UNITED STATES DISTRICT COURT
DISTRICT OF CONNECTICUT

CLEARWATER SYSTEMS CORPORATION, Plaintiff, v. EVAPCO, INC., et al., Defendants.	CIVIL ACTION NO. 3:05cv507 (SRU)

RULING ON MOTIONS FOR SUMMARY JUDGMENT

On March 23, 2005, Clearwater Systems Corporation ("Clearwater"), a manufacturer of non-chemical water treatment devices, sued Evapco, Inc. ("Evapco"), a company that produces similar devices, as well as John Lane, a former Clearwater employee who left to work for Evapco, and Bullock, Logan and Associates ("Bullock Logan"), a company that has provided marketing services for both Clearwater and Evapco. Since 2005, the parties have engaged in litigation concerning alleged theft of trade secrets and other business law torts. Clearwater has also brought claims of patent infringement against Evapco and Bullock Logan,[1] alleging that the defendants have infringed two Clearwater patents, one claiming a device for non-chemical water treatment (U.S. Patent No. 6,063,267, or the "'267 patent"), and the other claiming a method for non-chemical water treatment (U.S. Patent No. 6,641,739, or the "'739 patent").[2]

[1] On April 21, 2008, I granted Bullock Logan's motion to sever and stay based in part upon its agreement to be bound by any findings in a trial against all other defendants concerning patent validity and infringement. Although Bullock Logan remains a party to this action, throughout this ruling, unless otherwise indicated, I discuss Clearwater's claims as claims against Evapco, rather than against Evapco and Bullock Logan.

[2] Clearwater's second amended complaint, the operative complaint in this case, includes claims against John Does 2 through 10, and identifies Curt Bullock and Jeff Logan of Bullock Logan as Does 6 and 7. Because the only claims asserted against Does 2 through 10 are premised on the underlying patent infringement claim against Clearwater, and because as

Throughout the course of this litigation, the parties have filed a number of amended pleadings and withdrawn certain claims; other claims have been disposed of through court rulings. At this point, the following claims are pending: (1) Clearwater's claim against Evapco alleging infringement of claim 21 of the '267 patent ("Count 6"), (2) Clearwater's claim against Bullock Logan alleging breach of contract ("Count 11"), (3) Evapco's counterclaim seeking a declaration of non-infringement of the '267 patent ("Counterclaim 1"), (4) Evapco's counterclaim seeking a declaration that the '267 patent is invalid or unenforceable ("Counterclaim 2"), and (5) Evapco's counterclaim seeking a declaration that the '739 patent is invalid or unenforceable ("Counterclaim 3").

On September 2 and October 21, 2008, I heard arguments on Clearwater's motion for summary judgment on Counterclaim 2 (**doc. #404**) and Evapco's motion for summary judgment on Count 6 and Counterclaim 3 (**doc. #402**). For the reasons that follow, Clearwater's motion for summary judgment is GRANTED, and Evapco's motion for summary judgment is GRANTED. In addition, summary judgment is entered in favor of Evapco on Counterclaim 1.

I. Background

I assume familiarity with the facts and procedural history of this case. For discussion of certain underlying facts and history, including non-chemical water treatment generally and Clearwater and Evapco's devices specifically, *see* the July 26, 2005 Memorandum of Decision

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discussed below there is no infringement, there is no secondary or subsidiary infringement on the part of the Doe defendants. In addition, under Federal Rule of Civil Procedure 4(m), "[i]f a defendant is not served within 120 days after the complaint is filed, the court — on motion or on its own after notice to the plaintiff — must dismiss the action without prejudice against that defendant or order that service be made within a specified time." Here, where Does 2, 3, 4, 5, 8, 9, and 10 were not identified or timely served, dismissal of those parties is appropriate under Rule 4(m).

regarding Clearwater's motion for a preliminary injunction. *Clearwater Systems Corp. v. Evapco, Inc.*, 2005 WL 3543717 (D. Conn. July 26, 2005).

II. Discussion

A. Summary Judgment Standard

Summary judgment is appropriate when the evidence demonstrates that "there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(c); *see also Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 256 (1986) (plaintiff must present affirmative evidence in order to defeat a properly supported motion for summary judgment).

When ruling on a summary judgment motion, the court must construe the facts in the light most favorable to the nonmoving party and must resolve all ambiguities and draw all reasonable inferences against the moving party. *Anderson*, 477 U.S. at 255; *Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp.*, 475 U.S. 574, 587 (1986); *Adickes v. S.H. Kress & Co.*, 398 U.S. 144, 158-59 (1970); *see also Aldrich v. Randolph Cent. Sch. Dist.*, 963 F.2d. 520, 523 (2d Cir. 1992) (court is required to "resolve all ambiguities and draw all inferences in favor of the nonmoving party"), *cert. denied*, 506 U.S. 965 (1992). When a motion for summary judgment is properly supported by documentary and testimonial evidence, however, the nonmoving party may not rest upon the mere allegations or denials of his pleadings, but rather must present significant probative evidence to establish a genuine issue of material fact. *Celotex Corp. v. Catrett*, 477 U.S. 317, 327 (1986); *Colon v. Coughlin*, 58 F.3d 865, 872 (2d Cir. 1995).

When cross-motions for summary judgment are presented to the court, the standard is the same as that applied to individual motions for summary judgment. *Morales v. Quintel*

Entertainment, Inc., 249 F.3d 115, 121 (2d Cir. 2001). "Each party's motion must be examined on its own merits, and in each case all reasonable inferences must be drawn against the party whose motion is under consideration." *Id*. Summary judgment should not be granted "unless one of the moving parties is entitled to judgment as a matter of law upon facts that are not genuinely in dispute." *Heyman v. Commerce & Indus. Ins. Co.*, 524 F.2d 1317, 1320 (2d Cir. 1975).

"Only when reasonable minds could not differ as to the import of the evidence is summary judgment proper." *Bryant v. Maffucci*, 923 F.2d 979, 982 (2d Cir. 1991), *cert*. *denied*, 502 U.S. 849 (1991); *see also Suburban Propane v. Proctor Gas, Inc.*, 953 F.2d 780, 788 (2d Cir. 1992). If the nonmoving party submits evidence that is "merely colorable," or is not "significantly probative," summary judgment may be granted. *Anderson*, 477 U.S. at 249-50.

> The mere existence of some alleged factual dispute between the parties will not defeat an otherwise properly supported motion for summary judgment; the requirement is that there be no genuine issue of material fact. As to materiality, the substantive law will identify which facts are material. Only disputes over facts that might affect the outcome of the suit under the governing law will properly preclude the entry of summary judgment. Factual disputes that are irrelevant or unnecessary will not be counted.

Id. at 247-48. To present a "genuine" issue of material fact, there must be contradictory evidence "such that a reasonable jury could return a verdict for the non-moving party." *Id.* at 248.

