UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

ASETEK HOLDINGS, INC., *et al.*,

Plaintiffs,

v.

COOLIT SYSTEMS, INC.,

Defendant.

_____/

No. C-12-4498 EMC

ORDER GRANTING IN PART AND DENYING IN PART DEFENDANT'S AND PLAINTIFFS' MOTIONS FOR SUMMARY JUDGMENT

(Docket Nos. 195, 200)

In 2012 Plaintiffs Asetek Holdings, Inc. and Asetek A/S (collectively, "Asetek") filed suit against Defendant CoolIT Systems, Inc. ("CoolIT") asserting that CoolIT infringed and continues to infringe two of Asetek's patents: U.S. Patent No. 8,240,362 (the '362 patent) and U.S. Patent No. 8,245,764 (the '764 patent). CoolIT counterclaimed, alleging that the '362 and '764 patents are invalid, seeking declaratory judgment of non-infringement, and claiming infringement of CoolIT's patent, U.S. Patent No. 8,382,456 (the '456 patent). Claims 17-19 are at issue with respect to the '456 patent. After a Markman hearing, the Court construed five disputed terms relevant to one or both of the Asetek patents.[1] *See* Docket No. 155 ("Asetek Claim Construction Order"). At the same time, the Court construed seven disputed terms of the '456 patent. *See* Docket No. 156 ("'456 Claim Construction Order").

[1] The Asetek Claim Construction Order applies to the instant case as well as to a separate infringement action brought by Asetek in this District against a company called Cooler Master (No. C-13-0457 JST).

Currently pending before the Court are cross-motions for summary judgment. CoolIT moves for summary judgment of non-infringement of Asetek's patents, no damages for sales made by CoolIT outside of the U.S., no lost profits damages, invalidity of Asetek's '764 patent, infringement of CoolIT's '456 patent, and no willful infringement. *See* Docket No. 195 ("CoolIT Motion"). Asetek moves for summary judgment of sales within the meaning of 35 U.S.C. § 271(a), infringement of Asetek's '764 patent, and non-infringement of CoolIT's '456 patent. *See* Docket No. 200-3 ("Asetek Motion"). Asetek subsequently withdrew its claim for willful infringement. Accordingly CoolIT's motion is GRANTED as to Asetek's willful infringement claim. The Court held a hearing on both motions on July 24, 2014. As discussed below, the Court also GRANTS Asetek's request for an order barring CoolIT's expert from making certain arguments that conflict with the Court's claim construction order. The Court otherwise DENIES Asetek and CoolIT's motions for summary judgment.

I. FACTUAL & PROCEDURAL BACKGROUND

The Asetek patents-in-suit are the '362 and '764 patents. Both patents generally describe improvements to a liquid-cooling system for the CPU of a mainstream computer system, such as a personal computer. Historically, most CPUs utilized air-cooling systems. Due to the exponential growth of CPU speeds (the '362 and '764 patent specifications observe that CPU speed is believed to double around every 18 months), it was desirable to achieve higher cooling efficiency, such as through liquid cooling systems. The '362 patent generally describes the innovation of an integrated element combining a pump, a reservoir, and a cold plate. The '764 patent generally describes the innovation of dividing the reservoir into vertically-spaced dual chambers.

The CoolIT patent-in-suit is the '456 patent. In general, the CoolIT patent teaches a "pump expansion vessel" that accommodates "coolant volume spikes" caused by coolant expansion in a closed pump liquid cooling system through the use of a "resiliently compressible member," which compresses when the coolant expands. CoolIT is not a United States entity – it is a Canadian company headquartered in Calgary.

II. DISCUSSION

A. Legal Standard

Under Rule 56(a), the Court must grant summary judgment to a moving party when the "movant shows that 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). To show that there is no genuine dispute of fact, the movant should cite to specifics in the record, show that the record does not establish a genuine dispute, or demonstrate that an adverse party cannot dispute the facts with admissible evidence. *See* Fed. R. Civ. P. 56(c).

Thus, as with a directed verdict under Rule 50(a), if a nonmoving party bears the burden of proof, then the Court should grant summary judgment if there is a "complete failure of proof concerning an essential element of the nonmoving party's case." *Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986) (citations omitted). To oppose summary judgment, a nonmoving party "may not rest upon the mere allegations or denials of his pleading, but must set forth specific facts showing that there is a genuine issue for trial." *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986).

"Issues of fact are genuine only if the evidence is such that a reasonable jury could return a verdict for the nonmoving party." *Madey v. Duke Univ.*, 307 F.3d 1351, 1358 (Fed. Cir. 2002) (citing *Liberty Lobby*, 477 U.S. at 255). If a finding of a disputed fact is "necessary and relevant to the proceeding" then it is "material to the outcome of the suit." *Id.* (citation omitted). The Court should draw any justifiable factual inferences and resolve any doubts in favor of the nonmoving party. *See Liberty Lobby*, 477 U.S. at 255. The non-moving party need not resolve the issue of material fact "conclusively;" instead "all that is required is that sufficient evidence supporting the claimed factual dispute be shown to require a jury or judge to resolve the parties' differing versions of the truth at trial." *Id.* at 249 (citation omitted).

B. Sales

United States patent law does not have extraterritorial effect. The patent law states: "Except as otherwise provided in this title, whoever without authority *makes, uses, offers to sell, or sells any patented invention, within the United States* or imports into the United States any patented invention during the term of the patent therefor, infringes the patent." 35 U.S.C. § 271(a) (emphasis added).

By contrast, "[f]oreign laws alone, not United States law, currently govern the manufacture and sale of components of patented inventions in foreign countries." *Microsoft Corp. v. AT&T Corp.*, 550 U.S. 437, 455-56 (2007). In other words, "foreign exploitation of a patented invention . . . is not infringement at all." *Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc.*, 711 F.3d 1348, 1371 (Fed. Cir. 2013).

In *MEMC Elec. Materials, Inc. v. Mitsubishi Materials Silicon Corp.*, the Federal Circuit affirmed summary judgment in favor of plaintiff MEMC. MEMC alleged that Samsung Austin was the true customer of defendant SUMCO, the accused infringer. 420 F.3d 1369, 1372 (Fed. Cir. 2005). SUMCO argued that it sold only to Samsung Japan, which then sold the wafers to Samsung Austin; SUMCO did not negotiate the transaction between Samsung Japan and Samsung Austin. Plaintiff MEMC pointed to evidence that showed that SUMCO knew its accused wafers were being delivered to Samsung Austin and that SUMCO provided follow-up technical support after the wafers were delivered. This, MEMC argued, showed that Samsung Japan was a mere conduit, and that Samsung Austin was the true customer. *Id.* The district court disagreed and granted summary judgment to SUMCO. The Federal Circuit affirmed, finding there was thus no sales in the United States by SUMCO.

