

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OHIO
EASTERN DIVISION

TERVES, LLC,	)	
	)	CASE NO.: 1:19 CV 1611
Plaintiff.	)	
	)	
v.	)	JUDGE DONALD C. NUGENT
	)	
YUEYANG AEROSPACE NEW	)	
MATERIALS CO. LTD., <i>et al.</i> ,	)	
	)	<u>MEMORANDUM OPINION</u>
Defendants.	)	<u>AND ORDER</u>
	)	

This matter is before the Court on Plaintiff's Motion for Summary Judgment (ECF #135, 136), and Defendants' Amended Motion For Summary Judgment. (ECF #134, 137). Each party filed a response in opposition to the opposing party's motion, and a reply in further support of their own. (ECF #143, 144, 147, 148). Following the allowance of supplementary discovery, Defendants filed a Supplement to their Motion for Summary Judgment, and Plaintiff filed a Response. (ECF #151, 153). On March 29, 2022, the USPTO issued a Notice of Intent to Issue *Ex Parte* Reexamination Certificate, and Plaintiff filed a Notice re *Ex parte* Reexamination Confirming Patentability, along with arguments as to how it might affect Defendants defenses and

counterclaims. (ECF #174). Defendants then filed a Response to Terves' Notice. (ECF #177).

Plaintiff also filed a Motion to Strike the January 10, 2022 Declaration of Dr. Dana Medlin, which had been filed in support of the Defendants' Reply in support of its motion for summary judgment. (ECF #150). Defendants filed an opposition to this motion, and Plaintiff filed a reply in support. (ECF #152, 153). Finally, Plaintiff filed a Motion to Bifurcate Inequitable Conduct, which Defendants opposed. (ECF #169, 176). After careful consideration of the briefs and a thorough review of all relevant evidence and authority, the Court finds as follows.

FACTS AND PROCEDURAL HISTORY¹

Terves LLC, ("Terves") is a developer and manufacturer of engineered materials used in oil and gas drilling, and is the owner of asserted U.S. Patent No.10,329,653 ("the '653 Patent"), and U.S. Patent No. 10,689,740 ("the '740 Patent"). The '653 Patent, and the '740 Patent, address fully dissolvable magnesium materials used to manufacture frac balls and frac plugs. Ecometal is a Canadian company that sources metals and alloys. Nick Yuan is the CEO of Ecometal. Ecometal sells dissolvable magnesium to at least one client.

Terves filed suit against Yueyang Aerospace New Materials Co. Ltd. ("Yueyang"), Ecometal Inc. ("Ecometal"), and Nick Yuan alleging violations of two patents, U.S Patent No. 9,903,010 ("the '10 Patent") and U.S. Patent No. 10, 329, 653 ("the '653 Patent"). (ECF #1).

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The facts and procedural history have been taken from the undisputed statements set forth in the parties' briefs, and official court records. In accordance with the applicable standards on a motion for summary judgment, genuine questions of material fact have been resolved in favor of the non-moving party.

Defendants Ecometal and Nick Yuan (collectively “the Ecometal Defendants”) filed a Motion to Dismiss, and Terves, in response filed a First Amended Complaint. (ECF #13).² Terves subsequently filed a Second Amended Complaint, adding a claim for infringement of a third patent, U.S. Patent No. 10,689,740 (“the ‘740 Patent”). (ECF #44). The Ecometal Defendants Answered the Second Amended Complaint, asserting several affirmative defenses, along with three Counterclaims for Unenforceability, one for each of the three subject Patents (“the ‘10 Patent; the ‘653 Patent; and, the ‘740 Patent). (ECF #49). This Answer was later amended. (ECF #66). In response to the Ecometal Defendants’ Counterclaims, Terves filed a Motion to Dismiss, which was denied. (ECF #69, 85). During the claim construction process, Terves withdrew all claims under the ‘010 Patent. (ECF #45).

