

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

OMEGA FLEX, INC.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	C.A. No. 18-1004 (MN)
	)	
WARD MANUFACTURING, LLC,	)	
	)	
Defendant.	)	

**MEMORANDUM ORDER**

At Wilmington this 19th day of July 2019:

As announced at the hearing on July 15, 2019, IT IS HEREBY ORDERED that the disputed claim terms of U.S. Patent No. 7,004,510 (the “510 patent”) are construed as follows:

1. “A plurality of longitudinal, spaced ribs” means “a plurality of ribs running in a lengthwise direction and having spaces between them.”
2. “Threads” means “ridges that may be helical or non-helical.”
3. “Interior threads engaging an unthreaded outer surface of said sleeve” means “interior ridges that may be helical or non-helical that grab into an outer surface of the sleeve that does not have ridges.”
4. “A vent opening in fluid communication with said sleeve and an exterior surface of said sleeve” means “a vent opening in fluid communication with said interior of said sleeve and an exterior surface of said sleeve.”
5. “Coupled to an interior surface of said coupling” is given its plain and ordinary meaning.
6. “A shoulder to form a stop against said sleeve” means “a shoulder serving as a stop against said sleeve.”
7. “Has a higher durometer” means “is made from a harder polymer.”
8. “A threaded extension” means “an extension having ridges that may be helical or non-helical.”

The parties briefed the issues (*see* D.I. 66), submitted an appendix containing both intrinsic and extrinsic evidence (*see* D.I. 67), including expert declarations<sup>1</sup> (*see id.*, Exs. B, O, NN), and provided a tutorial describing the relevant technology<sup>2</sup> (*see* D.I. 64). The Court carefully reviewed all submissions in connection with the parties' contentions regarding the disputed claim terms, heard oral argument, and applied the following legal standards in reaching its decision:

## **I. LEGAL STANDARDS**

### **A. Claim Construction**

“[T]he ultimate question of the proper construction of the patent [is] a question of law,” although subsidiary fact-finding is sometimes necessary. *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 837-38 (2015). “[T]he words of a claim are generally given their ordinary and customary meaning [which 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.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (en banc) (internal citations and quotation marks omitted). Although “the claims themselves provide substantial guidance as to the meaning of particular claim terms,” the context of the surrounding words of the claim also must be considered. *Id.* at 1314. “[T]he ordinary meaning of a claim term is its meaning

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<sup>1</sup> Plaintiff Omega Flex, Inc. (“Plaintiff” or “Omega Flex”) submitted declarations from Glen Stevik, Ph.D., P.E., a mechanical engineer with more than thirty years of experience, including work with above and underground piping systems and tanks. (D.I. 66, Ex. B, NN). Defendant Ward Manufacturing, Inc. (“Defendant” or “Ward”) submitted a declaration from Randall King, Ph.D., P.E., a consultant with over forty years of experience in mechanical engineering, including nearly twenty years of experience in work focusing on piping systems. (*Id.*, Ex. O).

<sup>2</sup> The above-mentioned tutorial was submitted by Ward. Omega Flex did not submit a tutorial.

to the ordinary artisan after reading the entire patent.” *Id.* at 1321 (internal quotation marks omitted).

The patent specification “is always highly relevant to the claim construction analysis . . . [as] it is the single best guide to the meaning of a disputed term.” *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). It is also possible that “the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor’s lexicography governs.” *Phillips*, 415 F.3d at 1316. “Even when the specification describes only a single embodiment, [however,] the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words or expressions of manifest exclusion or restriction.” *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1372 (Fed. Cir. 2014) (internal quotation marks omitted) (quoting *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004)).

In addition to the specification, a court “should also consider the patent’s prosecution history, if it is in evidence.” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996). The prosecution history, which is “intrinsic evidence, . . . consists of the complete record of the proceedings before the PTO [Patent and Trademark Office] and includes the prior art cited during the examination of the patent.” *Phillips*, 415 F.3d at 1317. “[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Id.*

In some cases, courts “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*, 135 S. Ct. at 841. Extrinsic evidence “consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” *Markman*, 52 F.3d at 980. Expert testimony can be useful “to ensure that the court’s understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field.” *Phillips*, 415 F.3d at 1318. Nonetheless, courts must not lose sight of the fact that “expert reports and testimony [are] generated at the time of and for the purpose of litigation and thus can suffer from bias that is not present in intrinsic evidence.” *Id.* Overall, although extrinsic evidence “may be useful to the court,” it is “less reliable” than intrinsic evidence, and its consideration “is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.” *Id.* at 1318-19. Where the intrinsic record unambiguously describes the scope of the patented invention, reliance on any extrinsic evidence is improper. *See Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1308 (Fed. Cir. 1999) (citing *Vitronics*, 90 F.3d at 1583).