The Federal Circuit in *MEMC* did not define a bright line rule for determining when a sale occurs in the United States. The court acknowledged that "the criterion for determining the location of a "sale" under section 271(a) is not necessarily where legal title passes, because the 'more familiar places of contracting and performance' may take precedence over the passage of legal title." *MEMC*, 420 F.3d at 1377 (observing that a sale is not extraterritorial "simply because an article is delivered 'free on board' outside of the forum.") (citation omitted). In doing so the MEMC court gave weight to the lack of evidence of "contracting and performance," *e.g.*, the lack of evidence of any negotiations between SUMCO and Samsung's U.S. subsidiary. *Id.* In light of this lack of evidence regarding sale, the court held that "any 'sale' of the wafers took place between SUMCO and Samsung Japan, and the sale occurred in Japan where all of the *essential activities* took place." *Id.* (emphasis added). "Essential activities" of sale would include controlling purchase orders, deciding order volume, and paying for the devices. *Id.*

Similarly, cases following *MEMC* rejected formalistic and mechanical tests. Instead, the Federal Circuit has borrowed from the approach in personal jurisdiction cases that interpreted where a sale takes place. *See Litecubes, LLC v. N. Light Products, Inc.*, 523 F.3d 1353, 1370 (Fed. Cir. 2008) (determining there was "no basis for construing the location of a 'sale' differently [from cases addressing "sale" in the context of personal jurisdiction] when the issue is whether the plaintiff has established that the sale took place within the United States for the purposes of infringement."). In particular, the Federal Circuit relied on reasoning set forth in *North American Philips Corp. v. American Vending Sales, Inc.*:

> [U]nlike the "making" and the "using" of an infringing article, which as purely physical occurrences are relatively straightforward to place, the "selling" of an infringing article has both a physical and a conceptual dimension to it. That is to say, it is possible to define the situs of the tort of infringement-by-sale either in real terms as including the location of the seller and the buyer and perhaps the points along the shipment route in between, or in formal terms as the single point at which some legally operative act took place, such as the place where the sales transaction would be deemed to have occurred as a matter of commercial law.

Litecubes, 523 F.3d at 1369-70 (citing *North American Philips Corp. v. American Vending Sales, Inc.*, 35 F.3d 1576, 1579 (Fed.Cir.1994)). Thus, the analysis may encompass varying aspects of the contractual relationship in determining the site of the sales.

In the case at bar, the parties disagree as to whether CoolIT's sales to a retailer called Corsair were sales within in the United States. CoolIT alleges that its sales to Corsair of the accused products were entirely extraterritorial sales to a Hong Kong subsidiary of Corsair. Corsair Components and Corsair Memory are both located in Fremont. Prior to 2010, Corsair's business was conducted through Corsair Memory, and the foreign subsidiaries were wholly-owned by Corsair Memory. In 2010, Corsair underwent a restructuring wherein Corsair Memory became a wholly-owned subsidiary of Corsair Components. At this time, the foreign subsidiaries, including Corsair (Hong Kong) became either direct or indirect subsidiaries of Corsair Components. *See* McCauley Decl., Ex. 1. [redacted] Dion Decl., Ex. J, 295:4-10. CoolIT characterizes the sales as from a Canadian company (CoolIT) to Corsair (Hong Kong), "a

Hong Kong entity, paid for by a Hong Kong entity, and delivered to a Hong Kong entity in Hong Kong." CoolIT Motion at p. 10. On the other hand, Asetek points to negotiations and other contacts between CoolIT and employees of Corsair's *domestic* entities, such as Corsair Memory and Corsair Components, entities that both appear to operate in or around Fremont, California. Asetek argues that these contacts, along with aspects of Corsair's purchase orders, demonstrate that although Corsair (Hong Kong) appears on the contract with CoolIT, in reality, the sales were within the United States for purposes of 35 U.S.C. § 271(a). Asetek Motion at p. 1. The relevant facts are as follows.

The parties do not dispute that CoolIT entered into a Product Purchase Agreement ("PPA") with Corsair on October 6, 2010. *See* Docket No. 23 ("Lyon Decl." ¶ 3). This was approximately two years prior to the August 14, 2012 issue date of the first Asetek patent-in-suit. Corsair's CEO, Andy Paul, testified that there was [redacted] The PPA is an agreement [redacted] As noted above, Corsair (Hong Kong) Ltd. is a wholly-owned subsidiary of Corsair Components. Pursuant to the PPA, Corsair (Hong Kong) Ltd. issues purchase orders to CoolIT for the accused products. Lyon Decl. ¶ 4.

CoolIT conceded, both at the hearing and in its papers, that there were "a limited number of transactions" directly between CoolIT and a Corsair entity *in the United States* in addition to sales to Corsair (Hong Kong) Ltd., and that the PPA governed those U.S. sales. CoolIT Motion, p. 10, n. 3. In other words, the parties do not dispute that [redacted] Instead, CoolIT takes the position (more clearly articulated at the hearing), that because the PPA does not itself effectuate a sale, that agreement would not bear on the question of where the sales took place. Instead, CoolIT contends that the *purchase orders* reflect the sales agreements, if any.

The Court does not agree. The PPA provides an overarching transaction to the commercial relationship between CoolIT and the Corsair entities; CoolIT has not demonstrated the PPA had no legal effect on sales simply because they were ultimately effectuated by a purchase order. For

example, general [redacted] *See MEMC*, 420 F.3d at 1376 (listing control over how many products are ordered as "essential activity").

Even assuming *arguendo* that the PPA does not shed light on the sales relationship between CoolIT and Corsair, the purchase orders alone, on their face, do not establish that the agreement to sell was solely between Corsair Hong Kong and CoolIT. [redacted] *See* Lyon Decl., Ex. B. [redacted]

While CoolIT maintains that it is "indisputable" that Ms. Reyes did not issue the relevant purchase orders, Asetek has adduced evidence to dispute this fact. Asetek has pointed to correspondence where Corsair employees discuss [redacted] Asetek also points to reasons to question the credibility of [redacted] Asetek Motion at 9. More broadly, Asetek has identified evidence showing instances [redacted]

[redacted] While a reasonable jury might agree with CoolIT's position that Rosie Reyes merely "assist[ed] in the issuance of purchase orders," CoolIT Motion at p. 8, a reasonable jury might also conclude that in commercial actuality, it was Corsair's U.S. entities that issued the purchase orders, and Corsair's Hong Kong subsidiary existed primarily [redacted]

Thus, even if the focus were only on purchase orders, they alone raise genuine disputes of fact. These disputes concern material facts, because sending a purchase order can "constitute[] an essential element of a 'sale' that occurred within the United States." *Fellowes, Inc. v. Michilin Prosperity Co., Ltd.*, 491 F. Supp. 2d 571, 579-80 (E.D. Va. 2007).

Alternatively, Asetek has pointed to contacts between CoolIT and Corsair's U.S. entities concerning the negotiation of agreements and related activities. CoolIT argues that the PPA and other facts before the issue date of the Asetek patents-in-suit are irrelevant, because acts that take place before the patents issue do not infringe. *See* Docket No. 204 ("CoolIT Opp.") at p. 8. That argument is not persuasive. While Asetek relies in part upon [redacted] (*see* Asetek Motion at p. 8), the pre-2012 evidence is relevant to show a course of dealing and to establish relationships that inform the business and contractual relationships that persist to the present.

In addition to Corsair's U.S. entities' involvement in the PPA and the SMA, Asetek has identified evidence that [redacted]

[redacted] These facts are not offered to show infringement, but rather to evidence that Corsair's U.S. employees play a part in the essential activities of sale, including acting in the role of "Buyer" specifically set out in the PPA. *See, e.g.*, McCauley Decl., Ex. 14 ¶ 4 [redacted] Given that these contracts [redacted] they are relevant to whether or not there is a "sales relationship" between CoolIT and a U.S. company. *See MediaTek Inc. v. Freescale Semiconductor, Inc.*, 11-CV-5341 YGR, 2014 WL 580836 at *4 (N.D. Cal. Feb. 13, 2014) (determining that the governing purchase agreement "provides tangible evidence of a sales relationship between two U.S. companies.").

On the other hand, as stated above, there is evidence that the major agreements are signed by, purchase orders issued by, and payments are made from, Corsair (Hong Kong). On this record, "triable issues of facts exist," and summary judgment is not proper. *Id.* at * 3. The Court therefore DENIES both Asetek's motion and CoolIT's motion for summary judgment as to whether sales to Corsair were sales within the United States.

