

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

WHIRLPOOL CORPORATION,

Plaintiff,

v.

TST WATER, LLC,

Defendant.

) Civil Action No. 2:15-CV-1528 –JRG
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**DEFENDANT TST WATER, LLC’S NOTICE OF APPEAL TO THE UNITED STATES
COURT OF APPEALS FOR THE FEDERAL CIRCUIT**

Defendant TST Water, LLC (“TST Water”) hereby appeals to the United States Court of Appeals for the Federal Circuit from the Final Judgment (attached hereto as Exhibit A), entered by the United States District Court for the Eastern District of Texas in the above-captioned action on April 3, 2018 (Dkt. No. 203), as well as any and all opinions, orders or rulings underlying that Final Judgment, including without limitation: the Memorandum Opinion and Order denying TST Water’s Motion for Judgment as a Matter of Law (attached hereto as Exhibit B), entered on March 29, 2018 (Dkt. No. 202); the Memorandum Opinion and Order on Claim Construction (attached hereto as Exhibit C), entered on July 22, 2016 (Dkt. No. 59); and the Order on Motions *in Limine* (attached as Exhibit D), entered on March 3, 2017 (Dkt. No. 144), which led to the Court’s judgment rejecting TST Water’s permissible repair and implied license defenses, as reflected in the Court’s order entered March 29, 2018 (Dkt. No.200).

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: April 5, 2018

By: /s/ John B. Sganga, Jr.

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CERTIFICATE OF SERVICE

I certify that counsel of record who are deemed to have consented to electronic service are being served on April 5, 2018, with a copy of this document via the Court's CM/ECF systems per Local Rule CV-5(a)(3). Any other counsel will be served electronic mail, facsimile, overnight delivery and/or First Class Mail on this date.

/s/ John B. Sganga, Jr.

John B. Sganga, Jr.

EXHIBIT A

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

WHIRLPOOL CORPORATION,

Plaintiff,

v.

TST WATER, LLC,

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CIVIL ACTION NO. 2:15-CV-01528-JRG

FINAL JUDGMENT


A jury trial commenced in this case on March 6, 2017, and on March 10, 2017, the Jury returned a unanimous verdict finding that Defendant TST Water, LLC (“TST”) willfully infringed Claims 1, 4, 10, 15, 16, 20, and 27 (“the Asserted Claims”) of U.S. Patent No. 7,000,894 (“the ’894 Patent”), that TST failed to prove that the Asserted Claims were invalid, and that Plaintiff was entitled to \$7,600,000 in compensatory damages. (Dkt. No. 148).

Pursuant to Rule 58 of the Federal Rules of Civil Procedure, in accordance with the jury’s unanimous verdict and the entirety of the record available, the Court hereby **ORDERS** and **ENTERS JUDGMENT** as follows:

1. Defendant TST has directly infringed the Asserted Claims of the ’894 Patent.
2. The Asserted Claims are not invalid.
3. As explained in the Court’s Order (Dkt. No. 200), TST’s defenses of repair and implied license as to claims 1, 4, 10, 15, 17, 20, and 27 of the patent-in-suit are rejected and denied.
4. Plaintiff is hereby awarded compensatory damages against Defendant and shall accordingly have and recover from Defendants the sum of \$7,600,000 U.S. Dollars.

5. As explained in the Court's Order (Dkt. No. 198) and pursuant to 35 U.S.C. § 284, Plaintiff Whirlpool is hereby awarded enhanced damages against Defendant and shall further have and recover from Defendant the sum of \$3,800,000 U.S. Dollars. (*Id.* at 22).
6. As explained in the Court's Order (*id.*) and pursuant to 35 U.S.C. § 284, the Court awards pre-judgment interest applicable to the compensatory damages, calculated at the 5 year T-bill rate compounded monthly and that the interest is to accrue from April 21, 2017 to entry of this Final Judgment. (*Id.* at 25–26).
7. As explained in the Court's Order (*id.*) and pursuant to 28 U.S.C. § 1961, the Court awards Plaintiffs post-judgment interest applicable to all sums awarded herein, at the statutory rate, from the entry of this Final Judgment until paid. (*Id.* at 26).
8. As explained in the Court's Order (*id.*) and pursuant to Rule 54(d) of the Federal Rules of Civil Procedure and 28 U.S.C. § 1920, Whirlpool Corporation (“Whirlpool”) is the prevailing party in this matter and shall recover its costs from Defendant. (*Id.* at 2).
9. As explained in the Court's Order (*id.*) and pursuant to 35 U.S.C. § 285, the Court finds the case does not warrant a finding of exceptionality and Plaintiff's motion for an award of attorneys' fees is denied. (*Id.* at 25)
10. Pursuant to the Stipulated Injunction entered herein (Dkt. No. 199), TST is enjoined “from infringing the '894 patent by the manufacture, use, offer to sell, sale, importation, or distribution of the W-5 filters or any colorable variations thereof that also infringe the '894 patent.” (*Id.* at 2).
11. All other relief requested by either party and not specifically awarded herein is **DENIED**.
The Clerk is **DIRECTED TO CLOSE** the above referenced case.

So ORDERED and SIGNED this 3rd day of April, 2018.



RODNEY GILSTRAP
UNITED STATES DISTRICT JUDGE

EXHIBIT B

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

WHIRLPOOL CORPORATION,

Plaintiff,

v.

TST WATER, LLC,

Defendant.

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CIVIL ACTION NO. 2:15-CV-01528-JRG

MEMORANDUM OPINION AND ORDER

Before the Court is Defendant TST Water, LLC's ("TST") Motion for Judgment as a Matter of Law (Dkt. No. 171) ("the Motion"). In the Motion, TST moves for judgment as a matter of law of no infringement of the '894 patent and that Whirlpool is not entitled to damages. (Dkt. No. 171). Having considered the Motion and the relevant authorities, the Court is of the opinion that, for the reasons below, the Motion should be **DENIED**.

I. Background

Whirlpool Corporation ("Whirlpool") filed suit against TST on September 15, 2015, alleging infringement of United States Patent No. 7,000,894 ("the '894 Patent") by replacement water filters sold by TST, specifically replacement filters compatible with Whirlpool's Filter 3 filter design. (Dkt. No. 1). A jury trial was conducted from March 6, 2017, through March 10, 2017. (*See* Dkt. Nos. 149, 150, 151, 152, 153). The jury rendered its verdict on March 10, 2017, finding all claims of the '894 Patent asserted at trial to be willfully infringed and not invalid. The jury awarded Whirlpool damages in the amount of \$7,600,000. (Dkt. No. 148). Following trial, the Parties jointly moved, and the Court ordered, a post-trial briefing schedule. (Dkt. Nos. 170,

182). All briefing has been completed and the motions, including the instant Motion, are ripe for disposition.

II. Applicable Law

Judgment as a matter of law is appropriate if “the court finds that a reasonable jury would not have a legally sufficient evidentiary basis to find for [a] party” on an issue. Fed. R. Civ. P. 50(a)(1). “The grant or denial of a motion for judgment as a matter of law is a procedural issue not unique to patent law, reviewed under the law of the regional circuit in which the appeal from the district court would usually lie.” *Finisar Corp. v. DirectTV Group, Inc.*, 523 F.3d 1323, 1332 (Fed. Cir. 2008). The Fifth Circuit “uses the same standard to review the verdict that the district court used in first passing on the motion.” *Hiltgen v. Sumrall*, 47 F.3d 695, 699 (5th Cir. 1995). Thus, a jury verdict must be upheld, and judgment as a matter of law may not be granted, unless “there is no legally sufficient evidentiary basis for a reasonable jury to find as the jury did.” *Id.* at 700. The jury’s verdict must be supported by “substantial evidence” in support of each element of the claims. *Am. Home Assurance Co. v. United Space Alliance*, 378 F.3d 482, 487 (5th Cir. 2004).

Under Fifth Circuit law, a court is to be “especially deferential” to a jury’s verdict, and must not reverse the jury’s findings unless they are not supported by substantial evidence. *Baisden v. I’m Ready Prods., Inc.*, 693 F.3d 491, 499 (5th Cir. 2012). “Substantial evidence is defined as evidence of such quality and weight that reasonable and fair-minded men in the exercise of impartial judgment might reach different conclusions.” *Threlkeld v. Total Petroleum, Inc.*, 211 F.3d 887, 891 (5th Cir. 2000). The moving party is entitled to judgment as a matter of law, “only if the evidence points so strongly and so overwhelmingly in favor of the nonmoving party that no reasonable juror could return a contrary verdict.” *Int’l Ins. Co. v. RSR Corp.*, 426 F.3d 281, 296 (5th Cir. 2005). However, “[t]here must be more than a mere scintilla of evidence in the record to

prevent judgment as a matter of law in favor of the movant.” *Arismendez v. Nightingale Home Health Care, Inc.*, 493 F.3d 602, 606 (5th Cir. 2007).

In evaluating a motion for judgment as a matter of law, a court must “draw all reasonable inferences in the light most favorable to the verdict and cannot substitute other inferences that [the court] might regard as more reasonable.” *E.E.O.C. v. Boh Bros. Const. Co., L.L.C.*, 731 F.3d 444, 451 (5th Cir. 2013) (citation omitted). However, a court may not make credibility determinations or weigh the evidence, as those are solely functions of the jury. *See Ellis v. Weasler Eng’g Inc.*, 258 F.3d 326, 337 (5th Cir. 2001) (citing *Reeves v. Sanderson Plumbing Prods., Inc.*, 530 U.S. 133, 150–51 (2000)). “[T]he court should give credence to the evidence favoring the nonmovant as well as that ‘evidence supporting the moving party that is uncontradicted and unimpeached, at least to the extent that that evidence comes from disinterested witnesses.’” *Id.* at 151 (citation omitted).

III. Discussion

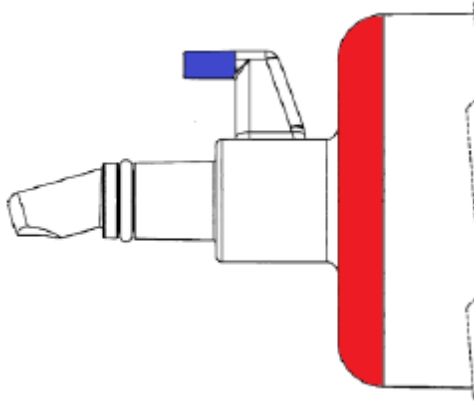
In addressing TST’s Motion for Judgment as a Matter of Law (Dkt. No. 171), the Court first considers infringement of the ’894 Patent. The Court will then address whether a reasonable jury would have had a sufficient evidentiary basis to award Whirlpool damages as set forth within the verdict.

A) Judgment as a Matter of Law of No Literal Infringement

At trial, Whirlpool asserted the ’894 Patent, specifically independent Claim 1, its dependent Claims 10 and 15, independent Claim 4, and its dependent Claims 17, 20, and 27 (“the Asserted Claims”). All asserted claims recite an end piece wall and a protrusion, with “said protrusion extend[ing] from said endpiece wall.” (’894 Patent at Claim 1, 4). Following the close of evidence, the jury returned a verdict that “Whirlpool prove[d] by a preponderance of the evidence

that TST Water directly infringes” the Asserted Claims “either literally or under the doctrine of equivalents.” (Dkt. No. 148 at 2). TST argues that the record lacks substantial evidence that the protrusion on the W-5 filter literally “extends from” the end piece wall. (Dkt. No 171 at 3). Accordingly, TST concludes that a reasonable jury would not have had a legally sufficient evidentiary basis to support a finding of direct literal infringement.

TST’s W-5 filter, the Accused Product, was found by the Jury to infringe the ’894 Patent. The W-5 filter has a protrusion (blue) and an end piece wall (red) as depicted below:



(Dkt. No. 171 at 2). During trial Whirlpool’s technical expert conceded that the protrusion on the W-5 does not directly contact the end piece wall. (Dkt. No. 159, March 7, 2017 A.M. Tr. at 118:10–16 (Q: “TST’s . . . protrusion [does not] actually contact[] the end piece wall, correct?” A. “[It’s] not in direct contact with the end piece wall, yes.”)). However, Whirlpool nonetheless maintained its position at trial that the protrusion on the W-5 “extends from” the end piece wall, even if the connection is, as TST characterizes it, “indirect.” (*Id.* at 3). This position, TST argues, was improper. Specifically, TST argues that “Whirlpool never advanced a special definition of ‘extending from said end piece wall,’ and the Court never adopted one.” (*Id.* at 4). Therefore, according to TST, “this limitation fell within the Court’s general instruction that the plain meaning applies to terms that the Court did not construe.” (*Id.*) Although Whirlpool’s technical expert Dr.

Joseph Beaman testified that, “these [protrusions] don’t have to be directly attached to the end piece wall, they just have to be connected in some sense,” (Dkt. No. 159, March 7, 2017 A.M. Tr. at 40:14–41:2), TST argues that this opinion amounts to an improper alternative construction. (Dkt. No. 171 at 4). Further, TST argues that such construction is unsupported or contradicted by the ’894 Patent’s intrinsic evidence, including the specification, file history, and cited prior art. (*Id.*) As such, the testimony offered by Dr. Beaman “is not probative and must be disregarded in assessing whether the jury’s presumed finding of literal infringement was supported by substantial evidence.” (*Id.* at 5).

Whirlpool, in response, points out that “[a]t no point before the jury’s verdict, including during the *Markman* process and trial, did TST ask the Court to construe ‘extend,’” and that, accordingly, “the Court properly instructed the jury that it should ‘use the plain and ordinary meaning of that term as understood by one of ordinary skill in the art.’” (Dkt. No. 181 at 2 (quoting Dkt. No. 166, Mar. 10, 2017 A.M./P.M Tr. at 15:22–16:2)).¹

The Court agrees. Whether the W-5 filter’s protrusion “extended” from its end piece wall (or not) was a question of fact for the jury. *See Inventio AG v. ThyssenKrupp Elevator Corp.*, No. 08-cv-874, 2014 WL 468897, at *4 (D. Del. Feb. 3, 2014) (where defendant did not ask the court to construe “connected,” whether “connect[ion]” could be “satisfied by an indirect connection”

¹ The Court agrees with the Federal Circuit’s instruction that “where the parties and the district court elect to provide the jury only with the claim language itself, and do not provide an interpretation of the language in the light of the specification and the prosecution history, it is too late at the JMOL stage to argue for or adopt a new and more detailed interpretation of the claim language and test the jury verdict by that new and more detailed interpretation.” *Hewlett-Packard Co. v. Mustek Sys.*, 340 F.3d 1314, 1320–21 (Fed. Cir. 2003); *accord Broadcom Corp. v. Qualcomm, Inc.*, 543 F.3d 683, 694 (Fed. Cir. 2008) (holding a party’s reliance on *O2 Micro* is “misplaced” where it makes a post-trial “eleventh-hour attempt to litigate a newly minted claim construction controversy” having “never requested that the district court construe any terms in [the relevant claim] and never offered a construction of [that claim],” but rather “[o]nly after the presentation of all of the evidence to the jury . . . even suggest[ed] that claim construction might be helpful to determine the proper scope of the claimed invention”) (quotations omitted). TST cannot now “proffer[] a claim construction argument regarding [its] meaning . . . in the guise of a challenge to the sufficiency of the evidence.” *Comcast IP Holdings I LLC v. Sprint Commc’ns Co., L.P.*, 850 F.3d 1302, 1311 (Fed. Cir. 2017). Accordingly, the Court will not second guess the Jury’s understanding of the plain and ordinary meaning of “extend,” and properly limits its inquiry to the sufficiency of the evidence to support the Jury’s ultimate conclusion.

was a “question of fact for the jury”); *accord* 1 Annotated Patent Digest § 4:58, Jury’s Determination of the Actual Precision of the Claim (“[A]fter the court has defined the claim with whatever specificity and precision is warranted by the language of the claim and the evidence bearing on the proper construction, the task of determining whether the construed claim reads on the accused product is for the finder of fact.”) (quoting *PPG Indus. v. Guardian Indus. Corp.*, 156 F.3d 1351, 1355, 48 U.S.P.Q.2d 1351 (Fed. Cir. 1998)); *Acumed LLC v. Stryker Corp.*, 483 F.3d 800, 806 (Fed. Cir. 2007) (“[A] sound claim construction need not always purge every shred of ambiguity. The resolution of some line-drawing problems . . . is properly left to the trier of fact.”).

