

I. Background

A. Factual Background¹

Loftex is a New York corporation that manufactures “low-twist” towels, which are characterized by high absorbency and soft texture. See Loftex CC Br. Ex. A (“U.S. Patent ‘308”) at 2:17. The ‘308 Patent describes and claims a method of producing a low-twist towel. U.S. Patent ‘308. According to the FAC, Loftex is the owner by assignment of “all right, title and interest in and to the ‘308 Patent, including the right to sue for . . . infringement of the ‘308 Patent.” FAC ¶ 8.

Trident Limited, of which Trident Group Limited is a shareholding company, see Dkt. 5, also manufactures towels. Loftex alleges that Trident “directly or through its subsidiaries, divisions, or groups,” has infringed its ‘308 Patent by “making, using, selling and/or offering to sell, importing or allowing others to make, use, sell and/or offer for sale, or import . . . products, including at least Trident’s towels, which are made in accordance with and within the scope of one or more of the claims of the ‘308 Patent.” FAC ¶ 11.

B. Procedural History

On December 20, 2011, Loftex filed its original complaint against Trident Limited. Dkt. 1. On February 23, 2012, Trident Limited filed its answer and counterclaims against Loftex. Dkt. 6. On July 23, 2012, Loftex moved for leave to amend the complaint to add Trident Group Limited as an additional defendant, Dkt. 20, which this Court granted in an

¹ The facts as related herein are drawn from the First Amended Complaint (“FAC”), Dkt. 32, and from the parties’ claim construction briefs and the exhibits attached thereto, including: Plaintiff Loftex USA LLC’s Opening Claim Construction Brief (“Loftex CC Br.”), Dkt. 26; Defendant Trident Limited’s Opening Claim Construction Brief (“Trident CC Br.”), Dkt. 24; Plaintiff Loftex USA LLC’s Opposition to Defendant Trident Limited’s Opening Claim Construction Brief (“Loftex Opp. Br.”), Dkt. 29; and Defendant Trident Limited’s Opposition to Plaintiff Loftex USA LLC’s Opening Claim Construction Brief (“Trident Opp. Br.”), Dkt. 28.

Opinion & Order dated November 20, 2012, Dkt. 30. See *Loftex USA, LLC v. Trident Ltd.*, No. 11 Civ. 9349 (PAE), 2012 WL 5877427 (S.D.N.Y. Nov. 20, 2012).

C. Applicable Law

A claim of patent infringement requires a two-step process. First, as a matter of law, the Court must construe the disputed claim terms. Only then can a determination be made whether the allegedly infringing product in fact infringes the patent, as construed, and/or whether the patent itself is valid. *Metabolite Labs., Inc. v. Lab. Corp. of Amer. Holdings*, 370 F.3d 1354, 1360 (Fed. Cir. 2004); *Brassica Prot. Prods. LLC v. Caudill Seed & Warehouse Co.*, 591 F. Supp. 2d 389, 394 (S.D.N.Y. 2008); *Joao v. Sleepy Hollow Bank*, 418 F. Supp. 2d 578, 580 (S.D.N.Y. 2006).

In construing a patent, “[i]t is a bedrock principle . . . that the claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). When a court interprets a patent claim, it “should look first to the intrinsic evidence of record, i.e., the patent itself, including the claims, the specification and, if in evidence, the prosecution history.” *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). The words of a claim should be interpreted according to their “ordinary and customary meaning”—that is, the “meaning that [they] 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.” *Phillips*, 415 F.3d at 1312–13 (citations omitted). The claims, in turn, “must be read in view of the specification, of which they are a part. . . . [T]he specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Vitronics*, 90 F.3d at

1582. Finally, the prosecution history can be consulted to “determine whether or not there were any express representations made in obtaining the patent regarding the scope and meaning of the claims.” *DeMarini Sports, Inc. v. Worth, Inc.*, 239 F.3d 1314, 1323 (Fed. Cir. 2001).

As compared with intrinsic evidence, which consists of the claims, specification, and prosecution history, extrinsic evidence includes “all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996). Extrinsic evidence, however, is “less significant than the intrinsic record in determining the legally operative meaning of claim language,” *Phillips*, 415 F.3d at 1317 (citation omitted); where “an analysis of the intrinsic evidence alone will resolve any ambiguity in a disputed claim term . . . , it is improper to rely on extrinsic evidence.” *Vitronics*, 90 F.3d at 1583.