The Counterclaims allege that Terves engaged in inequitable conduct by failing to provide the United States Patent and Trademark Office with a complete English translation of the Xiao Patent when it submitted its Information Disclosure Statement identifying potentially relevant prior art in connection with its Patent Applications for the ‘010 and ‘653 Patents. The Ecometal Defendants also allege that Terves failed to provide any version of the Xiao Patent to the Patent Office during prosecution of the ‘740 Patent application, and that it failed to disclose the invalidity claims raised in this litigation during the ‘740 Patent prosecution.

During the course of this litigation, Ecometal initiated an *ex parte* reexamination of the ‘653 Patent by the USPTO. (ECF #100-1). In its arguments to the USPTO, Ecometal included a full English translation of the Xiao Patent. On November 19, 2021, the USPTO initially issued a “non-final rejection,” of the ‘653 Patent. On March 28, 2022, however, it issued a Notice of

²To date, Defendant Yueyang has not made an appearance in this case.

Intent to Issue *Ex Parte* Reexamination Certificate confirming all of the asserted claims in this litigation.³(ECF #174-1, PageID #15457).

STANDARD OF REVIEW

Summary judgment is appropriate when the court is satisfied “that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law.” FED. R. CIV. P. 56(c). The burden of showing the absence of any such “genuine issue” rests with the moving party:

[A] party seeking summary judgment always bears the initial responsibility of informing the district court of the basis for its motion, and identifying those portions of ‘the pleadings, depositions, answers to interrogatories, and admissions on file, together with affidavits, if any,’ which it believes demonstrates the absence of a genuine issue of material fact.

Celotex Corp. v. Catrett, 477 U.S. 317, 323 (1986) (citing FED. R. CIV. P. 56(c)). A fact is “material” only if its resolution will affect the outcome of the lawsuit. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986). Determination of whether a factual issue is “genuine” requires consideration of the applicable evidentiary standards. The court will view the summary judgment motion in the light most favorable to the party opposing the motion. *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 587 (1986).

Summary judgment should be granted if a party who bears the burden of proof at trial does not establish an essential element of their case. *Tolton v. American Biodyne, Inc.*, 48 F.3d

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Claims 12-15,18-20, 23, 34, 67, and 69 were amended. (ECF #174-1, PageID #15457). Neither party has submitted any evidence that would suggest that the amended status of these claims in any way alters the arguments or issues pending in the current litigation.

937, 941 (6th Cir. 1995) (citing *Celotex*, 477 U.S. at 322). Accordingly, “[t]he mere existence of a scintilla of evidence in support of the plaintiff’s position will be insufficient; there must be evidence on which the jury could reasonably find for the plaintiff.” *Copeland v. Machulis*, 57 F.3d 476, 479 (6th Cir. 1995) (citing *Anderson*, 477 U.S. at 252). Moreover, if the evidence presented is “merely colorable” and not “significantly probative,” the court may decide the legal issue and grant summary judgment. *Anderson*, 477 U.S. at 249-50 (citations omitted). In most civil cases involving summary judgment, the court must decide “whether reasonable jurors could find by a preponderance of the evidence that the [non-moving party] is entitled to a verdict.” *Id.* at 252. However, if the non-moving party faces a heightened burden of proof, such as clear and convincing evidence, it must show that it can produce evidence which, if believed, will meet the higher standard. *Street v. J.C. Bradford & Co.*, 886 F.2d 1472, 1479 (6th Cir. 1989).

Once the moving party has satisfied its burden of proof, the burden then shifts to the non-mover. The non-moving party may not simply rely on its pleadings, but must “produce evidence that results in a conflict of material fact to be solved by a jury.” *Cox v. Kentucky Dep’t of Transp.*, 53 F.3d 146, 149 (6th Cir. 1995). FED. R. CIV. P. 56(e) states:

When a motion for summary judgment is made and supported as provided in this rule, an adverse party may not rest upon the mere allegations or denials of the adverse party’s pleading, but the adverse party’s response, by affidavits or as otherwise provided in this rule, must set forth specific facts showing that there is a genuine issue for trial.

