

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AROMA360, LLC,
PETITIONER,

v.

AIR ESSSENTIALS, INC.
PATENT OWNER.

Case IPR2025-00706
Patent 10,583,449

PETITIONER'S OPPOSITION TO MOTION TO EXCLUDE

I. INTRODUCTION

Patent Owner seeks to exclude deposition testimony from its own expert, Dr. Micklow, not because the testimony is inadmissible, but because Petitioner cited cross-examination answers that undermine Patent Owner's merits positions. Patent Owner characterizes those answers as "isolated," "ambiguous," or "out-of-scope," and asks the Board to exclude both the testimony and Petitioner's reliance on it. *Id.* at 1-2. That is not a basis for exclusion. Cross-examination exists to test an expert's claim-term understanding, technical assumptions, and the factual basis for his opinions. Patent Owner submitted Dr. Micklow's declaration to dispute whether the prior art teaches limitations such as "fluid dispersion," "mixing chamber," and the fluid-flow structures described and claimed in the '449 Patent. Petitioner was entitled to examine him on how he understood those limitations and why he believed the prior art failed to satisfy them.

For example, Dr. Micklow testified that claim construction was important, that the parties had agreed to constructions of certain terms, and that he nonetheless interpreted the claims as an engineer using his own understanding rather than applying those agreed constructions. Ex. 1046, 110:21-111:25, 114:20-116:4. Petitioner relied on that testimony to argue that Dr. Micklow's opinions deserve little to no weight because he did not evaluate the prior art under the same claim scope applied by the parties. Pet. Reply at 1-4. Patent Owner's disagreement with that use of the testimony

is not an admissibility objection.

Patent Owner's motion also fails procedurally. The motion is premised largely on "scope," but Patent Owner's table confirms that several challenged excerpts received only a "form" objection, and other answers within the cited ranges received no objection at all. PO Mot. to Exclude at 3-4. Patent Owner cannot convert form objections, or silence, into a basis to exclude unfavorable testimony.

Nor can Patent Owner use a motion to exclude to relitigate the weight or characterization of cross-examination testimony. Patent Owner takes the untenable view that an expert should be insulated from cross-examination on issues that undercut his opinion unless the expert preemptively addressed those issues in his declaration. Patent Owner cites no case supporting that proposition. The long-standing purpose of cross-examination is for the opposing party to explore "the facts and assumption underlying the testimony of an expert witness." *Symbol Technologies, Inc. v. Opticon, Inc.*, 935 F.2d 1569, 1575–76 (Fed. Cir. 1991) (quoting *Smith v. Ford Motor Co.*, 626 F.2d 784, 793 (10th Cir. 1980), cert. denied, 450 U.S. 449, 101 S. Ct. 1363, 67 L. Ed. 2d 344 (1981)). That is what happened here. Patent Owner's displeasure with its expert's answers during cross-examination is not a basis to exclude his testimony.

The Board should deny Patent Owner's Motion to Exclude portions of Dr. Micklow's deposition transcript and Petitioner's Reply citing those portions of that testimony.

II. THE CHALLENGED TESTIMONY WAS NOT PRESERVED BY COMMENSURATE OBJECTIONS

Patent Owner's motion to exclude is premised on a theory that the questions exceeded the scope of direct and provides a table listing five portions of challenged testimony that purportedly were objected to. PO Mot. to Exclude at 3. There are at least two problems with Patent Owner's objections. First, an objection to "form" is materially different than an objection to "scope"; the former does not preserve the latter. Second, Patent Owner improperly includes questions and answers that were not objected to, apparently based on their proximity to a different question or answer that drew an objection. Either precludes exclusion based on improper scope of questioning.

The only two portions of challenged testimony with a proper objection to support Patent Owner's motion are found at 200:14-16 and 158:2-159:2 of Dr. Micklow's deposition. See Ex. 1046; PO Mot. to Exclude at 3. The other challenged excerpts do not have a proper underlying objection and cannot thus be excluded by Patent Owner's motion.

A. Objections to "form" are not objections to "scope"

Patent Owner acknowledges that it objected to "form" for the challenged testimony at 11:20-25, 115:15-18 and 117:4-15. PO Mot. to Exclude at 3. Yet, Patent Owner's arguments for all three of these portions of challenged testimony are based on a theory that the testimony is outside the scope of direct testimony. Those challenges should be rejected.

