

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

URT UMWELT UND RECYCLINGTECHNIK GMBH
Petitioner,

v.

DUESENFELD GMBH
Patent Owner.

IPR2024-00948
Patent 11,050,097 B2

Before MEREDITH C. PETRAVICK, CHRISTOPHER M. KAISER,
and KEVIN W. CHERRY, *Administrative Patent Judges*.

KAISER, *Administrative Patent Judge*.

PRELIMINARY GUIDANCE
PATENT OWNER'S MOTION TO AMEND
37 C.F.R. § 42.121(e)

I. INTRODUCTION

On November 22, 2024, we instituted trial as to claims 1–3, 7–10, 12, 13, and 19 (“the challenged claims”) of U.S. Patent No. 11,050,097 B2 (Ex. 1001, “the ’097 patent”). Paper 10 (“Institution Decision” or “Inst. Dec.”). After institution, on February 14, 2025, Patent Owner filed a Motion to Amend that is contingent on the patentability of claims 1–3, 7–10, 12, 13, and 19. Paper 21 (“Motion” or “Mot.”). Specifically, Patent Owner submitted a contingent motion to amend that proposed substitute claims 22–31 to respectively replace original claims 1, 2, 3, 8, 12, 13, 10, 19, 7, and 9 of the ’097 patent, where Patent Owner asked that each substitute claim be considered only if the Board finds its corresponding original claim unpatentable. Mot. 7. On May 9, 2025, Petitioner filed an Opposition to the Motion. Paper 32 (“Opposition” or “Opp.”).

In the Motion, Patent Owner requested that we provide preliminary guidance concerning the Motion in accordance with 37 C.F.R. § 42.121(a)(1)(ii). Mot. 7; *see* 37 C.F.R. § 42.121(e)(1); *see also Rules Governing Motion to Amend Practice and Procedures in Trial Proceedings under the America Invents Act before the Patent Trial and Appeal Board*, 89 Fed. Reg. 76,421 (Sept. 18, 2024) (“Final Rule”). We have considered Patent Owner’s Motion and Petitioner’s Opposition.

In this Preliminary Guidance, we provide information indicating our initial, preliminary, non-binding views on whether Patent Owner has shown a reasonable likelihood that it has satisfied the statutory and regulatory requirements associated with filing a motion to amend in an *inter partes* review and whether Petitioner establishes a reasonable likelihood that the substitute claims are unpatentable. 37 C.F.R. § 42.121(e)(1), (2); *see also* 35 U.S.C. § 316(d) (statutory requirements for a motion to amend); 37 C.F.R. § 42.121(a)(2), (a)(3), (b) (regulatory requirements and burdens for a motion to amend); *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-

01129, Paper 15 (PTAB Feb. 25, 2019) (precedential) (providing information and guidance regarding motions to amend). The reasonable likelihood standard this Preliminary Guidance applies is different than the preponderance of the evidence standard applied when ultimately deciding the Motion. *Compare* 37 C.F.R. § 42.121(e)(1) *with* § 42.121(d). Finally, this preliminary guidance is not a “decision” for purposes of rehearing under 37 C.F.R. § 42.71(d). 37 C.F.R. § 42.121(e)(2).

For purposes of this Preliminary Guidance, we focus on the proposed substitute claims, and specifically on the amendments proposed in the Motion. *See* 37 C.F.R. § 42.121(e)(1); Final Rule, 89 Fed. Reg. at 76,425. We do not address the patentability of the originally challenged claims. *See id.* Moreover, in formulating our preliminary views on the Motion and Opposition, we have not considered the parties’ other substantive papers on the underlying merits of Petitioner’s challenges. We emphasize that the views expressed in this Preliminary Guidance are subject to change upon consideration of the complete record, including any revision to the Motion filed by Patent Owner. Thus, this Preliminary Guidance is not binding on the Board when rendering a final written decision or any other subsequent decision in this proceeding. 37 C.F.R. § 42.121(e)(2); *see Medytox, Inc. v. Galderma S.A.*, 71 F.4th 990, 1000 (Fed. Cir. 2023).

