

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ADVANCELL PTY LTD.,
Petitioner,

v.

SCIENCONS, AS and ARTBIO, INC.,
Patent Owner.

Case No. PGR2025-00040
Patent 12,249,437

PATENT OWNER'S SUR-REPLY

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I. INTRODUCTION

USPTO Director Squires has been clear that the Office will not tolerate multiple, inconsistent claim construction positions from a petitioner as both unduly prejudicial to a patent owner and a poor use of Office resources.

In the present case, Petitioner makes a mockery of this policy. Consider only the term “a collector surface with a gas tight seal” of claim element 1c. The petition proffered what it described as “three possible constructions” of this term. The corresponding discussion in the petition then presented various different iterations that at least doubled the “three possible constructions” into many more. Prior to institution, Petitioner filed a pre-institution reply brief adding new and different iterations of each of the petition’s “three possible constructions.” Paper 8. At institution, the Board identified a modified version of the petition’s “second construction” as the natural “first read” for the claim.¹ Now in Reply, Petitioner adds several additional new iterations of its interpretation of the same term recited in claim 1. In sum, Petitioner has now advanced at least a dozen different interpretations for the same claim term “a collector surface with a gas tight seal.”

¹ PO does not concede that the instituted case is in compliance with the relevant statutory parameters as explained, for example, by the Supreme Court in *SAS Institute v. Iancu*. 584 U.S. 357, 367 (2018).

Petitioner has advanced different interpretations of other claim terms as well. It is inconceivable how this is appropriate and anything other than highly prejudicial to Patent Owner as it renders notice and opportunity to respond a virtual impossibility. At institution, the Board rightfully expressed “concerns as to whether it is appropriate to construe claim element [1.C] as having multiple constructions.” DI at 43. Petitioner’s actions are unequivocally *not appropriate* and have only gotten worse during trial.

The Patent Owner Response (POR) explained that, if the petition challenges were to be considered at all, they should be reviewed according to Petitioner’s “second construction” of the term “a collector surface with a gas tight seal” as interpreted by the Board at institution, under which each ground fails. Remarkably, Petitioner now seeks to abandon its own construction. Such a request is improper and should only be viewed as a request to abandon the theories of anticipation and obviousness advanced in the petition and instead improperly backfill deficiencies identified in the Patent Owner Response (POR). Petitioner also raises new, unsupported arguments that only confirm the petition never advanced a viable unpatentability case in the first place. Finally, the Reply offers no clarification of the petition’s flawed indefiniteness argument, confirming Petitioner’s failure to meet its burden.

Accordingly, the patentability of each challenged claim should be upheld.

II. MULTIPLE INCONSISTENT CONSTRUCTIONS WARRANTS TERMINATION

Petitioner's advancement of multiple inconsistent constructions of limitation 1c from the petition and through the Reply is improper and, if anything, provides cause to terminate these proceedings. As Director Squires has repeatedly and emphatically explained, it is not acceptable for a petitioner to advance inconsistent claim construction positions for a limitation absent good cause. For example, in *Terumo BCT Inc. v. Haemonetics Corp.*, the Director explained that petitioners must advance a **single construction** and apply it consistently. IPR2025-01374, Paper 20, 3 (May 12, 2026) (informative) (“[A] petitioner should present a single construction and apply that construction consistently before the Board and the district court....”). Advancement of multiple inconsistent claim constructions undermines patent owners' ability to respond to petitioners' arguments and misuses Board resources. *See Infineon Techs. Ams. Corp. v. Mosaid Techs. Inc.*, IPR2025-01456, Paper 27, 4 (March 17, 2026) (“We are not in the business of aiding parties to stress test claim constructions to see which will prevail. As stated repeatedly, a petitioner should pick one [construction].”). Nor does a petitioner's desire to maintain an indefiniteness argument excuse the advancement of multiple different claim constructions. *See Tesla, Inc. v. Intellectual Ventures II LLC*, IPR2025-00340, Paper 18, 3-4 (Nov. 5, 2025) (informative) (availability of indefiniteness arguments does not excuse advancement of inconsistent positions).