C. Infringement

There is a two-step process of determining infringement: (1) "the claim must be properly construed to determine its scope and meaning;" and (2) "the claim as properly construed must be compared to the accused device or process." *Glaxo, Inc. v. Novopharm, Ltd.*, 110 F.3d 1562, 1565 (Fed. Cir. 1997). Step one is a question of law. *See Bayer AG v. Elan Pharm. Research Corp.*, 212 F.3d 1241, 1247 (Fed. Cir. 2000). Step two is a question of fact. *See id. Gart v. Logitech, Inc.*, 254 F.3d 1334, 1343 (Fed. Cir. 2001) ("[C]omparison is a question of fact."). To prove infringement, the patent holder must demonstrate that the preponderance of the evidence shows that the "accused device infringes one or more claims of the patent either literally or under the doctrine of equivalents." *Bayer*, 212 F.3d at 1247. If the accused device lacks even a single claim limitation, there is no literal infringement as a matter of law. *Id.*

Summary judgment regarding whether or not the claims read on the accused device, "can only be granted if, after viewing the alleged facts in the light most favorable to the non-movant, there is no genuine issue whether the accused device is encompassed by the claims." *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1304 (Fed. Cir. 1999); *Bell Atl. Network Servs., Inc. v. Covad Commc'ns Grp., Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001) ("[S]ummary judgment is proper only if "no reasonable jury could return a verdict for the nonmoving party.").

1. Infringement of Asetek's '362 Patent

Asetek claims infringement of claims 14, 15, and 17-19 of the '362 patent. Claim 14 of the '362 patent is a representative claim. In relevant part it calls for:

> A cooling system for a processing unit positioned on a motherboard of a computer, comprising:
>
> a **reservoir** configured to be coupled to the processing unit positioned on the motherboard at a first location, the **reservoir** being adapted to pass a cooling liquid therethrough, wherein the **reservoir** includes an upper chamber and a lower chamber, the upper chamber and the lower chamber being separate chambers containing cooling liquid that are separated by at least a horizontal wall and fluidly coupled together by one or more passageways, at least one of the one or more passageways being a **substantially circular passageway** positioned **on the horizontal wall,** the **reservoir** further including a heat exchanging interface configured to be placed in separable thermal contact with the processing unit, the heat exchanging interface being removably attached to the **reservoir** such that the heat exchanging interface forms a boundary wall of the lower chamber of the **reservoir;**
> . . .
> a pump configured to circulate the cooling liquid between the reservoir and the heat radiator, the pump including a motor having a rotor, a stator, and an impeller . . . at least partially submerged in the cooling liquid in the reservoir, **wherein a speed of the impeller is configured to be varied independent of the speed of the fan.**"

(Emphasis added).

CoolIT requests summary judgment that its products do not infringe the "asserted claims of the '362 patent at least because the accused products lack the claimed 'reservoir,' 'substantially circular passages,' and passages that are 'on the horizontal wall.'" CoolIT Motion at p. 4. Asetek does not seek summary judgment with respect to infringement of the '362 patent. However it seeks to bar CoolIT's expert from presenting certain arguments regarding the reservoir claim. *See* Asetek Motion at p. 18; Asetek Opp. at pp. 2-3.

In this case, the parties do not seek a refinement or revision of the Court's claim construction orders. *See* July 24, 2014 Hearing Transcript at pp. 4-6, 13-14; *cf. O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co., Ltd.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) ("When the parties present a fundamental dispute regarding the scope of a claim term, it is the court's duty to resolve it."). The question is therefore whether, applying the Court's constructions from the Markman hearing, there are no genuine disputes of for the jury to resolve.

a. Reservoir

CoolIT moves for summary judgment on the basis that its accused devices do not have a "reservoir." The Court construed reservoir as "a receptacle or chamber for holding a liquid or fluid." Asetek Claim Construction Order at p. 6. At the Markman hearing, CoolIT expressly stated that it did not object to this construction. *Id.* at p. 9. CoolIT's expert opined that CoolIT's accused products lack the claim limitation of a reservoir, because (1) the liquid in the flow passages between a pump means is "continuously flowing all throughout" and therefore the pump means is not "holding" a liquid or fluid. CoolIT Motion at p. 4; and (2) the volume of liquid in the pump head is a fraction of the overall volume of fluid in the system. *Id.*

As part of claim construction, the Court rejected CoolIT's proposed "not in normal fluid flow" requirement. Asetek Claim Construction Order at p. 7. The Court observed that "[t]he claims in both the '362 and '764 patents indicate that the reservoir in an integral part of fluid flow for cooling." *Id.* Nonetheless, CoolIT's expert, Dr. Pokharna, testified in support of its motion for summary judgment that he interpreted the term "reservoir" to mean "not in fluid flow." McCauley Decl., Ex. 31 at 78:20-79:3. At his deposition Dr. Pokharna acknowledged that his interpretation conflicts with the Court's rejection of a "not in fluid flow" limitation. *Id.* at 98:4-10. Thus, Dr. Pokharna's opinion regarding the meaning of "holding" conflicts with the Court's claim construction and is not creditable. *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 981 (Fed. Cir. 1995) aff'd, 517 U.S. 370 (1996) ("[T]he trial court properly rejected . . . extrinsic evidence to the extent it contradicted the court's construction of the claims based on the specification and prosecution history.").

With respect to the relative volume argument, CoolIT has not shown that, as a matter of

claim construction, the reservoir must have a defined relative volume. At best, a genuine dispute of material fact exists regarding whether the accused devices meet the reservoir claim limitation. The Court DENIES CoolIT's request for summary judgment. Further, Asetek's request that Dr. Pokharna be prohibited from presenting an opinion that interprets the term "reservoir" to mean "not in fluid flow" is GRANTED.

b. Substantially Circular Passages

In claim construction, the Court construed "substantially circular passages" to have its plain and ordinary meaning. Asetek Claim Construction Order at. p. 12. CoolIT argues that the passage in the CoolIT products is not substantially circular. CoolIT argues that its decision to employ a "substantially rectangular shape" was an intentional design choice that "created a far larger opening than a circular opening would in the same space." CoolIT Motion at p. 5. In support of its claims CoolIT points to the computer-assisted design files for the accused product, which it says shows that the passageway is "amorphous" and not substantially circular.

Asetek's expert, Dr. Tilton, has opined that the challenged passageway is "substantially circular." Asetek's expert supported his opinion using the understanding of "one of ordinary skill in the art" coupled with analysis of a three-dimensional plastic model of the interior of CoolIT's reservoir and the subject passageway. *See* Docket No. 207 ("Smyth Decl." Exs. 1; 2). Dr. Tilton used this model to explain his view on how the passageway is substantially circular in three dimensions. Smyth Decl., Ex. 2 at 88:8-91:19. He specifically described the engineering design utility created by the beveled edges in the passageway. *Id.* at 89:8-25.

The accused devices do not need to posses "circular" passages to infringe. The Court already rejected CoolIT's proposed construction of "circular," because it, among other things, would "read the word 'substantially' out of the claim." Asetek Claim Construction Order at p. 13-14. Neither party requests that the Court revisit or refine the claim construction and neither party proposes an alternative construction.

The construction of the Court provides as much guidance as possible, and the Court sees no need to amend or modify it. So stated, based on the facts of this case in which the characterization of the passage particularly in three dimensions is not without ambiguity, this is an issue on which

reasonable jurors may differ. Specifically, applying the Court's construction, there is a genuine issue of material fact regarding whether the rounded corners of the passage's "amorphous" opening and its beveled edges in three dimensions render the passage "substantially circular" or not.