If the nonmoving party has failed to make a sufficient showing on an essential element of his case with respect to which he has the burden of proof at trial, then summary judgment is appropriate. *Celotex*, 477 U.S. at 322. In such a situation, "there can be 'no genuine issue as to any material fact,' since a complete failure of proof concerning an essential element of the nonmoving party's case necessarily renders all other facts immaterial." *Id.* at 322-23; *accord*

Goenaga v. March of Dimes Birth Defects Foundation, 51 F.3d 14, 18 (2d Cir. 1995) (movant's burden satisfied if he can point to an absence of evidence to support an essential element of nonmoving party's claim). In short, if there is no genuine issue of material fact, summary judgment may enter. *Celotex*, 477 U.S. at 323.

B. Infringement of the '267 Patent

Clearwater claims that: (1) the Pulse-Pure device literally infringes claim 21 of the '267 Patent, and (2) the Pulse-Pure infringes claim 21 of the '267 Patent under the doctrine of equivalents. Clearwater bears the burden, under each theory, to prove infringement by a preponderance of the evidence. *Kegel Co. v. AMF Bowling, Inc.*, 127 F.3d 1420, 1425 (Fed. Cir. 1997). In response to my construction of claim 21, Clearwater also argues that the Pulse-Pure device infringes the means-plus-function limitations of claim 21 of the '267 Patent. I address each of these arguments below.

1. Literal infringement

To prevail on a claim of literal infringement, a patentee must show that the accused device meets each claim limitation. That is, structure exactly meeting each claim limitation must be present in the accused device. *Lantech, Inc. v. Keip Machine Co.*, 32 F.3d 542, 547 (Fed. Cir. 1994). If any express claim limitation is not found in the accused device – here, Evapco's Pulse-Pure unit – there is no literal infringement. *Wolverine World Wide, Inc. v. Nike, Inc.*, 38 F.3d 1192, 1199 (Fed. Cir. 1994). Answering the infringement question involves two steps: (1) the patented invention described by the claim language must be defined, and (2) the accused device must be compared to the claims defining that invention, as interpreted. *See, e.g., Becton Dickinson & Co. v. C.R. Bard Inc.*, 922 F.2d 792, 796 (Fed. Cir. 1990). In other words, the first

question asks the scope and contours of the patentee's right to exclude, and the second question asks whether the accused device falls within those parameters.

In general, the second question in the infringement analysis – whether or not the accused device infringes the claims, as interpreted by the court through claim construction – is a question of fact for the jury. The Federal Circuit has indicated that district courts should be careful when considering the question of infringement at the summary judgment stage not to resolve disputed issues of fact properly left for the jury. S*ee, e.g., SRI International v. Matsushita Electrical Corp.*, 775 F.2d 1107, 1117 (Fed. Cir. 1995). Despite the factual nature of the infringement analysis, summary judgment is appropriate where no genuine issues of material fact preclude resolution of the infringement question. *Chemical Engineering Corp. v. Essef Industries, Inc.*, 795 F.2d 1565, 1571 (Fed. Cir. 1986).

Here, the factual inquiry at the heart of the literal infringement analysis is the comparison between the limitations of claim 21 of the '267 Patent, on one hand, and the structures comprising the Pulse-Pure device, on the other. Although Clearwater's Dolphin is a commercial embodiment of the '267 Patent, limiting the infringement analysis to any preferred embodiment or commercial product is improper. *SRI International*, 225 F.2d at 1121; *Loctite Corp. v. Ultraseal, Ltd.*, 781 F.2d 861, 870 (Fed. Cir. 1985), *overruled on other grounds, Nobelpharma AB v. Implant Innovations, Inc.,* 141 F.3d 1059 (Fed. Cir. 1998).

Claim 21 of the '267 Patent claims:

> An apparatus for treating flowing liquid with electromagnetic flux and to be powered by a source of alternating current electrical power wherein a set of half cycles of positive voltage alternate with a set of half cycles of negative voltage, said apparatus comprising:

a pipe for conducting a flow of liquid,

a plurality of electrical coils surrounding said pipe,

means providing a given capacitance,

a switch having first and second terminals having open and closed conditions relative to one another,

connecting means for connecting said coils, given capacitance and switch to one another and to said power source such that during each half cycle of at least one of said two sets of half cycles, current due to said source power flows through said coils during at least a portion of said half cycle because of said first and second terminals of said switch being in said closed condition relative to one another,

said connecting means further being such that when said first and second terminals of said switch are in said open condition relative to one another said coils and said given capacitance form part of a series resonant circuit, and

said connecting means further being such that when said first and second terminals of said switch are in their closed condition so that electrical current due to said source power flows through said coils the electromagnetic flux passing through the center of at least one of said coils flows in a first direction parallel to said pipe and so that the electromagnetic flux passing through the center of at least one other of said coils flows in a second direction parallel to said pipe opposite to said first direction.

'267 Patent at col. 9, ln. 20 - col. 10, ln. 26. I issued an amended claim construction ruling on November 18, 2008. That ruling construed, *inter alia*, the terms "switch" and "connecting means" (or "means for connecting") as used in claim 21. The definitions of those terms are:

Switch:	An electrical component that includes a control terminal and at least two additional terminals that pass current through the component. Current is either permitted to flow or prevented from flowing through the additional terminals when different voltage levels are applied to the control terminal.
Connecting Means:	means for connecting (1) electrical coils (surrounding a pipe for conducting a flow of liquid), (2) capacitance, and (3) a switch to each other, and to (4) a source of alternating

current electrical power (wherein a set of half cycles of positive voltage alternate with a set of half cycles of negative voltage), in a manner that performs the functions described following each use of "such that" in column 10 of the '267 patent.

Nov. 18, 2008 Am. Claim Construction Ruling at 15-16 (doc. #467).

As discussed in the amended claim construction ruling, claim 21 includes means-plus-function limitations under 35 U.S.C. § 112 ¶ 6, claiming a number of functions to be performed when certain structural components, disclosed in the '267 Patent's specification, are connected in a manner that accomplishes those functions. Accordingly, the limitations of claim 21, including the functional limitations recognized in the term definitions above, are:

Limitation		Source in '267 Patent
(1)	An **apparatus**	col. 9, ln. 20
(2)	The apparatus (1) is powered by a source of **alternating current electrical power** wherein a set of half cycles of positive voltage alternate with a set of half cycles of negative voltage	col. 9, ln. 21-24
(3)	The apparatus (1) contains a **pipe**	col. 9, ln. 25
(4)	The apparatus (1) contains a plurality of **electrical coils** surrounding that pipe (3)	col. 9, ln. 26
(5)	The apparatus (1) contains means providing a given **capacitance**	col. 9, ln. 27
(6)	The apparatus contains a **switch** [an electrical component that includes a control terminal and at least two additional terminals that pass current through the component, wherein current is either permitted to flow or prevented from flowing through the additional terminals when different voltage levels are applied to the control terminal], that has first and second terminals having open and closed conditions relative to one another,	col. 9, ln. 27-28

