

United States District Court,
S.D. Texas, Houston Division.

ADVANCED PRODUCTION AND LOADING, INC,
Plaintiff.

v.

**SINGLE BUOY MOORINGS, INC., Single Buoy Moorings, Single Buoy Moorings of America, Inc.,
and SBM/Imodco, Inc,**
Defendants.

April 26, 2004.

Glenn A Ballard, Jr, Bracewell & Giuliani LLP, Houston, TX, for Plaintiff.

Lee L. Kaplan, Smyser Kaplan & Veselka, Houston, TX, for Defendants.

MEMORANDUM AND ORDER

EWING WERLEIN, JR., District Judge.

Plaintiff Advanced Production and Loading, Inc. ("APL") seeks a declaratory judgment that APL's equipment does not infringe any claims of United States Patent No. 5,816,183 (the "'183 Patent"), entitled "Submerged CALM Buoy," of which Defendant Single Buoy Moorings, Inc. ("SBM") is the assignee. SBM contends that APL's DWSAL offshore loading system infringes Claim 1 of the '183 Patent by its inclusion of a buoy that is kept submerged by the weight of catenary anchor lines and a swivel and a turntable with a short arm to create rotational movement. The '183 Patent was filed on October 7, 1994, through the Patent Cooperation Treaty, with a subsequent United States filing in accordance with 35 U.S.C. s. 371 on March 31, 1997, and was issued October 6, 1998. The parties seek construction of several claim terms contained in Claim 1 of the '183 Patent.

The Court conducted a *Markman* hearing during which the parties presented evidence and arguments in support of their proposed claim constructions. The parties also submitted briefs on construction of the claims. Although not requested, the parties have also filed post-submission briefs, which the Court has considered. FN1 After carefully considering the parties' submissions, the ' 183 Patent, and those portions of the prosecution history of ' 183 Patent submitted by the parties, the Court concludes as follows:

FN1. SBM also filed submitted Proposed Findings of Fact and Conclusions of Law, which APL moves to strike. SBM's document is essentially further argument, and APL has responded thereto in its Motion to Strike. Although none of this was requested or necessary, both parties' submissions are accepted as additional argument, and the Motion to Strike (Document No. 68) is DENIED.

I. Law Governing Claim Construction

Claim construction is strictly a legal question for the court. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 983-84 (Fed.Cir.1995), *aff'd*, 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). "When construing a claim, a court should look first to the intrinsic evidence, *i.e.*, the claims themselves, the written description portion of the specification, and the prosecution history." *Bell & Howell Document Mgmt. Prods. Co. v. Altek Sys.*, 132 F.3d 701, 705 (Fed.Cir.1997); *see also* *Markman*, 52 F.3d at 979. "Expert testimony, including evidence of how those skilled in the art would interpret the claims, may also be used." *Markman*, 52 F.3d at 979 (internal citations omitted). Expert testimony that is inconsistent with unambiguous intrinsic evidence, however, should be accorded no weight. *Bell & Howell Document Mgmt. Prods. Co.*, 132 F.3d at 706; *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1584 (Fed.Cir.1996); *Markman*, 52 F.3d at 981 (stating that extrinsic evidence can be used only for the court's understanding of the patent, not for the purpose of varying or contradicting the terms of the claims).

"[A]s a general rule, all terms in a patent claim are to be given their plain, ordinary and accustomed meaning to one of ordinary skill in the relevant art." *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed.Cir.2001); *see also* *Toro Co. v. White Consol. Indus., Inc.*, 199 F.3d 1295, 1299 (Fed.Cir.1999) ("[W]ords in patent claims are given their ordinary meaning in the usage of the field of the invention, unless the text of the patent makes clear that a word was used with a special meaning."). A court must give a claim term "the full range of its ordinary meaning as understood by an artisan of ordinary skill." *Rexnord*, 274 F.3d at 1342 (citing *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 989 (Fed.Cir.1999)).