Whirlpool points to substantial evidence which supports the jury’s conclusion that TST literally infringed, including:

- After identifying the “end piece wall” as the “flat wall section” at the top of the W-5, Dr. Beaman showed that the inlet and outlet fittings and protrusion “extend[ed]” from it. (Dkt. No. 159, Mar. 7, 2017 A.M. Tr. at 34:5–10; 36:4–12).
- Dr. Beaman explained that the W-5’s protrusion connects to and extends from the end piece wall via a “support.” (*Id.* at 40:14–23, 118:10–25 (protrusion not in “direct contact,” but still extends from the W-5’s end piece wall)).
- TST’s internal drawings revealed that, when developing the W-5, TST effectively “carved away” the Filter 3’s end piece wall, resulting in a different appearance. (*Id.* at 27:8–29:2). But its protrusion stayed in the same place and still extended from the end piece wall. (*Id.*)
- Whirlpool offered into evidence drawings, photographs, and physical exhibits confirming that TST’s design process involved carving around the protrusion, but leaving its location and extension from the end piece wall intact. (Dkt. Nos. 175-18, 175-38; Dkt. No. 181, Exs. 9–12). For example:



(Dkt. No. 181 at 3). The Court finds that the strength and sufficiency of record evidence, as illustrated above, more than adequately supports the jury’s verdict of direct infringement.

In addition, TST argues that Whirlpool’s position “leads to an absurd result” because, in TST’s view, “Whirlpool’s theory permits any feature of the claimed cartridge to extend from the end-piece wall, even the cap on the opposite end of the filter.” (Dkt. No. 171 at 6–7). As a result, TST contends that adopting Whirlpool’s position would preclude the “protrusion extending from” limitation from “limit[ing] the claim in any meaningful way.” (*Id.* at 7). TST concludes that this holding renders Whirlpool’s theory incorrect as a matter of law. (*Id.*) Finally, TST argues that Whirlpool improperly attempted to prove a structural limitation by showing that the accused product performs a function, specifically, that the W-5 filter’s protrusion extends out to go into the head assembly and interact with the head assembly. (*Id.* at 7). This type of “functional evidence,” in TST’s view, should not be considered. (*Id.*) Accordingly, TST submits that, in view of all of these arguments, Whirlpool “failed to introduce substantial evidence from which a reasonable jury could conclude that the W-5 filter literally satisfies the ‘protrusion extend[ing] from said end piece wall’ limitation.” (*Id.* at 8).

In response, with respect to the functional evidence argument raised by TST, Whirlpool submits that the “extending” limitation is structural. At trial, “TST’s expert agreed that structures that are entirely unconnected to the end piece wall do not ‘extend from it,’” thus the “extending”

limitation does serve as a structural limitation, specifically requiring connection, be it direct or indirect, of the protrusion to the end piece wall. (Dkt. No. 181 at 7). Whirlpool points to TST's expert, Mr. Stein, who testified regarding TST's primary reference, Knuth, which "has a protrusion," but not one that "extend[s] from the end piece wall." (Dkt. No. 165, Mar. 9, 2017 P.M. Tr. at 10:6–13; *accord* Dkt. No. 164, Mar. 9, 2017 A.M. Tr. at 100:6–13 (explaining that Knuth's "protrusion" extend[s] from the head assembly," "not . . . the end piece wall")). Whirlpool also submits that TST's end cap hypothetical is a strawman argument whose asserted "absurdity" arises from the fact that the end cap is not on the same side of the end piece wall as the inlet and outlet fittings. It has nothing to do with whether the end cap extends from the end piece wall via an intervening structure. Whirlpool notes that TST offered no response to this rebuttal. (Dkt. No. 189 at 4 ("Other limitations constrain the position of the protrusion, and neither party disputes that the protrusion should be on the same side as the inlet and outlet fittings to engage the head assembly. TST offers no response."))).

The Court is not persuaded by either of TST's arguments. The "extending" limitation is a structural limitation which requires the claimed "protrusion" to possess a specific structural form. This specific structural form is supported not only by the claim language itself ("said protrusion extend[s] from said end piece wall [and] is positioned between said inlet and outlet fittings") but also the specification. For example, the specification shows the "protrusion" (33) "extending" from the end piece wall (12):

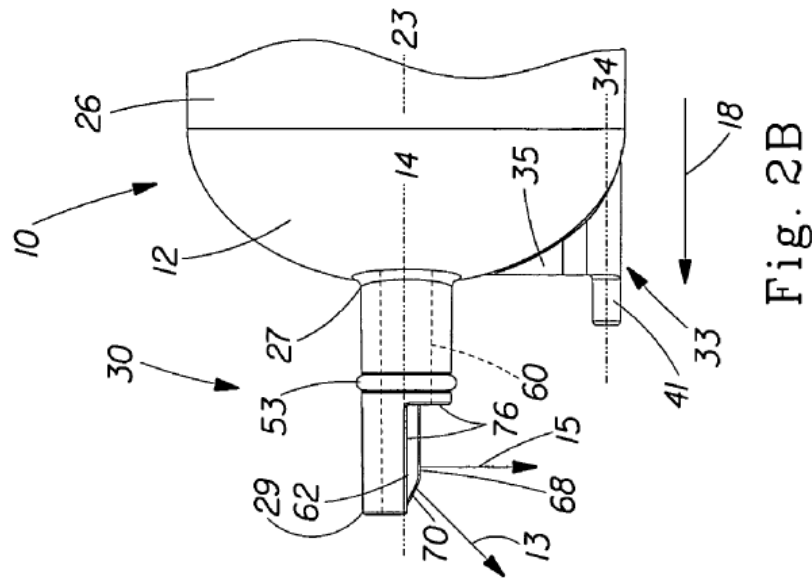


Fig. 2B

PX1 at Fig. 2B. “[T]he solid protrusion **33** may have a cylindrical end **41** (preferably having a length from about 0.1 cm, about 0.3 cm, about 0.5 cm to about 1 cm, about 1.5 cm, about 2 cm, and preferably having a diameter from about 0.1 cm, about 0.2 cm, about 0.3 cm to about 0.5 cm, about 0.7 cm, about 1 cm) extends from near the edge of the end piece wall **12**, adjacent to the connection of the end piece **10** and cartridge **20**.” (*Id.* at 5:23–30). In addition to the intrinsic evidence, Dr. Beaman supplied testimony on how the “extending” limitation was met by the accused product:

Q. Now, the claim next requires that the inlet fitting, the outlet fitting, and the protrusion all extend from the end piece wall. Do you see that?

A. Yes, I do.

Q. And how is this limitation satisfied?

A. Well, here’s the end piece wall right here. And you’ll notice the protrusion is extending from it. The inlet fitting is extending from it. And the outlet fitting are extending from the end piece wall.

(Dkt. No. 159, Mar. 7, 2017, A.M. Tr. at 36:4–12). Further, his testimony, Dr. Beaman concluded that the “extending” limitation was satisfied by the accused product. (*Id.* at 44:16–19). Finally, Dr. Beaman directly addressed TST’s indirect extension argument during his testimony:

Q. Now, Dr. Beaman, have you reviewed reports and testimony by Dr. — by Mr. Stein in this case?

A. Yes, I have.

Q. And do you understand that you have certain disagreements with him on his opinions regarding infringement here?

A. I think we do, yes.

Q. What are the — at a high level the areas of disagreement?

A. He disagrees with my understanding of extend from, what an longitudinal axis is, and also what we mean by about 2 centimeters.

Q. Dr. Beaman, let's go to the first area of disagreements. Literal infringement and extend from. Why do you disagree, and can you explain why you believe your theory — your understanding to be correct?

A. Yes. So it just has to extend from the end piece wall. And so what's happening here, here's the end piece wall, and this is just a — a support and kind of — you know, as they kind of multi-carve things away, these things all have to extend out because they have to interact with the head assembly. And, in my opinion, these don't have to be directly attached to the end piece wall, they just have to be connected in some sense. So these extend from, so they lineup and go into the head assembly.

(*Id.* at 40:2–41:2). Dr. Beaman and his testimony, including his expert opinions, were subjected to robust cross-examination by TST. The jury was entitled to credit and rely upon Dr. Beaman’s testimony and expert opinions in reaching its verdict of literal infringement. *See Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1326 (Fed. Cir. 2014) (“With the aid of [] cross-examination and expert testimony, the jury is capable of assigning the appropriate weight to [an expert’s] testimony based upon their judgment of her credibility, factual analysis, and conclusions.”). Whirlpool did not improperly attempt to prove a structural limitation by showing that the accused product

performs a function, but rather provided specific evidence upon which the Jury was able to properly rely, discussed above, that the structural limitation required by “extends from” claimed by the Asserted Claims was present in the Accused Products.

Finally, the Court disagrees with TST’s “absurd result” argument that the jury’s Verdict is unsupportable as a matter of law. (Dkt. No. 171 at 6–7). TST’s argument that “it is so glaringly obvious that the W-5 filter’s protrusion extends from the bridge that no reasonable juror could possibly think that it extends from the end-piece wall,” (Dkt. No. 171 at 7), is contradicted by the same record evidence identified with respect to the “extends from” limitation, above, upon which the jury’s Verdict is properly supported. (*See also supra* at 7 (discussing Knuth’s protrusion)).

In conducting this analysis, the Court was careful to draw all reasonable inferences in favor of the Verdict and not make credibility determinations or reweigh the evidence. *Boh Bros.*, 731 F.3d at 451 (a court must “draw all reasonable inferences in the light most favorable to the verdict and cannot substitute other inferences that [the court] might regard as more reasonable.”) (citation omitted). The Court has finds that the verdict is supported by substantial evidence presented a trial. Accordingly, the Court **DENIES** TST’s Motion for Judgement as a Matter of Law of No Literal Infringement. *Hiltgen*, 47 F.3d at 700 (5th Cir. 1995) (judgment as a matter of law may not be granted unless “there is no legally sufficient evidentiary basis for a reasonable jury to find as the jury did.”).

B) Judgment as a Matter of Law of No Infringement Under the Doctrine of Equivalents

TST argues, generally, that “[b]ecause Whirlpool relied on the ‘protrusion extend[ing] from said end piece wall’ limitation to overcome a PTO rejection based on prior art, prosecution history estoppel applies and bars the application of the doctrine of equivalents to the protrusion limitation. Further, even if the doctrine were not barred by prosecution history estoppel, Whirlpool

failed to present substantial evidence from which a reasonable jury could conclude that extending from a bridge between the fittings is equivalent to extending from the end-piece wall.” (Dkt. No. 171 at 8).

i) Prosecution History Estoppel

As to TST’s argument regarding prosecution history estoppel, the Court notes that the argument and authorities presented to the Court during trial in support of TST’s Rule 50(a) motion are relied upon and incorporated by reference in the instant Motion (*Id.* (incorporating Dkt. No. 140 by reference)). After briefing and argument, the Court denied TST’s Rule 50(a) motion and allowed the jury to decide whether TST’s Accused Products infringed Whirlpool’s Asserted Claims under the doctrine of equivalents. (Dkt. No. 165, Mar. 9, 2017 P.M. Tr. at 66:17–20).

TST argues now in its renewed Motion that the prosecution history of the “protrusion extend[ing] from” limitation estops any claim of infringement under the doctrine of equivalents as a matter of law.

Generally, “The doctrine of equivalents allows the patentee to claim those insubstantial alterations that were not captured in drafting the original patent claim but which could be created through trivial changes.” *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 733 (2002) (“*Festo I*”). An element in the accused device is equivalent to a claim limitation if the only differences between the two are insubstantial. *Eagle Comtronics, Inc. v. Arrow Commun. Labs., Inc.*, 305 F.3d 1303, 1315 (Fed. Cir. 2002) (citation omitted). However, prosecution history estoppel may bar the patentee from asserting equivalents if the scope of the claims has been narrowed by amendment during prosecution. *Festo I*, 535 U.S. at 733-34.

The Federal Circuit instructed in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d 1359, 1366–67 (Fed. Cir. 2003) (“*Festo II*”), that a court must conduct various inquiries

into the prosecution history in order to ascertain whether prosecution history estoppel applies. Specifically, courts must determine (1) whether there was a narrowing amendment during prosecution that surrendered subject matter; (2) whether that narrowing amendment was made for reasons related to patentability; (3) whether the alleged equivalent is within the scope of the surrendered subject matter, taking into account the presumption of total surrender for the limitation; and (4) Whether the presumption of total surrender can be rebutted under any of the three exceptions to the estoppel, specifically: (i) the equivalent was unforeseeable at the time of the application; (ii) the rationale underlying the amendment bears no more than a tangential relation to the equivalent in question; or (iii) other reasons suggesting that the patentee could not reasonably be expected to have described the insubstantial substitute in question. *Festo II*, 344 F.3d at 1366–67.

“Estoppel arises when an amendment is made to secure the patent and the amendment narrows the patent's scope.” *Festo I*, 535 U.S. at 736. “A presumption of surrender therefore arises if rewriting the dependent claims into independent form, along with canceling the original independent claims, constitutes a narrowing amendment.” *Honeywell Int’l, Inc. v. Hamilton Sundstrand Corp.*, 370 F.3d 1131, 1141 (Fed. Cir. 2004). “Under such circumstances, the surrendered subject matter 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.” *Id.* at 370 F.3d at 1144. “[W]hen a claim is rewritten from dependent into independent form and the original independent claim is cancelled, ‘the correct focus is on whether [the] amendment surrendered subject matter.’” *Id.* (citations omitted).

During prosecution of the ’894 Patent, the Examiner rejected the original independent claim 1 in the ’894 patent application. (Dkt. No. 140, Ex. 2, May 23, 2005 Office Action at 2–3).

The Examiner also rejected claims 14, 15, and 16. (*Id.*) The Examiner objected to original dependent Claim 17 as being dependent on a rejected base claim but indicated that Claim 17 “would be allowable if rewritten in independent form.” (*Id.* at 7).

At the time of the rejection, the relevant Claims submitted for Examination were as follows:²

1. [Original] An end piece for operatively engaging a head assembly, the head assembly comprising one or more valves, for the treatment and control of fluid passing through the head assembly, said end piece comprising:

- A. an end piece wall;
- B. an inlet fitting having a cam surface, said inlet fitting having a longitudinal axis; and
- C. an outlet fitting[,]

wherein said inlet fitting and said outlet fitting extend from said end piece wall, and wherein at least a portion of said cam surface is vectored from said longitudinal axis of said inlet fitting.

14. [Original] The end piece of claim 1, further comprising a protrusion having a longitudinal axis, said protrusion extending from said end piece wall.

15. [Original] The end piece of claim 14, wherein said protrusion is position between said inlet and outlet fittings.

16. [Original] The end piece of claim 15, wherein the distance from said longitudinal axis of said inlet to said longitudinal axis of said outlet is less than the distance from said longitudinal axis of said inlet to said longitudinal axis of said protrusion, and wherein the distance from said inlet to said longitudinal axis of said protrusion is greater than the distance from said longitudinal axis of said outlet to said longitudinal axis of said protrusion.

17. [Original] The end piece of claim 16, wherein the distance from said longitudinal axis of said inlet to said longitudinal axis of said outlet is about 2 cm, and wherein the distance from said inlet to said longitudinal axis of said protrusion is about 2 cm, and wherein the distance from said longitudinal axis of said inlet to said longitudinal axis of said outlet is about 2 cm.

(Dkt. No. 140-3, Apr. 25, 2003 Claims at 32-34). Following the non-final Office Action, Whirlpool submitted new application Claim 29 which is former Claim 17 rewritten in independent form. Claim 29 read:

29. [New] An end piece for operatively engaging a head assembly, the head assembly comprising one or more valves, for the treatment and control of fluid passing through the head assembly, said end piece comprising:

² The claims are presented with nesting provided for clarity of dependency.

- A. an end piece wall;
- B. an inlet fitting having a cam surface, said inlet fitting having a longitudinal axis; and
- C. an outlet fitting; and
- D. a protrusion having a longitudinal axis;

[w]herein said inlet fitting, said outlet fitting, and said protrusion extend from said end piece wall, wherein said protrusion is positioned between said inlet and said outlet fittings,

wherein the distance from said longitudinal axis of said inlet to said longitudinal axis of said outlet is less than the distance from said longitudinal axis of said inlet to said longitudinal axis of said protrusion, and

wherein the distance from said inlet to said longitudinal axis of said protrusion is greater than the distance from said longitudinal axis of said outlet to said longitudinal axis of said protrusion,

wherein the distance from said longitudinal axis of said inlet to said longitudinal axis of said outlet is about 2 cm, and wherein the distance from said inlet to said longitudinal axis of said protrusion is about 2 cm, and wherein the distance from said longitudinal axis of said outlet to said longitudinal axis of said protrusion is about 2 cm, and wherein at least a portion of said cam surface is vectored from said longitudinal axis of said inlet fitting.

(Aug. 23, 2005 Response (Dkt. 140-4) at 3–4). Whirlpool simultaneously submitted new application Claims 30–32 and canceled all other pending application claims, including Claim 17. Application Claims 29, 30, 31, and 32 issued as '894 Patent Claims 1, 2, 3, and 4, respectively.