II. PRELIMINARY GUIDANCE

A. Statutory and Regulatory Requirements

Patent Owner bears the ultimate burden to show that its motion to amend complies with the requirements of 35 U.S.C. § 316(d)(1), (3) and 37 C.F.R. § 42.121(a)(2), (a)(3), (b)(1), and (b)(2). 37 C.F.R. § 42.121(d)(1). For the reasons discussed below, at this stage of the proceeding, and based on the current record, it appears that Patent Owner has shown a reasonable likelihood that it has

satisfied the statutory and regulatory requirements associated with filing a motion to amend. *See* 37 C.F.R. § 42.121(e)(1).

1. Reasonable Number of Substitute Claims

A motion to amend must propose a reasonable number of substitute claims. 35 U.S.C. § 316(d)(1)(B); 37 C.F.R. § 42.121(a)(3). Patent Owner has shown it proposes a reasonable number of substitute claims. Mot. 12. Patent Owner proposes ten substitute claims to replace ten challenged claims. *Id.* 8–11.

2. Respond to Ground of Unpatentability

A motion to amend must respond to a ground of unpatentability involved in the proceeding. 37 C.F.R. § 42.121(a)(2)(i). Patent Owner has shown that the motion to amend responds to a ground of unpatentability involved in this proceeding. Mot. 18. In particular, Patent Owner notes that “each of claims 22–31 now contains a limitation requiring a dryer, or drying, operating in a batch mode.” *Id.*; *see also, Id.* at 22–30 (Claim Listing). Patent Owner contends that “Neither Hanisch’s pre-dryer, nor its high-temperature drying, however, employs a batch drying device.” *Id.* Patent Owner further contends that “each of the claims excludes Hanisch, and the combination of Hanisch with another reference to reach the new claims would not have the necessary motivation.” *Id.*

3. Scope of Amended Claims

A motion to amend may not enlarge the scope of the claims of the patent. 35 U.S.C. § 316(d)(3); 37 C.F.R. § 42.121(a)(2)(ii). Patent Owner’s Motion has not enlarged the scope of the claims of the patent. As Patent Owner explains in the Motion, “each Proposed Substitute Claim begins with the language of either independent claim 1 or independent claim 12, and provides only narrowing amendments thereto.” Mot. 13.

4. New Matter

A motion to amend may not introduce new subject matter. 35 U.S.C. § 316(d)(3); 37 C.F.R. § 42.121(a)(2)(ii). Patent Owner's Motion has not introduced new subject matter. Patent Owner identifies support in the application that matured into the challenged patent (the '484 application) for each limitation of each proposed substitute claim. Mot. 13–18. Petitioner does not raise any argument on this issue. For the purposes of this Preliminary Guidance, and on this record, it appears that Patent Owner has met this requirement.

B. Claim Construction

In an *inter partes* review, we construe a patent 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). This generally includes “construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” *Id.* The ordinary and customary meaning of a claim term “is its meaning to the ordinary artisan after reading the entire patent” and “as of the effective filing date of the patent application.” *Phillips*, 415 F.3d at 1313, 1321.

In our Institution Decision, we noted that “[a]lthough neither party requests construction of the claim term ‘inactivating,’ the parties’ disagreement on this limitation stems mostly from a disagreement regarding how much solvent must be removed from the comminuted material to constitute inactivation of that material.” Inst. Dec. 11. We concluded that “on the present record, we take inactivating to require the removal of sufficient amounts of dimethyl carbonate and/or ethyl methyl carbonate from the comminuted material to make an electrochemical reaction either no longer possible or only possible to a negligibly small extent” and

we encouraged “the parties to further develop the record on this question at trial.” *Id.* at 12.

Patent Owner does not address claim construction in the Motion. In Petitioner’s Opposition, Petitioner notes that, in the Patent Owner Response, Patent Owner “disagrees with the Board’s proposed construction of ‘inactivating’ . . .” Opp. 1 (citing Paper 20, 8–9).

We have reviewed the claim-construction arguments in the Patent Owner Response, Petitioner’s Reply, and Petitioner’s Opposition to the Motion to Amend, and we are mindful that there is additional briefing yet to be filed that may further develop these arguments. At this stage of the trial, we are not persuaded to adopt a new claim construction. Accordingly, for the purposes of this Preliminary Guidance, we apply the construction set forth in the Institution Decision. However, the parties are still encouraged to further develop the issue.

C. Obviousness Arguments by Petitioner

Petitioner bears the ultimate burden to show that any proposed substitute claims are unpatentable. 37 C.F.R. § 42.121(d)(2). For the reasons discussed below, at this stage of the proceeding, and based on the current record,¹ it appears that Petitioner has shown a reasonable likelihood that proposed substitute claims 22–31 are unpatentable. *See* 37 C.F.R. § 42.121(e)(1).