Patent Owner argues that its “form” objection should be treated as a “scope” objection in light of a statement by Petitioner’s counsel that “the proper objections are just for form.” PO Mot. to Exclude at 4 (citing Ex. 1046 at 85:1-4). Patent Owner contends that at this point its counsel “ceased using the phrasing ‘Objection, scope’” during the deposition. *Id.* The transcript plainly shows otherwise.

In fact, Patent Owner’s counsel, Mr. Eagan, objected to “scope” fifty-six times after this point in the deposition when it alleges it “ceased” doing so. *See, e.g.*, Ex. 1046 at 85:25, 104:22, 137:1, 138:24, 140:3, 141:7, 142:22, 152:22, 153:10, 154:10 (showing ten of the fifty-six instances of objecting to “scope”). More importantly, Patent Owner’s counsel’s later objections to scope included an objection to form, while others did not, confirming that Patent Owner’s counsel viewed objections to “form” and “scope” as separate bases for objections. *Compare* Ex. 1046 at 138:24 (“MR. EAGAN: Objection. Scope. Form.”), *with* 140:3 (“MR. EAGAN: Objection. Scope.”), 147:10 (“MR. EAGAN: Objection. Form.”). The record is replete with similar examples demonstrating that Patent Owner’s counsel was aware of the difference between an objection to scope and an objection to form even after the exchange with Petitioner’s counsel. Thus, the transcript confirms that Patent Owner’s counsel did not use “form” as a substitute for “scope” since counsel continued to make form-only objections, scope-only objections, and combined “form and scope” objections.

B. Patent Owner includes testimony that was not objected to at all

Patent Owner's table includes questions and answers that were not objected to at all. PO Mot. to Exclude at 3. Since no objection was raised to this testimony during the deposition, it is waived. 37 CFR § 42.53(f)(8) ("Any objection to the content, form, or manner of taking the deposition, including the qualifications of the officer, is waived unless made on the record during the deposition.").

The portions of testimony that were not objected to but are still listed in Patent Owner's motion, apparently due to nearby objections, are as follows:

- 117:11-15 – Patent Owner objected "form" to whether Dr. Micklow applied the term's plain meaning, Ex. 1046, 117:4-9, but did not object when Petitioner asked, "What is your understanding of a mixing chamber?" or when Dr. Micklow supplied the substantive definition. *Id.* at 117:11-15.
- 157:20-158:12 – Patent Owner objected to "scope" in response to a later question concerning whether the fluid enters the diffusion assembly, Ex. 1046, 158:13-18, but did not object to the earlier questions asking Dr. Micklow about the "mixing chamber" or to his answers identifying the mixing chamber, the downstream flow path, and the diffusion chamber. *Id.* at 157:20-158:12.

Patent Owner cannot obtain exclusion of this unobjected-to testimony by grouping it with neighboring questions that drew a different objection.

III. ALL CHALLENGED TESTIMONY IS RELEVANT, CLEAR AND WITHIN THE SCOPE OF DR. MICKLOW'S DECLARATION

Cross-examination extends to the subject matter of direct testimony and matters

affecting credibility. 37 C.F.R. § 42.53(d)(5)(ii); FRE 611(b). Patent Owner argues that Petitioner crossed that line by asking about his understanding of the specification and meaning of disputed claim limitations of the '449 Patent. PO Mot. to Exclude at 6–14. Those topics are directly tied to the patentability opinions Dr. Micklow offered in his declaration.

Dr. Micklow's declaration relies on his understanding of how a POSITA would view the '449 Patent, including limitations such as “fluid dispersion,” “mixing chamber,” and the fluid-flow-based atomization allegedly described in the '449 Patent. *See, e.g.*, Ex. 2002 ¶¶24-25 (addressing the parties' agreed meaning of “fluid dispersion”), ¶26 (opining that a non-uniform spray would not meet the “fluid dispersion” limitation), ¶28 (opining that prior art does not teach “an operative fluid designed for mechanical dispersion through gas-flow interaction as required by the '449 Patent”), ¶31 (opining that prior art teachings are materially different from the fluid-flow-based atomization described and claimed in the '449 Patent). Petitioner was entitled to ask how he understood the relevant claim scope and flow structures so it could test the basis for those opinions.