There is no dispute between the Parties that, as a result of this prosecution history, prosecution history estoppel applies under *Honeywell*. Specifically, a dependent claim was rewritten in independent form and the claims upon which the previously dependent claim depended upon were cancelled, resulting in a narrowing amendment. *Honeywell*, 370 F.3d at 1141. The dispute between the Parties, each relying on *Honeywell* in support of their positions, rests on the appropriate scope of the prosecution history estoppel.

TST argues that the application of *Honeywell* is straightforward: the difference in scope between the new Claim 29 (the rewritten Claim 17) and the original independent application Claim 1 defines the scope of the surrender proffered by the patentee in prosecution of the application. (Dkt. No. 171 at 9). However, Whirlpool argues that TST's argument focuses on the

wrong claim. Specifically, “Application claim 16 depended on 15, which depended on 14, which depended on 1. After the lone Office Action, all four claims stood rejected. However, Examiner indicated that claim 17, which depended on 16, was allowable if rewritten in independent form, and Whirlpool complied.” (Dkt. No. 143 at 6). Accordingly, “[b]ecause claim 16 [was] the narrowest claim that lacked the ‘about 2 cm’ limitation, was rejected but claim 17 was allowed, the appropriate inquiry focuses on the differences between these claims.” (*Id.*)

At its core, the Parties’ dispute is whether the *Honeywell* inquiry is performed between the dependent claim rewritten in independent form, here application Claim 17, and either the independent from which Claim 17 depends, here application Claim 1, or the claim from which claim 17 immediately depends, here application Claim 16.

This difference between application Claims 1 and 16 is important in this analysis because it determines whether Whirlpool was permitted to assert that the W-5 met the “protrusion extend[ing] from” claim limitation under the doctrine of equivalents. In TST’s view, the “protrusion extend[ing] from” limitation was not present in the original independent Claim 1 and so is deprived of the equivalent reach due to prosecution history estoppel. If Whirlpool is correct, however, the “protrusion extend[ing] from” limitation, being present in intermediate dependent Claim 14, was not surrendered by the cancellation of Claims 1, 14, 15, and 16 and the rewriting of Claim 17, since only the difference in limitation between Claims 16 and 17 determine the scope of the estoppel, and thus the bar to the doctrine. Accordingly, under this view, the estoppel to prevents equivalency to only the “about 2 cm” limitation which Claim 17 introduced.

As such, TST argues that the focus of the *Honeywell* inquiry in determining the proper estoppel scope treats *only* the independent claim as the “patent scope originally requested by the patentee.” (Dkt. No. 171 at 8–9 (“Dependent application claim 16 did not define the original patent

scope requested by the patentee; independent application claim 1 defined the patent scope originally requested by the patentee.”)). Accordingly, the surrender resulting from the patentee’s rewriting of Claim 17 in independent form “is defined by every limitation added to application claim 1—not just the limitations added from application claim 17—and triggered a presumption of estoppel for every one of these added limitations.” (*Id.* at 9). Whirlpool argues that as the limitation that led to allowance—and thus defined the scope of surrender—was the “about 2 cm” requirement from application Claim 17, application Claim 14’s “protrusion extending from” limitation “could not have been the basis for allowance, as the Examiner had already found that the Stevens reference disclosed this.” (Dkt. No. 181 at 8). Since *Honeywell* held that the scope of surrendered subject matter 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,” the limitation at issue in this case is the limitation which application Claim 17 adds, as determined by comparing application Claim 17 to application Claim 16, from which it depends.

The Court has undertaken a survey of cases relying on and applying the Federal Circuit’s holding in *Honeywell*. The Court has not been directed to, nor has it found, any case following *Honeywell* where it is clear that intermediate dependent claims existed between the original independent claim and the dependent claim which was ultimately rewritten in an independent form. Even so, Whirlpool’s view better accords with the precedent of *Honeywell*. Where an independent claim, alone, is cancelled and a dependent claim from that independent claim is rewritten into independent form, it is appropriate to apply prosecution history estoppel to the difference in scope between the independent and dependent claims. Similarly, where there are, as here, gradations of specificity due to nested intermediate dependent claims with each intermediate

dependent claim introducing additional limitations, it is equally appropriate to look only at the difference in scope between the most specific disallowed intermediate dependent claim and the ultimately rewritten dependent claim to determine the scope of the patentee's surrender. This makes sense, since "[e]ach claim must be considered as defining a separate invention." *Jones v. Hardy*, 727 F.2d 1524, 1528 (Fed. Cir. 1984). *Accord see Pall Corp. v. Micron Separations, Inc.*, 66 F.3d 1211, 1220 (Fed. Cir. 1993) ("Each claim is a separate statement of the patented invention").

The purpose of the rule of *Honeywell* is to ensure equivalency of scope between the prosecution estoppel applied to limitations of a patent claim that are added by a patentee to overcome a rejection and a patentee who discards broader claims and accepts the allowance of a dependent claim with a specific limitation which renders the claim allowable.³ The focus of this inquiry, thus, must be on the specific limitation which the examiner found rendered the claim allowable and, accordingly, confines the estoppel effect to only that specific limitation.

It is true that, generally, where multiple limitations from multiple dependent claims are rolled into a single rewritten independent claim, it may be difficult, or even impossible, for a court to determine what specific limitation, if any, was the ultimate basis for allowance. In such a case, it is appropriate that a court give prosecution history estoppel a sweeping reach, since "[w]here no explanation is established, . . . the court should presume that the patent applicant had a substantial reason related to patentability for including the limiting element added by amendment." *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 33 (1997). Here, however, the Court,

³ See *Biagro Western Sales, Inc. v. Grow More, Inc.*, 423 F.3d 1296, 1305 (Fed. Cir. 2005) ("If the narrowing amendment was the addition of a new claim limitation, . . . equivalents are presumptively not available with respect to that limitation.") (citing *Honeywell*, 370 F.3d at 1141) (emphasis added); *accord*. 5A Chisum on Patents § 18.05 (2018) ("The classic occasion for application of file wrapper (prosecution history) estoppel is when the patent examiner rejects a broad claim as unpatentable over the prior art and in response the applicant cancels or amends claims in order to narrow the scope of the claimed subject matter and thereby to secure issuance of a patent.") (emphasis added).

through the unique posture of the prosecution history presented, is able to properly limit the sweep of the prosecution history estoppel to *only* the limitations added by Claim 17 when compared to Claim 16.

Accordingly, prosecution history estoppel does not bar application of the doctrine of equivalents to the “protrusion extend[ing] from” limitation.

ii) Sufficiency of the Evidence

TST argues that Whirlpool failed to present substantial evidence that the W-5 filter satisfies the “protrusion extend[ing] from” limitation under the doctrine of equivalents. (Dkt. No. 171 at 11). Whirlpool first responds by reminding the Court that “TST never moved pre-verdict that substantial evidence did not support Whirlpool’s [doctrine of equivalents] theory for ‘extend.’” (Dkt. No. 181 at 8). Even so, Whirlpool does acknowledge that TST properly preserved its argument that (i) the Asserted Claims were only entitled to a narrow scope in applying the doctrine of equivalents analysis due to the narrowness of the claims and (ii) that the doctrine of equivalents was improperly applied and eliminated the “protrusion extend[ing] from” limitation from the claims.

With respect to the issue of waiver under Rule 50, “[i]t is well-settled in this circuit that a motion for judgment as a matter of law filed post-verdict cannot assert a ground that was not included in the motion for judgment as a matter of law made at the close of the evidence.” *Morante v. Am. Gen. Fin. Ctr.*, 157 F.3d 1006, 1010 (5th Cir. 1998). “If a party fails to move for judgment as a matter of law under Federal Rule of Civil Procedure 50(a) on an issue at the conclusion of all of the evidence, that party waives both its right to file a renewed post-verdict Rule 50(b) motion and also its right to challenge the sufficiency of the evidence on that issue on appeal.” *Flowers v. S. Reg’l Physician Servs., Inc.*, 247 F.3d 229, 238 (5th Cir. 2001).

Of course, strict adherence to Rule 50 is not required “in situations in which the purposes of the rule are satisfied.” *Scottish Heritable Trust, PLC v. Peat Marwick Main & Co.*, 81 F.3d 606, 610 (5th Cir. 1996). The purposes of Rule 50 “are met when the court and the plaintiff are alerted to the grounds on which the defendant contends the evidence is insufficient prior to the submission of the case to the jury.” *Taylor Pub. Co. v. Jostens, Inc.*, 216 F.3d 465, 472 (5th Cir. 2000).

TST contends that it properly made a Rule 50(a) motion regarding the doctrine of equivalents since “Rule 50 only requires a motion ‘that a reasonable jury would not have a legally sufficient evidentiary basis to find for [Whirlpool] on that *issue*,’” as opposed to requiring that individual attacks within an issue be identified. (Dkt. No. 185 at 5 (emphasis original)). “Whirlpool has identified no authority that TST was obligated to do more than identify the issue of infringement under the doctrine of equivalents, consistent with the text of Rule 50.” (*Id.*) Indeed, the case law marshaled by Whirlpool supports TST’s position, not Whirlpool’s. (Dkt. No. 189 at 5). Only unraised defenses are waived. However, there is no requirement to raise every possible argument in support of a defense in the initial 50(a). This is seen in each of the cases cited by Whirlpool which show *separate* defenses are found to be waived by raising other defenses but not, as Whirlpool argues, waiver of different arguments about why a specific defense is appropriate. *See, e.g., Texas Instruments, Inc. v. Cypress Semiconductor Corp.*, No. 3:90-cv-1590, 1995 WL 811944, at *1 (N.D. Tex. Aug. 28, 1995) (finding the validity defense of indefiniteness to be waived, because “[a]lthough Defendants did move for a judgment as a matter of law on a host of validity defenses in their JMOL I, [] they notably did not include indefiniteness as an asserted ground”); *cf. Kinzenbaw v. Deere & Co.*, 741 F.2d 383, 387–88 (Fed. Cir. 1984) (finding the issues of public knowledge or use waived where “[i]n a motion for a directed verdict, Deere

raised a number of specific issues it urged the court not to submit to the jury. It also included a general request for a directed verdict on Kinze's invalidity defenses, including the claim of obviousness based upon prior art not cited to the examiner. Deere, however, did not specifically refer in that motion to the prior public knowledge or use issue.”); *i4i Ltd. P'ship v. Microsoft Corp.*, 598 F.3d 831, 845 (Fed. Cir. 2010), *aff'd*, 564 U.S. 91 (2011) (finding the validity defense of obviousness waived where “[b]efore the case was submitted to the jury, Microsoft moved for JMOL on invalidity, arguing that i4i's sale of S4 violated the on-sale bar under § 102(b)[, but] did not move for pre-verdict JMOL on obviousness or with regard to other prior art.”); *Golden Hour Data Sys., Inc. v. emsCharts, Inc.*, No. 2:06-cv-381-JRG, 2014 WL 8708239, at *2 (E.D. Tex. Mar. 31, 2014) (finding the issues of willful infringement or invalidity waived where “emsCharts filed its Motion for Judgment as a Matter of Law [] under F.R. Civ. P. 50(a), arguing that it was entitled to a judgment as a matter of law on the issues of direct infringement, joint infringement, induced infringement and damages, based on insufficiency of the evidence[, but] did not raise the issues of willful infringement or invalidity in its Rule 50(a) motion.”).

Accordingly, the Court holds that TST properly raised the issue of non-infringement under the doctrine of equivalents in its original Rule 50(a) motion and has not waived its ability to now seek judgement as a matter of law under Rule 50(b).

Turning to the merits, TST urges, generally, that Whirlpool failed to present substantial evidence that the W-5 filter satisfies the “protrusion extend[ing] from” limitation under the doctrine of equivalents for three separate reasons: (1) whirlpool failed to present evidence of equivalence on a limitation-by limitation basis when it argued that the W-5 filter infringes because the filter fits, (2) Whirlpool’s “way” analysis did not even mention the alleged equivalent structure

in the accused W-5 product, and (3) Whirlpool's burden to provide probative evidence of equivalence was especially high in view of the specificity of the claims. (Dkt. No. 171 at 11–15).

TST points to various pieces of testimony and argument which, in its view, demonstrate that “Whirlpool argued at trial that the accused W-5 infringes the '894 Patent because it ‘fits’ in Whirlpool's Filter 3 refrigerators, making ‘fit’ a proxy for infringement.” (*Id.* at 11–12).⁴ Such an argument is foreclosed, in TST's view, because “the doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole,” *Warner-Jenkinson*, 520 U.S. at 29, and evidence regarding the doctrine of equivalents “must be presented on a limitation by-limitation basis. Generalized testimony as to the overall similarity between the claims and the accused infringer's product or process will not suffice.” *Texas Instruments Inc. v. Cypress Semiconductor Corp.*, 90 F.3d 1558, 1567 (Fed. Cir. 1996). Specifically, TST argues that this “fit” argument improperly subsumed the limitation-by-limitation inquiry, especially regarding the protrusion limitation. (Dkt. No. 171 at 13 (“Moreover, in seeking to prove infringement by showing that the W-5 fits in the Filter 3 refrigerator, Whirlpool renders the disputed limitations – including the protrusion limitation – redundant of the ‘for operatively engaging a head assembly’ limitation and deprives those limitations of all force and effect.”)).

The Court agrees that “Whirlpool certainly presented significant and un rebutted evidence that the W-5 filter, with its end piece and protrusion, was ‘guaranteed to fit’ into the same head assembly as the patented invention.” (Dkt. No. 181 at 14–15). That evidence “confirmed the substantial evidence that the W-5 filter's protrusion also actuated the bypass valve in the head

⁴ (*See, e.g.*, Dkt. No. 171 at 11 (quoting Dkt. No. 158, Mar. 6, 2017 P.M. Tr. at 36:17–19 (opening statement) (“So how are we going to prove infringement? One way is with their documents and what they say outside of the courtroom. Guaranteed to fit.”); quoting Dkt. No. 159, Mar. 7, 2017 A.M. Tr. at 43:16–44:19 (testimony) (“The filters are guaranteed to fit. The filter fits in place of -- and you'll see here the Filter 3, which we know practices the patent”; “The filter fits in place of the Whirlpool Filter 3.”); quoting Dkt. No. 158, Mar. 10, 2017 A.M./P.M. Tr. at 42:24–43:9 (closing argument) (“Infringement. Remember what they tell us outside of the courtroom. Outside of the courtroom they guarantee the W-5 filter to fit. Guaranteed to fit.”)).

assembly, and thus was insubstantially different.” (*Id.*) To this end, “Dr. Beaman, Mr. Stein, and Mr. Baird [] provided ample testimony and evidence from which the jury could have found that the W-5’s protrusion is insubstantially different from the claimed invention.” (*Id.* at 13).

Specifically, “Dr. Beaman explained that, despite being on a support bridge indirectly connected to the end piece wall, the protrusion did ‘not move,’” and instead “remained in a fixed location so that it could ‘fit into the bypass valve.’” (*Id.* (citing Dkt. No. 159, Mar. 7, 2017 A.M. Tr. at 28:16–21.) Dr. Beaman testified about the patented invention’s requirement that “the inlet and outlet and protrusion have to line up to get into the head assembly,” (*Id.* at 41:18–22), and that the protrusion must be “out from the end piece wall” to “operatively engage the[] valves” in the head assembly, (*Id.* at 41:22–24). Dr. Beaman also testified the W-5 filter’s protrusion must “line up to get into the Whirlpool head,” (*Id.* at 30:4–6), and, once in the head assembly, the protrusion must “line up well and hit the bypass valve.” (*Id.* at 47:7–13; *see also id.* at 43:9–15 (installation video confirms that W-5 “actually fits and functions the same way”))).

Mr. Stein testified that the W-5 filter’s protrusion, though held by an arm, “fits into the same place, and [] actuates the [head assembly’s] valve,” just like the claimed invention. (Dkt. No. 164, Mar. 9, 2017 A.M. Tr. at 121:5–8). Mr. Baird testified that the location of the protrusion could not be moved, as compared to the patented design, because “compatibility is important” and agreed that the W-5 needed to “have the same dimensions as . . . the head inside the refrigerator or it won’t work.” (Dkt. No. 163, Mar. 8, 2017 P.M. Tr. at 41:5–9).

This evidence demonstrates that Whirlpool did present substantial evidence and argument inviting the jury to directly consider the alleged infringement of TST’s W-5 with respect to the “protrusion extend[ing] from” limitation. The Court finds that Whirlpool presented “significant and un rebutted evidence that the W-5 filter, with its end piece and protrusion, was ‘guaranteed to

fit' into the same head assembly as the patented invention. That evidence confirmed the substantial evidence that the W-5's protrusion also actuated the bypass valve in the head assembly, and thus was insubstantially different." (Dkt. No. 181 at 14–15).