Petitioner presents three grounds of unpatentability for proposed substitute claims 22–31, as shown in the table below. Opp. 1.

Ground No.	Claims	35 U.S.C. §	Basis
1	22–31	103	Hanisch, Dunagan

¹ We express no view on the patentability of original claims 1–3, 7–10, 12, 13, and 19 in this Preliminary Guidance. Instead, we focus on the new limitations of proposed substitute claims 22–31 in the Patent Owner’s Motion to Amend.

2	22–31	103	Hanisch, Dunagan, Hayashi, Shin
3	22–31	112	Indefiniteness
4	30, 31	112	Indefiniteness

1. Petitioner’s Reliance on Hanisch Common to Grounds 1 and 2

For purposes of this preliminary guidance, we focus on the newly added limitations of the proposed substitute claims. “[E]ach of claims 22–31 now contains a limitation requiring a dryer, or drying, operating in a batch mode.” Mot. 18. Each of Petitioner’s obviousness grounds relies on Hanisch in combination with other references. Accordingly, if Hanisch’s disclosure would prevent a person of ordinary skill in the art from having the necessary motivation to employ batch drying, then each of Petitioner’s obviousness grounds fails.

i. Motivation to Combine Hanisch with Other References

As noted above, Patent Owner contends that “[n]either Hanisch’s pre-dryer, nor its high-temperature drying, however, employs a batch drying device” and “[t]hus, each of the claims excludes Hanisch, and the combination of Hanisch with another reference to reach the new claims would not have the necessary motivation.” Mot. 18.

Petitioner contends that “Hanisch in fact discloses drying in batch mode.” Opp. 2. More specifically, Petitioner asserts that “Hanisch discloses that its ‘method according to invention is *preferably* performed as continual process and not in batches’” or, in other words, “Hanisch discloses a drying process in batch mode as a non-preferred embodiment.” *Id.* at 3 (citing Ex. 1004, 3:27–28).

On this record, we tend to agree with Petitioner that Hanisch discloses that batch mode drying is a suitable, albeit non-preferred, method of drying battery material. “It’s not necessary to show that a combination is ‘the best option, only that it be a suitable option.’” *Intel Corp. v. Qualcomm Inc.*, 21 F.4th 784, 800 (Fed. Cir. 2021) (quoting *PAR Pharm., Inc. v. TWI Pharms., Inc.*, 773 F.3d 1186, 1197–98 (Fed. Cir. 2014)). Accordingly, our preliminary determination is that Hanisch discloses batch mode drying operations, and further that a person of ordinary skill in the art reviewing Hanisch would not have been dissuaded from using batch mode drying operations.

2. Ground 1: Substitute Claims 22–31 as Obvious over Hanisch and Dunagan

i. Proposed Substitute Claims 22 and 26 (Substitute for Claims 1 and 12)

a. Drying After Comminution

Petitioner contends that Hanisch discloses this limitation. In particular, Petitioner points out that Hanisch discloses that “[t]he active material separation system preferably possesses a pre-dryer which is set up in the material flow, behind the cell crushing device and before the oven.” Opp. 4 (citing Ex. 1004, 4:55–57). On this record, we tend to agree with Petitioner.

b. Drying with a Pressure of 300 hPa or Less

Petitioner contends that “Hanisch alone or in combination with Dunagan and in view of the knowledge of a POSITA renders obvious this limitation for the reasons previously described in the Petition and the Reply.” Opp. 5 (citing Ex. 1004, 3:4–9, 4:6–8, 4:55–59, 5:62–63, claim 6; Ex. 1003, ¶¶ 68–70, 110–116; Ex. 1023 ¶¶ 36–37). The cited portions of Hanisch disclose, *inter alia*, that “heating up takes place under inert gas or in a vacuum.” Ex. 1004, 3:6–9. To the extent that

Petitioner relies on “the knowledge of a POSITA” as filling the gap between Hanisch’s disclosure of drying “in a vacuum” and the claimed pressure limitation of “300 hPa or less,” we tend not to agree at this stage. Petitioner relies on the declaration testimony of Dr. van Schalkwijk for its position regarding the knowledge of a POSITA. As we noted in our Institution Decision, “Dr. van Schalkwijk does not provide any support for this testimony.” Inst. Dec. 15–16. That lack of support is not remedied in the portion of Dr. van Schalkwijk’s second declaration that Petitioner cites in the Opposition to the Motion to Amend. Ex. 1023 ¶¶ 36–37.