The Federal Rules identify the penalty for the lack of such a response by the nonmoving party as an automatic grant of summary judgment, where otherwise appropriate. *Id.*

Though parties must produce evidence in support of and in opposition to a motion for summary judgment, not all types of evidence are permissible. The Sixth Circuit has concurred

with the Ninth Circuit's position that "'only admissible evidence may be considered by the trial court in ruling on a motion for summary judgment.'" *Wiley v. United States*, 20 F.3d 222, 225-26 (6th Cir. 1994) (quoting *Beyene v. Coleman Sec. Servs., Inc.*, 854 F.2d 1179, 1181 (9th Cir. 1988)). FED. R. CIV. P. 56(e) also has certain, more specific requirements:

[Rule 56(e)] requires that affidavits used for summary judgment purposes be made on the basis of personal knowledge, set forth admissible evidence, and show that the affiant is competent to testify. Rule 56(e) further requires the party to attach sworn or certified copies to all documents referred to in the affidavit. Furthermore, hearsay evidence cannot be considered on a motion for summary judgment.

Wiley, 20 F.3d at 225-26 (citations omitted). However, evidence not meeting this standard may be considered by the district court unless the opposing party affirmatively raises the issue of the defect.

If a party fails to object before the district court to the affidavits or evidentiary materials submitted by the other party in support of its position on summary judgment, any objections to the district court's consideration of such materials are deemed to have been waived, and [the Sixth Circuit] will review such objections only to avoid a gross miscarriage of justice.

Id. at 226 (citations omitted).

As a general matter, the district judge considering a motion for summary judgment is to examine "[o]nly disputes over facts that might affect the outcome of the suit under governing law." *Anderson*, 477 U.S. at 248. The court will not consider non-material facts, nor will it weigh material evidence to determine the truth of the matter. *Id.* at 249. The judge's sole function is to determine whether there is a genuine factual issue for trial; this does not exist unless "there is sufficient evidence favoring the nonmoving party for a jury to return a verdict for that party." *Id.*

Summary judgment is as appropriate in a patent case as in any other type of case. *Desper*

Prods., Inc. V. QSound Labs, Inc., 157 F.3d 1324, 1332 (Fed. Cir. 1998). The defense of non-infringement may appropriately be decided on summary judgment if no reasonable jury could find that every limitation recited in a properly construed claim is found in the accused product either literally or under the doctrine of equivalents. *U.S. Philips Corp. v. Iwasaki Elec. Co. Ltd.*, 505 F.3d 1371, 1374 (Fed. Cir. 2007); *see also Lucent Technologies, Inc. v. Gateway, Inc.*, 525 F.3d 1200 (Fed. Cir. 2008). Both parties agree that there is undisputed evidence in this case generally establishing how the accused product works, and there are no genuine issues of material fact that would prevent a summary judgment ruling on the issue of infringement.

ANALYSIS

I. Infringement

Defendants seek summary judgment on infringement but offer no argument or evidence in favor of this request. Their Memorandum in Support of Defendants' Motion for Summary Judgment and their Reply brief focus solely on a variety of arguments relating to the validity of the patent but do not address infringement in any way. They have not even attempted to meet the criteria that would allow for summary judgment in their favor on the issue of infringement.

However, claims originally brought by Terves under the '010 Patent were subsequently withdrawn, and are, therefore, dismissed with prejudice. Plaintiff has also withdrawn claims 8, 11, 24, 28, 32, 36, 40, 44, 48, 51, 71, 72, and 75 of the '653 Patent, and claim 18 from the '740 Patent. Consequently, these claims are also dismissed with prejudice.