II. Disputed Claims

A. “A method of producing a low twist towel”

The parties dispute the meaning of the phrase “a method of producing a low twist towel,” which appears at the beginning of Claim 1 of the ‘308 Patent. See U.S. Patent ‘308 at 4:49. Loftex asks that the Court construe that phrase as “a method of producing a towel that is fluffy, soft, and super absorbent.” Loftex CC Br. 5. Trident asks instead that the phrase be construed as “a method of making a low twist towel without use of polyvinyl alcohol yarn (PVA fibers) in the process.” Trident CC Br. 16.

The disagreement about this particular phrase reflects a larger, overarching dispute between the parties regarding the ‘308 Patent. Specifically, Trident claims that Loftex’s Patent “disavows” the use of PVA fibers and that, because of the language of disavowal, the claims

throughout must be construed to include only methods of producing towels without the use of PVA fibers. The language in both the claims and the specification, Trident argues, explicitly excludes PVA fibers from the process described by the ‘308 Patent. Trident therefore seeks to import that limitation into the Patent through this particular language.

Loftex, for its part, argues that its construction is supported by the written description of the ‘308 Patent, which begins, “A low twist towel is classified as a high end product in the U.S. market. It is fluffy, soft, and super absorbent.” U.S. Patent ‘308 at 2:16–17. Because that language “provides a clear definition of the phrase” not contradicted by the prosecution history, and “is consistent with the ordinary meaning of the term,” Loftex contends that the Court must adopt Loftex’s proposed construction, thereby avoiding improperly “limiting [the] claim to a recited benefit.” Loftex Opp. Br. 7.

Although the issue of disavowal is an important element in the construction of the ‘308 Patent—one which the Court deals with in greater depth below, see *infra* pp. 12–17—the Court does not view it as implicated by this particular phrase.² Instead, the phrase “a method of

² The Court notes here the exchange that occurred when counsel for Trident was asked whether, if Trident were to prevail on the issue of disavowal in the construction of one or more other terms of the ‘308 Patent, the question of whether this particular term limited Loftex to PVA-free towels would be obviated:

THE COURT: If you’re right about terms 6 and 7 . . . 6, being weaving the 2-ply yarn to produce a fabric, and 7, free of polyvinyl alcohol fiber—if you prevail on your construction relating to those, i.e., as it relates to PVA . . . , is number one obviated? . . . [Loftex] is basically saying it needs to be fluffy and absorbent. Do we have a fight about that?

MR. DAVID: We do not. . . . [Y]ou’re generally right that assuming I accept fluffy and absorbent, then the issue of the method without using PVA is not an issue on this preamble.

THE COURT: Right . . . Frankly I took 1, 6, and 7, to mix metaphors, to be one ball of wax here, . . . the core point being whether or not you are allowed to use PVA in your process or not.

MR. DAVID: And that’s how I looked at it as well, your Honor.

producing a low twist towel”—the opening of Claim 1 of the Patent—introduces, on a general level, that the method about to be described is one geared to producing the type of towels that Loftex describes in its specification as “fluffy, soft, and super absorbent.” The familiar maxim that “[p]atent law allows an inventor to be his own lexicographer,” *ZMI Corp. v. Cardiac Resuscitator Corp.*, 844 F.2d 1576, 1580 (Fed. Cir. 1988), demands that, where the term in question is clearly defined in the specification, the Court must look to that definition.

The Court’s colloquy with counsel at argument, however, clarified that there is another defining characteristic of a low-twist towel—evident from the very name. That is, a low-twist towel “means that there is a low number of twists per unit length.” See Tr. 13. A person of ordinary skill in the art would regard a low-twist towel as not simply a fluffy, soft, and absorbent towel, but specifically as one with a low number of twists.³ Such a construction also addresses Trident’s contention that Loftex’s proposed construction is impermissibly vague. As Trident points out, “many towels . . . are touted as ‘fluffy, soft, and super absorbent.’ Loftex’s construction adds no clarity. . . .” Trident CC Br. 17.

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THE COURT: [I]t seemed to me that you were trying to fight the PVA battle at the level of the very first words of the claim, and that the battle is to be joined but I think it gets joined at C, not at 1.

MR. DAVID: OK, that’s right, your Honor. I think you are on the right track. I don’t agree with fluffy, soft, and super absorbent, but . . . the issue is really with the PVA.

Transcript of February 5, 2013 Markman Hearing (“Tr.”) 83–86.

³ At argument, the Court asked counsel for Loftex whether “one can make a fluffy, absorbent towel without the benefit of low twist.” Counsel responded that “usually” fluffy towels are low-twist, but was not certain whether it was possible to make a fluffy, soft towel that was not low-twist. Tr. 12–14. Whether or not a towel type exists that is simultaneously fluffy and soft, but not low-twist, it is clear from the parties’ submissions as well as the discussion at argument that the low twist is an essential component of the type of towel being described in the ‘308 Patent.

