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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

CYNTEC COMPANY, LTD.,
Plaintiff,
v.
CHILISIN ELECTRONICS CORP., et al.,
Defendants.

Case No. 18-cv-00939-PJH

**ORDER DENYING MOTION FOR
SUMMARY JUDGMENT, GRANTING
IN PART AND DENYING IN PART
MOTION TO EXCLUDE, AND
GRANTING MOTIONS TO SEAL**

Re: Dkt. Nos. 138, 139, 140, 141, 148,
150, 158, 160

United States District Court
Northern District of California

Before the court are defendants Chilisin Electronics Corp. and Chilisin America Ltd.’s (collectively “Chilisin” or “defendants”) motion for summary judgment and motion to exclude expert testimony. The matter is fully briefed and suitable for resolution without oral argument. Having read the papers filed by the parties and carefully considered their arguments and the relevant legal authority, and good cause appearing, the court rules as follows.

BACKGROUND

On February 14, 2018, plaintiff Cyntec Company, Ltd. (“Cyntec” or “plaintiff”), filed a complaint (“Compl.”) alleging patent infringement on four asserted patents: U.S. Patent Numbers 8,212,641 (the “’641 patent”); 8,922,312 (the “’312 patent”); 9,117,580 (the “’580 patent”); and 9,481,037 (the “’037 patent”). Dkt. 1. Each claim of infringement is brought against both defendants. This court held a claim construction hearing on May 15, 2019, (Dkt. 79), and issued a claim construction order on June 20, 2019, (Dkt. 83). The parties then stipulated to noninfringement of the ’641 patent. Dkt. 130. Defendants now move for summary judgment on the remaining patents.

1 **A. The Patents-in-Suit**

2 All three patents generally describe the manufacture and design of chokes, which
3 are small electrical devices that resist changes in current flow and are used in electronic
4 devices such as cell phones and computers to provide a smooth supply of power. Both
5 the '312 and '037 patents are generally directed to molded chokes, wherein a coil of wire
6 is buried in magnetic powder which is then molded around the wire. The '580 patent is
7 directed at a pillar choke wherein a wire is wound around a pillar in the choke and the
8 choke's cross-section is non-circular and non-rectangular.

9 **1. The '312 Patent and the '037 Patent**

10 The '312 patent is entitled "Electronic Device and Manufacturing Method Thereof."
11 Compl., Ex. 2, Dkt. 1-2. The '312 patent claims one independent and seventeen
12 dependent claims—plaintiff asserts that defendants infringe on claims 1–2, 5, 7–11, 16,
13 and 18. Independent claim 1 describes an electronic device comprising "a first magnetic
14 powder; a second magnetic powder;" and "a conducting wire buried in the mixture" of
15 those powders. Id. at claim 1. The patent explains that the "Vicker's Hardness"¹ and
16 particle sizes of the magnetic powders must be different. Id. The claim also recites what
17 the parties are calling the "by means of" limitation:

18 Wherein by means of the first hardness difference of the first
19 magnetic powder and the second magnetic powder, the mixture
20 of the first magnetic powder and the second magnetic powder
21 and the conducting wire buried therein are combined to form
22 an integral magnetic body at a temperature lower than the
23 melting point of the insulating encapsulant.

24 Id.

25 According to the '312 patent's specification, by mixing powders with both a
26 hardness difference and a size difference, the physical strains of the molding process are
27 reduced, and thus the "core loss"² of the electronic device is reduced. Id. at 2:14–21.

28 ¹ "Vicker's Hardness" is a way of measuring a material's hardness by pressing a pyramid-shaped diamond into the material and evaluating the indentation the diamond makes.

² The patent defines core loss as "energy losses in conducting wires and magnetic core." '312 patent, at 1:29–30.

1 Unlike the prior art, a high manufacturing temperature is not needed to create the
 2 device's integral magnetic body, so the magnetic powders can mold together without
 3 melting the coating (i.e., the insulating encapsulant) around the wire that is buried in the
 4 mixture. See id. at 2:29–37. Finally, having powders with different size particles means
 5 the density of the mixture is increased, which improves “the permeability³ of the
 6 electronic device.” Id. at 2:46–47.

7 The '037 patent is also entitled “Electronic Device and Manufacturing Method
 8 Thereof.” Compl., Ex. 4, Dkt. 1-4. It is in the same family as the '312 patent and
 9 discloses the method of making a molded choke with a mixture of two magnetic powders
 10 having different particle size and hardness. The '037 patent claims three independent
 11 claims (1, 16, and 20) and seventeen dependent claims—plaintiff asserts defendants
 12 infringe claims 1, 4, 6, 8–13, 15–16, and 19–20. Like the '312 patent, the '037 patent
 13 also discloses that the magnetic powders and the insulated conducting wire form an
 14 integral magnetic body at a temperature lower than the melting point of the insulating
 15 conducting wire and also includes the “by means of” limitation. See id. at claim 1.

16 2. The '580 Patent

17 The '580 patent is entitled “Choke” and is directed at a pillar choke. Compl., Ex. 3,
 18 Dkt. 1-3. A pillar choke is one in which the choke has “a non-circular and non-rectangular
 19 cross-section.” Id. at Abstract. The specification explains that “[i]n general, the larger an
 20 area of the cross section of the pillar . . . is, the better the characteristics of the choke[.]”
 21 Id. at 1:45–47. In conventional chokes with a circular cross-section space had to be
 22 reserved for winding the wire around the pillar, which resulted in a greater limitation on
 23 the area of the pillar's cross-section. In turn, the reduced area negatively impacted
 24 saturation current. Id. at 1:45–51. In another example, the patent explains that in chokes
 25 with a rectangular cross-section of the pillar, “the wire may be damaged at the sharp
 26 corners of the pillar, and the characteristics of the choke (e.g., saturation current, direct

27 _____
 28 ³ Plaintiff's expert explains that permeability is the measure of a metal's ability to form a
 magnetic field and store energy. Dkt. 150-8, ¶ 59.

1 current resistance, magnetic flux density, etc.) are worse.” Id. at 1:55–58. The ’580
2 patent solves the problems of the prior art by using both a non-circular and non-
3 rectangular cross-section. See id. at 1:65–2:34.

4 The ’580 patent includes two independent claims (1 and 15) and twenty-six
5 dependent claims—plaintiff alleges that defendants infringe on dependent claims 2, 3,
6 and 5. According to the related U.S. application data, the ’580 patent is a continuation-in-
7 part of U.S. Patent Application Number 13/331,786 (the “’786 application”), which is a
8 continuation-in-part of U.S. Patent Application Number 12/709,912 (the “’912
9 application”). The ’786 application was filed December 20, 2011 and the ’912 application
10 was filed February 22, 2010.

11 **B. Accused Sales Outside the United States**

12 All of defendants’ accused products are chokes. Plaintiff alleges that 314 of
13 defendants’ “Mixed-Powder Molding Chokes” infringe on the ’312 and ’037 patents. Mtn.
14 at 5. Cyntec further alleges that three of defendants’ “Mini Wire-Wound Chokes” infringe
15 on the ’580 patent. Id. Plaintiff accuses defendants of directly infringing its patents
16 based on sales inside the United States. However, most of the damages claimed by
17 plaintiff result from sales that occurred outside the United States. See Dkt. 140-8, at 3
18 (“Chilisin’s Accused Molded Choke sales are nearly all [outside the U.S.], approximately
19 99% from 2016 through Q3 2019.”). Plaintiff accuses defendants of indirectly infringing
20 on their patents because defendants sell the accused products to third parties who then
21 import the infringing products for sale into the United States.

22 Two of plaintiff’s experts offered opinions related to defendants’ accused sales
23 outside the United States. First, in his infringement report, Paul Kohl offered opinions
24 regarding defendant Chilisin’s knowledge and intent. Expert Report of Paul A. Kohl,
25 Ph.D. (“Kohl Report”), Dkts. 138-6, 150-6. For example, Kohl opined that “Chilisin knows
26 or [is] likely to know that the accused power chokes sold to third party manufacturers
27 outside of the U.S. are intended to be imported to or used in the U.S.” Id. ¶ 172.

28 Second, plaintiff submitted an expert report authored by Bryan Van Uden relating

1 to plaintiff's damages. Expert Report by Bryan M. Van Uden ("Van Uden Report"), Dkt.
 2 138-7. The Van Uden report estimates plaintiff's damages by first determining the portion
 3 of Chilisin's accused product sales that were likely to have been imported into the United
 4 States. Id. ¶ 110. In arriving at his damage estimates, Van Uden took Chilisin's
 5 customer base and summarized those companies' geographic sales breakdowns for a
 6 period from 2016 to 2019. Id. ¶ 111. He then multiplied Chilisin's revenues made
 7 outside the United States by the United States importation rates for each identified
 8 customer. Id. ¶ 112. According to Van Uden, this estimate methodology "provides a
 9 reasonable approximation of the revenues associated with Chilisin's Accused Products
 10 that were manufactured and/or sold outside the U.S. and later imported into the U.S. by
 11 Chilisin's customers." Id. ¶ 113.

12 In addition to moving for summary judgment, defendants also move to exclude
 13 portions of testimony offered by plaintiff's expert witnesses.