(7)	means for connecting electrical coils (surrounding a pipe for conducting a flow of liquid) (4), capacitance (5), and a switch (6) to each other, and to a source of alternating current electrical power (2), such that **current flows during at least each half cycle of positive voltage or each half cycle of negative voltage**, because of the first and second terminals of that switch being closed relative to each other,	col. 10, ln. 1-9
(8)	means for connecting electrical coils (surrounding a pipe for conducting a flow of liquid) (4), capacitance (5), and a switch (6) to each other, and to a source of alternating current electrical power (2), such that when the first and second terminals of the switch (6) are open relative to one another, the coils and capacitance form part of a **series resonant circuit**, and	col. 10, ln. 10 - 14
(9)	means for connecting electrical coils (surrounding a pipe for conducting a flow of liquid) (4), capacitance (5), and a switch (6) to each other, and to a source of alternating current electrical power (2), such that when the first and second terminals of the switch (6) are closed relative to one another, **current from that power source (2) flows through at least one coil (4) parallel to the direction of the pipe (3) and through at least one other coil (4) parallel to the pipe (3) but in the opposite direction**.	col. 10, ln. 15-25

Evapco's Pulse-Pure device infringes claim 21 if it meets each limitation identified above, and Evapco's device does not infringe if it does not meet each such limitation. It does not matter if the Pulse-Pure meets most of the limitations, or even if the Pulse-Pure's designers deliberately designed around the '267 Patent. *Kimberly-Clark Corp. v. Johnson & Johnson*, 745 F.2d 1437, 1457-58 (Fed. Cir. 1984). "Designing around" a patent is frequently an impetus for innovation; the Pulse-Pure's designers may or may not have intended to avoid infringing the '267 Patent when they designed their device. That question is not pertinent to the infringement analysis; the question is whether the Pulse-Pure meets each claim limitation of claim 21 of the

‘267 Patent. If the Pulse-Pure merely improves upon the ‘267 Patent, it would not avoid infringement provided each limitation of claim 21 was present in the Pulse-Pure’s elements, along with additional elements. *See Stiftung v. Renishaw PLC*, 945 F.2d 1173, 1179 (Fed. Cir. 1991).

Limitation (7), as identified above, requires that the component structures of the claimed apparatus be connected “such that during each half cycle of at least one of said two sets of half cycles, current due to said source power flows through said coils during at least a portion of said half cycle.” The invention is powered by a source of alternating current, such as a wall socket, and the current originating from that power source flows through coils during, at least, each and every half cycle of positive voltage or each and every half cycle of negative voltage. Claim 21 does not require that current flow during some part of each full cycle (either or both of the positive or negative half cycles), but rather that current flow either *every* positive or *every* negative half cycle of each full cycle.

To understand why limitation (7) is important to the ‘267 patent, it is helpful to understand the manner in which the ‘267 patent improves on prior non-chemical water treatment (“NCWT”) technology. Older devices treated water using weaker, less frequent, and less controlled flow of current and resulting electromagnetic flux. As Clearwater’s more recent Dolphin devices practice, and as the specification of the ‘267 Patent recites, the claimed invention improves on the prior art because it uses a switch to generate a ringing effect by interrupting current to a set of coils. When the switch is flipped, current flowing through the coils is interrupted, and electromagnetic flux rings out in a more focused and pronounced manner than in the prior art.

a. The Pulse-Pure's high frequency circuit

The Pulse-Pure contains two circuits: a high frequency circuit, and a low frequency (or 60-Cycle) circuit. Clearwater asserts that each circuit infringes claim 21. Clearwater contends, in support of its infringement argument, that the Pulse-Pure's high frequency circuit meets what I identify as limitation (7) above because Clearwater's expert indicated that the Pulse-Pure has current flowing in each positive or each negative half cycle, and that construing the alternating current power source identified in claim 21's preamble as a limitation (and part of the "connecting means") improperly reads the preamble into the claim's limitations. Clearwater Opp. Br. at 20.

First, as Clearwater's counsel repeatedly indicated at oral argument, the preamble of claim 21 provides an antecedent basis for the claim. *E.g.*, 9/2/08 Tr. at p. 4, ln. 17 - p. 5, ln. 1; p. 6, ln. 18 - p. 7, ln. 4; p. 12, ln. 2-6. "In considering whether a preamble limits a claim, the preamble is analyzed to ascertain whether it states a necessary and defining aspect of the invention, or is simply an introduction to the general field of the claim." *On Demand Machine Corp. v. Ingram Industries, Inc.*, 442 F.3d 1331, 1343 (Fed. Cir. 2006). Here, claim 21 claims an apparatus comprising, *inter alia*, "means for connecting . . . *said power source*" to certain structural components "such that during each half cycle of at least one of *said two sets of half cycles*, current due to *said source power*" flows in a certain manner, as well as connecting means "so that electrical current due to *said source power* flows through said coils" in a particular way. '267 Patent at col. 10, ln. 1-6, 15-19 (emphasis added). Those limitations do not read "*a* power source" or simply "two sets of half cycles," but rather include the words "said power source," referring back to the power source described in the preamble to Claim 21. "Because these

limitations . . . derive their antecedent basis from the . . . preamble and are necessary to provide context for the claim limitations, the use of these limitations in the preamble limits the claim." *NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282, 1306 (Fed. Cir. 2005). Because the only power source that the limitations in claim 21 could refer to is the "source of alternating current electrical power wherein a set of half cycles of positive voltage alternate with a set of half cycles of negative voltage," '267 Patent at col. 9, ln. 21-24, the preamble to claim 21 limits and defines the claim. Identifying that alternating current power source as a limitation does not impermissibly read a general preamble into the claim; rather, it is necessary if the express limitations of claim 21 are to have meaning within the context of the claim.

Second, in support of its argument, Clearwater cites to its expert's report, which identifies the Pulse-Pure's signal generator (the L293B) as a switch and indicates that the L293B produces current that flows during at least each 16.7 microsecond half period of the L293B current cycle. Clearwater Opp. Br. at 20-21. Clearwater's argument fails because the L293B does not meet the limitation of the power source that claim 21 describes. Instead, the power source in the limitations is the alternating current power source, discussed in claim 21's preamble, that powers the entire device. The claimed power source cannot be infringed by the L293B signal generator chip, which (even if it otherwise meets the limitations of claim 21) does not power the entire Pulse-Pure device.

As should be clear from the November 12, 2008 amended claim construction ruling in this matter, as well as discussion in this opinion, claim 21 contains means-plus-function limitations. Accordingly, claim 21 in part claims functions, not simply structures. That the Pulse-Pure may contain certain structures that are connected, and even that the Pulse-Pure may

produce a particular result, is not enough. For the Pulse-Pure to meet the functional limitations of claim 21, certain structures must be connected in such a manner that they accomplish the claimed functions. The "connecting means" functions that are claimed are not simply connections between capacitance, coils, switch, and/or other structural components. Clearwater recently filed supplemental briefing following the November 12 claim construction ruling; attached to that briefing were diagrams of the Pulse-Pure's wiring purportedly identifying infringing structural components and also identifying the infringing "function" that the Pulse-Pure performs.