Plaintiff also seeks summary judgment on the issue of infringement. They seek an Order declaring that Ecometal's products, specifically AJM-006, AJM-010, AJM-012, AJM-016,

AJM017, AJM018, and AJM-023 (collectively “the AJM products” or “AJM composites”), infringe claims 1-5, 7, 9, 12-15, 18-20, 23, 25-27, 29-31, 33-35, 37-39, 41-43, 45-47, 49-50, 52-61, 64, 66-67, 69-70, 74, and 76 of the ‘653 Patent, and claims 2-5, 8-11, 13, 16-17, 19-47, 51-69, 76-103 of the ‘740 Patent. A patent is infringed when a person “without authority makes, uses, offers to sell or sells any patented invention, within the United States . . . during the term of the patent.” 35 U.S.C. § 271(a). “Literal infringement exists when every limitation recited in the claim is found in the accused device.” *Akzo Nobel Coatings, Inc. v. Dow Chem. Co.*, 811 F.3d 1334, 1341(Fed. Cir. 2016). Terves, as the accuser, bears the burden of proving, by a preponderance of the evidence, that Ecometal’s accused products infringe the patent(s).

The Ecometal Defendants do not dispute that they import, sell, and/or offer the accused AJM products for sale in the United States. Terves has offered the expert opinion of Dr. Swanger in support of its position that the AJM products infringe the above listed claims within the ‘653 and ‘740 Patents. Dr. Swanger tested the AJM products, through the use of chemical composition, corrosion, Scanning Electron Microscopy (“SEM”) and energy dispersive X-ray spectroscopy (“EDS”) testing. (ECF #136-9). Based on his testing he opined that the seven AJM products infringe the following claims: 1-5, 7, 9, 12-15, 18-20, 23, 25-27, 29-31, 33-35, 37-39, 41-43, 45-47, 49-50, 52-61, 64, 66-67, 69-70, 74, and 76 of the ‘653 Patent, and claims 2-5, 8-11, 13, 16-17, 19-47, 51-69, and 76-103 of the ‘740 Patent.

With regard to the ‘653 Patent, the Ecometal Defendants argue that the accused products do not contain an “additive material constituting about 0.05 st. %-45 st.% of a mixture that forms a “galvanically-active intermetallic,” as required for claims 1, 12, 25, 29, 33,37, 41, 45 and 49; and that there is no proof that unalloyed additive material remains as required for claim 12 and its

derivative claims 13-15, 18-20, and 23. Dr. Swanger's report concluded that all seven AJM products did contain a mixture that forms a galvanically-active intermetallic, and that the additive material was within the specified range. (ECF #144-2, PageID# 12530, 12570). The report also did identify "unalloyed additive material" in all seven grades of material in the accused products. (ECF #144-2, PageID# 12573). Ecometal has offered nothing more than attorney arguments and unauthenticated graphs to challenge Dr. Swanger's opinion that "galvanically active intermetallic phases" are present in the accused products. Neither of these constitute admissible evidence, and neither is sufficient to undermine the opinion of Plaintiff's expert. *See Vivid Technologies, Inc. v. Am. Science & Eng'g. Inc.*, 200 F.3d 795, 812 (Fed. Cir. 1999); *Impax Laboratories Inc. v. Lannett Holdings Inc.*, 893 F.3d 1372, 1380 (Fed. Cir. 2018).

With regard to the '740 Patent, the Ecometal Defendants argue that Terves has not shown the accused products are "frac balls, plugs, or other tool components." The Patent does not include a claim limitation requiring that the products take the form of "frac balls, plugs, or other tool components." This phrase appears in the preamble of the claim which describes "the use of an invention" and "generally do[es] not limit the claims." *Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 809 (Fed. Cir. 2002). Further, the Ecometal Defendants did not raise this preamble language during the claim construction period, which would have been required under the Local Patent Rules. *See Id.*

The Ecometal Defendants also argue that there is no evidence that the AJM products contain *in situ* precipitates no more than 50 microns as required for claims 19 and its derivatives 20-47, 49-69, and 76-93; and, that there is no proof that the *in situ* precipitate includes additive

material.⁴ The Ecometal Defendants’ argument that the accused products have not been shown to fall within the size limitation is unsupported. Dr. Swanger’s infringement report specifically states that the “size of a plurality of the precipitates in each of the accused Ecometal composites is less than 50 microns, as shown by the micrographs in Exhibit D.” (ECF #144-2, PageID #12530, 12532). The photographs in exhibit D include a size scale that show that the precipitates are less than 50 micron. (ECF #144-2, PageID # 12548-12561). Further, after evaluating the accused composites and comparing them to the Patent claims, Dr. Swanger opined that the *in situ* precipitate includes additive material. (ECF #144-2, PageID #12589). The Ecometal Defendants offer no expert opinion or other evidence to contradict the evidence contained in Dr. Swanger’s report, or his related conclusions with regard to infringement.

