UNITED STATES DISTRICT COURT

DISTRICT OF NEVADA

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HALO ELECTRONICS, INC., Plaintiff, v. PULSE ENGINEERING, INC. and TECHNITROL, INC., Defendants.	2:07-CV-00331-PMP-PAL ORDER

Presently before the Court is Defendants' Motion for Partial Summary Judgment of Non-Infringement (Doc. #239), filed on December 22, 2010. Plaintiff filed a Response (Doc. #257), on January 13, 2011. Defendants filed a Reply (Doc. #274), on January 31, 2011. Also before the Court is Plaintiff's Motion for Partial Summary Judgment of Infringement (Doc. #244), filed on December 22, 2010. Defendants filed a Response (Doc. #264) on January 13, 2011. Plaintiff filed a Reply (Doc. #270) on January 31, 2011.

Also before the Court is Plaintiff's Motion for Partial Summary Judgment of No Invalidity (Doc. #240), filed on December 22, 2010. Defendants filed a Response (Doc. #261), on January 13, 2011. Plaintiff filed a Reply (Doc. #271), on January 31, 2011. Also before the Court is Defendants' Motion for Summary Judgment of Invalidity (Doc. #250), filed on December 22, 2010. Plaintiff filed a Response (Doc. #256), on January 13, 2011. Defendants filed a Reply (Doc. #273), on January 31, 2011.

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Also before the Court is Defendants' Motion for Summary Judgment on Equitable Estoppel, Laches, and Failure to Give Notice under 35 U.S.C. § 287(a) (Doc. #249), filed on December 22, 2010. Plaintiff filed a Response (Doc. #258), on January 13, 2011. Defendants filed a Reply (Doc. #275), on January 31, 2011.

Also before the Court is Defendants' Motion for Summary Judgment of No Liability for Defendants' Sales Activity Outside of North America (Doc. #251), filed on December 22, 2010. Plaintiff filed a Response (Doc. #251), on January 13, 2011. Defendants filed a Reply (Doc. #276), on January 31, 2011.

Also before the Court is Plaintiff's Motion to Strike Pulse's New Summary Judgment Argument in Reply and to Amend the Parties' September 2010 Stipulation (Doc. #279), filed on February 2, 2011. Defendants filed a Response (Doc. #281), on February 22, 2011. Plaintiff filed a Reply (Doc. #283), on March 4, 2011.

I. BACKGROUND

This is a patent infringement action brought by Plaintiff Halo Electronics, Inc. ("Halo") against Defendants Pulse Engineering, Inc. and Technitrol, Inc. (collectively "Pulse"). Halo owns a family of patents that relate to a design for a surface-mount package and are denoted by U.S. Patent Nos. 5,656,985 ("'985 Patent"); 6,297,720 ("'720 Patent"); and 6,344,785 ("'785 Patent") (collectively the "Halo Patents"). (Pl.'s Opp'n Mot. for Summ. J. Non-Infringement ["Opp'n Non-Infringement"] (Doc. #257).) The three patents stem from the '985 Patent application filed on August 10, 1995. (Id., Ex. 57.)

The Halo Patents name six individuals as inventors, three employees of Halo and three employees of Halo's Hong Kong based manufacturer, Perfect Brave Limited ("PBL"). (Decl. of James Heaton (Doc. #243) ["12/22/2010 Heaton Decl."] at ¶ 2.) Once the open construction design of the surface-mount package had been conceived, two of the inventors, Halo employees Jeff and James Heaton, were eager to see if the new design could withstand high temperatures without cracking. (Id. at ¶ 3.) Halo thus obtained what it contends were

prototypes samples for high temperature testing from PBL. (Id.) An August 5, 1994 invoice from PBL to Halo shows that PBL sent 50 "samples" of each of the new prototypes to Halo, with Halo receiving the samples no earlier than August 8, 1994. (Decl. of Craig Countryman ["Countryman Decl."] (Doc. #248), Ex. 10). The invoice shows charges for the parts denoted as samples for $300. (Id.)

Halo did not have an industrial, high temperature oven at its U.S. facilities like the type used by its customers, so Jeff and James Heaton performed tests of the prototypes by exposing them to heat in their home ovens at the highest temperature possible. (12/22/2010 Heaton Decl. at ¶ 4.) They also placed control parts under the same conditions to observe if the new design was indeed better. (Id.)

In July 2002, counsel for Halo sent then Pulse President John Kowalski a letter stating in part:

> We are writing on behalf of Halo . . . to notify you of certain surface mount packaging patents the company has recently acquired, copies of which are enclosed for your reference. Halo is interested in licensing these patents, and would like to solicit your company's interest in entering into negotiations for the license of these patented technologies.

(Defs.' Mot. for Summ. J. Equitable Estoppel, Laches, & Failure to Mark ["MSJ Estoppel"] (Doc. #249), Ex. 7.) On August 6, 2002, counsel for Halo sent another letter stating:

> There is reason to believe that surface mount products manufactured by your Company which are not transfer molded construction may possess features similar to those embodied in the patented devices described in Halo's patents previously provided to you. Halo has not yet reached any conclusive determinations as to whether your company's products are covered by its patents; rather Halo is devoting its energy to working out suitable arrangements with companies that would benefit from licensing Halo's patented technologies.

(Id., Ex. 8.)

Halo brought an infringement complaint on March 15, 2007, alleging that Pulse sells surface mount packages which infringe on the Halo Patents. (Compl. (Doc. #1).)

Based on product drawings and part to drawing information produced by Pulse, Pulse and Halo have agreed to arrange products in groups to be represented by the following eleven products: H0022; H0009; H1260; 23Z110SMNL; H6502NL; H1305; H1174; H0026; PE-5762QNL; H0019; and PE-67540NL. (Stip. Regarding Representative Products (Doc. #217), Ex. A.)

On June 14, 2010, this Court entered an Order construing the disputed claim terms of the Halo Patents and ordered Halo to limit its selection to fifteen asserted claims. (Order Claim Construction ["Claim Construction"] (Doc. #194).) On June 28, 2010, pursuant to this Court's Order, Halo limited its assertions against Pulse to the following claims: Claims 1, 2, 3, 7, 8, and 16 of the '985 Patent; Claims 1 and 6 of the '720 Patent; and Claims 1, 2, 18, 26, 40, and 48 of the '785 Patent (the "Asserted Halo Claims"). (Pl.'s Selection of Proposed Asserted Claims (Doc. #196).)

The parties now bring several motions and cross-motions for summary judgment regarding infringement; invalidity; equitable estoppel, laches, and failure to mark; and liability for sales outside of North America. The Court will analyze each of these motions below.

II. SUMMARY JUDGMENT STANDARD

Summary judgment is appropriate if the pleadings, depositions, answers to interrogatories and admissions, and affidavits demonstrate "there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a). A fact is "material" if it "might affect the outcome of the suit under the governing law." Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248 (1986). An issue is genuine if "the evidence is such that a reasonable jury could return a verdict for the nonmoving party." Id. Where a party fails to offer evidence sufficient to establish an element essential to its case, no genuine issue of material fact can exist, because "a complete failure of proof concerning an essential element of the nonmoving party's case necessarily renders all other

facts immaterial." Celotex Corp. v. Catrett, 477 U.S. 317, 322-23 (1986).

The party "seeking summary judgment bears the initial responsibility of informing the district court of the basis for its motion, and identifying those portions of 'the pleadings . . .' which it believes demonstrate the absence of a genuine issue of material fact." Id. at 323 (quotation omitted). The burden then shifts to the non-moving party to go beyond the pleadings and set forth specific facts demonstrating there is a genuine issue of material fact for trial. Fairbank v. Wunderman Cato Johnson, 212 F.3d 528, 531 (9th Cir. 2000). The Court views all evidence in the light most favorable to the non-moving party. County of Tuolumne v. Sonora Cmty. Hosp., 236 F.3d 1148, 1154 (9th Cir. 2001).

III. INFRINGEMENT/NON-INFRINGEMENT (Doc. #244 and #239)

Determination of infringement is a two step process. First, the court determines the meaning and scope of the asserted patent claims. Claim language is construed with its ordinary and customary meaning, "the meaning that the [language] would have to a person of ordinary skill in the art in question at the time of the invention." Phillips v. AWH Corp., 415 F.3d 1303, 1312-13 (Fed. Cir. 2005). The court then determines whether all of the claim limitations are present, either literally, or by equivalent, in the accused device. Innovention Toys, LLC v. MGA Entm't, Inc., 673 F.3d 1314, 1318-19 (Fed. Cir. 2011). "[A]n accused product or process is not infringing unless it contains each limitation of the claim, either literally or by an equivalent." Freedman Seating Co. v. Am. Seating Co., 420 F.3d 1350, 1358 (Fed. Cir. 2005).

"The doctrine of equivalents prohibits one from avoiding infringement liability by making only 'insubstantial changes and substitutions . . . which, though adding nothing, would be enough to take the copied matter outside the claim, and hence outside the reach of law.'" Siemens Med. Solutions USA, Inc. v. Saint-Gobain Ceramics & Plastics, Inc., 637 F.3d 1269, 1279 (Fed. Cir. 2011) (quoting Graver Tank & Mfg. Co. v. Linde Air Prods., 339 U.S. 605, 607 (1950)). "Under the doctrine of equivalents, a product or process that does

not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is 'equivalence' between the elements of the accused product or process and the claimed elements of the patented invention." Freedman, 420 F.3d at 1357. The doctrine of equivalents must be applied to each element of a claim, not the patented invention as a whole, therefore each element of a patent must have an equivalent for infringement to be found. Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co., 520 U.S. 17, 30 (1997).

The main inquiry under a theory of equivalents is the "function-way-result test," which asks "whether an element of an accused product performs substantially the same function in substantially the same way to obtain the same result as an element of the patented invention." Siemens Med. Solutions, Inc, 637 F.3d at 1279. The interchangeability of substitutes for an element of a patent has bearing on whether the accused device is substantially the same as the patented invention. Warner-Jenkinson Co., Inc., 520 U.S. at 36. However, the interchangeability of components must be known to one skilled in the art at the time of the patent and "[i]ndependent experimentation by the alleged infringer would not always reflect upon . . . whether a person skilled in the art would have known of the interchangeability." Id. Further, the patentee may not assert a theory of equivalence that would render a particular claim element without meaning. Id. at 39 n.8. Additionally, under the theory of prosecution history estoppel, "a patentee may not seek to recapture as an equivalent subject matter surrendered during prosecution." Trading Tech. Int'l, Inc. v. eSpeed, Inc., 595 F.3d 1340, 1355 (Fed. Cir. 2010).

Courts have refused to apply the doctrine of equivalents where "the accused device is the antithesis of the claimed structure." Planet Bingo, LLC v. GameTech Int'l, Inc., 472 F.3d 1338, 1345 (Fed. Cir. 2006) (finding no infringement where the doctrine of equivalents would need to change the claim language from "before" to "after"). Likewise, infringement was not found under the doctrine of equivalents where an accused product contained a minority of adhesive strips where the claim called for a majority, an unmounted

computer compared to the claim language of a mounted computer, or elongated slots within, rather than on top of, the claimed container. Moore U.S.A., Inc. v. Standard Register Co., 229 F.3d 1091, 1106 (Fed. Cir. 2000); Asyst Tech., Inc. v. Emtrak, Inc., 402 F.3d 1188, 1195 (Fed. Cir. 2005); Sage Prod., Inc. v. Devon Indus., Inc., 126 F.3d 1420, 1425-26 (Fed. Cir. 1997).