14 DISCUSSION

15 A. Legal Standard

16 1. Rule 56

17 Summary judgment is proper where the pleadings, discovery, and affidavits show
 18 that there is "no genuine dispute as to any material fact and the movant is entitled to
 19 judgment as a matter of law." Fed. R. Civ. P. 56(a). Material facts are those which may
 20 affect the outcome of the case. Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248
 21 (1986). A dispute as to a material fact is genuine if there is sufficient evidence for a
 22 reasonable jury to return a verdict for the nonmoving party. Id. at 248–49.

23 The party moving for summary judgment bears the initial burden of identifying
 24 those portions of the pleadings, discovery, and affidavits that demonstrate the absence of
 25 a genuine issue of material fact. Celotex Corp. v. Catrett, 477 U.S. 317, 323 (1986).
 26 When the moving party has met this burden of production, the nonmoving party must go
 27 beyond the pleadings and, by its own affidavits or discovery, set forth specific facts
 28 showing that there is a genuine issue for trial. Id. at 323–24. The court must view the

1 evidence in the light most favorable to the nonmoving party. See Tolan v. Cotton, 572
 2 U.S. 650, 657 (2014). If the nonmoving party nevertheless fails to meet its burden, the
 3 moving party wins.

4 **2. Motion to Exclude**

5 Federal Rule of Evidence 702 permits experts qualified by “knowledge,
 6 experience, skill, expertise, training, or education” to testify “in the form of an opinion or
 7 otherwise” based on “scientific, technical, or other specialized knowledge” if that
 8 knowledge will “assist the trier of fact to understand the evidence or to determine a fact in
 9 issue.” Fed. R. Evid. 702.

10 The proponent of expert testimony bears the burden of establishing by a
 11 preponderance of the evidence that the admissibility requirements are met. See Fed. R.
 12 Evid. 702, Advisory Committee Notes. Although there is a presumption of admissibility,
 13 Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 588 (1993), the trial court is obliged
 14 to act as a “gatekeeper” with regard to the admission of expert scientific testimony under
 15 Rule 702. Id. at 597.

16 Daubert requires a two-part analysis. First, the court must determine whether an
 17 expert’s testimony reflects “scientific knowledge,” whether the findings are “derived by the
 18 scientific method,” and whether the work product is “good science”—in other words,
 19 whether the testimony is reliable and trustworthy. Id. at 590 & n.9, 593. Second, the
 20 court must determine whether the testimony is “relevant to the task at hand.” Id. at 597.

21 **B. Analysis**

22 **1. Induced Infringement**

23 Defendants argue that they are entitled to summary judgment of noninfringement
 24 for the asserted patents because Cytotec has not established direct infringement
 25 occurring in the United States such that plaintiff cannot also establish induced
 26 infringement. Mtn. at 6.

27 “Whoever actively induces infringement of a patent shall be liable as an infringer.”
 28 35 U.S.C. § 271(b). “Induced infringement under § 271(b) requires knowledge that the

1 induced acts constitute patent infringement.” Glob.-Tech Appliances, Inc. v. SEB S.A.,
 2 563 U.S. 754, 766 (2011). “This requires not only knowledge of the existence of the
 3 patent that is infringed, but that “the defendant knew the acts were infringing.” Asia Vital
 4 Components Co. v. Asetek Danmark A/S, 377 F. Supp. 3d 990, 1016 (N.D. Cal. 2019)
 5 (quoting Commil USA, LLC v. Cisco Sys., Inc., 135 S. Ct. 1920, 1928 (2015)). Therefore,
 6 a party asserting induced infringement must “prove that: (1) a third party directly infringed
 7 the asserted claims of the [relevant] patents; (2) [the defendant] induced those infringing
 8 acts; and (3) [the defendant] knew the acts it induced constituted infringement.” Power
 9 Integrations, Inc. v. Fairchild Semiconductor Int’l, Inc. (“Power Integrations II”), 843 F.3d
 10 1315, 1332 (Fed. Cir. 2016).

11 **a. Direct Infringement in the U.S. by a Third Party**

12 An act of direct patent infringement occurs when an entity “without authority . . .
 13 offers to sell, or sells any patented invention, within the United States” 35 U.S.C.
 14 § 271(a). It is well established that direct infringement liability is “limited to infringing
 15 activities that occur within the United States.” MEMC Elec. Materials, Inc. v. Mitsubishi
 16 Materials Silicon Corp., 420 F.3d 1369, 1375 (Fed. Cir. 2005). “Mere knowledge that a
 17 product sold overseas will ultimately be imported into the United States is insufficient to
 18 establish liability under section 271(a).” Id. at 1377.

19 Here, defendants argue that plaintiff has not produced direct evidence of any
 20 direct infringement activities occurring within the United States. Mtn. at 7. Plaintiff
 21 argues that sufficient circumstantial evidence precludes summary judgment. With
 22 respect to direct evidence, the court agrees with defendants. Plaintiff did not, for
 23 example, purchase an end product, take it apart, and find an accused choke. Cf. Power
 24 Integrations II, 843 F.3d at 1332–33 (noting that that the plaintiff “presented evidence that
 25 it purchased at least three products containing infringing Fairchild chips in the United
 26 States”). Nor has plaintiff submitted any evidence obtained from third parties that those
 27 third parties import or sell the accused products in the United States.

28 Despite the lack of direct evidence, plaintiff has produced circumstantial evidence

1 of direct infringement in the United States by third parties to create a genuine dispute of
 2 material fact. For example, plaintiff cites evidence that Chilisin uses “design codes” to
 3 track samples and sales to end customers located in the United States. Dkt. 140-12, ¶ 5.
 4 A jury could find that knowing the identity of U.S.-based recipients demonstrates direct
 5 infringement in the United States. In response, defendants argue that Chilisin has no
 6 way of knowing where its products are ultimately sold or which end products ultimately
 7 include their products. Reply at 5. While a plausible assertion, defendants’ arguments
 8 go to the weight and persuasiveness of plaintiff’s evidence. Plaintiff has introduced
 9 sufficient factual matter to preclude a finding of summary judgment with respect to direct
 10 infringement by a third party in the United States.

11 **b. Inducement and Knowledge**

12 In passing, defendants argue that, even if there is direct infringement, plaintiff’s
 13 indirect infringement claims still fails because there is no evidence of specific intent. Mtn.
 14 at 9 n.5.

15 “The Supreme Court has explained that the term ‘induce’ as it is used in § 271(b)
 16 ‘means [t]o lean on; to influence; to prevail on; to move by persuasion.’” Power
 17 Integrations II, 843 F.3d at 1331 (alteration in original) (internal quotation marks omitted)
 18 (quoting Glob.–Tech, 563 U.S. at 760). Inducement may be proven by circumstantial
 19 evidence. MEMC Elec. Materials, 420 F.3d at 1380. In Power Integrations II, the Federal
 20 Circuit cited evidence introduced at trial that would allow a jury to find the defendant “took
 21 affirmative acts to induce third parties to import its products into the United States.” 843
 22 F.3d at 1333. Examples cited by the court included evidence that the defendant
 23 “designed its controller chips to meet certain United States energy standards” and
 24 “competed for business it knew was directed to the United States.” Id.

25 With those examples in mind, plaintiff’s circumstantial evidence is sufficient to
 26 establish a factual dispute that defendants induced infringement. For example, Chilisin
 27 certifies that at least some of their products meet design specifications required by U.S.-
 28 based customers. Van Uden Report ¶ 47. Nor is the court persuaded by defendants’

1 argument that Chilisin does not know where its choke products ultimately end up, even if
2 they know the identity of the end customer and some of those end customers are located
3 in the United States. Reply at 5. The Federal Circuit rejected a similar argument in
4 Power Integrations II, where the defendant argued that it sold “its controller chips
5 overseas into a worldwide distribution system with no knowledge of where its chips will
6 ultimately end up.” 843 F.3d at 1333. The Federal Circuit found sufficient evidence
7 existed to overcome this argument, id. at 1333–34, and a jury could find Cyntec’s
8 evidence to be similarly persuasive.

9 Finally, with regard to knowledge that the acts in question constituted infringement,
10 neither party specifically addresses this prong. Plaintiff’s counsel sent a letter in
11 December 2017 a few months prior to the initiation of the lawsuit suggesting that
12 defendants had knowledge of infringement, (Dkt. 151-27), at the very least raising a
13 genuine dispute of material fact.

14 Accordingly, the court DENIES defendants’ motion with respect to noninfringement
15 of the patents-in-suit.

16 2. Indefiniteness of the '312 and '037 Patents

17 Defendants next argue that they are entitled to summary judgment of
18 indefiniteness of the '312 and '037 patents. Mtn. at 10.

19 Indefiniteness is a question of law “that is drawn from the court’s performance of
20 its duty as the construer of patent claims.” Eon Corp IP Holdings LLC v. Aruba Networks
21 Inc., 62 F. Supp. 3d 942, 948–49 (N.D. Cal. 2014) (quoting Atmel Corp. v. Info. Storage
22 Devices, Inc., 198 F.3d 1374, 1378 (Fed. Cir. 1999)). Pursuant to 35 U.S.C. § 112(b), a
23 patent must “conclude with one or more claims particularly pointing out and distinctly
24 claiming the subject matter which the applicant regards as [the] invention.” A claim term
25 is indefinite “if its claims, read in light of the patent’s specification and prosecution history,
26 fail to inform, with reasonable certainty, those skilled in the art about the scope of the
27 invention.” Nautilus, Inc. v. Biosig Instruments, Inc., 572 U.S. 898, 898–99, 908 (2014)
28 (“[D]efiniteness is to be evaluated from the perspective of someone skilled in the relevant

1 art”); see also One-E-Way, Inc. v. Int’l Trade Comm’n, 859 F.3d 1059, 1064 (Fed.
2 Cir. 2017) (reviewing entire specification).