Patent Owner also nominally cites FRE 401-403 and FRE 702-703, but never attempts to explain why those rules require exclusion. The testimony is relevant to the basis and credibility of Dr. Micklow's opinions, and Patent Owner does not show that any risk of confusion substantially outweighs that probative value. In any event,

because the Board is the factfinder, the risk of unfair prejudice that Rule 403 principally guards against is diminished. Patent Owner's FRE 702-703 argument is likewise internally inconsistent. Patent Owner does not challenge Dr. Micklow's qualifications, competence, or direct-testimony methodology, yet it argues that he lacked a sufficient basis to answer cross-examination questions testing the same opinions. See PO Mot. to Exclude at 1-2, 5, 14. If Dr. Micklow was qualified to opine that the prior art does not teach the claimed limitations, Petitioner was entitled to test the basis for those opinions on cross-examination.

A discussion of each of the portions of testimony Patent Owner challenged is provided below demonstrating that all of the questions asked were relevant, clear and within the scope of cross-examination.

A. Patent Owner Fails to Explain How FRE 401-403 or FRE 702-703 are Applicable to the Underlying Facts

Patent Owner cites FRE 401-403 yet never once explains why these rules are applicable. See PO Mot. to Exclude at 5, 7-11 and 14. For example, Patent Owner never explains why the challenged testimony is not relevant under FRE 401/402 or results in unfair prejudice that is "substantially outweighed" by the probative value of the testimony under FRE 403. See *Captioncall LLC v. Ultratec, Inc.*, IPR2014-00780, Paper No. 35 at 8 (PTAB Dec. 1, 2015) (denying motion to exclude where "Patent Owner fails to address the 'substantially outweighed' aspect of the Rule [FRE 403]").

Here the challenged testimony is not unfairly prejudicial since Patent Owner

had an opportunity at the deposition to re-direct Dr. Micklow to address his testimony but chose not to. Moreover, the risk of “unfair prejudice” is either eliminated or diminished in IPR trials since the fact finder is the Board and not a jury. *Neste Oil Oyj v. Reg Synthetic Fuels, LLC*, IPR2013-00578, Paper No. 53 at 10 (PTAB Mar. 12, 2015) (“Proceedings before the Board are not jury trials; in the absence of a jury, the risk of unfair prejudice against which Rule 403 guards is diminished, if not eliminated entirely.”); *Trend Micro Inc. v. Cupp Computing AS*, IPR2019-00764, Paper No. 32 at 5 (PTAB Aug. 25, 2020). In addition, the challenged testimony is highly relevant and probative to the ultimate issues of patentability as it demonstrates the underlying errors in Dr. Micklow’s testimony regarding his analysis of whether the prior art teaches the claim limitations.

Similarly, Patent Owner cites FRE 702 and 703 but fails to address how they apply. See PO Mot. to Exclude at 5 and 14. Ironically, Patent Owner is asking for its own expert’s opinion to be excluded on the basis of FRE 702 and 703, which is a tacit admission that Dr. Micklow’s direct testimony is unreliable and should be given little weight. If Dr. Micklow cannot provide reliable answer in cross-examination testimony on the subject matter of whether the prior art teaches certain claim limitations, then his direct testimony on these issues is likewise unreliable. Patent Owner’s theory, if upheld, would shield an expert from having to defend their opinions, which is an untenable result and Patent Owner provides no basis for the Board to adopt this

approach.

B. Ex. 1046 at 11:20-25 and 115:15–18 — Dr. Micklow’s Failure to Apply the Parties’ Claim Constructions, Including Fluid Dispersion

Patent Owner frames this issue as eliciting “testimony outside the scope of Dr. Miclow’s disclosures opinions” since Dr. Miclow’s “assignment” did not include claim construction. PO Mot. to Exclude at 6. However, considering the parties’ claim constructions (and the Board’s or Court’s constructions, if available) is a fundamental part of an expert’s analysis to credibly opine on whether the prior art fails to teach the limitations of a claim. Moreover, Dr. Micklow specifically referenced the “the parties’ stipulated definition” of “fluid dispersion” in his declaration. Ex. 2002 at ¶¶24-25. Dr. Micklow’s failure to apply those agreed upon construction set out by the parties goes directly to the credibility and weight of the statements in his declaration that the prior art failed to teach certain limitations.

Indeed, the Federal Circuit has made clear that expert testimony which does not apply the correct claim construction should not be considered. *See, e.g., Trudell Med. Int’l Inc. v. D R Burton Healthcare, LLC*, 127 F.4th 1340, 1349-50 (Fed. Cir. 2025) (quoting FRE 702 and finding that the district court abused its discretion in allowing an expert to offer testimony “untethered from the district court’s claim constructions,” which resulted in a “methodological[ly] unsound[]” opinion); *Liquid Dynamics Corp. v. Vaughn Co., Inc.*, 449 F.3d 1209, 1224 n.2 (Fed. Cir. 2006) (affirming the striking of “expert opinion evidence as irrelevant because it was based on an impermissible

claim construction”).