Examination of Clearwater's diagrams demonstrates their shortcomings. For instance, Exhibit 2 to Clearwater's supplemental brief purports to demonstrate the manner in which the Pulse-Pure's high frequency circuit infringes claim 21. The diagram, at the top, reads "Function 1: Current flows during at least half of each HF AC cycle because switch is closed." The first problem with Clearwater's diagram, before even addressing the structural components it points to, is Clearwater's identification of the function at issue. As discussed more fully above and below, claim 21 does not require that current flow during at least half of each cycle (regardless of whether the power source is the alternating current power source, as it must be under claim 21, or any other power source). Instead, claim 21 requires that current flow during at least each positive or each negative half-cycle. If claim 21 only required that current flow during at least half of each cycle, a device might infringe if current flowed during the positive half-cycle of one power cycle, and then during the negative half-cycle of the next power cycle. That is not, however, what claim 21 requires.

The next problem with Clearwater's diagram is that claim 21 does not simply require that

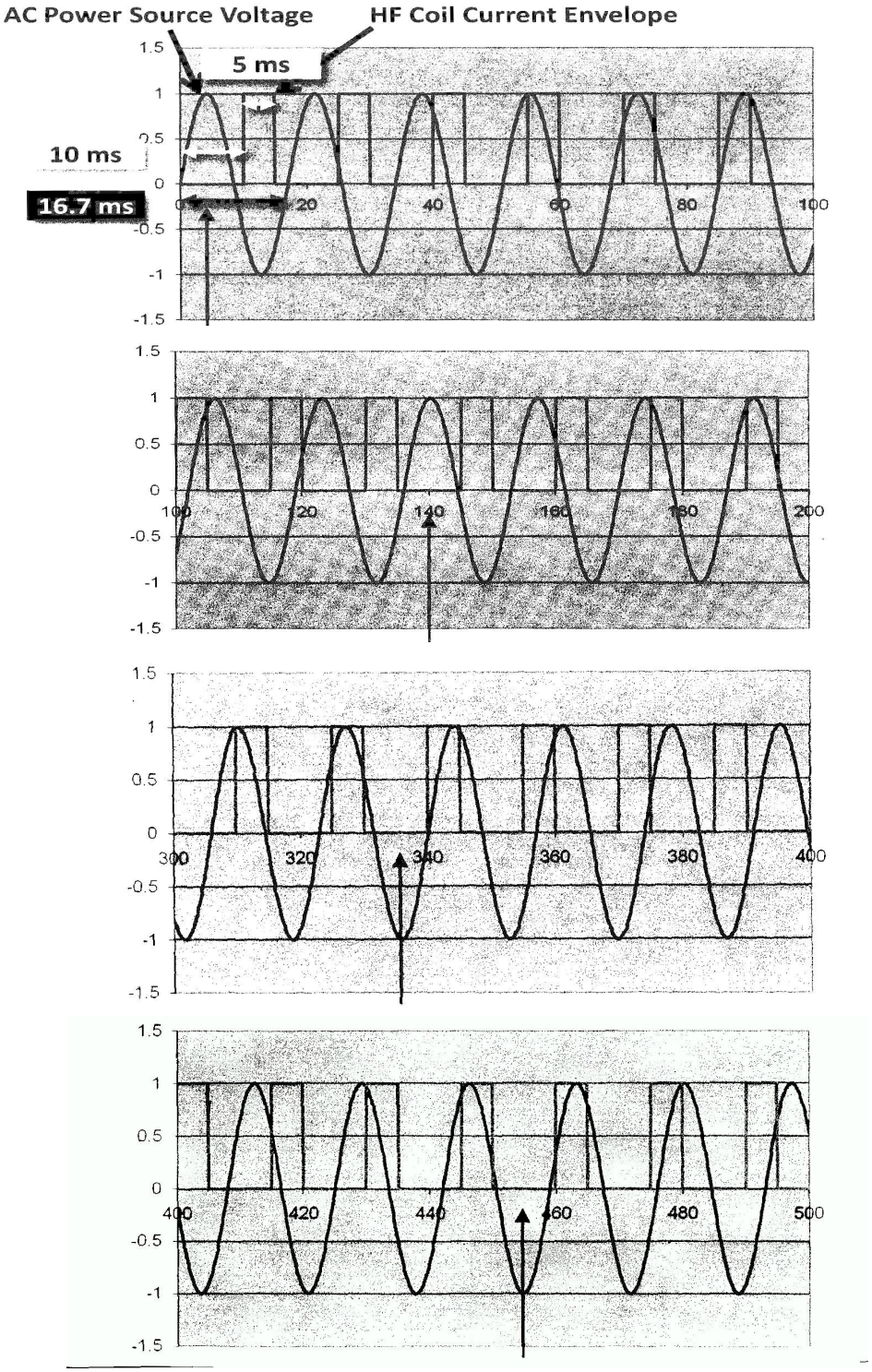
certain structural components (here, conductors, a 12-volt subcircuit, a comparator, a timer, and a switch) are present, and that current flows at certain intervals because the switch is closed. What claim 21 requires – and what Clearwater fails to demonstrate, or even attempt to demonstrate – is that at least some of the identified structural components be present to connect electrical coils (surrounding a pipe for conducting a flow of liquid), capacitance, and a switch to each other, and to a source of alternating current electrical power, in a manner that produces the flow of current during at least each half cycle of positive voltage or each half cycle of negative voltage, because of the first and second terminals of that switch being closed relative to each other. Matching up structures, as Clearwater has done, is not enough; the connecting means functional limitation requires that the connecting means are present in a way "such that" the specified result occurs. Again, Clearwater has failed to demonstrate the presence of that functional limitation.

Another problem with Clearwater's diagram is Clearwater's identification of the L293B as the power source claimed in claim 21, as well as its drawing of the flow of current from the L293B. The power source claimed in claim 21 is the alternating current power source that powers the entire claimed device, not merely the power source that may produce magnetic flux. Claim 21 claims "[a]n apparatus . . . powered by a source of alternating current electrical power wherein a set of half cycles of positive voltage alternate with a set of half cycles of negative voltage," '267 Patent at col. 9, ln. 21-24, and it is current from *that* power source that the Pulse-Pure must meet if it is to infringe. In other words, if the L293B is not the power source that powers the whole device, it does not meet the claim limitations because the preamble to claim 21 and the language that follows make clear that the power source at issue is the alternating current power source that powers the entire device. Because the L293B does not power the Pulse-Pure

apparatus, Clearwater's identification of the L293B in its diagram does not aid in the high frequency circuit infringement analysis.

In addition, claim 21 of the '267 Patent requires interruption of current flowing to the coils during, at least, each half cycle of positive voltage or each half cycle of negative voltage. Claim 21 claims a device that is powered by a source of alternating current "wherein a set of half cycles of positive voltage alternate with a set of half cycles of negative voltage." *Id*. at col. 9, ln. 22-24. Current must flow "during *each* half cycle of at least *one of said two sets* of half cycles." *Id*. at col. 10, ln. 3-4 (emphasis added.) To the extent that Clearwater argues that the L293B signal generator meets claim 21's switch limitation, the L293B would still need to generate magnetic flux during each positive or each negative half cycle to infringe claim 21.