The Court therefore construes the phrase “a method of producing a low-twist towel” as “a method of producing a towel, with a low number of twists per unit length, that is fluffy, soft, and super absorbent.”

B. “Thick Yarn”/“Fine Count Yarn”

“Thick yarn” and “fine count yarn” are terms used in Claim 1 and later in the Patent—in Claims 2, 3, 6, 7, and 9 (thick yarn) and Claims 4, 5, 6, 7, and 9 (fine count yarn), respectively—to describe the yarns to be twisted in producing a low-twist towel according to the method explained in the ‘308 Patent. Loftex argues that “thick yarn” should be defined as “yarns that include, for example, about 16s-2s count (preferably, 10s or 12s count) yarns,” Loftex CC Br. 6, and that “fine count yarn” should be defined as “yarns that include, for example, greater than or equal to about 60s (preferably, 60s) count yarns,” *id.* Trident, on the other hand, argues for a relative construction of these terms: “The proper construction of ‘thick yarn’ is ‘a yarn having a thickness that is greater than another yarn.’ Similarly, the proper construction of ‘fine count yarn’ is ‘a yarn having a thickness that is less than another yarn.’” Trident CC Br. 17.

The Court views Trident’s proposed construction with skepticism. To interpret adjectives such as “thick” and “fine count” as devoid of any intrinsic meaning whatsoever, and only possessing meaning relative to each other, departs from the ordinary use of language. Common sense dictates that such words be interpreted as having some intrinsic meaning, albeit sometimes dependent on the context. Here, one need not speculate as to these words’ meaning in context, because the ‘308 Patent’s specification provides guideposts:

Suitable fine count yarns include, for example, greater than or equal to about 60s (preferably, 60s) count yarns Suitable thick yarns include, for example, about 16s-2s count (preferably, 10s or 12s count) yarns

U.S. Patent '308 at 2:48–55. Mindful that the claims are to “be read in view of the specification,” *Vitronics*, 90 F.3d at 1582, the Court deems it more than reasonable to incorporate these numerical ranges in the construction of the terms “thick yarn” and “fine count yarn.”

Loftex’s proposed construction, however, is flawed too. By importing the phrase “for example” into the construction, Loftex furnishes little, if any, meaningful guidance as to the outer bounds of that definition. It makes the patent vulnerable to claims of vagueness and of superfluity. As Trident notes, Loftex’s constructions “encompass an unclear range of sizes . . . and would render the claim terms indefinite under 35 U.S.C. § 112. Under Loftex’s construction, one would not be able to discern the metes and bounds of the claim, as he or she would not know which particular sizes of yarn would, or would not, be deemed a thick or fine count yarn.” Trident CC Br. 18–19. Further, the ranges Loftex proposes in its constructions of “thick yarn” and “fine count yarn” in Claim 1 are also provided in dependent claims 2–6 of the Patent. As Trident notes, construing the terms “thick yarn” and “fine count yarn” as precisely coterminous with the ranges provided in the Patent’s dependent claims “would render the ranges already provided in the dependent claims 2–6 superfluous and . . . improper.” Trident CC Br. 17 (citing *Robotic Vision Sys., Inc. v. View Eng’g, Inc.*, 189 F.3d 1370, 1376 (Fed. Cir. 1999)).

The Court therefore interprets the examples provided by Loftex in its proposed constructions as providing an approximate range of thickness and thinness, the precise definition of which is not provided in the Patent. The term “thick yarn” is thus defined as “yarns of between about 16s and about 2s count (preferably, 10s or 12s count).” “Fine count yarn” is defined as “yarns greater than or equal to about 60s (preferably, 60s) count yarns.”⁴ A

⁴ Eliminating the phrase “for example” in Loftex’s proposed construction, in lieu of using words of approximation, is not far afield from Loftex’s wishes. At argument, counsel for Loftex stated: “The specification is definite even though it’s prefaced by ‘for example.’ If we took out ‘for

determination of infringement vel non would therefore entail inquiring whether a person of ordinary skill in the art would or would not regard the particular thickness utilized as falling within the approximate range provided in the '308 Patent. That construction avoids the problems of indefiniteness and superfluity identified by Trident. And it heeds the maxim that a patent should be interpreted so as to preserve its validity where a claim is ambiguous and where the validity-preserving construction is based on sound claim construction principles, see Phillips, 415 F.3d at 1327; Liebel-Flarsheim Co. v. Medrad, Inc., 358 F.3d 898, 911 (Fed. Cir. 2004), while avoiding Trident's excessively broad, relativistic construction that might render the patent invalid.