3 The indefiniteness test “mandates clarity, while recognizing that absolute precision
4 is unattainable.” Nautilus, 572 U.S. at 899; see also BASF Corp. v. Johnson Matthey
5 Inc., 875 F.3d 1360, 1365 (Fed. Cir. 2017) (“‘Reasonable certainty’ does not require
6 ‘absolute or mathematical precision.’” (quoting Biosig Instruments, Inc. v. Nautilus, Inc.,
7 783 F.3d 1374, 1381 (Fed. Cir. 2015))). “It cannot be sufficient that a court can ascribe
8 some meaning to a patent’s claim; the definiteness inquiry trains on the understanding of
9 a skilled artisan at the time of the patent application, not that of a court viewing matters
10 post hoc.” Nautilus, 572 U.S. at 899. “Indefiniteness must be proven by clear and
11 convincing evidence” by defendants. Sonix Tech. Co. v. Publ’ns Int’l, Ltd., 844 F.3d
12 1370, 1377 (Fed. Cir. 2017).

13 The issue here is whether the term “by means of” is indefinite such that the
14 independent claims in the ’037 and ’312 patents that rely on the term are also indefinite.
15 Independent claim 1 of the ’312 patent recites:

16 An electronic device, comprising:

17 first magnetic powder;

18 a second magnetic powder, wherein the mean particle diameter
19 of the first magnetic powder is larger than the mean particle
20 diameter of the second magnetic powder, the Vicker’s
21 Hardness of the first magnetic powder is greater than the
22 Vicker’s Hardness of the second magnetic powder by a first
23 hardness difference, and the first magnetic powder mixes with
24 the second magnetic powder; and

25 a conducting wire buried in the mixture of the first magnetic
26 powder and the second magnetic powder, wherein the
27 conducting wire comprises an insulating encapsulant and a
28 conducting metal encapsulated by the insulating encapsulant;

where by means of the first hardness difference of the first
magnetic powder and the second magnetic powder, the mixture
of the first magnetic powder and the second magnetic powder
and the conducting wire buried therein are combined to form an
integral magnetic body at a temperature lower than the melting
point of the insulating encapsulant.

’312 patent, at claim 1. Independent claim 1 of the ’037 patent recites a similar

1 formulation with slightly different language; in particular the by means of limitation states:

2 performing a molding process on the insulated conducting wire
3 and the mixture, wherein by means of the first hardness
4 difference of the first magnetic powder and the second
5 magnetic powder, the mixture of the first magnetic powder and
6 the second magnetic powder and the conducting wire buried
7 therein are combined to form an integral magnetic body at a
8 temperature lower than the melting point of the insulated
9 conducting wire.

7 '037 patent, at claim 1.

8 Defendants' indefiniteness argument focuses on the causal nexus between the
9 hardness difference in the two magnetic powders and whether the integral magnetic body
10 can be manufactured at a lower temperature. The court addresses this argument in two
11 parts. First, whether the "by means of" limitation dictates that a lower manufacturing
12 temperature could not be achieved in the absence of the hardness difference. Second,
13 whether the patents claim any causal link or nexus between the lower manufacturing
14 temperature and the hardness difference.

15 **a. Whether Lower Temperature Could Not Be Achieved in the**
16 **Absence of the Hardness Difference**

17 Defendants first contend that the correct interpretation of the "by means of" term is
18 that a lower manufacturing temperature of the magnetic body is due to the hardness
19 difference between the two magnetic powders such that the lower temperature could not
20 be achieved in the absence of the claimed hardness difference. Mtn. at 11. Defendants'
21 evidence for this proposition are statements made by plaintiff's counsel at the claim
22 construction hearing that, according to defendants, indicate that plaintiff admits the by
23 means of limitation requires that the lower temperature could not be achieved in the
24 absence of the hardness difference. Id. Plaintiff responds that defendants' use of the
25 phrase "could not be achieved in the absence" is intended to construe "by means of" to
26 mean "but for" causation between hardness difference and manufacturing temperature.
27 Opp. at 10. Plaintiff points out that defendants' own expert recognized that the "by
28 means of" language means that the hardness difference "has an impact on the formation

1 of the claimed integral magnetic body.” Id. (quoting Expert Report of John C. Bravman,
2 Ph.D. (“Bravman Report”), Dkt. 140-14, ¶ 83).

3 In its claim construction order, the court determined that the “by means of”
4 limitation should be given its plain and ordinary meaning. Dkt. 83 at 15. At the claim
5 construction hearing, plaintiff’s counsel stated: “You have the mixture of two powders and
6 the wire, which is within it, are combined. So because or due to the fact that you have
7 these two hardnesses . . . when you mix them together, you’re capable of mixing them
8 together and forming the integral body at a temperature lower than the insulating
9 encapsulant.” Dkt. 82, at 99:5–10; see also id. at 99:12–16 (“[D]ue to the fact that you
10 have these two differences . . . in hardness, you lower the temperature under which you
11 form the integral body . . .”).

12 There are two problems with defendants’ reliance on plaintiff counsel’s statements
13 at claim construction. First, the language “because” or “due to” indicates a causal link
14 between hardness difference and lower temperatures. Reading anything further into that
15 statement is problematic because, for example, counsel did not explicitly limit the causal
16 nexus by stating that, for example, the lower temperature is only due to (or only because
17 of) the hardness difference. Second and more importantly, Nautilus, 572 U.S. at 899,
18 requires “definiteness . . . to be evaluated from the perspective of a person skilled in the
19 relevant art and that claims are to be read in light of the patent’s specification and
20 prosecution history” Thus, the claims and specification are the appropriate sources
21 to determine indefiniteness, not arguments made at a claim construction hearing.

22 Starting with the claim language, defendants find some support for their
23 interpretation of the “by means of” limitation. The claims in both patents only reference
24 the hardness difference as leading to formation of the integral magnetic body at a
25 temperature lower than the melting point of the insulating conducting wire or insulating
26 encapsulant. See, e.g., ’037 patent, at claim 1. The “by means of” limitation does not
27 reference, for example, the size difference between the magnetic powders as having an
28

1 effect on manufacturing temperature.⁴ In his rebuttal report, defendants' expert interprets
 2 the "by means of" limitation's failure to refer to the size difference or any other
 3 characteristic other than the hardness difference as requiring that the hardness difference
 4 be the only cause of the lower temperature. Rebuttal Report of John C. Bravman, Ph.D.,
 5 Dkt. 140-17, ¶ 58.

6 As the parties are well aware, the claims must be read in light of the specifications
 7 which a person of ordinary skill in the art must view to inform his or her reading of the
 8 claims. See Phillips v. AWH Corp., 415 F.3d 1303, 1313 (Fed. Cir. 2005) ("[A] person of
 9 ordinary skill in the art is deemed to read the claim term not only in the context of the
 10 particular claim . . . but in the context of the entire patent, including the specification.").
 11 As discussed in greater depth below, the specification demonstrates that the hardness
 12 difference has an impact on the temperature but is not the only potential cause of a lower
 13 temperature. To summarize briefly here, the '312 specification states "optimization of the
 14 ratio of the hardness of the first magnetic powder to the hardness of the second magnetic
 15 powder and the ratio of the mean particle diameter of the first magnetic powder to the
 16 mean particle diameter of the second magnetic powder largely reduces the strains of the
 17 mixture of the first magnetic powder and the second magnetic powder" '312 patent
 18 at 2:13–19 (emphasis added). This language indicates that the size difference, in
 19 addition to the hardness difference, has an impact on manufacturing temperature. The
 20 specification also discusses how the hardness difference "has a higher priority" than the
 21 size difference, id. at 2:26, which explains why the by means of limitation in the claim
 22 would only reference the hardness difference.

23 Notably, defendants' own expert stated that "[t]he 'by means of' language of these
 24 claim terms indicates that the claimed hardness difference has an impact on the

25
 26 ⁴ However, the court notes that the definition in claim 1 of "a second magnetic powder"
 27 includes "wherein the mean particle diameter of the first magnetic powder is larger than
 28 the mean particle diameter of the second magnetic powder" '312 patent at claim 1.
 The "by means of" limitation uses the term "second magnetic powder," indicating that the
 by means of limitation imports the size difference definition. This suggests the "by means
 of" limitation is not entirely devoid of reference to the size difference.

1 formation of the claimed integral magnetic body.” Bravman Report ¶ 83. The statement
 2 “has an impact on” denotes some causal link but does not foreclose that there might be
 3 other impacts on the temperature used to form the choke. This statement also indicates
 4 that there is a genuine factual dispute as to how a person of ordinary skill in the art would
 5 interpret the “by means of” limitation.

6 In sum, defendants’ interpretation adds a limitation to the plain and ordinary
 7 meaning of “by means of” that does not find support in light of the specification. The
 8 court declines to apply defendants’ interpretation that the lower temperature can only be
 9 achieved through the hardness difference.

10 **b. Whether the Patents Claim a Causal Link Between**
 11 **Manufacturing Temperature and the Hardness Difference**

12 Defendants’ indefiniteness argument does not rest exclusively on the court finding
 13 the term “by means of” to mean that the lower temperature could not be achieved in the
 14 absence of the claimed hardness difference. Instead, they argue that regardless of
 15 whether the hardness difference is the exclusive cause of the lower manufacturing
 16 temperature, there is no nexus between the hardness difference and the temperature at
 17 which a manufacturer uses to form a choke. Mtn. at 11.