Regarding Petitioner’s reliance on Dunagan, Petitioner does not explain how Dunagan discloses drying under a pressure of “300 hPa or less” as claimed, or provide any citation to Dunagan. Opp. 5.

ii. Proposed Substitute Claims 23, 25, 27 (Substitute for Claims 2, 8, 13)

Petitioner contends that Hanisch discloses producing “a gaseous electrolyte component recoverable by condensation.” Opp. 5. In particular, Petitioner points to Hanisch’s disclosure of “a condenser 34 for condensing electrolyte.” *Id.* (citing Ex. 1004, 5:59–61). Petitioner contends that a person of ordinary skill in the art “would have understood that [Hanisch’s] condenser 34 on the pre-dryer is for condensing back to a liquid the gaseous electrolyte that had evaporated from the comminuted batteries in the pre-dryer 28.” *Id.* (citing Ex. 1003, 74, 92, 93).

On this record, we tend to agree with Petitioner that Hanisch discloses this limitation.

Regarding the limitation of proposed substitute claim 25 of “wherein the drying occurs at temperature of 80°C or less,” Petitioner contends that Hanisch discloses this limitation. Opp. 6. In particular, Petitioner points to Hanisch’s

disclosure that it is “advantageous for the drying temperature to be below 100°C., in particular below 80°C.” *Id.* (citing Ex. 1004, 3:65–4:5).

On this record, we tend to agree with Petitioner that Hanisch discloses this limitation.

iii. Proposed Substitute Claims 24, 28, 29 (Substitute for Claims 3, 10, 19)

Regarding the limitation that “the comminuted material is dried until an electrolyte content in the comminuted material is so low that an electrochemical reaction is impossible or only to a negligibly small extent,” Petitioner contends that “Hanisch alone or in combination with Dunagan, in view of the knowledge of a POSITA renders obvious this limitation for the reasons described in the Petition.” Opp. 7. As we explained in the Institution Decision, “[g]iven that Hanisch’s decomposition oven would destroy the electrolyte solvent such that ‘none would remain,’ we determine that Petitioner has shown sufficiently that Hanisch teaches removing enough solvent in its decomposition oven to make an electrochemical reaction either no longer possible or only possible to a negligibly small extent.” Inst. Dec. 14. That is our preliminary determination and the parties are encouraged to address this issue further.

iv. Proposed Substitute Claims 30, 31 (Substitute for Claims 7, 9)

Regarding the limitation of “wherein the drying occurs at a temperature such that almost no Hydrogen Fluoride is produced,” Petitioner contends that “Hanisch renders this limitation obvious,” and that a person of ordinary skill “would have understood that drying at low temperatures would prevent the production of Hydrogen Fluoride.” Opp. 7 (citing Ex. 1003 ¶¶ 68, 114).

Despite being couched in terms of obviousness, Petitioner’s position seems to be that this limitation is inherently met by Hanisch’s disclosure of drying at low

temperatures (specifically, below 80°C). The '097 patent itself appears to support that position. As Petitioner points out (Opp. 8), the '097 patent discloses that “[t]he drying preferably occurs at a maximum temperature of 80°C.: this produces almost no hydrogen fluoride.” Ex. 1001, 5:7-8. On this record, we tend to agree that drying at low temperatures inherently leads to “almost no Hydrogen Fluoride” production.

v. Conclusion as to Ground 1

Our preliminary, non-binding determination on the current record is that Petitioner has not established a reasonable likelihood that substitute claims 22–31 are unpatentable as obvious over Hanisch and Dunagan, for essentially the same reasons set forth in our Institution Decision.

3. Ground 2: Substitute Claims 22–31 as Obvious over Hanisch, Dunagan, Hayashi, and Shin

Petitioner contends that proposed substituted claims 22–31 would have been obvious over the combination of Hanisch, Dunagan, Hayashi, and Shin. Opp. 10–14.

i. Proposed Substitute Claims 22 and 26 (Substitute for Claims 1 and 12)

As Petitioner points out (Opp. 10–11), there does not appear to be any dispute that Hayashi and Shin disclose batch processes.

