a peripheral region of the cover, [1.g] the cover includes a region configured to be pierced at a location that is offset from the central longitudinal axis, [1.h] the cover has a second height that is defined between the peripheral region and the central region, wherein the first height of the base element is greater than the second height of the cover

Ex. 1001, 13:30, 40–49. Petitioner contends that Yoakim discloses a foil lid attached to the rim of a capsule body, such as sealing foil 103 attached to rim 104. Pet. 48 (referencing Ex. 1004 ¶¶ 129, 197, 414, Figs. 6, 7; Ex. 1003 ¶ 230). Petitioner further contends that Yoakim renders obvious an outwardly bowed cover. *Id.* Petitioner contends that Yoakim discloses that the capsule is sealed to prevent air ingress and that the capsule may include an inert gas or carbon dioxide. *Id.* (referencing Ex. 1004 ¶¶ 121, 128, 129, 270; Ex. 1003 ¶¶ 231, 232). Petitioner contends that a person having ordinary skill in the art “would have understood that a capsule with a foil membrane cover that is sealed fluid tight and filled with an inert gas would obviously bow outwardly under the pressure of the gas or [carbon dioxide] emitted from the ground coffee.” *Id.* (referencing Ex. 1003 ¶¶ 233–234 and citing Pet. 5).

Petitioner adds that “Jarisch explicitly discloses a cover that is bowed outwardly in a central region of the cover relative to a peripheral region of the cover.” Pet. 48 (referencing Ex. 1005, Fig. 4; Ex. 1003 ¶ 235); *see also id.* at 49 (showing an annotated version of Jarisch’s Figure 4, illustrating a bowed cover). Petitioner contends that “[i]t would have been obvious for a [person having ordinary skill in the art] to utilize a capsule shown in Jarisch with a bowed cover because such a cover can be the result of known techniques, such as inert gas and pressurization, which preserve the quality

of the ingredients over time.” *Id.* at 48–49 (referencing Ex. 1003 ¶¶ 236–237).

Petitioner also contends that Yoakim discloses a cover having a region configured to be pierced at a location that is offset from the central longitudinal axis. Pet. 49–50 (referencing Ex. 1004 ¶¶ 186–187, 199, Figs. 4, 7; Ex. 1003 ¶ 238–240); *see also id.* at 49 (reproducing Yoakim’s Figure 7, showing a region with piercings offset from the central axis of the capsule).

Petitioner also contends that Yoakim renders obvious a cover that has a second height that is defined between the peripheral region and the central region, where the recited first height of the base element is greater than the second height of the cover, because it renders obvious a bowed cover as discussed above. Pet. 51 (referencing Ex. 1003 ¶¶ 229–234, 242). Alternatively, Petitioner contends that Jarisch discloses this subject matter. *Id.* at 50 (referencing Ex. 1005, Fig. 4; Ex. 1003 ¶ 241); *see id.* (providing an annotated version of Jarisch’s Figure 4, showing the recited first and second heights). Petitioner contends that “it would have been obvious to a [person having ordinary skill in the art] for a capsule to have a first height of the base element that is greater than the second height of the cover so that the base element has increased space to contain ground coffee to enhance flavor and improve the beverage.” *Id.* at 51 (referencing Ex. 1003 ¶¶ 243–244).

Upon review of the information in the Petition and corresponding evidence, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that the combination of Yoakim and Jarisch teaches or suggests the portion capsule cover recited in claim 1. Patent Owner does not dispute Petitioner’s contentions with respect to this limitation at this stage of the proceeding.

e) Portion capsule—barrier layer (limitations 1.i)

Claim 1 also recites “a portion capsule comprising: . . . [1.i] iv) a barrier layer to prevent moisture or aroma from escaping out of the portion capsule.” Ex. 1001, 13:30, 50–51. Petitioner contends that “Yoakim discloses that both the sealing lid and cup-shaped body can include gas barrier layers made of polymers, aluminum, and/or aluminum alloys.” Pet. 51 (referencing Ex. 1004 ¶¶ 121, 128, 129, 197; Ex. 1003 ¶ 245). Petitioner adds that a person having ordinary skill in the art would have understood that such gas barrier layers would have prevented moisture or aroma from escaping out of the portion capsule. *Id.* (referencing Ex. 1004 ¶¶ 96, 350, 355; Ex. 1003 ¶¶ 246–248; and citing Pet. 5).