18 **i. Prior Art**

19 According to the ’312 patent, the prior art describes a manufacturing process
 20 whereby a conducting wire is placed inside a mold, the mold is filled with iron powder and
 21 an adhesive, and then the mold is compressed. ’312 patent, at 1:33–38. When there are
 22 more than two magnetic powders of different sizes placed in the mold, an annealing
 23 process is generally performed above 600° Celsius, which “is necessary to reduce the
 24 strains of magnetic powder.” *Id.* at 1:45–47. The concept of strain and core loss are
 25 interrelated, as described by plaintiff’s expert:

26 Notably, the molding process itself occurs by forcing the
 27 resin/powder composite into a confined space under pressure.
 28 The shape of the choke’s integral body is formed as the applied
 pressure has packed and compressed the resin/powder
 mixture with integrated wire into its final form-factor. The

1 applied pressure compacts and compresses (i.e., causes
2 strain) in the resin and magnetic particles. Their deformation
3 (i.e., strain) increases the density of magnetic particles and
4 thus increases the inductance of the choke. However, the
5 applied pressure and resulting strain of the magnetic powder
6 also has an undesirable effect because it leads to core loss.

7 Kohl Report ¶ 75.

8 Plaintiff's expert goes on to explain how the prior art resolved that core loss by
9 requiring high temperature annealing: "To obtain the original magnetic characteristics of
10 the amorphous alloy magnetic powder, residual stress and the like at the time of
11 pressure-molding must be relieved by annealing." Declaration of Paul A. Kohl, Ph.D.,
12 ("Kohl Decl."), Dkt. 150-6, ¶ 17 (quoting Dkt. 151-4, U.S. Patent Application No. US
13 2004/0113744 ("Watanabe 744"), at 0025). Along the same lines, other prior art states:
14 "A heat treatment using temperature above 500° Celsius will be necessary for most alloys
15 in order to restore the proper magnetically soft characteristics subsequent to shaping."
16 U.S. Patent No. 7,230,514, Dkt. 151-5 at 1:52–55.

17 **ii. Link Between Hardness Difference and Performance**
18 **Characteristics**

19 The parties agree that the '037 and '312 patents seek to achieve a desired
20 objective or effect, namely "to lower the temperature for annealing more than two mixed
21 magnetic powders of different sizes to form an integral magnetic body by using the
22 hardness differences between the magnetic powders." '312 patent, at 1:54–58; see also
23 '037 patent, at 3:16–17 ("[T]he present invention does not require performing a high
24 temperature heat treatment . . ."). Next, the specifications indicate a link between the
25 hardness difference of two magnetic powders and certain desired performance
26 characteristics. Two such performance characteristics are strain reduction and core loss.
27 Both hardness difference and size difference have an impact on strain. To that end, the
28 '312 specification recites that:

optimization of the ratio of the hardness of the first magnetic
powder to the hardness of the second magnetic powder and
the ratio of the mean particle diameter of the first magnetic
powder to the mean particle diameter of the second magnetic
powder largely reduces the strains of the mixture of the first

1 magnetic powder and the second magnetic powder during the
 2 molding process, and thus the core loss of the electronic device
 is reduced.

3 '312 patent, at 2:14–21; '037 patent, at 3:10–14. Further, the specification clarifies that
 4 the hardness difference has priority over the size difference in determining strain
 5 reduction and core loss. See '312 patent, at 2:21–28 (“In the preferred embodiment, the
 6 hardness difference . . . can determine the smaller core loss of the electronic device; in
 7 other words, the ratio of the hardness . . . has a higher priority than the ratio of mean
 8 particle diameter . . .”).

9 **iii. Link Between Performance Characteristics and**
 10 **Manufacturing Temperature**

11 At this point in the analysis, the parties depart on their interpretation of the claims.
 12 Defendants argue that there is no causal nexus between the hardness difference and the
 13 manufacturing temperature. Defendants further argue that the discussion of performance
 14 characteristics (i.e., strain and core loss) is a red herring because the patents are not
 15 directed to strain reduction or core loss. Mtn. at 13. Plaintiff contends that there is a link
 16 between the performance characteristics and a lower temperature (and thus a link
 17 between hardness difference and lower temperature) because performance degradation
 18 does not occur in the '037 and '312 patents, which means that the high temperature
 19 treatment, recited in the prior art, is no longer needed. Opp. at 6.

20 The prior art introduces the concept of a link between performance characteristics
 21 and manufacturing temperature. As described by the patents and plaintiff's expert, the
 22 prior art required high temperature annealing to reduce strain and core loss. See, e.g.,
 23 Watanabe 744, at 0025 (“To obtain the original magnetic characteristics of the
 24 amorphous alloy magnetic powder, residual stress and the like at the time of pressure-
 25 molding must be relieved by annealing.” (emphasis added)). In response to the prior art,
 26 the '312 patent specification states “[o]ne objective of the present invention is to lower the
 27 temperature for annealing more than two mixed magnetic powders of different sizes to
 28 form an integral magnetic body by using the hardness differences between the magnetic

1 powders.” ’312 patent, at 1:54–58. Thus, the patents identify an issue with the prior
2 art—annealing is required in order to reduce strains in mixed magnetic powders—as well
3 as the goal of the current patent—no annealing required.

4 The ’312 patent specification generally states that optimization of the hardness
5 difference and the size difference reduces the strains on the powder mixture and the
6 hardness difference has a higher priority than size difference. ’312 patent, at 2:14–28. In
7 other words, the specification describes a link between a desired performance
8 characteristic (core loss reduction) and both hardness difference and size difference.
9 The specification then recites: “Therefore, high temperature is not needed in forming the
10 integral magnetic body.” ’312 patent, at 2:29–30. The use of the word “therefore”
11 indicates that a lower temperature results from the hardness difference and the purpose
12 of the hardness difference is to reduce the performance characteristics (i.e., strain and
13 core loss).

14 Defendants argue that the temperature at which a choke is formed is an operating
15 condition chosen by the manufacturer, that is, a manufacturer could use low or no heat
16 without regard to the hardness difference. Mtn. at 12; see also Bravman Report ¶ 85
17 (“Manufacturing at a temperature below the melting point of the conducting wire or its
18 insulating encapsulant is an obvious choice, and one that is not related to any hardness
19 difference between the powders used.”). While true, defendants’ argument does not
20 speak to the objective of the patents. The ’312 and ’037 patents seek to permit a lower
21 temperature without any corresponding strain and core loss. Plaintiff’s expert contends
22 that “Dr. Bravman ignores the core loss penalty incurred by not annealing out the strain in
23 prior art technologies, making prior art chokes manufactured at low temperature less
24 efficient.” Kohl Dec. ¶ 17. In other words, a manufacturer with an understanding of the
25 prior art could choose low or no temperature, but that choice would result in increased
26 core loss compared to the ’312 and ’037 patents.

27 The court finds plaintiff’s argument persuasive; in light of the specifications, a
28 person of ordinary skill in the art could understand that the patents teach a causal link

1 between hardness difference and lower temperature.

2 **c. Whether the Patents Teach How to Measure Hardness**
 3 **Difference**

4 Defendants also argue that the specifications do not describe how to measure or
 5 quantify the hardness difference or range of values for the hardness difference that would
 6 bring about the claimed effect, i.e., the lower temperature. Mtn. at 11–12. Defendants’
 7 expert contends, “[e]xamples of hardness values or hardness difference values do not
 8 inform a person of ordinary skill in the art about if, how, and to what extent (if any) these
 9 values impact the selected processing temperature.” Bravman Report ¶¶ 86.

10 As alluded to by defendants and their expert, both the dependent claims and the
 11 embodiments recite hardness values. For example, dependent claim 2 of the ’312 patent
 12 recites “[t]he electronic device according to claim 1, wherein the Vicker’s Hardness of the
 13 first magnetic powder is greater than or equal to 150, and the Vicker’s Hardness of the
 14 second magnetic powder is smaller than or equal to 100.” ’312 patent, at 14:27–30; see
 15 also ’037 patent, at 13:60–63 (same). The preferred embodiments echo the values in the
 16 dependent claims. See ’312 patent, at 4:7–15.

17 Helpful in understanding the hardness values, the patents recite a series of
 18 experiments that identify different magnetic powder hardness values. In one such
 19 experiment, Table 3 records the differences in core loss when comparing four different
 20 materials used in a magnetic body and the lowest cores loss corresponds to a mix of two
 21 powders (iron and amorphous alloy) but not subjected to annealing. The specification
 22 summarizes the import of Table 3:

23 As a result, it can be shown that, according to the present
 24 embodiment, by adopting first magnetic powder and second
 25 magnetic powder of different mean particle diameter and
 26 hardness, less core loss can be obtained without the
 performance of high temperature heat treatment. Therefore, a
 step of high temperature heat treatment is omitted and a
 process is simplified.

27 ’037 patent, at 9:40–46. It is true that the hardness difference values do not directly
 28 speak to the lower temperature. However, because manufacturing temperature is linked

1 to core loss and the hardness difference values is linked to core loss, there is a sufficient
2 link between the hardness difference and the lower temperature.