Here, Petitioner has flouted the requirement to advance a *single* claim construction to a head-spinning degree. The petition listed “three possible constructions” of limitation 1c, and rather than identifying which Petitioner viewed as correct or what a POSITA would have understood the claim to mean, the petition instead asserted that each was “equally possible.” Pet., 5, 95. Moreover, the petition promptly departed from these constructions, applying interpretations inconsistent with Petitioner’s own list of possible constructions. *See, e.g.*, POR, 16; Pet., 5-6, 19, 51. In its pre-institution reply (Paper 8), Petitioner recharacterized each of its constructions, producing at least three new iterations of its constructions. *See* Paper 9, 3-5. Now in Reply, Petitioner adds still more variations of its constructions. For example, as discussed below in §III.A, Petitioner introduces new constructions never before advanced, recharacterizes its second construction yet again, and then abandons it without justification.

The Board at institution correctly noted “concerns as to whether it is appropriate to construe claim element [1.C] as having multiple constructions.” DI, 43. These concerns have been borne out at trial, as Petitioner’s continually shifting constructions have flown in the face of the Director’s repeated admonition to identify a *single, consistent construction*. Petitioner’s inconsistent claim construction positions warrant termination as its continuously shifting approach has rendered notice and opportunity to respond an impossibility. Moreover,

Petitioner's attempt to abandon the construction advanced in the petition, credited by the Board at institution (with modification), and addressed in the POR is unjustified and inappropriate at this stage of the proceeding. If anything, Petitioner's request to abandon the petition's theory should be construed as an abandonment of the contest.

III. CLAIM CONSTRUCTION

A. "...a collector surface with a gas tight seal"

1. Petitioner may not now abandon its own "second construction"

The petition construed limitation 1c, listing what it called "three possible constructions" of this term, but it provided no evidence or argument regarding which construction was correct. Pet., 5. Indeed, Petitioner insisted on the absence of such evidence, asserting that the three meanings were "equally possible." Pet., 95. The Reply's attempt to change course should be rejected, and limitation 1c should be construed to require that the collector surface have a gas tight seal, consistent with the Board's understanding at institution of the petition's "second construction." DI, 19.

As the POR pointed out, the Institution Decision interpreted and the POR adopted Petitioner's "second construction" without Petitioner's unjustified negative limitation ("not the entire volume," Pet., 5). POR, 14-15. Petitioner now states they never intended the negative limitation in the first place. Reply, 14. In

other words, consistent with what the Board identified as the natural understanding that a POSITA could ascribe on a “first read” of limitation 1c, Petitioner now appears to agree that the second construction is simply that “the collector surface...has a gas tight seal.” Pet., 5; DI, 19. This is the construction the POR agreed was the correct interpretation under which the claims should be reviewed in this case. POR, 16-21, 22 (limitation 1c “corresponds to Petitioner’s second construction (without the negative limitation...)”).²

Patent Owner agreed to apply Petitioner’s second construction, as understood by the Board: the term “‘with a gas tight seal’ refers to the term it immediately follows in the claim: ‘a collector surface.’” POR, 16-17. The POR addressed Petitioner’s second construction in detail, including discussing phrases such as “the collector surface have a gas tight seal” or that “there be a gas tight seal on the collector surface.” POR, 17, 21. Notably, these are phrasings recited in the petition and institution decision with respect to Petitioner’s second construction. *See* Pet., 5 (“the collector surface...has a gas-tight seal” in limitation 1c, second construction), 68 (equating “limitation 1c second construction” to a “gas tight seal

² Petitioner claims Patent Owner adopted a new construction for limitation 1c, construing “with” to mean “on.” Reply, 5. Not so. Such a replacement would result in the phrase “collector surface on a gas tight seal,” which no party has proposed.

on the collection chamber”); DI, 19-20 (“the collector surface has a gas tight seal”), 41 (discussing whether it was obvious to include “gas tight seal on the collection chamber” to meet the second construction); Reply, 5 (asserting construction of “gas tight seal on” collector surface is “possible”). Accordingly, the second construction (without the negative limitation) should be the only relevant construction under consideration.