A court "may determine infringement on summary judgment when no reasonable jury could find that every limitation recited in the properly construed claim either is or is not found in the accused device." Innovention Toys, 637 F.3d at 1319. However, "[b]ecause infringement under the doctrine of equivalents often presents difficult factual determinations," summary judgment often is not appropriate" Leggett & Platt, Inc. v. Hickory Springs Mfg. Co., 285 F.3d 1353, 1360 (Fed. Cir. 2002). Conflicting expert testimony can create a genuine issue of material fact sufficient to avoid summary judgment. LG Elec., Inc. v. Bizcom Elec., Inc., 453 F.3d 1364, 1376 (Fed. Cir. 2006); see also Overhead Door Corp. v. Chamberlain Group, Inc., 194 F.3d 1261, 1269 (Fed. Cir. 1999) (expert's report was sufficient to create genuine issue of material fact that features of the accused product were insubstantially different from claim terms). However, on a motion for summary judgment, the expert's testimony must set forth "the factual foundation for his opinion-such as a statement regarding the structure found in the accused product-in sufficient detail for the court to determine whether that factual foundation would support a finding of infringement under the claim construction adopted by the court, with all reasonable inferences drawn in favor of the nonmovant." Arthur A. Collins, Inc. v. N. Telecom Ltd., 216 F.3d 1042, 1047-48 (Fed. Cir. 2000). Similarly, "a party cannot create an issue of fact by supplying an affidavit contradicting his prior deposition testimony, without explaining the contradiction or attempting to resolve the disparity." Sinskey v. Pharmacia Opthalmics, Inc., 982 F.2d 494, 498 (Fed. Cir. 1992).

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Here, the Court previously has interpreted the claim language of the '985, '720, and '785 patents. (Claim Construction.) Pulse now moves for summary judgment of non-infringement as to (1) each product represented by the H6502NL, PE-5762QNL, and PE-67540NL parts; (2) each asserted Claim of the '985 Patent, Claim 6 of the '720 Patent, and Claims 2 and 26 of the '785 Patent with respect to the products represented by the H0009 and H0019 parts; and (3) Claim 7 of the '985 Patent, and Claims 18 and 48 of the '785 Patent with respect to all the accused products. Plaintiff Halo moves for partial summary judgment of infringement with respect to (1) Claims 1, 2, 6, 7, 8, and 16 of the '985 Patent; (2) Claims 1 and 6 of the '720 Patent; and (3) Claims 1, 2, 18, 26, 40, and 48 of the '785 Patent.

A. Products Represented by H6502NL, PE-5762QNL, and PE-67540NL

All of the Asserted Halo Claims require either "a plurality of toroid transformers" or "at least one toroid transformer." Pulse argues that the products represented by the H6502NL, PE-5762QNL, and PE-67540NL parts do not infringe any of the Asserted Halo Claims, either literally or under the doctrine of equivalents, because the above products do not contain any toroid transformers. Additionally, Pulse argues that Halo appreciated the differences between toroid transformers and toroid chokes at the time of the patent applications because Halo expressly claimed toroid chokes in the '151 Patent, filed contemporaneously with the Patents at issue here, yet omitted any mention of toroid chokes in the present Patent. Pulse argues, therefore, that the Court should hold that a toroid choke is not the equivalent of a toroid transformer as a matter of law. Halo responds that each of the accused products contains one or more toroid chokes which, under the doctrine of equivalents, are equivalent to toroid transformers and therefore summary judgment in Pulse's favor is inappropriate.

Halo inventor Jeffrey Heaton testified that transformers and common mode chokes cannot be used interchangeably. (Mot. for Summ. J. of Non-Infringement (Doc.

#239), Ex. 7 ["7/21/2010 Dep. of Jeff Heaton."] at 30-31.) Another Halo inventor, Peter Lu ("Lu"), testified that while common mode chokes can pass both AC and DC signals, transformers are unable to pass DC signals. (Mot. for Summ. J. of Non-Infringement, Ex. 20 at 168-171.) However, Lu also testified that while toroid chokes and toroid transformers are not interchangeable if the external and internal connections remain the same, they can be interchangeable if the external and internal connections are altered. (Id.)

Dr. Wilmer Bottoms ("Bottoms") testified that toroid chokes and toroid transformers are physically identical in the context of the Asserted Halo Claims. (1/13/2011 Decl. of Dr. Wilmer Bottoms "[1/13/2011 Bottoms Decl."] (Doc. #259) at ¶ 108.) Additionally, Bottoms states that toroid chokes and toroid transformers are both constructed and situated inside the package in the same manner. (Id. at ¶ 109.) Bottoms states that toroid chokes do not actually become toroid chokes until they are placed in a circuit in a manner that produces the electrical characteristics of a choke, and that a toroid transformer may be used as a toroid choke simply by arranging the circuitry external to the accused product in a different manner. (Id. at ¶ 110.) Pictures of the accused products show no discernable difference between the physical characteristics of toroid chokes and toroid transformers. (Opp'n Non-Infringement at 4.) With respect to the PE-5762QNL product groupings, Bottoms declares that the drawing and electrical schematics show that the product contains a single toroid transformer. (1/13/2011 Bottoms Decl. at ¶ 112.) Bottoms notes that the parts drawing for the PE-5762QNL contains the notation "XFRM," which is an abbreviation for transformer. (Id.)

Here, viewing all evidence in the light most favorable to Halo, the non-moving party, conflicting expert testimony creates a genuine issue of material fact that a toroid choke reads on the limitation of one or more toroid transformers. While Pulse offered testimony showing that toroid chokes and toroid transformers are not interchangeable, Halo has offered conflicting expert testimony supported by factual assertions that creates a

genuine issue of material fact.

Halo offered Bottoms' deposition testimony that, for the purposes of the Asserted Halo Claims, toroid chokes and toroid transformers are physically identical; toroid chokes and toroid transformers are substantially similar in terms of how they are constructed and connected within the package; and that toroid chokes are interchangeable with toroid transformers if the external circuitry is arranged in a different manner. As factual support for his testimony, Bottoms offers his knowledge about the electrical characteristics of toroid chokes and toroid transformers; knowledge about the construction of toroid chokes and toroid transformers; and pictures of the accused products and Halo's products showing that toroid chokes and toroid transformers both consist of wire wrapped toroids and are physically identical. Viewing all evidence in the light most favorable to Halo, a genuine issue of material fact exists as to whether the toroid chokes present in the products represented by H6502NL and PE-67540NL are the equivalent of toroid transformers. Additionally, there is a genuine issue of material fact that PE-5762QNL contains a toroid transformer. Accordingly, summary judgment of non-infringement of the products represented by the H6502NL, PE-5762QNL, and PE-67540NL parts is inappropriate and the Court will deny Defendants' motion in this respect.

B. Products Represented by the H0009 and H0019

All of the Asserted Halo Claims require the toroids to be "by/in a soft silicone material." The Court construed the claim language "by/in a soft silicone material" to mean "retained inside the package by a soft silicone material." (Claim Construction at 18.) "Soft silicone material" means " a soft silicone material that is resilient so as to allow expansion of the toroid when heated." (Id.) This Court has acknowledged that to one of ordinary skill in the art, "soft silicone does not mean hard plastic or epoxy." (Id.) Therefore use of epoxy to retain toroids in their packaging would not satisfy this claim element.

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Pulse argues that the products represented by the H0009 and H0019 parts do not infringe any of the Asserted Halo Claims, either literally or under the doctrine of equivalents, because the above products do not use soft silicone to retain their transformers. Pulse states that the H0009 and H0019 parts use hard plastic or epoxy to retain their toroids. Halo states that the toroids present in the products represented by the H0009 and H0019 parts are retained inside the package by a resilient silicone material and hence infringe on the Asserted Halo Claims.

Long-time Pulse engineer Aurelio Gutierrez ("Gutierrez") declares that early on in the assembly process, the toroids of the accused products are dipped into silicone material. (Mot. for Summ. J. of Non-Infringement, Ex. 13 ["Gutierrez Decl."] at ¶ 9.) Gutierrez states that this initial coating is a separate and distinct procedure from the procedure which retains the toroids in the packaging. (Id.) Gutierrez also declares that the toroids of the H0009 and H0019 products are later retained in their package by the epoxy Dexter-Hysol E01057. (Id. at ¶¶ 10-11.) Product drawings and bill-of-materials information for the H0009 and H0019 products show that Dexter-Hysol E01057 is used in the products. (Mot. for Summ. J. Non-infringement, Exs. 17, 18.)

However, Bottoms declares that the toroids of the H0009 and H0019 products are retained in their packaging by soft silicone that is resilient so as to allow expansion of the toroid when heated. (1/13/2011 Bottoms Decl. at ¶ 113.) To support his position, Bottoms offers drawings and product schematics of the H0009 and H0019 products. (Id.) Bottoms states that the toroids of the H009 and H0019 products are coated with soft silicone which surrounds the toroid on all sides and then placed in the package. (Id.) Bottoms states that after the toroids are placed in package, a small amount of epoxy is placed in the package. (Id. at ¶ 114.) According to Bottoms, the epoxy never comes into direct contact with the toroids and is placed next to the toroids, contacting the silicone coated toroids only if they move laterally within the package. (Id.) It is Bottoms' opinion that "silicone retains the

toroids in the H0009 and H0019 products." (Id. at ¶ 113.)

Here, Halo has presented evidence, in the form of Bottoms' declaration, that the toroids in the H0009 and H0019 products are retained by a soft silicone material that is resilient so as to allow expansion of the toroid when heated. Bottoms offers pictures of the H0009 and H0019 showing the toroids coated in silicone material and the placement points for epoxy to support his declaration. Viewing this evidence in the light most favorable to Halo, as the Court must, there is a genuine issue of material fact as to whether the toroids of the H0009 and H0019 products are retained in their packages by a soft silicone material. Accordingly, summary judgment of non-infringement of the products represented by the H0009 and H0019 parts is inappropriate and the Court will deny Defendants' motion in this respect.

C. Claim 7 of the '985 Patent and Claims 18 and 48 of the '785 Patent

Claim 7 of the '985 Patent and Claims 18 and 48 of the '785 Patent (collectively, the "Asserted Standoff Claims") require a portion of the package designed to rest in contact with the printed circuit board after mounting to prevent the solder posts from contacting the printed circuit board. Pulse argues that none of the accused products are designed to have a portion of their respective packages rest in contact with the printed circuit board. Halo responds that the accused Pulse products contain a standoff that is designed to rest in contact with the printed circuit board after mounting to prevent the solder posts from contacting the printed circuit board for maintaining a distance between the bottom of the pins and the printed circuit board.

Gutierrez declares that "[n]one of the accused Pulse products are designed to have a portion of their respective packages rest in contact with the printed circuit board after mounting." (Gutierrez Decl. at ¶ 13.) Additionally, Gutierrez states that terminal pins, rather than a standoff, are used to "prevent the end walls, or any other portion of the package, from resting in contact with the circuit board after mounting." (Id.)

Bottoms declares that the Pulse H0022 product includes a standoff designed to prevent the solder posts from contacting the printed circuit board for maintaining a distance between the bottom of the pins and the printed circuit board. (1/13/2011 Bottoms Decl. at ¶ 117.) Bottoms further declares that the Pulse H0022 standoffs are intended to rest in contact with the printed circuit board and prevent damage to the printed circuit board or the device. (Id.) In Bottoms' expert opinion, all of the representative products include a standoff. (Id.) Bottoms bases his opinion on examination of the Asserted Standoff Claims and the accused Pulse products, as well as schematic drawings of Pulse product H0022 which he contends shows a standoff. Additionally, Dr. Lawrence Larson ("Larson"), an expert retained by Pulse, testified that the standoffs in the '985 patent were designed to rest in contact with the printed circuit board. (Countryman Decl. (Doc. #269), Ex. 24 at 224-25.)