Upon review of the information in the Petition and corresponding evidence, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that the combination of Yoakim and Jarisch teaches or suggests the portion capsule barrier layer recited in claim 1. Patent Owner does not dispute Petitioner’s contentions with respect to this limitation at this stage of the proceeding.

f) Portion capsule—identifier (limitations 1.j)

Claim 1 also recites “a portion capsule comprising: . . . [1.j] v) an identifier provided on the bottom side of the rim.” Ex. 1001, 13:30, 52. Petitioner contends that Yoakim discloses an identification system for identifying portion capsules and that the identifier can be an optical code. Pet. 52 (referencing Ex. 1004 ¶¶ 477, 496, 526; Ex. 1003 ¶¶ 249, 250). Petitioner contends that Jarisch discloses an optically read code on the bottom side of the rim of a portion capsule. *Id.* (referencing Ex. 1005 ¶¶ 6, 22, 24, 34, 35, 82, Figs. 1–4; Ex. 1003 ¶¶ 251–253); *see id.* at 53 (reproducing Jarisch’s Figure 5). Petitioner adds that Jarisch discloses that

this positioning of the code is an optimal location. *Id.* at 52; Ex. 1005 ¶ 22 (“The bottom of the rim is sufficiently away from the liquid injection and beverage delivery areas so that there is a lower risk for the code to become unreadable . . .”).

Upon review of the information in the Petition and corresponding evidence, including Petitioner’s reasoning for combining the teachings of Yoakim and Jarisch, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that the combination of Yoakim and Jarisch teaches or suggests the portion capsule identifier recited in claim 1.¹⁰ Patent Owner does not dispute Petitioner’s contentions with respect to this limitation at this stage of the proceeding.

g) Beverage machine—sensor/detector (limitations 1.k)

Claim 1 also recites “a beverage machine comprising: [1.k] i) a sensor/detector.” Ex. 1001, 13:53–54. Petitioner contends that Yoakim discloses a beverage machine having a sensor or detector. Pet. 55 (referencing Ex. 1004 ¶¶ 25, 192, 477, 494–496, 512, 525, Fig. 4, Fig. 61; Ex. 1003 ¶¶ 260–262).

Petitioner adds that Rossi and Jarisch each discloses reading identifiers using optical sensors. Pet. 55 (referencing Ex. 1041, 11; Ex. 1005 ¶ 82, Fig. 4; Ex. 1003 ¶¶ 263–265); *see also id.* at 56 (providing an

¹⁰ Petitioner provides alternative contentions “[t]o the extent ‘identifier’ is construed as a ‘feature that individualizes the portion capsule’ and ‘individualization’ is construed as ‘to determine whether the portion capsule is suitable for use with the beverage machine such that the use of unsuitable capsules is prevented.’” Pet. 53. Because we do not construe the term “identifier” this way at this stage of the proceeding, we do not analyze Petitioner’s alternative contentions. We note, however, that these contentions are part of the trial record and may be considered on the complete trial record.

annotated version of Jarisch’s Figure 4, identifying the sensor, beam, and optical identifier). Petitioner contends, alternatively, that “it would have been obvious to utilize th[e] configuration [of Jarisch’s Figure 4] in Yoakim, as depicted in” Figure 61. *Id.* at 56 (referencing Ex. 1003 ¶ 266); *see also* Ex. 1003 ¶ 266 (testifying that it would have been obvious to use the configuration depicted in Jarisch’s Figure 4 with Yoakim’s Figure 61 to “allow reading of the code below the rim”).

Upon review of the information in the Petition and corresponding evidence, including Petitioner’s reasoning for combining the teachings of Yoakim and Jarisch, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that the combination of Yoakim and Jarisch teaches or suggests the beverage machine sensor/detector recited in claim 1. Patent Owner does not dispute Petitioner’s contentions with respect to this limitation at this stage of the proceeding.

h) Beverage machine—insertion shaft (limitations 1.1)

Claim 1 also recites “a beverage machine comprising: . . . [1.1] ii) an insertion shaft configured to receive the portion capsule and to enable detection of the identifier on the bottom side of the rim by the sensor/detector.” Ex. 1001, 13:53, 55–57. Petitioner contends that the combined teachings of Yoakim and Jarisch disclose the subject matter of limitation 1.1 including discloses an insertion shaft “being light conductive to allow the sensor/detector light beam to reach the bottom side of the rim where the optical code is located.” Pet. 57 (referencing Ex. 1005 ¶ 82, Fig. 4; Ex. 1003 ¶¶ 267–268).

Upon review of the information in the Petition and corresponding evidence, including Petitioner’s reasoning for combining the teachings of Yoakim and Jarisch, we determine Petitioner has made a sufficient showing,

at this stage of the proceeding, that the combination of Yoakim and Jarisch teaches or suggests the beverage machine insertion shaft recited in claim 1. Patent Owner does not dispute Petitioner's contentions with respect to this limitation at this stage of the proceeding.

i) Beverage machine—chamfered mandrel (limitations 1.m)

Claim 1 also recites “a beverage machine comprising: . . . [1.m] iii) a chamfered mandrel that is configured to pierce the cover at the location that is offset from the central longitudinal axis.” Ex. 1001, 13:53, 58–60.

