UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

THERMAPURE, INC.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	**No. 10 C 8157**
	)	
RXHEAT™, LLC and CAMBRIDGE ENGINEERING, INC.	)	**Judge Rebecca R. Pallmeyer**
	)	
	)	
Defendants.	)	

MEMORANDUM OPINION & ORDER

The Centers for Disease Control and Prevention reports that the United States is experiencing "an alarming resurgence in the population of bed bugs." Heat treatment is one of several methods for controlling these and other undesirable visitors. *See* U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION & U.S. ENVIRONMENTAL PROTECTION AGENCY, JOINT STATEMENT ON BED BUG CONTROL IN THE UNITED STATES at 1 (2010), *available at* http://www.cdc.gov/nceh/ehs/Docs/Joint_Statement_on_Bed_Bug_Control_in_the_US.pdf. The parties in this patent infringement suit are engaged in the heat treatment services industry. Plaintiff Thermapure, Inc. ("Thermapure") charges Defendants RxHeat, LLC ("RxHeat") and Cambridge Engineering, Inc. ("Cambridge") with infringing Thermapure's U.S. Patent No. 6,327,812 (" '812 patent"), which describes a process for killing potentially harmful organisms and toxins, such as mold or bed bugs, located inside a home or building.

Part of this process is familiar: A heating mechanism heats air to a temperature that will kill the mold or bed bugs, and the heated air is directed into the home or building and circulated, killing the unwanted organisms. The patented process is intended to address the "dust-like remains" that, Plaintiff contends, are left behind after the heat treatment process; specifically, the patented process calls for a vent or filter through which the heated air exits the home or building and is released into the atmosphere. As the patent explains, filtration serves two

purposes: it removes the organism remains from the treated space, and it prevents them from entering the atmosphere. In its final claim contentions, Thermapure alleges that Defendants RxHeat and Cambridge infringe claims 4, 6, and 8 of the '812 patent under 35 U.S.C. §§ 271(a)–(c) through use of filters with their heat treatment products.

Defendants RxHeat and Cambridge responded with a motion for summary judgment of non-infringement, and a motion to strike the expert testimony of Michael Geyer, on which Plaintiff relies to demonstrate infringement. Defendants argue that the accused products do not employ filtration, if at all, in the manner described by the '812 patent, and that Geyer's testimony does not satisfy *Daubert*. Plaintiff argues, relying on Geyer's testimony, that Defendants' products infringe because they either use or should be used with a filter. For reasons discussed below, Defendants' motion to strike [123] is granted in part and denied in part. Their motion for summary judgment [117] is granted.

BACKGROUND

Defendants RxHeat and Cambridge, each organized and located in Missouri, are companies under "common ownership." (Pl.'s Resp. to Defs.' Statement of Facts [130], hereinafter "Pl.'s Resp. to Defs.' 56.1," ¶¶ 2–3; Defs.' Resp. to Pl.'s Statement of Additional Facts [141], hereinafter "Defs.' Resp. to Pl.'s 56.1," ¶ 9.) Cambridge "developed and makes gas-fired heating products," including the Rx12 and Rx15 product line, with its own patented heating technology. (Defs.' Statement of Facts [119], hereinafter "Defs.' 56.1," ¶ 14.) RxHeat markets these products to service providers in water restoration and pest remediation markets, "often individually-owned or small businesses operated in limited geographic areas," and the Rx12/Rx15 products also are distributed by Jon-Don, Inc. (Pl.'s Resp. to Defs.' 56.1 ¶¶ 15–17.) RxHeat itself does not provide water restoration or pest remediation services. (*Id.* ¶¶ 16–18.)

Plaintiff alleges that Defendants' Rx Z9000 Electric Heater and the Rx12/Rx15 gas-powered heaters[1] infringe on claims 4, 6, and 8 of the '812 patent. (*Id.* ¶ 7.)

I. The '812 Patent

The '812 patent covers a method of "sanitizing buildings and other enclosed spaces by killing and removing organisms such as insects, bacteria, virus, dust mites, spiders, silver fish, fungi and toxic molds." (Patent No. US 6,327,812, Ex. P to Defs.' 56.1, hereinafter " '812 Patent," at 1:6–9.) The patented method describes the steps of preparing an enclosure for heat treatment, placing temperature-indicating probes within the enclosure, "installing ingress ducts through which an environmentally acceptable gas . . . can be directed into the enclosure," and "opening windows, doors, etc." or "installing an egress duct or ducts" through which the heated gas may leave the enclosure. The gas is then heated, directed through ingress ducts into the enclosure, and filtered through open doors, windows and/or egress ducts in order to "collect organism remains and prevent them from entering the environment." (*Id.* at 1:64–2:8.) The patent identifies several "object[s]" of the invention, including "to filter gases leaving from the enclosure to prevent the allergenic organism remains from entering the environment," and "to remove substantially all of the remains of the killed organisms from open areas in the enclosure." (*Id.* at 2:28–33.) Plaintiff alleges that Defendants have infringed on the claims set forth below (with emphasis added):

Claim 4

> A kit for use in killing organisms and removing toxic substances from an enclosure, which comprises:
> at least one ingress duct for directing gas into an enclosure and at least one

[1] For purposes of this ruling, the Rx12/Rx15 category refers to the following products: Rx15 Commercial Portable System and Rx15 Commercial Turnkey Trailer, the Rx12 Residential Portable System and Rx12 Residential Turnkey Trailer, the Rx Temperature Monitoring Kit, and the RxSmart Monitoring System. The "only difference" between the portable and turnkey systems is that, with the turnkey system, "the heating units are mounted inside a trailer that can be easily towed behind a vehicle with a propane generator on board." (Pl.'s Resp. to Defs.' 56.1 ¶ 8.)

egress duct for directing gas out of said enclosure;
a plurality of temperature indicating probes for installation at predetermined locations in said enclosure;
means for heating an environmentally acceptable gas to a predetermined temperature that is lethal to predetermined organisms;
means for directing said gas through said ingress duct;
means for viewing the temperatures of said indicating probes;
means for recording the temperatures of said indicating probes in real time;
means for removing remains of said organisms from said enclosure; and
filter means in said egress duct for removing remains of said organisms from gas from said enclosure passing through said egress duct.

Claim 6

A method for sanitizing an enclosed structure having an exterior and an interior, comprising the steps of:
preparing said enclosed structure for exposure to a high temperature gas by removing or protecting all heat sensitive items;
disposing a plurality of temperature indicating probes at predetermined locations within said enclosed structure;
heating a gas to a predetermined temperature;
directing said heated gas into said enclosed structure in order to raise the temperature within said enclosed structure to said predetermined temperature;
monitoring the temperature detected from said probes in real time to ensure that all portions of said enclosed structure reach said predetermined temperature;
venting said heated gas from said enclosed structure; and
filtering said heated gas vented from said enclosed structure.

Claim 8

A system for sanitizing an enclosed structure having an exterior and an interior, comprising:
a source of an environmentally acceptable gas;
a heater coupled to said gas source to heat said gas to a predetermined temperature, and means for introducing a flow of said heated gas into said interior of said enclosed structure;
a filter arranged to allow said flow of heated gas to pass therethrough after passing through said interior of said enclosed structure;
a plurality of temperature indicating probes adapted to be disposed at predetermined locations within said enclosed structure; and
a control unit electrically connected to said plurality of temperature indicating probes to thereby provide an indication of temperature at said predetermined locations within said enclosed structure;
wherein, said heated gas serves to kill organisms and remove toxic substances from within said enclosed structure.

It is undisputed that the practice of using heat to kill unwanted organisms was recognized in prior art. (Pl.'s Resp. to Defs.' 56.1 ¶ 21.) In fact, in the application for the '812

patent, the filtration limitations described in claims 4, 6, and 8 were separate, dependent claims on independent claims describing the other limitations. Thus, in Plaintiff's original application, claim 4 appeared as two separate claims—independent claim 11, which described all limitations but filtration, and dependent claim 13, which described a "filter means in said egress duct for removing remains of said organisms from gas from said enclosure passing through said egress duct." (*Id.* ¶¶ 67–68.) So too, claim 6 contains what was once dependent claim 19, describing filtration, and independent claim 18, describing all other limitations; and, finally, claim 8 combined dependent claim 25, the filtration limitation, with independent claim 24, describing all other limitations. (*Id.* ¶¶ 71–73.) During prosecution, the Examiner found the original independent claims 11, 18, and 24 obvious in light of prior art. Charles Forbes' U.S. Patent No. 4,817,329 (" '329 Patent"), the Examiner reasoned, "shows all of the limitations recited with the exception of the plurality of temperature probes and removing or protecting heat sensitive items," which the Examiner concluded were obvious alterations. ('812 Patent Prosecution History, Ex. KK to Defs.' 56.1, hereinafter "Prosec. Hist.," at THERMA000058, THERMA000089.) The Examiner concluded that the dependent claims (Claims 13, 19, and 25) would be allowed only if rewritten "to include all of the limitations of the base claim and any intervening claims," (*id.* at THERMA000059, THERMA000090), and Plaintiff did amend each of the claims accordingly. (Pl.'s Resp. to Defs.' 56.1 ¶¶ 70, 73.)

II. The Accused Products

The first product line at issue, the Rx12/Rx15 gas-fueled heaters, are used in residential and/or commercial settings, and are "set up outside the structure to be treated," "draw air from the atmosphere into a passageway through the device," and heat the air as it passes through the unit, directing it into the structure through "flexible ducts" inserted in a door or window to the structure. (Pl.'s Resp. to Defs.' 56.1 ¶¶ 50–51.) The Rx12/Rx15 heaters do not come with filters; the manufacturer (Cambridge) does not "make" them, the seller (RxHeat) does not "provide" them, and the distributer (Jon-Don) does not sell them with the Rx12/Rx15 products.