TST also argues that Whirlpool's "way" analysis⁵ did not mention the alleged equivalent structure in the accused W-5 product. Specifically, TST argues that Dr. Beaman never mentioned a protrusion extending from a bridge between the fittings or explained how that structure performs the function in substantially the same "way" as a protrusion that extends from the end-piece wall. In support, TST points to the following testimony:

Q. And, Dr. Beaman, let's look at the next — next part of the test. Substantially the same way. How does the W-5 perform the claimed feature in substantially the same way?

A. Yeah, so these -- the longitudinal axes of these all have — there has to be some platform — platform for them to come off of. And that has to be from the end piece wall, which is this flat portion. And so substantially the same way is the end piece wall provides that platform for these things to extend from.

(Dkt. No. 159, Mar. 7, 2017 A.M. Tr. at 40:14–15, 41:3–6, 42:2–10). In other words, in TST's opinion, "Dr. Beaman never mentioned the allegedly equivalent structure in applying the 'way' prong." (Dkt. No. 171 at 14).

Whirlpool submits that "Dr. Beaman explained that the W-5's protrusion performs 'substantially the same function,' in 'substantially the same way,' to achieve the 'substantially the same result' as the claimed 'protrusion extend[ing] from [the] end piece wall.'" (Dkt. No. 181 at 11). Whirlpool argues that "Dr. Beaman testified that the W-5's protrusion perform[s] the same

⁵ The function-way-result test ensures that infringement under the doctrine of equivalents is only found where a claimed invention and an accused device perform substantially the same function, substantially the same way, to attain substantially the same result. "That a claimed invention and an accused device may perform substantially the same function and may achieve the same result will not make the latter an infringement under the doctrine of equivalents where it performs the function and achieves the result in a substantially different way." *Advanced Steel*, 808 F.3d at 1320 (quoting *Perkin-Elmer Corp. v. Westinghouse Elec. Corp.*, 822 F.2d 1528, 1532 n. 6 (Fed. Cir. 1987)). However, the Court ultimately seeks to determine "whether the accused product or process contain elements identical or equivalent to each claimed element of the patented invention[.]" *Warner-Jenkinson*, 520 U.S. 17, 21 (1997).

function as the claimed function as it extends from the end piece wall to allow it ‘to line up to get into the head assembly,’” and that the “W-5 achieves the same result as the claimed invention: its protrusion can enter the head assembly, thereby enabling the flow of water.” (Dkt. No. 181 at 11–12 (citing Dkt. No. 159, Mar. 7, 2017 A.M. Tr. at 42:19–21 (“So the result is basically the filter goes into the head assembly. And the end of the day, water flows and you get filtered water.”); *Id.* at 28:16-21 (noting that W-5 protrusion still “fit[s] into the bypass valve.”))). Additionally, TST’s installation video shows that the W-5 filter’s protrusion engages the head assembly. (Dkt. No. 175-39 (the W-5 filter “has been engineered to fit and function properly in your refrigerator.”)). This evidence was confirmed by both TST’s technical expert, Mr. Stein, and TST’s President, Michael Baird. Both witnesses agreed that the W-5 product performs the same function and achieves the same result as the claimed invention. (Dkt. No. 165, Mar. 9, 2017 P.M. Tr. at 30:21–24 (Mr. Stein disagreeing only “with respect to the ‘way’ aspect of the function-way-result test”); Dkt. No. 164, Mar. 9, 2017 A.M. Tr. at 121:5–8 (Mr. Stein agreeing that the W-5 “fits into the same place [and] actuates the valve”); Dkt. No. 163, Mar. 8, 2017 P.M. Tr. at 51:22–52:11 (Baird agreeing that the W-5’s protrusion performs “the same function of actuating the bypass valve” and that “the result is the same”)).

As to the “way” in which this same function reaches the same result, Whirlpool points to Dr. Beaman’s testimony with respect to the W-5’s “end piece wall.” Dr. Beaman identified the “end piece wall” as the “flat portion” of the filter which forms a “platform” for the protrusion (and the inlet and outlet fittings) to extend from. (Dkt. No. 159, Mar. 7, 2017 A.M. Tr. at 42:5–10 (explaining that “the longitudinal axes of these all have—there has to be some platform—platform for them to come off of. And that has to be from the end piece wall, which is this flat portion”); *id.* at 42:9–10 (“the end piece wall provides that platform for [the fittings and protrusion] to extend

from’’)). Dr. Beaman also described how TST effectively “carved away” the area around the protrusion to form the “bridge” of the W-5 during development. (*Id.* at 28:16–19 (“[T]his protrusion, this will not move. And what’s going to happen is they kind of carved away or at least sunk it down, the material.”); *id.* at 30:4–9 (explaining that “the protrusion now is sitting out here’’)). It is this protrusion in the Whirlpool filter which Dr. Beaman stated must be “out from the end piece wall” to operatively engage the valves in the head assembly. (*Id.* at 41:23–24). He also noted that the W-5 does the same, as its protrusion is structured to “line up” to get into the head (*id.* at 30:4-6) and “hit the bypass valve.” (*Id.* at 47:7–14). Dr. Beaman explained that no part of the W-5’s “platform” for the protrusion “enter[s] the bypass valve,” just as in the patented invention. (*Id.* at 138:7–10; *see id.* at 21:23–22:8 (claimed protrusion, not end piece wall, can “activate[] [the] . . . bypass valve” “to help prevent . . . leaks’’)).

This evidence is more than substantial. A reasonable jury could have relied upon it in reaching a verdict of infringement.

Further, TST argues that the above analyses must be limited to “only a narrow scope of equivalents” due to “the specificity of the claims.” (Dkt. No. 171 at 15).

It is true that “[a] claim that contains a detailed recitation of structure is properly accorded correspondingly limited recourse to the doctrine of equivalents.” *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 955 (Fed. Cir. 2006). “If it were otherwise, then claims would be reduced to functional abstracts, devoid of meaningful structural limitations on which the public could rely.” *Sage Prod., Inc. v. Devon Indus., Inc.*, 126 F.3d 1420, 1424 (Fed. Cir. 1997).

In TST’s view, “the claims at issue define a relatively simple structural device,” limited to “a protrusion, [] one that extends from the end-piece wall, is positioned between the inlet and outlet fittings, and lies about 2 cm from the inlet fitting and about 2 cm from the outlet fitting.” (Dkt.

No. 171 at 15; *see, e.g.*, '894 Patent Claim 1). This argument revisits the issue previously addressed by the Court in Part A, *supra*, regarding the ability of the claimed “protrusion extend[ing] from” limitation to be met by the protrusion in the Accused Product through the indirect extension of the bridge from the end-piece wall. The Court is, again, not persuaded by TST’s arguments on this issue. *See, e.g., supra* p. 11. Accordingly, no limitation of the doctrine of equivalents to some narrower scope is appropriate.

Finally, TST argues that Whirlpool’s theory of equivalence effectively eliminates the “protrusion extending from” limitation from the claims. (Dkt. No. 171 at 17). The Court disagrees. This argument attempts to unduly limit the scope of equivalents for “extend” to direct contact with the wall, precluding any sort of indirect extension, such as in the Accused Product. As discussed above and in Part A, *supra*, regarding the ability of the claimed “protrusion extending from” limitation to be met by the protrusion in the Accused Product through the indirect extension of the bridge from the end-piece wall, TST’s arguments remain unpersuasive.

In conclusion, the Court has found that (1) prosecution history estoppel does not bar the application of the doctrine of equivalents to the “protrusion extending from” limitation; that (2) TST properly preserved its attack on the sufficiency of the evidence on the issue of infringement under the doctrine of equivalents; and that (3) on review of the merits of the sufficiency of said evidence, there is substantial evidence upon which a reasonable jury could have relied to find that the W-5 filter satisfies the “protrusion extending from” limitation under doctrine of equivalents. In conducting this analysis, the Court was careful to draw all reasonable inferences in favor of the Verdict and not make credibility determinations or reweigh the evidence. *Boh Bros.*, 731 F.3d at 451 (a court must “draw all reasonable inferences in the light most favorable to the verdict and cannot substitute other inferences that [the court] might regard as more reasonable.”) (citation

omitted). As the Court has not found the verdict to be unsupported by substantial evidence, the Court **DENIES** TST's Motion for Judgement as a Matter of Law of No Infringement Under the Doctrine of Equivalents.

C) Judgment as a Matter of Law of No Damages

Prior to trial, "the parties agree[d] that the filter is the appropriate royalty base." (Dkt. No. 144 at 6). TST argues that Whirlpool failed to prove a reasonable royalty based on the value attributable to the patented technology. (Dkt. No. 171 at 18).

"When the accused technology does not make up the whole of the accused product, apportionment is required." *Finjan, Inc. v. Blue Coat Sys., Inc.*, No. 2016-2520, 2018 WL 341882, at *8 (Fed. Cir. Jan. 10, 2018). "[T]he ultimate combination of royalty base and royalty rate must reflect the value attributable to the infringing features of the product, and no more." *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1226 (Fed. Cir. 2014). "In such cases, the patentee must 'give evidence tending to separate or apportion the [infringer]'s profits and the patentee's damages between the patented feature and the unpatented features, and such evidence must be reliable and tangible, and not conjectural or speculative.'" *Finjan*, 2018 WL 141882 at *8 (quoting *Garretson v. Clark*, 111 U.S. 120, 121 (1884)). Whirlpool, "as the present patent holder, had the burden of proving damages by a preponderance of the evidence." *Id.* at *8.

First, Whirlpool argues that TST's challenge to apportionment is procedurally improper. Whirlpool contends that this challenge is a "methodology challenge" that could only have been properly brought as a *Daubert* motion. (Dkt. No. 181 at 17). Additionally, Whirlpool argues that TST's argument, if not a challenge to methodology, should be limited to an argument that Whirlpool had not apportioned for "external factors," and that TST's argument that Whirlpool

failed to apportion for “unpatented features of the accused product” itself, “such as the carbon block responsible for the filter’s filtering capability,” has been waived. (Dkt. No. 189 at 8).

For similar reasons as in Part II.B.2, *supra*, the Court finds that the argument was not waived. TST brought a motion under Rule 50(a) “for no damages because the Plaintiffs failed to present evidence apportioning the value of the patented technology.” (Dkt. No. 165, Mar. 9, 2017 P.M. Tr. at 52:22–24). The challenge TST has presented is that, in its view, the evidence presented by Mr. McFarlane simply fails to provide the jury “with evidence from which the jury could apportion those profits to isolate the value contributed by the patented technology, as distinct from the value contributed by other, unpatented features of the accused product.” (Dkt. No. 185 at 11).

Turning to the substance of TST’s argument, first, the Court notes the issues upon which the Parties agree: (1) that the filter is the appropriate royalty base, (Dkt. No. 144 at 6); (2) that the filter is the smallest saleable patent-practicing unit in this case, (Dkt. No. 185 at 9); and (3) that the parties compete for sales of the product, and thus Whirlpool stands to lose its entire profit on its lost sales of those products. (*Id.*)

TST complains that Whirlpool’s damages expert Mr. McFarlane “testified that 100% of TST’s profit and 100% of Whirlpool’s profit were attributable to the patented invention, without providing any analysis of the value attributable to unpatented features of the accused product. (Dkt. No. 171 at 21). “Because Whirlpool failed to apportion the value of the patented technology,” TST argues, “the jury’s award of reasonable-royalty damages award cannot stand.” (*Id.* at 22). TST contends that “Whirlpool was required to establish the value of the patented technology, as distinct from the other unpatented features of the accused product.” (*Id.*)

In response, Whirlpool argues that “Mr. McFarlane considered the parties’ profits in selecting a starting point for his hypothetical negotiation analysis. He appropriately considered the

entire value of the filters because substantial evidence confirms that that value is attributable to patented features. And his Georgia-Pacific analysis accounted for any factors that might impact the royalty rate.” (Dkt. No. 181 at 18–19).

The evidence marshaled by Whirlpool in support of its position is substantial. Mr. McFarlane testified that he had considered the profit that Whirlpool would lose and TST would earn if Whirlpool granted TST a license. (Dkt. No. 160, Mar. 7, 2017 P.M. Tr. at 127:7–22, 124:19–125:5). He further testified that Whirlpool would lose all of its profit, (*id.* at 124:19–125:5), and noted TST’s profits were an important factor to consider when calculating damages because the “entirety of TST’s profits [were] contingent upon TST getting a license.” (*Id.* at 127:7–22, 145:5–10; *see also* Dkt. No. 164, Mar. 9, 2017 A.M. Tr. at 25:15–17).

There is a large dispute between the Parties as to whether, how, and to what extent the patented features drive demand for the filters. Specifically, Whirlpool submits that interoperability with a Filter 3 head assembly (or “fit”) is a patented feature and is undisputed. (Dkt. No. 181 at 20). TST disputes this. (Dkt. No. 185 at 10 (“Interoperability Is Not A Patented Feature”)).

Even so, “[t]he parties agree that interoperability with Whirlpool’s refrigerator is a primary driver of demand.” (*Id.*; *see also* Dkt. No. 159, Mar. 7, 2017 A.M. Tr. at 23:10–24 Dr. Beaman testifying that interoperability is “an important benefit of the invention”); Dkt. 121-1 at 39 n. 73 (TST noting in its proposed Jury Instructions that the invention “is essential for interoperability” and that “license is necessary to make a filter that interoperates with Whirlpool’s refrigerators”)).

However, in TST’s view, while “[t]he ’894 patent does cover specific distances and arrangements of components, [] these claimed dimensions are not sufficient for the filter to fit properly in the refrigerator. For example, merely satisfying the claim requirement that the fittings

and protrusion be ‘about 2 cm’ from one another is not enough for a filter to fit properly.^[6] The dimensions of the filter need to match those of the refrigerator precisely if the filter is to engage the Filter-3 refrigerator properly and without leaking. ([Dkt. No. 163, Mar. 8, 2017 P.M.] Tr. at 41:7–9). Thus ‘fit’ is not a claimed feature.” (Dkt. No. 171 at 1).

This argument is unpersuasive. First, the claim language explicitly requires that the filter engage with a head assembly. (’894 Patent at Claim 1 (end piece “for operatively engaging a head assembly”); *see also* Claims 4 and 15). If a filter does not properly fit, it cannot engage with the head assembly. Further, it may be true that the specific distances and arrangements of components are not sufficient for the filter to fit properly in the refrigerator, but the claimed configuration requirements are necessary for the filter to fit. (Dkt. No. 159, Mar. 7, 2017 A.M. Tr. at 15:9–16:3, 36:13–38:2 (claimed dimensions and components allow for “fit”)).

This accords with the Court’s prior holding that the preambles of Claims 1 and 4 are limiting by “set[ting] forth configuration requirements in relation to head assemblies” (even though they “do not require the actual presence of head assemblies and valves”). (Dkt. No. 59 at 16.) Further, as TST noted previously, “invention . . . is essential for interoperability,” such that a “license is necessary to make a filter that interoperates with Whirlpool’s refrigerators.” (Dkt. 121-1 (TST’s proposed Jury Instructions) at 39 n. 73).

TST further argues that interoperability is only one of many drivers of demand, drivers which Mr. McFarlane did not consider in his analysis. (Dkt. No. 185 at 10). Specifically, “the carbon block and its capacity to filter contaminants from the water” and “the existing base of Whirlpool refrigerators” both also drive demand. (*Id.* (citations omitted)).

⁶ The Court notes this argument is contrary to TST’s prior position that the claims require a cartridge that actually engages a head assembly. (Dkt. No. 46 at 9 (“Reading the claims to cover cartridges that do not engage a head assembly . . . ‘would be divorced from reality’”)).