Petitioner contends that Yoakim discloses a chamfered mandrel configured as recited. Pet. 58–59 (referencing Ex. 1004 ¶¶ 186–187, Fig. 4, Fig. 7; Ex. 1003 ¶¶ 275–278).

Upon review of the information in the Petition and corresponding evidence we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that Yoakim teaches or suggests the beverage machine chamfered mandrel recited in claim 1. Patent Owner does not dispute Petitioner's contentions with respect to this limitation at this stage of the proceeding.

j) Beverage machine—seal (limitations 1.n)

Claim 1 also recites “a beverage machine comprising: . . . [1.n] iv) a seal that is configured to bear against a top side of the cover in a region between the peripheral region of the cover and the region of the cover that is pierced by the chamfered mandrel.” Ex. 1001, 13:53, 61–64. Petitioner contends that Yoakim discloses a seal configured as recited. Pet. 59–60. Petitioner contends that Yoakim teaches a flow restriction means arranged after the outlet of a portion capsule. *Id.* (referencing Ex. 1004 ¶¶ 370–380, 382, 396–398; Ex. 1003 ¶¶ 279–280). Petitioner contends that Yoakim discloses a brewing machine having sealing valve system 156 including

engaging portion 157 that “is designed to ‘control[] the flow of liquid that is discharged from the device.’” *Id.* at 60 (referencing Ex. 1004 ¶¶ 384–385, 388, 436, 446; Ex. 1003 ¶¶ 281–283).

Petitioner explains that Yoakim’s seal bears against the top of a portion capsule between the peripheral region of the capsule and the region pierced by the chamfered mandrel. Pet. 60–61 (referencing Ex. 1004 ¶¶ 388, 396, 436, Figs. 35, 37, 39; Ex. 1003 ¶ 285).

Petitioner also contends, in the alternative, that “it would have been obvious to a [person having ordinary skill in the art] to utilize a seal in the claimed position in order to improve interaction between the water and coffee grounds.” Pet. 62 (referencing Ex. 1003 ¶¶ 286–287).

Upon review of the information in the Petition and corresponding evidence we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that Yoakim teaches or suggests, or otherwise renders obvious, the beverage machine seal recited in claim 1. Patent Owner does not dispute Petitioner’s contentions with respect to this limitation at this stage of the proceeding.

k) Beverage machine—pump (limitations 1.o)

Claim 1 also recites “a beverage machine comprising: . . . [1.o] v) a pump controlled to supply hot water into the portion capsule only upon detection of the identifier by the sensor/detector and a determination by the beverage machine that the portion capsule is suitable for use with the beverage machine.” Ex. 1001, 13:53, 65–14:2. Petitioner contends that Yoakim discloses a pump that supplies hot water to the capsule. Pet. 62 (referencing Ex. 1004 ¶¶ 180, 506). Petitioner adds that Yoakim discloses that its pump is controlled by detecting an identifier. *Id.* at 62–63 (referencing Ex. 1004 ¶¶ 25, 192, 218, 477, 522; Ex. 1003 ¶¶ 288–289); *see*,

e.g., Ex. 1004 ¶ 477 (“The capsule system further comprises an identification means associated to the different capsules in the set for identifying each capsule The identification means are associated to control means . . . by controlling . . . the pump supplying liquid in the capsule.”).

Petitioner concludes that “[i]t would have been obvious to a [person having ordinary skill in the art] reading Yoakim to only utilize the pump to supply water into the capsule after the identifier is read by the sensor/detector in order to allow the system to process optimal brewing parameters before beginning the brewing process.” Pet. 63 (referencing Ex. 1003 ¶ 290).

Additionally, or alternatively, Petitioner contends that Rossi discloses detecting an identifier on a portion capsule by a sensor. Pet. 63–64 (referencing Ex. 1041, 6, 7; Ex. 1003 ¶ 291). Petitioner contends that Rossi then discloses that its beverage machine determines if the portion capsule is suitable for the machine using a validation element. *Id.* at 64–65 (referencing Ex. 1041, 7; Ex. 1003 ¶¶ 291–293). Petitioner contends that, next, Rossi discloses that the identification and validation elements can be the same element, such as an optical code. *Id.* at 65 (referencing Ex. 1041, 9, 11, 13; Ex. 1003 ¶ 294). Finally, Petitioner contends that Rossi discloses that it activates the production of a beverage only after detecting the identifier and validating that the capsule is suitable for use. *Id.* at 65–66 (referencing Ex. 1041, 8, 9; Ex. 1003 ¶ 295).