(*Id.* ¶¶ 52, 54.) Nor does any technical information describing the Rx12/Rx15 products (that is "marketing materials provided to the industry, operations manuals, or sales forms for the Rx12 and Rx15 products") refer to a filter to be used with the Rx12/Rx15 heaters. (*Id.* ¶ 56.) According to Defendants, a filter would "diminish the effectiveness" of the Rx12/Rx15 units by "imped[ing] . . . air movement," and therefore, they assert, they neither provide nor advocate the use of a filter with these products. (Defs.' 56.1 ¶¶ 52, 59.) Plaintiff responds that Defendants' position is contradicted by industry guidelines and by the "Water Restoration Case Study," which was performed by a third party using the Rx15 gas-heater and summarized on RxHeat's website. (Pl.'s Resp. to Defs.' 56.1 ¶¶ 52, 59; *see* Water Restoration Case Study Residential, Ex. 3 to Pl.'s 56.1, hereinafter "Case Study.") [2]

The Z9000 electric heater is another RxHeat product used for heat treatment, which may be "set up inside a structure to treat smaller areas, such as individual rooms." (Defs.' 56.1 ¶ 62.) It heats to the "requisite temperatures" and is sold with remote temperature monitoring capability. (Defs.' Resp. to Pl.'s 56.1 ¶¶ 11–12.) The Z9000 comes with a MERV 11 "inlet" filter; as air enters the unit, it passes through the filter, is heated, exits the unit through a non-filtered opening, and is blown into the enclosure. (Defs.' 56.1 ¶¶ 63, 65.) While the Z9000 usually is set up inside the enclosure to be treated, it may also be set up outside the room with the heated air ducted into the enclosure. (Pl.'s Resp. to Defs.' 56.1 ¶ 64; RxHeat Z9000 Installation, Operation & Maint. Instructions, Ex. 2 to Pl.'s 56.1, hereinafter "Z9000 Instr.," at RX000330–331.) The Z9000 Instructions state that the Z9000 comes with "multiple ducting options," including a "12

[2] In the case study, a third party servicer used an Rx15 heater to dry out a home that suffered from significant water damage after a pipe burst and leaked for five days, "saturat[ing] the entire structure." According to the case study description, the Rx15 heater dried out the structure in three days. The case study description does not indicate when or why the study was performed, though it appears to have been a real situation in which the Rx15 heater was used successfully. The exhibit showing the case study is a computer screen shot, taken from RxHeat's website, describing this case study and listing what appear to be links to other RxHeat case studies (describing RxHeat products' use in other situations).

[inch] intake" and a "12 [inch] supply," and that the unit "can be ducted at the inlet, the outlet or both using the included round outlet adapter." (Z9000 Instr. at RX000327, RX000330.)

The parties dispute the intended function of the Z9000's filter element.[3] Defendants claim that "[t]he purpose of this filter is to protect the unit's heating element from debris in the ambient air." (Defs.' 56.1 ¶ 63.) In Plaintiff's understanding, however, the filter removes substantially all of the toxins and dead organisms after heat treatment. Plaintiff points out that the specifications that appear in Z9000's technical literature describe both a "double-walled, screened enclosure for heating elements" and "multiple air filter options," and that RxHeat "can point to no statement from the manufacturer suggesting such a purpose [i.e., protection of the heating element] for the filter." (Pl.'s Resp. to Defs.' 56.1 ¶ 63.) Relying exclusively on Z9000 specifications and the testimony of their proffered expert Michael Geyer, Plaintiff claims that there is "no reason" to use a "high-efficiency MERV" filter simply to protect the device's heating element. (*Id.*) (citing Pl.'s Statement of Additional Facts [130], hereinafter "Pl.'s 56.1," ¶¶ 15–26.)

III. Michael Geyer's Testimony

In opposition to Defendants' renewed motion for summary judgment, Plaintiff relies substantially on the declaration and expert report of Michael Geyer. (Expert Rep. of Michael Geyer, Ex. 1 to Pl.'s Opp. to Defs.' Mot. to Strike [128], hereinafter "Geyer Rep.") According to that report, Geyer received a B.S. in in engineering and soil science from California Polytechnic State University in 1985, and is now studying public health as an M.S. candidate at Tulane University. (*Id.* ¶ 7; Michael D. Geyer Curriculum Vitae, Ex. B to Geyer Rep., hereinafter "Geyer

[3] Although Defendants dispute that the Z9000 product utilizes a filter in the manner called for by the patent, they admit that the Z9000 "is designed so that hot air emitted from the heater will recirculate through the heater's intake and pass through the installed MERV filter." Somewhat confusingly, they also argue that Plaintiff's "recirculation theory" is "unsupported by competent evidence" and that Plaintiff has failed to "provide any evidence that such use has ever occurred." (Defs.' Resp. to Pl.'s 56.1 ¶¶ 13, 27.) Defendants' admission does not defeat summary judgment, however, because Plaintiff has provided no evidence that the Z9000 satisfies all limitations of claims 4, 6, or 8.

CV," at 1.) Geyer is employed as the project director at KERNTEC Industries, Inc., an engineering consulting company that specializes in "environmental engineering, industrial hygiene, and high-hazard construction-remediation projects involving physical hazards and/or chemical/biological agents." Geyer's own specialty is in the area of "design and construction of contaminant mitigation systems, air quality studies, worker exposure studies, property assessments, and hazard abatement." (Geyer Rep. ¶¶ 8–9.) From 1985 to present, Geyer claims to have "sampled and evaluated" more than 1,000 structures for "chemical and/or biological agents affecting indoor air quality and/or occupant health," "assessed and designed containment and control systems" for "hundreds" of remediation projects to prevent harmful aerosols, and worked on "numerous" projects involving water damage. (*Id.* ¶ 12.) And, between 1977 and 1985, Geyer worked in the construction industry performing reconstruction on "over a hundred" water damaged buildings. (*Id.* ¶ 13.)

"[T]hrough working with Thermapure and Precision Environmental, Inc." Geyer also claims to have "become an expert on the use of heat for remediation and restoration." He was "present" at "approximately 30–50" heat remediation projects, which included bed bug remediation and water restoration jobs, and therefore asserts that he has "experience with multiple types of heaters, including stand-alone propane heaters, stand-alone electric heaters (similar to the RxHeat Z9000), and trailer mounted, gas-fired heaters (similar to the Rx12 and Rx15)." (*Id.* ¶¶ 16–17.) He also has inspected an electric heater manufactured by Therma-Stor, the same company that manufactures the Z9000. (*Id.* ¶ 27.) Geyer acknowledges that he does not recall whether he was ever present at a job where the Rx12/Rx15 or Z9000 heaters were used, or whether he had conducted testing on any of these heaters. (Geyer Dep., May 30, 2013, Ex. 3 to Defs.' Mot. to Strike, at 146:8–15, 147:8–13, 148:4–11, 19–25.)

In his expert report, Geyer evaluates the Water Restoration Case Study materials, and concludes that a filter must have been used with the Rx15. (Geyer Rep. ¶ 41.) Dave Walters, an engineer responsible for the case study, testified at his deposition that a filter was used only

during initial cleanup and was removed before the Rx15 heater was used. (Dave Walters Dep., Jan. 26, 2012, Ex. V to Defs.' 56.1, at 58:10–60:21.) Geyer insists that this account "is contradicted by the photographs[4] and description within the case study, as well as common sense and standard of care." (*Id.*) From examining the photographs, Geyer identifies the filter as a Dri-Eaz HEPA 500, and concludes that because the filter is shown in an empty room with drywall "removed from the bottom 4 to 6 inches of all walls," and because the filter is sitting beside an axial fan, it must have been used with the Rx15. (*Id.* ¶¶ 44–46.) He observes that it would "make no sense" not to use the filter with the heater because the Rx15 forces a "large amount[] of air" into a structure, causing particulates to become aerosolized, which could then be inhaled if not removed. (*Id.* ¶¶ 42, 47.) Furthermore, Geyer asserts, "no reputable contractor in the fields of remediation and/or restoration would purposefully omit air filtration as an engineering control and fail to mitigate potentially harmful aerosols generated from this sort of treatment effort." (*Id.* ¶ 42.) Geyer claims that filtration is "standard industry practice" and that "[p]urposeful omission [of filtration] would constitute a negligent act," but he cites no standards to this effect in his report. (*Id.* ¶¶ 18, 21.)

After reviewing "RxHeat documents and specifications describing the Z9000," Geyer concludes (using the filtration limitation language of claim 8 verbatim) that the filter for the Z9000 is arranged so that hot air will pass through it after it has passed through the enclosure, and that the filter's purpose is to "filter[], clean[], and sanitize[] the hot air of very fine particulate matter." (Geyer Rep. ¶¶ 37–38.) Geyer explains that all filters are given a "Minimum Efficiency Rating Value" ("MERV") that is established by the American Society of Heating, Air Conditioning, and Refrigeration Engineers (ASHRAE), and is "based on a filter package's

[4] The case study description includes two photographs: the first photograph shows the inside of the home with what appears to be a fan and a large blue object to its left (identified by Geyer as the Dri-Eaz HEPA 500 filter), and the second photograph shows the Rx15 heater placed outside the home with a duct connecting the heater and the interior of the home through a window. (Case Study.) Neither party nor the exhibit itself identifies who took the photographs.

capability of capturing or arresting particulates of a specific aerodynamic diameter." (*Id.* ¶¶ 29–30.) The higher the MERV rating, the smaller the particles that the filter can capture: MERV-1 through MERV-4 capture larger particles and "are used primarily to protect equipment," while MERV-5 through MERV-16 remove smaller particles and are used to capture "airborne contaminants." The standard MERV-11 (and optional MERV-14) filters that come with the Z9000, Geyer asserts, "are specifically designed and intended to capture much smaller particles and filter the air of those small particles as the equipment operates." (*Id.* ¶¶ 30, 33) (citing ANSI/ASHRAE 52.2–2012.)