3 To be sure, the patents do not explain every aspect of the desired effect. For
4 example, the patents do not address how the hardness difference results in core loss
5 reduction. According to plaintiff's expert, this linkage is due to the laws of physics. See
6 Kohl Decl. ¶20 ("By nature of physics, the smaller, softer iron particles are intimately
7 mixed in between the vacancies created by the larger, harder alloy particles, the softer,
8 smaller particles are deformed during molding, thereby mitigating mechanical strain in the
9 larger particles."). The failure to include this fact in the patent is not fatal because the
10 indefiniteness test "mandates clarity, while recognizing that absolute precision is
11 unattainable." Nautilus, 572 U.S. at 899.

12 In sum, the "by means of" limitation must be read in light of the specification and
13 the claims. Those specifications and claims explain a range of hardness values that are
14 appropriate for the claimed choke. The hardness difference values are linked to less
15 core loss reduction, which is otherwise achieved through annealing. Thus, hardness
16 difference has an effect or impact on using a lower temperature manufacturing
17 temperature.

18 Accordingly, the court DENIES defendants' motion for summary judgment with
19 respect to indefiniteness.

20 **3. Noninfringement of the '312 and '037 Patents**

21 Similar to their indefiniteness argument, defendants argue that they are entitled to
22 summary judgment of noninfringement of the '312 and '037 patents.

23 The court evaluates infringement in two steps. First, the court determines the
24 scope and meaning of the claims via claim construction; then, the court compares that
25 construction of the patent against the accused products. Duncan Parking Techs., Inc. v.
26 IPS Grp., Inc., 914 F.3d 1347, 1360 (Fed. Cir. 2019) (citing Markman v. Westview
27 Instruments, Inc., 52 F.3d 967, 976 (Fed. Cir. 1995) (en banc)). While claim construction
28 is a matter of law, infringement itself is a question of fact. Biogen Int'l GmbH v. Banner

1 Life Scis. LLC, 956 F.3d 1351, 1355 (Fed. Cir. 2020) (citing Amgen Inc. v. Sandoz Inc.,
2 923 F.3d 1023, 1027 (Fed. Cir. 2019)).

3 Infringement may be proven under two different theories. First, a claim can be
4 “literally infringed” if each properly construed claim element directly reads on the accused
5 product or process. Jeneric/Pentron Inc. v. Dillon Co., 205 F.3d 1377, 1382 (Fed. Cir.
6 2000). Second, under the doctrine of equivalents, a court may find infringement when an
7 accused product or process is the substantial equivalent of the patented invention—i.e.,
8 where the accused product or process performs substantially the same function in
9 substantially the same way to accomplish substantially the same result as the claimed
10 product or process. Graver Tank & Mfg. Co. v. Linde Air Prod. Co., 339 U.S. 605, 608
11 (1950); Optical Disc Corp. v. Del Mar Avionics, 208 F.3d 1324, 1335–37 (Fed. Cir. 2000).
12 Summary judgment of noninfringement is appropriate where after resolving reasonable
13 factual inferences in favor of the patentee, “no reasonable jury could find [literal]
14 infringement’ or infringement under the doctrine of equivalents.” Microsoft Corp. v.
15 GeoTag, Inc., 817 F.3d 1305, 1313 (Fed. Cir. 2016) (alteration in original) (quoting Crown
16 Packaging Tech., Inc. v. Rexam Beverage Can Co., 559 F.3d 1308, 1312 (Fed. Cir.
17 2009)).

18 **a. Literal Infringement**

19 For defendants’ devices to literally infringe on the patents in question, they must
20 contain every limitation in the asserted patents. Defendants offer one broad argument as
21 to why their devices do not infringe on plaintiff’s claims: there is no evidence that forming
22 the magnetic body of the choke at a temperature lower than the melting point of the wire
23 is the result of the hardness difference between two magnetic powders used to form the
24 choke. Mtn. at 14. In support of that broad thesis, defendants first argue that plaintiff’s
25 expert opines that the hardness difference leads to certain performance characteristics
26 such as compactness and minimizing strain loss but the claims are not directed towards
27 these performance characteristics. See Kohl Report ¶ 237 (“The hardness difference
28 allows Chilislin to achieve compactness and minimize strain-loss in the larger alloy

1 particles because the smaller, softer particles will deform more than the harder ones.”).

2 Defendants are correct that the claims themselves do not discuss compactness or
3 strain reduction. The “by means of” limitation only references the hardness difference as
4 having an impact on using a temperature lower than the melting point of the insulated
5 conducting wire (or encapsulant). However, the court’s findings with respect to
6 indefiniteness apply with equal weight here. Read together, the claims and specifications
7 illustrate that the “by means of” limitation links hardness difference to lower
8 manufacturing temperature.

9 Defendants also contend that, even if there is a connection between performance
10 characteristics and hardness difference, plaintiff’s expert has not presented any evidence
11 to quantify the improvements in the compactness or strain loss caused by the hardness
12 difference. Mtn. at 14. Again, the court’s indefiniteness finding applies; the specifications
13 discuss experiments that demonstrate a lower core loss if there is a mix of two powders
14 with a hardness difference compared to no hardness difference. Further, plaintiff’s expert
15 conducted a reverse engineering test that determined that Chilisin’s products included a
16 hardness difference and the use of a lower temperature of the melting point of the
17 insulated conducting wire. Kohl Decl. ¶ 33. The reverse engineering test constitutes
18 sufficient evidence such that there is material dispute of fact whether the accused
19 products infringe on Cyntec’s claims.

20 Next, defendants argue that Kohl’s opinion does not differentiate between the size
21 difference and the hardness difference as having the desired effect on strain and particle
22 density. Mtn. at 14. Defendants’ argument finds some purchase because Cyntec’s
23 expert does opine about the impact of both size and hardness difference. See Kohl
24 Report ¶ 246 (“By nature of physics, the smaller, softer iron particles are intimately mixed
25 in between the vacancies created by the larger, harder alloy particles, the softer, smaller
26 particles are deformed during molding, thereby mitigating mechanical strain in the larger
27 particles.”). Again, the specifications resolve this issue. First, the ’312 patent
28 specification states that the hardness difference has a “higher priority” than the size

1 difference. '312 patent, at 2:26. Second, the prior art required annealing where there
 2 were more than two magnetic powders of different sizes. The notable change between
 3 the current claims and the prior art is the hardness difference, as the prior art already
 4 accounts for the size difference.

5 Finally, defendants assert that the testing reports to which Kohl cites do not
 6 provide any evidence because there is no correlation between hardness values and
 7 temperature. Mtn. at 15. This argument does not challenge the sufficiency of the
 8 evidence itself but rather the connection between hardness values and the temperature
 9 used by Chilisín to manufacture the accused devices. Because there is a causal link
 10 between the hardness difference and the temperature used to manufacture a choke, then
 11 Kohl's testing report is relevant evidence such that there is a material dispute of fact.

12 Accordingly, summary judgment of literal infringement is not warranted.

13 **b. Doctrine of Equivalents**

14 Under the doctrine of equivalents, a patentee may demonstrate infringement using
 15 the function-way-result test. That test requires "showing on a limitation by limitation basis
 16 that the accused product performs substantially the same function in substantially the
 17 same way with substantially the same result as each claim limitation of the patented
 18 product." Crown Packaging, 559 F.3d at 1312 (citing Warner–Jenkinson Co. v. Hilton
 19 Davis Chem. Co., 520 U.S. 17, 39–40 (1997)). The "test is particularly suitable for
 20 analyzing the equivalence of mechanical devices" Id.

21 As a threshold argument, defendants assert that Kohl admits that plaintiff does not
 22 have evidence of direct infringement. The language in question is:

23 [T]here is a clear nexus between the hardness difference
 24 between the first magnetic powder and the second magnetic
 25 powder in lowering the temperature used during the molding
 26 process However, to the extent that the Court construe[s]
 27 this limitation to mean that the temperature used during the
 28 molding process must only be affected by the hardness
 difference, it is my opinion that this limitation is nevertheless
 met under the doctrine of equivalents.

Kohl Report ¶ 255. By using the phrase "however, to the extent that," Kohl is indicating

1 an alternative argument that assumes the court does not agree with plaintiff's
2 interpretation of the claims at issue. Reading this as an admission is not warranted;
3 plaintiff can prove infringement by either literal infringement or doctrine of equivalents.

4 Next, defendants argue that plaintiff's doctrine of equivalents evidence is limited to
5 a single conclusory paragraph purporting to apply a function-way-result test. Mtn. at 16.
6 Plaintiff responds that Kohl has identified a specific function, way, and result supported
7 by citations to defendants' documentation and deposition testimony. Opp. at 9.

8 Kohl's opinion is that the Chilisin devices perform the same function, way, and
9 result as Cynotec's patents. Kohl Report ¶ 256. Defendants are correct that paragraph
10 256, by itself, does not contain much factual content. Notably, however, paragraph 256
11 cross references paragraphs 235 through 251, (see id.), which contain several factual
12 assertions, including Kohl's reverse-engineering of the accused devices, (id. ¶ 252). By
13 cross referencing the other paragraphs, the report goes beyond an entirely conclusory
14 expert opinion similar to the report cited in Cambrian Scientific Corp. v. Cox
15 Communications, Inc., 617 Fed. App'x 989, 994 (Fed. Cir. 2015) ("The paragraphs are
16 devoid of any particularized testimony or linking arguments. In fact, the paragraphs lack
17 any factual statements."). Defendants have not carried their burden to show that
18 summary judgment based on doctrine of equivalents is required.