Petitioner contends that a person having ordinary skill in the art would have understood

Rossi’s disclosure to constitute operating the pump only upon detection of the identifier and a determination that the capsule is

suitable for use with the beverage machine because the machine must both detect and read the recognizing element (and additionally the validation element) to determine whether the capsule is suitable for use with the machine before the machine will activate the brewing process, which uses the pump.

Pet. 66 (referencing Ex. 1003 ¶ 296). Mr. Jobin testifies that “[t]he pump is a component of the brewing cycle and thus would not operate without brewing cycle activation.” Ex. 1003 ¶ 296. Petitioner concludes that it would have been obvious to a person having ordinary skill in the art to combine Rossi’s teachings of the identification and validation process with Yoakim to arrive at the subject matter of limitation 1.o.

Petitioner adds that Rossi, “[a]t a minimum, renders obvious” not allowing a pump to operate unless a portion capsule passes the identification and validation steps. Pet. 66 (referencing Ex. 1003 ¶ 296).

Patent Owner argues that “Yoakim lacks any express teaching for a pump that is controlled to push water into the portion capsule only after the identifier is read by the sensor/detector.” Prelim. Resp. 38. Patent Owner argues that Yoakim’s disclosure demonstrates that supplying water to a portion capsule is not dependent on detecting an identifier. *Id.* (referencing Ex. 1004 ¶ 218). Patent Owner also argues that Yoakim teaches that motor activation causes pump activation. *Id.* (referencing Ex. 1004 ¶ 521). Patent Owner adds that the claimed subject matter is also not inherently disclosed. *Id.* at 39–40.

We determine, on the current record, that Petitioner demonstrates sufficiently for institution that it would have been obvious, based on the teachings of Yoakim, to have a pump that controls the supply hot water into the portion capsule upon detecting an identifier and determining that the portion capsule is suitable for use with the beverage machine as recited in

limitation 1.o. As Petitioner contends, Yoakim discloses that its brewing system includes

an identification means associated to the different capsules in the set for identifying each capsule and adjusting brewing parameters accordingly. . . . The identification means are associated to control means placed in the centrifugal brewing device which controls the adjustment of the said parameters, by controlling . . . the pump supplying liquid in the capsule.

Ex. 1004 ¶ 477 (quoted at Pet. 63). Mr. Jobin testifies that “Yoakim . . . discloses that [its] beverage machine, including the pump, is controlled by a controller based on the detection of an identifier by a sensor/detector.”

Ex. 1003 ¶ 289. Patent Owner’s arguments that Yoakim does not disclose, either expressly or inherently, operating its pump upon detecting an identifier are inapposite. Prelim. Resp. 38–40. Petitioner’s contention is that such subject matter would have been *obvious* based on Yoakim’s teachings in order “to process optimal brewing parameters before beginning the brewing process.” *See* Pet. 63 (referencing Ex. 1003 ¶ 290). Petitioner contends that a person having ordinary skill in the art would have found it obvious, based on the teachings that Yoakim controls a pump based on the type of beverage in the capsule as determined by reading an identifier, to only operate the pump if the system successfully reads that identifier. *See* Pet. 62–63.

Patent Owner next argues that Rossi does not disclose a pump and, as such, does not disclose activating a pump as claimed. Prelim. Resp. 42–43; *see also id.* at 44–45 (discussing Rossi’s process and arguing that “[n]one of these steps teach activating or controlling a pump to push water into the portion capsule”). We have considered Patent Owner’s argument and

determine, on the current record, that it does not demonstrate a deficiency in Petitioner's position for purposes of instituting trial.

Petitioner has demonstrated sufficiently for institution that the combined teachings of Yoakim and Rossi render the subject matter of limitation 1.o obvious. Patent Owner's argument that Rossi does not disclose a pump ignores Petitioner's position that the *combined teachings* of Yoakim and Rossi render the subject matter obvious. Petitioner relies on Yoakim to teach a pump and Rossi to activate that pump (as Rossi teaches activating its brewing device) after applying Rossi's identification and validation steps. That is, Rossi teaches the process for identifying and validating a capsule to ensure it is suitable and safe for use, and teaches, upon successfully completing the steps, activating the machine. Petitioner contends that a person having ordinary skill in the art would have found it obvious to apply this activation to Yoakim's pump. *Cf.* Ex. 1003 ¶ 296 ("The pump is a component of the brewing cycle and thus would not operate without brewing cycle activation." (cited at Pet. 66)).