Defendants’ expert, Dr. Medlin, has offered no non-infringement opinion. He testified that he began testing the accused composites to determine whether there was infringement but upon finding results that mirrored Dr. Swanger’s results he stopped testing. Although his report included one paragraph addressing infringement, within which he criticized Dr. Swanger’s testing, he offered no rebuttal to Dr. Swanger’s testing results or conclusions. He also admitted during his deposition that his report does not include an infringement analysis, or a non-infringement opinion, nor does it identify any accused AJM products that do not infringe the ‘653 or ‘740 Patents. (ECF #136-11, PageID 12234-12236). When a plaintiff meets its burden of

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Defendants argue that “Dr. Swanger’s EDS experiment purportedly shows *in situ* precipitate with no discernable additive materials.” (ECF #144, PageID #12476). They do not cite to any evidence in the record that supports this statement, nor do they concede the validity of the “purported” showing. There is no citation to any actual evidence that would provide a context within which this statement could be properly evaluated.

showing infringement and that showing goes effectively un-rebutted, summary judgment on infringement is appropriate. *See McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1344-49 (Fed. Cir. 2001)(affirming summary judgment when infringer's only rebuttal was conclusory).

Terves has submitted evidence sufficient to show that the accused AJM products infringe the above-listed claims of its '653 and '740 Patents, and Ecometal has not sufficiently rebutted any of this evidence. Therefore, assuming the patents are valid, Terves is entitled to summary judgment on its infringement claims. These claims may not be fully realized, however, if the Patents are found to be invalid or if any of the Defendants' other affirmative defenses apply. The asserted defenses will be addressed below.

II. Defenses

A. Patent-Ineligibility/Indefiniteness/Enablement/Written Description

Plaintiff has moved for summary judgment in its favor on the invalidity defenses of patent-ineligibility, indefiniteness, enablement, and written description. Patents are presumed valid. 35 U.S.C. § 282. An accused infringer must prove invalidity by clear and convincing evidence. *See Microsoft Corp. v. I4I Ltd. P'ship*, 564 U.S. 91, 131 S. Ct. 2238, 2239 (2011). Also, according to Local Patent Rules, a defendant must assert any grounds they have for invalidity in their final invalidity contentions. Defendants failed to assert 35 U.S.C. §101 as a grounds for invalidity in its final invalidity contentions, as is required under Local Patent Rule 3.5(d), 3.10. Further they have offered no expert opinion on their defenses of patent-ineligibility, non-enablement, or lack of written description. Each of these defenses is properly examined from the perspective of a person having ordinary skill in the art ("POSITA"), at the time the

patent was filed. *See, Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898 (2014); *Apple Inc. v. Samsung Elecs. Co.*, 786 F.3d 983, 1002 (Fed. Cir. 2015), rev'd and remanded on other grounds, 137 S. Ct. 429 (2016). Therefore testimony from an expert or a non-expert POSITA is required to support these defenses. Conclusory assertions are insufficient. *See, Streck, Inc. v. Rsch. & Diagnostic Sys., Inc.*, 665 F.3d 1269, 1290 (Fed. Cir. 2012). Defendants have not provided any such testimony in support of these asserted defenses, and have not responded to the request for summary judgment on these defenses in their opposition.