C. "2-ply yarn"

The parties also ask the Court to construe the term "2-ply yarn," which appears in Claim 1 of the '308 Patent. Loftex asks the Court to construe the term to mean "a yarn comprising two yarns twisted together." Loftex CC Br. 7. Trident, for its part, suggests the construction, "a yarn having only two discrete strands that are twisted together." Trident CC Br. 19. The nub of the parties' dispute in this regard is whether the term "2-ply yarn" includes yarns of more than two-ply, or whether "2-ply yarns" contain two, and only two, strands.

example,' I mean if that's what is bothering your Honor, read it without 'for example.' This is patent terminology. When you are preparing a patent application, you throw in these terms. They don't really mean anything to the person skilled in the art" Tr. 45. The Court also asked counsel for Loftex at argument whether "you are saying actually the examples are meant to if not literally set the outer bounds, to treat it a little bit like horseshoes where it's awfully close to the outer bounds." Counsel responded: "That's correct." Tr. 40. Finally, in a post-hearing letter to the Court dated February 8, 2013, Loftex cites Takeda Pharmaceutical Co., Ltd. v. Handa Pharmaceuticals, LLC, for the proposition that a court can, to preserve validity, interpret the term "for example" as "not fatal and ha[ving] a limited application." February 8, 2013 Letter from Plaintiff, Dkt. 41 (citing Takeda Pharm. Co., Ltd. v. Handa Pharm., LLC, Nos. C-11-00840 JCS, C-11-1609 JCS, C-11-1610 JCS, 2012 WL 1243109, at *21-22 (N.D. Cal. Apr. 11, 2012)).

It is well-established in patent law that the word “comprising” serves as an open-ended transition element, preserving the possibility of claiming more than what is recited. In other words, “[a] drafter uses the term ‘comprising’ to mean ‘I claim at least what follows and potentially more.’” *Vehicular Techs. Corp. v. Titan Wheel Int’l, Inc.*, 212 F.3d 1377, 1383 (Fed. Cir. 2000); see also *MagSil Corp. v. Hitachi Global Storage Techs., Inc.*, 687 F.3d 1377, 1383 (Fed. Cir. 2012) (“Open claim language, such as the word ‘comprising’ . . . signals that the entire claim is presumptively open-ended.” (citation omitted)); *Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501 (Fed. Cir. 1997) (“‘Comprising’ is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim.” (citation omitted)); *Mitsubishi Chem. Corp. v. Barr Labs., Inc.*, 718 F. Supp. 2d 382, 410 (S.D.N.Y. 2010). Loftex argues, therefore, that because the ‘308 Patent uses the word “comprising” at the beginning of Claim 1, the term “2-ply” as used later in Claim 1 in fact means at least two-ply, and possibly more. Loftex Opp. Br. 9–10.

Loftex’s reliance on the Patent’s use of the word “comprising,” however, is unavailing. Although that open-ended term is used once, to introduce the steps of Claim 1 that follow it, it is nowhere repeated specifically in the context of the term “2-ply.” For Loftex’s argument to prevail, the Court would be required to essentially “distribute out” the term “comprising” to each subsection of Claim 1, despite the patent’s failure to do so. And that argument proves too much: It would in effect negate any specifics used in Claim 1. Instead, the logical application of the word “comprising” in this context allows for additional individual steps; it “does not reach into each of the . . . steps to render every word and phrase therein open-ended,” *Dippin’ Dots, Inc. v. Mosey*, 476 F.3d 1337, 1343 (Fed. Cir. 2007); see also *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 1271 (Fed. Cir. 1986), abrogated on other grounds by *Egyptian Goddess, Inc. v.*

Swisa, Inc., 543 F.3d 665 (Fed. Cir. 2008) (“While a transitional term such as ‘comprising’ . . . does not exclude additional unrecited elements, or steps (in the case of a method claim), we conclude that the transitional phrase does not, in the present case, affect the scope of the particular structure recited within the method claim’s step.”). The presence of the word “comprising” at the beginning of Claim 1 does not assist Loftex in its argument that “2-ply yarn” includes more-than-two-ply yarn.