A court may refer to dictionaries to determine the proper definition of claim terms including technical dictionaries, encyclopedias, and treatises that establish specialized meanings in particular fields of art. *Inverness Med. Switzerland v. Princeton Biomeditech Corp.*, 309 F.3d 1365, 1369 (Fed.Cir.2002). When a claim term does not have a specialized meaning, however, "standard dictionaries of the English language are the proper source of ordinary meaning for the [term]." *Id.* If a claim term has multiple meanings, the court must interpret the term to encompass all consistent meanings, based on the intrinsic evidence. *Texas Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1203 (Fed.Cir.2002). The intrinsic record "must be examined in every case to determine whether the presumption of ordinary and customary meaning is rebutted." *Id.* at 1204. As the Federal Circuit noted:

In short, the presumption in favor of a dictionary definition will be overcome where the patentee, acting as his or her own lexicographer, has clearly set forth an explicit definition of the term different from its ordinary meaning.... Further, the presumption also will be rebutted if the inventor has disavowed or disclaimed scope of coverage, by using words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.

Id. (internal citations omitted). *Accord* *Rambus Inc. v. Infineon Techs. AG*, 318 F.3d 1081, 1088 (Fed.Cir.2003) (noting that "to help determine the proper construction of a patent claim, a construing court consults the written description and the prosecution history").

This last circumstance-where an "inventor has disavowed or disclaimed scope of coverage, by using words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope"-is termed "prosecution disclaimer." Prosecution disclaimer is a well-established doctrine and fundamental precept in claim construction jurisprudence that "preclud[es] patentees from recapturing through claim interpretation specific meanings disclaimed during prosecution." *Omega Engineering, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed.Cir.2003). Disclaimer during the prosecution of a patent may include instances where "the patentee distinguished [a] term from prior art on the basis of a particular embodiment, expressly disclaimed

subject matter, or described a particular embodiment as important to the invention." *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366-67 (Fed.Cir.2002). "[W]here the patentee has equivocally disavowed a certain meaning to obtain his patent, the doctrine of prosecution disclaimer attaches and narrows the ordinary meaning of the claim congruent with the scope of surrender." *Omega Engineering*, 334 F.3d at 1324. Prosecution disclaimer must be narrowly tailored, however, to exclude only claim scope that has been "clearly and unmistakably" disclaimed. *See id.* at 1325-26 ("[F]or prosecution disclaimer to attach, our precedent requires that the alleged disavowing actions or statements made during prosecution be both clear and unmistakable."). *See also Golight, Inc. v. Wal-Mart Stores, Inc.*, 355 F.3d 1327, 1332 (Fed.Cir.2004); *Liquid Dynamics Corp. v. Vaughan Co., Inc.*, 355 F.3d 1361, 1368 (Fed.Cir.2004); *Cordis Corp. v. Medtronic Ave., Inc.*, 339 F.3d 1352, 1361 (Fed.Cir.2003); *Anchor Wall Sys., Inc. v. Rockwood Retaining Walls, Inc.*, 340 F.3d 1298, 1307 (Fed.Cir.2003) ("During prosecution, an inventor may surrender coverage of material that would otherwise be covered by a claim; however, the surrender must be clear and unmistakable.").

II. Discussion

A. The '183 Patent

The '183 Patent, which consists of 5 claims, four of which are dependent, discloses a Catenary Anchor Leg Mooring (CALM) buoy comprising a body with buoyancy, means for connecting the buoyant body to catenary anchor chains to anchor the body to the seabed, and a turntable being rotatable with respect to the body with buoyancy. As the "Summary of the Invention" of the '183 Patent discloses, the turntable has a mooring means for a floating unit such as a vessel, a swivel and a means for connecting at least one hose between at least one swivel and a submerged pipe structure extending over or into the seabed to any subsea well or the like, as well as means for connecting at least one hose between at least one swivel and at least one vessel, and is characterized in that the catenary anchor chains which have a weight such that the CALM buoy as a whole is kept underwater at least during normal practice.

B. Claim Construction

The parties seek construction of the following terms and/or phrases in Claim 1: "rigid mooring arm," "relatively short length," "buoy as a whole is kept underwater," "for connection to a floating vessel via an anchor line or chain," and "swivel." Both parties agree that the asserted claim terms should be afforded their ordinary and customary meaning. Further, the parties agree that the intrinsic evidence, including the prosecution history, can be used to limit the scope of the claim in some instances.