In this regard, *Winans v. Denmead*, 56 U.S. 330 (1853), is analogous. The court held that "[w]hether, in point of fact, the defendant's cars did copy the plaintiff's invention . . . is a question for the jury, and the court below erred in not leaving that question to them upon the evidence in the case." *Id.* at 344. There, the plaintiff argued that an octagonal car was substantially equivalent to a conical car:

> [I]f the original construction of the body in right lines saved the infringement, an hundred-sided polygon would be without the patent; and also that, in point of fact, even the conical car was oftener a polygon than a true curve, owing to the character of the material from which it was built; and that if, by accident, it came from the shops a true theoretical cone, a day or two's use made a polygon of it; and that the immediate tendency of the load of coal, when put into an octagon car, was to bulge out its size and convert it into a conical one. All of which was urged for the purpose of showing that the question was necessarily a question as to whether the change of form was colorable or substantial-a question of fact, which it belonged to the jury to determine.

Id. at 333. The *Winans* court agreed, declining to elevate form over substance and leading to the doctrine of equivalents. *Id.* at 343. The substantiality of any differences was deemed a jury question. *Id.* at 344. Once the court construes the patent, it is the province of the trier of fact to weigh the various perspectives, examine how the design manifests in practice, and to compare the accused device to the claim as it has been construed. CoolIT's request for summary judgment on this ground is DENIED.

c. On the Horizontal Wall

The question here is whether the "horizontal wall" extends beyond the vertical wall of the volute casing and, even if not, whether the fact that the passage runs through the horizontal wall can constitute being "on the horizontal wall." CoolIT argues that "CoolIT's fluid passageway extends from the vertical part of the upper passageway housing and not the horizontal wall separating the upper and the lower passageways." Asetek disputes this, pointing to its expert's testimony that the "three-dimensional metes and bounds" of the horizontal wall does not stop at the vertical wall of the

volute casing where the passage starts. Asetek Motion at p. 5. Meanwhile, CoolIT concedes that "[t]he Tilton Expert Report appears to identify the entire horizontal portion of the pump head as the 'horizontal wall.'" The Asetek expert also specifically opined that a wall has an internal and external surface. *See* Smyth Decl., Ex. 2 at 77:4-13. More importantly, CoolIT's own expert admitted that the passageway runs 'through' the horizontal wall that separates the upper and lower chambers. *See id.*, Ex. 3 at 153:20-154:19. Thus, on this record, it cannot be said that there are no factual disputes appropriate for resolution by the jury. *See, e.g., Litecubes*, 523 F.3d at 1374 (Fed. Cir. 2008) (finding that in the face of conflicting evidence, the jury is entitled to credit one expert's testimony over that of another when determining whether a claim limitation is met). CoolIT's request for summary judgment is DENIED.

d. Impeller Whose Speed is Configured to be Varied

CoolIT contends that its accused devices lacks the claim limitation of an "impeller whose speed is configured to be varied"[2] because "the pump in CoolIT's products operates at a constant speed (in revolutions per minute) and, therefore, the impeller is independent of the fan but its speed is not configured to be varied." CoolIT Motion at p. 7. Nevertheless, CoolIT's own expert opined that an independent impeller motor could be enough to satisfy this limitation in connection with his invalidity opinions. *See* Docket No. 195-15 ("Dion Decl.," Ex. L at p. 21). Not only has CoolIT's expert taken inconsistent positions, *see Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1330 (Fed. Cir. 2003) ("It is axiomatic that claims are construed the same way for both invalidity and infringement."), Asetek's expert offered specific evidence regarding a mechanism for varying the impeller speed:

> [The impeller is] configured to be plugged into a standard fan connector on the motherboard, and it's pretty well known that those connectors, you can vary the speed through the BIOS of the computer, or you could apply a different voltage to that connector, which would cause the speed to run at a different – or the – the pump to run at a different speed. So there's a number of ways you could vary the speed of the impeller. And then the fan itself, which would be mounted to the radiators, it's not powered by the same connector. So, likewise, it could be varied independently. It's kind of a standard – standard

[2] None of the terms in this claim limitation was subject to claim construction in connection with the Markman hearing.

> practice in the devices where these – within the computers where these devices are used.

Dion Decl., Ex. H at 101:21-102:10. Thus, it cannot be said, as a matter of law, the claim limitation of an impeller whose speed is configured to be varied is not met. As a result, a dispute of material fact exists. CoolIT's request for summary judgment on this issue is DENIED.

2. Infringement of Asetek's '764 Patent

Asetek alleges infringement of claims 1-15 and 17-18 of the '764 patent. With respect to the '764 patent, Asetek seeks summary judgment of infringement. CoolIT seeks summary judgment of non-infringement. The only dispute is whether CoolIT's accused devices meet the claim limitations of a "reservoir" and "fluidly coupled."

Claim 15 of the '764 patent is a representative claim. In relevant part it calls for:

> a **reservoir** including an impeller cover, an intermediate member and a heat exchange interface, wherein a top wall of the reservoir and the impeller cover define a pump chamber for housing the impeller, and the intermediate member and the heat exchange interface define a thermal exchange chamber, the pump chamber and the thermal exchange chamber being spaced apart from each other in a vertical direction and **fluidly coupled** together . . .

(Emphasis added).

a. Reservoir

CoolIT, referring back to the reservoir arguments discussed *supra*, alleges that its products do not infringe the '764 patent because of the lack of a "reservoir." CoolIT Motion at p. 8. The Court construed the term "reservoir" in the same way with respect both to the '362 and '764 patents. Asetek Claim Construction Order at pp. 6-9. Without further reasoning, CoolIT merely incorporates its arguments regarding the '362 patent, asserting that "for the same reasons that CoolIT's products do not infringe the 'reservoir' limitation of the '362 patent, they do not infringe the 'reservoir' limitation of the '764 patent." CoolIT Motion at p.8. As discussed with respect to the '362 patent, the argument that a "reservoir" is not in normal fluid flow is contrary to the Court's construction and rejected.

However, the rejection of Dr. Pokharna's interpretation of "holding" is not enough to grant summary judgment in Asetek's favor. In its opposition, Asetek does not address the relative volume

argument that CoolIT makes in its motion. CoolIT argued that its devices did not have a reservoir, because the volume of coolant in the pump head is a fraction of the overall volume of fluid in the system. CoolIT, based in part on the relative volume argument, characterizes its accused device as having "flow passages" and not a reservoir. *See* CoolIT Motion at p. 5. Asetek's expert, Dr. Tilton, appears to agree that the volume of fluid accumulation can distinguish a reservoir from a "channel," thus arguably agreeing in part with CoolIT's relative volume argument. *See* Dion Decl., Ex. M at 27. For instance, in his report on validity, Dr. Tilton distinguishes the Koga "channel" from a "chamber" by describing the channel as a "flow-through region that would not allow the coolant to accumulate and absorb heat from the heat generating component." *Id.* Similarly, at the hearing, counsel for Asetek stressed that the Koga prior art did not have a thermal "chamber" because the "sucking channel" held only 3% of the relevant fluid flow. *See* July 24, 2014 Hearing Transcript at ¶. 68-70. This suggests determining whether something is a "chamber," "channel," and "reservoir" may turn on the relative volume of the area in which coolant may accumulate.

Drawing all reasonable inferences in CoolIT's favor, and viewing the evidence in the light most favorable to it, a reasonable jury could credit the distinction between flow passages and reservoir. A reasonable jury, based on the record, could conclude either way, and this precludes summary judgment. Asetek and CoolIT's motions for summary judgment are DENIED. As with the '362 patent, Asetek's request that the Court bar CoolIT from presenting Dr. Pokharna's opinion that the term "reservoir" means "not in fluid flow" is GRANTED.

b. Fluid Coupling

CoolIT argues that its products do not infringe the '764 patent because of the lack of "fluid coupling" between the pump chamber and the thermal exchange chamber. The Court construed "fluidly coupled" or "coupled" as "fluidly connected." Asetek Claim Construction Order at p. 10. CoolIT argues that its "products use an intermediate member, which forms an intermediate chamber vertically displaced from the pump chamber and also vertically displaced from the thermal exchange chamber." CoolIT Motion at p. 8.