Patent Owner argues that Petitioner does not explain why a person having ordinary skill in the art would have incorporated Rossi's validation step into Yoakim. Prelim. Resp. 43. Patent Owner argues that "any such step of destruction of any of the capsule features before starting the brewing process would be contrary to the principle of operation of Yoakim (and Jarisch)." *Id.* We have considered Patent Owner's argument and determine, on the current record, that that it does not demonstrate a deficiency in Petitioner's position for purposes of instituting trial.

Patent Owner's argument seems based on bodily incorporation and fails to account adequately for what the combined teachings of the prior art fairly would have suggested to those skilled in the art. Petitioner does not

contend that a person having ordinary skill in the art would use the destroying aspect of the validation process. Instead, Petition recognizes that Rossi expressly teaches that the validation element can be an optical code and, indeed, the same code that would be used as the identification element. *See* Ex. 1041, 9 (“The validation element could be identical to the identification element.”); *see also id.* at 11 (“The load element of the system comprises an identifying element for its recognition and a validation element for its validation. These are preferably in the form of barcodes, antennae, or paints having optically measurable properties.”); *id.* (“The checking means compares the signal from the recognising means for the identifying element and the validation element with pre-stored data in order to allow the machine to proceed to activation only if it recognises the identifying element and the unvalidated validation element.”); *see also* Pet. 66 (“A [person having ordinary skill in the art] would understand Rossi’s disclosure to constitute operating the pump only upon . . . read[ing] the recognizing element (and additionally the validation element) to determine whether the capsule is suitable for use with the machine before the machine will activate the brewing process.”).

We understand that Rossi’s preferred method may destroy the validation element, but on this record, we determine that a person having ordinary skill in the art would have understood that, although “preferred,” such a step is not required. *See* Pet. 42 (explaining that Rossi’s identifying and validating codes “can be read by a ‘barcode reader, radio frequency wave transmitter and receiver, or optical sensor.’” (quoting Ex. 1041, 11)). And, in light of how Yoakim’s system operates—through centrifugal operation of the capsule—an artisan of ordinary skill would have understood that a damaged capsule should not be used, as the capsule would no longer

be radially symmetrical and able to rotate at a rate of at least 500 revolutions per minute. *See* Pet. 22; Ex. 1003 182 (“Yoakim discloses a centrifugal beverage brewing system with a single-serve portion capsule, brewing device, and method for preparing a liquid food or beverage); *see also* Ex. 1003 ¶ 184 (“The capsules are configured to be ‘radially symmetrical.’”); Ex. 1004 ¶¶ 21 (indicating that the capsule is rotated at 500 rpm); 126 (providing capsule rotation speeds from at least 1000 rpm to 16,000 rpm). On the current record, it seems that an argument that a person having ordinary skill in the art would not have understood the implications of the destruction aspect of Rossi’s teachings on Yoakim’s system treats the artisan of ordinary skill as an automaton. *Cf. KSR Int’l Co.*, 550 U.S. at 421 (“A person of ordinary skill is also a person of ordinary creativity, not an automaton.”).

To the extent that Patent Owner argues that Petitioner’s proposed combination would result in starting components other than a pump, Patent Owner does not provide sufficient evidence to support this attorney argument. On the current record, Patent Owner’s reliance on Yoakim’s disclosure that rotational momentum delivers liquid to the capsule, rather than a pump, suggesting the drive unit would be activated after an identification process (*see* Prelim. Resp. 39), does not demonstrate a deficiency in Petitioner’s position for purposes of instituting trial. Yoakim expressly discloses that a low pressure pump delivers water to the capsule inlet in sufficient quantities such that rotational effects are able to provide a consistent flow into the capsule. *See* Ex. 1004 ¶¶ 428 (“[T]he water pump can deliver a water pressure and flow rate sufficient to provide a continuous water flow (i.e., without flow shortage due to the centrifuge pumping effect in the capsule) at the operational centrifugal speeds during centrifugation.”);

477 (disclosing that the identification means is associated with the control means to control the rotational motor *or* the pump (cited at Pet. 63)); 522 (“The control of the volume of liquid injected in the capsule is carried out by the control means selectively activating the pump 211 to meter the proper volume of liquid.” (cited at Pet. 63)). Thus, this disclosure suggests that the pump is activated before experiencing the centrifuge pumping effect from a rotating capsule.