For ease of comprehension, Claim 1 is reproduced, with the disputed terms underlined:

1. A catenary anchor leg mooring buoy comprising a buoyant body, means for connecting the buoyant body to catenary anchor lines for anchoring the body to the seabed, the catenary anchor lines having a weight such that the *buoy as a whole is kept underwater* when the anchor lines are attached to the seabed, the buoy further comprising a turntable which is rotatable with respect to the buoyant body, said turntable having a *rigid mooring arm for connection to a floating vessel via an anchor line or chain* and for exerting a rotational moment on the turntable upon weathervaning of the vessel around the buoy, said mooring arm having a *relatively short length* such that when in an essentially upright position from the buoyant body toward sea level, the mooring arm extends no further than to just below or just above the sea level, a *swivel* and means for connecting at least one hose between the swivel and a submerged pipe structure extending over or into the seabed to any subsea well, and means for connecting at least one hose between the swivel

and the floating vessel.

1. "*Rigid mooring arm*"

SBM argues for the following construction of the term "rigid mooring arm" in Claim 1: "the non-flexible portion of the turntable that branches, extends, or projects out from the symmetrical portion (located at the bearings) of the turntable." APL seeks to limit this definition to "a separate, moveable, hinged arm." SBM argues that reading the limitations of "separate" and "hinged" into Claim 1 to modify the term "arm" is improper because the limitations are not supported by the intrinsic evidence.

The term "arm" is everywhere understood as the human upper limb. Its metaphorical use as applied to machinery and other inanimate objects is therefore well understood. For examples of the latter usage, Webster's Ninth New Collegiate Dictionary (1991) defines "arm" as "2d. a slender part of a structure, machine, or an instrument projecting from a main part, axis, or fulcrum." Webster's New World Dictionary of the American Language (1982) defines "arm" as "anything thought as armlike, esp. in being attached or connected to something larger." The Oxford Dictionary (2d ed.1989) defines "arm" as "[a] narrower portion or part of anything projecting from the main body ... of a machine or other object." Webster's II New Riverside University Dictionary (1994) defines "arm" as "[s]omething branching out from a large mass." Reader's Digest Illustrated Encyclopedic Dictionary defines "arm" as "[a] part projecting from a support in a machine." The term "arm" as used in Claim 1 requires no construction. FN2 The argument here is whether, as APL contends, the intrinsic evidence of the ' 183 Patent requires that the "arm" of the turntable be "separate" and "hinged."

FN2. The term also is not uncommon to the offshore mooring industry. SBM has used the term "arm" in prior patents relevant to the offshore mooring industry to refer to a broad range of structures, all of which are or become narrower or slenderer than the structure to which they are attached as they extend or project outward. *See, e.g.*, United States Patent No. 5,041,038 (Poldervaart, Aug. 20, 1991), Figs. 3 and 4, at 3; United States Patent No. 4,568,295 (Poldervaart, Feb. 4, 1986), Fig. 7, at 37; United States Patent No. 4,534,740 (Poldervaart, Aug. 13, 1985), Figs. 3 and 4, at 18; United States Patent No. 4,527,501 (Poldervaart, July 9, 1985), Figs. 1 and 2, at 1. Other patentees employ the same understanding. *See* United States Patent No. 6,503,112 B1 (Chadwick, Jan. 7, 2003), Fig. 1, at 29; United States Patent No. 4,417,537 (Di Telia, Nov. 29, 1983), Figs. 1 and 2., at 13.

First, the word "separate" does not appear in the intrinsic evidence, nor is "separate" within the ordinary meaning of "arm." Moreover, Claim 1 teaches that the "buoy" is "comprised of" a "turntable *having* a rigid mooring arm," which implies that the turntable possesses an "arm" as a constituent part. APL argues that for the arm to exert "a rotational movement on the turntable," it must be separate from the turntable. This seems not to comport with the prosecution history where, in the Remarks section of the May 1998 Amendment, the applicant distinguished three prior art references by stating that the "short and rigid arm [is] *connected* to a turntable of the mooring buoy...." *Amendment*, Document No. 53 ex. B, at SBM 00296 (emphasis added). It is in this sense that the turntable *has* a rigid mooring arm capable of exerting a rotational movement on the turntable upon weathervaning of the vessel around the buoy. To limit the arm as "separate" from the turntable is not supported in the claim or prosecution history. The rigid mooring arm is therefore not limited to a feature that is "separate" from the turntable.