Viewing all evidence in the light most favorable to Halo, as the Court must, conflicting expert testimony creates a genuine issue of material fact that the accused products contain a standoff designed to rest in contact with the printed circuit board after mounting to prevent the solder posts from contacting the printed circuit board. While Pulse offered the declaration of its employee that its products do not contain a standoff in accordance with the Asserted Standoff Claims, Halo offered Bottoms' declaration that the accused Pulse products contain a standoff. Bottoms' declaration is supported by analysis of the Asserted Standoff Claims and comparison to the accused products, as well as schematic drawings of Pulse product H0022 showing a structure consistent with a standoff. Accordingly, summary judgment of non-infringement of Claim 7 of the '985 Patent or Claims 18 and 48 of the '785 Patent is inappropriate and the Court will deny Defendants' motion in this respect.

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D. Infringement of Claims 6 of the '985 Patent

Claim 6 of the '985 Patent requires the following:

> An electronic surface mount package for mounting on a printed circuit board in an electronic device, said electronic surface mount package comprising:
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> a one piece construction package having a sidewall and an open bottom,
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> a plurality of toroid transformers carried within said package by a soft silicone material, said transformers each having wires wrapped thereon,
>
> a plurality of terminal pins molded within and extending from the bottom of said package, each of said pins extending through a bottom of said side wall and having a notched post upon which said wires from said transformers are wrapped and soldered thereon, respectively.

This Court construed the phrase "an electronic surface mount package for mounting on a printed circuit board in an electronic device" to mean "an electronic device configured to attach to the surface of a DC voltage only printed circuit board." (Claim Construction at 16.) This Court construed "by a soft silicone material" to mean "retained inside the package by a soft silicone material" and "a soft silicone material" to mean "a silicone material that is resilient so as to allow expansion of the toroid when heated." (Id.)

Halo argues that the products represented by Pulse products H0022, H1260, H1305, H1174, and H0026 read on all the limitations of Claim 6 of the '985 Patent, therefore, summary judgment is appropriate. Pulse responds that there are genuine issues of material fact that the accused H0022, H1260, H1305, H1174, and H0026 products contain all of the claim limitations, hence summary judgment is inappropriate. Additionally, Pulse previously moved for summary judgment of non-infringement with respect to these parts arguing, among other things, that the toroids of the accused Pulse products are not retained in their package by soft silicone. While the evidence presented by Pulse was not sufficient to grant summary judgment, it may be used to create a genuine issue of material fact in opposition to Halo's motion.

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Bottoms declares that the accused Pulse products meet the claim limitations of Claim 6 of the '985 Patent. (12/22/2010 Decl. of Wilmer Bottoms ["12/22/2010 Bottoms Decl."] (Doc. #247) at ¶¶ 14-20.) Bottoms bases his opinion on analysis of the accused Pulse products and the Halo Patents as well as product drawings of the accused Pulse products which appear to show a one piece construction having an open bottom and side wall. (Id.)

Larson declares that each accused Pulse product is designed and configured to attach to a board that passes both AC and DC signals and therefore does not meet the "DC voltage only printed circuit board" claim restriction. (Decl. of Lawrence Larson ["Larson Decl."] (Doc. #266) at ¶ 3.) In connection with Pulse's Motion for Summary Judgment of Non-infringement, Gutierrez declared that he was familiar with the manufacturing process of the accused products, and that early on in the manufacturing process, the toroids were dipped in silicone material and then later were retained in their packages by a separate adhesive.

Viewing all evidence in the light most favorable to Pulse, as the Court must when deciding Halo's motion, there are genuine issues of material fact as to whether the H0022, H1260, H1305, H1174, and H0026 products meet the limitations of Claim 6 of the '985 Patent. Pulse's prior motion provided evidence that, while not sufficient to grant summary judgment to Pulse, creates a genuine issue of material fact as to whether the toroids in the accused Pulse products are retained in their packages by soft silicone. Accordingly, the Court will deny summary judgment on this issue.

E. Infringement of Claim 7 of the '985 Patent

Claim 7 of the '985 Patent requires the claim limitations of Claim 6 in addition to "a standoff for maintaining a distance between the bottom of said pins and said printed circuit board." The Court construed "standoff" to mean "a portion of the package designed to rest in contact with the printed circuit board after mounting in order to prevent the solder

posts from contacting the printed circuit board." (Claim Construction at 20.)

Halo argues that the products represented by Pulse products H0022, H1260, H1305, H1174, and H0026 read on all limitations of Claim 7 of the '985 Patent. As it did in its motion for summary judgment, Pulse argues that the standoff limitation of Claim 7 of the '985 patent is not present in the above accused products**.**

Bottoms declares that the accused Pulse products contain a standoff as required by Claim 7 of the '985 Patent. (12/22/2010 Bottoms Decl. at ¶ 28.) Bottoms bases his opinion on analysis of the accused Pulse Products and the claim language of Claim 7. (Id.) Drawings of the accused products appear to show ends walls, which also may serve as a standoff. (Id. at ¶ 26.) Gutierrez declares that none of the above accused pulse products has such a standoff. (Gutierrez Decl. at ¶¶ 13-24.) Gutierrez also states that the representative products include terminal pins that extend from the package side walls and below the package end walls for mounting onto the surface of a printed circuit board, and that these pins, as opposed to a standoff, prevent any portion of the package from resting in contact with the circuit board. (Id.)

Viewing all evidence in the light most favorable to Pulse, as the Court must when deciding Halo's motion, there are genuine issues of material fact as to whether the H0022, H1260, H1305, H1174, and H0026 products meet the limitations of Claim 7 of the '985 Patent. Pulse has offered evidence sufficient to create a genuine issue of material fact as to whether the accused products contain a standoff. Pulse offers the Gutierrez declaration supported by his analysis of the accused products and the Halo Patents for this proposition. Supported conflicting expert testimony is sufficient to create a genuine issue of material fact. Additionally, the side view drawings of the accused products do not conclusively show that the end wall is designed to rest in contact with the printed circuit board. Accordingly, Halo has not met its burden of showing no genuine issue of material fact remains as to the existence of a side wall designed to rest in contact with a printed circuit board. Therefore,

summary judgment that Pulse infringes on Claim 7 of the '985 patent is inappropriate. The Court will deny Plaintiff's motion in this respect.

F. Infringement of Claims 1, 2, and 8 of the '985 Patent

Claim 1 of the '985 Patent is materially similar to Claim 6 of the '985 Patent with the exception that the preamble of Claim 1 does not recite the "for mounting on a printed circuit board in an electronic device" language. The limitations of Claim 2 are materially similar to Claims 1 and 6 with the exception that Claim 2 does not require "one piece" construction, and, like Claim 1, does not contain the "for mounting on a printed circuit board in an electronic device" language in the preamble. Claim 8 of the '985 Patent contains the same limitations as Claims 2 and 6 with the exception that Claim 8 requires only one toroid transformer rather than a plurality of toroid transformers.

Halo relies on its earlier analysis of Claim 6 to allege that the products represented by Pulse products H0022, H1260, H1305, H1174, and H0026 infringe on Claims 1 and 2 of the '985 Patent. Halo also contends that Pulse products represented by 23Z110SMNL contain one toroid transformer and thus infringe on Claim 8 of the '985 Patent. Pulse relies on its earlier Motion for Summary Judgment of Non-infringement to argue that the accused products do not read on all the limitations of Claims 1, 2, and 8 of the '985 Patent.

As set forth earlier in this Order with respect to Claim 6 of the '985 Patent, there is a genuine issue of material fact as to whether the toroids of the accused products are retained in their packages by soft silicone material. Claims, 1, 2, and 8 of the '985 Patent require toroids to be retained in their packages by soft silicone. Accordingly, summary judgment in favor of Halo is not appropriate with respect to Claims 1, 2, and 8 of the '985 patent.

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G. Infringement of Claim 16 of the '985 Patent

Claim 16 of the '985 Patent Halo requires the following limitations:

> An electronic surface mount package comprising:
> a construction package having a first side wall and an open bottom,
> at least one toroid transformer carried within said package by a soft silicone material, said toroid transformer having a wire wrapped thereon,
> at least one terminal pin molded within and extending from the bottom of said package, said pin extending through a bottom of said first side wall and having a notched post upon which said wire from said transformer is wrapped and soldered thereon, wherein said post is substantially parallel to said first side wall, and a portion of said terminal pin extends from and is substantially perpendicular to said first side wall, said terminal pin further including a lead for mounting onto the surface of the printed circuit board,
> an end wall substantially perpendicular to said first side wall, wherein at least a portion of said end wall extends below said post, and
> a second side wall substantially parallel to said first side wall, and wherein said wire from said transformer is contained between first and second planes defined respectively, by an outside surface of said first side wall, and an outside package of said second side wall.

Halo argues that all of the accused products infringe on the limitations that are unique to Claim 16 of the '985 Patent. In its Response, Pulse does not specifically dispute the limitations that are unique to Claim 16. However, in its Motion for Summary Judgment, discussed above, Pulse argues that the toroids in its products are not retained by soft silicone, which would be required to infringe on Claim 16 of the '985 Patent.

As set forth earlier in this Order with respect to Claim 6 of the '985 Patent, there is a genuine issue of material fact as to whether the toroids of the accused products are retained in their packages by soft silicone material. Claims 16 of the '985 Patent requires toroids to be retained in their packages by soft silicone. Accordingly, summary judgment in favor of Halo is not appropriate with respect to Claim 16 of the '985 patent.

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G. Claim 1 of the '720 Patent

Claim 1 of the '720 Patent requires the following limitations:

> An electronic surface mount package for mounting onto the surface of a printed circuit board in an electronic device, said package comprising:
> a one piece open construction package having a side wall,
> a plurality of toroid transformers within said package, said transformers each having wires wound thereon,
> a plurality of terminal pins molded within the side wall of said package, the ends of the terminal pins forming solder posts and extending through and below the bottom of said side wall,
> said solder posts each having an hour-glass shaped notch upon which said wires from said transformers are wrapped and soldered thereon, respectively,
> the other end of each of the terminal pins extending in gull wing fashion outwardly from the side wall and below the bottom of the package for mounting onto the surface of the printed circuit board.

The Court construed "hour-glass shaped notch" to mean "a notch formed by two mirrored indentations on opposite edges of the solder post." (Claim Construction at 22.) The Court construed "gull wing fashion" to mean "extending outwardly from the case, then extending in a downward fashion away from the case, and then extending outwardly from the case." (Id.)

Halo argues that the H0022, H1260, H1305, H1174, H0026, and H0019 representative products infringe on Claim 1 of the '720 Patent. Halo contends that drawings of the accused products show that the accused products read on all limitations. Pulse responds that the accused products represented by the Pulse H0026 product utilize "J-leads" that do not extend in a gull wing fashion as terminal pins. Additionally, Pulse argues that Halo has not met its burden of showing no genuine issue of material fact remains because it only completes an analysis on the representative product H0022, and Halo merely states that analysis of the other representative parts yields similar results.

Drawings of the accused representative product H0022 appear to show that the product contains gull wing terminal pins. (Countryman Decl. (Doc. #248), Exs. 18, 19.) Drawings also show one piece construction and a plurality of toroid transformers. (Id.)

Drawings of the H0022 product also appear to show an hour glass shaped notch. (Id., Ex. 18.) Bottoms declares that the representative products include one or more terminal pins that are molded within and extend through and below the bottom of the side wall. (12/22/2010 Bottoms Decl. at ¶¶ 34-35.) Additionally, Bottoms states that the representative products have terminal pins that extend in a "gull wing" fashion. (Id. at ¶ 36.) Drawings of the H0026 product appear to show terminal pins extending in a "J lead" rather than "gull wing" fashion. (Mot. for Summ. J. of Non-Infringement (Doc. #239), Exs. 23, 24.)