Faced with its failure to show unpatentability under its second construction (many petition grounds did not even address the second construction), Petitioner now argues that construction “should not be adopted.” Reply, 12. But there is no basis, legally or factually, by which Petitioner can now abandon this construction. Petitioner claims it is abandoning the second construction because Dr. Mirzadeh allegedly testified the second construction would exclude embodiments shown in Figs. 3 and 5.³ Reply, 13. This statement is so blatantly false it is surprising

³ This is also erroneous as a matter of law, as there is no requirement that a claim encompass each embodiment. *E.g.*, *Pacing Techs., LLC v. Garmin Int’l, Inc.*, 778 F. 3d 1021, 1026 (Fed. Cir. 2015); *TIP Sys., LLC v. Phillips & Brooks/Gladwin, Inc.*, 529 F.3d 1364, 1373 (Fed. Cir. 2008) (“Our precedent is replete with examples of subject matter that is included in the specification, but is not claimed.”).

Petitioner would even advance such argument.

In response to Petitioner's own question, Dr. Mirzadeh expressly testified that Figs. 3 and 5 *do* read on the second construction:

Q. In your opinion, would a person of ordinary skill in the art, looking at Figures 3 and 5, believe that they satisfy your second construction?

MR. ROSATO: Objection to form, leading.

A. Yes, they cover the same.

EX2004, 107:11-16. Indeed, Petitioner's expert repeatedly argued that the parts of the vials of Figs. 3-5 to which gas flows (from which ^{212}Pb can be leached) are collector surfaces having gas tight seals. *See* EX2004, 77:13-78:1 (collector surface is surface you can "use to leach the Lead-212," and agreeing that "the collector surface in Figure 3 does have a gas tight seal"), 78:12-24 (Fig. 5 same as Fig. 3), 101:23-102:1 ("Figure 4 has a gas tight seal when the cap is closed and basically that is it."); *see also* Paper 8, 3 (admitting Fig. 4's cap has gas tight seal).

Petitioner's request to abandon its own "second construction" proposed in the petition is based on a false pretense, and highly prejudicial to Patent Owner as it undermines notice and opportunity to respond. *See, e.g., Cont'l Auto. Sys., Inc., v. Intellectual Ventures II LLC*, IPR2022-00972, Paper 49, 14-15 (where petitioner stakes out a claim construction position relied on by patent owner, changing that

position on reply is unfairly prejudicial). Petitioner provides no valid justification for its abandonment of its own construction beyond a false pretense lacking any factual or legal support.

Petitioner additionally argues that its second construction of limitation 1c conflicts with claim 16, but this new argument makes no sense. As the POR explained, construing “with a gas tight seal” to modify “collector surface” is consistent with the doctrine of the last antecedent. POR, 17-18. The Reply does not dispute this, nor does it present any evidence of a POSITA’s understanding or identify any inconsistency within the language of claim 1. Instead, the Reply argues that applying this doctrine naively to a different word (“using”) in a different claim (claim 16) to modify a different element (“source”) would be nonsensical. Reply, 9. This is an improper new construction for claim 16, advanced in the first time on reply, with no evidence offered in support. *Cf.* 37 C.F.R. § 42.104(b)(3) (petition must show “[h]ow the challenged claim is to be construed”). And even if Petitioner’s arguments for claim 16 were considered, Petitioner does not justify applying its new argument regarding claim 16 to claim 1, which indisputably has different language. Petitioner itself argues only that method and apparatus claims are “often” construed together, not that they must be (Reply, 9-10), as confirmed by the petition’s failure to discuss limitation 16c’s construction.

Petitioner also argues that its reframing of its second construction in its Preliminary Reply as requiring that “collector surface defines the volume” was also wrong. Reply, 13 (citing Paper 8). Patent Owner agrees that interpreting the second construction in this way would be wrong. The second construction merely requires that the collector surface has a gas tight seal, not that it *defines a volume*. Pet., 5. The Reply’s further argument regarding claim 8 was not raised in the petition, makes no sense, and merely attacks Petitioner’s strawman recasting of its own construction.

At bottom, limitation 1c requires a collector surface that has a gas tight seal. This construction was proposed by Petitioner and credited by the Board, and then adopted in the POR as best supported by both the intrinsic and extrinsic evidence, including the natural reading of the claim language. POR, 16-21. DI, 19; EX2002, ¶¶42-50. The petition (95) concedes its alternative constructions are no better, and Reply’s attempt to backtrack on Petitioner’s original argument fails. Limitation 1c means what it says: “a collector surface with a gas tight seal” means that the collector surface has a gas tight seal.