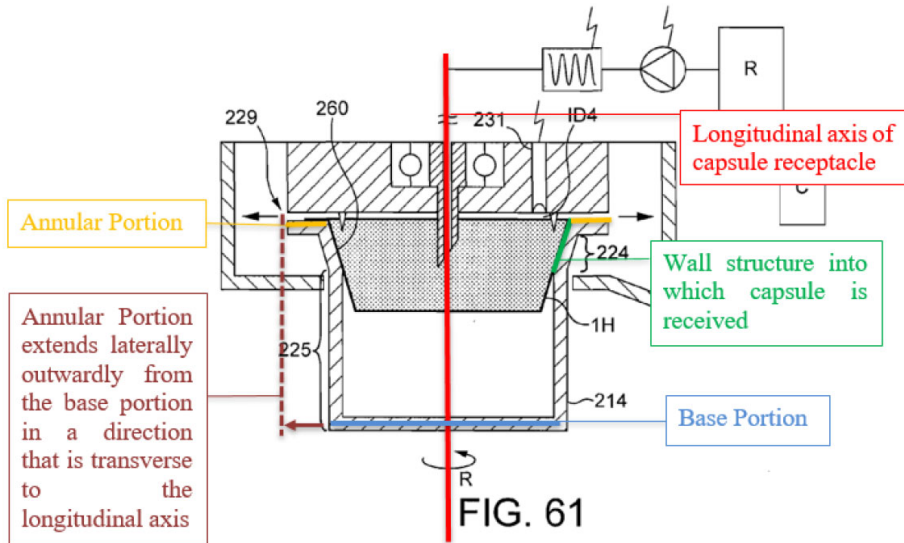
l) Conclusion

Having reviewed the preliminary record, including Petitioner’s showing as to how the combined teachings of Yoakim, Jarisch, and Rossi disclose each of the limitations of claim 1, and the reasons for combining the teachings of these references, we conclude that Petitioner demonstrates a reasonable likelihood that claim 1 is unpatentable under 35 U.S.C. § 103(a) over Yoakim, Jarisch, and Rossi.

3. Independent claim 12

Independent claim 12 recites similar subject matter as independent claim 1. *Compare* Ex. 1001, 13:29–14:2, *with id.* at 14:45–15:22. Significant to our analysis here, claim 12 does include the requirement that the insertion shaft is defined by a base portion and an annular portion laterally extending outwardly from the base portion in a direction that is transverse to a longitudinal axis of the insertion shaft. *See id.* at 15:3–7 (element “12.1”).¹¹ Petitioner contends that Yoakim discloses the recited arrangement between the base portion and annular portion. We reproduce Petitioner’s annotated version of Yoakim’s Figure 61, below.

¹¹ This subject matter is also recited in claim 3, which ultimately depends from claim 1. Patent Owner’s arguments apply to both claim 12 and claim 3. *See* Prelim. Resp. 46–49.



Pet. 58. The annotated figure of a centrifugal brewing device with a small volume capsule. Ex. 1004 ¶ 90. Petitioner adds annotations identifying the longitudinal axis of the capsule receptacle (in red), the wall structure into which a capsule is received (in green), the base portion (in blue) and the annular portion (in yellow). Petitioner also illustrates that the “[a]nnular portion extends laterally outward from the base portion in a direction that is transverse to the longitudinal axis,” by providing a line extending from the plane of the base portion to the annular portion (in maroon).

Patent Owner argues that “the Petitioner makes no connection between the so-called base portion and the so-called annular portion. Therefore, Petitioner’s argument fails.” Pet. 47. That is, Patent Owner argues that Petitioner fails to demonstrate how the alleged annular portion extends from the alleged base portion, given that the two portions are illustrated separately.

As we discuss above, Petitioner has demonstrated a reasonable likelihood of success in proving that at least claim 1 of the '829 patent is unpatentable, and we institute on all challenges raised in the Petition. *See SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1354, 1359–60 (2018); *see also*

PGS Geophysical AS v. Iancu, 891 F.3d 1354, 1360 (Fed. Cir. 2018) (interpreting the statute to require “a simple yes-or-no institution choice respecting a petition, embracing all challenges included in the petition”); 37 C.F.R. § 42.108(a) (“When instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.”). We do present some observations on this dispute below to provide guidance to the parties and facilitate a streamlined trial.

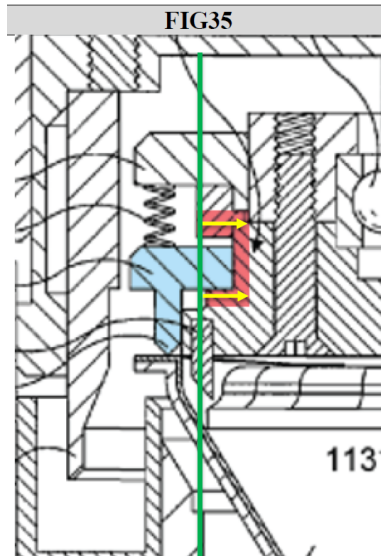
Petitioner’s contention implies that the plain and ordinary meaning of the phrase “annular portion laterally extending outwardly from the base portion” encompasses an annular portion that indirectly extends from the base portion. Patent Owner’s argument implies that the plain and ordinary meaning of the phrase requires the annular portion to be directly connected to the base portion. Neither party offers an express construction to support their implied constructions. If Patent Owner’s argument is presented during trial, we will assess it on the complete trial record.¹²

4. *Dependent claim 4*

Claim 4 depends ultimately from claim 1 and recites “wherein the beverage machine comprises a groove that is laterally offset from the chamfered mandrel, and the seal is at least partially seated in the groove.” Ex. 1001, 14:19–22. Petitioner contends that Yoakim discloses this feature.