APL argues further that the intrinsic evidence requires that the "rigid mooring arm" be "hinged." SBM

responds that under the doctrine of "claim differentiation," there is a presumption that the limitations of dependent Claim 5, which provide, among other things, that the mooring arm have a "pivotal connection," cannot be read into independent Claim 1. Hence, SBM contends, Claim 1 does not require that the "rigid mooring arm" be hinged because such construction would be superfluous to Claim 5 and would therefore be presumptively unreasonable. SBM maintains, moreover, that there is no "clear and unmistakable" limitation of claim scope in the prosecution history that would overcome the presumption and support the reading of the "hinge" limitation into the "rigid mooring arm" phrase of Claim 1.

Claim 1 describes the rigid mooring arm as "having a relatively short length such that when in an essentially upright position from the buoyant body toward sea level, the mooring arm extends no further than just below or just above the sea level." Because the above-quoted "when" clause modifies the phrase "rigid mooring arm," APL argues that proper construction of the "when" language means that the rigid mooring arm must be moveable from the buoyant body to an upright position toward sea level. "When" refers to the variable positions of the rigid mooring arm 6 and 6', as shown in Figures 1 and 2 of the '183 Patent. Therefore, APL argues, the rigid arm must be hinged, so as to be moveable between an oblique position from the buoyant body, as represented by mooring arm 6, and the position "when in an essentially upright position from the buoyant body," as represented by mooring arm 6'.

The fact that the embodiment shown in Figures 1 and 2 of the '183 Patent depicts a buoy with a pivotal arm does not restrict the scope of the claim phrase "rigid mooring arm" necessarily to include a hinged arm. Indeed, the inventor described the embodiment shown in Figures 1-3 as the "most preferred at the time being," and added, "it will be immediately clear that a lot of amendments can be introduced without leaving the scope of protection." *See Teleflex*, 299 F.3d at 1327 ("[T]he number of embodiments disclosed in the specification is not determinative of the meaning of disputed claim terms."); *CCS Fitness*, 288 F.3d at 1366 (noting that an accused infringer cannot overcome the "heavy presumption" that a claim term takes on its ordinary meaning "simply by pointing to the preferred embodiment or other structures or steps disclosed in the specification or prosecution history.").

In determining the meaning of "when," in the phrase, "when in an essentially upright position from the buoyant body toward sea level," it is appropriate to consider the "broad range" of consistent dictionary definitions because the language has no specialized meaning. *See Texas Digital*, 308 F.3d at 1203. Both parties agree that included in the full range of meanings for the word "when" is this definition: "in the event that: IF." MERRIAM-WEBSTER ONLINE DICTIONARY, *id. ex. G-34*. *See also* THE OXFORD DICTIONARY (2d ed.1989). Therefore, in the absence of any evidence of clear disavowal of claim scope, the claim phrase "said mooring arm having a relatively short length such that when in an essentially upright position from the buoyant body toward sea level, the mooring arm extends no further than to just below or just above sea level" covers both an arm that is movable by pivot or hinge to different angles with respect to the buoyant body and an arm that is not so pivoted or hinged. *See Teleflex*, 229 F.3d at 1327 ("[C]laim terms take on their ordinary and accustomed meanings unless the patentee demonstrated an intent to deviate from the ordinary and accustomed meaning of a claim term by redefining the term or by characterizing the invention in the intrinsic record using words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.").

Contrary to APL's contention, the prosecution history of the '183 Patent does not indicate a clear intent by SBM to disavow any construction of "arm" other than one that requires a hinge. APL, in support of its argument, relies on this single excerpt from the Remarks in support of the November 1997 Amendment:

By means of the *hinging* arm 6 and the anchor line 14 in the present invention, the anchor line 14 can always maintain an optimum alignment with a catenary anchor line 4 for optimum force transmission.

Amendment, Document No. 55 ex. B, at SBM 00279 (emphasis added). This sentence is found in that segment of the Remarks that distinguishes the German reference 27,52,266 (the "German patent"). In these Remarks, the applicant devotes at least two or three pages to a series of distinctions between the German Patent, which had been identified as prior art in the rejection of original claims 1-6. In the course of making several distinctions between the '183 Patent and the German Patent, the applicant refers no fewer than six times to "arm 6" of the '183 Patent but only once-in the sentence quoted above-is "arm 6" modified by the word, "hinging." After having reviewed the Remarks and this portion of the prosecution history, it is evident that no "clear and unmistakable disavowing statements" are contained in the prosecution history that limit the scope of Claim 1's "arm" only to a "hinging arm." Instead, this segment of the prosecution history is amenable to several reasonable interpretations and to some extent is ambiguous.