IV. Industry Guidelines

Geyer's report makes no mention of water restoration industry guidelines.[5] These guidelines, established by the Institute of Inspection, Cleaning and Restoration Contractors ("IICRC"), include the S500 Standard and Reference Guide for Professional Water Damage Restoration ("IICRC S500"). The IICRC S500 describes practices which "should" be adhered to as well as those merely "recommended."[6] (Pl.'s 56.1 ¶¶ 38, 44; *see* IICRC S500 Standard & Reference Guide for Prof'l Water Damage Restoration, Ex. 15 to Pl.'s 56.1, hereinafter "IICRC S500.") First, when explaining how to control airflow in order to accelerate evaporation, the IICRC S500 explains that "[a]irmoving devices inherently tend to aerosolize soils and contaminants present in the environment. As water evaporates from surfaces and materials, such as carpet, more particles often become aerosolized, creating possible health, safety,

[5] Plaintiff argues that the Rx12/Rx15 heaters, which are used to treat water damaged structures, must use filtration because guidelines for the water restoration industry mandate and recommend that filters be used with heat treatment. (*See* Pl.'s Opp. to Defs.' Mot. for Summ. J. [129], hereinafter "Pl.'s Opp.," at 10.) Geyer's report itself makes no mention of these guidelines, however.

[6] In the IICRC S500, "should" means "the practice or procedure is a component of the accepted 'standard of care' to be followed, while not mandatory by regulatory requirements," and "recommended" means "the practice or procedure is advised or suggested, but is not a component of the accepted 'standard of care' to be followed." (IICRC S500 at RX004944.)

comfort, and cleanliness issues." Thus, in order "[t]o minimize or control aerosolization of particles," the IICRC S500 states that "restorers *should* consider implementing the following: Restorers can install one or more air filtration devices or AFDs (scrubbers), depending on the AFD's size and obstructions within the structure. AFDs provide additional airflow, while simultaneously removing aerosolized soils or contaminants from the air within a room. Restorers *should* consider repositioning AFDs on each monitoring trip." (IICRC S500 at RX004992) (emphasis added.) Second, in its description of drying equipment and tools for water restoration, the IICRC S500 "*recommend[s]*" that restorers "evaluate the use of AFDs [air filtration devices] on a job based on filtration and air volume requirements," and in situations where restorers use negative pressure in order to "draw[]moist air out of potentially contaminated cavities "provides that restorers "*should*" "use an in-line HEPA filter to remove contamination from the air before being exhausted into the room." (IICRC S500 at RX004994–4995) (emphasis added.)

DISCUSSION

I. Standard of Review

Summary judgment is "appropriate in a patent case as it is in any other case," and will be granted where there is "no genuine dispute of material fact and the movant is entitled to judgment as a matter of law." FED. R. CIV. P. 56(a); *Desper Prods., Inc. v. QSound Labs, Inc.*, 157 F.3d 1325, 1332 (Fed. Cir. 1998). "The evidence of the nonmovant is to be believed, and all justifiable inferences are to be drawn in his favor." *Anderson v. Liberty Lobby, Inc.,* 477 U.S. 242, 255 (1986). Where the moving party does not bear the burden of proof at trial, it still must satisfy the burden set forth in Rule 56(a), to show that there are no genuine issues of material fact and it is entitled to judgment as a matter of law, and it may do so "either by providing evidence that negates an essential element of the opposing party's case, or by showing that the evidence on file (such as pleadings, depositions, and admissions) establishes no material issue

of fact and that the opposer will not be able to prove an essential element of its case." *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 806–07 (Fed. Cir. 1999).

Determining infringement is a two-step process: first, the court must construe the "scope and meaning" of the particular claims at issue, and second, compare the construed claims to the allegedly infringing product or process. *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454 (Fed. Cir. 1998). Under the all-limitations rule, the patentee must prove that the accused product or process satisfies each limitation within the claim, literally or under the doctrine of equivalents. *Deering Precision Instruments, L.L.C. v. Vector Distrib. Sys., Inc.*, 347 F.3d 1314, 1324 (Fed. Cir. 2003). In proving direct infringement, a patentee need not prove that the defendant had any intent to infringe. *Intel Corp. v. U.S. Int'l Trade Comm'n*, 946 F.2d 821, 832 (Fed. Cir. 1991). Claim construction is a matter of law, particularly fitting for summary judgment, but whether a particular product or process infringes is generally a matter for the factfinder, and summary judgment of non-infringement may be granted only if "no reasonable jury could find infringement." *Charles Mach. Works, Inc. v. Vermeer Mfg. Co.*, 723 F.3d 1376, 1378 (Fed. Cir. 2013).

In opposition to a motion for summary judgment of non-infringement, the patentee may rely on the affidavit or declaration of a retained expert, so long as the affidavit or declaration is "made on personal knowledge, sets out facts that would be admissible in evidence, and show[s] that the affiant or declarant is competent to testify on the matters stated." FED. R. CIV. P. 56(c)(4). Before a person may testify as an expert witness, the court must find that the expert testimony is both relevant and reliable. FED. R. EVID. 702; *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993). The testimony is relevant if it will "assist the trier of fact with its analysis of any of the issues involved in the case." *Smith v. Ford Motor Co.*, 215 F.3d 713, 718 (7th Cir. 2000). The testimony is reliable if the court finds the expert qualified "by knowledge, skill, experience, training, or education" in the relevant field, FED. R. EVID. 702; *Metavante Corp. v. Emigrant Sav. Bank*, 619 F.3d 748, 761 (7th Cir. 2010), and finds that the expert used

appropriate methodology and principles to reach her conclusions. *Smith*, 215 F.3d at 718. *Daubert* and Federal Rule of Evidence 702 outline four, flexible and non-exhaustive "guideposts" to consider in evaluating expert testimony: "(1) whether the scientific theory on which the expert's testimony is based can be or has been tested; (2) whether the theory has been subjected to peer review and publication; (3) the known and potential rate for error; and (4) whether the theory has been generally accepted in the relevant scientific, technical, or professional community." *United States v. Mire*, 725 F.3d 665, 674–75 (7th Cir. 2013). "The purpose of the *Daubert* inquiry is to scrutinize proposed expert witness testimony to determine if it has 'the same level of intellectual rigor that characterizes the practice of an expert in the relevant field' so as to be deemed reliable enough to present to a jury." *Lapsley v. Xtek, Inc.*, 689 F.3d 802, 805 (7th Cir. 2012) (quoting *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 152 (1999)). A court may exclude the testimony of an expert who does not satisfy the standards for relevance and reliability.

II. Michael Geyer's Testimony

Defendants have moved to strike the declaration and report of Michael Geyer, submitted by Plaintiff in opposition to summary judgment. Defendants argue that Geyer's testimony is inadmissible under Federal Rule of Evidence 702 and *Daubert*. In evaluating this argument, the court notes, first, that Mr. Geyer's testimony clearly is relevant to the infringement issues in this case; he testifies about the accused products, the Rx12/Rx15 and the Z9000, and how they infringe claims 4, 6, and 8 of the '812 patent through use of filtration.

The more challenging concern is whether Geyer is qualified to testify about the way in which the accused products infringe the '812 patent, and whether his methodology is reliable.[7]

[7] In opposition to Defendants' motion to strike, Plaintiff observes that "Defendants do not offer an expert who contradicts Michael Geyer's findings or methodology." (Pl.'s Opp. to Defs.' Mot. to Strike [128] at 1.) In performing its "gatekeeping" function under Federal Rule of Evidence 702 and *Daubert*, the court is not concerned with whether Defendants have presented (continued…)

Under Federal Rule of Evidence 702, Mr. Geyer may be qualified as an expert by his "knowledge, skill, experience, training or education" in the relevant field, in this case, the use of filtration in the heat remediation industry. Where an expert's testimony is offered to assist the trier of fact determine whether a particular product or process infringes a patent, the expert must have "sufficient relevant technical expertise," and may be qualified to testify so long as there is "an adequate relationship between [the expert's qualifications] and the claimed invention." *SEB S.A. v. Montgomery Ward & Co., Inc.*, 594 F.3d 1360, 1372–73 (Fed. Cir. 2010), *aff'd sub nom. Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S. Ct. 2060 (2011) (upholding admission of the testimony of an expert who admittedly lacked expertise in the design of the patented invention, but had experience with materials selected for use in the invention); *see also Mytee Prods., Inc. v. Harris Research, Inc.*, 439 Fed. App'x. 882, 886–87 (Fed. Cir. 2011) (upholding admission of the testimony of an expert who "had experience relevant to the field of the invention," despite admission that he was not a person of ordinary skill in the art).

The court is satisfied that Mr. Geyer is qualified to testify on filtration in the building remediation industry generally: he has some twenty-five years of experience in working on projects involving potentially harmful aerosols[8] that affect air quality and health, and has authored numerous presentations and publications concerning air quality issues. (Geyer Rep. ¶ 12; Geyer CV at 4–5.) Less obvious is whether he is qualified to testify concerning "the use of *heat* for remediation and restoration." (Geyer Rep. ¶ 16.) (emphasis added.) The only experience Geyer claims to have in heat remediation is having "worked or been present" on "approximately 30–50" heat remediation projects, and "working with" Plaintiff Thermapure and

---

an expert to oppose Mr. Geyer and demonstrate that no genuine issue of material fact remains; rather, it is whether Mr. Geyer's testimony itself is admissible.