Whirlpool submits, first, that evidence was presented that the existing base of Whirlpool refrigerators is tied to interoperability because consumers demand filters that fit into their refrigerators, meaning that more Filter 3 refrigerators in the market leads to higher demand for practicing filters. (*See* Dkt. No. 160, Mar. 7, 2017, P.M. Tr. at 122:21–124:16 (“[W]hat motivates owners of Filter 3 [refrigerators] to purchase . . . Filter 3 filters is because the filter fits in the refrigerator.”); Dkt. No. 164, Mar. 9, 2017, A.M. Tr. at 14:11–13 (“[T]he demand for the filter cartridges is driven off of the sales of the [Filter 3] refrigerators.”); Dkt. No. 165, Mar. 9, 2017, P.M. Tr. at 60:23–61:17 (“existing base of Whirlpool refrigerators” “motivate[s] practicing the patent”)). Second, Mr. McFarlane testified that he “accounted for the value of the carbon block in [] [his] reasonable royalty analysis,” (Dkt. No. 162, Mar. 8, 2017, A.M. Tr. at 49:3–6). TST argues that “Mr. McFarlane could only have meant that he *considered* apportioning some part of the [P]arties’ profits to the carbon block, before deciding against it” since he decided “to attribute 100% of the profits from the parties’ products to the patented invention.” (Dkt. No. 185 at 11). However, there is undisputed testimony that he did consider the carbon block in his analysis. (Dkt. No. 161, Mar. 8, 2017, A.M. Tr. at 49:3–6 (“Q. Did you account for the value of the carbon block in doing your reasonable royalty analysis? [Mr. McFarlane:] I believe that I did, yes.”)). Additionally, there was evidence presented that the patent’s space savings feature allows for a larger carbon block, which in turn improves contaminant reduction. (Dkt. No. 159, Mar. 7, 2017, A.M. Tr. at 15:2–7 (Beaman discussing relationship); Dkt. No. 158, Mar. 6, 2017, P.M. Tr. at 128:13–22 (inventor Todd Rose discussing same); Dkt. No. 160, Mar. 7, 2017, P.M. Tr. at 142:24–143:21 (McFarlane discussing space saving as a patented benefit)). Moreover, evidence was also presented for ease of installation, tying it to the patented technology as well. (Dkt. No. 159, Mar. 7, 2017 A.M. Tr. at 16:7–21:9 (describing how patented design achieves this advantage); *id.* at

12:12–17 (patented advantages include “ease of use”), Dkt. No. 160, Mar. 7, 2017 P.M. Tr. at 143:14–21 (same)).

Further, as Whirlpool points out, Mr. McFarlane used the midpoint of the Parties’ profits only as the starting point for a hypothetical negotiation, further apportioning the rate through his *Georgia-Pacific* analysis. (*see, e.g.*, Dkt. No. 160, Mar. 7, 2017 P.M. Tr. at 130:14–15 (“a midpoint was an appropriate starting point for the baseline royalty rate.”); 131:9–163:25 (discussing the *Georgia-Pacific* factors) (“The \$10.93 is the ending of Step 1. The baseline royalty rate analysis. Now, I do Step 2. And that, as you recall, is the *Georgia-Pacific* factor analysis.”)). Indeed, and as an example, in analyzing the 13th *Georgia-Pacific* factor, Mr. McFarlane testified he considered “all of the things that . . . TST contribute[d] towards commercializing the accused products,” including its efforts to “design,” “manufactur[e],” and “promote” the filters, (*Id.* at 146:2–147:8), crediting TST’s “low price strategy [for] greatly expand[ing] the market for these filters.” (*Id.* at 147:9–21). He concluded that these efforts had a “very significant downward effect,” lowering the royalty rate. (*Id.* at 147:22–148:5).

The Court finds that Mr. McFarlane did engage in the proper apportionment required by the law, beginning with an appropriate rate.

Additionally, the jury heard significant evidence from Whirlpool’s and TST’s witnesses regarding the filters’ patented and unpatented features and drivers of demand. (*See, e.g., id.* at 8:20-9:1, 9:11-11:9 (Beaman); *id.* at 121:17-124:8-18, 122:21-124:7, 124:11-16 (McFarlane); Dkt. No. 162, Mar. 8, 2017 A.M. Tr. at 58:2–20 (Baird); Dkt. No. 164, Mar. 9, 2017 A.M. Tr. at 14:11–13, 14:23-15:2 (Hanson)). The jury was free to weigh the evidence as it saw fit. *Micro Chem., Inc. v. Lextron, Inc.*, 317 F.3d 1387, 1394 (Fed. Cir. 2003) (“The amount of damages based on a reasonable royalty is an issue of fact.”).

The jury's \$7.6 million award was less than Mr. McFarlane's proposed damages of \$8,742,836. It is clear that the jury reached its own award within the confines of the law, as presented in the Court's charge, and appears to have apportioned damages beyond what Mr. McFarlane opined. Accordingly, substantial evidence supports the jury verdict. *See Energy Transp. Grp., Inc. v. William Demant Holding A/S*, 697 F.3d 1342, 1356-57 (Fed. Cir. 2012) (affirming verdict despite improper use of "25% rule" because "[t]he jury did not adopt either expert's damages analysis wholesale," and "record support[ed] the jury's award"); *Brocade Commc'ns Sys., Inc. v. A10 Networks, Inc.*, No. 10-cv-3428, 2013 WL 831528, at *7 (N.D. Cal. Jan. 10, 2013) (affirming jury award less than expert's amount, despite argument that jury did not apportion).

In conclusion, because substantial evidence supports the jury's verdict as to damages in this case, the Court **DENIES** TST's Motion for Judgment as a Matter of Law for No Damages.

IV. Conclusion

The Court agrees with Whirlpool that while TST "may not like the jury verdict," "it was the result of a fair trial, fairly fought." *Micro Chem.*, 317 F.3d at 1394. For all of the reasons provided above, the Court hereby **DENIES** Defendant TST's Motion for Judgment as a Matter of Law (Dkt. No. 171) in its entirety.

So ORDERED and SIGNED this 29th day of March, 2018.



 RODNEY GILSTRAP
 UNITED STATES DISTRICT JUDGE

EXHIBIT C

**THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

WHIRLPOOL CORPORATION,

Plaintiff,

v.

TST WATER, LLC,

Defendant.

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CASE NO. 2:15-CV-1528-JRG

MEMORANDUM OPINION AND ORDER

Before the Court are Plaintiff Whirlpool Corporation’s Opening Claim Construction Brief (Dkt. No. 42), Defendant’s response (Dkt. No. 46), and Plaintiff’s reply (Dkt. No. 47). The Court held a claim construction hearing on July 18, 2016.

The Court addressed construction of the disputed terms in the patent-in-suit in a Provisional Claim Construction Order entered on July 19, 2016. (Dkt. No. 55.) That Provisional Claim Construction Order is superseded by this expanded Memorandum Opinion and Order, which is and shall be effective as of July 19, 2016.

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I. BACKGROUND

Plaintiff alleges infringement of United States Patent No. 7,000,894 (“the ’894 Patent”). (Dkt. No. 42, Ex. A.). The ’894 Patent, titled “Fluidic Cartridges and End Pieces Thereof,” issued on February 21, 2006, and bears a filing date of April 25, 2003. The Abstract states:

In the treatment of water, an end piece is connected to a treatment cartridge housing and inserted into an appliance having bypass, inlet, and outlet valves. The end piece has an end piece wall from which an inlet fitting, outlet fitting, and protrusion extend. The inlet fittings, outlet fittings, protrusion, and cartridge housing each have a longitudinal axis. The inlet and outlet fittings have a cam surface for actuating the inlet and outlet valves, respectively. Further, the cam surfaces of the inlet and outlet fittings are angled and vectored in relation to their respective longitudinal axis. The protrusion is shaped for actuating the bypass valve.

II. LEGAL PRINCIPLES

It is understood that “[a] claim in a patent provides the metes and bounds of the right which the patent confers on the patentee to exclude others from making, using or selling the protected invention.” *Burke, Inc. v. Bruno Indep. Living Aids, Inc.*, 183 F.3d 1334, 1340 (Fed. Cir. 1999). Claim construction is clearly an issue of law for the court to decide. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970-71 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996).

“In some cases, however, the district court will need to look beyond the patent’s intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period.” *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015) (citation omitted). “In cases where those subsidiary facts are in dispute, courts will need to make subsidiary factual findings about that extrinsic evidence. These are the ‘evidentiary underpinnings’ of claim construction

that we discussed in *Markman*, and this subsidiary factfinding must be reviewed for clear error on appeal.” *Id.* (citing 517 U.S. 370).

To ascertain the meaning of claims, courts look to three primary sources: the claims, the specification, and the prosecution history. *Markman*, 52 F.3d at 979. The specification must contain a written description of the invention that enables one of ordinary skill in the art to make and use the invention. *Id.* A patent’s claims must be read in view of the specification, of which they are a part. *Id.* For claim construction purposes, the description may act as a sort of dictionary, which explains the invention and may define terms used in the claims. *Id.* “One purpose for examining the specification is to determine if the patentee has limited the scope of the claims.” *Watts v. XL Sys., Inc.*, 232 F.3d 877, 882 (Fed. Cir. 2000).

Nonetheless, it is the function of the claims, not the specification, to set forth the limits of the patentee’s invention. Otherwise, there would be no need for claims. *SRI Int’l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) (en banc). The patentee is free to be his own lexicographer, but any special definition given to a word must be clearly set forth in the specification. *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1388 (Fed. Cir. 1992). Although the specification may indicate that certain embodiments are preferred, particular embodiments appearing in the specification will not be read into the claims when the claim language is broader than the embodiments. *Electro Med. Sys., S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 1054 (Fed. Cir. 1994).

This Court’s claim construction analysis is substantially guided by the Federal Circuit’s decision in *Phillips v. AWH Corporation*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). In *Phillips*, the court set forth several guideposts that courts should follow when construing claims. In particular, the court reiterated that “the claims of a patent define the invention to which the

patentee is entitled the right to exclude.” 415 F.3d at 1312 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To that end, the words used in a claim are generally given their ordinary and customary meaning. *Id.* The ordinary and customary meaning of a claim term “is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Id.* at 1313. This principle of patent law flows naturally from the recognition that inventors are usually persons who are skilled in the field of the invention and that patents are addressed to, and intended to be read by, others skilled in the particular art. *Id.*

Despite the importance of claim terms, *Phillips* made clear that “the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Id.* Although the claims themselves may provide guidance as to the meaning of particular terms, those terms are part of “a fully integrated written instrument.” *Id.* at 1315 (quoting *Markman*, 52 F.3d at 978). Thus, the *Phillips* court emphasized the specification as being the primary basis for construing the claims. *Id.* at 1314-17. As the Supreme Court stated long ago, “in case of doubt or ambiguity it is proper in all cases to refer back to the descriptive portions of the specification to aid in solving the doubt or in ascertaining the true intent and meaning of the language employed in the claims.” *Bates v. Coe*, 98 U.S. 31, 38 (1878). In addressing the role of the specification, the *Phillips* court quoted with approval its earlier observations from *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998):

Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim. The construction that stays true to the claim

language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction.

Phillips, 415 F.3d at 1316. Consequently, *Phillips* emphasized the important role the specification plays in the claim construction process.

The prosecution history also continues to play an important role in claim interpretation. Like the specification, the prosecution history helps to demonstrate how the inventor and the United States Patent and Trademark Office (“PTO”) understood the patent. *Id.* at 1317. Because the file history, however, “represents an ongoing negotiation between the PTO and the applicant,” it may lack the clarity of the specification and thus be less useful in claim construction proceedings. *Id.* Nevertheless, the prosecution history is intrinsic evidence that is relevant to the determination of how the inventor understood the invention and whether the inventor limited the invention during prosecution by narrowing the scope of the claims. *Id.*; see *Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1350 (Fed. Cir. 2004) (noting that “a patentee’s statements during prosecution, whether relied on by the examiner or not, are relevant to claim interpretation”).

Phillips rejected any claim construction approach that sacrificed the intrinsic record in favor of extrinsic evidence, such as dictionary definitions or expert testimony. The *en banc* court condemned the suggestion made by *Texas Digital Systems, Inc. v. Telegenix, Inc.*, 308 F.3d 1193 (Fed. Cir. 2002), that a court should discern the ordinary meaning of the claim terms (through dictionaries or otherwise) before resorting to the specification for certain limited purposes. *Phillips*, 415 F.3d at 1319-24. According to *Phillips*, reliance on dictionary definitions at the expense of the specification had the effect of “focus[ing] the inquiry on the abstract meaning of words rather than on the meaning of claim terms within the context of the patent.” *Id.* at 1321.

Phillips emphasized that the patent system is based on the proposition that the claims cover only the invented subject matter. *Id.*

Phillips does not preclude all uses of dictionaries in claim construction proceedings. Instead, the court assigned dictionaries a role subordinate to the intrinsic record. In doing so, the court emphasized that claim construction issues are not resolved by any magic formula. The court did not impose any particular sequence of steps for a court to follow when it considers disputed claim language. *Id.* at 1323-25. Rather, *Phillips* held that a court must attach the appropriate weight to the intrinsic sources offered in support of a proposed claim construction, bearing in mind the general rule that the claims measure the scope of the patent grant.

III. CONSTRUCTION OF AGREED TERMS

In their April 25, 2016 Joint Claim Construction and Prehearing Statement (Dkt. No. 39), the parties stated that they had “not agreed on any constructions.” (Dkt. No. 39, at 1.) During the course of briefing, however, the parties reached agreement as to certain terms, and the parties included those agreed-upon constructions in their July 5, 2016 Joint Claim Construction Chart. (*See* Dkt. No. 50, Ex. A, at 36.) Those agreements are set forth herein.

IV. CONSTRUCTION OF DISPUTED TERMS

A. Preambles of Claims 1 and 4

<p>“an end piece for operatively engaging a head assembly, the head assembly comprising one or more valves, for the treatment and control of fluid passing through the head assembly, said end piece comprising” (Claim 1)</p>	
Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
<p>As part of the preamble, this term is non-limiting and needs no further construction.</p> <p>To the extent construction is deemed necessary, the term should be given its plain and ordinary meaning.</p> <p>Alternatively, “an end piece that is intended to be connected to a head assembly, with the head assembly including one or more valves, for treating and controlling fluid that passes through the head assembly, the end piece comprising.”</p>	<p>This preamble to Claim 1 is part of the claim and limits the claim to require the combination of an end piece and a head assembly that is operatively engaged by the end piece as described.</p>
<p>“a cartridge for operatively engaging a head assembly, the head assembly comprising one or more valves, for the treating and control of fluid passing through the head assembly, said cartridge comprising” (Claim 4)</p>	
Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
<p>As part of the preamble, this term is non-limiting and needs no further construction.</p> <p>To the extent construction is deemed necessary, the term should be given its plain and ordinary meaning.</p> <p>Alternatively, “a cartridge that is intended to be connected to a head assembly, with the head assembly including one or more valves, for treating and controlling fluid that passes through the head assembly, the cartridge comprising.”</p>	<p>This preamble to Claim 4 is part of the claim and limits the claim to require the combination of a cartridge and a head assembly that is operatively engaged by the cartridge as described.</p>

(Dkt. No. 39, Ex. A, at 1; Dkt. No. 42, at 6; Dkt. No. 50, Ex. A, at 1-3.)

(1) The Parties' Positions

Plaintiff argues that these preambles are not limiting because the body of each claim sets forth a complete invention and does not rely upon the preamble for antecedent basis for any term in the body, and each preamble merely states a purpose or intended use. (Dkt. No. 42, at 7-10.)

Defendant responds that these preambles recite essential structure, were relied upon during prosecution to distinguish prior art, and provide antecedent basis for terms appearing later in the claims. (Dkt. No. 46, at 5.)

Plaintiff replies that even though the preambles refer to structure, such structure is set forth merely as part of non-limiting statements of intended use. (Dkt. No. 47, at 2.)

(2) Analysis

In general, a preamble limits the invention if it recites essential structure or steps, or if it is “necessary to give life, meaning, and vitality” to the claim. *Pitney Bowes[, Inc. v. Hewlett-Packard Co.]*, 182 F.3d [1298,] 1305 [(Fed. Cir. 1999)]. Conversely, a preamble is not limiting “where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention.” *Rowe v. Dror*, 112 F.3d 473, 478, 42 USPQ2d 1550, 1553 (Fed. Cir. 1997).

Catalina Mktg. Int’l, Inc. v. Coolsavings.com, Inc., 289 F.3d 801, 808 (Fed. Cir. 2002); *see, e.g., Eaton Corp. v. Rockwell Int’l Corp.*, 323 F.3d 1332, 1339 (Fed. Cir. 2003) (“When limitations in the body of the claim rely upon and derive antecedent basis from the preamble, then the preamble may act as a necessary component of the claimed invention.”). Also, “the purpose or intended use of the invention . . . is of no significance to claim construction . . .” *See Pitney Bowes*, 182 F.3d at 1305. This principle has sometimes been characterized as “the presumption against reading a statement of purpose in the preamble as a claim limitation.” *Marrin v. Griffin*, 599 F.3d 1290, 1294-95 (Fed. Cir. 2010).

Claims 1 and 4 recite (emphasis added):

1. An end piece *for operatively engaging a head assembly, the head assembly comprising one or more valves*, for the treatment and control of fluid passing through the head assembly, said end piece comprising:

- A. an end piece wall;
- B. an inlet fitting having a cam surface, said inlet fitting having a longitudinal axis; and
- C. an outlet fitting; and
- D. a protrusion having a longitudinal axis;

Wherein said inlet fitting, said outlet fitting, and said protrusion extend from said end piece wall, wherein said protrusion is positioned between said inlet and said outlet fittings, wherein the distance from said longitudinal axis of said inlet to said longitudinal axis of said outlet is less than the distance from said longitudinal axis of said inlet to said longitudinal axis of said protrusion, and wherein the distance from said longitudinal axis of said inlet to said longitudinal axis of said protrusion is greater than the distance from said longitudinal axis of said outlet to said longitudinal axis of said protrusion, wherein the distance from said longitudinal axis of said inlet to said longitudinal axis of said outlet is about 2 cm, and wherein the distance from said longitudinal axis of said inlet to said longitudinal axis of said protrusion is about 2 cm, and wherein the distance from said longitudinal axis of said outlet to said longitudinal axis of said protrusion is about 2 cm, and wherein at least a portion of said cam surface is vectored from said longitudinal axis of said inlet fitting.