2. The various alternative constructions of “...a collector surface with a gas tight seal” are inappropriate and wrong

Other than the second construction discussed above, all other constructions are inappropriate and wrong. Petitioner’s reinterpretations of its constructions are

untimely, unfounded, and should be disregarded. They should receive no consideration here.

The Reply (10) urges that the “Petition’s First and Third Constructions Are Supported” but its position is unsupported and unsupportable. Claim terms are ascribed “*the* meaning that the term would have to a person of ordinary skill in the art,” not multiple different meanings. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (emphasis added). Like the petition, the Reply provides no evidence of how a POSITA would understand the claim language and fails to even argue which construction would better fit the claim language. *See* Reply, 10-12; Pet., 95 (“three equally possible meanings”). Petitioner fails to square its position that the first and third constructions are *both* correct with the Board’s remarks at institution that the different constructions are mutually inconsistent and cannot all be adopted. *See* POR, 20 (citing DI, 43).

The Reply also asserts for the first time that the “third construction also reads on all embodiments.” Reply, 2-3. However, as noted in the POR, the petition contained no argument or evidence justifying the third construction whatsoever. POR, 15-16. Indeed, even now, Petitioner introduces no evidence supporting this assertion. *See* Reply, 2-3 (advancing characterizations of “the embodiments of Figures 2-5” with no supporting testimony or explanation). This untimely, new argument is unsupported and waived.

B. “gas tight seal”

The petition did not construe the term “gas tight seal,” but despite introducing no evidence of a POSITA’s understanding, the Reply now purports to construe the term. However, the Reply focuses almost entirely on the word “seal” in isolation, arguing that something can be a “seal” even if is “non-operating.” Reply, 3-4. To the extent this new argument is considered, it fails to address the claim term “*gas tight* seal.” Petitioner concedes that the valve in Fig. 4 is described as being “gas and liquid tight” only “[w]hen operational (in the ‘closed position’),” but asserts “that language does not define seal.” Reply, 4. Again, Petitioner focuses on the term “seal” in isolation, ignoring the claim’s requirement that the seal be *gas tight*. The specification indicates that the valve is gas tight only when closed. POR, 9-10; EX1001, 18:19-24. Consistent with this, the “gas tight seal” limitation is satisfied only when there is a *seal that is gas tight*. For example, when the cap in Figs. 3-5 is screwed to the top of the bottle. When a valve is open, it is not gas tight, so it does not provide a gas tight seal. *See* POR, 8-9; EX2002, ¶¶38-40. The Reply’s failure to engage with this claim language confirms the incoherence of Petitioner’s position.

C. “fluidly coupled”

The Reply admits that “fluidly coupled” does not mean “selectively fluidly coupled,” and that its third construction relied on reading the term “selectively”

into the claim. Reply, 1-2. This confirms the petition’s third construction is unsupportable. *See* POR, 15-16. Petitioner’s argument construing “configured to be fluidly coupled” is not only untimely and unsupported attorney argument, but is also tied to Petitioner’s defective arguments regarding gas tight seal and limitation 1c. Reply, 2. The Reply’s attempt to resuscitate its flawed constructions should thus be rejected.

IV. ANY GROUNDS REMAINING UNDER PETITIONER’S “SECOND CONSTRUCTION” STILL FAIL

Only grounds 3-5 and 8-10 argued anticipation or obviousness under Petitioner’s “second construction,” and ground 11 argued indefiniteness based on three “equally possible meanings” including the second construction. Pet., 95. Each of these grounds still fail, as explained in the POR and below.

A. Grounds 3-4 Fail as Recognized at Institution

As the Institution Decision correctly noted, the petition failed to “provide sufficient evidence and argument explaining how just Norman’s second chamber 12 has a gas tight seal.” DI, 39. Trying to remedy this deficiency, the Reply asserts that Norman’s “plunger 30 is part of the collector surface” and forms a gas-tight seal “on” the “collector surface (item 12)”. Reply, 18-19; *see id.* (asserting same for plunger 150). This assertion should be rejected as new, unsupported attorney argument. Petitioner provides no evidence that Norman’s item 12 has a gas-tight seal or even show where it is located in Norman. Norman’s broad statement that

the generator does not leak radon is insufficient to show the recited “collector surface with a gas tight seal.” *See* Reply, 18-19; POR, 30-32.