B. Indefiniteness

“The primary purpose of the definiteness requirement is to ensure that the claims are written in such a way that they give notice to the public of the extent of the legal protection afforded by the patent, so that interested members of the public, *e.g.* competitors of the patent owner, can determine whether or not they infringe.” *All Dental Prodx, LLC v. Advantage Dental Prods., Inc.*, 309 F.3d 774, 779-80 (Fed. Cir. 2002) (citing *Warner-Jenkinson Co. v. Hilton-Davis Chem. Co.*, 520 U.S. 17, 28-29 (1997)). Put another way, “[a] patent holder should know what he owns, and the public should know what he does not.” *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 535 U.S. 722, 731 (2002).

A patent claim is indefinite if, “viewed in light of the specification and prosecution history, [it fails to] inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). A claim may be indefinite if the patent does not convey with reasonable certainty how to measure a claimed feature. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1341 (Fed. Cir. 2015). But “[i]f such an understanding of how to measure the claimed [feature] was within the scope of knowledge possessed by one of ordinary skill in the art, there is no requirement for the specification to identify a particular measurement technique.” *Ethicon Endo–Surgery, Inc. v. Covidien, Inc.*, 796 F.3d 1312, 1319 (Fed. Cir. 2015).

Like claim construction, definiteness is a question of law, but the Court must sometimes render factual findings based on extrinsic evidence to resolve the ultimate issue of definiteness. *See, e.g., Sonix Tech. Co. v. Publications Int’l, Ltd.*, 844 F.3d 1370, 1376 (Fed. Cir. 2017); *see also Teva*, 135 S. Ct. at 842-43. “Any fact critical to a holding on indefiniteness . . . must be proven by the challenger by clear and convincing evidence.” *Intel Corp. v. VIA Techs., Inc.*, 319 F.3d 1357, 1366 (Fed. Cir. 2003); *see also Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1338 (Fed. Cir. 2008).

## **II. THE COURT’S RULING**

The Court’s rulings regarding the disputed claim terms of the ’510 patent were announced from the bench at the conclusion of the hearing. The Court’s rulings are as follows:

. . . [A]t issue we have United States [P]atent [N]o. [7,004,510] entitled “tubing containment system.”<sup>[3]</sup> There are eight terms in dispute and I am prepared to rule on each of those terms. I will not be issuing a written opinion, but I will issue an order that states my

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<sup>3</sup> The Court notes that any quotation marks appearing in this section of the Court’s Order were added for the purposes of this Order and do not appear in the July 15, 2019 hearing transcript.

rulings. I want to emphasize before I announce my decisions that while I am not issuing a written opinion[,] we have followed a full and thorough process before making the decisions I'm about to state. I reviewed the '510 Patent and the portions of the prosecution history submitted. There was full briefing on each of the disputed terms. There was [an] extensive appendix. There was a tutorial. There were expert declarations and there has been argument here today. All of that has been considered.

And as to my rulings, as an initial matter[,] I'm not going to read into the record my understandings of claim construction law generally and indefiniteness. I have a legal section standard that I've included in earlier opinions[,] including somewhat recently in *Invensus v. Samsung*, civil action number 17-1363. And I will [in]corporate that law and adopt it into my ruling today.

Additionally, I note that the parties have proposed competing definitions of a person of ordinary skill in the art. There are some similarities between those constructions and some differences. Notwithstanding the differences, however, the parties agree that [] claim construction does not depend on which definition is ultimately adopted.