Pulse has presented sufficient evidence to create a genuine issue of material fact as to whether the H0026 product contains terminal pins extending in a "gull wing" fashion. Accordingly summary judgment in favor of Halo on this issue is inappropriate and will be denied. Pulse does not respond specifically to Halo's argument that products other than those represented by the H0026 product infringe on Claim 1 of the '720 Patent. However, Pulse argues that Halo's "cursory" analysis of products other than the H0022 does not meet Halo's burden of showing no genuine issue of material fact as to whether the representative products read on all limitations of Claim 1. The Court agrees Halo has not met its burden with respect to products other than the H0022 and summary judgment will be denied in that respect. With respect to the H0022 representative product, Halo has provided sufficient evidence showing that the H0022 representative product reads on all limitations of Claim 1 of the '720 Patent. Pulse has not provided sufficient evidence creating a genuine issue of material fact as to whether the H0022 product reads on all limitations of Claim 1 of the '720 Patent. Accordingly, the Court will grant partial summary judgment in favor of Halo with respect to the H0022 product only.

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H. Claim 6 of the '720 Patent

Claim 6 of the '720 Patent requires the following limitations:

> An electronic surface mount package for mounting onto the surface of a printed circuit board comprising:
> an open construction package having a side wall,
> at least one toroid within said package in a soft silicone material, said transformer having a wire wound thereon,
> at least one terminal pin molded within the side wall of said package,
> said one end forming a solder post extending through and below the bottom of said side wall said solder post having a notched post upon which said wire from said transformer is wrapped and soldered thereon.

Halo argues that drawings and testimony regarding the H0022, H1260, H1305, H1174, H0026, and 23Z110SMNL representative products show that these products read on all limitations of Claim 6 of the '720 Patent. Pulse, as with Claim 1 of the '720 Patent, argues that Halo has not met its burden of showing no genuine issue of material fact remains as to whether the accused products read on all limitations of Claim 6 of the '720 Patent.

As set forth earlier in this Order with respect to Claim 6 of the '985 Patent, there is a genuine issue of material fact as to whether the toroids of the accused products are retained in their packages by soft silicone material. Claim 6 of the '720 Patent requires "at least one toroid transformer within . . . soft silicone material." Accordingly, there is a genuine issue of material fact as to whether the H0022, H1260, H1305, H1174, H0026, and 23Z110SMNL representative products meet this limitation. Accordingly, summary judgment on this issue is inappropriate and will be denied.

I. Claim 1, of the '785 Patent

Claim 1 of the '785 Patent requires the following limitations:

> An electronic surface mount package for mounting onto the surface of a printed circuit board comprising:
> a side wall with a bottom end,
> a plurality of toroid transformers within the package, the toroid transformers each having wires wrapped thereon,
> a plurality of terminal pins molded within the side wall and having a solder post with an end upon which the wires from the

> transformers are respectively wrapped and soldered thereon, each of the post ends extending beyond the bottom of the side wall.

Halo argues that the products represented by Pulse products H0022, H1260, H1305, H1174, H0019, and H0026 infringe on Claim 1 of the '785 Patent. Pulse does not respond specifically to arguments that the products represented by Pulse products H0022, H1260, H1305, H1174, H0019, and H0026 infringe on Claim 1 of the '785 Patent, but instead argues that Halo has not met its burden of putting forth a prima facie case of infringement of Claim 1 of the '785 Patent.

Halo has not met its burden of showing no genuine issue of material fact as to whether the accused products read on all limitations of Claim 1 of the '785 Patent. While Bottoms declares that the representative products meet all limitations of Claim 1, he did not set forth the factual basis for his findings. Accordingly, his declaration is not sufficient to show no genuine issue of material fact remains. Therefore, summary judgment on this issue will be denied.

J. Claims 2 and 26 of the '785 Patent

Claims 2 and 26 of the '785 Patent are similar to Claim 1, but both Claims require toroids to be retained in their packages by a soft silicone material. Halo contends that the products represented by Pulse products H0022, H1260, H1305, H1174, H0019, and H0026 have toroids retained in their packages by soft silicone material and hence read on all limitations of Claims 2 and 26 of the '785 Patent. In its response, Pulse does not respond specifically to the arguments that its products infringe on claims 2 and 26 of the '785 Patent. However, in its motion for summary judgment of non-infringement, Pulse argues that its accused products do not have toroids retained in soft silicone material.

As set forth earlier in this Order with respect to Claim 6 of the '985 Patent, there is a genuine issue of material fact as to whether the toroids of the accused products are retained in their packages by soft silicone material. Claims 2 and 26 of the '785 Patent

require toroids retained in their package by a soft silicone material. Accordingly, there is a genuine issue of material fact as to whether the H0022, H1260, H1305, H1174, H0026, and 23Z110SMNL representative products meet this limitation. Accordingly, summary judgment on this issue is inappropriate and will be denied.

K. Claims 18 and 48 of the '785 Patent

Claims 18 and 48 of the '785 Patent both require a standoff and a gap between the bottom end of the side wall and the standoff. Halo contends that the H0022, H1260, H1305, H1174, H0019, and H0026 representative products contain a standoff and hence infringe on Claims 18 and 48 of the '785 Patent. Pulse contends that Halo has failed to prove that any of the accused products include a gap between the bottom end of the side wall and the standoff as required by Claims 18 and 48 of the '785 Patent.

Bottoms declares that the representative products contain a gap between the standoff and the bottom end of the sidewall. (12/22/2010 Bottoms Decl. at ¶ 44.) Larson declares that, in all accused Pulse products, the side wall and end wall are continuously touching and there is no gap between them. (Larson Decl. (Doc. #266) at ¶ 6.) From drawings of the H0022 product, it is unclear whether this product contains a standoff and gap. (Countryman Decl. (Doc. #248), Ex. 18.)

There is a genuine issue of material fact as to whether the H0022, H1260, H1305, H1174, H0019, and H0026 representative products contain a standoff and a gap between the standoff and the bottom end of the side wall. From drawings of the representative products it is unclear whether a gap is present, and the parties have presented conflicting expert testimony on the issue. Accordingly, summary judgment on this issue is inappropriate and will be denied.

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L. Claim 40 of the '785 Patent

Claim 40 of the '785 Patent requires the following limitations:

> An electronic surface mount package for mounting onto the surface of a printed circuit board comprising:
> a first side wall with a bottom end,
> a plurality of toroid transformers within the package, the toroid transformers each having wires wrapped thereon,
> a plurality of terminal pins molded within the first side wall and having a solder post with an end upon which the wires from the transformers are respectively wrapped and soldered thereon, each of the post ends extending beyond the bottom end of the first side wall, wherein each of the post ends is substantially parallel to the first side wall, and a portion of each of the terminal pins extends from and is substantially perpendicular to the first side wall, each of the terminal pins further including a lead for mounting onto the surface of the printed circuit board, and
> a second side wall substantially parallel to the first side wall, and wherein the wires from the transformers are contained between the first and second planes defined, respectively, by an outside surface of the first side wall and an outside surface of the second side wall.

Halo contends that the H0022, H1260, H1305, H1174, H0019, H0026110SMNL representative products contain all limitations of Claim 40 of the '785 Patent and hence infringe on the '785 Patent. Halo provides an analysis of the drawing of the H0022 product and contends that it contains all the limitations of Claim 40 of the '785 Patent. Halo then asserts that analysis of the other representative products would show that these products read on all the limitations of Claim 40 as well. Pulse does not respond specifically to allegations that the above products read on the limitations of Claim 40 of the '785 Patent but contends that, for all Claims, Halo has not met its burden of showing no genuine issue of material fact as to whether all limitations are met.

Bottoms declares that the accused products contain posts that extend beyond the bottom end of a first side wall; that each of the posts is substantially parallel to the first side wall; that a portion of the terminal pins extends from and is substantially perpendicular to the first side wall; and that each of the terminal pins include a lead for mounting onto the surface of the printed circuit board. (12/22/2010 Bottoms Decl. at ¶ 45.) Drawings of the

H0022 product appear to show terminal pins extending through a side wall; posts being substantially parallel to the side wall; and a portion of the terminal pins substantially perpendicular to the side wall. (Countryman Decl. (Doc. #248), Ex. 18.) Drawings of the H1260, 23Z110SMNL, H1305, H1174, H0026, and H0019 also appear to show terminal pins extending through a side wall; posts being substantially parallel to the side wall; and a portion of the terminal pins being substantially perpendicular to the side wall. (Countryman Decl. (Doc. #248), Exs. 25-31.)

Viewing all evidence in the light most favorable to Pulse, there is a genuine issue of material fact as to whether the accused products read on all limitations of Claim 40 of the '785 Patent. While the drawings of the accused representative products and Bottoms' testimony provided evidence that the accused products contain posts that extend beyond the bottom end of the first side wall; that each of the posts is parallel to the first side wall; and that a portion of the terminal pins are substantially perpendicular to the side wall, Halo does not provide any evidence to support Bottoms' contention that the terminal pins contain leads for mounting onto a printed circuit board. It is not clear from drawings of the accused products that these products contain such leads. Accordingly, there is a genuine issue of material fact as to whether the H1260, 23Z110SMNL, H1305, H1174, H0026, and H0019 representative products read on all limitations of Claim 40 of the '785 Patent. Accordingly, summary judgement on this issue will be denied.

IV. INVALIDITY/VALIDITY (Doc. #250 and #240)

Under 35 U.S.C. § 102(b), a patent is invalid if "the invention was . . . in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States." Invalidity is an affirmative defense and the burden of proof lies with the party challenging the patent's validity. Electromotive Div. of Gen. Motors Corp. v. Transp. Sys. Div. of Gen. Elec. Co., 417 F.3d 1203, 1212 n.2 (Fed. Cir. 2005).

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To prove a patent invalid under the "on-sale" bar of § 102(b), the party claiming invalidity must prove that the invention in question was (1) the subject of a commercial, not experimental, sale, and (2) that the invention was ready for patenting. Allen Eng'g Corp. v. Bartell Indus., Inc., 299 F.3d 1336, 1353 (Fed. Cir. 2002). Factors to be considered when determining the experimental nature of a sale include:

> (1) the necessity for public testing, (2) the amount of control over the experiment retained by the inventor, (3) the nature of the invention, (4) the length of the test period, (5) whether payment was made, (6) whether there was a secrecy obligation, (7) whether records of the experiment were kept, (8) who conducted the experiment, . . . (9) the degree of commercial exploitation during testing[,] . . . (10) whether the invention reasonably requires evaluation under actual conditions of use, (11) whether testing was systematically performed, (12) whether the inventor continually monitored the invention during testing, and (13) the nature of contacts made with potential customers.

Id. (citing EZ Dock v. Schafer Sys., Inc., 276 F.3d 1347, 1357 (Fed. Cir. 2001)). Every factor may not be relevant in a particular case, rather the factors are to be balanced. Id.

An invention is ready for patenting if (1) it was actually reduced to practice or (2) the inventor prepared sufficiently specific drawings or descriptions "to enable a person skilled in the art to practice the invention." Pfaff v. Wells Elec., Inc., 525 U.S. 55, 67-68 (1998). "To demonstrate reduction to practice, a party must prove that the inventor (1) constructed an embodiment or performed a process that met all the limitations and (2) determined that the invention would work for its intended purpose." In re Omeprazole Patent Lit., 536 F.3d 1361, 1373 (Fed. Cir. 2008) (quotation omitted). Further, "[t]esting is required to demonstrate reduction to practice in some instances because without such testing there cannot be sufficient certainty that the invention will work for its intended purpose." Id. (quotation omitted).