¹² Patent Owner is reminded that arguments not presented in a Patent Owner Response, even if in a Preliminary Response, are deemed to be waived. *See* Consolidated Trial Practice Guide (“CTPG”) 52 (citing *In re Nuvasive, Inc.*, 842 F.3d 1376, 1381 (Fed. Cir. 2016) (explaining that a patent owner waives an issue presented in its preliminary response if it fails to renew the issue in its response after trial is instituted)), available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

Pet. 68–69. We reproduce below a portion of Yoakim’s Figure 35 as annotated by Petitioner.



Pet. 69. The portion of Figure 35 shows a close-up of a seal arrangement of the brewing machine of Figure 35. The seal is provided in blue, a groove is identified in red, and a green line is provided through the centerline of a chamfered mandrel. Yellow arrows indicate the lateral displacement of the groove. Petitioner contends that the figure illustrates a groove that is laterally offset from the chamfered mandrel, and the seal is at least partially seated in the groove. *Id.*; see also Ex. 1003 ¶ 305 (“Based on the claim language, [laterally offset] means off to the side (in either direction) of the central axis of the chamfered mandrel.”).

Patent Owner argues Petitioner provides no support for its construction that the term laterally offset is determined from the centerline of the chamfered mandrel. Prelim. Resp. 50–52. Patent Owner also argues that the groove is not off to the side of the chamfered mandrel, even under Petitioner’s unsupported construction. *Id.* at 53–57. Patent Owner adds that Petitioner appears to have arbitrarily chosen a portion of the groove structure to identify in red as the recited groove. *Id.* at 58–59.

The Board rejected this same argument from Petitioner in the Final Written Decision in IPR2022-01574, which involved the same parties and included claims that recited the same subject matter. *See Nespresso USA, Inc. v. K-Fee Sys. GmbH*, Paper 29, 25–31, 32–45 (PTAB April 10, 2024). We note, however, that Petitioner filed a request for Director Review of the Final Written Decision in IPR2022-01574, and the request is still pending. IPR2022-01574, Paper 30. We will address this issue on a full trial record as necessary to any final written decision.

5. *Dependent claims 9 and 18*

Dependent claim 9 ultimately depends from claim 1 and recites “wherein the portion capsule is free of a filter inside of the cavity.” Ex. 1001, 14: 37–38. Claim 18 ultimately depends from claim 12 and recites similar subject matter. *Id.* at 16:18–19. Petitioner argues that Yoakim discloses a portion capsule that does not include a filter in the cavity of the capsule. Pet. 72 (referencing Ex. 1004 ¶¶ 171, 343, Fig. 54; Ex. 1003 ¶¶ 320–323). We understand Petitioner to contend that, because Yoakim discloses that a filter inside the cavity is an optional, additional feature for a portion capsule, that Yoakim’s capsule does not have a filter inside the cavity. *Cf.* Ex. 1003 ¶¶ 320–321 (“Specifically, Yoakim describes extraction of coffee capsules using methods that do not include a filter, and in fact confirm that the addition of a filter structure is optional. . . . Yoakim further describes the optional filter embodiment, which is not otherwise present in the Yoakim embodiments that I have discussed.”).

Patent Owner disagrees, arguing that Yoakim discloses a filter in the cavity. Prelim. Resp. 61–64. Patent Owner directs us to disclosures in Yoakim that indicate the inclusion of a filter or refer to openings/outlets 118, shown in Figure 29, as filters. *See, e.g., id.* at 61 (quoting Ex. 1004 ¶ 16

(“The enclosure can *instead* have . . . a filter part separating the extractable or infusible ingredient(s) and the collecting cavity food with the filter part optionally spaced from the top wall by a gap” (emphasis added)); quoting Ex. 1004 ¶ 338 (“[T]he openings can have a filtering function per se.”)), 62 (reproducing Ex. 1004, Fig. 29 and stating the figure “depicts the openings/outlets (118) configuration”).