19 For the foregoing reasons, the court DENIES defendants' motion for summary
20 judgment with respect to noninfringement of the '312 and '037 patents.

21 **4. Invalidity of the '580 Patent**

22 Defendants argue that they are entitled to summary judgment of invalidity of the
23 '580 patent under the title 35 U.S.C. § 102 patentability analysis. Mtn. at 16.

24 A patent claim is invalid if "the claimed invention was patented, described in a
25 printed publication, in public use, on sale, or otherwise available to the public before the
26 effective filing date of the claimed invention." 35 U.S.C. § 102(a)(1). "Whether a patent
27 is invalid as anticipated is also a two-step inquiry. Like infringement, the first step
28 requires construing the claim, which is a question of law." Power Mosfet Techs., L.L.C. v.

1 Siemens AG, 378 F.3d 1396, 1406 (Fed. Cir. 2004) (citing Oakley, Inc. v. Sunglass Hut
2 Int'l, 316 F.3d 1331, 1339 (Fed. Cir. 2003)). At the second step, the construed claims
3 must be compared against the prior art, which is a question of fact. Id. (citing Oakley,
4 316 F.3d at 1339).

5 Here, defendants assert that Chilisin device number LVH252012A is prior art that
6 anticipates claims 2, 3, and 5 of the '580 patent. Mtn. at 21. Defendants' argument
7 requires two steps to reach an invalidity finding. First, defendants contend that the '580
8 patent cannot claim priority to the '786 application and the '912 application because
9 certain language in claim 1 is not disclosed in the '786 application. Second, defendants
10 assert that their accused product anticipates claims 2, 3, and 5 because it was sold prior
11 to the '580 patent and therefore constitutes invalidating prior art.

12 **a. Whether Chilisin's Prior Art Anticipates the '580 Patent**

13 Taking the second argument first, defendants' assert their prior art, the
14 LVH252A12 product sold in February 2013, anticipates the '580 patent. They rely on
15 plaintiff's assertion that the LVH252A12 product infringes on the '580 patent and would
16 apply the rule "[t]hat which infringes, if later, would anticipate, if earlier." CreAgri, Inc. v.
17 PinnacLife, Inc., No. 11-cv-6625-LHK, 2013 WL 6673676, at *4 (N.D. Cal. Dec. 18, 2013)
18 (quoting Peters v. Active Mfg. Co., 129 U.S. 530, 537 (1889)). Thus, defendants would
19 only need to demonstrate that the infringing product was sold prior to the '580 patent's
20 priority date.

21 However, there is a genuine dispute of material fact whether the LVH252A12
22 product sold in February 2013 includes the same core design as the LVH252A12 product
23 that plaintiff alleges to infringe on the '580 patent. For example, a Chilisin employee,
24 Deqing Zhong, states "[i]t is my understanding that as of December 19, 2012, Chilisin's
25 LVH252A12-1R0M-N choke product included the structure, dimensions, and components
26 as described in paragraphs 5 and 6 above and as reflected in attached Exhibits 1 through
27 3." Declaration of Deqing Zhong ("Zhong Decl."), Dkt. 140-19, ¶ 7. Plaintiff contends that
28 Zhong lacks personal knowledge in violation of Rule 56(c)(4) because he did not

1 establish the basis for his understanding that the LVH252A12 product was sold in
2 February 2013. The court agrees with plaintiff; Zhong has not established the basis on
3 which he knew that LCH252A12 product sold in February 2013 included the new core
4 design.

5 Accordingly, there is a factual dispute whether Chilisin's prior art anticipates the
6 '580 patent.

7 **b. Whether the '580 Patent is Entitled to a Priority Date Before**
8 **March 25, 2013**

9 In their reply brief, defendants contend that even if the court does not find for them
10 on the issue of invalidity, then it is still appropriate to find that the earliest priority date the
11 '580 patent is entitled to is March 25, 2013. Reply at 13.

12 There are two concepts relevant here. First, the written description requirement.
13 "It is elementary patent law that a patent application is entitled to the benefit of the filing
14 date of an earlier filed application only if the disclosure of the earlier application provides
15 support for the claims of the later application, as required by 35 U.S.C. § 112."
16 PowerOasis, Inc. v. T-Mobile USA, Inc., 522 F.3d 1299, 1306 (Fed. Cir. 2008) (quoting In
17 re Chu, 66 F.3d 292, 297 (Fed. Cir. 1995)). "To satisfy the written description
18 requirement the disclosure of the prior application must 'convey with reasonable clarity to
19 those skilled in the art that, as of the filing date sought, [the inventor] was in possession
20 of the invention.'" Id. (alteration in original) (quoting Vas-Cath Inc. v. Mahurkar, 935 F.2d
21 1555, 1563–64 (Fed. Cir. 1991)).

22 Second, there is a burden shifting regime to prove an invalidity defense. Initially,
23 defendants, "having the ultimate burden of providing [their] defense of invalidity based on
24 anticipating prior art, also ha[ve] the initial 'burden going forward with evidence that there
25 is such anticipating prior art.'" Dynamic Drinkware, LLC v. Nat'l Graphics, Inc., 800 F.3d
26 1375, 1379 (Fed. Cir. 2015) (quoting Tech. Licensing Corp. v. Videotek, Inc., 545 F.3d
27 1316, 1327 (Fed. Cir. 2008)). "In response, [plaintiff] then ha[s] 'the burden of going
28 forward with evidence either that the prior art does not actually anticipate, or . . . that it is

1 not prior art because the asserted claim is entitled to the benefit of a filing date prior to
2 the alleged prior art.” Id. (quoting Tech. Licensing, 545 F.3d at 1327).

3 Here, defendants argue that plaintiff has not met its burden to establish priority to
4 the '786 application because the '580 patent specification does not meet the written
5 description requirement and cannot claim priority to the '786 application. See Mtn. at 18–
6 20. Plaintiff contends that it asserted priority to the '786 and '912 applications in this
7 litigation as early as August 2018 but defendants did not challenge the priority assertion
8 until the present motion for summary judgment. Opp. at 18. By not providing notice of
9 the invalidity challenge, plaintiff asserts that defendants' summary judgment contention
10 should be excluded pursuant to the Patent Local Rules. Id. at 18–19. Defendants
11 respond that plaintiff was on notice through defendants' position that the LVH252012A
12 was invalidating prior art. Reply at 13.

13 As Dynamic Drinkware describes, once defendants carry their initial burden to
14 introduce anticipating prior art, plaintiff can carry its burden by demonstrating that the
15 prior art does not actually anticipate or that it is entitled to a filing date prior to the alleged
16 prior art. As discussed, defendants carried their initial burden to assert that the
17 LVH252012A was invalidating prior art and plaintiff has responded with sufficient
18 evidence to preclude a finding that the accused choke was, in fact, invalidating prior art.
19 The issue remains whether plaintiff must also meet its burden that its asserted claim was
20 entitled to the benefit of a filing date prior to sale of the alleged prior art.

21 Both parties have obligations under the Patent Local Rules to provide certain
22 disclosures to the opposing party. Plaintiff, under Patent Local Rule 3-1(f), had to
23 disclose the priority date for any patent that claimed priority to an earlier application.
24 Patent Local Rule 3-3 requires a party opposing infringement to serve its invalidity
25 contentions, which must contain “[a]ny grounds of invalidity based on 35 U.S.C.
26 § 101, . . . or written description under 35 U.S.C. § 112(1) of any of the asserted claims.”
27 Patent L.R. 3-3(d). Defendants, who are challenging the '580 patent based on
28 invalidating prior art and further contending that the '580 patent's written description does

1 not support the priority claim to the '786 application, were required to disclose those
2 challenges in their invalidity contentions. Other district courts have determined that the
3 failure to disclose grounds for opposing a claim of patent infringement requires that those
4 grounds to be barred. See Good Tech. Corp. v. Mobileiron, Inc., No. 12-cv-5826-PSG,
5 2015 WL 3866019, at *1 (N.D. Cal. May 4, 2015) (citing Mediatek Inc. v. Freescale
6 Semiconductor, Inc., No. 11-cv-5341-YGR, 2014 WL 690161, at *1 (N.D. Cal. Feb. 21,
7 2014)).

8 As required by the Patent Local Rules, plaintiff disclosed its priority claim for the
9 '580 patent in its initial infringement contentions and defendants disclosed their
10 invalidating prior art. Yet, defendants do not direct the court to any contention they
11 disclosed to plaintiff, as required by the Patent Local Rules, containing their argument
12 that the '580 patent cannot claim priority to the '786 application. It is not clear to the court
13 why defendants could not have sought to amend their invalidity contentions pursuant to
14 Patent Local Rule 3-6 once they determined the '580 patent might not meet the written
15 description requirement. In any event, the court agrees with plaintiff that defendants'
16 apparent decision to omit their written description challenge from their invalidity
17 contentions prejudiced Cyntec. Moreover, because plaintiff can rebut defendants'
18 invalidating prior art by either of two ways (no anticipation or earlier filing date), the court
19 need not, and does not, find that '580 patent is limited to a priority date of March 25,
20 2013.

21 For the foregoing reasons, the court DENIES summary judgment with respect to
22 defendants' invalidity contention.

23 **5. Willful Infringement**

24 Defendants next argue that they are entitled to summary judgment of no willful
25 infringement of the asserted patents. Mtn. at 21.