A. August 5, 1994 Sale

Pulse argues that the Halo Patents are invalid under 35 U.S.C. § 102(b) because products embodying the Halo Patents were sold commercially more than a year before the

filing of the patent applications. Halo responds that Pulse cannot meet its burden to show that the August 5, 1994 transaction between Halo and PBL is invalidating under § 102(b) because the transaction was purely for experimental purposes and there is no evidence that the invention was ready for patenting more than a year before the first Halo Patent was. Pulse replies that it has put forth a prima facie showing that the August 5, 1994 sale was invalidating and Halo has not put forth sufficient evidence to rebut this showing. Additionally, Pulse contends that the experimental use exception cannot apply to the August 5, 1994 sale because the inventions already had been reduced to practice.

As the party claiming invalidity of the patents, Pulse bears the burden of showing that the invention in question was both (1) the subject of a commercial sale, and (2) that the invention was ready for patenting more than a year prior the date of the patent application. The Halo Patents were filed on August 10, 1995. Therefore, to be potentially invalidating, a commercial sale must have taken place prior to August 10, 1994. Only the August 5, 1994 sale is identified by Pulse to be an invalidating sale.

Even viewing all evidence in the light most favorable to Pulse, there is no genuine issue of material fact that the August 5, 1994 sale was for experimental, rather than commercial, purposes. The first, third, and tenth factors analyze (1) the necessity for public testing, (3) the nature of the invention, and (10) whether the invention reasonably requires evaluation under actual conditions of use. James Heaton avers that prior surface mount packages would warp and crack at high temperatures and Halo needed to test its prototypes to ensure that they offered a reasonable solution to these prior problems before contracting with customers. (12/22/2010 Heaton Decl. at ¶¶ 2-7.) Pulse does not provide evidence raising a genuine issue of material fact in this regard. Rather, Pulse attacks the credibility of James Heaton without providing any evidentiary basis for doing so. Thus, Pulse has presented no evidence raising a genuine issue of material fact that testing of the prototypes under actual conditions of use was necessary because of the nature of the invention.

The second, eighth, ninth, twelfth, and thirteenth factors are (2) the amount of control over the experiment retained by the inventor, (8) who conducted the experiment, (9) the degree of commercial exploitation during the experiment, (12) whether the inventor continually monitored the invention during the testing, and (13) the nature of the contacts made with potential customers. James Heaton avers that the prototypes were at all times under the control of the inventors at PBL or Halo. (Id. at ¶ 8.) Additionally, Heaton states that the Heatons personally performed and continually monitored all testing on the prototypes. (Id. at ¶ 5.) Halo also provides evidence that its first commercial exploitation of the Halo Patents took place weeks later on September 22, 1994. (Countryman Decl. (Doc. #248), Ex 11, Ex. 8 at 320.) Pulse does not provide any evidence creating a genuine issue of material fact with respect to these factors. Pulse does not dispute that the prototypes were at all times under the control of the named inventors, but rather attacks Heaton's credibility by questioning whether the alleged home testing even took place. Again, Pulse does not provide any evidentiary basis for attacking Heaton's credibility. Further, Pulse does not provide any evidence suggesting that Halo made contact with customers or commercially exploited the Halo Patents during testing. Thus, Pulse has presented no evidence raising a genuine issue of material fact as to whether the inventors at all times maintained control over the prototype, conducted and monitored the experiment, and did not exploit the Patents commercially or make contact with potential customers during the testing.

The fourth, seventh, and eleventh factors are (4) the length of the test period, (7) whether records of the experiment were kept, and (11) whether the testing was systematically performed. Jeff Heaton testified that the oven testing was performed as a quick yes or no test regarding whether the new design could withstand high temperatures. (Countryman Decl. (Doc. #248), Ex. 8 at 303-04.) Halo also contends that due to the quick nature and low complexity of the testing, the tests did not take a long time to perform and the Heatons did not keep detailed notes of the experiments. James Heaton states that while

the tests were done quickly, they were carried out in a systematic manner, control testing was performed on prior packages, and that he believes he sent a fax to PBL confirming the test results. (12/22/2010 Heaton Decl. at ¶ 4; Countryman Decl. (Doc. #248), Ex. 8 at 313-315, Ex. 9 at 503-07.) Pulse notes that Halo has not provided any "contemporaneous evidence" of the testing that corroborates Heaton's declaration. Pulse points out that Halo has not submitted evidence of testing that one would expect, such as notes and records of the experiment, or the fax Heaton allegedly sent to PBL confirming the test results. Viewing the absence of such evidence in the light most favorable to Pulse, there is a genuine issue of material fact that the length of the experiment, the records of the experiment, and the systematic nature of the experiment are indicative of the August 5, 1994 sale being an experimental sale.

The fifth factor is whether payment was made. The invoice in connection with the August 5, 1994 sale indicates that PBL charged Halo $300 for the parts it delivered. (Countryman Decl. (Doc. #248), Ex. 10.) The fact that Halo made "payment does not per se make a section 102(b) bar." Baker Oil Tools, Inc. v. Geo Cann, Inc., 828 F.2d 1558, 1564 (Fed. Cir. 1987). Indeed, "[i]nventors can request another entity's services in developing products embodying the invention without triggering the on-sale bar." Trading Techs. Int'l, Inc., 595 F.3d at 1362. Thus, that payment was made does not, in itself, trigger the on-sale bar under section 102(b).

The sixth factor is whether there is a secrecy obligation involving the use of the invention. Here, there was no explicit vow of secrecy between PBL and Halo regarding the August 5, 1994 transaction. However, as co-inventors of the product, it is not necessary for a confidentiality agreement to be in place regarding this sale. Other courts have found experimental use even where prototypes were given to outside mechanics where the inventor had "prior working relationships with those mechanics" without an explicit confidentiality agreement. Lisle Corp. v. AJ Mfg. Co., 398 F.3d 1306, 1315 (Fed. Cir. 2005); see also TP

Labs, Inc. v. Prof'l Positions, Inc., 724 F.2d 965, 972 (Fed. Cir. 1984). Given Halo's and PBL's relationship as co-inventors, the lack of a formal confidentiality agreement regarding the August 5, 1994 transaction does not raise a genuine issue of material fact that the sale was commercial, rather than experimental.

Viewing all evidence in the light most favorable to Pulse on Halo's motion, Pulse has not presented sufficient evidence to create a genuine issue of material fact that the August 5, 1994 sale was not for experimental purposes. Halo lacks evidence of the testing records and whether these tests were conducted systematically. Further, Halo does not dispute that it paid PBL for the parts. However, these factors are not enough to create a genuine issue of material fact as to the factors as a whole, especially given the co-inventor relationship between Halo and PBL and the fact that the invention was at all times under the control of the inventors. Accordingly, there is not a genuine issue of material fact that the August 5, 1994 sale was for experimental purposes.

Because the Court finds that Pulse has not presented sufficient evidence to create a genuine issue of material fact that the August 5, 1994 sale was experimental, the Halo Patents are not invalid under 35 U.S.C. § 102(b) as a matter of law. Thus, the Court will grant Halo summary judgment of no invalidity based on the August 5, 1994 sale. Accordingly, summary judgment to Pulse on the same issue will be denied.

B. Priority Date of the '720 Patent

Halo seeks summary judgment that its asserted claims of the '720 Patent are entitled to the August 10, 1995 filing date of the '985 Patent because the asserted claims are a continuation-in-patent which were disclosed in the prior patents. Pulse responds that the only filing date that the claims of the '720 filing date are entitled to is December 27, 1996, the date which the '720 Patent application actually was filed. Pulse contends that "empirical" evidence shows that the specification of the '985 Patent measures 169 lines and the specification of the '720 Patent measures 288 lines, an increase of over 70 percent.

Pulse argues that this increase shows that Halo's argument that the only new matter added to the '720 Patent is the reinforcement beam is inaccurate. Pulse also contends that the Patent Office's conclusion as to the priority date of the '720 Patent at least creates a genuine issue of material fact as to the priority date of the '720 Patent. Pulse further contends that sales of products after the August 10, 1994 cut-off afforded the '985 Patent but before the December 27, 1995 cut-off provided for the '720 Patent invalidate the '720 Patent.

A claim of a continuation-in-patent is entitled to the benefit of an earlier filed patent if the claim is disclosed in the parent patent's application. Waldemar Link v. Osteonics Corp., 32 F.3d 556, 558 (Fed. Cir. 1994). However, if the claims contain matters that were not disclosed in the parent patent, those claims are not entitled to the earlier filing date. Id.

Here, Bottoms declares that the only "new" material in the '720 Patent not covered in the '985 Patent relates to a reinforcement beam, something that is not claimed in Claims 1 or 6 of the '720 Patent. (12/22/2010 Bottoms Decl. at ¶ 8.) Bottoms further declares that Claims 1 and 6 of the '720 Patent recite features that were described in the '985 Patent. (Id.) Halo also provides an analysis of the limitations of Claims 1 and 6 of the '720 showing where they were disclosed in the '985 Patent. (Compare Countryman Decl. (Doc. #248), Exs. 1, 2.) This analysis shows that all limitations of Claims 1 and 6 of the '720 Patent were disclosed in the '985 Patent.

In the face of a comparison of Claims 1 and 6 of the '720 Patent and the prior claims of the '985 Patent, there is no genuine issue of material fact that Claims 1 and 6 of the '720 Patent were disclosed in the '985 Patent. Accordingly, the Court will grant summary judgment in Halo's favor that sales after August 10, 1994 do not invalidate the '720 Patent.

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C. Anticipation

A patent also may be invalid because the invention was anticipated by the prior art at the time the patent application was filed. Finisar Corp. v. DirecTV Group, Inc., 523 F.3d 1323, 1334 (Fed. Cir. 2008). "Invalidity by anticipation requires that the four corners of a single, prior art document describe every element of the claimed invention, either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without undue experimentation." Advanced Display Sys., Inc. v. Kent State Univ., 212 F.3d 1272, 1282 (Fed. Cir. 2000).

Pulse argues that the technology behind the Halo Patents was well known in the industry for many years before Halo filed is patent applications. Pulse contends that Claims 1, 2, and 26 of the '785 Patent are anticipated by the Pulse PE-64309 Product. Pulse provides a chart of Claims 1, 2, and 26 of the '785 Patent that purportedly shows how the PE-64309 Product anticipates these claims. (App. to Mot. for Summ. J. Non-infringement (Doc. #252), Ex. 69.) Pulse argues that there is no genuine issue of material fact that the subject matter covered by the Halo Patents was anticipated and therefore summary judgment in its favor is appropriate. Halo disputes only that the PE-64309 Product satisfies the "molded within" requirement of Claims 1, 2, and 26. Therefore, the Court will limit its analysis to whether the PE-64309 Product contains terminal pins that are molded within the sidewall.

There is conflicting testimony regarding whether the plurality of terminal pins are molded within the package. (Compare Reed Decl. (Doc. #252), Exs. 41 ["Lint Decl."] with Countryman Decl. (Doc. #267) at 276:18.) It is unclear from the drawings and product materials list for the PE-64309 product whether the PE-64309 contains a plurality of terminal pins. (Reed Decl. (Doc. #252), Exs. 53-55.)

Viewing all evidence in the light most favorable to Halo, Pulse has not met its burden of showing no genuine issue of material fact remains as to whether the PE-64309

Product contains all of the limitations of Claims 1, 2, and 26 of the '785 Patent such that a person of ordinary skill in the art could practice the invention. Accordingly, the Court will deny Pulse summary judgment on the issue of anticipation.