These arguments are untethered to the petition’s original arguments, which made no mention of the plunger providing the collector surface with a gas tight seal. *See generally* Pet., 51-54. Petitioner offers no defense of its original arguments for ground 3, and its new, unsupported arguments on Reply are both untimely and insufficient to overcome the petition’s deficiencies. *See SAS*, 584 U.S. at 367. Petitioner has thus failed to meet its burden for ground 3.

The Reply (22) does not argue that ground 4 remedies the deficiencies of ground 3. Ground 4 thus fails along with ground 3.

B. Ground 5 Fails

As an initial matter, Ground 5 was presented in the petition only based on the proposed “second construction” of claim element [1.C] and only that construction is relevant here. The Reply in a footnote now suggests ground 5 ought to be newly considered under “Petitioner’s first and third constructions.” Reply, 22 n.4. Such request is improper and contradicts the petition’s original argument, which expressly limited ground 5 to the “second 1c construction” by purporting to provide a “gas-tight seal on the collection chamber.” Pet., 67-68. The Reply’s assertion is thus untimely and entirely unsupported attorney argument.

Turning to the petition argument, the petition's ground 5 cited to Norman, asserting it was obvious to modify Hassfjell-Hoff such that a gas-tight seal results when Hassfjell-Hoff's metal tube is contacted with the polyethylene bottle. The petition failed to explain how or why a POSITA would have made the proposed modification. POR, 36 ("no explanation as to why or how"), 34-42. As to Norman, the POR pointed out Petitioner identified no particular seal structure readily transferable or adaptable between the fundamentally different structures of Norman and Hassfjell-Hoff. POR 36-38.

In Reply (22-25), Petitioner still fails to explain precisely what modification it envisioned or how to accomplish it. Petitioner retreats to a generic desire "to implement Hassfjell-Hoff with a gas tight seal" but never explains precisely what it envisions. Petitioner's retreat from Norman only adds further ambiguity where specificity is required by the moving party. For example, the Reply (23) now argues "the Petition does not rely on Norman for any structural detail such as a chamfered edge; that is disclosed in Hassfjell-Hoff." If Norman provides no structural detail, why is it cited? If Hassfjell-Hoff already provides the identified structure, what is being modified? Petitioner cannot meet its burden of proving a POSITA would be motivated to make a modification that is never clearly articulated. *See, e.g., Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (Petitioner bears "burden to explain to the Board how" the combination

“rendered the challenged claims unpatentable”); *Intelligent Bio-Systems, Inc. v. Illumina Cambridge, Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2016) (“It is of the utmost importance that petitioners in the IPR proceedings adhere to the requirement that the initial petition identify ‘with particularity’ the ‘evidence that supports the grounds for the challenge to each claim.’” (quoting 35 U.S.C. §312(a)(3))).

The Reply advances new argument regarding Norman that lack any objective support and have been waived. For example, the Reply now asserts that “Norman’s plungers 30/150 form gas-tight seals with the other sides of second chamber 12,” claiming this would motivate a gas-tight seal. Reply, 22. Putting aside the unexplained logical leap, such characterization of Norman is found nowhere in the petition and lacks a shred of evidentiary support. Neither Norman nor any expert identified “plungers 30/150” as forming gas-tight seals. Nor does Petitioner explain how Norman’s plungers, which appear to be shafts sliding in concentric tubes (*see* EX1007, Figs. 1-2), bear any relevant resemblance to Petitioner’s generic proposal to mate a polyethylene bottle with the end of a tube. The Reply’s complaint that “obviousness does not require bodily incorporation” (23), does not relieve Petitioner of the burden of explaining its combination in a timely manner with evidentiary support.

As to motivation, the POR established that Petitioner's proffered motivation theory to "reduce the possibility of outside contamination" made little sense for Hassfjell-Hoff's device and was inconsistent with its teachings. POR, 39-43; *see id.*, 39-41 (proposal would not prevent gas emanation)). Hassfjell-Hoff expressly states that contamination is not a concern, undermining any justification for the added cost and complexity of further modification. POR 41-42. Petitioner leaves the POR evidence and argument unaddressed entirely.