With regard to indefiniteness, a patent claim is indefinite only if when “read in the light of the specification delineating the patent, and the prosecution history, [the claim] fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124, 189 L.Ed.2d 37 (2014). Ecometal has the burden of proving indefiniteness by clear and convincing evidence. *See BASF Corp. v. Johnson Matthey Inc.*, 875 F.3d 1360, 1365 (Fed. Cir. 2017). That burden has not been met. Dr. Medlin offered indefiniteness opinions in the claim construction report, but those opinions were rejected by the Court. (ECF #89). He indicated in his report that the patent does not specify a required method for testing dissolution rates, elongation, shear strength, and other limitations, but does not indicate why any generally acceptable method of testing would not suffice. (ECF #134-22). Nor does he opine that the rates and other limitations are not, themselves, properly definite and understandable to a POSITA. He criticizes the breadth of some limitations, but breadth is not the legal equivalent of indefiniteness. *See SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1341 (Fed. Cir. 2005). This does not satisfy the burden of clear and convincing evidence of invalidity. Therefore, summary judgment in favor of Terves is appropriate, on these defenses.

See Shire LLC v. Amneal Pharms., LLC, 802 F.3d 1301, 1309 (Fed. Cir. 2015).

B. Waiver/Laches/Estoppel/Prosecution History Estoppel

Plaintiff moved for summary judgment on the defenses of waiver, laches, and estoppel. The Ecometal Defendants have not presented any evidence to support these asserted defenses, and have not responded to Plaintiffs request for summary judgment on these issues. Summary judgment in favor of Terves on these defenses is, therefore, appropriate.

C. Anticipation/Obviousness

Relevant to this issue is Defendants' attachment of a January 10, 2022 Declaration of Dr. Medlin, to their Reply in support of their motion for summary judgment and incorporated by reference in their opposition to Terves' Motion for Summary Judgment. (ECF#147-2). Defendants cite the Declaration as support for their defenses of indefiniteness, anticipation, and obviousness. They assert that the declaration "clarifies" Dr. Medlin's prior expert report(s). Terves filed a Motion to Strike this Declaration. The Court agrees that the Declaration should be stricken and will not consider it in connection with the summary judgment motions. The Declaration, filed well after the close of expert discovery, expands and arguably contradicts opinions set forth in Dr. Medlin's expert reports and deposition. Further, the Declaration indicates the Dr. Medlin "agrees" with the USPTO's non-final rejection of claims, referencing inadmissible evidence that has since been overturned. It would also be prejudicial to Terves to have to address these new contentions after summary judgment briefing has been completed. The Court finds that the Declaration is untimely, not harmless, and not substantially justified. *See HLV, LLC v. Van Buren County*, 775 Fed.Appx. 204, 214 (6th cir. 2019). Therefore, the motion to strike is GRANTED.

Terves seeks summary judgment on the Defendants' defenses of anticipation and obviousness, with regard to claims 2, 3, 9, 14, 15, 18-20, 23, 26, 27, 30, 31, 34, 35, 38, 39, 42, 46-47, 50, 52-54, 56-61, 64, 66, 67, and 76 of the '653 Patent; and claims 3-5, 8-11, 13, 16, 17, 20-47, 51-69, 76-93, and 95-103 of the '740 Patent (hereinafter, collectively "unchallenged claims").⁵ Terves concedes that the Ecometal Defendants have offered some expert evidence creating a material question of fact on these defenses with regard to the remaining asserted claims. The Ecometal Defendants do not dispute that Dr. Medlin has provided no opinion on anticipation or obviousness with regard to the unchallenged claims, and Defendants have not offered testimony from any competent non-expert POSITA on these issues. Summary judgment of no invalidity is appropriate when an accused infringer offers no expert, or other competent non-expert testimony that would provide evidence of invalidity from the perspective of a POSITA. *See Alexsam, Inc. v. IDT Corp.*, 715 F.3d 1336, 1348 (Fed. Cir. 2013); *Schumer v. Lab. Computer Sys., Inc.*, 308 F.3d 1304, 1315-16 (Fed. Cir. 2002). A laypersons's logic, judgment, and common sense, is not sufficient in a case, such as this, that involves complex scientific principles. Invalidity contentions are also not sufficient to supplant the required evidence on a motion for summary judgment. *See, generally Suffolk Technologies, LLC v. AOL Inc.*, 752 F.3d 1358, 1367 (Fed. Cir. 2014). Therefore, summary judgment is warranted, in favor of Terves, on the unchallenged claims.