First, as to the term[,] “a plurality of longitudinal, spaced ribs” in claim 1[,] Plaintiff argues that it means “raised segments with a lengthwise direction and having spaces there between.” Defendant argues that the term is indefinite or[,] alternatively[,] that it means “a plurality of ribs separated by spaces wherein each rib runs the length of the sleeve.” The crux of the dispute is whether the language advocated by defendant that each rib runs the length of the sleeve should be included and if it is not, is the term as plaintiff[] propose[s] indefinite. Here, I agree with plaintiff that the proposed additional language should not be read into the claim term and I will construe the term as “a plurality of ribs running in a lengthwise direction and having spaces between them.” By using the term ribs[,] I do not mean to imply anything regarding how far the ribs extend lengthwise and do not mean to read in that the ribs must run the length of the sleeve.

The additional language proposed by defendant is found in the specification where in discussing, quote, one embodiment, end quote, where the fluid transported by the tubing is natural gas, it notes that the “ribs are longitudinal and run the length of the sleeve.” That's in column one, lines 56 through 58. The claim, however, only refers to the ribs being longitudinal and the language that defendant would add is not included in or required by the claim. Rather, what

defendant[] propose[s] seems to be an attempt to import an embodiment from the specification into the claims and it is well established that limitations not existing in the claims cannot be imported from the specification. That's *Applera Corp. versus Micromass U[K]*, 186 F. Supp[.] 2d 487 at 508 in the District of Delaware in 2002.

Moreover, the specification does not require that the ribs run the length of the sleeve. The specification teaches that the piping system is designed to allow for safe venting of combustible fluids in the event that the corrugated tubing leaks. It states that "in the event that tubing 12 leaks, fluids travel along spaces between ribs 20 for venting through coupling," column one, lines 59 to 62.

With respect to the ribs, the specification[,] again, does not require that the ribs run the entire length of the sleeve. The specification discusses Fig. 2, which shows "a cross section of sleeve 16 showing the inner diameters of sleeve 16 having a number of ribs separated by spaces." That's column one, lines 54 to 56. Fig. 2 shows that the ribs are formed on the interior of the sleeve. The spaces between the ribs can also be seen and th[e] patent explains that "fluid travels along the spaces between the ribs for venting through coupling." Column one, lines 61 and 62.

As I noted before, the specification discussing the embodiment of Fig. 2 recites that the ribs are longitudinal and run the length of the sleeve. I agree with plaintiff that by stating these as separate features joined by the conjunction "and," . . . that the specification is suggesting that those are two different features. The specification is thus teaching that longitudinal is not necessarily co-extensive with running the length of the sleeve. Neither the claim language nor the specification indicate that a rib can[not] be longitudinal without running the length of the sleeve.

Defendant relies on the prosecution history, including the Webb and other prior art references, which refer to ribs and apparently show them running the length of the sleeve. It is not clear, however, that Webb is limited to ridges that run the entire length of the sleeve and[,] certainly not so clear[,] based on the disclosures that I've seen here and the arguments made today nor the arguments made by the patentee during prosecution[,] that those essentially dictate that a person of skill in the art would understand that a longitudinal rib must extend the entire length.

As for [in]definiteness, I take defendant's points about plaintiff's proposed construction, but I'm not convinced that

defendant has established that the term is indefinite as I've construed it on the record before me. For a claim to be held invalid for indefiniteness[,] there must be clear and convincing evidence. And that's *Microsoft v. i4i* and the *Nautilus* case[.]

At this time, the Court finds that defendant has not met its burden to show that the term is indefinite[.] [H]owever[,] should there still be disagreement regarding this term in the future[,] defendant may raise the issue at summary judgment or as otherwise appropriate after full fact and expert discovery.

The second term is "threads." Actually[,] we have a number of terms here. We have a second term "threads," the third term "interior threads engaging an unthreaded outer surface of said sleeve[.]" and the final term, which was the [eighth] term, "a threaded extension." Both parties . . . argue that the second term should have its plain and ordinary meaning but they differ as to what that is. Plaintiff asserts that it means "ridges that may be annular or helical." Defendant asserts that it means "helical ridges."

Similarly[,] as to the third term, "interior threads engaging an unthreaded outer surface of said sleeve," plaintiff argues that the term should have its plain and ordinary meaning and no construction is needed. Alternatively[,] plaintiff[] proposes that the term means "interior ridges that may be annular or helical that grab into an outer surface of the sleeve that does not have ridges." Defendant argues that it means "interior helical ridges that grab into an outer surface of the sleeve that does not have helical ridges to secure the coupling to said sleeve."