Instead, the Reply (23-24) introduces new argument regarding reducing contamination that is both unsupported and waived. Specifically, the petition argued the proposed modification would "reduce *the possibility* of outside contamination or allowing radioactivity to escape the container." Pet., 68. Petitioner's own expert undermined this theory during cross-examination, testifying that radon gas would escape and already fill the interior upon opening the gate valve. *see* EX2004, 29:14-30:6, 30:18-32:15, 48:8-18; EX2002, ¶¶58, 74-75. Now in Reply, Petitioner shifts from arguing for reducing the "*possibility*" of contamination to reducing the *amount* of particles that collect outside the bottle. Reply, 22-23 ("reduce the amount of ²¹²Pb that collects outside the collector surface"); *see id.*, 24 (amount "greatly reduced"). This argument is both new and lacks a shred of evidentiary support. The only testimony the Reply cites for its argument is the Conroy deposition, discussing whether unintentional leakage

outside of a generator was a concern in general, not the amounts of radiation expected to reach the bottle's exterior when *inside* Hassfjell-Hoff's generator, with or without Petitioner's modification. Reply, 24-25 (citing EX1023, 86:1-13, 94:10-13).

The Reply is entirely silent regarding Hassfjell-Hoff's disclosure that such contamination is not a concern in its device. *See* POR, 41-42; EX1003, 7; EX2002, ¶76. Petitioner is also silent regarding countervailing evidence Petitioner itself elicited in deposition indicating its proposed modification of bringing Hassfjell-Hoff's tube into contact with the polyethylene bottle could actually increase the contamination, not decrease it. Upon questioning by Petitioner, Mr. Conroy explained how contacting the tube and bottle would be recognized as "unwise" because it could damage the tube and bottle and increase contamination concerns. EX1023, 217:7-218:24. The Reply ignores this evidence entirely. These un rebutted facts alone should resolve the obviousness assertions of Ground 5 in PO's favor.

The Reply also newly asserts its vague modification "would be useful to increase the recoverable yield inside the bottle and reduce the amount lost and unrecoverable." Reply, 24-25. Neither the petition nor Petitioner's expert ever argued motivation to increase recoverable yield. The Reply fails to cite a shred of supporting evidence. Petitioner's new attorney argument is waived, unsupported, and should be rejected.

C. Grounds 8-10 Fail

As discussed in the POR, none of grounds 8-10 remedies the deficiencies of Hassfjell-Hoff or Norman. The Reply offers no argument to the contrary. Grounds 8-10 thus fail to show the unpatentability of any claim.

D. Ground 11 Fails

The Reply argues that claim 1 is indefinite due to “PO’s inability to propose a construction that reads on any preferred embodiment.” Reply, 25-26. But it is Petitioner’s burden to show unpatentability, and it fails to do so.

As the POR explained, the petition argued that claim 1 and its dependent claims were indefinite because limitation 1c allegedly “has three equally possible meanings.” Pet., 95-96; POR, 43-45. But beyond merely alleging that this limitation is susceptible to differing interpretations, the petition provided no further analysis regarding how a POSITA would have understood this limitation, and the Reply offers nothing more. Moreover, the Reply has now backtracked on one of its “three equally possible meanings” without any elaboration on a POSITA’s understanding of the remaining two. *See* Reply, 10-14.

However, the Federal Circuit has repeatedly admonished that even if “a term is susceptible to more than one meaning” that would “not render it indefinite. ‘Such a test would render nearly every claim term indefinite so long as a party could manufacture a plausible construction.’” *ClearOne, Inc. v. Shure Acquisition*

Holdings, Inc., 35 F.4th 1345, 1351 (Fed. Cir. 2022)(quoting *Nevro Corp. v. Bos. Sci. Corp.*, 955 F.3d 35, 41 (Fed. Cir. 2020)). Indeed, the Supreme Court expressly rejected the proposition that a patent is rendered invalid merely because a claim was “ambiguous, such that readers could reasonably interpret the claim’s scope differently.” *Nautilus, Inc. v. Biosig Inst., Inc.*, 572 U.S. 898, 909 (2014); see *Nevro*, 955 F.3d at 41.

Contrary to Petitioner’s unsupported attorney argument, a POSITA would have understood the term “with a gas tight seal” in limitation 1c to characterize the collector surface. EX2002, ¶80; see *id.*, ¶¶42-50. Accordingly, Petitioner has not shown claim 1 or its dependent claims to be indefinite.