Perhaps most telling is that Dr. Micklow testified that “claim construction is important” and even acknowledged that the parties had “agreed to constructions of certain terms” yet Dr. Micklow did not actually consider those constructions despite acknowledging their importance. Ex. 1046 at 110:21-111:25 and 114:20-115:9. Dr. Micklow’s failure to consider the parties’ claim constructions is not excused by him “interpret[ing] the claims as would be normally interpreted by an engineer.” *Id.* at 116:2-4. If anything, this statement highlights the problem because Dr. Micklow’s declaration relies on an interpretation of claim scope that is materially different than the parties’ constructions.

As uncovered in the deposition, Dr. Micklow’s opinions are not based on the same understanding of the claim scope that the parties have agreed to or asserted, and thus his opinions are entitled to little or no weight as Petitioner argued in its Reply.

The challenged testimony is within the scope of the direct testimony since it goes to the credibility of Dr. Micklow’s direct testimony and to understanding the claim scope that Dr. Micklow used in opining that the prior art does not teach certain limitations.

C. Ex. 1046 at 117:4-15 – Regarding Dr. Micklow’s Improper Construction of “Mixing Chamber”

The limitation of “mixing chamber” has been expressly disputed by the parties. Ex. 1018, Ex. B. Dr. Micklow’s understanding of the term “mixing chamber” is

relevant to the analytical framework he used in preparing the opinions in his declarations and the credibility of his opinions.

The testimony is also straightforward. After an objection to whether he applied the plain meaning, Dr. Micklow stated that he applied his own understanding. Ex. 1046, 117:4-9. Petitioner then asked the unobjected-to question, “What is your understanding of a mixing chamber?” and received the answer quoted in the Reply. *Id.* at 117:11-15; Pet. Reply 4. Whether that engineering description matches either party’s proposed construction is an evidentiary-weight issue. It is not a basis to exclude the answer.

D. Ex. 1046 at 200:14–16 — Dr. Micklow’s Admission That Figure 6 Was Not a Basis for His Opinions

Patent Owner does not allege this testimony was improper, but rather uses this section to try to rebut Petitioner’s explanation of the testimony in Petitioner’s reply. PO Mot. to Exclude at 10-11. As such, the Board should dismiss this request as improper additional briefing.

Nonetheless, Patent Owner’s belated argument that Dr. Micklow “may” have reviewed Figure 6 does not address the underlying problem that Dr. Micklow did not base his analysis on Figure 6 (which Patent Owner acknowledges Dr. Micklow admitted). *Id.* As explained in Petitioner’s Reply, all the arguments in Patent Owner’s Response attempting to distinguish prior art based on Figure 6 of the ’449 Patent are unsupported attorney argument. Petitioner Reply at 2 (“Patent Owner’s arguments

regarding Figure 6 in the Response are nothing more than attorney argument.”). Patent Owner’s acknowledgement that Dr. Micklow did not base his opinions on Figure 6 confirms that there is no expert testimony supporting Patent Owner’s attorney arguments for Figure 6.

Moreover, Dr. Micklow’s declaration is premised on distinguishing the prior art from the “the fluid-flow-based atomization described and claimed in the ’449 Patent.” Ex. 2002 at ¶31. Thus, Dr. Mickow’s opinions regarding the fluid flow “described and claimed in the ’449 Patent” should encompass the fluid flow described in Figure 6, yet Dr. Micklow admitted that was not part of his analysis.

In addition, the Figure 6 question did not ask Dr. Micklow to formulate a new technical opinion but rather inquired into the basis for the opinions he provided in his declaration. Determining which embodiment(s) of the ’449 Patent actually informed those opinions is classic cross-examination concerning foundation and credibility.

E. Ex. 1046 at 157:20–159:2 — Dr. Micklow’s Admission That Droplet Uniformity Develops Downstream of the Mixing Chamber

Patent Owner argues that Petitioner’s questions for this testimony lacked context and were compound questions. PO Mot. to Exclude at 11-13. Even assuming that were the case, Patent Owner could have sought clarification of Dr. Micklow’s answers during re-direct, yet it did not do so. Instead, Patent Owner now seeks exclusion by speculating as to Dr. Micklow’s internal thought process despite the lack of any indication of confusion in Dr. Micklow’s actual answers.