D. Obviousness

Under 35 U.S.C. § 103(a), a patent is invalid if "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." Thus, when a "patent simply arranges old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement, the combination is obvious." KSR Int'l. Co. v. Teleflex Inc., 550 U.S. 398, 417 (2007) (quotation omitted). Inquiries relevant to obviousness include; "(1) the scope and content of the prior art; (2) the level of ordinary skill in the prior art; (3) the differences between the claimed invention and the prior art; and (4) objective evidence of nonobviousness." Green Edge Enter., LLC v. Rubber Mulch Etc., LLC, 620 F.3d 1287, 1298 (Fed. Cir. 2010) (quotation omitted). However, "[t]he genius of invention is often a combination of known elements which in hindsight seems preordained. To prevent hindsight invalidation of patent claims, the law requires some teaching, suggestion or reason to combine cited references." McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1351 (Fed. Cir. 2001) (quotation omitted). Further, "when the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious." KSR, 550 U.S. at 416.

Pulse contends that the technology behind Halo's Patents has been available for years prior to Halo's application and that Halo merely combined known elements in predictable and conventional ways, as such Halo does not deserve patent protection. Pulse contends that the Asserted Halo Claims are obvious when referencing prior art in the Pulse

PE-64309 product and the Akachi reference. Pulse further argues that most of the Asserted Halo Claims are found in both the Pulse PE-64309 and the Akachi reference, and for those that are not, it would have been obvious to a person of ordinary skill at the time of the invention to modify the Pulse PE-64309 and/or the Akachi reference. The main categories of claims which Pulse contends are obvious from prior art are notched/hour-glass shaped posts, standoffs, posts substantially parallel to sidewalls, plurality of toroid transformers, transformers retained inside the package by soft silicone material, and terminal pins extending in a gull wing fashion outwardly from the sidewall.

Halo responds that the PE-64309 part and Akachi reference each are missing multiple limitations present in the Halo Patents. Halo contends that there would be no reason for someone of ordinary skill in the art to combine the PE-64309 and Akachi reference with each other and/or other elements disclosed in the Halo Patents. Further, Halo argues that the prior art at the time of its patents taught away from the combinations present in its patents and in any event, there are genuine issues of material fact regarding obviousness and summary judgment is inappropriate.

Viewing the evidence in the light most favorable to Halo, there is a genuine issue of material fact as to whether the technology behind the Halo Patents was obvious to one of ordinary skill in the prior art at the time of the invention. Halo has presented sufficient evidence, in the form of the Bottoms declaration, industry papers, and a Pulse white paper, to raise genuine issues of material fact that the prior art was teaching away from several key components of the Halo Patents. (See 1/13/2011 Bottoms Decl. at ¶¶ 30, 80, 81, 86-88, 90, 99; Countryman Decl. (Doc. #267), Exs. 13-15.) Further, Halo provided evidence that Pulse used features such as a standoff in some of its earlier products yet did not use a standoff in the PE-64309 to prevent problems of cracking, which later were solved by the developments of the Halo Patents. (1/13/2011 Bottoms Decl. at ¶ 82.) This evidence creates a genuine issue of material fact that the combination of prior art present in the Halo Patents was not

obvious.

Halo also presented sufficient secondary objective indicia of non-obviousness to raise a genuine issue of material fact that the technology covered by the Halo Patents was not obvious. Halo further presented evidence of the commercial success of the covered products, that the invention fulfilled a long-felt need, that other attempts at solving the cracking problem had failed, and that industry competitors are willing to license the technology from Halo as evidence of non-obviousness. (Countryman Decl. (Doc. #263), Ex. 40 at ¶ 40;1/13/2011 Bottoms Decl. at ¶ 100-01; Countryman Decl. (Doc. #267), Ex. 15.) Further, evidence that some potential customers were concerned about the novelty of the products using the technology covered by the Halo Patents is further evidence of non-obviousness. (Countryman Decl. (Doc. #263), Ex. 36.) Accordingly, the Court will deny Pulse's motion for summary judgment of invalidity based on obviousness.

V. EQUITABLE ESTOPPEL, LACHES, and FAILURE TO MARK (Doc. #249)

A. Equitable Estoppel

"Equitable estoppel is an equitable defense to infringement and may serve as an absolute bar to a patentee's claim of infringement." Scholle Corp. v. Blackhawk Molding Co., Inc., 133 F.3d 1469, 1471 (Fed. Cir. 1998). To support a defense of equitable estoppel in the patent context, a defendant must show:

> (1) the patentee, through misleading conduct, led the alleged infringer to reasonably believe that the patentee did not intend to enforce its patent against the infringer; (2) the alleged infringer relied on that conduct; and (3) due to its reliance, the alleged infringer would be materially prejudiced if the patentee were permitted to proceed with its charge of infringement.

Aspex Eyewear Inc. v. Clariti Eyewear, Inc., 605 F.3d 1305, 1310 (Fed. Cir. 2010). Equitable estoppel may arise where the misleading conduct is essentially inaction on the part of the patentee, "[h]owever, plaintiff's inaction must be combined with other factors respecting the relationship or contacts between the parties to give rise to the necessary

inference that the claim against the Defendants is abandoned." A.C. Aukerman Co. v. R.L. Chaides Constr. Co., 960 F.2d 1020, 1042 (Fed. Cir. 1992). A party threatening immediate or vigorous enforcement of its patent rights then delaying its claim for an unreasonably long time may be estopped from pursuing its claim. Meyers v. Asics Corp., 974 F.2d 1304, 1309 (Fed. Cir. 1992).

An alleged infringer ignoring or giving little weight to a patentee's offer to negotiate licenses may be evidence that the alleged infringer did not rely on the patentee's conduct. Id. Prejudice because of reliance may be either economic or evidentiary. Economic prejudice "may be shown by a change of economic position flowing from actions taken or not taken by the patentee." Aspex, 605 F.3d at 1312. However, the alleged infringer must prove that any increased expenditure is related to the actions taken by the patentee, and not merely a business decision. Gasser Chair Co., Inc. v. Infanti Chair Mfg. Corp., 60 F.3d 770, 774 (Fed. Cir. 1995). Evidentiary prejudice arises when key witnesses and/or documentary evidence is lost or witnesses' memories lessen because of the plaintiff's unreasonable delay. Meyers, 974 F.2d at 1308.

When "deciding whether to bar the suit on estoppel grounds, the court must consider all evidence relevant to the equities." Aspex, 605 F.3d at 1310. "[E]quitabble estoppel is not limited to a particular factual situation nor subject to resolution by simple or hard and fast rules." Aukerman, 960 F.2d at 1041.

Pulse argues that it was misled by Halo's conduct of sending two letters to Pulse not explicitly accusing Pulse of infringement at times when Pulse contends Halo already believed Pulse was infringing. Pulse states that it relied on Halo's misleading conduct by actively expanding the accused product lines. Further, Pulse contends that it has suffered evidentiary prejudice as a result of Halo's allegedly misleading conduct because one of the named inventors of the Halo Patents died two years ago and another inventor is now physically incapacitated and unable to testify. Pulse further states that the other available

inventors are now unable to recall important discussions relating to the case because those discussions occurred so long ago.

Halo responds that its conduct was not misleading in any way. Halo argues that Pulse has not shown it relied on any of Halo's activity or inactivity. Further, Halo contends that Pulse has not shown any material prejudice as a result of Halo's actions or inactions. Halo states that there has been no change in Pulse's economic position over the alleged period of delay. Additionally, Halo contends that Pulse has failed to identify any evidentiary prejudice as a result of Halo's activity or inactivity. Halo states that Pulse had the opportunity to depose the inventors it now complains are unable to testify, but did not do so.

Halo President James Heaton states that Halo was only "aware of the possibility Pulse was infringing" its patents at the time it sent the licensing letters to Pulse. (MSJ Estoppel, Ex. 5 ["7/20/2010 James Heaton Dep."] at 179-181.) Pulse "continued to actively expand its accused product lines" after receipt of the letters, and Pulse's sales of the accused products increased in the years after receiving the letters from Halo's counsel. (Decl. of Victor Aldaco (Doc. #252), Ex. 32 ["Aldaco Decl."] at ¶ 15; MSJ Estoppel, Ex. 28.) However, had Pulse believed that Halo intended to assert an infringement claim, Pulse "could have placed more emphasis on alternatives to the accused products," filed for a declaratory judgment, or taken measures to preserve documents in preparation for the present lawsuit. (Aldaco Decl. at ¶¶ 13-15.) No one at Pulse made a conscious decision that it was permissible to continue selling open header surface mounted transformer products after Pulse received the letters from Halo's counsel. (Countryman Decl. (Doc. #260), Ex. 32 ["Munson Dep."] at 282-83.) Rather, Pulse has contended that it "always has believed in good faith that its activities do not constitute infringement of any valid asserted claims of Halo's patents-in-suit." (Countryman Decl. (Doc. #269), Ex. 4.)

One of the named inventors of the Halo Patents, Mr. Loh, died in 2008, and another inventor, Mr. Lok, is now physically incapacitated and unable to testify. (MSJ

Estoppel, Ex. 15 at 45.) Inventor Jeff Heaton testified that he is unable to recall certain things related to the development of the Halo Patents. (Id. at 131-143.)

When viewing evidence in the light most favorable to Halo, Halo has presented sufficient evidence raising a genuine issue of material fact as to whether Halo should be estopped. Turning to the first factor of equitable estoppel, there is a genuine issue of material fact as to whether Halo's conduct was misleading and whether Halo led Pulse reasonably to believe that Halo did not intend to enforce its patents against Pulse. The July and August 2002 letters informed Pulse of the Halo Patents, and the August 2002 letter alerted Pulse only to the possibility that Pulse may be infringing. Halo then waited approximately four years before filing the present infringement action. A reasonable jury could find that the letters do not rise to the level of threatening vigorous enforcement then delaying bringing an action. The letters invite Pulse to enter into licensing negotiations but do not explicitly accuse Pulse of infringement. The letters also imply that Halo had yet to thoroughly investigate whether the Pulse products infringed its patents, and that if an infringement action were to come, it likely would take some time for the investigation to be conducted. Additionally, there is nothing in the relationship or contacts between Pulse and Halo that reasonably would indicate to Pulse that Halo did not intend to pursue its claims.

Additionally, there is a genuine issue of material fact that Pulse relied on Halo's activity and/or inactivity. There is evidence that no one at Pulse made a conscious decision to continue selling the accused products. Lack of a conscious decision to continue selling the accused products is evidence that Pulse did not rely on Halo's actions. Similarly, Halo presented evidence that Pulse always believed it was not infringing on the Patents, evidence which creates a genuine issue of material fact of whether Pulse relied on Halo's alleged misrepresentation that it would not bring suit. Further, Pulse ignoring Halo's attempts to negotiate license agreements, under Meyers, is evidence that Pulse did not rely on Halo's conduct. All evidence taken together and viewed in the light most favorable to Halo raises

genuine issues of material fact as to whether Pulse relied on Halo's conduct.

Additionally, there is a genuine issue of material fact as to whether Pulse would be materially prejudiced if Halo is allowed to continue with its infringement claim. While "could have" placed greater emphasis on alternative products had it not been misled by Halo's conduct, Pulse does not provide evidence that, but for Halo's actions, it would have focused on alternative products. Further, Pulse's sales of the accused products increased after Halo's counsel sent letters to Pulse informing them of the possibility of infringement. A reasonable jury could infer that Pulse would have taken its course of action regardless of any of Halo's conduct. This raises a genuine issue of material fact as to whether Pulse suffered economic prejudice as a result of Halo's conduct.