V. ALL GROUNDS UNDER PETITIONER’S ALTERNATIVE CONSTRUCTIONS FAIL

A. Grounds 1-2 Fail

The Reply does not dispute that grounds 1-2 fail to show anticipation or obviousness of claim 1 or its dependent claims under a construction in which “gas-tight seal” modifies “collector surface.” Thus, under the correct construction, Petitioner has not met its burden in grounds 1 or 2.

The Reply falsely asserts the POR “does not dispute that Grounds 1-4 establish unpatentability...under the Petition’s first and third constructions.” Reply, 15-16. Not only did the POR explain that the first and third constructions were unsupported and illogical, but it also explained, for example, that the

mappings to Hassfjell-Hoff and Norman in the petition were inconsistent with the interpretation of limitation 1c now advanced in its Reply (and previously raised for the first time in the pre-institution reply). *See, e.g.*, POR, 14, 29-31. For example, the element identified as the “volume” in the petition in grounds 1-4 (Hassfjell-Hoff’s lower chamber and Norman’s second chamber) lacks a gas-tight seal whenever there is fluid coupling between the precursor isotope source. *See id.*; *see also id.*, 38. Likewise, the POR explained that the petition’s arguments for claim 16 and its dependent claims failed due to reliance on its claim 1 arguments and on their own merits. *See* POR, 24-26, 31-33.

Trying to avoid the inconsistency in the petition’s mappings, Petitioner now pivots to untimely, defective arguments. *See* Reply, 16-20. For example, the Reply now argues that certain housing elements around the gate valve (rather than the gate valve itself) provide a gas tight seal. *See* Reply, 16-18. The Reply does not dispute that the gate valve, when open, fails to seal the lower chamber of Hassfjell-Hoff (which the petition mapped to the recited volume, *see* Pet., 20), but instead argues that the generator as a whole is sealed. *See* Reply, 16-18. However, this new argument lacks support and contradicts Hassfjell-Hoff’s disclosure.

First, the Reply’s new argument relies on a purported gate valve design that even Petitioner concedes is not the type disclosed in Hassfjell-Hoff. *See* EX1023, 166:24-167:5, 167:19-168:1 (gate valves “not the same”; “look to be very

dissimilar”; “clearly not the gate valve in Figure 3” of Hassfjell-Hoff). Petitioner makes no showing to the contrary.

Second, Hassfjell-Hoff expressly discloses that its system as a whole is not sealed, but rather an “on-off valve (VAT) with connection to a filtered air outlet is placed in the upper chamber.” EX1003, 7. As explained in the Conroy deposition, this valve “allow[s] air to actually escape from the system,” such that the system as a whole is not sealed. EX1023, 97:3-98:3. Petitioner simply ignores this testimony Hassfjell-Hoff’s disclosure, both of which undermine the Reply’s new attorney argument. Petitioner’s attempt to resuscitate its ground 1 mapping should thus not be credited.

The Reply does not argue that ground 2 remedies the deficiencies of ground 1. Reply, 21. Ground 2 thus fails along with ground 1.

B. The Claim 16 Arguments Fail

As the POR noted, grounds 1-4’s arguments that limitation 16c was taught by Hassfjell-Hoff or Norman relied on having shown that limitation 1c was taught by these references. POR, 24-25, 31-33. The Reply has failed to rebut these deficiencies. *See supra* §§IV.A, V.A. The Reply asserts that the different language of claims 1 and 16 dictate different outcomes, contradicting its new arguments construing limitation 1c based on the text of limitation 16c. *Compare* Reply, 20 (arguing limitation 16c’s different language distinguishes it from limitation 1c),

with Reply, 9 (limitations 1c and 16c should be construed similarly). However, Petitioner's failure to construe limitation 16c and its choice to rely on a failed showing for limitation 1c are defects of the petition and cannot suffice to establish a *prima facie* case. Patent Owner is not obliged to make Petitioner's case for it or to reply to arguments Petitioner failed to make.

The Reply's remaining arguments for claim 16 likewise fall short. For ground 1, the Reply argues (20-21) that even though Hassfjell-Hoff's open gate valve is not a gas-tight seal, it resembles Fig. 4's open valve. This addresses the specification, not the claim; advances an unsupported argument not found in the petition; repeats its mistaken assertion that Hassfjell-Hoff's volume is gas-tight when the gate valve is open; and ignores that unlike Hassfjell-Hoff, Fig. 4 expressly discloses a collector surface with a seal that is gas-tight when the fluid coupling occurs. For ground 3, the Reply repeats its baseless argument regarding Norman's plunger and admits Norman's stopcock only fluidly couples when open (and thus lacks a gas-tight seal). Reply, 21. The Reply's arguments regarding claim 16 thus rely on the same mistaken argument that limitation 16c may be met by a configuration in which fluid coupling occurs only in the absence of the recited gas-tight seal.