Diagrams showing the flow of current in the invention claimed in the '267 patent, on one hand, and the Pulse-Pure device, on the other hand, demonstrate that the Pulse-Pure does not interrupt the flow of current or otherwise create a magnetic flux at least each positive or negative half cycle. As shown in the '267 patent, and as embodied in the Dolphin, alternating current originating in the power source that powers the invention, such as a wall socket, flows in a sine wave (or sinusoidal) pattern. The signal generator in the Pulse-Pure, in contrast, produces a flow of current through the high frequency coils in a 15-millisecond cycle. In the illustrations below, the square-shaped lines indicate the current produced by the Pulse-Pure's signal generator, the sinusoidal line indicates the alternating current produced by the '267 Patent's alternating current power source, and arrows point to the positive or negative half cycles of alternating current wherein the high frequency circuit's current does not flow.


AC Power Source Voltage
HF Coil Current Envelope
5 ms
10 ms
16.7 ms
1.5
1
0.5
0
-0.5
-1
-1.5
0
20
40
60
80
100
100
120
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160
180
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320
340
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500

Demonstratives for Evapco Summ. J. Oral Argument at p. 19 (9/2/08 Court Ex. 1). As indicated in the illustrations above, current from the high frequency circuit does not flow during each positive or each negative half-cycle of the alternating current power source.

In the Pulse-Pure, current flows for 5 milliseconds and then does not flow for 10 milliseconds. This means that: (1) at no point is there a flow of negative current, but rather there is an alternating flow of positive current and no current at all, (2) current does not flow each positive (or each negative) half cycle of current produced by the alternating current power source powering the entire device, and (3) to the extent that the L293B, rather than the AC power source identified in the preamble, could arguably be the power source referred to in claim 21, the current it produces flows for five seconds on and then not at all for ten seconds, as opposed to having (equal) alternating half cycles of positive and negative voltage. Clearwater's above-mentioned diagram is misleading: the drawing represents the L293B as producing alternating half cycles of positive and negative voltage, albeit in a square-shaped, rather than sinusoidal, fashion. Because the L293B does not produce half cycles and also does not produce negative voltage, but rather produces current for 5 milliseconds and then nothing for 10 milliseconds, Clearwater's drawing is inaccurate and does not support its argument that the Pulse-Pure infringes claim 21.

Because current produced by an alternating current power source powering the entire Pulse-Pure device does not flow during each positive or each negative half cycle of the high frequency circuit, the high frequency circuit does not infringe claim 21 of the '267 Patent.

b. The Pulse-Pure's low frequency circuit

Clearwater also argues that the Pulse-Pure's 60-cycle, or low-frequency, circuit infringes claim 21. Clearwater argues that

> [t]he term "connecting means" as a means-plus-function limitation is literally infringed by the relevant structure in the Pulse-Pure device. The Pulse-Pure device uses conductors, a comparator subcircuit, a timer subcircuit, and an indicator subcircuit to connect one or more coils, capacitance, a switch, and a power source to each other. Evapco's attempt to read the structure of the switching circuit into the construction of the term "connecting means" is improper . . . .

Clearwater Opp. Br. at 13 (internal citation and quotation marks omitted). As discussed in the amended claim construction ruling (doc. #467), claim 21's means-plus-function limitations require more than just connections between the various structural components identified in the '267 Patent's specification. Those means-plus-function limitations require that the structural components be connected in a manner such that the claimed device behaves in a specified manner. For instance, for a device to infringe claim 21, it must contain a switch such that "when said first and second terminals of said switch are in said open condition relative to one another said coils and said given capacitance form part of a series resonant circuit," and such that "when said first and second terminals of said switch are in their closed condition so that electrical current due to said source power flows through said coils the electromagnetic flux passing through the center of a least one of said coils flows in a first direction parallel to said pipe and so that the electromagnetic flux passing through the center of at least one other of said coils flows in a second direction parallel to said pipe opposite to said first direction." '267 Patent, col. 10, ln. 10-25. As agreed upon by the parties and defined in the amended claim construction ruling, a switch is "an electrical component that includes a control terminal and at least two additional terminals that pass current through the component. Current is either permitted to flow or prevented from flowing through the additional terminals when different voltage levels are applied to the control terminal." Am. Cl. Constr. Ruling (doc. #467) at *15.

The parties do not dispute that the low frequency circuit of the Pulse-Pure contains diodes through which current passes, rather than structural components that connect up to and enable a switch to perform the functions identified in the previous paragraph. Clearwater Rule 56(a)(2) Statement at ¶ 70. Because the Pulse-Pure's low frequency circuit does not contain structural components that, when connected, enable a switch to open and close, controlling and interrupting the flow of current to the device and creating ringing magnetic flux, the low frequency circuit does not infringe claim 21 of the '267 Patent.

2. Literal infringement of means plus function limitations

Where, as here, a claim contains means-plus-function limitations under 35 U.S.C. § 112 ¶ 6, literal infringement "requires that the relevant structure in the accused device perform the identical function recited in the claim and be identical or equivalent to the structure identified in the written description as corresponding to the recited function." *JVW Enterprises, Inc. v. Interact Accessories, Inc.*, 424 F.3d 1324, 1333 (Fed. Cir. 2005) (citations omitted). If all other limitations in a claim are met by the elements of an accused device, and the accused device contains equivalents of the structures disclosed in the specification and identified in claimed means-plus-function limitations, the accused device literally infringes. This is similar to, but distinct from, infringement under the doctrine of equivalents as discussed below, and requires that the function performed be *identical*, not just substantially the same. *Pennwalt Corp v. Durand-Wayland, Inc.*, 833 F.2d 931, 934 (Fed. Cir. 1987), *abrogated on other grounds, Cardinal Chemical Co. v. Morton International, Inc.*, 508 U.S. 83 (1993).

The functional limitations of claim 21 include that the component structures are connected to each other "such that during each half cycle of at least one of said two sets of half

cycles, current due to said source power flows through said coils during at least a portion of said half cycle because of said first and second terminals of said switch being in said closed condition relative to one another." '267 Patent at col. 10, ln. 3-8. The Pulse-Pure, as discussed above, does not contain a switch that operates to interrupt the flow of current. Also, as opposed to the source of alternating current in claim 21, the L293B does not produce half cycles of current. Even if the Pulse-Pure contains equivalent structures that perform in substantially the same way and produce substantially the same result as those structures identified in the '267 Patent specification to perform the claimed functions at issue, the Pulse-Pure does not literally infringe under section 112 ¶ 6 as a matter of law because the functions performed by the Pulse-Pure's structures are not identical to those claimed in claim 21. Accordingly, Clearwater's section 112 ¶ 6 argument must fail.