- ii. Limitations [22-E], [23-E], and [24-E] (wherein the drying occurs at a maximum pressure of 300 hPa)
- iii. Limitations [26-F], [27-G], and [28-G] (such that the drying device operates with a pressure of 300 hPa or less)

Petitioner contends that “Hanisch alone or in view of Dunagan and in further view of the teachings of Hayashi and/or Shin renders obvious this limitation for the

reasons explained in the Petition and the Reply.” Opp. 12. For the reasons discussed above under Ground 1, we are not convinced that Hanisch discloses or renders obvious this limitation. Hayashi, however, discloses that “the electrolyte solution is heated at 80°C. to 150°C. Under reduced pressure of less than or equal to 1kPa, the volatile component is gasified, and the gasified gas is introduced to a dry processing step.” Ex. 1006, 3:20–25. Petitioner’s declarant testified that Hayashi’s disclosure of “less than or equal to 1kPa” is equivalent to “less than or equal to 10 hPa” which is, of course, less than 300 hPa. Ex. 1003, ¶ 149. On this record, Patent Owner does not dispute Petitioner’s position that a person of ordinary skill in the art would have been motivated to combine this teaching with the teachings of Hanisch. *See* Pet. 46; *see also*, Inst. Dec. 23 (“Petitioner has shown sufficiently that Hayashi teaches the step of drying at a pressure of no more than 300 hPa and that a person of ordinary skill in the art would have had reason to combine that teaching with the method of Hanisch”).

The Federal Circuit has held that “where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” *E.I. DuPont de Nemours & Co. v. Synvina CV*, 904 F.3d 996, 1006 (Fed. Cir. 2018) (quoting *In re Aller*, 220 F.2d 454, 456 (CCPA 1955)). “[W]here there is a range disclosed in the prior art, and the claimed invention falls within that range, the burden of production falls on the patentee to come forward with evidence of teaching away, unexpected results, or other pertinent evidence of nonobviousness.” *Id.* (quoting *Galderma Labs., L.P. v. Tolmar, Inc.*, 737 F.3d 731, 738 (Fed. Cir. 2013)); *cf. In re Peterson*, 315 F.3d 1325, 1330 (Fed. Cir. 2003) (“[T]he existence of overlapping or encompassing ranges shifts the burden to the applicant to show that his invention would not have been obvious.”). Likewise, there is a rebuttable presumption grounded on a

claimed range overlapping a range disclosed in the prior art. *E.I. DuPont de Nemours & Co.*, 904 F.3d at 1007 (quoting *Ormco Corp. v. Align Tech., Inc.*, 463 F.3d 1299, 1311 (Fed. Cir. 2006)) (“The presumption [of obviousness] can be rebutted if it can be shown that the prior art teaches away from the claimed range, or the claimed range produces new and unexpected results.”); *cf. Peterson*, 315 F.3d at 1330–31 (discussing role of evidence of unexpected results or criticality and teaching away in rebutting a prima facie case of obviousness in examination of an application). In sum,

“where there is a range disclosed in the prior art, and the claimed invention falls within that range, the burden of production falls upon the patentee to come forward with evidence” of teaching away, unexpected results or criticality, or other pertinent objective indicia indicating that the overlapping range would not have been obvious in light of that prior art.

E.I. DuPont de Nemours & Co., 904 F.3d at 1008 (quoting *Galderma*, 737 F.3d at 738). To be clear, the burden of persuasion always lies with Petitioner, as “[t]he factfinder then assesses [the patentee’s] evidence, along with all other evidence of record, to determine whether a patent challenger has carried its burden of persuasion to prove that the claimed range was obvious.” *Id.* at 1007. “[I]n the absence of evidence indicating that there is something special or critical about the claimed range, an overlap suffices to show that the claimed range was disclosed in—and therefore obvious in light of—the prior art.” *Id.* at 1008. The overlap itself provides sufficient motivation to optimize the ranges. *See Peterson*, 315 F.3d at 1330 (“The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of . . . ranges is the optimum combination . . .”).

Based on our preliminary review, Petitioner has sufficiently shown that Hayashi discloses drying under a pressure “less than or equal to 10 hPa” a range

that overlaps the claimed “pressure of 300 hPa or less.” Accordingly, our preliminary view is that the burden of production has shifted to Patent Owner to demonstrate that the invention would not in fact have been obvious, for example by showing unexpected results or criticality of the claimed range.