[8] The '812 Patent "Background of the Invention" emphasizes that some of the organism remains, if not properly disposed of, "are a serious health hazard even when dead" because "[m]any people are allergic to the dust-like remains of these organisms." ('812 Patent at 1:49–51.)

another company. (*Id.* ¶¶ 16–17.) (Geyer does not explain whether this work is distinct from the heat remediation projects that he observed in connection with his report for this case.) By observing and/or working on these projects, Geyer claims to have "experience" with heaters similar to the Rx12/Rx15 and Z9000, though he cannot recall whether he has ever seen or tested the accused products. (Geyer Dep. 146:8–15, 147:8–13, 148:4–11, 19–25.)

A qualified expert's testimony also must be reliable. Mr. Geyer concluded that both the accused products used filtration, and therefore, infringed on the '812 patent. While "[t]he soundness of the factual underpinnings of the expert's analysis and the correctness of the expert's conclusions based on that analysis are factual matters to be determined by the trier of fact," before admitting expert testimony, the district court must determine whether the expert's "principles and methodology" are reliable. *Smith*, 215 F.3d at 718. In this case, Geyer's principles and methodology appear to include little more than review of documents and the application of common sense. He has concluded, after "review[ing] documents" concerning the case study (citing Case Study ("Ex. I to Geyer Rep."), and Woodard Case Study: Residential Home Water Restoration/ Structural Drying (Ex. J to Geyer Rep.)), and in light of "common sense and standard of care," that a filter was used with the Rx15. (Geyer Rep. ¶ 41.) He reasons that when the Rx15 is used, it forces large amounts of air into the structure, and "necessarily" aerosolizes particulates, which must be removed. (*Id.* ¶ 42.) The only support for this conclusion, other than Geyer's experience with aerosols and the remediation industry, is his unpublished paper. "Dry Heating Structures Without Air Filtration is Dangerous" (2008)[9], and his 2006 "study of aerosols generated during a typical heat treatment project," neither of which appear to have been published or peer-reviewed. (*Id.* ¶ 24.)

[9] Geyer does not explain the purposes for, or circumstances in which he wrote this unpublished paper.

As the court understands Geyer's analysis, even assuming that it is reliable, it concerns only whether a filter *should* be used with the Rx12/Rx15—not whether a filter actually *is* used. The wisdom and desirability of using a filter during heat treatment may be relevant for regulatory or even marketing purposes, but those issues do not illuminate the question of whether Defendants' products actually do use filters, and therefore infringe the '812 Patent. Geyer's testimony about what actually happened during the case study is merely speculative. He was not present at the case study at issue, and cannot even recall whether he has used or tested the Rx12/Rx15 gas-fired heaters. Rather, based upon nothing more than a single photograph in which a filter appears beside an axial fan in an empty room, with drywall removed, Geyer reasons that a filter must have been used with the Rx15. (Geyer Rep. ¶¶ 44–46.) In support of the conclusion, Geyer notes that the filter appears to be in the room after cleanup was "substantially completed," and that use of an axial fan during remediation would "greatly increase worker exposure to airborne hazard." Then, citing the case study description, Geyer concludes that it would "make no sense at all [for] reasonable persons" to use a filter during cleanup (before use of the Rx15) and remove it before introducing heat, because, again, the heater will aerosolize particulates. (*Id.* ¶ 47.) Geyer also claims that removing the filter before using the Rx15 would violate a "standard of care," and later claims that "no reputable contractor in the fields of remediation and/or restoration would purposefully omit air filtration." (*Id.* ¶¶ 41, 43.) Notably, Geyer does not identify any industry standard or common industry practice that *requires* filtration.

Geyer's testimony does not satisfy the *Daubert* guideposts. Geyer cites no industry standards evidencing general acceptance of his theory, and no data other than his own unreviewed white paper and "study." In *United States v. Mire*, the Seventh Circuit found expert testimony about a drug testing method reliable despite his reliance on non-peer-reviewed articles because the expert also cited "several studies and published literature" as well as "peer-review studies" and "peer-reviewed publications," and testified that the rate of error was minimal

and the method was common practice. 725 F.3d at 675, 677. In this case, in contrast, Geyer relies on no other studies or publications beyond the single paper which is neither peer-reviewed nor published at all.[10] Geyer's testimony offers little beyond a summary of what appears in the photograph and case study description, and his "bottom line" sense that a filter must have been used. This testimony does not assist the trier of fact. *See Metavante*, 619 F.3d at 761 (testimony may not "be based on subjective belief or speculation"); *Clark v. Takata Corp.*, 192 F.3d 750, 759 n.5 (7th Cir. 1999) ("A supremely qualified expert cannot waltz into the courtroom and render opinions unless those opinions are based upon some recognized scientific method and are reliable and relevant under the test set forth by the Supreme Court in *Daubert*.") The court finds that Geyer's testimony regarding the Rx12/Rx15 gas-fired heaters unreliable, and therefore, inadmissible.

Geyer also testifies that the filter in the Z9000 meets the limitations of the '812 patent because the purpose of that filter is to capture particulates, and the Z9000 may be arranged so that heated air is re-circulated through the filter. (Geyer Rep. ¶¶ 37–40.) Citing ASHRAE standards, Geyer explains the MERV filter rating system, which rates filters on their ability to capture particles "of a specific aerodynamic diameter" measured in microns (one millionth of a meter), and observes that the MERV-11 filter used in the Z9000 is capable of capturing between 65% to 79% of particles between one to three microns, and at least 85% of particles between three and ten microns. (*Id.* ¶ 29–31, tbl. 1.) Geyer is "not aware" of "any air moving equipment" that uses a higher-rated filter than a MERV-5 to protect the motor. (*Id.* ¶¶ 30, 35–36.) The only purpose for use of a MERV-11 filter that he can identify is to capture particulates at the conclusion of the heat treatment process. Geyer's analysis of the *type* of filter used in the

[10] Geyer does cite a document published by the Environmental Protection Agency as evidence that particles that have a diameter of less than 10 micrometers, such as "most fungal material and spores," are a health hazard, if inhaled. (Geyer Rep. ¶ 20) (citing Ex. D to Geyer Rep.) Plaintiff did not provide a copy of the exhibit cited with the report, however.

Z9000, the MERV-11, is grounded exclusively in the filter rating system set by ASHRAE, and the court is satisfied that this testimony about the purpose of the MERV filter is admissible.

Geyer's testimony about how the Z9000 works, however (specifically, its ability to "recirculate" heated air over the filter), suffers from the same failings as his testimony about the Rx12/Rx15 products. Geyer merely summarizes the information contained in the "documents and specifications" for the Z9000 about how the Z9000 works, and the parts that come with it. (Geyer Rep. ¶¶ 25–26) (citing "the documents produced with the bates numbers: RX000327–337;" *see* Z9000 Instr. (RX000327–335); Z9000 Elec. Heat Solution, Ex. 9 to Pl.'s 56.1, hereinafter "Z9000 Handout" (RX000336–337).) In addition to examining the Z9000 specifications, Geyer also claims to have "physically inspected" another heater produced by Z9000's manufacturer that is "substantially the same" as the Z9000. (Geyer Rep. ¶ 27.)

Geyer's testimony that the Z9000 will recirculate, and filter, heated air, does not satisfy *Daubert* guideposts. He offers no support for his recirculation theory—no industry standards establishing that recirculation is common practice, and no data showing that the Z9000, or other similar heaters, employ recirculation in a fashion that includes filtering heated air that has passed through the treated space before it reenters the heating unit to repeat the heat treatment process. Again, Geyer does not recall ever using or testing the Z9000, and there is no evidence that he even physically examined the Z9000, presumably the most straightforward way to evaluate the filter's purpose. *See Cummins v. Lyle Indus.*, 93 F.3d 362, 369 (7th Cir. 1996) ("hand's on testing" is not always "an absolute prerequisite to the admission of expert testimony," but no error in excluding expert testimony where the expert's opinions "clearly lend themselves to testing and substantiation" and the expert cited none). Geyer's unsupported conclusions about Z9000's ability to recirculate, and filter, heated air, do not withstand *Daubert* analysis.

Defendants' motion to strike Geyer's testimony is denied with respect to his testimony concerning the use of the MERV filters, and otherwise is granted.

III. Direct Infringement Claims

Having granted in part and denied in part Defendants' motion to strike, the court now considers Defendants' motion for summary judgment of non-infringement.