On the current record, we determine that Petitioner has demonstrated sufficiently that Yoakim discloses a portion capsule free of a filter in the cavity. As Patent Owner’s own citations indicate, Yoakim discloses that a filter is an optional addition. *See* Ex. 1004 ¶¶ 171 (“An additional filtering layer can be used to filter the liquid depending on the size of the outlets.” (cited at Pet. 72)); 343 (“In a possible mode, the portion of wall with the outlet openings can be formed from a paper filter or woven, non-woven fibres, meshed material, porous polymer membrane or combination thereof.”). Patent Owner does not explain sufficiently how slots or openings constitute a filter *inside* the cavity as required by the claims. Also, Patent Owner cites expressly to paragraph 271 of Yoakim. Prelim. Resp. 61. This paragraph states that, *preferably*, the capsule contains an internal filter placed at the periphery of the enclosure, such as an internal perforated lid or a portion of porous material. Ex. 1004 ¶ 271. Yoakim continues that, “[i]n *another mode*, the filter could be part of the device or be formed by the puncturable membrane and piercing members.” *Id.* (emphasis added). That is, in this alternative mode, the capsule would not have the filter internal to the enclosure, but instead the beverage device itself would have the filter.

We will, however, revisit this argument on the complete trial record if put forward in the Patent Owner Response.

6. Dependent claims 2, 5–8, and 13–17

As we discuss above, Petitioner has demonstrated a reasonable likelihood of success in proving that at least claim 1 of the '829 patent is unpatentable, and we institute on all challenges raised in the Petition. We have, however, reviewed Petitioner's contentions and citations to the evidence and determine that Petitioner has made a sufficient showing, on the current record, that dependent claims 2, 5–8, and 13–17, which depend ultimately from either independent claim 1 or independent claim 12, are unpatentable under 35 U.S.C. § 103(a) over Yoakim, Jarisch, and Rossi. Patent Owner does not make any arguments directed to these dependent claims, except for the arguments directed to independent claims 1 and 12, which we address above in connection with our analysis above.

F. Ground 2: Claims 10, 11, and 19 as unpatentable over Yoakim, Jarisch, Rossi, and Castellani

Petitioner contends that “Yoakim, Jarisch, and Rossi disclose all elements of claims 10, 11, and 19 except for (1) the holding arms for guiding the single-serve capsule; and (2) a waste container.” Pet. 72–73 (referencing Ex. 1003 ¶¶ 324–325 and the Petition's analysis of Ground 1). Petitioner contends that Castellani teaches this additional subject matter, and that a person having ordinary skill in the art would have been motivated to modify the combination of Yoakim, Jarisch, and Rossi with Castellani's teachings to arrive at the subject matter of claims 10, 11, and 19. *Id.* at 73–75; 75–77 (providing an analysis of claims 10, 11, and 19).

As we discuss above in our analysis of Ground 1, because Petitioner has demonstrated a reasonable likelihood of success in proving that at least claim 1 of the '829 patent is unpatentable, we institute on all challenges raised in the Petition. We have, however, reviewed Petitioner's contentions

and citations to the evidence and determine that Petitioner has made a sufficient showing, on the current record, that claims 10, 11, and 19 are unpatentable under 35 U.S.C. § 103(a) over Yoakim, Jarisch, Rossi, and Castellani. Patent Owner does not make any arguments directed to these claims, except for the arguments directed to the independent claims, which we address above in connection with our analysis of Ground 1.

III. CONCLUSION

For the above reasons, we determine that the information presented in the Petition shows a reasonable likelihood that at least claim 1 of the '829 patent is unpatentable as obvious over Yoakim, Jarisch, and Rossi. Because Petitioner demonstrates that at least one claim of the '829 patent meets the threshold for institution, we institute an *inter partes* review of all claims as challenged in the Petition. 37 C.F.R. § 42.108(c); *SAS*, 138 S. Ct. at 1359–60.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–19 of the '829 patent is *instituted*; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), notice is hereby given of the institution of trial, which will commence on the entry date of this Decision.

IPR2024-00254
Patent 11,465,829 B2

FOR PETITIONER:

Clayton McCraw
Amanda S. Bonner
MAYER BROWN LLP
CMcCraw@mayerbrown.com
asbonner@mayerbrown.com

FOR PATENT OWNER:

Douglas Carsten
Michael P. Chu
Ian B. Brooks
MCDERMOTT WILL & EMERY LLP
dcarsten@mwe.com
mchu@mwe.com
ibrooks@mwe.com

S. Benjamin Pleune
ALSTON & BIRD LLP
ben.pleune@alston.com

Eric M. Dobrusin
Paul J. Palinski
THE DOBRUSIN LAW FIRM P.C.
EDobrusin@PatentCo.com
PPalinski@PatentCo.com