Loftex’s other argument—that nowhere in the Patent is there an explicit limitation of “2-ply yarn” to only two plies—is more persuasive than its argument surrounding the word “comprising.” But it, too, is ultimately unavailing. Both parties look to the specification’s language to construe the phrase “2-ply yarn”—“unevenly S twist the two yarns together . . . to form a 2-ply yarn.” U.S. Patent ‘308 at 2:15–17. Loftex emphasizes that “[n]owhere in the ‘308 specification is the term ‘2-ply’ defined as excluding the possibility of the inclusion of another yarn or yarns into the weave. . . . The specification does not state that the addition of another yarn would render the invention inoperable” or “outside the scope of the invention.” Loftex Opp. Br. 9. Loftex, not unreasonably, argues that “an infringer [should not be able to] avoid the patent by arbitrarily adding another yarn while still practicing all the claimed steps of the invention.” *Id.*

Trident, however, points out that each time the term “2-ply” appears in the specification, it describes how to twist precisely two yarns into a resulting “2-ply yarn.” Thus, according to Trident, its construction “is supported not only by logic and by the specified number ‘2,’ but by all recitations of the term 2-ply in the specification and claims.” Trident CC Br. 19–20.

Although the Court is mindful of the need to “avoid the danger of reading limitations from the specification into the claim,” Phillips, 415 F.3d at 1323, where a claim is specific as to

a particular number, and where that number, both linguistically and conceptually, pervades both the claims and the specification, it is unpersuasive to conclude that “2-ply yarn” should be construed to mean, effectively, yarn of three, four, or more plies. As Trident points out, “[h]ad the inventor contemplated and disclosed forming three or more plies by twisting three or more yarns, then the patentee might have had support to claim: ‘unevenly S twisting one or more Z-twisted thick yarns into one or more Z-twisted fine count yarns . . . to produce a multi-ply yarn.’” Trident CC Br. 21 (emphasis in original). It is reasonable to expect a patentee to use such language, particularly where he or she desires to deviate from the ordinary meaning of a word—or, here, a number.⁵

The Court therefore adopts Trident’s proposed construction and interprets the term “2-ply yarn,” as used in the ‘308 Patent, to mean “a yarn having only two discrete strands that are twisted together.”

D. “Weaving the 2-ply yarn to produce a fabric that is free of polyvinyl alcohol fibers”

The construction of the term—or terms, according to Loftex, which seeks to construe this phrase in two distinct parts—“weaving the 2-ply yarn to produce a fabric that is free of polyvinyl alcohol fibers” is the area of claim construction that the parties most vigorously dispute and that appears most consequential. The central issue involves the role of PVA fibers in the production process. The parties dispute whether the ‘308 Patent (as Trident argues) is limited to methods of production that eschew altogether any use of PVA fibers or whether (as Loftex argues) it also covers methods of production that use PVA so long as the resulting towel is PVA-free.

⁵ Cf. *KCJ Corp. v. Kinetic Concepts, Inc.*, 223 F.3d 1351, 1356 (Fed. Cir. 2000) (“Unless the claim is specific as to the number of elements, the article ‘a’ receives a singular interpretation only in rare circumstances when the patentee evinces a clear intent to so limit the article.” (emphasis added)).

Loftex proposes a construction that separates the clause into two parts: It argues that “weaving the 2-ply yarn to produce a fabric” should be construed as “weaving using the 2-ply yarn to produce a fabric,” and that “free of polyvinyl alcohol fiber” should be construed as “producing a towel free of polyvinyl alcohol fiber.” Loftex CC Br. 8. In other words, Loftex argues that, provided that the final product of the process yields a towel that is free of PVA, the ‘308 Patent embraces methods that use or that avoid the use of PVA. By way of context, Loftex states that, from its perspective, the “key feature” of the ‘308 Patent is its twisting method. It notes that that method can be used in the production process whether or not PVA is used. That said, Loftex also notes that the twisting method, achieving as it does a fluffy towel on its own, obviates the need for use of the chemical PVA to achieve the same end. Loftex CC Br. 9.

Trident proposes a more restrictive construction. It urges that the patent term be construed so that the phrase “that is free of polyvinyl alcohol fibers” modifies the preceding word “fabric.” Specifically, it proposes to construe the term to mean “weaving a 2-ply yarn that is free of polyvinyl alcohol fibers such that the woven fabric is free from PVA and does not require any processing or finishing to remove PVA fibers.” Trident CC Br. 14. In other words, the fabric at the end of the weaving process must be PVA-free. This construction, Trident argues, is “consistent with the specification that explains that the present invention does not use PVA fiber in its process of making a low twist towel,” *id.* at 14 (citation omitted), and is also grammatically consistent with the claim language.