A. None of the Accused Products Directly Infringe Claim 6

Plaintiff claims that the accused products, the Z9000 and the Rx12/Rx15, directly infringe claim 6. (Pl.'s Final Infringement Contentions ag. Defs., Ex. A to Defs.' Mot., hereinafter "Final Infring. Cont.," at 3.) Defendants respond that the accused products provide neither remediation nor water restoration services, and therefore, cannot infringe claim 6, a method claim. (Defs.' Mot. for Summ. J. [118], hereinafter "Defs.' Mot.," at 8.) Plaintiff does not address this argument, and the court concludes that Defendants are entitled to summary judgment on this claim. (*See* Defs.' Reply [140] at 1.) Claim 6 provides "[a] method for sanitizing an enclosed structure . . . comprising [described steps] . . . ." ('812 Patent at 6:5–6.) As claim 6 is a method claim, Defendants are correct that they infringe only if they "have practiced all steps of the claimed method." *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1317 (Fed. Cir. 2009); *see also i4i Ltd. P'ship v. Microsoft Corp.*, 598 F.3d 831, 850 (Fed. Cir. 2010), *aff'd* 131 S. Ct. 2238 (2011) ("Because the claims asserted by i4i are method claims, Microsoft's sale of Word, without more, did not infringe the '449 patent."). A patentee also may prove infringement of a method claim "where the actions of multiple parties combine to perform every step of a claimed method" and "one party exercises 'control or direction' over the entire process such that every step is attributable to the controlling party." *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1329 (Fed. Cir. 2008). Plaintiffs admit that neither Defendant provides heating services in the water restoration or pest remediation markets (Pl.'s Resp. to Defs.' 56.1 ¶¶ 14, 16–18), and as Plaintiff has failed to demonstrate any genuine issue of fact concerning infringement under the doctrine of equivalents (*see* Defs.' Reply at 3 n.2), the court grants Defendants' motion for summary judgment of non-infringement on claim 6.

B. Claim 4

1. The Z9000[11] does not literally infringe claim 4

Next, Plaintiff claims that the Z9000 directly infringes claim 4 because when the Z9000 is set up outside an enclosed structure, an intake duct pulls heated air from the enclosure, through the duct into the Z9000, and, in the process, the air passes through a filter. (Pl.'s Opp. to Defs.' Mot. for Summ. J. [129], hereinafter "Pl.'s Opp.," at 8.) Though Defendants dispute whether the Z9000 has ever actually been set up in this way (Defs.' Resp. to Pl.'s 56.1 ¶¶ 14, 28), they argue that the Z9000 nevertheless does not infringe because it does not have an "egress duct" nor a "filter means in said egress duct," and therefore, cannot satisfy claim 4's "filter" limitation. (Defs.' Mot. at 13; *see also* '812 Patent at 5:47–49.)

In a separate case, *Thermapure, Inc. v. Giertsen Co. of Ill., Inc.*, No. 10-C-4724, Judge Lefkow of this court has construed the "filter means" limitation in claim 4 of the '812 patent, concluding that it is a means-plus-function limitation, with the function of "removing remains of killed organisms from heated gas within an enclosure," and the structure of "a filter located within an egress duct." (Rulings on Claim Constr. in *Thermapure, Inc. v. Giertsen Co. of Ill., Inc.*, No. 10-C-4724 (N.D. Ill. July 3, 2012), Ex. LL to Defs.' Mot., hereinafter "*Giertsen* Cl. Constr.," at 3.) The Supreme Court, in *Markman v. Westview Instruments, Inc.*, emphasizing the importance of uniform interpretation and construction of patent claims, held that claim construction is a matter of law to be decided by a court, and observed:

> whereas issue preclusion could not be asserted against new and independent infringement defendants even within a given jurisdiction, treating interpretive issues as purely legal will promote (though it will not guarantee) intrajurisdictional certainty through the application of *stare decisis* on those questions not yet subject

[11] Defendants also argue that the Rx12/Rx15 do not directly infringe claim 4 (Defs.' Mot. at 10–11), but Plaintiff does not appear to allege that these products infringe in either its Final Infringement Contentions or its opposition to Defendants' summary judgment motion. (*See* Pl.'s Opp. at ii.) The court, therefore, need not address this argument.

> to interjurisdictional uniformity under the authority of the single appeals court.

517 U.S. 370, 390–91 (1996). And, in *Lighting Ballast Control LLC v. Philips Electronics N. Am. Corp.*, ___ F.3d ___, No. 2012-1014, 2014 WL 667499 (Fed. Cir. Feb. 21, 2014), the Federal Circuit reiterated the importance of uniformity, emphasized by the Supreme Court in *Markman*. Although the *Lighting Ballast* court was addressing the standard of review for the Federal Circuit, its language is instructive here too:

> Because differing claim constructions can lead to different results for infringement and validity, the possibility of disparate district court constructions unravels the "uniformity in the treatment of a given patent" that the Court sought to achieve in *Markman II.* 517 U.S. at 390. It would restore the forum shopping that the Federal Circuit was created to avoid. Just as the Court in *Markman II* counted such consequences as negatives that its ruling overcame, they count as negatives in the *stare decisis* analysis.

2014 WL 667499 at **11.

Both parties in this case recognize that district courts are not bound by prior claim constructions, but the court views Judge Lefkow's claim construction as "persuasive authority" in construing claim 4. *See CoStar Realty Info., Inc. v. CIVIX-DDI, LLC*, No. 12 C 4968, 2013 WL 5346440 at **4–5 (N.D. Ill. Sept. 23, 2013) (Holderman, J.) ("prior non-preclusive district court claim constructions . . . [are] persuasive authority.") Significantly, it is Defendants, who were not parties to the case before Judge Lefkow, who are urging this court to adopt her construction. (*See* Defs.' Mot. at 10–11, 13.) The court is less concerned about the fairness of adopting construction from earlier litigation where Plaintiff participated in that litigation, and the parties who were unrepresented there argue in favor of that construction.

Were this court to conduct its own claim construction, the result would be the same. In construing disputed claims, the court considers "the claim language, the specification, the prosecution history, and any relevant extrinsic evidence." *Meyer Intellectual Props. Ltd. v. Bodum, Inc.*, 690 F.3d 1354, 1368 (Fed. Cir. 2012). A term within a disputed claim is generally given "the plain and ordinary meaning as understood by a person of ordinary skill in the art at

the time of the invention." *Id.* Section 112(f) provides a "limited exception" to the general requirement that claims must "particularly point[] out and distinctly claim[] the subject matter which the inventor . . . regards as the invention," 35 U.S.C. 112(b), by permitting a claim to "be expressed as a means or step for performing a specified function . . . , construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." 35 U.S.C. §112(f); *Function Media, L.L.C. v. Google, Inc.*, 708 F.3d 1310, 1317 (Fed. Cir. 2013). In construing a means-plus-function claim, the court first defines the scope and meaning of the particular function, and then examines the specification in order to identify the function's corresponding structure. *In re Aoyama*, 656 F.3d 1293, 1296–97 (Fed. Cir. 2011).

Claim 4's filter-means limitation specifies a "filter means in said egress duct for removing remains of said organisms from gas from said enclosure passing through said egress duct." ('812 Patent at 5:46–48.) The "filter means" function, then, is "removing remains of said organisms from gas" as it passes from the enclosure through an egress duct. And the language of claim 4 describes a "kit" that includes a structure to heat gas, an ingress duct to direct gas into the enclosure, and "at least one egress duct for directing gas out of said enclosure," indicating that the heated gas leaves the structure through the egress duct. (*Id.* at 5:28–32.) The specification contains similar language. (*See id.* at 1:67–2:8, providing that heated gas is directed into the enclosure through ingress ducts, and, as it leaves the enclosure, is "filter[ed]" either through open windows, doors, or egress ducts.) Judge Lefkow's claim construction is consistent with the plain and ordinary meaning of the claim and specification. The function of the "filter means" limitation is "removing remains of killed organisms from heated gas within an enclosure."

With respect to the corresponding structure: The specification describes a structure "allowing the gas to leave the enclosure by opening windows, doors, etc. or by installing an egress duct . . . " and "filtering gas exhausting through open doors and windows and/or the egress ducts." ('812 Patent at 2:2–8.) As Judge Lefkow observed in her claim construction

ruling, while "[t]his could mean a filter located at open doors and windows . . . . the 'filter means' of claim 4 plainly requires an egress duct and a filter 'in' that duct." (*Giertsen* Cl. Constr. at 3.) Again, this court agrees; the plain language of the "filter means" limitation specifies that it is located "in said egress duct," and the court adopts Judge Lefkow's definition of the "filter means" structure as "a filter located within an egress duct."

Under the "all-limitations rule," an accused product or process directly infringes a patent only if it satisfies each limitation within the claim. *See Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29–30 (1997) (same for doctrine of equivalents); *Deering Precision*, 347 F.3d at 1324. As Plaintiff acknowledges, the Z9000 does not contain "a filter located within an egress duct." (Pl.'s Opp. at 8–9; Defs.' Mot. at 10–11, 13.) Because the filter in the Z9000 is not located in the egress duct, it does not meet each limitation, and therefore, does not literally infringe claim 4.

2. Prosecution History Estoppel applies to Claim 4

A product that does not directly infringe may nevertheless be challenged under the doctrine of equivalents.[12] An accused product that does not literally infringe a patent claim may infringe under the doctrine of equivalents where, for every claim limitation, the accused product "perform[s] substantially the same function in substantially the same way with substantially the same results," *Ring & Pinion Serv. Inc. v. ARB Corp. Ltd.*, 743 F.3d 841, 835 (Fed. Cir. 2014), and therefore, "any differences between the claimed invention and the accused product [are]

[12] Though Plaintiff argues that the Z9000 infringes claim 4 under that doctrine (Pl.'s Opp. at 9), Defendants correctly note that Plaintiff did not make such an allegation in its Final Infringement Contentions. (Defs.' Mot. at 13–14.) Instead, Plaintiff asserted: "To the extent any element of any asserted claim is deemed not to be literally infringed, [Plaintiff] may amend to allege that the element is infringed under the doctrine of equivalents." (Fin. Infring. Cont. at 2.) Under Local Patent Rule 3.1, final infringement contentions must contain the same information provided in the initial infringement contentions (N.D. Ill. Patent R. 2.2), including, for equivalence claims, "an explanation of each function, way, and result that is equivalent and why any differences are not substantial." (N.D. Ill. Patent R. 2.2(d)). Plaintiff's Final Infringement Contentions did not explain how the Z9000 infringes claim 4 under the doctrine of equivalents, but because both parties have addressed the issue on this motion, the court does so, as well.

insubstantial." *Brilliant Instruments, Inc. v. GuideTech, LLC*, 707 F.3d 1342, 1346–47 (Fed. Cir. 2013); *see also Warner-Jenkinson*, 520 U.S. at 29–30 (1997) ("Each element contained in a patent claim is deemed material to defining the scope of the patented invention, and thus the doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole. It is important to ensure that the application of the doctrine, even as to an individual element, is not allowed such broad play as to effectively eliminate that element in its entirety.").