C. Grounds 6-7 Fail

As discussed in the POR, grounds 6-7 do not remedy the deficiencies of Hassfjell-Hoff. The Reply offers no argument to the contrary. Grounds 6-7 thus fail to show the unpatentability of any claim.

VI. EXPERTS

A. Petitioner's Attack on Mr. Conroy Fails

The '437 patent relates to devices and methods useful for generating radiopharmaceuticals. EX1001, 12:35-38; Pet., 2-3. Mr. Conroy satisfies Petitioner's POSITA definition. *See* Pet., 3. He has a bachelor's degree in pharmacy, a comparable field to those listed in Petitioner's definition, and many years of experience in the pharmaceutical industry, including many years of experience prior to the critical date as a practicing radiopharmacist with board certification in nuclear pharmacy. *E.g.*, EX2002, ¶¶2-4; EX2003; EX1023, 34:2-17 (at least six years' experience preparing and dispensing radioactive drugs for patient use). He is also well versed in the principles of radioisotope generation and familiar with radioisotope generators sold and under development prior to the critical date. EX2002, ¶4.

Ignoring the substance of Mr. Conroy's testimony, Petitioner asserts his pharmacy degree is not "equivalent to" the degrees listed in its definition, but offers nothing but attorney argument to explain why the field of pharmacy is not a

“comparable” field in the context of radiopharmaceutical generators. Moreover, Mr. Conroy’s extensive experience with radiopharmaceutical generation further confirms his qualifications. Petitioner complains that experience using radiopharmaceutical generators is insufficient, but this contradicts its own definition of relevant experience as including “professional experience with radioisotope generators.” Pet., 3; *see also* EX1023, 30:2-19 (confirming Mr. Conroy’s ability to design new radiopharmaceutical generators).

Petitioner’s remaining arguments are similarly unfounded. That Mr. Conroy previously co-founded and worked for a company that did business with ARTBIO, among many customers, falls well short of showing an interest in these proceedings. Petitioner asserts this company “is manufacturing ARTBIO’s ‘patented’ technology,” but makes no showing that this relates to the ’437 patent. Petitioner’s cited case also falls short, as it involved a declarant who conceded “a direct, financial stake in the outcome” as a co-founder and officer of the patent owner, and even in that case, the Board only accorded reduced weight to testimony untethered to record evidence. *Parrot S.A. v. QFO Labs, Inc.*, IPR2018-01690, Paper 40, 63-64 (Feb. 20, 2020). Petitioner identifies no testimony of Mr. Conroy lacking supporting evidence and provides no reason to disregard his opinions.

B. Petitioner's Experts Fail to Support Its Case

Petitioner does not dispute that Per Hoff's opinions are entitled to no weight. While Petitioner asserts that Per Hoff's declaration describes his recollection of how "the device in his article actually worked at the time" (Reply, 26), the theories of the petition were based on the Hassfjell-Hoff publication, not the device. Nor were Dr. Mirzadeh's opinions informed by the Hoff declaration. *See* EX2004, 21:4-13; EX1002, xii (Hoff declaration not cited).

As to Dr. Mirzadeh, the Reply fails to address the deficiencies discussed in the POR. *See, e.g.*, POR, 9-21, 47.

VII. CONCLUSION

The Board should uphold the challenged claims' patentability.

Respectfully submitted,

Date: June 16, 2026

/ Michael T. Rosato /
Michael T. Rosato, Lead Counsel
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CERTIFICATE OF COMPLIANCE

Pursuant to §42.24(d), the undersigned certifies that this paper contains no more than 5,600 words, not including the portions of the paper exempted by §42.24(b). According to the word-processing system used to prepare this paper, the paper contains 5,596 words.

Respectfully submitted,

Date: June 16, 2026

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CERTIFICATE OF SERVICE

I certify that the foregoing Patent Owner's Sur-Reply was served on this
16th day of June, 2026, on Petitioner at the following electronic service addresses:

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