CoolIT, however, concedes that claim 15 of the '764 Patent specifically calls for an intermediate member. CoolIT Motion at p. 10. Further, the Court rejected any requirement of

"direct" connection in its construction. Asetek Claim Construction Order at p. 10. Instead "the Court's ruling here [is] that, where a means of coupling is specified, that is the exclusive means of connection." *Id.* at p. 12. Hence, the existence *vel non* of an intermediate member does not preclude the chambers from being fluidly coupled. Moreover, at the hearing, it was apparent that the intermediate member was a rubber or plastic insert, and not an "intermediate chamber." Thus, even though not required by this Court's construction, the chamber is directly fluidly coupled.

CoolIT's motion for summary judgment of non-infringement is DENIED, because CoolIT's argument is predicated on rejected claim constructions. With respect to Asetek's motion for summary judgment, while the Court finds that the "fluid coupling" limitation has been met, a material dispute of fact remains pertaining to "reservoir." As a result, Asetek has not shown that, as a matter of law, the accused device reads on every claim. Thus, summary judgment regarding infringement is DENIED as to Asetek. *See Perkin-Elmer Corp. v. Westinghouse Elec. Corp.*, 822 F.2d 1528, 1533 (Fed. Cir. 1987) (citation omitted) ("[I]n order for a court to find infringement, the plaintiff must show the presence of every element or its substantial equivalent in the accused device.").

3. Infringement of CoolIT's '456 Patent

CoolIT seeks summary judgment of infringement of its patent. Asetek seeks summary judgment of non-infringement. There are three claim limitations that CoolIT points to: "mechanically coupled with the cap and the base member;" "a cap defining a recess at least partially defining the reservoir;" and a "port."[3] Asetek, in turn, seeks summary judgment as to the lack of a "port."

Claim 17 is a representative claim of the '456 patent:

> A cooling system for a computer, wherein the cooling system comprises:
> a heat exchanger and a pump;
> a housing defining an impeller chamber and a reservoir, wherein the impeller chamber and the reservoir are positioned directly adjacent to each other in the housing and separated from each other by a housing wall defining a **port** configured to fluidicly couple the

[3] CoolIT did not seek claim construction of these terms at the Markman hearing.

> impeller chamber and the reservoir with each other, wherein the housing comprises:
>
> a base member,
>
> **a cap defining a recess at least partially defining the reservoir,** and
>
> a mid-portion positioned between and **mechanically coupled with the cap and the base member**;
>
> wherein a portion of the pump is positioned within the impeller chamber, and
>
> wherein a portion of the wall separating the impeller chamber and the reservoir from each other defines a retainer; and
>
> a resiliently compressible member positioned in the recess defined by the cap and configured to resiliently compress in response to a volumetric expansion of a liquid coolant, wherein the retainer is configured to prevent the resiliently compressible member from blocking a fluid flow through the **port** in the housing wall.

(Emphasis added.)

a. Mechanically Coupled with the Cap and the Base Member

Broadly speaking, the accused Asetek products have a cap, a middle impeller cover, and a bottom base member, which are sometimes referred to by different names. *See* CoolIT Motion at ¶. 19-20; Dion Decl., Ex. N at p. 19, ¶64. The experts dispute whether the middle portion, the impeller cover, is "mechanically coupled" with the base member.

In the accused Asetek products, the impeller cover is press-fit into the cap and then the cap is connected by screws directly to the base member. When the cap and base member are screwed together, the unit is sealed by compressing an O-ring. Dion Decl., Ex. N at p. 19, ¶64; Smyth Decl., Ex. 2 at 163:1-25. In other words, the impeller cover is snapped into the cap and then sandwiched between the cap and the base when the cap and base are screwed together. In Dr. Tilton's view, the impeller cover is in mere "mechanical contact" with the base; it is not "mechanically coupled" since the impeller cover is not directly affixed to the base. *Id.* Dr. Tilton opines that "mechanical coupling" requires something along the lines of fasteners, glue, welding, or press-fit that would attach the base to the impeller cover. Smyth Decl., Ex. 2 at 164:9-17. CoolIT contends, on the other hand, that Dr. Tilton's admission that the impeller cover is in "mechanical contact" with the base member is sufficient to meet the claims limitation.

Drawing all reasonable inferences in favor of the non-movant, the parties have raised genuine disputes of material fact. A reasonably jury could conclude for either party as to whether the impeller cover is "mechanically coupled." Both motions for summary judgment on this point are DENIED.

b. A Cap Defining a Recess at Least Partially Defining The Reservoir

As described above, the '456 patent discloses an invention with a cap, mid-portion, and base. The cap must define a recess that partially defines the reservoir. CoolIT argues that Asetek cannot deny that its products meet this limitation. CoolIT points to testimony from Dr. Tilton, where it says Dr. Tilton abandoned his claim that Asetek's Gen IV products lack the "requisite 'recess.'" CoolIT Motion at p. 20. CoolIT points to a short excerpt of deposition testimony, where Dr. Tilton testifies "That, I guess, is true. The recess – that entire flat surface is very slightly below the lip that holds the O-ring in place." Dion Decl., Ex. H at 189:8-13. CoolIT claims that this demonstrates that the cap has a recess. The question, however, that Dr. Tilton answers is ". . . and that entire flat surface that we discussed sits in the recess?" *Id.* In other words, the "entire flat surface" referred to in the question is *the cap*, which Dr. Tilton says is entirely flat because it has no recess. *Id.* at 188-19:25. Instead, Dr. Tilton identifies a lip that retains the O-ring groove as defining a recess that the flat surface of the cap sits in–*i.e.*, the flat surface is slightly recessed, because it sits next to a raised lip that holds the O-ring. *Id.* at 188:12-25. Further, Dr. Tilton testified that the resiliently compressible member is "press fitted into a recess in the intermediate member of the cooling head" and *not* into the "recess" of the cap. Dion Decl., Ex. N at p. 29.

Drawing all reasonable inferences in favor of Asetek, a reasonable jury might determine the relevant portion of the cap to be entirely flat and that resiliently compressible member is not press fitted into the recess. On this record, there is a material dispute of fact regarding whether the O-ring lip suffices to define a recess that partially defines the reservoir. Because a reasonable jury could find either way, CoolIT's motion for summary judgment is DENIED.

c. "Port"

CoolIT's expert agrees that the Asetek accused devices lack a port. Instead, CoolIT relies on the doctrine of equivalents to assert that a recess in the cap is the equivalent of a "port" in the

housing wall. Asetek argues in its summary judgment motion that prosecution history estoppel bars CoolIT from making a doctrine of equivalents argument. Asetek seeks summary judgment because (1) its products lack a port; and (2) claims 18 and 19 depend from claim 17, making summary judgment appropriate for claims 17-19 appropriate.

i. Prosecution History Estoppel

A "narrowing amendment made to satisfy any requirement of the Patent Act may give rise to an estoppel." *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 535 U.S. 722, 736, 122 S. Ct. 1831, 1839 (2002). This occurs when "an amendment is made to secure the patent and the amendment narrows the patent's scope." *Id.* The rationale is that "[a] patentee who narrows a claim as a condition for obtaining a patent disavows his claim to the broader subject matter, whether the amendment was made to avoid the prior art or to comply with § 112." *Id.* at 736-37.