And for the [eighth] term, plaintiff again asserts plain and ordinary meaning, no construction needed[,] and plaintiff offers as an alternative[,] "an extension having ridges that may be annular or helical." Defendant also argues for the plain and ordinary meaning, but asserts that it is "an extension having helical ridges."

The crux of the disputes [for these three terms] as has been discussed today is whether the threads must be helical as advocated by the defendant or may also be annular as proposed by the plaintiff. Here, I agree with the plaintiff and construe the term "threads" to mean "ridges that may be helical or non-helical."

The term "interior threads engaging an unthreaded outer surface of said sleeve" is construed to mean "interior ridges that may be helical or non-helical that grab into an outer surface of the sleeve that does not have ridges" and . . . I construe the final term, the



“threaded extension” to mean “an extension having ridges that may be helical or non-helical.”

The '510 Patent simply refers to the first end of the coupling having interior threads. It does not use any term such as helical or annular to define them. Both sides have cited extrinsic evidence to support their positions, plaintiff that threads can be helical, annular or even longitudinal and defendant that they are helical in the context of the art of this patent. Defendant points to Fig. 4 and some statements in the prosecution history showing the fitting with threaded extensions which would require helical threads. Those, however, appear to refer to the embodiments or examples of the invention. While plaintiff agrees that in some circumstances[,] threads might need to be helical, they disagree that that is the case here. They note that claim 1 states that the coupling's threads are for engaging an unthreaded outer surface of said sleeve. That's looking at claim 1, the language itself. Because the outer surface of the sleeve is unthreaded, there is no screwing together of corresponding thread and components. Instead[,] the thread is intended to grab into the surface of the sleeve to secure the coupling to the sleeve. This was explained during the prosecution of the '510 Patent in distinguishing the Webb prior art. For example, at page numbered OMF43 through OMF44, the plaintiff patentee explained this. As in the *Sanofi versus Eli Lilly* case from the District of Delaware[,] the claim language does not require helical threads and helical threads are not needed for the invention to work. So I'm not going to require helical in the construction of the three thread terms.

The fourth term is “a vent opening in fluid communication with said sleeve and an exterior surface of said sleeve.” Again, plaintiff asserts that the term should be given its plain and ordinary meaning or[,] alternatively[,] “a vent opening that allows fluid[,] e.g. gas[,] to flow from the interior of a sleeve to outside the sleeve.” Defendant counters that the term means “a vent opening in fluid communication with said interior of said sleeve and an exterior surface of said sleeve outside the coupling.” Here[,] I will construe the term to mean “a vent opening in fluid communication with said interior of said sleeve and an exterior surface of said sleeve.”

Though the language proposed is slightly different[,] both parties seem to agree that other than[,] as defendant[']s said in their section of the joint brief clarifying that the exterior surface of the sleeve is located outside of the coupling, there is no need to construe the term. Here, having reviewed the papers and heard argument, there does not seem to be a dispute that the exterior surface claimed means an exterior surface outside the coupling. That being said, . . .

I don't see the need to add that language in the construction given, so I have dropped that off of defendant's proposal.

As for plaintiff's assertion that exterior surface means simply outside the coupling, I agree with defendant that that proposal is inconsistent with the plain language of the claim. Plaintiff points to language in the specification as well as statements during the prosecution to support its proposal. However, that language is not the language used in the claim. I understand that the prosecution history says the vent opening extends from the interior of the sleeve to the exterior of the sleeve, but it does not make clear that patentee was essentially reading out or ignor[ing] the explicit claim term that refers to the surface of the sleeve. Indeed[,] the patentee knew how to state that the vent opening expelled gas to the, quote, outside, end quote, but when it chose claim language[,] it specified that the vent opening was in fluid communication with the interior surface of the sleeve as well as the exterior surface of the sleeve. That language cannot be simply read out of the claim.

The fifth term is . . . "coupled to an interior surface of said coupling," in claim 1. Plaintiff argues that the term should have its plain and ordinary meaning, no construction is needed and does not offer an alternative. Defendant asserts that the term is indefinite.