* * *

4. A cartridge *for operatively engaging a head assembly, the head assembly comprising one or more valves*, for the treating and control of fluid passing through the head assembly, said cartridge comprising:

- A. An end piece, said end piece comprising:
 - i. an end piece wall;
 - ii. an inlet fitting having a cam surface, said inlet fitting having a longitudinal axis;
 - iii. an outlet fitting having a cam surface, said outlet fitting having a longitudinal axis; and
 - iv. a protrusion having a longitudinal axis and positioned between said inlet fitting and said outlet fitting;Wherein said inlet fitting, said outlet fitting, and said protrusion extend from said end piece wall; and
 - B. A cartridge housing having a first end, a closed second end, and a longitudinal axis extending therebetween;
- Wherein said end piece wall is connected to said first end of said cartridge housing, and wherein a portion of said cam surface of said inlet fitting is vectored from at least one of said longitudinal axis of said inlet fitting, said

longitudinal axis of said outlet fitting, and said longitudinal axis of said cartridge housing, and wherein a portion of said cam surface of said outlet fitting is vectored from at least one of said longitudinal axis of said inlet fitting, said longitudinal axis of said outlet fitting, and said longitudinal axis of said cartridge housing.

On one hand, recital of structure in a preamble does not necessarily mean that the preamble is limiting. *See, e.g., Marrin*, 599 F.3d at 1294 (“the mere fact that a structural term in the preamble is part of the claim does not mean that the preamble’s statement of purpose or other description is also part of the claim”). For example, structures that are referred to in a preamble may merely provide “reference points . . . that aid in defining” the claimed invention. *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1350 (Fed. Cir. 1998). Likewise, “it is generally not appropriate to limit claim language to exclude particular devices because they do not serve a perceived purpose of the invention.” *Praxair, Inc. v. ATMI, Inc.*, 543 F.3d 1306, 1325 (Fed. Cir. 2008) (citation and internal quotation marks omitted); *see Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 908 (Fed. Cir. 2004) (“The fact that a patent asserts that an invention achieves several objectives does not require that each of the claims be construed as limited to structures that are capable of achieving all of the objectives.”). Thus, at least at first blush, the preamble language “for operatively engaging a head assembly” could be read as setting forth a reference point or a statement of purpose.

On the other hand, dependent Claim 15 (which depends from Claim 1) and Claim 24 (which depends from Claim 23, which depends from Claim 21, which in turn depends from Claim 4) recite the “head assembly” and “valve” that first appear in the preambles of the above-reproduced independent claims:

15. The end piece of claim 1, when the end piece is engaged with the *head assembly*, a distal end of the protrusion actuates a *valve of the head assembly*.

* * *

24. The cartridge of claim 23, when the end piece is engaged with the *head assembly*, a distal end of the protrusion actuates a *valve of the head assembly*.

Plaintiff has cited authority from another district court noting that “[t]he Federal Circuit has found a statement of intended use in a preamble to be non-limiting, even where the body of the claim relied upon the preamble for antecedent basis.” *Civix-DDI, LLC v. Celco P’ship*, 387 F. Supp. 2d 869, 890 n.20 (N.D. Ill. 2005) (citing *Bristol-Myers Squibb Co. v. Ben Venue Labs., Inc.*, 246 F.3d 1368 (Fed. Cir. 2001)); *see Civix-DDI*, 387 F. Supp. 2d at 890 n.20 (“the mere fact that the body of the claim relies on the preamble for antecedent basis does not, by itself, render the preamble limiting”). *Civix-DDI* is of minimal persuasive weight, if any, because the court found that “[t]he parties have not sufficiently developed these issues in their briefing in order for the Court to make a decision on this issue of law.” *Id.* at 890.

Further, *Bristol-Myers* is distinguishable. The preamble language there at issue concerned “[a] method for reducing hematologic toxicity in a cancer patient” 246 F.3d at 1371. Although the body of the claim recited “said patient,” thus relying upon the preamble for antecedent basis, the court found that “reducing hematologic toxicity” was not a limitation because: “The steps of the three-hour infusion method are performed in the same way regardless whether or not the patient experiences a reduction in hematologic toxicity, and the language of the claim itself strongly suggests the independence of the preamble from the body of the claim.” *Id.* at 1375. Here, by contrast, the above-quoted dependent claims recite interaction between structures recited in the bodies of the claims and structures introduced in the preambles. The preambles at issue thus set forth limitations rather than merely statements of purpose.

Finally, although Plaintiff has argued claim differentiation as to the above-quoted dependent claims, these dependent claims recite more than merely that a structure is configured to engage with a head assembly. Plaintiff's claim differentiation argument is therefore of limited weight and is unpersuasive. *See Wenger Mfg., Inc. v. Coating Mach. Sys., Inc.*, 239 F.3d 1225, 1233 (Fed. Cir. 2001) ("Claim differentiation, while often argued to be controlling when it does not apply, is clearly applicable when there is a dispute over whether a limitation found in a dependent claim should be read into an independent claim, *and that limitation is the only meaningful difference between the two claims.*") (emphasis added).

On balance, the above-quoted dependent claims weigh in favor of finding that the preambles of Claims 1 and 4 are limiting. *See Pacing Techs., LLC v. Garmin Int'l, Inc.*, 778 F.3d 1021, 1024 (Fed. Cir. 2015) (preamble of independent claim found to be limiting because, among other factors, the preamble provided antecedent basis for a term in a dependent claim).

Also, the preamble language is necessary to understand the structures recited even in the bodies of the independent claims. *Deere & Co. v. Bush Hog, LLC*, cited by Defendant, is analogous:

Unlike non-limiting preamble terms, "rotary cutter deck" does not merely state a name or a use for the claimed box section. Rather, the term describes a "fundamental characteristic of the claimed invention" that informs one of skill in the art as to the structure required by the claim. *Poly-Am., L.P. v. GSE Lining Tech., Inc.*, 383 F.3d 1303, 1310 (Fed. Cir. 2004). For example, that the claim is drawn to a "rotary cutter deck" informs the meaning of the "torsional stiffness" limitation—the claimed structure must possess sufficient stiffness to withstand the torsional loads imposed by the operation of a rotary cutter.

703 F.3d 1349, 1358 (Fed. Cir. 2012); *see Pacing Techs.*, 778 F.3d at 1024.

Such a reading is consistent with the specification, which discloses the recited cartridge in the context of engaging with a head assembly that has valves. *See, e.g.*, '894 Patent at 1:6-9, 1:40-44, 4:30-33 ("the present invention is directed to cartridges and end pieces thereof that

actuate one or more valves and other features on a head assembly into which an end piece is received”), 10:39-63 & 15:8-11; *Catalina Mktg.*, 289 F.3d at 808 (“when reciting additional structure or steps underscored as important by the specification, the preamble may operate as a claim limitation”); *Gen. Elec. Co. v. Nintendo Co., Ltd.*, 179 F.3d 1350, 1361-62 (Fed. Cir. 1999) (“[T]he . . . specification makes clear that the inventors were working on the particular problem of displaying binary data on a raster scan display device and not general improvements to all display systems. In light of the specification, to read the claim indiscriminately to cover all types of display systems would be divorced from reality.”). Although Plaintiff has argued that *General Electric* is distinguishable as having involved preamble language that set forth a specific improvement rather than merely a reference point, the above-quoted dependent claims and the above-cited portions of the specification reinforce that the claimed invention is recited in the context of a head assembly.

Such a reading is further confirmed by prosecution history. During *ex parte* reexamination, the patentee distinguished the “Koslow” and “Fritze” references by arguing that the claimed invention requires actuating a valve. (*See* Dkt. No. 46, Ex. 6, Aug. 15, 2013 Response to Office Action, at 17 & 21-22.) Because valves are recited in the preamble as part of a head assembly, the patentee thus relied upon the preambles as requiring that the claimed invention is configured to be connected to a head assembly. *See Catalina Mkt’g*, 289 F.3d at 808 (“clear reliance on the preamble during prosecution to distinguish the claimed invention from the prior art transforms the preamble into a claim limitation because such reliance indicates use of the preamble to define, in part, the claimed invention”); *see also MBO Labs., Inc. v. Becton, Dickinson & Co.*, 474 F.3d 1323, 1330 (Fed. Cir. 2007) (similar).

The Examiner, evidently having this same understanding, accepted this argument by finding that “none of the alleged cam surfaces of the prior art of record includes any surface that physically touches a follower of a valve for the purpose of actuating the valve, as required by the special definition of ‘cam surface’ from the specification.” (*See id.*, Ex. 7, Feb. 13, 2014 Notice of Intent to Issue Ex Parte Reexamination Certificate, at 4; *see also Am. Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1359 (Fed. Cir. 1984) (patent examiners are “assumed . . . to be familiar from their work with the level of skill in the art”), *abrogated on other grounds, Therasense, Inc. v. Becton, Dickinson & Co.*, 649 F.3d 1276 (Fed. Cir. 2011); *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1304 (Fed. Cir. 2008) (citing *American Hoist*); *Salazar v. Procter & Gamble Co.*, 414 F.3d 1342, 1347 (Fed. Cir. 2005) (“Statements about a claim term made by an Examiner during prosecution of an application may be evidence of how one of skill in the art understood the term at the time the application was filed.”); *St. Clair Intellectual Prop. Consultants, Inc. v. Canon Inc.*, Nos. 2009-1052, 2010-1137, 2010-1140, 412 F. App’x 270, 276 (Fed. Cir. Jan. 10, 2011) (“Because an examiner in reexamination can be considered one of ordinary skill in the art, his construction of the asserted claims carries significant weight.”).)

Plaintiff has cited *Summit 6* and *Intirtool*, but those decisions are distinguishable because *Summit 6* did not involve antecedent basis or reliance on the preamble during prosecution, *see Summit 6, LLC v. Samsung Elecs. Co., Ltd.*, 802 F.3d 1283, 1292 (Fed. Cir. 2015) (finding preamble language “duplicative of the limitations in the body of the claim”), and in *Intirtool* the patentee during prosecution had relied on “specific structural limitations set forth in the body” rather than on the preamble, *Intirtool, Ltd. v. Texar Corp.*, 369 F.3d 1289, 1295 (Fed. Cir. 2004).

Thus, because “the claim drafter cho[se] to use *both* the preamble and the body to define the subject matter of the claimed invention, the invention so defined, and not some other, is the

one the patent protects.” *Bell Commc’ns Research, Inc. v. Vitalink Commc’ns Corp.*, 55 F.3d 615, 620 (Fed. Cir. 1995).

The preambles are thus limiting as to the following language: “for operatively engaging a head assembly, the head assembly comprising one or more valves.” *See Proveris Scientific Corp. v. Innovasystems, Inc.*, 739 F.3d 1367, 1373 (Fed. Cir. 2014) (“The phrase ‘the image data’ clearly derives antecedent basis from the ‘image data’ that is *defined in greater detail in the preamble* as being ‘representative of at least one sequential set of images of a spray plume.’”) (emphasis added).

Construction is appropriate to clarify that this preamble language sets forth configuration requirements in relation to head assemblies and valves but does not necessarily itself require the actual presence of head assemblies and valves. That is, Defendant has not demonstrated that the phrase “for operatively engaging” should be interpreted so as to require actual engagement.

The Court therefore hereby finds that the preambles of Claims 1 and 4 are limiting as specified above, and the Court hereby construes the preambles as set forth in the following chart:

<u>Term</u>	<u>Construction</u>
“an end piece for operatively engaging a head assembly, the head assembly comprising one or more valves” (Claim 1)	“an end piece that is configured to be connected to a head assembly, with the head assembly including one or more valves”
“a cartridge for operatively engaging a head assembly, the head assembly comprising one or more valves” (Claim 4)	“a cartridge that is configured to be connected to a head assembly, with the head assembly including one or more valves”

B. “about 2 cm”

Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
Plain and ordinary meaning, no construction necessary. Alternatively, “approximately 2 centimeters.”	“between 1.95 cm and 2.05 cm”

(Dkt. No. 39, Ex. A, at 2; Dkt. No. 42, at 10; Dkt. No. 50, Ex. A, at 3.) The parties have submitted that this term appears in Claims 1 and 27. (Dkt. No. 39, Ex. A, at 2; Dkt. No. 50, Ex. A, at 3.)

(1) The Parties’ Positions

Plaintiff argues that “[t]he word ‘about’ does not have a specialized meaning in the ’894 patent,” and “[t]he Court therefore should give the phrase its plain and ordinary meaning, or, alternatively, construe ‘about’ as ‘approximately’ consistent with the case law.” (Dkt. No. 42, at 11.)

Defendant responds that whereas “a typical juror would likely believe that ‘about 2 cm’ or ‘approximately 2 cm’ should encompass everything that rounds to 2 cm – that is, everything from 1.5 cm to 2.5 cm,” “such an interpretation would conflict with the specification.” (Dkt. No. 46, at 15.)

Plaintiff replies that “[Defendant’s] focus on the ‘about 0.5 cm’ and ‘about 0.7 cm’ language is completely irrelevant, as these numerical dimensions are not in the asserted claims, and they do not purport to set the tolerance for ‘about 2 cm.’” (Dkt. No. 47, at 7.)

(2) Analysis

The specification discloses examples of relative distances, such as in terms of whole centimeters and tenths of centimeters, but the specification does not define the term “about”:

As shown in FIG. 2-A, the distance L1 (preferably from about 0.2 cm, about 0.5 cm, about 0.8 cm to about 2 cm, about 4 cm, about 5 cm) from the longitudinal axis 14 of the inlet fitting 30 to the longitudinal axis 16 of the outlet fitting 32 is less than the distance L2 (preferably from about 0.5 cm, about 0.7 cm, about 1 cm, about 2 to about 3 cm, about 5 cm, about 6 cm) from the longitudinal axis 14 of the inlet fitting 30 to the longitudinal axis 34 of the protrusion 33. Further, as shown in FIG. 2-A, the distance L2 from the longitudinal axis 14 of the inlet fitting 30 to the longitudinal axis 34 of the protrusion 33 is less than the distance L3 (preferably from about 0.7 cm, about 1 cm, about 1.5 cm, about 2 to about 3 cm, about 6 cm, about 7 cm) from the longitudinal axis 16 of the outlet fitting 32 to the longitudinal axis 34 of the protrusion 33. As mentioned above, the inlet and outlet fittings 30 and 32 may be reversed, or otherwise arranged, such that the distance L2 would be greater than the distance L3.

'894 Patent at 5:42-59; *see id.* at 7:32-33 (referring to distances such as “about 0.05 cm,” “about 0.08 cm,” “about 0.15 cm,” and “about 0.25 cm”).

Yet, “a sound claim construction need not always purge every shred of ambiguity.”

Acumed LLC v. Stryker Corp., 483 F.3d 800, 806 (Fed. Cir. 2007) (“The resolution of some line-drawing problems . . . is properly left to the trier of fact.”) (citing *PPG Indus. v. Guardian Indus. Corp.*, 156 F.3d 1351, 1355 (Fed. Cir. 1998) (“after the court has defined the claim with whatever specificity and precision is warranted by the language of the claim and the evidence bearing on the proper construction, the task of determining whether the construed claim reads on the accused product is for the finder of fact”)); *see EON Corp. IP Holdings LLC v. Silver Springs Networks, Inc.*, 815 F.3d 1314, 1318-19 (Fed. Cir. 2016) (citing *PPG*). Further, Defendant has not adequately supported its suggestion that a finder of fact would likely interpret “about 2 cm” as meaning between 1.5 cm and 2.5 cm, particularly in light of the above-quoted disclosure of various distances ranging from “about 0.05 cm” to “about 7 cm.”

Ultimately, “[a]lthough it is rarely feasible to attach a precise limit to ‘about,’ the usage can usually be understood in light of the technology embodied in the invention. When the claims are applied to an accused device, it is a question of technologic fact whether the accused device

meets a reasonable meaning of ‘about’ in the particular circumstances.” *Modine Mfg. Co. v. U.S. Int’l Trade Comm’n*, 75 F.3d 1545, 1554 (Fed. Cir. 1996); see *Merck & Co. v. Teva Pharm. USA, Inc.*, 395 F.3d 1364, 1369-72 (Fed. Cir. 2005) (finding that the term “about” “should be given its ordinary and accepted meaning of ‘approximately’” because the specification “fails to redefine ‘about’ to mean ‘exactly’ in clear enough terms to justify such a counterintuitive definition of ‘about’”).