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In its Memorandum in support of its Motion for Summary Judgment, Terves omits claims 26 and 53 of the '653 Patent from its list of unchallenged claims. (ECF #134-22). Terves also inadvertently included claim 94 in its list of unchallenged claims within the '740 Patent, although Dr. Medlin did address this claim in his expert report.

D. Inequitable Conduct

“Inequitable conduct is an equitable defense to patent infringement that, if proved, bars enforcement of a patent.” *Therasense, Inc. v. Becton, Dickinson & Co.*, 649 F.3d 1276, 1285 (Fed. Cir. 2011)(*en banc*). In order to prove inequitable conduct based on failure to disclose information, a defendant must show that the patent applicant (1) failed to disclose a known material reference; and (2) had a specific intent to deceive the USPTO. *Id.* at 1290. In order to properly present this defense, the pleadings must include sufficient allegations of underlying facts from which a court may infer that these two factors can be met. *Exergen Corp. v. Wal-Mart Stores, Inc.*, 575 F.3d 1312, 1328-29 (Fed. Cir. 2009). “Intent to deceive the Pto must be ‘the single most reasonable inference able to be drawn from the evidence.’” *Everlight Elecs. Co. v. Nichia Corp.*, 143 F.Supp. 3d 644, (E.D. Mich. 2015), *aff’d* 719 F.App’x 1008 (Fed. Cir. 2018). Materiality is proven by establishing that one or more claims within the patent would not have issued if the applicant had disclosed the withheld information. *Therasense* at 1291. Intent to deceive requires the defendant to show that the applicant “knew of the reference, knew it was material, and made a deliberate decision to withhold it.” *Id.* at 1290.

The Ecometal Defendants claim that Terves failed to disclose the full English translation of the Xiao prior art when it sought the ‘653 Patent, and that it failed to disclose that the patent was originally rejected by the Chinese Patent Office. It also claims that Terves withheld the existence of this litigation, as well as the English translation of Xiao obtained during this litigation, from the USPTO during the pendency of the ‘740 Patent prosecution. “[C]laims of inequitable conduct that are based on such omissions require proof of but-for materiality.” *Therasense*, 649 F.3d at 1293.

All of the allegedly withheld materials were submitted to the USPTO as part of the *ex parte* reexamination proceedings for the '653 Patent, initiated by Ecometal. On March 28, 2022, the USPTO issues a Notice of Intent to Issue *Ex Parte* Reexamination Certificate confirming the asserted claims. (ECF #174-1, PageID #15457). The Statement of Reasons for Patentability and/or Confirmation states that "Xiao is the closest prior art and it fails to teach a magnesium alloy that includes in situ galvanically-active intermetallic phases or intermetallic particles to enable controlled dissolution of the magnesium alloy as claimed." The USPTO further noted that "[t]here is no suggestion from Xiao to substitute copper, nickel, iron or cobalt for the aluminum in the galvanically-active intermetallic." (ECF #174-1, PageID #15458).⁶ The USPTO came to this conclusion having full knowledge of the English translation of the Xiao prior art reference; the office action initially denying Terves' Chinese patent application; Terves' response to the Chinese office action; notice of this litigation; the Court's construction of terms in the '653 Patent; Defendants invalidity contentions; and, Dr. Medlin's expert reports from this litigation. (ECF #174-2, PageID #15462-64). The examiner's notes indicate that all of these documents were not only submitted, but considered by him during the reexamination process. (ECF #174-2, Page ID #15462-64).⁷ Because the USPTO confirmed patentability with full knowledge of all of

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The Ecometal Defendants argue that Plaintiff improperly inundated the USPTO with prior art references, however, there is no evidence that any of these references were actually improperly disclosed or unnecessary to a full review. Further, it is clear from the examiner's statements that he was able to focus his analysis on the '653 Patent's relationship to Xiao, which Defendants have consistently argued was the most relevant prior art.