As a result, "when the court is unable to determine the purpose underlying a narrowing amendment-and hence a rationale for limiting the estoppel to the surrender of particular equivalents-the court should presume that the patentee surrendered all subject matter between the broader and the narrower language." *Id.* at 740. The patentee then "bears the burden of proving that an amendment was not made for a reason that would give rise to estoppel" as well as "the burden of showing that the amendment does not surrender the particular equivalent in question." *Id.*

A patentee may meet this burden and rebut the presumption by, among other things, showing that the amendment bears "no more than a tangential relation to the equivalent in question." *Integrated Tech. Corp. v. Rudolph Techs., Inc.*, 734 F.3d 1352, 1356 (Fed. Cir. 2013). This exception is "very narrow." *Id.* at 1358. It requires the patentee to "prove by a preponderance of the evidence that, based on the prosecution history, the 'objectively apparent reason for the narrowing amendment' was only tangentially related to the equivalent." *Id.* at 1359.

In this case, CoolIT amended claim 1 of the '456 patent in February of 2011, as shown below:

> 34. (currently amended) A computer cooling system comprising: a liquid cooled heat exchanger and a pump circuit providing liquid coolant to the liquid cooled heat exchanger, the pump circuit including: a pump including a housing defining therein an inner chamber of fixed volume, the inner chamber including at least an

> impeller chamber and a reservoir, the impeller chamber and the reservoir being positioned directly adjacent in the pump housing, separated by a wall and in fluid communication through a **port** in the wall; an inlet through the housing ~~providing communication~~ opening to the ~~inner chamber~~ reservoir, apart from the **port**; an outlet through the housing ~~providing communication to~~ opening from the ~~inner chamber~~ impeller chamber, apart from the **port**; a pumping mechanism in the ~~inner chamber~~ impeller chamber; a resiliently, compressible member in the reservoir accommodating a portion of the fixed volume of the inner chamber, the resiliently, compressible member being compressed in response to expansion of the liquid coolant; and, a retainer in the inner chamber to hold the resiliently, compressible member in a position away from moving out of the inner chamber or into a position blocking fluid flow through the pump; a pump discharge tubing extending between the pump outlet and the heat exchanger, and a pump return tubing extending between the heat exchanger and the pump inlet, the pump circuit providing the liquid coolant to the heat exchanger in a closed loop driven by the pumping mechanism including a flow path through the pump inlet into the reservoir, past the member and out the **port** into the impeller chamber.

McCauley Decl., Ex. 36 at p. 4 (bolding added, underline and strikethrough in original).

CoolIT argues that "[i]n amending claim 34 to overcome the prior art rejection, CoolIT's focus was on the flow path of the coolant." In CoolIT's view, "[t]he port was merely a component to facilitate the particular flow path described in that claim." CoolIT Opp. at p. 12. CoolIT also points to a communication to the patent office, which stated that "[i]ndependent claim 34 has been amended to clarify that the coolant circuit defines a coolant flow path through the reservoir: in through an inlet, past the member and out through a port, which is separate from the inlet." *Id.* This, CoolIT argues, shows merely tangential relationship.

CoolIT has not met its burden of showing the amendment describing the port had only a tangential relationship to the equivalent in question. CoolIT, in seeking the amendment to claim 1, specifically distinguished the prior art by defining a fluid flow path "in through an inlet, past the member and out through a port." *See* McCauley Decl., Ex. 36 at p. 5 (representing to PTO that "[w]hile Agnew teaches a hydraulic system including a reservoir, it does not teach or even suggest the fluid flow path/reservoir as presently claimed nor the benefits obtained therefrom."). In other words, the narrowing amendment defined a flow path with the port as an outlet. The port in the wall is described as an integral part of the flow path. CoolIT has not met its burden to show that it did not disavow other flow paths that did not include such a port as outlet. In this case, the alleged

Asetek "port" is not part of a flow path that goes in through an inlet, past the sponge, and out into the impeller chamber. The "inlet" in the Asetek device does not allow cooling liquid into the accused sponge chamber. Instead, during a regular cycle of the Asetek device, coolant flows directly from the inlet into the thermal exchange chamber. *See* Dion Decl., Ex. N at ¶. 7-9. The accused port then accommodates fluid expansion by allowing fluid both in and out of the sponge chamber as required by volume fluctuations. *Id.* The flow path is a non-tangential, integral feature of Claim 1. CoolIT is estopped from arguing that the flow path of the Asetek device is the equivalent to the flow path defined by Claim 1.

ii. August 18, 2014 Infectious Estoppel

Nevertheless, the claim at issue in this dispute is not claim 1; it is independent claim 17, which was not amended. Asetek argues that claim 17 is "tainted" under the doctrine of "infectious estoppel." The doctrine of infectious estoppel stems from the principle that there should be "consistent interpretation of claim terms within a patent in view of the prosecution history." *Glaxo Wellcome, Inc. v. Impax Labs., Inc.,* 356 F.3d 1348, 1356 (Fed. Cir. 2004). Thus "subject matter surrendered via claim amendments during prosecution is also relinquished for other claims containing the same limitation." *Id.* CoolIT argues that, assuming that prosecution history estoppel applies, the assumed surrender should not reach Claim 17.

CoolIT relies on the requirement that the affected claims must "recite the amended term." See *Glaxo Wellcome*, 356 F.3d at 1356 (citing *Fiskars, Inc. v. Hunt Mfg. Co.*, 221 F.3d 1318, 1322-23 (Fed. Cir. 2000)). *Fiskars* presents a useful illustration. The patent-in-suit was a paper cutter with a circular blade rather than a long blade. In the Fiskars device, the patent specified that it used "leaf springs" in a "spring assembly formed on [the] carriage assembly." The challenged device used a "free-standing coil spring." One of the claims that was not at issue stated that the spring was "located in the rail." The defendant argued that Fiskars emphasized the location in the rail during prosecution to distinguish prior art. The *Fiskars* court determined that "the prosecution record clearly stated which claims were amended to add the limitation that the spring is in the rail, and the examiner thereafter allowed the claims." *Fiskars*, 221 F.3d at 1322. Thus, where "the claims in suit were not amended to add the limitation of the spring in the rail" the "district court correctly ruled

that the claims in suit are not limited to a device wherein the spring is located in the rail, and that there is no estoppel against equivalency based on the location of the spring." *Id.*, at 1323.

Here, a flow path limitation does not appear in claim 17.[4] Only the "port" element appears in claim 17. Asetek attempts to reach claim 17 by arguing that, during prosecution, claim 17 was added after the flow path limitation was added to claim 1. *See* Asetek Motion at ¶. 23-24. It is undisputed that claim 17 was not itself amended during prosecution. Instead, Asetek urges the Court to read the flow path limitation from claim 1 into the term "port" in independent claim 17. *Id.* Asetek's argument fails, however, because the term "port" in independent claim 17 has no particular flow path connotation. *Cf. Phillips v. AWH Corp.*, 415 F.3d 1303, 1325 (Fed. Cir. 2005) (holding that, while certain claims describe "baffles" as structures that deflect projectiles, that "does not imply that in order to qualify as baffles within the meaning of the claims, the internal support structures must serve the projectile-deflecting function in all the embodiments of all the claims."). Nor does the specification warrant a flow path limitation. While there is only one embodiment presented in the drawings of the '456 patent, "it is improper to read limitations from a preferred embodiment described in the specification – even if it is the only embodiment – into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited." *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004).

The flow path limitation in claim 1 therefore does not "infect" the word "port" in claim 17. *See Fiskars,* 221 F.3d at 1323 ("Claims whose allowance was not due to a particular argument are not subject to estoppel deriving from that argument."). CoolIT is not estopped from arguing doctrine of equivalents with respect to the term "port."

iii. Doctrine of Equivalents

The doctrine of equivalents arises in part from the inherent limitations on the ability of language to "capture the essence of a thing in a patent application," and the corresponding desire not to "subordinate substance to form." *See Festo,* 535 U.S. at 731-32; *Graver Tank & Mfg. Co. v.*

[4] The flow path limitation in claim 1 was subject to claim construction and given its plain and ordinary meaning; the term "port" was not specifically construed. *See* CoolIT Claim Construction Order at ¶. 15-16.