The Court therefore hereby expressly rejects Defendant’s proposal of limiting “about” to meaning within 0.05 centimeters. No further construction is necessary. See *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (“Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy.”); see also *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) (“[D]istrict courts are not (and should not be) required to construe every limitation present in a patent’s asserted claims.”); *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1207 (Fed. Cir. 2010) (“Unlike *O2 Micro*, where the court failed to resolve the parties’ quarrel, the district court rejected Defendants’ construction.”); *ActiveVideo Networks, Inc. v. Verizon Commcn’s, Inc.*, 694 F.3d 1312, 1326 (Fed. Cir. 2012); *Summit 6*, 802 F.3d at 1291.

The Court accordingly hereby construes **“about 2 cm”** to have its **plain meaning**.

C. “longitudinal axis”

Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
<p>Plain and ordinary meaning, an example of which is set forth in the patent specification. No construction necessary.</p> <p>Alternatively, “axis running along the length and through the center of the referenced object.”</p>	<p>“the axis running along the length and through the center of the referenced object”</p>

(Dkt. No. 39, Ex. A, at 2; Dkt. No. 42, at 12.) The parties have submitted that this term appears in Claims 1, 2, 4, 10, 12, 13, 17, 18, 21, 22, 27, and 28. (Dkt. No. 39, Ex. A, at 2; Dkt. No. 50, Ex. A, at 36.)

Plaintiff argued that “[t]he plain meaning and context of the claim language make the meaning of ‘longitudinal axis’ clear,” and “defining this well-known phrase ‘longitudinal axis’ using more detailed words from the specification therefore might confuse the jury and is unnecessary.” (Dkt. No. 42, at 13.)

Defendant responded that “[t]he ‘894 patent, the dictionary, and common sense are all in accord: an object can have only one longitudinal axis.” (Dkt. No. 46, at 17.)

Plaintiff replied that “[t]o narrow the issues for the Court, [Plaintiff] agrees to [Defendant’s] proposed construction: ‘the axis running along the length and through the center of the referenced object’ – as expressly stated in the ’894 patent.’” (Dkt. No. 47, at 7 (citing ’894 Patent at 3:47-49).) Nonetheless, Plaintiff maintains that irregular shapes can have a longitudinal axis. (*Id.*, at 7-8 (citing ’894 Patent at Figs. 2B, 7 & 8).)

In their July 5, 2016 Joint Claim Construction Chart, the parties submitted an agreed-upon construction for this term. (Dkt. No. 50, Ex. A, at 36.) The Court therefore concludes that there no longer exists any claim construction dispute as to this term. At the July 18, 2016

hearing, upon inquiry by the Court, the parties confirmed that there is no longer any claim construction dispute as to this term.

The Court accordingly hereby adopts the parties' agreement that **"longitudinal axis"** means **"the axis running along the length and through the center of the referenced object."**

D. "distal" and "proximal"

"distal" (Claims 2, 12, 14, 15, 21, 23, and 24)	
Plaintiff's Proposed Construction	Defendant's Proposed Construction
Plain and ordinary meaning, an example of which is set forth in the patent specification. No construction necessary. Alternatively, an "area in a direction situated away from the end piece wall." ¹	"farther from the end piece wall and the person inserting the filter cartridge"
"proximal" (Claims 12, 13, 14, 21, 22, and 23)	
Plaintiff's Proposed Construction	Defendant's Proposed Construction
Plain and ordinary meaning, an example of which is set forth in the patent specification. No construction necessary. Alternatively, an "area situated in a direction closer to the end piece wall." ²	"closer to the end piece wall and the person inserting the filter cartridge"

(Dkt. No. 39, Ex. A, at 2; Dkt. No. 42, at 15 & 18; Dkt. No. 50, Ex. A, at 5 & 8.)

¹ Plaintiff previously proposed: "area in a direction away from the end piece wall." (Dkt. No. 39, Ex. A, at 2.)

² Plaintiff previously proposed: "area in a direction closer to the end piece wall." (Dkt. No. 39, Ex. A, at 2.)

(1) The Parties' Positions

Plaintiff argues that these disputed terms are “used in common parlance and ha[ve] no special meaning in the art.” (Dkt. No. 42, at 15 & 18-19.) Plaintiff also argues that Defendant’s proposed constructions “import[] terms foreign to the specification, alter[] the term[is]’ plain meaning[s], and create[] ambiguity.” (*Id.*, at 16 & 19.) For example, Plaintiff submits:

The only reference to a “person” in the specification is in relation to a person removing the cartridge. ’894 patent at 18:46-47 (“Once the button 110 is pushed to an unlatched position, the cartridge 20 may be removed manually by a person.”). Even there, however, the person’s position plays no role in defining the term “distal.”

(Dkt. No. 42, at 16 n.2.)

Defendant responds that “the average juror will be unfamiliar with these terms, and therefore the Court should construe them to avoid confusion at trial.” (Dkt. No. 46, at 22.) As to “proximal,” for example, Defendant argues that its proposed construction appropriately specifies a direction, and “[n]o juror will be confused, as [Plaintiff’s] brief suggests, by the possibility that a user might grasp the wrong end of the cartridge in a frustrating and fruitless attempt to insert the cartridge backwards.” (*Id.*, at 23.)

Plaintiff replies that “[Defendant] does not dispute that [Plaintiff’s] construction is faithful to the specification and avoids the reference point issues that [Defendant’s] constructions raise.” (Dkt. No. 47, at 8.)

(2) Analysis

These disputed terms are technical terms and are potentially confusing, so “[t]he Court believes that some construction of the disputed claim language will assist the jury to understand the claims.” *See TQP Dev., LLC v. Merrill Lynch & Co., Inc.*, No. 2:08-CV-471, 2012 WL 1940849, at *2 (E.D. Tex. May 29, 2012) (Bryson, J.). In particular, the *Summit 6* case cited by

Plaintiff is distinguishable as involving a non-technical phrase, namely “being provided to.” *See* 802 F.3d at 1291.

As to the proper construction, the specification expressly defines these disputed terms as follows:

As used herein, the term “distal” refers to the area situated in a direction away from the end piece wall.

As used herein, the term “proximal” refers to the area situated in a direction nearest to the end piece wall.

’894 Patent at 3:53-56.

“[T]he inventor’s lexicography governs,” *Phillips*, 415 F.3d at 1316, and Defendant’s proposal of introducing a “person inserting the filter cartridge” would tend to confuse rather than clarify, such as by introducing a subjective element as to how a particular person might choose to hold a filter cartridge when interacting with a particular appliance. The extrinsic dictionary definitions submitted by Plaintiff are likewise consistent with the lexicography. (*See* Dkt. No. 42, Ex. H, *Merriam-Webster’s Collegiate Dictionary* 337, 941 (10th ed. 1998) (defining “distal” as “situated away from the point of attachment or origin or a central point esp. of the body — compare PROXIMAL”; defining “proximal” as “situated close to” or “next to or nearest the point of attachment or origin, a central point, or the point of view; *esp* : located toward the center of the body — compare DISTAL”); *see also id.*, Ex. I, *The American Heritage College Dictionary* 402, 1102 (3d ed. 1997) (similar).)

The Court therefore hereby construes these disputed terms as set forth in the following chart:

<u>Term</u>	<u>Construction</u>
“distal”	“area situated in a direction away from the end piece wall”
“proximal”	“area situated in a direction nearest to the end piece wall”

E. “cam surface”

Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
<p>Plain and ordinary meaning, an example of which is set forth in the patent specification. No construction necessary.</p> <p>Alternatively, a “surface that physically touches a follower of a valve for the purpose of actuating the valve.”</p>	<p>“the sum of all surfaces that physically touch a follower of a valve for the purpose of actuating the valve”</p>

(Dkt. No. 39, Ex. A, at 2-3; Dkt. No. 42, at 20.) The parties have submitted that this term appears in Claims 1, 2, 4, 10, 12, 13, 14, 17, 18, 20, 21, 22, 23, 25, 26, and 28. (Dkt. No. 39, Ex. A, at 2-3; Dkt. No. 50, Ex. A, at 36.)

Plaintiff argued that this disputed term “is another common phrase that would readily have been understood by one of ordinary skill in the art at the time of invention.” (Dkt. No. 42, at 20.)

Defendant responded that “[t]here is no basis for deviating from the specification’s definition, especially as [Plaintiff] quoted this definition exactly during prosecution and relied on it to distinguish the prior art.” (Dkt. No. 46, at 23 (citing ’894 Patent at 3:61-63).)

Plaintiff replied:

[Defendant] concedes that, under its construction of “cam surface” as the “sum of all surfaces that physically touch a follower of a valve for the purpose of actuating the valve,” “the entirety of each such surface [does not need] to contact the valve.” ([Defendant’s] Resp. Br. at 23-24). [Defendant] further concedes that not “every point on a cam surface must contact the valve follower.” (*Id.* at 24.)

Finally, [Defendant] does not dispute its prior suggestion that the construction of this phrase is unnecessary to resolving any issue. (*Compare* [Plaintiff's] Br. at 20-21 *with* [Defendant's] Br. at 23-24.)

In light of those concessions, and to narrow the issues for the Court, [Plaintiff] agrees to [Defendant's] proposed construction: "the sum of all surfaces that physically touch a follower of a valve for the purpose of actuating the valve" – as expressly stated in the '894 patent. (*See* '894 patent at 3:61-63; JCCS, Ex. A at 2-3.)

To the extent that [Defendant's] application of its construction would require that a cam surface actually be used in combination with the valve of a head assembly to infringe, [Plaintiff] disagrees for the same reasons with respect to the preambles, above.

(Dkt. No. 47, at 8.)

In their July 5, 2016 Joint Claim Construction Chart, the parties submitted an agreed-upon construction for this term. (Dkt. No. 50, Ex. A, at 36.) The Court therefore concludes that there no longer exists any claim construction dispute as to this term. At the July 18, 2016 hearing, upon inquiry by the Court, the parties confirmed that there is no longer any claim construction dispute as to this term.

The Court accordingly hereby adopts the parties' agreement that **"cam surface"** means **"the sum of all surfaces that physically touch a follower of a valve for the purpose of actuating the valve."**

F. "portion of said cam surface . . . is vectored"

Plaintiff's Proposed Construction	Defendant's Proposed Construction
<p>Plain and ordinary meaning, an example of which is set forth in the patent specification. No construction necessary.</p> <p>Alternatively, "a cam surface or a portion thereof that radially faces away to some degree from a referenced line or axis"</p>	<p>"a cam surface (or a portion thereof) that is not perpendicular to the reference axis"</p> <p>Alternatively, "vectored" may be construed to mean "not perpendicular to the reference axis."</p> <p>Alternatively: "a cam surface (or a portion thereof) that is parallel or at an angle to the reference axis"</p>

(Dkt. No. 39, Ex. A, at 3; Dkt. No. 42, at 22; Dkt. No. 46, at 24; Dkt. No. 50, Ex. A, at 10.) The parties have submitted that this term appears in Claims 1, 2, 4, 10, 12, 13, 14, 17, 18, 20, 21, 22, 23, and 28. (Dkt. No. 39, Ex. A, at 3; Dkt. No. 50, Ex. A, at 10.)

(1) The Parties' Positions

Plaintiff argues that “[i]n the context of the claim language, the meaning of a cam surface that is ‘vectored’ has a plain and ordinary meaning that is unambiguous.” (Dkt. No. 42, at 22.) Plaintiff also argues that Defendant’s proposal of “not perpendicular” lacks support in the specification, and “negative constructions are disfavored.” (*Id.*, at 23.)

Defendant responds that construction is appropriate because “[t]he jury likely will not be familiar with this term, and the specification’s convoluted fifteen-line definition is far from a model of clarity.” (Dkt. No. 46, at 24.) Defendant argues that “‘vectored’ encompasses surfaces that are parallel or at an angle to the reference axis, and excludes surfaces that are perpendicular to that axis.” (*Id.*)

Plaintiff replies by reiterating that whereas Defendant’s proposed constructions are unsupported and confusing, Plaintiff’s proposal “comes directly from the ’894 patent.” (Dkt. No. 47, at 9 (citing ’894 Patent at 4:7-21).)

(2) Analysis

Claim 1, for example, recites in relevant part (emphasis added):

1. An end piece for operatively engaging a head assembly, the head assembly comprising one or more valves, for the treatment and control of fluid passing through the head assembly, said end piece comprising:

...

B. an inlet fitting having a cam surface, said inlet fitting having a longitudinal axis; . . .

. . . wherein at least a *portion of said cam surface is vectored* from said longitudinal axis of said inlet fitting.

The specification discloses:

As used herein, the term “vectored” refers to a cam surface or a portion thereof having a vector with a radial component some degree from a referenced line or axis (i.e., a vector which at least partially diverges radially some degree from a referenced line or axis). *A vectored cam surface radially faces away to some degree from a referenced line or axis* (which is generally the longitudinal axis of a fitting). A vectored cam surface or portion thereof can have a vector which extends only in a radial or transverse direction, that is, 90 degrees in relation to the referenced line or axis (herein referred to as “fully vectored”) or a vectored cam surface or portion thereof can have a radial or transverse component, that is, greater than about 1 degree and less than about 90 degrees in relation to the referenced line or axis (herein referred to as “partially vectored”).

’894 Patent at 4:7-21 (emphasis added).

Particularly in light of this disclosure that a cam surface may be “fully vectored” by being at “90 degrees in relation to the referenced line or axis” (*id.*), the Court hereby expressly rejects Defendant’s proposal of “not perpendicular to the reference axis.”

As to Plaintiff’s proposal that no construction is necessary, however, the term “vectored” is a technical term, and “some construction of the disputed claim language will assist the jury to understand the claims.” *See TQP*, 2012 WL 1940849, at *2 (Bryson, J.).

The Court therefore hereby construes “**vectored**” to mean “**radially faces away to some degree from a referenced line or axis.**”

G. “inlet fitting” and “outlet fitting”

<p align="center">“inlet fitting” (Claims 1, 2, 3, 4, 5, 10, 11, 12, 13, 14, 17, 19, 20, 21, 22, 23, 25, 27, and 28)</p>	
Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
<p>Plain and ordinary meaning, no construction necessary.</p> <p>Alternatively, “part for the intake of fluid.”</p>	<p>“an extension from the end piece that mates with the head assembly and contains a channel for fluid to flow from the head assembly into the interior space of the cartridge housing”</p>

<p style="text-align: center;">“outlet fitting” (Claims 1, 2, 3, 4, 18, 19, 20, 26, 27, and 28)</p>	
Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
<p>Plain and ordinary meaning, no construction necessary.</p> <p>Alternatively, “part for the outflow of fluid.”</p>	<p>“an extension from the end piece that mates with the head assembly and contains a channel for fluid to flow from the interior space of the cartridge housing back into the head assembly”</p>

(Dkt. No. 39, Ex. A, at 3; Dkt. No. 42, at 24 & 27; Dkt. No. 46, at 24 & 25 n.4; Dkt. No. 50, Ex. A, at 18-19 & 28-29.)

(1) The Parties’ Positions

Plaintiff argues that “[i]n the context of the claim language, the plain and ordinary meaning of ‘inlet fitting’ is clear: it refers to the part for the intake of fluid.” (Dkt. No. 42, at 25.) Likewise, Plaintiff argues, “[i]n the context of the claim language, the plain and ordinary meaning of ‘outlet fitting’ is clear: it refers to the part for the outflow of fluid.” (*Id.*, at 28.)

Plaintiff also argues that Defendant’s proposal should be rejected because the fittings need not actually be inserted into a head assembly. (*Id.*, at 26 & 28.) As to Defendant’s proposal of “a channel for fluid to flow,” Plaintiff argues that “[t]hese words, too[,] are absent from all independent claims.” (*Id.*, at 26.)

Defendant responds that in the Abstract and the Summary of the Invention as well as in every embodiment, the fittings are end piece wall extensions that mate with the head assembly. (Dkt. No. 46, at 25.) Defendant also argues that “unless the terms ‘inlet fitting’ and ‘outlet fitting’ are limited to channels for conveying fluid, the construction of these terms will read on the protrusion,” which does not contain a channel for conveying fluid from one component to another.” (*Id.*, at 26.)

Plaintiff replies that Defendant’s proposed constructions should be rejected because the fittings need not be mated to a head assembly and because the claims themselves already recite when the fittings “extend from the end piece wall.” (Dkt. No. 47, at 10.) Plaintiff also argues that Defendant’s proposal of “channel” limitations is contrary to claim differentiation, and “[a]lthough [Defendant] argues that the ‘channel’ is necessary to distinguish the fittings from the ‘protrusion,’ [Plaintiff]’s alternate constructions already clarify that the fittings permit the ‘intake of fluid’ and ‘outflow of fluid.’” (*Id.* (citations omitted).)