3. Infringement under the doctrine of equivalents

Under the equitable doctrine of equivalents ("DOE"),[3] a product may infringe a patent even if it does not literally fall within the scope of what that patent claims, provided the structures of the accused device and the claimed device are equivalent. DOE infringement lies where the accused device performs substantially the same function, in substantially the same way, to achieve substantially the same result; any differences must be insubstantial. *E.g., Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.,* 520 U.S. 17, 39-40 (1997). As with literal infringement, DOE infringement requires that every limitation of a claim is satisfied either

[3] Evapco asserts that Clearwater has waived any DOE infringement argument because, although Clearwater raised DOE infringement in its complaint, Clearwater has not pursued that claim through discovery or otherwise throughout this litigation. It does appear that Clearwater has waived its DOE infringement argument; nevertheless, I analyze that claim below.

literally, or by a substantial equivalent. *See, e.g., Carroll Touch, Inc. v. Electro Mechanical Systems, Inc.*, 15 F.3d 1573, 1579 (Fed. Cir. 1993). Accordingly, the DOE infringement analysis looks at each claimed element rather than the invention as a whole. *Warner-Jenkinson,* 520 U.S. at 29.

Equivalence is a factual question; if the accused device does not literally infringe, the burden remains with the patentee to prove DOE infringement by a preponderance of the evidence. Although the question of equivalence is factual, where the patentee does not present sufficient evidence for a jury to find DOE infringement, summary judgment is appropriate. *General Electric Co. v. Nintendo Co.*, 179 F.3d 1350, 1353 (Fed. Cir. 1999).

If an alleged equivalent element of an accused device represents an insubstantial change from the claimed limitation, DOE infringement may lie. If, however, the alleged equivalent element represents a substantial change, such that the claimed limitation would be vitiated or rendered meaningless if stretched to reach the element in the accused device, a patentee is not entitled to a finding of equivalence. *Freedman Seating Co. v. American Seating Co.*, 420 F.3d 1350, 1358 (Fed. Cir. 2005). Similarly, an accused element is not equivalent if such a finding would change the way the function of the claimed invention is performed, *Wolverine*, 38 F.3d at 1199.

As the amended claim construction ruling discusses at length, the "connecting means" limitations of claim 21 are written in means-plus-function form. Those limitations claim functions beyond simply connecting the component structures that comprise the claimed invention; the claimed functions are connecting those structures "such that" specified results occur. For example, claim 21 includes "connecting means for connecting [component structures]

such that during each half cycle of at least one of said two sets of half cycles, current due to said source power flows through said coils during at least a portion of said half cycle because of said first and second terminals of said switch being in said closed condition relative to one another." '267 Patent at col. 10, ln. 1-8. Because the means-plus-function limitations claim functions, rather than structures, claim 21 does not claim just the wiring or circuitry that connects the component structures in the device, but rather claims the functions that occur as a result of those connections – in the example above, the circuitry connecting the component structures operates in a manner that, when the switch is closed, results in the flow and interruption of current during at least each positive or each negative half cycle.

For the Pulse-Pure to infringe claim 21 of the '267 Patent, then, it is not enough for the same component structures to be present or even for those structures to be connected. Infringement cannot be shown merely by noting that the Pulse-Pure contains a switch, coils, capacitance and relies on an alternating current power source, or even that the Pulse-Pure may contain a switch, coils, and capacitance, which are all connected to each other and to that power source by way of conductors, various subcircuits identified in the '267 Patent specification, or a thermal overload switch. Instead, for Clearwater to prove its infringement claim, the Pulse-Pure must contain the requisite structural components, connected such that the claimed functions occur.

Under the doctrine of equivalents, for the Pulse-Pure to infringe Claim 21 of the '267 Patent it would need to perform substantially the same functions, in substantially the same way, producing substantially the same results. As discussed above, the invention claimed in the '267 Patent must be powered by a source of alternating current electrical power with alternating half

cycles of positive and negative voltage; the Pulse-Pure's L293B component that allegedly infringes does not power the entire device and does not produce such a current. In addition, there is no dispute that the L293B does not interrupt current in the same manner that the invention claimed in the '267 Patent does. Accordingly, the Pulse-Pure does not perform substantially the same functions as those claimed in claim 21, and a finding of equivalence would vitiate claim 21's functional limitations, including in particular that the source of alternating current that powers the device generates the current that is interrupted to produce ringing magnetic flux. Because a finding of equivalence would vitiate limitations of claim 21, Clearwater's doctrine of equivalents argument must fail.

For the reasons discussed above, Evapco's motion for summary judgment on Claim 6, which alleges that the Pulse-Pure infringes claim 21 of the '267 Patent, is GRANTED. For the same reasons, I sua sponte grant summary judgment in favor of Evapco on its Counterclaim 1, which seeks a declaration that the Pulse-Pure does not infringe the '267 Patent.

C. Validity of the '267 Patent

Evapco asserts that claim 21 of the '267 Patent is anticipated by at least one of three pieces of prior art: two different patents issued to Salvatore Pandolfo, and actual "Parrot" water purification devices that were produced and sold. Clearwater has moved for summary judgment on Evapco's counterclaim.

In order to assess whether the challenger to a patent has proved anticipation, and therefore invalidity, a court must first identify the elements of the claims at issue, determine their meaning, and then identify corresponding elements disclosed in the anticipating reference. Although the elements must correspond, the focus of the anticipation inquiry is on the entirety of the claimed

invention, rather than on simple element-to-element matching. *Structural Rubber Products Co. v. Park Rubber Co.*, 749 F.2d 707, 716 (Fed. Cir. 1984).

Here, Evapco argues that "if the Court accepted [Evapco's] proposed construction of the terms "switch" and "connecting means," then neither the Parrot devices, nor . . . the 'Pandolfo Patents' . . . would anticipate Claim 21 of [the '267 Patent]." Evapco Opp. Br. at 1. Evapco contends, however, that Clearwater's proposed reading of claim 21 of the '267 Patent is expansive to the point that it implicates the Parrot device and Pandolfo Patents as anticipatory prior art.

I hold that neither the Pandolfo Patents nor the Parrot device anticipated claim 21 of the '267 Patent. Specifically, as indicated in the deposition testimony of Evapco's experts Dr. John Lane and Dr. Thomas Keim, the "switch" claimed in claim 21 – defined as "an electrical component that includes a control terminal and at least two additional terminals that pass current through the component," is not present in the allegedly anticipatory prior art. 7/11/07 Lane Dep. Tr. at p. 450, ln. 3-19; p. 465, ln. 14-22; p. 592, ln. 19-21; 10/10/07 Keim Dep. Tr. at p. 374, ln. 10 - p. 376, ln. 6. Because neither the Pandolfo Patents nor the Parrot devices anticipated claim 21 of the '267 Patent, Clearwater's motion for summary judgment is GRANTED.

D. Validity of the '739 Patent

Evapco has moved for summary judgment on Counterclaim 3, asking for a declaration that the '739 Patent is invalid. Evapco argues that the '739 Patent claims a process that is inherently performed by prior art, including the '267 Patent and an article published by Dr.

Dennis Opheim,[4] one of the inventors of the '739 Patent.