Courts regularly decline to apply the doctrine of prosecution disclaimer where, as here, "the alleged disavowal of claim scope is ambiguous." *Omega Engineering*, 334 F.3d at 1324. *See also Rexnord*, 274 F.3d at 1347; *Northern Telecom Ltd. v. Samsung Elecs. Co.*, 215 F.3d 1281, 1293-95 (Fed.Cir.2000); *Kothmann & Kothmann, Inc. v. Trinity Indus., Inc.*, 287 F.Supp.2d 673, 687 (S.D.Tex.2003) (Rosenthal, J.). Therefore, the doctrine of prosecution disclaimer does not operate in this case to limit the scope of Claim 1.

The doctrine of "claim differentiation" lends further support to SBM's proposed construction. There is presumed to be a difference in meaning and scope when different words or phrases are used in separate claims. *See Comark Communications, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed.Cir.1998). To the extent that the absence of such difference in meaning and scope would make a claim superfluous, the doctrine of claim differentiation embodies the presumption that the difference between claims is significant. *See Tandon Corp. v. U.S. Int'l Trade Com'n.*, 831 F.2d 1017, 1023 (Fed.Cir.1987). Under the doctrine of claim differentiation, absent "clear and persuasive" indications to the contrary, Claim 1's "rigid mooring arm" is not limited to having a "pivotal connection," the limitation of the narrower dependent Claim 5. *See Modine Mfg. Co. v. United States Int'l Trade Comm'n*, 75 F.3d 1545, 1551 (Fed.Cir.1996) ("Such a presumption [of claim differentiation] can be overcome, but the evidence must be clear and persuasive.").

Dependent Claim 5 reads: "Catenary anchor leg mooring buoy according to claim 4, wherein the mooring arm has a buoyant end and a second end, a pivotal connection connecting the buoyant end to the buoy, and a means for connecting a mooring hawser to the second end." This limitation of "a pivotal connection" is not found in Claim 1 or any prior dependent claims. Moreover, it is recited as "*a* pivotal connection"-not "*the* pivotal connection." As has been seen, the intrinsic evidence does not favor limiting the scope of Claim 1's "arm" only to an "arm having a pivotal connection" or a "hinging arm." The presumption of claim differentiation between independent Claim 1 and dependent Claim 5 has therefore not been rebutted with clear and persuasive evidence.

Accordingly, the Court finds that the term "rigid mooring arm" is a clear and descriptive term that requires no further definition to one of ordinary skill in the relevant art. Moreover, the Court concludes that the term as used in Claim 1 is not limited to being "separate" and "hinged."

2. "Relatively short length"

SBM seeks to construe the phrase "relatively short length" in Claim 1, as follows:

... said mooring arm having a relatively short length such that *when/if in an essentially upright position from the buoyant body toward sea level, it extends/would extend no further than to just below or just above sea level*

APL, however, argues for the following construction:

... said mooring arm having *enough length to exert significant turning forces on the turntable, and such that when in an essentially upright position from the bouyant body toward sea level, the mooring arm extends no further than to just below or just above sea level,*

Although neither party disputes that Claim 1 contains a maximum length limitation on its face (*i.e.*, "a relatively short length such that when in an essentially upright position from the buoyant body toward sea level, the mooring arm extends no further than just below or just above sea level"), APL's construction proposes that a *minimum* length limitation be read into Claim 1. The minimum length limitation does not appear on the face of Claim 1. APL argues, however, that the prosecution history of the '183 Patent supports the reading of the limitation into Claim 1.

In distinguishing the SBM device from the Urdshals et al. 5,288,253 reference (the "Urdshals patent"), SBM argued to the Patent and Trademark Office ("PTO"):

By contrast, the relatively short arm 6 of the present invention, to which the vessel is connected via an anchor chain or rope, as can clearly be seen from Figure 1, will, upon weathervaning of the vessel around the buoy, transmit a rotational torque onto turntable 5. The rigid arm 6 is relatively short and can exert a rotational torque on the turntable which is significantly larger than if the mooring hawser 14 in Figure 1 of the present invention were to be directly connected to the turntable 5 as is the case in the URDSHALS et al. reference.