(2) Analysis

As discussed above, the Court finds that the preambles of Claims 1 and 27 are limiting as to configuration with respect to a head assembly. Further, Claim 28 is a method claim that expressly recites a head assembly as part of the claimed method steps.

Nonetheless, as to Defendant’s proposal of requiring a “channel,” dependent Claim 26 recites “wherein the outlet fitting includes a fluid channel, and the cam surface of the outlet fitting is positioned in the fluid channel of the outlet fitting.” *See also* ’894 Patent at Cls. 5-7 & 25 (similar). Although this claim recites more than merely a limitation of “includes a fluid channel,” the doctrine of claim differentiation nonetheless weighs at least somewhat against Defendant’s proposal. *See Phillips*, 415 F.3d at 1315 (“[T]he presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.”); *but see Wenger*, 239 F.3d at 1233 (“Claim differentiation, while often argued to be controlling when it does not apply, is clearly applicable when there is a dispute over whether a limitation found in a dependent claim should be read into an independent claim, and that limitation is the *only meaningful difference* between the two claims.”) (emphasis added).

The Court thus hereby expressly rejects Defendant’s proposed constructions. On balance, no further construction is necessary, particularly in light of the extrinsic dictionary definitions submitted by Plaintiff that indicate that “inlet,” “outlet,” and “fitting” have well-established meanings that are readily applicable in the context of the ’894 Patent. (*See* Dkt. No. 42, Ex. H, *Merriam-Webster’s Collegiate Dictionary* 602 (10th ed. 1998) (defining “inlet” as “2: a way of entering; *esp* : an opening for intake”); *id.* at 826 (defining “outlet” as “1 a : a place or opening through which something is let out : EXIT, VENT”); *id.*, Ex. J, *McGraw-Hill Dictionary of Engineering* 220 (2d ed. 2003) (defining “fitting” as “[a] small auxiliary part of standard dimensions used in the assembly of an engine, piping system, machine, or other apparatus”).)

The Court therefore hereby construes “**inlet fitting**” and “**outlet fitting**” to have their **plain meaning**.


V. CONCLUSION

The Court adopts the constructions set forth in this opinion for the disputed terms of the patents-in-suit, and in reaching these conclusions the Court has considered and relied upon extrinsic evidence. The Court’s constructions thus include subsidiary findings of fact based upon the extrinsic evidence presented by the parties in these claim construction proceedings. *See Teva*, 135 S. Ct. at 841.

The parties are ordered that they may not refer, directly or indirectly, to each other’s claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

Within thirty (30) days of the issuance of this Memorandum Opinion and Order, the parties are hereby ORDERED, in good faith, to mediate this case with the mediator agreed upon by the parties. As a part of such mediation, each party shall appear by counsel and by at least one corporate officer possessing sufficient authority and control to unilaterally make binding decisions for the corporation adequate to address any good faith offer or counteroffer of settlement that might arise during such mediation. Failure to do so shall be deemed by the Court as a failure to mediate in good faith and may subject that party to such sanctions as the Court deems appropriate. No participant shall leave the mediation without the approval of the mediator.

So ORDERED and SIGNED this 22nd day of July, 2016.



RODNEY GILSTRAP
UNITED STATES DISTRICT JUDGE

EXHIBIT D

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

WHIRLPOOL CORPORATION,
Plaintiff,

v.

TST WATER, LLC,
Defendant.

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Civil Action No. 2:15-cv-1528-JRG

ORDER ON MOTIONS IN LIMINE

Before the Court are the Motions *in Limine* filed by Plaintiff Whirlpool Corporation (“Whirlpool”) (Dkt. No. 100) and Defendant TST Water, LLC (“TST Water”) (Dkt. No. 99), as well as the parties’ Agreed Motion *in Limine* (Dkt. No. 101). The Court held a pre-trial conference February 27, 2017 and heard oral arguments on these motions.

To the extent a motion *in limine* is granted, a party must approach the bench before introducing evidence or argument about the covered subject matter.

Plaintiff Whirlpool’s Motions in Limine

Whirlpool’s MIL No. 1: Calling Patents “Monopolies” or Denigrating the Patent System. TST may not offer any testimony, statement, opinion, or argument suggesting that: (1) patents are “monopolies” in a pejorative manner e.g. that they limit consumer choice; (2) Whirlpool’s behavior in enforcing its patent rights is “monopolistic,” including that Whirlpool inappropriately manufactures filters that have long patent terms; or (3) the PTO and its examiners lack expertise, are overworked, are not diligent, or are prone to error.

DENIED AS MOOT due to Whirlpool’s withdrawal of this MIL in light of an agreement reached by the parties. Per that agreement, “the parties agree that TST will not state or

argue (including through testimony) that Patent Office examiners are overworked, lack competence, lack expertise, or that the examiner here was overworked and thus did not review the references before him. Under this agreement, TST is free to describe the facts of this case, e.g., the identity and number of references before the examiners who considered the '894 patent. TST may also argue that the examiners appear not to have thoroughly reviewed all of the references before him.” (Dkt. No. 129.)

Whirlpool’s MIL No. 2: Disparagement of Products Not Made in the United States. TST shall not introduce any argument, evidence, testimony, insinuation, reference or assertion (1) denigrating, disparaging, touting, exalting or commenting unnecessarily on the nationality of a witness or (2) insinuating that Whirlpool’s practicing products are inferior because they are made outside the United States.

GRANTED. There will be no disparaging or denigrating of witnesses by nationality or of any individual by nationality. There will be no direct or indirect, overt or non-overt attempt to show that something is superior or inferior based on its place of origin. The factual reality of place of manufacture, location of a facility, place of employment, and other kinds of factual matters that relate to location are permitted.

Whirlpool’s MIL No. 3: Net Worth of and Pejorative Terms for Whirlpool. TST shall not introduce any argument, evidence, testimony, insinuation, reference or assertion regarding Whirlpool’s size, including (1) its wealth, total revenues, total profits, or net worth and (2) using derogatory terms regarding Whirlpool’s size including, “goliath,” monopolist,” “behemoth,” and “bully.”

DENIED AS MOOT due to Whirlpool's partial withdrawal of this MIL in light of an agreement reached between the parties. Per the agreement, TST Water will not refer to Whirlpool as a "goliath," monopolist," "behemoth," or "bully." (Dkt. No. 129.) However, regardless of the withdrawal of this MIL, the Court expects both parties to avoid name-calling during the course of the trial.

Whirlpool's MIL No. 4: KX MOU and \$2 Rate in P&G Agreements. To the extent that Whirlpool's *Daubert* motion is granted, TST shall not make any reference, argument, evidence, or testimony regarding (1) the May 2013 memorandum of understanding ("MOU") between TST and its supplier, KX Technologies, in which TST gave KX Technologies ("KX") an option to license, for five years, a TST patent on a design around of a patented General Electric ("GE") filter for \$0.20 and (2) the \$2 royalty rate included in the agreements between Whirlpool and its prior co-owner and co-developer of the patent-in-suit Proctor & Gamble Company.

DENIED AS MOOT due to Whirlpool's withdrawal of this MIL in light of an agreement reached by the parties.

Whirlpool's MIL No. 5: Use Of Commercial or Preferred Embodiments to Demonstrate Non-Infringement. TST shall not present any argument, evidence, testimony, insinuation, or reference that the scope of the asserted claims should be judged, or infringement decided, by comparing the accused products to any commercial embodiments of the patent-in-suit, including Whirlpool's Filters 1 and 3. Likewise, TST shall not present any argument, evidence, testimony, insinuation, or reference that the scope of the asserted claims should be judged, or infringement decided, by comparing the accused products to any preferred embodiments of the patent-in-suit.

GRANTED to the extent of the agreement reached between the parties stated on the record, but otherwise **DENIED AS MOOT**. Per that agreement, TST will not argue that the claims are limited to a specific embodiment or use a preferred or commercial embodiment as a standard to measure infringement. TST may use the preferred embodiments to explain the patented features of the patented design.

Whirlpool's MIL No. 6: Use of Whirlpool's Sales to Customers as Defense to TST's Own Direct Infringement. TST shall not argue or insinuate that Whirlpool's sale of refrigerators to customers creates a defense to TST's direct infringement under 35 U.S.C. § 271(a), whether under an implied license or repair theory.

GRANTED IN PART. As addressed in the Court's Claim Construction Order (Dkt. No. 59), Claims 1 and 4 of the patent-in-suit do not require the actual presence of a head assembly. The parties are precluded from presenting evidence or argument that the head assembly is required to prove direct infringement. Notwithstanding this *limine* order, Defendant's implied license and permissible repair defenses are equitable issues that the Court will address outside the presence of the jury.

Whirlpool's MIL No. 7: Prior Art Not Substantively Discussed. TST shall not present any argument, evidence, or testimony regarding its non-primary prior art (i.e., Knuth, Dorfman, Fritze '054, JP '891, Clack, Nicko) that its technical expert, Mr. Stein, did not disclose in his invalidity report.

DENIED AS MOOT due to Whirlpool's withdrawal of this MIL in light of an agreement reached between the parties.

Whirlpool's MIL No. 8: Late Produced Home Depot Documents. TST shall not offer any evidence, statement, or argument concerning two late-produced Home Depot documents containing Return to Vendor ("RTV") information for TST accused products and Whirlpool practicing products.

DENIED AS MOOT due to Whirlpool's withdrawal of this MIL during the pre-trial hearing held on February 27, 2017.

Whirlpool's MIL No. 9: Expert Testimony by Michael Baird. Any expert testimony by TST's President, Michael Baird, is limited to the specific statements he made during his deposition regarding (1) the design of refrigerator water filtration products, including refrigerator water filters and related principles of design; (2) the structure and operation of products Mr. Baird has developed, including the accused W-5 water filter; and (3) the replacement refrigerator water filter market. TST shall not offer Mr. Baird as an expert on designing around refrigerator water filter patents.

DENIED AS MOOT due to Whirlpool's withdrawal of this MIL in light of an agreement reached between the parties. Per that agreement, TST Water shall not offer Michael Baird as an expert. Mr. Baird may discuss his experiences reviewing patents and designing filters.

Whirlpool's MIL No. 10: Relative Importance of Claim Elements. TST shall not suggest that certain claim limitations are more important than others.

DENIED AS MOOT due to Whirlpool's withdrawal of this MIL in light of an agreement reached between the parties. Per that agreement, the parties agree that all limitations must be proven for infringement and invalidity. The parties may discuss the significance of limitations during prosecution.

Whirlpool's MIL No. 11: Impact of Verdict. TST may not introduce evidence or testimony or argue, comment upon, insinuate, or refer to the possible consequences of a verdict in Whirlpool's favor, including the possibility of an injunction, an award of enhanced damages, an award of attorney's fees, or arguments that a verdict would result in (1) consumers paying more for filters, (2) firings or layoffs, (3) undermining American economic competitiveness, or (4) other adverse economic consequences.

DENIED AS MOOT due to Whirlpool's withdrawal of this MIL in light of an agreement reached between the parties. Per that agreement, TST Water will not offer evidence or testimony, or make attorney argument, comments, or insinuation that a verdict would result in firings or layoffs. Whirlpool will not offer evidence or testimony, or make argument, comments, or insinuation that a verdict for TST Water would have adverse effects due to the presence of low-quality, non-Whirlpool filters on the market.

Whirlpool's MIL No. 12: Whirlpool's Failure to Apportion. TST may not introduce evidence or testimony or argue, comment upon, or insinuate that that (1) the damages requested by Whirlpool for TST's infringement do not reflect the value attributed to the patented features and/or that (2) Whirlpool or its expert failed to exclude any damages attributable to unpatented features.

DENIED AS MOOT due to Whirlpool's withdrawal of this MIL in light of an agreement reached by the parties. Per that agreement, the parties agree that the filter is the appropriate royalty base.

Whirlpool's MIL No. 13: Use Of TST's Patents or Applications to Demonstrate Non-Infringement. TST shall not refer to TST's patents or applications covering the accused product to argue that the accused product does not infringe.

GRANTED.

Defendant's Motions in Limine

TST Water's MIL No. 1: All evidence and argument regarding Home Depot reports listing individual returns on TST products, including but not limited to PX176, is excluded (if the corresponding report on Whirlpool's returns, DX738, is also excluded).

GRANTED as to the RTV reports generated by Home Depot that contain the unknown customer commentary. The RTV supplier visibility report is not the subject of TST Water's MIL and thus is outside the scope of this ruling.

TST Water's MIL No. 2: All evidence and argument regarding warranty claims submitted to Whirlpool by third parties, including but not limited to PX359-379.

GRANTED.

TST Water's MIL No. 3: All evidence and argument regarding third party accused product EcoAqua EFF-6008A, including but not limited to PX55 and PX532.

DENIED AS MOOT due to TST Water's withdrawal of this MIL in light of an agreement reached by the parties. Per that agreement, Whirlpool will not introduce evidence or argument about the EcoAqua EFF-6008A filter, and Whirlpool will redact portions of exhibits that related to EcoAqua.

TST Water's MIL No. 4: All evidence and argument regarding the exclusion in prior cases of opinions proffered by TST's damages expert.

GRANTED due to Whirlpool's withdrawal of its opposition to this MIL. (Dkt. No.129.)

TST Water's MIL No. 5: All evidence and argument regarding an invention date of asserted U.S. Patent No. 7,000,894 earlier than April 25, 2003.

DENIED AS MOOT based on TST Water's withdrawal of this MIL in light of an agreement reached by the parties. The parties have agreed as follows:

For purposes of this case, the '894 patent is entitled to a priority date of April 25, 2003. For purposes of this case, Whirlpool does not dispute that the following references are prior to the invention of the '894 patent: U.S. Patent No. 3,399,776 to Knuth ("Knuth"), U.S. Patent No. 5,320,752 to Clack ("Clack"), U.S. Patent No. 5,094,365 to Dorfman ("Dorfman"), U.S. Patent No. 7,067,054 to Fritze ("Fritze '054"), Japanese Patent Publication No. 56-144891 ("JP '891"), and U.S. Patent No. 3,715,032 ("Nicko"). Whirlpool will not challenge the prior art status of these references, but may contend that the references are not analogous art or otherwise argue that the references do not render the asserted claims obvious for reasons unrelated to their dates. (Dkt. No. 108.)

Agreed Motions in Limine

Agreed MIL No. 1: The parties shall not introduce evidence or testimony or argue, comment upon, insinuate, or refer to the filing, contents, and rulings of any motions *in limine* (other than objections based on such rulings).

GRANTED by agreement of the parties. (Dkt. No. 101.)

Agreed MIL No. 2: The parties shall not introduce evidence or testimony or make arguments, insinuations, references, or assertions concerning Whirlpool's choice to file this action in Texas.

GRANTED by agreement of the parties. (Dkt. No. 101.)

Agreed MIL No. 3: The parties shall not introduce evidence or testimony or make arguments, insinuations, references, or assertions concerning the location from where a particular lawyer comes or the location or size of a lawyer's firm.

GRANTED by agreement of the parties. (Dkt. No. 101.)

Agreed MIL No. 4: The parties shall not introduce evidence or testimony or make arguments, insinuations, references, or assertions concerning the amount of legal fees and expenses that the parties have incurred in this litigation.

GRANTED by agreement of the parties. (Dkt. No. 101.)

Agreed MIL No. 5: The parties shall not introduce evidence or testimony or make arguments, insinuations, references, or assertions concerning the religious or political beliefs, or sexual orientation of any party or witness.

GRANTED by agreement of the parties. (Dkt. No. 101.)

Agreed MIL No. 6: The parties shall not make any reference or attempt to read or show to the jury any non-relevant exchanges between counsel during depositions, including objections. The parties shall eliminate all non-relevant exchanges when reading or showing any depositions in this case.

GRANTED by agreement of the parties. (Dkt. No. 101.)


Agreed MIL No. 7: The parties shall not introduce evidence or testimony or make arguments, insinuations, references, or assertions concerning alleged general deficiencies in the parties' production of documents or other discovery (pursuant to any Federal or Local Rules concerning discovery) or litigation misconduct. The parties may raise alleged failures to produce specific categories of documents where relevant.

GRANTED by agreement of the parties. (Dkt. No. 101.)

Agreed MIL No. 8: The parties may not introduce evidence or testimony or make arguments, insinuations, references, or assertions concerning the parties' use or alleged use of jury studies, jury consultants, focus group studies, or shadow juries.

GRANTED by agreement of the parties. (Dkt. No. 101.)

So ORDERED and SIGNED this 3rd day of March, 2017.



RODNEY GILSTRAP
UNITED STATES DISTRICT JUDGE