> Under the principles of inherency, if a structure in the prior art necessarily functions in accordance with the limitations of a process or method claim of an application, the claim is anticipated. This is not to say that the discovery of a new use for an old structure based on unknown properties of the structure might not be patentable to the discoverer as a process. . . . [I]f a previously patented device, in its normal use and operation will perform the function which an [applicant] claims in a subsequent application for process patent, then such application for process patent will be considered to have been anticipated by the former patented device.

In re King, 801 F.2d 1324, 1326-27 (Fed. Cir. 1986) (internal citations and punctuation omitted). Inherency, as a form of anticipation under 35 U.S.C. § 102, is only present when there is identity of the claimed process and either express or inherent description or embodiment in a single reference. *E.g., Glaverbel S.A. v. Northlake Marketing & Supply, Inc.*, 45 F.3d 1550, 1554 (Fed. Cir. 1995). Absence from the reference of any claimed element negates anticipation. *Kloster Speedsteel AB v. Crucible, Inc.*, 793 F.2d 1565, 1571 (Fed. Cir. 1986), *overruled on other grounds*, *Knorr-Bremse Systeme Fuer Nutzfahrzeuge GmbH v. Dana Corp.,* 383 F.3d 1337 (Fed. Cir. 2004).

Inherency is present where, instead of a prior art disclosure being express, it is implied. Characteristics or functioning may be inherent even if unrecognized or unappreciated by those of ordinary skill in the art; discovery of a previously unknown property or scientific explanation does not provide new grounds for patentability. *Atlas Powder Co. v. IRECO, Inc.*, 190 F.3d 1342, 1347 (Fed. Cir. 1999); *Harris Corp. v. IXYS Corp.*, 114 F.3d 1149, 1153 (Fed. Cir. 1997). Also, the known use of a known process that has been described in prior art is not patentable.

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[4] Opheim's article, "The Effect of Pulse-Power Technology on the Microbial Content and Biofilm Formation in Evaporative Cooling Towers," was presented at the May 2000 Annual General Meeting of the American Society of Microbiology.

Bristol-Myers Squibb Co. v. Ben Venue Laboratories, Inc., 246 F.3d 1368, 1376, 1379 (Fed. Cir. 2001).

Merely providing the scientific explanation of an inherent function is not patentable. *King*, 801 F.2d 1324. It is not enough, however, for a particular result to have been a possible or probable result of what is already known in the prior art; occasional results are not inherent. *Mehl/Biophile International Corp. v. Milgraum*, 192 F.3d 1362, 1365 (Fed. Cir. 1999). Whether a claim limitation is inherent in prior art, for purposes of a finding of anticipation, is generally a question of fact. *Finnigan Corp. v. United States ITC*, 180 F.3d 1354, 1362 (Fed. Cir. 1999).

Determining whether Evapco's summary judgment motion should be granted with regard to the '739 Patent requires, in accord with the authorities discussed above, identification of the limitations of the claims of the '739 patent and their meanings, and then comparing those limitations with explicitly disclosed elements in the allegedly anticipatory prior art as well as with the prior art's undisputed inherent features.

The independent claims of the '739 Patent read as follows:[5]

1. A method of making an oxidizing agent comprising the steps of:

   providing a magnetic field in the form of successive bursts of ringing magnetic flux; and

   exposing a liquid to the bursts of magnetic flux for a period sufficient to form a stabilized oxidizing agent in a concentration sufficient to have a biocidal effect on microorganisms in the liquid.

   * * *

[5] Because the dependent claims of the '739 Patent are narrower than the independent claims on which they depend, they cannot be valid if the independent claims – claims 1, 10 and 16 – are invalid. Accordingly, this discussion is limited to the independent claims of the '739 Patent.

10. A method of forming a stabilized oxidizing agent in water comprising the steps of:

aerating the water to provide dissolved oxygen in the water;

producing bursts of ringing magnetic flux having a frequency of 10kHz to 80kHz during each burst and with the bursts being repeated at a frequency of 1 Hz to 100 Hz; and

exposing the aerated water to the bursts of ringing magnetic flux for a period sufficient to form a stabilizing oxidizing agent.

* * *

16. A method of treating water in an air conditioning system cooling tower having a water evaporation means with water evaporation surfaces from which water evaporates into air moved past the evaporation surfaces, a water inlet, a distribution means for distributing water received through the water inlet onto the evaporation surfaces, a main tank for receiving water moving from the evaporation surfaces, a water outlet for removing water from the main tank, and means providing a recirculation flow path for recirculating water from said outlet to said inlet, said method comprising:

moving water through said recirculation flow path,

producing bursts of ringing magnetic flux in the water moved through said recirculation flow and having a frequency of 10 kHz to 80 kHz during each burst of ringing flux with the bursts of ringing flux being repeated at a frequency of 1 Hz to 100 Hz to form a stabilized oxidizing agent in the water which oxidizing agent has an anti-microbial effect involving oxidation of the oxidizing agent with chemical components of microorganisms in the water.

'739 Patent at col. 8, ln. 56-64; col. 9, ln. 35 - 47; col. 10, ln 24-44. Put simply, claim 1 of the '739 Patent is the broadest claim in the Patent, and claims a method, using bursts of ringing magnetic flux at certain intervals, for oxidizing liquid and thereby treating microorganisms in that liquid. Claim 10 additionally claims aeration of water along with the specific frequency range for the bursts of ringing magnetic flux, and claim 16 claims a method of using the ringing magnetic flux to treat water in an air conditioning system cooling tower.

Inherency doctrine provides that "discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's function," cannot be the basis for a valid patent. *Atlas Powder Co.*, 190 F.3d at 1376. Although not dispositive, it is telling that the specification of the '739 Patent states that "[t]he present invention involves the previously unknown, unrecognized, and beneficial capability of being able to produce a stabilized oxidizing agent . . . by exposing the water to a certain type of varying magnetic flux . . . ." '739 Patent at col. 4, ln. 45-50. The '739 Patent's specification states that

> [t]he ringing magnetic flux field may be provided by an apparatus such as that of [the '267 Patent]. . . . The magnetic flux generated and passed through the water by this apparatus is in the form of successive bursts or periods of ringing flux with the flux oscillations during the ringing periods being of relatively high primary frequency, such as 10 kHz to 80 kHz, . . . and with the ringing periods themselves being repeated at a frequency of between 1 Hz to 100 Hz, preferably 50 Hz to 60 Hz.

Id. at col. 4, ln. 63-65.

Whether the '267 Patent anticipates each of the claims of the '739 Patent requires comparison of the limitations of the '739 Patent with what was disclosed in the prior art. Citations in the '739 Patent to the '267 Patent, including to the manner in which the '267 Patent is practiced and results that are produced by devices such as the preferred embodiment of the '267 Patent, correspond to the limitations of the independent claims of the '739 Patent.

'739 Patent Limitation	**Source in '739 Patent**	**Reference to '267 Patent in '739 Patent Specification**
A magnetic field in the form of successive bursts of ringing magnetic flux	col. 8, ln. 59-60	"The ringing magnetic flux field may be provided by an apparatus such as that of U.S. Pat. No. 6,063,267." ('739 Patent, col. 4, ln. 63-64.)