26 Under title 35 U.S.C. § 284, in a case of infringement, a court "may increase the
27 damages up to three times the amount found or assessed." Halo Elecs., Inc. v. Pulse
28 Elecs., Inc., 136 S. Ct. 1923, 1935 (2016). The type of conduct "warranting enhanced

1 damages has been variously described in our cases as willful, wanton, malicious, bad-
2 faith, deliberate, consciously wrongful, flagrant, or—indeed—characteristic of a pirate.”
3 Finjan, Inc. v. Cisco Sys. Inc., No. 17-CV-00072-BLF, 2017 WL 2462423, at *3 (N.D. Cal.
4 June 7, 2017) (quoting Halo, 136 S. Ct. at 1932).

5 “The subjective willfulness of a patent infringer, intentional or knowing, may
6 warrant enhanced damages, without regard to whether his infringement was objectively
7 reckless.” Halo, 136 S. Ct. at 1933. However, “[k]nowledge of the patent alleged to be
8 willfully infringed continues to be a prerequisite to enhanced damages.” WBIP, LLC v.
9 Kohler Co., 829 F.3d 1317, 1341 (Fed. Cir. 2016) (citing Halo, 136 S. Ct. at 1932–33).

10 Other courts in this district have noted that willful infringement often requires both pre-suit
11 notice and egregious behavior. See Gamevice, Inc. v. Nintendo Co., No. 18-cv-1942-RS,
12 2018 WL 5310792, at *6 (N.D. Cal. Aug. 6, 2018) (citing Finjan, 2017 WL 2462423, at
13 *5). Finally, the question of enhanced damages is committed to the court’s discretion.
14 Halo, 136 S. Ct. at 1934.

15 Here, defendants challenge the evidence supporting plaintiff’s willful infringement
16 contention. They do not contest pre-suit notice; indeed, plaintiff has produced a letter,
17 dated December 15, 2017, from its counsel to Chilisin providing notice of the alleged
18 infringement. Dkt. 151-27. Instead, they argue that notice combined with continued
19 infringement is insufficient to show the egregious conduct to warrant enhanced damages.
20 In response, plaintiff asserts that defendants sought to copy the ’580 patent’s non-
21 circular, non-rectangular core and cite deposition testimony indicating that one of
22 Chilisin’s suppliers provided them with Cyntec’s data sheet. Opp. at 25. Defendants
23 respond that Chilisin had designed the accused pillar shape as early as 2012. See
24 Zhong Decl. ¶ 5.

25 Summary judgment is not appropriate because resolution of any egregious
26 conduct depends on the resolution of a disputed fact, i.e., whether the LVH252A12 choke
27 that purportedly changed its core as of December 2012 is the same choke as the one
28 that Chilisin allegedly copied in 2017 at its supplier’s request. If they are the same, then

1 defendants are correct that they could not knowingly infringe because they had the
2 design in 2012, well before the 2017 request to emulate Cytotec's design. On the other
3 hand, testimony from two of defendants' witnesses, (Dkt. 150-18 at 134:21–135:1, 136:8–
4 11; Dkt. 150-16 at 134:2–6), raises the question of why Chilisin would have emulated
5 Cytotec's design if they already had a non-circular, non-rectangular core design in
6 Chilisin's possession. Because a genuine issue of material fact exists with regard to at
7 least one patent, summary judgment as to willful infringement is not warranted.

8 For the foregoing reasons, the court DENIES defendants' motion for summary
9 judgment with respect to willful infringement.

10 **6. Motion to Exclude**

11 Defendants separately move to exclude portions of Kohl's infringement report and
12 Van Uden's damages report. Dkt. 139.

13 **a. Kohl's Infringement Report**

14 The parties generally agree that it would be impermissible for plaintiff's expert to
15 offer an opinion on defendants' subjective beliefs. Other district courts have arrived at
16 similar conclusions. See, e.g., Finjan, Inc. v. Blue Coat Sys., Inc., No. 13-CV-03999-BLF,
17 2015 WL 4272870, at *3 (N.D. Cal. July 14, 2015) (finding experts not "qualified to offer
18 opinions regarding Defendant's subjective beliefs"). Further, plaintiff concedes that
19 Kohl's statements in paragraphs 177, 181, 339, 343, 493, and 497 concerning what
20 Chilisin knew, should have known, or intended should be excluded. Dkt. 149 at 20–21.

21 The parties diverge on whether the remaining six opinions offered by Kohl in
22 paragraphs 172, 174–75, 177, 179 (and repeated again in paragraphs 334, 336–37, 339,
23 341, 488, 490–91, 493, and 495) simply summarize Chilisin's documentary and witness
24 testimony or involve an opinion not founded on sufficient facts or data.

25 First, Kohl stated: "Chilisin believes most of its inductors end up in the U.S." Kohl
26 Report ¶¶ 174, 336, 490. Plaintiff cites testimony from defendants' witness, Tania Wu,
27 who testified using similar language as Kohl. See Declaration of James C. Yoon "(Yoon
28 Decl.)", Ex. H, Dkt. 148-20, at 71:14–23. The court agrees with plaintiff. Kohl's opinion is

1 similar to a statement made by defendants' employee and is sufficiently supported by the
2 testimony.

3 Second, Kohl stated: "Chilisin knew the Accused Products were made for use in
4 products such as smartphones, table PCs, and other circuits." Kohl Report ¶¶ 179, 341,
5 495. Plaintiff produced a document that generally describes market segments of different
6 types of products including PCs and mobile devices. Yoon Decl., Ex. A, Dkt. 148-7, at
7 39. Kohl's opinion here strays too far from the content of the document, which simply
8 describes market breakdowns and not what Chilisin knew or did not know. The court
9 agrees with defendants that Kohl's second statement is impermissible and should be
10 excluded.

11 Third, Kohl stated: "Chilisin believes [a U.S.-based company's] products sold in the
12 U.S. may include Chilisin's inductors." Kohl Report ¶¶ 174, 336, 490. Defendants'
13 witness, Wu, testified that it could be possible that such a company's products may
14 include one of Chilisin's chokes. See Yoon Decl., Ex. H, at 99:16–21. As with the
15 previous statement by Wu, Kohl's opinion tracks close enough to Wu's testimony such
16 that the opinion is based on sufficient facts and should not be excluded.

17 Fourth, Kohl stated: "Chilisin intended its products to be used in the U.S." Kohl
18 Report ¶¶ 175, 337, 491. Plaintiff contends that the broader context of paragraph 175
19 cites a document in which Chilisin certifies that its products are in compliance with
20 specifications of a U.S.-based company. Kohl's opinion is not supported by the
21 documents because the documents only certify that Chilisin's products meet certain
22 specifications not that Chilisin intended for them to be used in the United States. The
23 court agrees with defendants that this statement should be excluded.

24 Fifth, Kohl stated: "Chilisin knows or [is] likely to know that the accused power
25 chokes sold to third party manufacturers outside the U.S. are intended to be imported to
26 or used in the U.S." Id. ¶¶ 172, 334, 488. Plaintiff cites the circumstantial evidence that it
27 has cited with respect to the Van Uden report (addressed below) as supporting Kohl's
28 statement. However, plaintiff does not cite a specific piece of testimony demonstrating

1 that Chilisin knew this fact. Kohl does not summarize evidence so much as summarize
2 plaintiff's characterization of the evidence. Accordingly, the court agrees with defendants
3 that this statement should be excluded.

4 Sixth, Kohl stated: "Chilisin encourages or instructs the use, sale, and importation
5 of the Accused Products." Id. ¶¶ 177, 339, 493. Plaintiff again cites the several pieces of
6 circumstantial evidence that it cites elsewhere to demonstrate that Chilisin knew that the
7 accused products were imported into the United States. As with the prior statement, Kohl
8 is not summarizing what Chilisin knew but rather summarizing plaintiff's characterization
9 of the evidence. The court agrees with defendants that this statement should be
10 excluded.

11 **b. Van Uden's Damages Report**

12 Next, defendants challenge both the source of Van Uden's data and his
13 methodology. Dkt. 139 at Beginning with data sources, "data relied on by the expert
14 'need not be admissible for the opinion to be admitted' if experts in the field would
15 reasonably rely on such data." Power Integrations, Inc. v. Fairchild Semiconductor Int'l,
16 Inc. ("Power Integrations I"), 711 F.3d 1348, 1373 (Fed. Cir. 2013) (quoting Fed. R. Evid.
17 703). In Power Integrations I, the Federal Circuit rejected certain documents that were
18 derived from a manifestly unreliable source. In that case, the court discussed testimony
19 from a damages expert: "When asked whether the provider of the documents 'found
20 [them] off the internet,' [the expert] responded, 'I can only assume so.'" Id. (first alteration
21 in original). The court reasoned that "while an expert's data need not be admissible, the
22 data cannot be derived from a manifestly unreliable source," id. (citing Montgomery Cty.
23 v. Microvote Corp., 320 F.3d 440, 448 (3d Cir. 2003)), and, when combined with
24 questionable methodology, held that that the trial court abused its discretion by admitting
25 the expert' testimony, id. at 1374.

26 Here, the sources of the documents on which Van Uden relied are nowhere near
27 the questionable source material in Power Integrations I because Van Uden relied on
28 Chilisin's own documents and witness testimony. Defendants' arguments go to the

1 weight and persuasiveness of the evidence and, as soon discussed, the methodology by
2 which he applied that evidence to arrive at his opinions.