We note that Patent Owner has not yet had an opportunity to respond to Petitioner’s new evidence regarding “routine optimization” submitted in Exhibit 1023 (Declaration of Walter van Schalkwijk), or to submit rebuttal evidence. Patent Owner will have the opportunity to do so in its reply to Petitioner’s Opposition (or in a revised motion) in this proceeding.

iv. Conclusion as to Ground 2

Our preliminary, non-binding determination on the current record is that Petitioner has established a reasonable likelihood that substitute claims 22–31 are unpatentable as obvious over Hanisch, Dunagan, Hayashi, and Shin.

4. Conclusion as to Obviousness

We acknowledge that Patent Owner has not yet had the opportunity to respond to Petitioner’s contention that substitute claims 22–31 are unpatentable as obvious under 35 U.S.C. § 103. Patent Owner will have the opportunity to do so in its reply to Petitioner’s Opposition (or in a revised motion) in this proceeding.

D. Indefiniteness Arguments by Petitioner

1. Legal Standard

A patent’s specification must “conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.” 35 U.S.C. § 112(b). In particular, “a patent’s claims, viewed in light of the specification and prosecution history, [must] inform those skilled in the art about the scope of the invention with reasonable certainty.”

Nautilus, Inc. v. Biosig Instr., Inc., 572 U.S. 898, 910 (2014). The definiteness requirement “strikes a ‘delicate balance’ between ‘the inherent limitations of language’ and providing ‘clear notice of what is claimed.’” *Sonix Tech. Co. v. Publ’ns Int’l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017) (quoting *Nautilus*, 572 U.S. at 909).

2. Ground 3: Indefiniteness of claims 22–31

Petitioner contends that proposed substituted claims 22–31 are indefinite because “[t]he meaning of the ‘inactivating’ limitations in substitute claims 22–31 is not reasonably clear because a POSITA would not have understood from the ’097 Patent the outer boundaries of when comminuted material is considered ‘inactivated.’” Opp. 14 (citing Ex. 1023, ¶¶ 65–68). Petitioner also points out that Patent Owner, in its Response, disagrees with our preliminary construction for this term in our Institution Decision. *Id.* 16.

In our Institution Decision, we addressed the “inactivating” term, although neither party had presented an explicit construction. Inst. Dec. 11–12. Patent Owner argued in the Preliminary Response that inactivation requires drying until “the accumulated content of organic carbonates from the electrolyte that are volatile at 80° C. falls short of 3% by volume in the atmosphere above the comminuted material.” Prelim. Resp. 19–20. We indicated that we did not agree with Patent Owner’s implicit construction because the ’097 patent describes the 3% benchmark as “preferable,” and not as a requirement or definitional language that would limit the scope of the claim. Inst. Dec. at 11–12. We also indicated that we did not agree with Patent Owner’s suggestion that inactivation requires “the electrolyte solvent [be] recoverable by condensation.” *Id.* at 12 (quoting Prelim. Resp. 23). For purposes of our Institution Decision, we indicated the following:

[O]n the present record, we take inactivating to require the removal of sufficient amounts of dimethyl carbonate and/or ethyl methyl carbonate from the comminuted material to make an electrochemical reaction either no longer possible or only possible to a negligibly small extent. We encourage the parties to further develop the record on this question at trial.

Inst. Dec. 12.

For purposes of this preliminary guidance, our preliminary interpretation of “inactivating” remains the same as in our Institution Decision. We note that Petitioner does not appear to disagree with our preliminary interpretation in its Opposition. *See* Opp. 14–18. Contrary to Petitioner’s arguments, Patent Owner’s disagreement with our preliminary interpretation of this term, in its arguments regarding the original claims of the ’097 patent, does not necessarily render the proposed substitute claims indefinite. We may not agree with Patent Owner’s contentions, but the mere fact that an argument was made is not evidence of indefiniteness. We also do not agree with Petitioner that the testimony of Patent Owner’s declarant, Mr. Dantam, mandates a determination of indefiniteness. *See* Opp. 16 (arguing that “Mr. Dantam confirmed that the relationship of ‘drying’ to ‘inactivation’ is circular and dependent on the whims of the party performing the drying . . .”). In particular, we do not agree that the cited back-and-forth in Mr. Dantam’s deposition testimony relied on by Petitioner constitutes an admission by Patent Owner that the term “inactivating” is “circular” because “material is inactivated if it has been dried per the specifications of the party doing the drying.” *See Id.* at 16–18.