A "doctrine of equivalents" argument may be cabined by prosecution history. Specifically, a patentee may be estopped from asserting infringement under the doctrine of equivalents "when [the patentee] ma[de] a narrowing amendment for purposes of patentability, or clearly and unmistakably surrenders subject matter by arguments made to an examiner." *AquaTex Indus., Inc. v. Techniche Solutions*, 419 F.3d 1374, 1382 (Fed. Cir. 2005). In *Honeywell Int'l Inc. v. Hamilton Sundstrand Corp.*, plaintiffs, assignees of the patents at issue, sought to enforce their patent for an engine located on an airplane's tail section, under the doctrine of equivalents. 370 F.3d 1131 (Fed. Cir. 2004). During prosecution of the patent, all of the claims at issue were dependent claims, describing an "inlet guide vane limitation," but the examiner rejected the independent claims on which they relied as obvious. *Honeywell*, 370 F.3d at 1133, 1137. The patentee responded by amending the original dependent claims to include the independent limitations, and cancelling the original independent claims. *Id.* at 1137. The plaintiffs argued that there should be no presumption of surrender in these circumstances, but the *en banc* Federal Circuit disagreed. 370 F.3d 1131, 1141–42. Citing the Supreme Court's decision in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 535 U.S. 722 (2002), the court held that "[w]hen the scope of the patent claim is narrowed to secure the patent, the court 'must regard the patentee as having conceded an inability to claim the broader subject matter.'" 379 F.3d at 1143–44 (quoting *Festo Corp.*, 535 U.S. at 737). Exactly what subject matter is surrendered by a narrowing amendment "is defined by the cancellation of independent claims that do not include a particular limitation and the rewriting into independent form of

dependent claims that do include that limitation. Equivalents are presumptively not available with respect to that added limitation." Thus, the *Honeywell* court concluded, the plaintiff was presumed to have surrendered a doctrine-of-equivalents argument with respect to the "inlet guide vane limitation." *Id.* at 1144. The presumption of surrender is rebuttable if the patentee "could not reasonably have been expected to have described the alleged equivalent," either because the equivalent "would have been unforeseeable," the amendment had only "a tangential relation to the equivalent in question," or for "some other reason," but no such showing had been made. *Id.* at 1368–69.

In the case before this court, the only real equivalence issue is whether the difference between the Z9000's filter and the "filter means" limitation contained in claim 4 is insubstantial.[13] It is undisputed that the Z9000 contains a "plurality of temperature indicating probes" that can be installed within the enclosure, a "means for heating an environmentally acceptable gas to a predetermined temperature" that can kill identified organisms, and a means for viewing and recording the temperature. (Defs.' Resp. to Pl.'s 56.1 ¶¶ 11–12.) Furthermore, though Defendants dispute whether "ducting has ever occurred" with the Z9000 (Defs.' Resp. to Pl's 56.1 ¶ 14), they appear to be referring only to egress ducting; the Z9000's instructions state that it comes with "multiple ducting options," including a "12 [inch] intake" and a "12 [inch] supply." (Z9000 Instr. at RX000327, RX000330; Z9000 Handout at RX000336; *see* '812 Patent at 5:30-32, 39 (describing "at least one ingress duct for directing gas into an enclosure and at

[13] In addition to the "filter means" limitation, claim 4 also describes a "means for removing remains of said organisms from said enclosure." ('812 Patent at 5:44–45.) Judge Lefkow construed this limitation as means-plus-function limitation, nearly identical to the "filter means" limitation, with the function of "removing remains of organisms from an enclosure," through the structure of "a filter assembly that receives gas from an egress duct and removes remains of organisms before the gas passes into the external environment." (*Giersten* Cl. Constr. at 5–6.) Were the court to adopt Judge Lefkow's construction of this limitation, both the "means for removing" and the "filter means" limitations would appear to be at issue here. Having concluded that Z9000's filter is not equivalent to the "filter means" limitation, however, the court need not decide whether the Z9000 infringes the "means for removing" limitation under the doctrine of equivalents.

least one egress duct for directing gas out of said enclosure" and "means for directing said gas through said ingress duct".) In any event, even if one of the Z9000's "multiple ducting options" is interpreted as a reference to an egress duct, Plaintiff has still not identified an equivalent "filter means" for that duct.

The court concludes that Plaintiff is barred by prosecution history estoppel from asserting that the Z9000 filter is equivalent to the "filter means" limitation in claim 4 of the '812 patent. As described earlier, in the original application, claim 4 was two separate claims: claim 11, which described all limitations except for the final, filtration limitation,[14] and claim 13, a dependent claim, which described "[t]he kit according to claim 11 further including filter means in said egress duct for removing remains of said organisms from gas from said structure passing through said egress duct." (Prosec. Hist. at THERMA000032–33.) The Examiner rejected claim 11 as obvious, but concluded that claim 13 "would be allowable if rewritten . . . to include all of the limitations of the base claim and any intervening claims." (*Id.* at THERMA000058–59.) Plaintiff amended claim 13 accordingly (*see id.* at THERMA000075), and claim 4 of the '812 patent subsequently issued. Plaintiff argues that these amendments were merely tangential, and unrelated to the filter's location (Pl.'s Opp. at 3), but the only fair reading of the prosecution history is consistent with Defendants' position (Defs.' Mot. at 13; Defs.' Reply at 3–4.): Plaintiff surrendered subject matter related to the "filter means" limitation when, after the Examiner rejected claim 11 as obvious, Plaintiff cancelled claim 11, and rewrote dependent claim 13 (the "filter means" limitation), as an independent claim. Plaintiff is therefore presumed to have

[14] Claim 11 provided: "A kit for use in killing organisms and removing toxic substances from an enclosure, which comprises: at least one ingress duct for directing gas into an enclosure; a plurality of temperature indicating probes for installation at predetermined locations in said enclosure; means to heat an environmentally acceptable gas to a predetermined temperature that is lethal to predetermined organisms; means for directing said gas through said ingress duct; means for viewing the temperatures of said indicating probes; means for recording the temperatures of said indicating probes in real time; and means for removing remains of said organisms from said structure." (Prosec. Hist. at THERMA000032–33.)

surrendered all subject matter related to the "added limitation," which, here, was the limitation describing a "filter means in said egress duct."

Nor does Plaintiff rebut the presumption that the narrowing amendment was for the purpose of patentability by demonstrating that it was merely "tangential." Plaintiff argues that the location of the filter is not relevant to the narrowing amendment, generally, and because, while claim 4 provides that the filter is located in an egress duct, claims 6 and 8 do not specify a filter location. (Pl.'s Opp. at 3–4.) In determining whether prosecution history estoppel applies, however, the court does not evaluate the patent as a whole, but rather, examines the limitations identified within each claim. *See, e.g.*, *Festo Corp.*, 535 U.S. at 733–35 (discussing prosecution history estoppel of individual claims). The narrowing amendment to original, dependent claim 13 (the "filter means" limitation) made claim 4 patentable, and therefore, the amendment could not have been tangential. *See Festo Corp.*, 344 F.3d at 1369 ("[A]n amendment made to avoid prior art that contains the equivalent in question is not tangential; it is central to allowance of the claim."). Furthermore, even assuming that claim 4 would have been patentable with a broader definition of the filtration limitation, Plaintiff is presumed to have surrendered all subject matter related to the "filter means," including other possible locations for the filter. *See Honeywell Int'l Inc.*, 370 F.3d at 1144. Finally, Plaintiff's proposal, that the location of the filter is irrelevant to claim 4, would undermine the presumption that "each claim in a patent has different scope," because, as Plaintiff acknowledges, claim 4 specifies that the filter is located in the egress duct, while claims 6 and 8 do not restrict the location of the filter. *Curtiss-Wright Flow Control Corp. v. Velan, Inc.*, 438 F.3d 1374, 1380 (Fed. Cir. 2006). The court concludes that Plaintiff may not claim that the Z9000 filter is equivalent to the "filter means" limitation in claim 4, and grants summary judgment of non-infringement on claim 4.

C. Claim 8

1. The Z9000 does not directly infringe claim 8

Plaintiff also claims that the Z9000 directly infringes claim 8 by "using, selling, and offering to sell the system" described. (Fin. Infring. Cont. at 2.) The Z9000 does satisfy many of claim 8's limitations: the Z9000 heats air, a source of environmentally acceptable gas, "to the requisite temperatures," introduces the heated air to an enclosed structure through a blower, and contains a filter and "remote temperature monitoring." (Defs.' Resp. to Pl.'s 56.1 ¶¶ 10–13.) And again, while Defendants dispute whether ducting has ever been used with the Z9000 (*id.* ¶ 14), the Z9000 instructions explicitly state that the product comes with "multiple ducting options," including a supply and an intake duct. (Z9000 Instr. at RX000327, RX000330.)