Likewise, there is a genuine issue of material fact that Pulse suffered evidentiary prejudice as a result of Halo's alleged misleading conduct. The fact that Pulse has not deposed the available Hong Kong inventor creates a genuine issue of material fact as to whether it would have deposed the other two Hong Kong inventors had they been available. Additionally, the two unavailable Hong Kong inventors were available at the commencement of the infringement suit and Pulse did not make arrangements to depose them. Although Pulse contends that it did not take efforts to preserve evidence potentially related to the infringement claims, it does not state what evidence it failed to maintain and how the failure to maintain the evidence is related to Halo's alleged conduct.

Viewing all evidence in the light most favorable to Halo, there are genuine issues of material fact as to whether Halo should be equitably estopped from asserting its patent claims. There is a genuine issue of material fact that Halo's conduct was misleading. There are also genuine issues of material fact that Pulse relied on Halo's allegedly misleading conduct and that it suffered economic or evidentiary prejudice because of its reliance. Accordingly, summary judgment on the issue of equitable estoppel is inappropriate and will be denied.

B. Laches

"The defense of laches is committed to the sound discretion of the district court." Aukerman, 960 F.2d at 1032. To prove laches, a defendant must show that the plaintiff delayed filing suit for an "unreasonable and inexcusable length of time after the plaintiff knew or reasonably should have known of its claim against the defendant; and . . . the delay resulted in material prejudice or injury to the defendant." Wanlass v. Gen. Elec. Co., 148 F.3d 1334, 1337 (Fed. Cir. 1998).

"The length of time which may be deemed unreasonable has no fixed boundaries but rather depends on the circumstances." Aukerman, 960 F.2d at 1032. Generally, "[t]he Circuit has pronounced a three or four-year delay unreasonable only when that delay was accompanied by extraneous improper tactics or misleading conduct by the plaintiff." IXYS Corp. v. Advanced Power Tech., Inc., 321 F. Supp. 2d 1156, 1163 (N.D. Cal. 2004) (citing MCV, Inc. v. King-Seeley Thermos Co., 879 F.2d 1568, 1572 (Fed. Cir. 1989); Rosemount, Inc. v. Beckman Instruments, Inc., 727 F.2d 1540, 1550 (Fed. Cir. 1984)). For example, the plaintiff co-inventor telling the patentee that he had no interest in possessing rights in the patent, then later bringing suit to be named on the patent was misleading conduct. MCV, 879 F.2d at 1572. A delay of more than six years raises a presumption that the delay is unreasonable. Wanlass, 148 F.3d at 1337. Material prejudice may be established by showing economic or evidentiary prejudice. Id.

Pulse argues that Halo brought suit after delaying an unreasonable and inexcusable amount of time. As discussed above, Pulse argues it has suffered evidentiary and economic prejudices as a result of Halo's alleged delay in bringing suit. Halo responds that the alleged delay was four years and Pulse is not entitled to the presumption of laches. Halo also states that the alleged delay was both reasonable and excusable. Additionally, Halo contends that Pulse has not shown evidentiary or economic prejudice.

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James Heaton testified that he believed Pulse to be infringing on the Halo Patents at the time the letters were sent. (7/20/2010 James Heaton Dep. at 179-180.) Halo brought suit in March 2007, over four years after Halo allegedly became aware of the alleged infringing activity. James Heaton testified that Halo was facing extreme financial pressures from 2002-2007 and could not afford to pursue a lawsuit. (Id. at 181.) Heaton also states that at this time his wife was terminally ill and he was focused on caring for her. (Id. at 182.)

Viewing all evidence in the light most favorable to Halo, Halo has presented sufficient evidence creating a genuine issue of material fact regarding laches. As an initial matter, Pulse is not entitled to the presumption of laches because the delay was approximately four years. Additionally, Pulse has not shown that the four year delay was accompanied by misleading conduct on Halo's part. The letters Halo sent do not rise to the level of misleading conduct. The letters informed Pulse of the possibility of infringement. Additionally, there are genuine issues of material fact as to whether Pulse was prejudiced by the delay. A reasonable jury could find that because Pulse has not taken steps to depose the remaining available Hong Kong inventor, and did not depose the unavailable inventors in the roughly two years that they were available, that Pulse would not have deposed the unavailable inventors. This raises a genuine issue of material of fact regarding Pulse suffering evidentiary prejudice. Further, as discussed above, there are genuine issues of fact as to whether Pulse would have taken the same actions regarding its product focus and hence whether Pulse suffered economic damages. Accordingly, summary judgment on laches is inappropriate and will be denied.

C. Failure to Mark

Title 35 U.S.C. § 287 limits damages a patentee is able to recover to those damages associated with products marked by the patent number on the product, or those damages occurring after an alleged infringer is on notice of the patented product.

Compliance with the marking portion of 35 U.S.C. § 287 is achieved when the "patentee consistently mark[s] substantially all of the patented product." Nike, Inc. v. Wal-Mart Stores, Inc., 138 F.3d 1437, 1446 (Fed. Cir. 1998). Marking ninety-five percent of relevant products has been deemed sufficient to comply with the marking statute. Maxwell v. J. Baker, Inc., 86 F.3d 1098, 1112 (Fed. Cir. 1996); see also Funai Elec. Co., Ltd. v. Daewoo Elecs. Corp., 616 F.3d 1357, 1374 (Fed. Cir. 2010). Where an item is too small to affix a patent number to the product itself, a patentee may affix a label to the package which carries the product. Sessions v. Romadka, 145 U.S. 29, 50 (1882).

Pulse argues that none of the products Halo sells physically are marked with any of the Halo Patent numbers. Halo responds that it marks its products' packaging and that Pulse has not provided any evidence that indicates that Halo consistently failed to mark substantially all of its products.

Jeff Heaton declares that Halo's products are too small to physically mark the products themselves, and instead marks the packaging with the associated patent numbers. (Pl's. Resp. to MSJ Estoppel (Doc. #258), Ex. 1 ["1/13/2011 Jeff Heaton Decl."] at ¶ 3; 7/20/2010 James Heaton Dep. at 172-73.) Halo employs several different ways of packaging its products including tape-and-reel, shipping tubes, and trays. (MSJ Estoppel, Ex. 14.) Halo marks the patents on the packaging, including all reels, vacuum sealed bags containing reels, all boxes in which the bagged reels are placed, all shipping cartons in which reels are placed, all bags in which shipping tubes are placed, all shipping cartons in which trays are placed, and on the data sheets for all products with the exception of Thin Net Transceiver ("TNT") modules. (1/13/2011 Jeff Heaton Decl. at ¶ 4; 7/21/2010 Jeff Heaton Dep. at 225-29; MSJ Estoppel, Ex. 9 ["11/19/2010 Jeff Heaton Dep."] at 344-386, 658-660.) Further, several photos of Halo packaging material show the packages marked with the associated patent numbers. (Countryman Decl. (Doc. #269), Exs. 20, 22, 23.)

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Halo sells TNT modules but does not mark them. (11/19/2010 Jeff Heaton Dep.) The patent marking convention referred to in the email does not apply to modules, including the TNT modules. (MSJ Estoppel, Ex. 11.) Halo does not mark patent numbers on the packaging of TNT modules because the patented parts of the TNT modules are not visible without looking inside the module. (1/13/2011 Jeff Heaton Decl. at ¶ 3.) The amount of TNT modules sold by Halo represent approximately one percent of Halo products sold. (Id. at 7.)

The evidence presented by Halo raises a genuine issue of material fact as to whether Halo consistently marked substantially all of its products. A reasonable jury could find that Jeff Heaton's declaration shows that Halo's products are to small to be marked themselves, and therefore that marking the products' packaging complies with § 287. Additionally, the declarations and testimony of Jeff and James Heaton creates a genuine issue of material fact as to whether Halo marks the packaging of substantially all of its products. Halo provides sufficient evidence to raise a genuine issue of material fact that the TNT modules, which it does not mark, constitute only one percent of the total number of products sold. A reasonable jury could conclude that Halo marks the roughly ninety-nine percent of remaining products, which would satisfy the requirements of marking substantially all of its products. Accordingly, there is a genuine issue of material fact that Halo marked substantially all of its products in compliance with 35 U.S.C. § 287. The Court will deny Pulse summary judgment on this issue.

VI. SALES OUTSIDE OF NORTH AMERICA (Doc. #251)

United States patent law offers protection "only domestically and does not extend to foreign activities." Microsoft Corp. v. AT & T Corp., 550 U.S. 437, 455 (2007) (quotation omitted). Title 35 U.S.C. § 271(a) makes it an act of infringement to make, use, import, offer to sell, or sell any patented invention within the United States without the authority of the patent holder. "It is well established that the reach of section 271(a) is

limited to infringing activities that occur within the United States." MEMC Elec. Materials, Inc. v. Mitsubishi Materials Silicon, 420 F.3d 1369, 1375 (Fed. Cir. 2005). "Mere knowledge that a product sold overseas will ultimately be imported into the United States is insufficient to establish liability under section 271(a)." Id. at 1377. Further, "the location of the contemplated sale controls whether there is an offer to sell within the United States." Transocean Offshore Drilling, Inc. v. Maersk Contractors USA, Inc., 617 F.3d 1296, 1309 (Fed. Cir. 2010).

Under 35 U.S.C. § 271(b) one who "actively induces infringement of a patent shall be liable as an infringer." "[T]o succeed on a claim of inducement, the patentee must show, first that there has been direct infringement, [and] second, that the alleged infringer knowingly induced infringement and possessed specific intent to encourage another's infringement." Minn. Mining & Mfg. Co. v. Chemgue, Inc., 303 F.3d 1294, 1304-05 (Fed. Cir. 2002).

Induced infringement "requires knowledge that the induced acts constitute patent infringement." Global-Tech Appliances, Inc. v. SEB S.A., 131 S. Ct. 2060, 2068 (2011). The knowledge element can be satisfied if it is shown that the defendant was "willfully blind" to the existence of a patent. Id. at 2071. "While proof of intent is necessary, direct evidence is not required; rather, circumstantial evidence may suffice." MEMC, 420 F.3d at 1378 (quotation omitted). A manufacturer providing e-mail communications and other technical support to third parties in the United States, even though the manufacturer sold the product to a different party abroad, creates a genuine issue of material fact that the manufacturer intended to induce infringement. MEMC, 420 F.3d at 1379-80. Moreover, failure of a manufacturer to obtain an opinion of counsel that a manufacturer's activities are not inducing infringement may be probative of a manufacturer's intent to induce infringement. Broadman Corp. v. Qualcomm Inc., 543 F.3d 683, 699 (Fed. Cir. 2008).

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A. Direct Infringement

Pulse argues that Halo has failed to show that it is liable for direct infringement on the majority of its sales of accused products. Pulse states that the majority of the accused products were manufactured, ordered, invoiced, and shipped outside of North America. Pulse argues it should not be liable for infringement based on sales outside of North America. Further, Pulse argues that it has sold relatively few accused products to Cisco and that while it does engage in periodic pricing discussions with Cisco in the United States, these talks were merely forecasts and were not guarantees that Pulse would receive these orders from Cisco contract manufacturers.

Halo argues that Pulse's discussions with Cisco regarding pricing of the accused products took place in the United States and that these discussions constitute offers for the purposes of § 271(a). Further, Halo argues that the prices paid by Cisco contract manufacturers are almost exclusively the same as those negotiated by Cisco, indicating that sales to contract manufacturers were dependent on the offers to sell Pulse made to Cisco in the United States. Accordingly, Halo argues that Pulse directly infringes on the Halo Patents when it sells to Cisco contract manufacturers, even if delivery of such products occurs abroad. Halo also argues that even though accused products sold to manufacturers other than Cisco are delivered abroad, the negotiations regarding these sales often take place in the United States and hence the sales themselves take place in the United States.