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At the bottom of each list of references, the examiner initialed the following statement: "all references considered except where lined through /SV/." None of the above cited references were lined through.

the materials Ecometal alleges were wrongfully withheld during the initial determination of patentability, those materials cannot be deemed to have been material. The materiality analysis is not affected by Defendants assertion that the USPTO's reasoning for confirming patentability was flawed. The question with regard to inequitable conduct is whether the patent holder withheld material information, not whether the USPTO's decision was ultimately correct. The fact that both the original and reexamination examiners made the same decision, one with and one without the information at issue, precludes a finding that the information was material. Absent clear and convincing evidence that Terves withheld material information, Defendants claim of inequitable conduct cannot be sustained.⁸

Although the USPTO reexamination only confirmed claims within the '653 Patent, there is no reason to believe that the allegedly withheld information would have any greater effect on the patentability of the '740 Patent. The Ecometal Defendants maintain the burden of proving the materiality of the information by clear and convincing evidence, and has presented no evidence that would suggest that the '740 Patent would not have been issued if the information allegedly withheld had been presented during that prosecution of that patent. Having failed to establish inequitable conduct by clear and convincing evidence, Ecometal's defense, as well as its second and third counterclaims, fail as a matter of law.

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Defendants argue that even if they cannot establish inequitable conduct, they could still prove invalidity based on the doctrine of unclean hands. However, Defendants did not assert the defense of unclean hands in their Amended Answer and Counterclaim, nor did they argue it in their Motion for Summary Judgment or their Response to Terves' Motion for Summary Judgment.

CONCLUSION

For the reasons set forth above, Defendants' Motion for Summary Judgment is GRANTED in part, and DENIED in part. (ECF #137). Claims originally brought by Terves under the '010 Patent are dismissed with prejudice. Claims 8, 11, 24, 28, 32, 36, 40, 44, 48, 51, 71, 72, and 75 of the '653 Patent, and claim 18 from the '740 Patent are also dismissed with prejudice. Material questions of fact remain as to whether any claims within the '653 and '740 Patents are invalid on the basis of anticipation or obviousness. Defendant has not provided sufficient evidence to prove their remaining defenses by the requisite standard of proof. Defendants' request for summary judgment on these issues is, therefore, DENIED.

Plaintiff's Motion for Summary Judgment is GRANTED in part and DENIED in part. (ECF #135, 136). The Defendants' defenses of waiver, laches, estoppel, and prosecution estoppel are not supported. The '653 and '740 Patents are not invalid due to patent-ineligible subject matter, non-enablement, indefiniteness, inequitable conduct, or lack of adequate written description. The Ecometal Defendants' counterclaims seeking declaratory judgment invalidating the '653 and '740 Patents due to inequitable conduct also necessarily fail along with the inequitable conduct defense.

The accused Ecometal products infringe claims 2, 3, 9, 14, 15, 18-20, 23, 26, 27, 30, 31, 34, 35, 38, 39, 42, 46, 47, 50, 52-54, 56-61, 64, 66, 67, and 76 of the '653 Patent, and claims 3-5, 8-11, 13, 16, 17, 20-47, 51-69, 76-93, and 95-103 of the '740 Patent. The Defendants have failed to provide sufficient evidence to support their defenses to these claims of infringement. Summary Judgment is, therefore, granted in favor of Terves on these specific claims. Terves has also shown that the accused products infringe claims 1, 4, 5, 7, 12, 13, 25, 29, 33, 37, 41, 43, 45,

49, 55, 69, 70, and 74 of the '653 Patent; and, claims 2, 19, and 94 of the '740 Patent. However, material questions of fact remain as to whether these claims are invalid on the basis of anticipation or obviousness.

Plaintiff's Motion to Strike the January 10, 2022 Declaration of Dr. Dana Medlin is GRANTED. (ECF #150). Plaintiff's Motion to Bifurcate Inequitable Conduct is DENIED as moot. (ECF #169). Trial on the remaining issues remains set for April 22, 2022 at 8:30 a.m.. IT IS SO ORDERED.

Date: April 12, 2022


Judge Donald C. Nugent
United States District Judge