Two limitations remain at issue: whether the Z9000 contains, first, "a filter arranged to allow said flow of heated gas to pass therethrough after passing through said interior of said enclosed structure," and second, "a means for introducing a flow of said heated gas into said interior of said enclosed structure." ('812 Patent at 6:47–49; 6:50–52.) The first dispute relates to the timing, during the heat treatment process, of claim 8's filtration limitation. Defendants argue that the '812 patent provides that heated gas passes through the filter only after it has passed through the enclosed structure, and that the claimed filter is "separate [from] the heating unit" with "no indication [from the claims] that the filter may be placed inside the heater or inside the structure being heated." (Defs.' 56.1 ¶¶ 22, 29.) Plaintiff denies "that the '812 Patent specification places importance on the exact location [where] the filtration occurs." (Pl.'s Resp. to Defs.' 56.1 ¶ 22.) Again, however, the court disagrees. The filtration limitation at issue here clearly describes the filtration of *heated* gas that has first passed through the enclosed structure. (*See* '812 Patent at 6:50–52.) Plaintiff does not suggest an alternate interpretation, and, in light of the disclosed purpose of claim 8 ("wherein, said heated gas serves to kill organisms and remove toxic substances from within said enclosure") it must be that heated gas first passes through an enclosure, killing the organisms within it, before the dead organisms may be filtered

from the treated enclosure. ('812 Patent at 6:59–61; *see also id.* at 3:25–41 (describing figure 1 which shows that organism remains leave the enclosed structure through a "filter assembly [that] receives gas from an egress duct and removes the remains of the organisms preventing them from reaching the environment ").) Claim 8 does not appear to limit the physical location of the filter, but does require that it be "arranged" in such a way that the heated gas passes through the filter after it has passed through the enclosed structure, and that the filter can screen out dead organisms. (*Id.* at 6:50–52.)

Claim 8 also describes two other components: "a heater coupled to said gas source to heat said gas to a predetermined temperature, and a means for introducing a flow of said heated gas into said interior of said enclosed structure." ('812 Patent at 6:46–49.) Neither party has provided an interpretation of the limitation describing "a means for introducing a flow of said heated gas into said interior of said enclosed structure," which the court considers necessary in order to determine whether the Z9000 literally infringes on claim 8. As discussed above, Section 112(f) permits functional claims, which will be "construed to cover the corresponding structure . . . described in the specification and equivalents thereof." 35 U.S.C. § 112(f). To construe this claim, the court identifies the scope and meaning of the described function, and then identifies the corresponding structure. *In re Aoyama*, 656 F.3d at 1296–97.

The apparent function of the structure at issue is to "direct" a flow of heated gas from the heater, and "introduce" it to the interior of the enclosed structure. Every other claim in the '812 patent, excluding dependent claim 2 (and claim 8), describes heated gas being "directed" into the enclosed structure. (*See* '812 Patent at 4:54, 5:16, 5:39, 5:60, 6:15, 6:35.) The descriptions of figures 1 and 2 within the specification provide that gas is "directed" into the enclosed structure after it is heated. (*Id.* at 3:16–19; 4:11–13.)

Furthermore, the specification and the prosecution history identify the corresponding structure as an ingress duct. The description of figure 1 in the specification states that "Heated gas from one or more heaters is directed to a blower (which may, if desired, be a component of

the heater) which directs the hot gas into enclosure *through at least one ingress duct*. Generally a plurality of ducts will be used to achieve the optimum distribution of hot gas throughout enclosure." ('812 Patent at 3:16–20) (emphasis added.) The specification's description of figure 2 is similar, stating that "*[a]t least one ingress duct* and when the enclosure is sealed at least one egress duct are then installed." (*Id.* at 4:1–2) (emphasis added.) Two types of ducts are mentioned in the specification: ingress ducts, through which heated air flows from the heater to the interior of the enclosed structure, and egress ducts, through which heated air passes from the enclosure to the outside environment. Though egress ducts are described as an alternative to venting through open doors and windows, ingress ducts appear to be an essential component of the claimed method. (*See id.* at 1:67-2:8; 3:16-26; 4:1-2.) During prosecution, the Examiner interpreted the claimed method in the '812 patent to include an ingress duct, and rejected the original, independent claim 24 as obvious in light of the Forbes '329 Patent (prior art), which "provides at least one ingress duct 41 communicating with the interior of the enclosure 40, directing a heated gas into the enclosure . . . ." (Prosec. Hist. at THERMA000089.)

The summary of the invention also describes a step of "*installing ingress ducts* through which an environmentally acceptable gas, such as air, can be directed into the enclosure, . . . heating the gas and directing it into the *ingress duct(s) when installed*." ('812 Patent at 1:67–2:8) (emphasis added.) Plaintiff seizes on the language "when installed," arguing that those words should be interpreted to mean "that ingress ducts are not necessary." (Pl.'s Resp. to Defs.' 56.1 ¶ 29.) The court declines to adopt this strained interpretation. Section 112(f) permits functional claims, but "[t]he trade-off for allowing such claiming is that the specification must contain sufficient descriptive text by which a person of skill in the field of the invention would know and understand what structure corresponds to the means limitation." *Function Media*, 708 F.3d at 1317 (citation and quotations omitted). The specification repeatedly identifies ingress ducts as the structure that "introduc[es] a flow of said heated gas into said interior of said enclosed structure," and notably, mentions no other structure performing this function. In light of the

specification and the prosecution history, the court construes claim 8's limitation of "a means for introducing a flow of said heated gas into said interior of said enclosed structure" as a means-plus-function claim, with the function of directing a flow of heated gas from the heater and introducing it to the interior of the enclosed structure, and the structure of an ingress duct.

Plaintiff is correct that the Z9000 contains both an ingress duct (intake and/or supply duct(s)) and a filter. What Plaintiff has not demonstrated is that the Z9000 can satisfy both limitations ("a means for introducing a flow of said heated gas into said interior of said enclosed structure," and "a filter arranged to allow said flow of heated gas to pass therethrough after passing through said interior of said enclosed structure") at the same time. When the Z9000 is set up within the enclosure, air enters the unit through the inlet, passes through the MERV filter, is heated and blown into the enclosure, and then, Plaintiff alleges, is recirculated, again passing through the Z9000's filter element. (Pl.'s 56.1 ¶¶ 13, 27; Defs.' 56.1 ¶¶ 63, 65.) Under these circumstances, however, there is no evidence that an ingress duct is being used to direct a flow of heated gas, and introduce it into the enclosure. On the other hand, when the Z9000 is set up outside the enclosure, the air enters the unit's inlet and passes through the filter, is heated, and then presumably directed into the enclosure through a supply and/or intake duct. (Pl.'s Resp. to Defs.' 56.1 ¶ 64; Z9000 Instr. at RX000330–331.) In this situation, the Z9000 filter does not filter heated air after it passes through the enclosed structure. Neither of these situations involves both claim limitations.

Relying exclusively on the declaration of Mr. Geyer, Plaintiff claims that the Z9000 may satisfy both limitations at issue when it is set up outside the enclosure. The supply duct would direct heated air from the Z9000 unit into the enclosure, Plaintiff posits, and an intake duct would pull the heated air from the enclosure into the inlet of the Z9000 unit, thus passing over the filter before it is again heated and recirculated. (Pl.'s 56.1 ¶ 28) (citing Decl. of Michael Geyer of Aug. 15, 2013, Ex. C to Pl.'s 56.1, hereinafter "Geyer Decl.," ¶ 19.) Plaintiff is correct that "[t]he fact that the Z9000 can potentially be used in a non-infringing manner is irrelevant to

the issue of direct infringement" (Pl.'s Opp. at 8) because a product may infringe, the Federal Circuit has held, "if it is reasonably capable of satisfying the claim limitations, even though it may also be capable of non-infringing modes of operation." *Hilgraeve Corp. v. Symantec Corp.*, 265 F.3d 1336, 1343 (Fed. Cir. 2001). Geyer's unsubstantiated testimony, however, does not demonstrate that the Z9000 is even "reasonably capable" of satisfying claim 8's limitations. As discussed above, Mr. Geyer's testimony about the operation of the Z9000 is unreliable; he has never physically examined the Z9000, could not recall whether he used or tested the product, relied solely on the instruction manual and a specification handout in reaching his conclusions, and cited no industry standards or other data indicating that the Z9000 operates in this particular manner. The Z9000 comes with an intake and a supply duct, and Defendants have admitted that it is "designed so that hot air emitted from the heater will recirculate through the heater's intake and pass through the installed MERV filter" (Defs.' Resp. to Pl.'s 56.1 ¶ 13), but Plaintiff offers no evidence that the Z9000 has ever been used in the way proposed by Mr. Geyer.

Because Plaintiff has failed to raise any genuine issue of disputed fact indicating that the Z9000 may satisfy both of the limitations at issue at the same time, Plaintiff cannot prove that the Z9000 literally infringes claim 8, and Defendants are entitled to summary judgment on this claim as well.

2. No issue of material fact was raised concerning Z9000's equivalence

Defendants also argue that Plaintiff is barred by prosecution history estoppel from asserting that the Z9000 filtration element is equivalent to the "filter" limitation in claim 8. (Defs.' Mot. at 13–14.) Plaintiff's argument in response fails for the same reason the one addressed earlier does: the narrowing amendment creates a presumption that Plaintiff surrendered such a broad claim. Like claim 4, claim 8 became patentable only with the amendment of a dependent claim (claim 25), the "filter" limitation, to an independent claim, and the cancellation of the original independent claim (claim 24), which recited all other limitations in claim 8. (Prosec. Hist. at THERMA000090; Pl.'s Resp. to Defs.' 56.1 ¶¶ 70, 73.) And, as before, Plaintiff has not

rebutted this presumption by showing that the change was tangential. Furthermore, after Defendants raised the issue of equivalence on summary judgment, Plaintiff failed to explain, with respect to each limitation, how the Z9000 infringes by equivalence to claim 8. As a result, the court will grant Defendants' motion for summary judgment on the Z9000.