Linde Air Prods. Co., 339 U.S. 605, 607 (1950). The focus of whether an accused device is "equivalent" under the doctrine of equivalents is on the degree of difference between the two inventions - *i.e.*, whether the differences between the invention and the accused device are "insubstantial." *Id.* Whether two designs are equivalent is a question of fact. *See Bell Atlantic*, 262 F.3d at 1267 ("A determination of infringement, both literal and under the doctrine of equivalents, is a question of fact.").

The parties disagree regarding whether Asetek's embodiment, which they agree is not technically a "port in the housing wall" is an equivalent. Both parties rely on the function-way-result analysis, which is one accepted way (among others) to test the substantiality of the differences. *See Brilliant Instruments, Inc. v. GuideTech, LLC*, 707 F.3d 1342, 1346-1347 (Fed. Cir. 2013). In that test, the relevant inquiry is whether the "accused product performs substantially the same function in substantially the same way with substantially the same result as each claim limitation of the patented product." *Id.*

CoolIT's devices have a port in the wall separating the impeller chamber from the reservoir. In Asetek's device, the parties agree that there is no port in the wall dividing the impeller chamber and the reservoir. There is, however, an indentation in the ceiling of the top wall of the Asetek cooling head unit. This indentation allows cooling liquid to flow from the impeller chamber to the reservoir when the device experiences fluid volume expansion. This, CoolIT's expert contends, is the equivalent of CoolIT's port.

CoolIT argues that the function stated in claim 17 is to "fluidicly couple" the "impeller chamber and the reservoir" and states that this is "undoubtedly" the same function as in the Asetek products, based on Asetek's expert's testimony. In the portion of the Asetek's expert's testimony that CoolIT cites, Dr. Tilton agrees that the recess in the cap does achieve "fluid communication." Dion Decl., Ex. H at 176:2-4. Yet Dr. Tilton immediately goes on to explain that the fluid communication in the Asetek product is substantially different; he opines that "the ports, just even by virtue of the fact that they're communicating with different portions of the device, the whole device will function differently" based on the location's effect on the pressure differentials that

expand or contract the resiliently compressible member when the pump is activated. *Id.* at 176:17-177:20.

Asetek's expert also testifies that because the flow path in the CoolIT devices has only one outlet (the port in the wall), the flow through the port must occur during every fluid cycle, thus the port's function is to allow flow during operation. Dion Decl., Ex. N at p. 25, ¶89. Asetek argues that the "indentation on the top wall/ceiling" of its accused product "has an entirely different function," *i.e.*, "to allow cooling liquid to flow into the sponge chamber if there is expansion of liquid volume due to extreme low temperatures during shipment or storage." *Id.* CoolIT's expert agreed that the purpose of the Asetek accused port was to allow for liquid flow "if there's fluid volume expansion." McCauley Decl., Ex. 31 at 474:15-20.

CoolIT defines the "way" this "fluidic coupling" is achieved as "an opening between the two areas." By contrast, in Asetek's view, the indentation allows cooling liquid to flow both "*in* and *out*," permitting an equalization of pressure. Asetek Motion at p. 27 (emphasis in original). According to Asetek, CoolIT's port is only an outlet for the flow path and therefore it does not work in the same way. *Id.*

CoolIT defines the result as "fluid coupling of the impeller chamber and reservoir" and characterizes this result as substantially the same as well. Meanwhile Asetek defines the "result" as (1) the flow of coolant (in the CoolIT device); versus (2) counteracting the expansion of fluid volume (in the Asetek device). This difference, per Asetek, makes the accused equivalent substantially different.

The record reflects ample questions of fact with respect to function, way, *and* result. Furthermore, the question of equivalences is generally a question of fact. A reasonable jury could find for either party in the factual question of equivalence. *See, e.g., Optical Disc Corp. v. Del Mar Avionics*, 208 F.3d 1324, 1336 (Fed. Cir. 2000) ("Clearly there is a genuine issue of material fact as to whether the claim limitation . . . is met . . . by an equivalent."). Thus, Asetek and CoolIT's motions for summary judgment as to the "port" limitation are each DENIED.

D. Invalidity of Asetek's '764 Patent

CoolIT argues that Asetek's patent is invalid, because it is anticipated by U.S. Patent No. 7,544,049 ("the Koga patent" or "Koga"). Anticipation is a question of fact. *See Int'l Seaway Trading Corp. v. Walgreens Corp.*, 589 F.3d 1233, 1237 (Fed. Cir. 2009). Anticipation may be resolved on summary judgment only if no genuine issue of material fact exists. *See OSRAM Sylvania, Inc. v. Am. Induction Technologies, Inc.*, 701 F.3d 698, 704 (Fed. Cir. 2012). The burden to prove invalidity is "clear and convincing evidence." *Id.* (citation omitted). This burden matters, because "in ruling on a motion for summary judgment, the judge must view the evidence presented through the prism of the substantive evidentiary burden." *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 254 (1986).

Anticipation invalidates a patent when "each and every limitation is found in a single prior art reference." *OSRAM Sylvania*, 701 F.3d at 704. Further, the anticipating reference "must enable that which it is asserted to anticipate." *Elan Pharm., Inc. v. Mayo Found. for Med. Educ. & Research*, 346 F.3d 1051, 1054 (Fed. Cir. 2003). To show enablement, "the prior art reference must teach one of ordinary skill in the art to make or carry out the claimed invention without undue experimentation." *Id.*

Although neither party attaches the Koga patent to their motions, it appears that Koga generally teaches a closed circuit centrifugal cooling system for a computer system's CPU. There is a pump room with an impeller. A "sucking channel," referred to in the patent drawing as "channel 19," runs between the heat-receiving surface and the pump room wall. On the inner wall there are dimples or protrusions extending to the impeller.

CoolIT advances few affirmative arguments in support of its motion. Instead, CoolIT focuses on disputing the conclusions of Dr. Tilton. *See* CoolIT Motion at pp. 16-19. Indeed, CoolIT does not quote from the Koga patent, does not propose any construction of its terms, and does not even attach the Koga patent to its motion. *Id.* Instead, CoolIT's motion identifies disputes of fact concerning whether or not the Koga patent reads on each of the claims of the Asetek '764 patent. For example, CoolIT discusses its disagreement with Dr. Tilton regarding whether "Koga's heat generating component 2 forms a boundary wall of sucking channel 19 and transverse section 30,"

and whether sucking channel 19 and tranverse section 30 "together function as a thermal exchange chamber." *Id.* CoolIT variously states that Dr. Tilton is "factually inaccurate," makes "unfounded assumptions," "is wrong," and "makes faulty assertions." *See* CoolIT Motion at ¶. 16-19.

Asetek contends that combining the sucking channel in the Koga patent with the transverse section 30 does not meet the claim limitation of the "thermal exchange chamber," which appears in each claim of the '764 patent. Asetek Motion at ¶. 19-20. Asetek further points to inconsistencies in CoolIT's position regarding the number of thermal exchange chambers present in the Koga invention. Asetek presents a different view on Koga's functionality, particularly how Koga enables thermal exchange. For example, Asetek argues that Koga does not meet the claim limitation of "thermal contact with a surface of the heat-generating component" as claim 1 recites, because Koga's sucking channel 19 does not extend over the heat-generating component. See McCauley Decl., Ex. M, pp. 25-32.