3 With respect to methodology, defendants argue that Van Uden's reliance on
4 general market statistics are not tailored to the importation and sale of the allegedly
5 infringing products. Dkt. 139 at 8. Power Integrations I is a useful starting point for
6 methodology. There, the court found the methodology used by the expert inadmissible
7 because it was based on two speculative assumptions. First, "the document on which
8 [the expert] relied for his worldwide damages estimate indicated worldwide shipments of
9 Samsung's mobile phones"; however, the infringing circuits were not in the phone, they
10 were in phone chargers. Power Integrations I, 711 F.3d at 1373. The documents did not
11 mention whether chargers were shipped with all phones. Id. Second, from the same
12 document, the expert assumed "not only that each of Samsung's shipments included a
13 charger, but that each of these chargers incorporated an infringing power circuit. Id. at
14 1374. The document on which the expert relied did not speak to that assumption and, as
15 discussed, the court held that the testimony should have been excluded. See id.

16 In contrast to Power Integrations I, the district court's opinion in MediaTek Inc. v.
17 Freescale Semiconductor, Inc., No. 11-cv-5341-YGR, 2014 WL 2854890, at *5 (N.D. Cal.
18 June 20, 2014), is helpful to define the other end of the permissible spectrum. There, the
19 damages expert used publicly available industry data showing the U.S. share of North
20 American computers imported into the United States as a proxy for Amazon Kindle sales
21 that incorporated the infringing component. The district court distinguished Power
22 Integrations because the "source of the expert's data was unclear and his estimates were
23 based upon improper assumptions about the accused products themselves." Id. The
24 court went on to reason that it was undisputed that the "source of the ratio estimate is
25 based upon disclosed, publicly available data and that Amazon Kindles incorporate [the
26 defendant's] accused chips." Id. Thus, the court denied the motion to exclude because
27 the defendant's arguments were disagreements and credibility challenges more
28 appropriate for trial.

1 Van Uden’s opinion falls somewhere in the spectrum between Power Integrations I
2 and MediaTek. Unlike Power Integrations I and similar to MediaTek, Van Uden has cited
3 substantive data to determine the amount of indirect United States sales. Van Uden has
4 information concerning Chilisin’s sales per customer and per infringing product. See,
5 e.g., Van Uden Report, Ex. 3.5. He also calculated percentage of U.S. sales per
6 company compared to their overall sales. Id., Ex. 12. Like Power Integrations I and
7 unlike MediaTek, Van Uden did not cite evidence that each product necessarily includes
8 the infringing Chilisin product. Put differently, in MediaTek, there was no question that an
9 Amazon Kindle incorporated the infringing chip so estimating damages by comparing
10 general market share was permissible. Here, Van Uden knows the amount of Chilisin
11 sales outside the U.S. to individual companies and he knows that the percentage of U.S.
12 sales of those companies, but he lacks a bridge between the two.

13 Two additional district court opinions dealt with a similar issue. First, in
14 Semiconductor Energy Laboratory Co. v. Chi Mei Optoelectronics Corp., 531 F. Supp. 2d
15 1084, 1112 (N.D. Cal. 2007), an expert estimated that approximately 29% of the
16 defendant’s infringing LCD panels ultimately reached the United States. The expert
17 identified two customers who allegedly imported the LCD panels into the United States in
18 end products that were then sold in the United States. The expert used those two
19 companies’ public filings which determined that 60% and 40%, respectively, of all sales
20 were in the United States. Id. at 1112–13. The plaintiff acknowledged that there was an
21 “evidentiary void as to whether the sales of [the defendant’s] products track the same
22 percentages as sales of products generally,” but a jury could infer that the defendant’s
23 customers sell its infringing products in the United States. Id. at 1113. The court agreed
24 with the plaintiff and permitted the expert opinion.

25 Here, defendants would distinguish Semiconductor Energy because the expert in
26 that case identified actual end products, LCD panels, that were imported in the United
27 States. The Semiconductor Energy defendant’s infringing product was not, in fact, the
28 end product; the LCD panel was a component incorporated into end products sold by two

1 companies. For that reason, Semiconductor Energy is persuasive because the infringing
2 chokes are likewise incorporated into end products. Similar to Semiconductor Energy,
3 Van Uden calculated the percent of sales that each of Chilisin's customers has in the
4 United States compared to the rest of the world. There is also a similar "evidentiary void"
5 because Van Uden does not know whether sales of Chilisin's products track the same
6 percentages as sales of products generally.

7 Second, in Eidos Display, LLC v. Chi Mei Innolux Corp., 262 F. Supp. 3d 424, 426
8 (E.D. Tex. 2017), the district court excluded testimony from an expert who had
9 determined that 25% of the infringing products were sold in the United States. The court
10 first noted that the 25% was generated from the "testimony of three other individuals who
11 were speculating as to what their general estimates of total LCD products sold in the U.S.
12 market would be." Id. The court also questioned the application of the 25% because he
13 had "no opinions or testimony to support a conclusion that such a percentage would be
14 an appropriate representation of the number of each Defendants' accused infringing
15 products that were shipped into the United States." Id.

16 Eidos Display is not entirely applicable but also raises the same issue of the
17 accused infringing products as the missing link in the analysis. Unlike Eidos Display, Van
18 Uden has specific data on which he relied, rather than speculative testimony from other
19 individuals. Van Uden has the amount of Chilisin sales per infringing product sold to
20 specific customers based in the United States. He also has reliable information to
21 determine the percent of sales that each of those customers made in the United States
22 compared to the rest of the world. Like Eidos Display, the issue again boils down to the
23 "evidentiary void": is there reliable evidence that would allow Van Uden to estimate
24 whether sales of end products is a reliable indicator of Chilisin choke included in that end
25 product.

26 In this situation, the court is persuaded by the reasoning of Semiconductor Energy
27 and MediaTek. The court finds that Van Uden's opinions rely on data sources that are
28 sufficiently reliable that a jury can determine whether the assumptions made in his

1 calculations were valid. Thus, the court does not exclude Van Uden's opinions or expert
2 report.

3 For the foregoing reasons, the court GRANTS IN PART AND DENIES IN PART
4 defendants' motion to exclude and excludes Kohl's challenged testimony in paragraphs
5 172, 177, 179, 181, 334, 337, 339, 341, 343, 488, 491, 493, 495 and 497 as described
6 herein.

7 **7. Motions to File Under Seal**

8 Both parties have filed administrative motions to file portions of their respective
9 briefs for both the motion for summary judgment and motion to exclude as well as the
10 corresponding exhibits for all six briefs under seal. Dkts. 138, 140, 148, 150, 158, 160.
11 Generally, both parties argue that the material to be sealed contains confidential and
12 proprietary information that, if disclosed, would cause both parties to suffer competitive
13 harm.

14 There is a general presumption in favor of public access to federal court records.
15 Nixon v. Warner Commc'ns, Inc., 435 U.S. 589, 597 (1978). "[T]he proponent of sealing
16 bears the burden with respect to sealing. A failure to meet that burden means that the
17 default posture of public access prevails." Kamakana v. City & Cty. of Honolulu, 447 F.3d
18 1172, 1182 (9th Cir. 2006). When a request to seal documents is made in connection
19 with a motion, the court must determine whether the parties are required to overcome
20 that presumption with "compelling reasons" or with "good cause." A party seeking to seal
21 materials submitted with a motion that is "more than tangentially related to the merits of
22 the case"—regardless whether that motion is "technically dispositive"—must demonstrate
23 that there are compelling reasons to keep the documents under seal. Ctr. for Auto Safety
24 v. Chrysler Grp., LLC, 809 F.3d 1092, 1101–02 (9th Cir. 2016).

25 Because the underlying motion for summary judgment here would be dispositive,
26 the parties' request to seal documents must meet the compelling reasons standard. The
27 information to be sealed includes technical information relating to the products and sales
28 information including volume and customer identity. Other courts have determined these

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1 to be compelling reasons to file under seal. See, e.g., Finjan, Inc. v. Proofpoint, Inc., No.
2 13-CV-05808-HSG, 2016 WL 7429304, at *2 (N.D. Cal. Feb. 9, 2016) (finding compelling
3 reasons to seal “information about the technical operation of the products, financial
4 revenue data, and excerpts from expert depositions, expert report, and related
5 correspondence”). Further, the parties’ requests are narrowly tailored and do not, for
6 example, contain publicly-available information. Cf. id. (denying request to the extent it
7 contained publicly-available information).

8 Accordingly, the court GRANTS the parties’ motions to file under seal. The court
9 expresses no opinion whether the sealed documents will remain under seal at trial.

10 **CONCLUSION**

11 For the foregoing reasons, the court DENIES defendants’ motion for summary
12 judgment, GRANTS IN PART AND DENIES IN PART defendants’ motion to exclude, and
13 GRANTS the parties’ motions to file under seal. The court notes that its most recent
14 amended case scheduling order set trial in this case for November 30, 2020. Dkt. 109.
15 The court further notes that General Order No. 72-5 prohibits in person jury trials through
16 September 30, 2020, and this court generally will not hold any in-person jury trial while a
17 national public health emergency related to the COVID-19 disease remains ongoing.
18 Accordingly, the court SETS a case management conference to further amend the case
19 schedule for October 16, 2020.

20 **IT IS SO ORDERED.**

21 Dated: September 8, 2020

22 /s/ Phyllis J. Hamilton
23 PHYLLIS J. HAMILTON
24 United States District Judge
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