As explained above, Dr. Micklow’s testimony was premised on distinguishing the prior art from the “fluid dispersion” and “fluid-flow-based atomization described and claimed in the ’449 Patent.” *See, e.g.*, Ex. 2002 at ¶¶24-25 (opining that “Gao cannot achieve a fluid dispersion within the meaning agreed upon by the parties”), ¶26 (opining that if prior art teaches “a non-uniform spray. It will not meet the limitation of ‘fluid dispersion’”), ¶28 (opining that prior art does not teach “an operative fluid designed for mechanical dispersion through gas-flow interaction as required by the ’449 Patent”) and ¶31 (opining that prior art teachings are “materially different from the fluid-flow-based atomization described and claimed in the ’449 Patent”). In view of such, Petitioner is entitled to ask Dr. Micklow to explain his understanding of the “uniform spray...fluid dispersion” and “fluid-flow-based atomization described and claimed in the ’449 Patent,” including whether droplets in the fluid flow become more uniform after exiting the mixing chamber.

The challenged exchange was also the natural continuation of earlier testimony that was not objected to. Dr. Micklow had testified that the diffusion chamber claimed in the ’449 Patent was a chamber where the flow is decelerated while attempting to obtain a fine, uniform spray distribution. Ex. 1046, 117:20–24. He later testified that fluid dispersion “has to happen in the mixing chamber” and described the result as a uniform distribution. *Id.* at 145:11–19. Given that Dr. Micklow identified both the mixing chamber and the diffusion chamber as areas trying to achieve uniform

distribution, Petitioner then asked questions trying to understand the structures the '449 Patent utilizes to produce uniform distribution according to Dr. Micklow. In so doing, Petitioner's counsel asked whether the dispersion could become more uniform as it flowed through the assembly, and Dr. Micklow proceeded to identify the mixing chamber, the downstream flow path, and the diffusion chamber. *Id.* at 152:18–159:2.

Patent Owner's assertions that the final question was compound or embedded disputed assumptions are baseless. Patent Owner does not point to any question in the exchange that asked for multiple answers. Instead, Patent Owner appears to complain that because there was a line of follow-up questions seeking additional information this is somehow a compound question. Yet, Patent Owner provides no case law that follow-up questions seeking additional information are equivalent to compound questions.

Patent Owner also fails to identify any disputed assumptions that would justify exclusion. The exchange did not even involve a hypothetical scenario that would require certain assumptions, but was rather discussing the embodiment shown in Figure 2 and referenced structures by their specific numerals. *See* Ex. 1046 at 157:8-12 (question directs Dr. Micklow to mixing chamber “232” of “Figure 2”). As another example, Patent Owner contends that Petitioner confused Dr. Micklow by referring to the “diffusion assembly” but Dr. Micklow himself used the phrase “diffusion chamber” (which is part of the diffusion assembly) in his answer making it clear that

Dr. Micklow was not confused. Indeed, Dr. Micklow was free to reject any premise, qualify his answer, or explain a different flow path. He instead answered that making the droplets more uniform is “what you attempt to do in the diffusion chamber.” Ex. 1046, 158:20–159:2. There is nothing to indicate that Dr. Micklow was confused by the questions or somehow tricked into believing the ’449 Patent said something it did not.

IV. PATENT OWNER’S MOTION TO EXCLUDE EVIDENCE INCLUDES IMPROPER ADDITIONAL BRIEFING

Patent Owner’s rebuttal to “Petitioner’s broader proposition” set out in Petitioner’s Reply is improper additional briefing that should not be considered. PO Mot. to Exclude at 13-14. Here, Patent Owner includes over a page of attorney argument designed to substantively rebut Petitioner’s merits position on this damaging portion of Dr. Micklow’s testimony. Patent Owner’s Motion to Exclude Evidence is not the proper vehicle for this briefing, and these arguments should not be considered.

V. CONCLUSION

Patent Owner’s Motion to Exclude should be denied in its entirety.

Date: July 16, 2026

Respectfully submitted,

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CERTIFICATE OF SERVICE UNDER 37 CFR § 42.6(e)(4)

The undersigned hereby certifies that a copy of the accompanying Petitioner's Opposition to the Motion to Exclude is being served on July 16, 2026, via electronic mail directed to the following counsel of record for the Patent Owner:

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