CoolIT's disagreement with Dr. Tilton's views on the functionality of the Koga device, does not warrant summary judgment – it precludes it. There are also issues with the adequacy of CoolIT's evidence. CoolIT relies primarily on attorney argument to discuss the functionality of the Koga device. For example, without citation to the record, CoolIT argues that the pump room can be a heat exchange chamber in addition to the thermal exchange chamber created by sucking channel 19 and transverse section 30. Not only does CoolIT fail to provide record support, its attorney's argument is at odds with the conclusions of CoolIT's expert. In his report on invalidity, CoolIT's expert does not describe the pump room as a thermal chamber. Instead, CoolIT's expert describes the pump room as connected to the "thermal exchange chamber." *Compare* CoolIT Motion at p. 16 ("Koga's pump room 15A is not the sole and exclusive heat exchange chamber. . . .") *with* Dion Decl., Ex. L at p. 70 (describing 15A as a "pump chamber" that is "fluidly coupled" to the "thermal exchange chamber"). On this record, there are doubts regarding whether CoolIT can meet the clear and convincing evidence standard. CoolIT's request for summary judgment that the '764 patent is invalid as anticipated by prior art is DENIED.

CoolIT makes a passing assertion that the '764 patent is invalid as obvious, yet does not specifically argue obviousness. *See* CoolIT Motion at ¶. 16-19. Like anticipation, obviousness must

be shown by clear and convincing evidence. *Pfizer, Inc. v. Apotex, Inc.,* 480 F.3d 1348, 1361 (Fed. Cir. 2007). Thus, the "burden falls on the challenger of the patent to show by clear and convincing evidence that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so." *Id.*

As discussed above CoolIT's argument proceeds in the form of rebuttal and not affirmative argument. CoolIT does not proffer any evidence, let alone clear and convincing evidence, regarding how a person of ordinary skill in the art would have approached the Koga references. CoolIT also fails to respond to the secondary considerations presented by Dr. Tilton in his report. *See* Dion Decl., Ex. M at pp. 7-12. Secondary considerations must be weighed in the obviousness analysis. *See Ruiz v. A.B. Chance Co.,* 234 F.3d 654, 663 (Fed. Cir. 2000). Dr. Tilton addresses topics such as (1) commercial success; (2) alleged copying of the invention by others; (3) acquiescence by the industry in the form of requests for licensing; (4) long felt need, failure of others, and skepticism regarding the possibility of success; and (5) praise and recognition. *See* Dion Decl., Ex. M at pp. 7-12. Viewing all evidence in the light most favorable to the non-movant, and considering the substantive evidentiary burden that CoolIT bears, summary judgment is not appropriate. CoolIT's motion for summary judgment regarding invalidity is DENIED.

E. Lost Profit Damages

CoolIT contends that Asetek is not entitled to lost profits and is only entitled to, at most, a reasonable royalty. CoolIT Motion at p. 13.

As the parties agree, the Federal Circuit "has not restricted patentees to any one particular method of proving 'but for' causation." *See Micro Chem., Inc. v. Lextron, Inc.,* 318 F.3d 1119, 1122 (Fed. Cir. 2003). Nonetheless, a test articulated by the Sixth Circuit, and referred to as the "*Panduit* test" is one "recognized method of showing 'but for' causation." *Id. See Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.,* 575 F.2d 1152, 1156 (6th Cir. 1978)].

The *Panduit* test requires that a patentee show: (1) demand for the patented product; (2) absence of acceptable non-infringing substitutes; (3) manufacturing and marketing capability to exploit the demand; and (4) the amount of the profit it would have made. *See Rite-Hite Corp. v.*

Kelley Co., Inc., 56 F.3d 1538, 1545 (Fed. Cir. 1995) (citing *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1156 (6th Cir. 1978)). If a patentee makes this showing, the court may "reasonably infer that the lost profits claimed were in fact caused by the infringing sales, thus establishing a patentee's prima facie case with respect to 'but for' causation." *Id.* CoolIT focuses exclusively on the second *Panduit* factor, the "absence of acceptable non-infringing substitutes." CoolIT argues that Asetek will not be able to show "but for" causation, because CoolIT argues that it could have marketed "acceptable non-infringing alternatives to the Asetek patents." CoolIT Motion at p. 13.

Where a purported alternative is not actually on sale during the alleged infringement period, as in the instant case, "a trial court may reasonably infer that it was not available as a noninfringing substitute at that time." *Grain Processing Corp. v. Am. Maize-Products Co.*, 185 F.3d 1341, 1353 (Fed. Cir. 1999). CoolIT can, however, overcome this inference. To do so, CoolIT bears the burden of showing that the substitute was available. *See id.* Whether that burden has been met is generally a fact-based question. *See id.* (holding trial court did not err when it based its conclusion of availability on "several specific, concrete factual findings" regarding, *e.g.*, availability of materials, resources, know-how, and experience).

The parties do not dispute that CoolIT did not have such alternatives actually on sale during the alleged infringement period. However, CoolIT alleges that the facts show that "other configurations of the cooling system are possible." CoolIT Motion at p. 15. CoolIT argues, without citing evidence, that it "has used alternative, non-infringing, designs in the past," and "could have reverted to its prior designs" and adapted its newest technology for that purpose. *Id.* CoolIT's bare assertion that "other configurations of the cooling system are possible" and that it could have designed around the infringement by reverting to its older design – but apparently did not do so – does not suffice to eliminate questions of fact regarding the availability of an alternative. CoolIT's lone record citation is to testimony of Asetek's CEO wherein he discusses [redacted] and (b) a hypothetical system combining the *Asetek* cold plate with a separate pump. Testimony regarding Asetek's processes and products does not reveal much as to CoolIT's capabilities. CoolIT then asserts, without any citation

to evidence, that it had the resources, know-how, and time to implement the alternative design. Viewing the facts in the light most favorable to Asetek, this evidence is too thin to overcome the inference that the alternative was unavailable. *See Grain Processing*, 185 F.3d at 1353 ("[T]he trial court must proceed with caution in assessing proof of the availability of substitutes not actually sold during the period of infringement.").

A reasonable jury could find that CoolIT's proposed substitute was only "theoretically possible," or that the hypothetical alternative would not have been "acceptable" to consumers, or that CoolIT would have had to "invent around" the patent. *See Grain Processing*, 185 F.3d at 1353-54; *see also Micro Chem.*, 318 F.3d at 1123. In other words, a reasonable jury could conclude that the unmarketed alternative was not available. *See Micro Chem.*, 318 F.3d at 1123 (holding it was error to find a substitute to be available when the infringer "designed around the patented technology after [the patentee] established infringement" and lacked the equipment, know-how, experience, resources and lead-time to convert the infringing machines to the purported substitute). CoolIT's motion for summary judgment on lost profits is therefore DENIED.

III. CONCLUSION

For the foregoing reasons, Asetek and CoolIT's motions for summary judgment are **GRANTED IN PART** and **DENIED IN PART** as follows:

1. CoolIT's motion for summary judgment regarding no willful infringement is GRANTED.
2. Asetek and CoolIT's motions for summary judgment regarding sales to Corsair are each DENIED.
3. CoolIT's request for summary judgment regarding non-infringement of the '362 patent is DENIED.
4. Asetek's request for an order prohibiting CoolIT's expert from presenting an opinion that interprets the term "reservoir" to mean "not in fluid flow" is GRANTED.
5. Asetek's motion for summary judgment regarding infringement of the '764 patent is DENIED.

6. CoolIT's motion for summary judgment regarding non-infringement of the '764 patent is DENIED.

7. CoolIT's motion for summary judgment regarding infringement of the '456 patent is DENIED.

8. Asetek's motion for summary judgment regarding non-infringement of the '456 patent is DENIED.

9. CoolIT's motion for summary judgment regarding invalidity by anticipation or obviousness is DENIED.

10. CoolIT's motion for summary judgment regarding lost profits is DENIED.

This order disposes of Docket Nos. 195 and 200.

The unredacted version of this order shall be filed under seal and shall be served via U.S. Mail on all counsel listed on the attached Certificate of Service.

IT IS SO ORDERED.

Dated: August 19, 2014

EDWARD M. CHEN
United States District Judge