Trident’s proposed construction is substantially more persuasive and logical. First, the claim language itself supports such a definition. The adjectival phrase “that is free of polyvinyl alcohol fibers” clearly modifies the word “fabric” that immediately precedes it. The fabric that is produced via the weaving process in Claim 1(c) must, therefore, be PVA-free. In other words,

by that point in the process, the product must not contain PVA. It follows that, because weaving cannot remove PVA fibers, the two-ply yarn utilized must also be free of PVA fibers.⁶

The specification, too, supports Trident's definition—although in the Court's view the claim language is sufficiently clear as to obviate any need to consult the specification. The "Detailed Description" section of the specification reads: "In particular, the present invention does not use PVA fiber in its process of making a low twist towel" U.S. Patent '308 at 2:1–3. And the Patent also states: "The environmentally friendly procedure of the present invention eliminates the dependence on PVA fiber in low twist towel production" *Id.* at 3:51–54. These unequivocal statements further support Trident's construction that the '308 Patent requires that PVA fibers not be used in the process by which the fabric is produced. These statements are also fully consistent with the critical claim language "that is free of polyvinyl alcohol fibers."

Disputing that the specification undercuts its construction, Loftex argues that the specification does not disavow, but merely permits the fabric to be free of PVA fiber. Loftex highlights the permissive, rather than mandatory, language of the Abstract, which states: "Fabric produced by this method can solve the dependency on PVA." *Id.* at 1:8–9. According to Loftex, the "key feature of the invention" is "the unique twisting of the yarns that would permit the fabric to be free of the PVA fiber," Loftex CC Br. 9 (emphasis in original); "the elimination of PVA is a benefit, not a limitation." Loftex Opp Br. 1. Loftex emphasizes that the specification does not state that the inclusion of PVA fibers would affect the functionality of the product. On this basis, it argues, the '308 Patent's specification cannot be read to disavow the use of PVA in its claimed process.

⁶ Loftex does not contest this point. See Tr. 55–56 ("THE COURT: [C]an the PVA come out at any other point in the process? MR. FIELDS: No. THE COURT: So as a matter of technology here, if there is PVA that's put in during the weaving process, it's still going to be there at the end of the weaving process . . . , correct? MR. FIELDS: Yes.").

The Court disagrees. “[T]he specification may limit the scope of a claim if the patentee has disavowed or disclaimed the scope by using words or ‘expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.’” *ResQNet.com, Inc. v. Lansa, Inc.*, 346 F.3d 1374, 1378 (Fed. Cir. 2003) (citing *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002)). To be sure, “the distinction between using the specification to interpret the meaning of a claim and importing limitations from the specification into the claim can be a difficult one to apply in practice.” *Phillips*, 415 F.3d at 1323. But where, as here, both the claim language itself and the specification unequivocally state, in declarative sentences, that PVA is not used in the process, the threshold for disavowal of PVA is comfortably met. *Loftex* cites cases holding that “a patentee’s intention to limit the claims via the specification must be clear and unambiguous from the specification of the patent.” *Loftex Opp. Br. 3* (citing *Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1366–67 (Fed. Cir. 2012)); see also *Epistar Corp. v. Int’l Trade Comm’n*, 566 F.3d 1321, 1336 (Fed. Cir. 2009) (“[D]isparaging comments alone do not necessarily show a manifest or express disavowal of the criticized subject matter.”). But that standard is met here. The ‘308 Patent’s specification contains clear and unambiguous language that not only embodies criticism of methods that use PVA—it flatly states that the method “does not use” PVA and “eliminates the dependence on PVA.” It is difficult to imagine a clearer statement of disavowal. The permissive language cited by *Loftex*, to the effect that the process “can” eliminate the dependence on PVA, does not overcome these emphatic statements. See *Watts v. XL Sys., Inc.*, 232 F.3d 877, 883 (Fed. Cir. 2000) (permissive language in preferred embodiment stating that “the taper of the external thread may be made slightly less than the taper of the internal thread,” when read in context of the entirety of the disclosure, did not disclose an

embodiment without misaligned taper angles; invention was limited to embodiments with misaligned taper angles (emphasis in original)).

Loftex distinguishes the cases cited by Trident in which courts have found specifications to act as disavowals, on the grounds that, in those cases, including the disavowed element would render the invention inoperable. See Loftex Opp. Br. 4–5 (discussing *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337 (Fed. Cir. 2001); *Alloc, Inc. v. ITC*, 342 F.3d 1361 (Fed. Cir. 2003)). But Loftex’s characterizations of SciMed and Alloc are too grudging. In SciMed, the disclaimed method utilized by the prior art, involving a dual lumen structure, suffered from disadvantages, including “making the shaft sizes of . . . catheters larger than necessary and making the catheters stiffer in their distal regions than would be desired.” SciMed, 242 F.3d at 1344. Because the SciMed patents improved the prior art by using a coaxial lumen structure, the court held that the patent disclaimed the dual lumen configuration. *Id.* at 1345.⁷ Similarly, here, towel production methods that utilize PVA have several disadvantages, including environmental, economic, and marketing. Loftex incorrectly reads SciMed and Alloc to hold that disavowal applies only where the patented method literally would not function without the disclaimed limitation. Indeed, in those cases, the words of exclusion in the relevant claim language itself (as to dual lumen configurations in SciMed or flooring without play in Alloc) were less clear than the claim language here is in excluding PVA. Finally, as noted, the claim language itself is sufficiently clear in excluding PVA. The disclaimers in the specification thus