Although we find that the term “inactivating” is a term of degree, that alone does not render the proposed substitute claims indefinite. As the Federal Circuit has explained:

While there must be objective boundaries, “we have explained that ‘a patentee need not define his invention with mathematical precision in order to comply with the definiteness requirement.’” *Guangdong Alison Hi-Tech Co. v. Int’l Trade Comm’n*, 936 F.3d 1353, 1359 (Fed. Cir. 2019) (quoting *Sonix Tech. Co. v. Publ’ns Int’l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017)). Indeed, patentees often use “[d]escriptive words ... to ‘avoid[] a strict numerical boundary to the specified parameter.’” *Braintree Lab’ys, Inc. v. Novel Lab’ys, Inc.*, 749 F.3d 1349, 1360 (Fed. Cir. 2014) (third alteration in original) (quoting *Pall Corp. v. Micron Separations, Inc.*, 66 F.3d 1211, 1217 (Fed. Cir. 1995)). And we have recognized that “[c]laim language employing terms of degree has long been found definite where it provided enough certainty to one of skill in the art when read in the context of the invention.” *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1370 (Fed. Cir. 2014).

Niazi Licensing Corp. v. St. Jude Med. S.C., Inc., 30 F.4th 1339, 1347 (Fed. Cir. 2022). For purposes of this preliminary guidance, we determine that the terms “inactivating” and “configured to inactivate” in proposed substitute claims 22–31 provide enough certainty to one of skill in the art when read in light of the ’097 patent’s specification.

3. Ground 4: Indefiniteness of claims 30 and 31

Petitioner contends that the limitation “almost no Hydrogen Fluoride is produced” in claims 30 and 31 renders those claims indefinite because “[t]he claims and the specification of the ’097 Patent do not provide guidance to a” person of ordinary skill in the art so as “to define the scope of the alleged invention with reasonable certainty.” Opp. 18–19.

Patent Owner cites to the following portions of the Specification as providing written description support for this limitation: column 7, line 33 to column 8, line 1; column 2, line 21 to column 3, line 4; and column 4, lines 18–25. Mot. 16, 17–18. Petitioner addresses each of these disclosures on pages 20–21 of

the Opposition. At this preliminary stage, on this record, we tend to agree with Petitioner that the '097 patent's specification does not inform those skilled in the art about the scope of the invention with reasonable certainty. The cited portions of the Specification "mere[ly] restate[] the claim language," replace "almost no Hydrogen Fluoride is produced" with "the formation of a significant amount of fluorophosphates can be ruled out," and state that "formation of hydrogen fluoride is hindered." Opp. 20–21 (quoting 2:21–3:4, 4:18–25, 7:33–8:1). On the present record, we are persuaded that Petitioner has shown a reasonable likelihood that it will prevail in showing that none of these portions provide "boundaries that are 'precise enough to afford clear notice of what is claimed, thereby apprising the public of what is still open to them.'" *J.R. Simplot Co. v. McCain Foods USA, Inc.*, 713 F. Supp. 3d 904, 944–45 (D. Id. 2024). Patent Owner will have the opportunity respond to Petitioner's arguments in its reply to Petitioner's Opposition (or in a revised motion) in this proceeding.

III. CONCLUSION

This concludes our Preliminary Guidance. Patent Owner has the option to reply to this Preliminary Guidance *or* to file a revised MTA by DUE DATE 3. 37 C.F.R. § 42.121(e)(3), (f); Paper 11. Patent Owner's reply or revised MTA may only respond to this Preliminary Guidance or Petitioner's Opposition and may be accompanied by new evidence (including declarations). 37 C.F.R. § 42.121(e)(3). Petitioner has the option to file a sur-reply responsive to this Preliminary Guidance, Patent Owner's reply, or Patent Owner's revised MTA but may not present new evidence in any case. 37 C.F.R. § 42.121(e)(3). Petitioner may also file a reply to the preliminary guidance in the case Patent Owner does not file a reply or revised MTA. 37 C.F.R. § 42.121(e)(4).

In addition, Patent Owner is reminded that amendments of the challenged claims may also be pursued in a separate reissue or reexamination proceeding before, during, or after an AIA trial proceeding, including subsequent to the issuance of the Final Written Decision. We draw Patent Owner's attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

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