Of the $250.6 million in accused products sold by Pulse since March 15, 2001, $210.8 million was shipped outside of North America. (App. to Defs.' Mot. for Summ. J. No Liability (Doc. #253), Exs. 1, 2.) Since at least March 15, 2001, all of the accused products have been manufactured in China. (Id., Ex. 5 ["8/20/2009 Carpenter Dep."] at 137; Decl. of John Carpenter (Doc. #253) ["Carpenter Decl."] at ¶ 6.) Further, since at least March 15, 2001, all purchase orders for accused products that were shipped outside of North America were received at Pulse's sales offices outside of North America. (Id. ¶¶ 6-7.) All

accused products eventually shipped to Pulse's customers outside of North America were at no point, in transit or otherwise, in the United States. (Id. at ¶ 8.)

Pulse has sold relatively few accused products to Cisco and its subsidiaries. (App. MSJ No Liability (Doc. #253), Ex. 7 at 94-95, 127-28.) Cisco negotiates the prices that its contract manufacturers pay to Pulse for the accused products. (Id. at 45-47, 53-54, 120-122.) For each Cisco contract manufacturer (Hon-Hai/Foxconn, Flextronics, Celestica, and Jabil), the manufacture, invoicing, shipping, and delivery took place outside of the United States. (Carpenter Decl. at ¶¶ 19-22.)

Pricing discussions with Cisco take place from the Pulse sales office in San Diego, California. (Countryman Decl. (Doc. #260), Ex. 3 ["Vasquez Dep."] at 37, 50.) Pulse engineers have worked with Cisco engineers in the early stages of Cisco's design in Cisco's locations in Austin, Texas and San Jose, California. (Id. at 169-70.) Additionally, Pulse provides technical support for the accused products to Cisco, among other customers, in the United States. (Countryman Decl. (Doc. #260), Ex. 1 ["Carpenter Dep."] at 314-321; Ex. 12 ["Benjamin Dep."] at 65-71.) A Pulse employee attended regular sales meetings at Cisco offices as a Pulse representative discussing product pricing, among other topics. (Vasquez Dep. at 82-83.) Further, another Pulse employee testified that he has attended various meetings with Cisco executives in the United States and that if there is a problem with parts Cisco obtained from Pulse, Pulse provides technical support in the United States to attempt to rectify the problem. (Benjamin Dep. at 65-66, 71-72.)

Pulse has provided evidence that of the $250.6 million in accused products sold by Pulse since March 15, 2001, the entirety was manufactured outside of North America, and $210.8 million was shipped outside of North America. Halo does not provide any evidence disputing that the products were manufactured overseas or the amount of products shipped outside of North America. Rather, Halo argues that because some pricing discussions took place in the United States, Pulse "offered to sell" the accused products in

the United States. It is well settled that liability under § 271(a) requires infringing activity within the United States. MEMC, 420 F.3d at 1375. Further, under Transocean, it is not the location of the offer to sell, but rather the location of the contemplated sale that determines whether an offer to sell is made in the United States. Although Halo has provided evidence indicating that pricing discussions took place between Pulse and its customers in the United States, Pulse has provided evidence that the majority of its accused products were manufactured and shipped outside of the United States. Halo does not provide sufficient evidence that Pulse shipped these products into the United States. Accordingly, there is not a genuine issue of material fact that for these products, Pulse did not directly infringe the Halo patents. Therefore, Pulse is not liable for direct infringement based on its sales of accused products outside of the United States.

B. Indirect Infringement

Pulse argues that Halo has failed to present evidence that Pulse is liable for indirect infringement under § 271(b). Pulse argues that Halo has not presented any evidence which a reasonable jury could find that any of Pulse's customers directly infringed on the Halo Patents. Further, Pulse contends that it has no knowledge of where the end products incorporating accused Pulse products end up, thus, even if Halo were able to show direct infringement by some of Pulse's customers, Halo cannot show that Pulse had knowledge or intended to induce the alleged infringement.

Halo responds that there is, at a minimum, a genuine issue of material fact that Pulse's sales and offers to customers where delivery occurred abroad indirectly infringe on the Halo Patents. Halo argues that Pulse knowingly induces others to ship accused products back into the United States, making Pulse guilty of indirect infringement. Halo states that there is ample evidence that some of the accused Pulse products that are shipped outside of the United States are eventually sold, offered for sale, used, and imported into the United States whether as stand alone products or incorporated into end products that are sold in the

United States.

Pulse customers do not provide Pulse with information about where the end products incorporating accused Pulse products ultimately end up. (Carpenter Decl. at ¶ 10.) The accused Pulse products are components of computers, servers, internet routers, switches, and hubs. (Carpenter Dep. at 345-348.) Twenty-four to thirty-six percent of computers sold worldwide during the relevant time period were sold in the United States. (Countryman Decl. (Doc. #260), Ex. 39.) Pulse is aware that its customers incorporate Pulse products into products delivered to manufacturers such as Lucent, Apple, Avaya, Canon, Cisco, Dell, HP, IBM, Intel, Motorola, NEC, and Nortel for use in end products. (Carpenter Dep. at 47-48, 75-76, 83, 91, 97, 241-243, 287-88.) The annual sales reports from these manufacturers show that the yearly percentage of end products sold in the United States during the relevant period ranged from 7.1-66.0 percent. (Countryman Decl. (Doc. #267), Exs. 26-36.) A Pulse employee also testified that he believed at least some Cisco end products incorporating the accused products come back to the United States. (Carpenter Dep. at 351-54.) Pulse did not make efforts to obtain a legal opinion that its products did not infringe on the Halo Patents. (Munson Dep. at 282-83.)

Pulse has visited at least fifty U.S.-based entities to promote its accused products. (Carpenter Dep. at 315-16.) Pulse employees gave on-site technical presentations to customers in the United States to promote use of the accused products. (Id. at 318-21.) Further, Pulse provides customer service support to customers in the United States. (Id. at 337-43.)

Indirect infringement under § 271(b) requires only an act of infringement by a third party and knowing inducement and intent to encourage infringement. Halo has presented evidence that a substantial number of the types of end-products into which Pulse's customers incorporate accused Pulse products eventually are sold in the United States. While Halo does not provide direct evidence about whether, and the number of, accused

Pulse products that end up in the United States, Pulse's corporate representative testified that he believed at least some of the accused products end up in the United States. This type of circumstantial evidence has been held to be substantial evidence of indirect infringement. Lucas Aerospace, Ltd. v. Unison Indus., L.P., 899 F. Supp. 1268, 1286-87 (D. Del. 1995) (evidence that the defendants supplied fifty percent of a third party's requirements for particular engine component coupled with evidence that substantial percentage of third party's engines made their way to the United States was sufficient to create a genuine issue of material fact regarding indirect infringement). Accordingly, based on the evidence provided by Halo, a reasonable jury could conclude that Pulse's customers infringe on Halo's patents by bringing accused products into the United States.

To survive summary judgment of no liability for indirect infringement, Halo also must also show there is a genuine issue of material fact as to whether Pulse knowingly induced infringement and possessed specific intent to encourage infringement. Here, Halo provides evidence that Pulse did not obtain an opinion of counsel that its actions did not induce infringement, even after being alerted to the potentiality of infringement by letters from Halo's counsel. Evidence of this type has been found sufficient to support a jury finding inducement of infringement. Broadman, 543 F.3d at 699.

Further, Halo presented evidence that Pulse actively promotes its accused products to end users in the United States who purchase products incorporating the accused products from Pulse's customers. Halo offers evidence that Pulse employees conduct site visits and give technical presentations to end users in the United States. Further, Halo provides evidence that Pulse offers customer support to, and makes accommodations to the manufacturing process for, end users in the United States. Evidence of this nature has been deemed sufficient to permit a reasonable jury to find inducement of infringement. MEMC, 420 F.3d at 1379. Additionally, Pulse's corporate witness testified to his belief that end products containing the accused Pulse products are offered for sale in the United States. A

reasonable jury could conclude that the support and other actions taken by Pulse with respect to end users in the United States are intended to induce infringement. Accordingly, Halo has presented sufficient evidence creating a genuine issue of material fact that Pulse indirectly infringed on Halo's patents under § 271(b). The Court, therefore, will deny summary judgment on this matter.

VII. MOTION TO STRIKE PULSE'S NEW SUMMARY JUDGMENT IN REPLY AND TO AMEND THE PARTIES' SEPTEMBER 2010 STIPULATION (Doc. #279)

In its Reply in connection with its Motion for Summary Judgment of Invalidity, Pulse raises the argument that Halo's allegations that the PE-64309 part, which was on sale before the Halo Patents were filed, infringes on the Halo Patents, demonstrates that the Halo Patents are invalid as a matter of law. Halo filed the present motion to strike alleging that the PE-64309 was included on the Stipulated Representative Products List in error, and further, that Pulse should not be allowed to raise an argument for the first time in reply. Halo requests that the Court strike this argument from Pulse's Reply and amend the Parties' Stipulation to remove the PE-64309 part from the list of accused Pulse products. Pulse argues that it always has alleged that the PE-64309 invalidates the Halo Patents and that Halo should not be able to reap the benefits, but not suffer the detriments of, the efficiencies created by the Stipulated Representative Products List.

The Court finds that it is in the interests of justice to strike Pulse's argument and to remove the PE-64309 part from the accused product list. A party may not raise an argument for the first time in a reply brief. Graves v. Arpaio, 623 F.3d 1043, 1048 (9th Cir. 2010). Further, given the thousands of products on the Stipulated Representative Product List, the potential for inadvertent errors is great. Additionally, the Court's ruling does not unfairly prejudice Pulse because Pulse still will be able to argue that the PE-64309 reads on all of the Asserted Halo Claims and thus the Halo Patents are invalid. However, Pulse will not be able to rely on Halo's erroneous inclusion of the PE-64309 part on the accused

products list to satisfy its burden as a matter of law.

VIII. CONCLUSION

IT IS THEREFORE ORDERED that Defendants' Motion for Summary Judgment of No Infringement (Doc. #239) is hereby DENIED.

IT IS FURTHER ORDERED that Plaintiff's Motion for Summary Judgment of Infringement (Doc. #245) is hereby GRANTED in part and DENIED in part. Plaintiff's Motion is GRANTED with respect to products represented by the H0022 product with respect to Claim 1 of the '720 Patent only. Plaintiff's Motion is denied in all other respects.

IT IS FURTHER ORDERED that Plaintiff's Motion for Summary Judgment of No Invalidity (Doc. #240) is hereby GRANTED.

IT IS FURTHER ORDERED that Defendants' Motion for Summary Judgment of Invalidity (Doc. #250) is hereby DENIED.

IT IS FURTHER ORDERED that Defendants' Motion for Summary Judgment of Equitable Estoppel, Laches, and Failure to Mark (Doc. #249) is hereby DENIED.

IT IS FURTHER ORDERED that Defendants' Motion for Summary Judgment of No Liability for Sales Activity Outside of North America (Doc. #251) is hereby GRANTED in part and DENIED in part. Defendants' Motion is granted with respect to direct infringement for products sold outside of North America and denied in all other respects.

IT IS FURTHER ORDERED that Plaintiff's Motion to Strike and to Amend the Parties' Stipulation (Doc. #279) is hereby GRANTED. The parties' Stipulated Representative Products List (Doc. #217) is hereby amended to remove the PE-64309 product.

DATED: September 6, 2011

PHILIP M. PRO
United States District Judge