⁷ In *Alloc*, where the question was whether the patent excluded flooring systems without “play” between the boards, the court discussed the major disadvantages that accompanied systems without play. It did not state, however, that a flooring system without play was incapable of being built. Rather, it stated, displacement was “hard to achieve in systems without play” and that leaving “play” between the boards facilitated disassembly and reassembly. *Alloc*, 342 F.3d at 1369–70.

reinforce Trident's construction, but the Court need not reach them to rule for Trident on this point. Disavowal cases such as *SciMed* and *Alloc* serve merely to bolster Trident's argument.

In sum, the claims of the '308 Patent and the specification both support a construction that excludes PVA from the process that produced the fabric.⁸ The Court accordingly adopts Trident's proposed construction: "weaving a 2-ply yarn that is free of polyvinyl alcohol fibers such that the woven fabric is free from PVA and does not require any processing or finishing to remove PVA fibers."

E. "About 20–60 Minutes"/"About 80–95° C"

Claim 11 of the '308 Patent describes "[t]he method of claim 1, wherein step (d) comprises contacting the fabric for about 20–60 minutes with hot water having a temperature of about 80–95° C." U.S. Patent '308 4:31–33. According to *Loftex*, these terms should be construed to mean "between 20–60 minutes with variations, e.g., between 11–69 minutes" and "between 80–95° C with variations, e.g., between 71–99° C." *Loftex* CC Br. 10–11. Trident proposes a construction of "between 20–60 minutes" and "between 80–95° C." Trident CC Br. 22–23.

Loftex argues that "[t]he use of the word 'about[]' avoids a strict numerical boundary to the specified parameter." *Pall Corp. v. Micron Separations, Inc.*, 66 F.3d 1211, 1217 (Fed. Cir. 1995). Therefore, according to *Loftex*, variations as to time and temperature are permitted in the process without removing it from the scope of the '308 Patent. Trident, for its part, "does not

⁸ As Trident aptly notes: "[T]he patentee had a blank slate on which to draft his claims as broad as he thought was permissible given what was already existing in the prior art, but chose this specific language to define the scope of his invention over the prior art problems with using PVA. *Loftex* cannot . . . be allowed to argue later in litigation that the claim language is broader than what the claim (and patent) actually state." Trident Opp. Br. 11. That the patent examiner "did not identify the exclusion of PVA as a reason for finding the invention patentable," *Loftex* Opp. Br. 5–6, does not allow the Court to overlook the statements, in both the claims and the specification, that the '308 Patent "does not use PVA" in its process.

argue that [the] term ‘about’ should never have the effect of expanding a claimed range outside the specifically enumerated range. Rather, in the case of the ‘308 Patent, the intrinsic evidence does not provide any guidance to a person skilled in the art as to what sort of variations would be acceptable. . . . [T]here is no guidance regarding what temperatures or times outside the numerical range would still fall within the scope of the claims.” Trident Opp. Br. 14. In other words, because nothing in the specification of the ‘308 Patent describes temperatures or times outside the specified range, Trident argues that the only reasonable constructions are those that limit the terms to times and temperatures within the specified range. *Id.* Loftex’s proposed construction, Trident contends, would render the claim indefinite. Trident CC Br. 23.

Although Trident is correct that none of the examples given in the specification “describes hot water washing with a temperature lower than 80° C, higher than 95° C, shorter than 20 minutes, or longer than 60 minutes,” Trident Opp. Br. 14, the Court agrees with Loftex that use of the term “about” indicates that it “did not intend to limit the claimed ranges to their exact end-points.” *In re Harris*, 409 F.3d 1339, 1343 (Fed. Cir. 2005), cert. denied, 546 U.S. 1090 (2006). The Court has little basis at this point, however, without the benefit of experts or other evidence, to determine precisely what time and temperature ranges do fall within the Patent. The Court therefore declines to adopt Trident’s construction, but does not specify the exact ranges of time and temperature covered by the ‘308 Patent. Instead, the Court adopts a construction largely along the lines of Loftex’s proposal, but reserves a determination of the specific range for a later date. As in the case of what thread count range constitutes “thick yarn” and “fine count yarn,” the Court construes these terms as approximate, defined as “between about 20–60 minutes” and “between about 80–95° C.” Again here, a determination of infringement would inquire whether a person of ordinary skill in the art would regard a given

water temperature or washing time as falling within the approximate range provided for in the Patent.⁹