Exposing a liquid to the bursts of ringing magnetic flux for a period sufficient to form a stabilized oxidizing agent in a concentration sufficient to have a biocidal effect on microorganisms in the liquid	col. 8, ln. 61-64	When water is exposed to the ringing magnetic flux that may be provided by the '267 Patent, "an oxygen-bearing oxidizing agent having anti-microbial properties is produced." ('739 Patent, col. 5, ln. 57-61.)
Aerating the water to provide dissolved oxygen in the water	col. 9, ln. 38-39	In an air conditioning cooling tower, "[s]ince this recirculated water is brought into intimate contact with ambient air . . . the water in the main tank . . . contains a significant amount of dissolved oxygen . . . ." ('739 Patent, col. 6, ln. 39-46.)
Bursts of magnetic flux repeated at a frequency of 1 Hz to 100 Hz	col. 9, ln. 40-43	"The ringing magnetic flux field may be provided by an apparatus such as that of U.S. Pat. No. 6,063,267." ('739 Patent, Col. 4, ln. 63-64.)
Specific frequency for flux oscillations	col. 9, ln. 44-46	"The ringing magnetic flux field may be provided by an apparatus such as that of [the '267 Patent]. . . . The magnetic flux generated and passed through the water by this apparatus is in the form of successive bursts or periods of ringing flux with the flux oscillations during the ringing periods being of relatively high primary frequency, such as 10 kHz to 80 kHz, . . . and with the ringing periods themselves being repeated at a frequency of between 1 Hz to 100 Hz, preferably 50 Hz to 60 Hz." ('739 Patent, col. 4, ln. 63-65, col. 5, ln. 1-7.)
A method of treating water in an air conditioning system cooling tower	col. 10, ln. 24-34	"[I]n the cooling tower arrangement . . . bursts of ringing magnetic flux are applied to the portion of the water which is recirculated from and back to the main tank. To accomplish this . . . a ringing magnetic flux producing device is included . . . with the device preferably being one such as shown and described in [the '267 Patent]." ('739 Patent, col. 6, ln. 47-54.)

Moving water through said recirculation flow path	col. 10, ln. 35	"[I]n the cooling tower arrangement . . . bursts of ringing magnetic flux are applied to the portion of the water which is recirculated from and back to the main tank. To accomplish this . . . a ringing magnetic flux producing device is included . . . with the device preferably being one such as shown and described in [the '267 Patent]." ('739 Patent, col. 6, ln. 47-54.)
Bursts of ringing flux repeated at a frequency of 1 Hz to 100 Hz	col. 10, ln. 36-40	"The ringing magnetic flux field may be provided by an apparatus such as that of U.S. Pat. No. 6,063,267." ('739 Patent, Col. 4, ln. 63-64.)
Stabilized oxidizing agent in the water with an anti-microbial effect involving oxidation of the oxidizing agent with chemical components of microorganisms in the water	col. 10, ln. 41-44	When water is exposed to the ringing magnetic flux that may be provided by the '267 Patent, "an oxygen-bearing oxidizing agent having anti-microbial properties is produced." ('739 Patent, col. 5, ln. 57-61.) In an air conditioning cooling tower, "[s]ince this recirculated water is brought into intimate contact with ambient air . . . the water in the main tank . . . contains a significant amount of dissolved oxygen . . . ." ('739 Patent, col. 6, ln. 39-46.)

The text of the '739 Patent specification makes clear that inherent in the '267 Patent, when practiced, is the method and results claimed in the '739 Patent. For instance, the '739 Patent states that, when water is exposed to the ringing magnetic flux described in the '267 Patent, "an oxygen-bearing oxidizing agent having anti-microbial properties is produced." '739 Patent, col. 5, ln. 57-61. Importantly, the '739 Patent does not teach that when the '267 Patent is practiced, an oxygen-bearing oxidizing agent having anti-microbial properties *may be* produced, or is occasionally produced; the '739 Patent teaches that the anti-microbial oxidizing agent *is* produced when the '267 Patent is practiced. It does not matter that, at the time of invention of the '267 Patent, its inventors may not have known or understood or appreciated that such a result would occur. "[D]iscovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's function," cannot be the basis for a valid patent.

Atlas Powder Co., 190 F.3d at 1376.

It also does not matter that the '739 Patent specification indicates that the device claimed in the '267 Patent is one way, among others, to produce the method and results that the '739 Patent claims. Because, as the '739 Patent specification recognizes, each limitation is inherent in the '267 Patent when practiced, the '267 Patent anticipates the method claimed in the '739 Patent. For that reason, the '739 Patent is invalid.[6] Evapco's motion for summary judgment (**doc. #402**) is granted.

E. Other Pending Motions

Along with the cross-motions for summary judgment that I discuss above, there are a number of pending motions.

First, I note that Clearwater withdrew its motion for reconsideration of the initial claim construction ruling in this case. Accordingly, Clearwater's motion to withdraw (**doc. #461**) is GRANTED, and Clearwater's motion to reconsider (**doc. #395**) is DENIED AS MOOT.

Second, Clearwater has filed a motion to strike in part the expert testimony of Dr. Keim. That motion appears on the docket sheet twice, once at docket entry 417, and once at docket entry 431. That motion (**doc. #431**) is GRANTED.[7] The duplicate motion (**doc. #417**) is DENIED AS MOOT.

Third, Evapco has filed a motion in limine to preclude Clearwater's arguments that the

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[6] Because the '267 Patent anticipates the '739 Patent, it is not necessary to consider whether the Opheim article anticipates the '739 Patent as well.

[7] Accordingly, I have not considered those portions of Dr. Keim's expert report, or those portions of Evapco's statement of undisputed facts that rely on those portions of Dr. Keim's report, that Clearwater moved to strike.

Pulse-Pure infringes claim 21 of the '267 Patent under the doctrine of equivalents. Evapco argues that Clearwater has waived its doctrine of equivalents argument by not indicating that it was pursuing that claim in interrogatory responses or through expert reports. For the reasons discussed above, Clearwater's doctrine of equivalents argument fails. Accordingly, Evapco's motion in limine (**doc. #433**) is DENIED AS MOOT.

III. Conclusion

For the reasons discussed above, Evapco's motion for summary judgment (**doc. #402**) is GRANTED. Clearwater's motion for summary judgment (**doc. #404**) is GRANTED. Clearwater's motion to withdraw (**doc. #461**) is GRANTED, and Clearwater's motion to reconsider (**doc. #395**) is DENIED AS MOOT. Clearwater's motion to strike (**doc. #431**) is GRANTED; a duplicate motion (**doc. #417**) is DENIED AS MOOT. Evapco's motion in limine (**doc. #433**) is DENIED AS MOOT. In addition summary judgment is granted in favor of Evapco on Evapco's Counterclaim 1.

It is so ordered.

Dated at Bridgeport, Connecticut this 8th day of January 2009.

/s/
Stefan R. Underhill
United States District Judge