3. The Rx12/Rx15 Cannot Literally Infringe Claim 8

Defendants' motion for summary judgment argues that the Rx12/Rx15 cannot directly infringe claim 8. Although Plaintiff made this assertion in its Final Infringement Contentions, it has not responded to Defendants' challenge. (Fin. Infring. Cont. at 3; Pl.'s Opp. at ii; Defs.' Mot. at 8–10.) It is undisputed that the Rx12/Rx15 products do not contain a filter (Pl.'s Resp. to Defs.' 56.1 ¶¶ 52, 54), and that one limitation of claim 8 provides for a "filter." ('812 Patent at 6:50.) Therefore, under the all-limitations rule, the Rx12/Rx15 products cannot literally infringe claim 8, and summary judgment on this claim is appropriate.

IV. The Rx12/Rx15 do not indirectly infringe claims 6 & 8

Finally, Plaintiff alleges that Defendants are liable for indirect infringement of claims 6 and 8 of the '812 Patent, under 35 U.S.C. §§ 271(b) and (c). Plaintiff claims that Defendants induce infringement first, by selling the Rx12/Rx15 product line "into an industry which follows certain standards," thus "enabl[ing] its customers" to practice each step in the method or use the system claimed, and second, "at its educational training centers, webinars, virtual training centers, forums and/or courses." (Fin. Infring. Cont. at 5.) Furthermore, Plaintiff asserts, Defendants contribute to infringement by selling components, the Rx12/Rx15 products, used in the claimed method or system. (*Id.*)

Under § 271(b), a person may be liable for "actively inducing" patent infringement where the patentee proves that the person had "knowledge of the existence of the patent and 'knowledge that the induced acts constitute patent infringement,' " and where the end user, in fact, directly infringed the patent. *Commil USA, LLC v. Cisco Sys., Inc.*, 720 F.3d 1361, 1367 (Fed. Cir. 2013) (quoting *Global-Tech Appliances, Inc.*, 131 S. Ct. at 2068); *DSU Med. Corp. v.*

JMS Co., Ltd., 471 F.3d 1293, 1303, 1305–06 (Fed. Cir. 2006) ("[I]f an entity offers a product with the object of promoting its use to infringe, as shown by clear expression or other affirmative steps taken to foster infringement, it is then liable for the resulting acts of infringement by third parties."). Knowledge, on the part of an accused infringer, includes "actual knowledge or willful blindness." *Commil USA*, 720 F.3d at 1366.

Additionally, a person may be liable under § 271(c) for contributory infringement where that person "sells or offers to sell, a material or apparatus for use in practicing a patented process, and that 'material or apparatus' is material to practicing the invention, has no substantial non-infringing uses, and is known by the [person] 'to be especially made or especially adapted for use in an infringement of such patent.'" *R+L Carriers, Inc. v. DriverTech LLC*, 681 F.3d 1323, 1337 (Fed. Cir. 2012) (quoting 35 U.S.C. § 271(c)). "[A] substantial non-infringing use is any use that is not unusual, far-fetched, illusory, impractical, occasional, aberrant, or experimental." *R+L Carriers*, 681 F.3d at 1337 (citation and quotations omitted); *see also Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd.*, 545 U.S. 913, 932 (2005) ("In sum, where an article is 'good for nothing else' but infringement, there is no legitimate public interest in its unlicensed availability, and there is no injustice in presuming or imputing an intent to infringe.") (citations omitted). And, like Section 271(b), under Section 271(c), the patentee must prove that the end user directly infringed the patent. 35 U.S.C. § 271(c); *DSU Med. Corp.*, 417 F.3d at 1303.

Plaintiff has failed to show that any end user used the Rx12/Rx15 products to directly infringe either claims 6 or 8 of the '812 Patent, and therefore, cannot prove that Defendants either induced or contributed to infringement through the sale of these products. To do so, Plaintiff would have to present evidence that the Rx12/Rx15 products were used with filtration. (*See* '812 Patent at 6:22–23 ("filtering said heated gas vented from said enclosed structure"); *id.* at 6:50–52 ("a filter arranged to allow said flow of heated gas to pass therethrough after passing through said interior of said enclosed structure").) The Rx12/Rx15 are not sold with a filter, no

technical information describing the products advise that they be used with a filter, and Defendants claim that using a filter with the Rx12/Rx15 would "diminish [their] effectiveness." (Pl.'s Resp. to Defs.' 56.1 ¶¶ 52, 54, 56.) Plaintiff has not even presented evidence of any actual end user using the Rx12/Rx15 products with a filter. Instead, Plaintiff relies on the case study, performed by a third party using the Rx15 gas heater, to establish that Defendants indirectly infringed claims 6 and 8. (Pl.'s Resp. to Defs.' 56.1 ¶¶ 52, 59.)

In concluding that a filter must have been used with the Rx15 during the case study, Plaintiff turns, again, to the expert testimony of Michael Geyer, and his interpretation of a single photograph and two descriptions of the case study. (*See* Pl.'s 56.1 ¶¶ 29–35) (citing Geyer Decl. ¶¶ 21–27; Case Study; Marc Braun Dep., Dec. 6, 2011, Ex. 1 to Pl.'s 56.1, at 97–99.)[15] Defendants admit that a filter was used during the case study, though they assert that the filter was removed before the Rx15 system was ever turned on and used. (Defs.' 56.1 ¶¶ 37, 61.) For the reasons explained earlier, however, Mr. Geyer's testimony does not create a dispute of fact; he merely speculates that a filter was used with the Rx15 and cites no industry standards or data in support. Plaintiff provides no other evidence that a filter was used with the Rx15 system during this particular case study, or more generally that a filter has ever been used with Rx12/Rx15 products. Without proof of direct infringement, Plaintiff cannot establish that Defendants indirectly infringe claims 6 and 8, and the court will grant Defendants' motion for summary judgment of non-infringement.

Plaintiff makes one additional argument that rests on the S500 water restoration standard set by the IICRC. In light of this standard, Plaintiff urges, it must be that Defendants

[15] Plaintiff also cites the deposition testimony of RxHeat President Marc Braun who, Plaintiff claims, "admitted that RxHeat supplied equipment and training for the projects selected for its case studies and 'may have' had RxHeat employees at the site of the case study," and explained that the purpose of axial fans or "air movers" is "to optimize the drying process with Rx equipment." (Pl.'s 56.1 ¶¶ 29, 33) (citing Braun Dep. at 97–99.) Nothing about this testimony establishes whether or not a filter was used with the Rx15 during the case study.

intend their consumers to use a filter with the Rx12/Rx15 products. (Pl.'s 56.1 ¶ 38; Pl.'s Opp. at 12–13.) Indeed, the S500 "recommend[s]" that restorers "evaluate the use of AFDs [air filtration devices]." (IICRC S500 at RX004994–95.) The standard identifies use of a filter as part of the standard of care when restorers uses negative pressure to "draw[] moist air out of potentially contaminated cavities," and explains that such use may be part of the standard of care when restorers use air-moving devices. (*Id.*) (stating that restorers "should" either use a filter or consider use of a filter, and defining "should" as an indication that "the practice or procedure is a component of the accepted 'standard of care' to be followed".) And, in response to Defendants' argument that it does not recommend use of a filter with the Rx12/Rx15 products, Plaintiff observes that Defendants "cannot point to a single document or communication informing its customers of this intention." (Pl.'s Opp. at 12.) But Defendants have no burden to prove they encouraged customers not to use products in an infringing fashion. It is Plaintiff's burden to present facts that show Defendants' intent to infringe through "a clear expression or other affirmative steps taken to foster infringement." *DSU Med. Corp.*, 471 F.3d at 1305–06. Defendants' failure to explicitly warn its customers against filtration turns this standard on its head, and would require a party seeking to avoid liability for indirect infringement to expressly disclaim an endless number of patented, theoretical uses of its product. As Plaintiff here cannot prove that the Rx12/Rx15 products were ever used to directly infringe claims 6 or 8, the court need not determine whether these standards or Plaintiff's failure to explicitly disavow use of a filter in Rx12/Rx15 technical documents create a genuine issue of material fact with respect to Defendants' intent to infringe.

V. Cambridge's Liability

Though Plaintiff alleges that Defendant RxHeat infringed claims 4, 6, and 8 of the '812 Patent, it also seeks to hold Defendant Cambridge liable for RxHeat's alleged infringement on either an agency or alter ego theory. (*See* Pl.'s Opp. at 14–15; Defs.' Reply at 14–15.) Having

granted Defendants' motion for summary judgment of non-infringement on all counts, the court need not address Plaintiff's claim against Cambridge.

CONCLUSION

Plaintiff believes that hot gas that has been used to kill unwanted organisms should be filtered before it is released into the atmosphere. Plaintiff also appears to believe the filtering practice is so advisable that Defendants must have adopted the practice. On this record, however, Plaintiff has not established a dispute of fact about whether Defendants' Z9000 and Rx12/Rx15 products actually include the filtering function, however appropriate or necessary that function may be. For the reasons explained here, Defendants' motion to strike Geyer's testimony [123] is granted in part and denied in part. Defendants' motion for summary judgment of non-infringement [117] is granted.

ENTER:

Dated: March 31, 2014

REBECCA R. PALLMEYER
United States District Judge