F. “Crodamide Ramification”

Finally, the Court is left to construe “crodamide ramification,” appearing in Claim 17 of the Patent. Loftex argues that this term should be defined as “a derivative of fatty acid amide.” Loftex CC Br. 11–12. Trident argues that the Court should find the term indefinite, because “one of ordinary skill in the relevant art cannot discern [its] boundaries,” *Haemonetics Corp. v. Baxter Healthcare Corp.*, 607 F.3d 776, 783 (Fed. Cir. 2010), and that, if the Court declines to do so, it should construe it as “the polymer additive ‘Crodamide™ ER’ made by Croda International Plc.” Trident CC BR. 23–24.

Loftex proffers that “[c]rodamide is known in the fabric and textile industry as a fabric softener agent and is a fatty acid amide.” Loftex CC Br. 11. As for “ramification,” Loftex explains that the word is a slightly flawed translation from the Chinese patent application, intended to mean “derivative.” *Id.*

The case law holds that courts should not “redraft claims to contradict their plain language in order to avoid a nonsensical result.” *Haemonetics*, 607 F.3d at 782; cf. *Ultimax Cement Mfg. Corp. v. CTS Cement Mfg. Corp.*, 587 F.3d 1339, 1348 (Fed. Cir. 2009) (holding that, since a person of ordinary skill in the art would use the word ‘anhydride’ to mean ‘anhydrite,’ with no resulting confusion . . . , interpreting the claim in that way merely restates its plain meaning”). Because Loftex concedes that the word “ramification” was a translation error,

⁹ The Court does not foreclose here a more precise construction of these terms at a later date. See *Guttman, Inc. v. Kopykake Enters., Inc.*, 302 F.3d 1352, 1361 (Fed. Cir. 2002) (“District courts may engage in a rolling claim construction, in which the court revisits and alters its interpretation of the claim terms as its understanding of the technology evolves.” (citing *Sofamor Danek Grp., Inc. v. DePuy-Motech, Inc.*, 74 F.3d 1216, 1221 (Fed. Cir. 1996))).

it would be illogical to assume that a person of ordinary skill could discern what that word signifies. Furthermore, Trident validly argues that, upon discovering the translation error, Loftex could—and should—have amended the specification to correct the error during the time the application was pending, or else obtained a certificate of correction from the Patent and Trademark Office before filing this action. Trident Opp. Br. 15. The Court therefore holds the word “ramification” to be indefinite, and therefore reads it out of the Claim.¹⁰

As to the word “crodamide,” the patent specification contemplates finishing by “contacting the fabric with a solution containing SN-308 crodamide.” U.S. Patent ‘308 at 3:45–47. Both parties agree that the Patent Examiner likely removed the term SN-308 from the body of the Patent itself, because trade names are often not permitted in patent claims. See Loftex Opp. Br. 11; Trident CC Br. 24. In this respect, it appears that SN-308 imports some meaning into the word crodamide. Furthermore, the fact that Trident was indeed able to identify a hydrophilic softener product with the name “crodamide,” see Trident CC Br. 24, indicates that the term is not devoid of meaning. Finally, Trident does not appear to argue with the statement that SN-308 is a fabric softening agent known in the industry, but rather that “crodamide ramification” is not. The specification sufficiently elucidates the word “crodamide” for a person of ordinary skill in the art to identify it as a fabric softening agent SN-308.

The Court therefore construes the phrase “crodamide ramification” as, simply, “a fatty acid amide.”

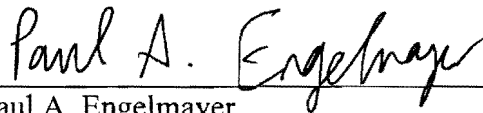
CONCLUSION

For the foregoing reasons, the disputed terms, as set forth in the parties’ claim construction submissions and at argument, are construed as set forth above.

¹⁰ When asked at argument whether “this [can] equally be read as if the word ramification never existed,” counsel for Loftex responded affirmatively. Tr. 70.

The parties are directed to submit a joint letter to the Court, by May 28, 2013, regarding proposed next steps in the case and whether, in counsel's view, the Court should schedule a conference to discuss the resolution of the case going forward.

SO ORDERED.



Paul A. Engelmayer
United States District Judge

Dated: May 15, 2013
New York, New York