As with the earlier assertions of indefiniteness, I am not convinced that defendant has met its burden to show that this term is indefinite on the record before me. There is evidence, including testimony from defendant's expert, that a person of ordinary skill in the art could understand that element can be coupled in a variety of ways, even if that word is not explicitly stated in the specification. And defendant has cited no law to suggest that a clear term in an independent claim could be rendered indefinite by a later dependent claim. Again, however, should there still be a disagreement regarding this term down the road or to the extent defendant wants to argue about an improper antecedent basis in claim 8, defendant may raise those issues later as appropriate. For now, though, the Court agrees with plaintiff and adopts the plain and ordinary meaning for this term.

The sixth term is "a shoulder to form a stop against said sleeve," which is found in claim 4. Here again, plaintiff argues that the term should have its plain and ordinary meaning, no construction is needed[,] and it offers as an alternative[,] "a shoulder serving as a stop to limit the insertion depth of said sleeve." Defendant asserts that the term means "a shoulder serving as a stop against said sleeve." The Court agrees with defendant and adopts the following

construction[:] “A shoulder serving as a stop against said sleeve.” This construction is consistent with the language of claim 4, which claims that there is a shoulder to form a stop against said sleeve. It also is supported by the specification which states that the coupling “has a shoulder 26 that serves as a stop.” And that’s in column one, line 66 through 67.

Plaintiff contends that if the Court adopts defendant’s construction[,] the Court should read in the complete phrase from the specification and adopt the quote, to limit the insertion depth of said sleeve, end quote, as well. The Court declines to do so. The claim language recites that the shoulder is, quote, “forming a stop against said sleeve.” There is no mention in the claim language regarding insertion depth and reading in the full phrase would read in a preferred embodiment where there is no clear evidence that the patentee sought to define the term in that way. Although defendant[’]s construction uses language from the same embodiment, that language is consistent with the only way shoulder is described as being a stop in the patent. Therefore[,] the Court will adopt defendant’s construction of “a shoulder serving as a stop against said sleeve.” That being said, the Court understands that there is a dispute between the parties regarding whether the claim requires that the sleeve actually touch the shoulder. Defendant contends that this is required and plaintiff’s construction would not require the sleeve to touch the shoulder. Having agreed with defendant’s language, however, I am not ruling that the stop actually must touch the shoulder. As I understand the patent, the shoulder serves as a stop for the sleeve if it[’]s needed to do so.

The final term, “has a higher durometer,” which is found in claim 5, plaintiff asserts that this means “is made from a harder material[,]” whereas defendant asserts that it means “is made from a harder polymer.” Here, I agree with defendant and adopt the construction, “is made from a harder polymer.” As defendant points out, claim 5[’s] [] use of the term higher durometer is one of only two times that term appears in the ’510 Patent. The other use is in the ’510 Patent specification which in column 2, line 7 through 11 states, quote, “in one embodiment coupling 18 is made from a harder polymer (i.e., higher durometer) than the sleeve 16 to facilitate threading coupling 18 on sleeve 16. Alternatively, coupling 18 may be metal depending on application.”

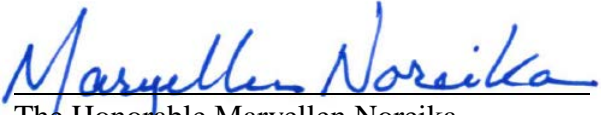
The dispute here is whether the specification defines the term “higher durometer.” While I understand plaintiff’s argument that the i.e. phrase is describing a way of measuring, I disagree that that is the case here and find that[,] as used[,] plaintiff did define the

term “higher durometer.” By using i.e. in the definition, which means “in other words,” the term higher durometer was defined as “made from a harder polymer.” And I’m citing there the *SkinMedica* case which was discussed earlier which quoted the *Edwards LifeSciences* case with *Cook* at 582 F.3d 1322 at page 1333 from the [F]ederal [C]ircuit 2009. Also, the *Galderma Labs versus Teva Pharmaceuticals* case, civil action [number] 17-1783, which is Judge Andrews’ case from the District of Delaware.

I also note in construing this term that Omega’s expert agreed that i.e. actually means “in other words” or provides a definition.

The patent does not use higher durometer in any other manner than the definition provided, “made from a harder polymer.” I also find compelling the defendant[’]s submissions suggesting that durometer is most commonly used in discussing plastics, rubber, polymers.

And so with that, I believe I have construed the terms that are at issue and that were argued here before me.

  
The Honorable Maryellen Noreika  
United States District Judge