Amendment, Document No. 55 ex. B, at SBM 00294-00295. In this passage, SBM is distinguishing from the Urdshals patent the specific ability of the ' 183 Patent's "relatively short arm" to exert a significantly larger rotational torque on the turntable than if the mooring hawser were directly connected to the turntable. *See* CCS Fitness, 288 F.3d at 1366-67 (noting that prosecution disclaimer may operate to limit claim scope where "the patentee distinguished [a] term from prior art on the basis of a particular embodiment."). This language from the prosecution history is sufficient to meet the "clear and unmistakable" standard set forth in *Omega Engineering* to support a finding of prosecution disclaimer. Thus, prosecution disclaimer applies and a minimum limitation is read into Claim 1 such that the "rigid mooring arm" be long enough to exert a significantly larger rotational torque on the turntable than if the mooring hawser were directly connected to the turntable.

Based on the foregoing, the claim phrase "relatively short length" as used in Claim 1 is construed to mean "said mooring arm having a minimum length long enough to exert a significantly larger rotational torque on the turntable than if the mooring hawser were directly connected to the turntable and having a maximum length such that when in an essentially upright position from the buoyant body toward sea level, the mooring arm extends no further than to just below or just above sea level."

3. "Buoy as a whole is kept underwater"

APL argues for the following construction of the phrase "buoy as a whole is kept underwater" as it is used in Claim 1: "fully equipped mooring buoy is completely submerged, and no parts float on the surface of the sea." SBM maintains, contrary to APL's contention, that this claim phrase does not preclude the use of a second, non-mooring surface buoy.

When a patent claim uses the word "comprising" as its transitional phrase, the use of "comprising" creates a presumption that the body of the claim is open. In the parlance of patent law, the transition "comprising" creates a presumption that the recited elements are only a part of the device, that the claim does not exclude additional, unrecited elements. *See* KCJ Corp. v. Kinetic Concepts, Inc., 223 F.3d 1351, 1356 (Fed.Cir.2000). Here, both parties agree that Claim 1 recites "a catenary anchor leg mooring buoy *comprising*": (1) three "means for connecting"; (2) a "buoyant body"; (3) a "turntable"; (4) a "rigid mooring arm"; and (5) a "swivel," and that these elements make up the "buoy as a whole." Because Claim 1 contains this "open-ended" claim phrase language, however, SBM contends that the "buoy as a whole" could be "comprised of" other elements, such as an additional, non-mooring surface buoy.

It is well-settled that consistency in claim interpretation is important. *Burke, Inc. v. Bruno Indep. Living Aids, Inc.*, 183 F.3d 1334, 1337 (Fed.Cir.1999) (citing *Markman*, 116 S.Ct. at 1396). Claim 1 of the '183 Patent requires that the "buoy as a whole" be "kept underwater." Any additional, unrecited elements covered by the "comprising" language, therefore, must also comport with the limitation in Claim 1 that all of the catenary anchor line mooring buoy's components be kept underwater in order to preserve internal consistency within the claim. *See* *Applera Corp. v. Micromass UK Ltd.*, 186 F.Supp.2d 487, 503 (D.Del.2002) (" '[C]omprising' can neither narrow nor broaden the meaning of the claim limitations subsequently recited."). Since the presence of an additional part or component of the mooring buoy floating on the surface of the sea would contradict the requirement in Claim 1 that all of the catenary anchor line mooring buoy's components, recited and unrecited, be kept *underwater*, Claim 1 does not cover a catenary anchor line mooring buoy featuring component(s) that float on the surface of the sea.

Accordingly, the Court agrees with APL's proposed construction of the phrase "buoy as a whole is kept underwater" as it is used in Claim 1 of the '183 Patent.

4. "For connection to a floating vessel via an anchor line or chain"

APL contends that the limitation "directly" should be read into the claim phrase "for connection to a floating vessel via an anchor line or chain." Hence, according to APL, the phrase should read, a rigid mooring arm "connected *directly* to the vessel via an anchor line or chain with no intermediate floating buoy." SBM, on the other hand, construes the phrase as requiring the arm to "have the capability for connection, either directly or indirectly, to a floating vessel with an anchor line or chain." APL argues that permitting an indirect connection would prevent the vessel from weathervaning around the "completely submerged buoy," as set forth above. Moreover, APL contends that allowing the anchor lines or chains of the buoy to be connected indirectly, such as to an intermediate floating structure, defeats the purpose and function of the device as presented by SBM to the PTO, namely, so that "it can stay clear from the keel of the vessel" and to avoid the "drawbacks of the influence of wave motion." *See Amendment*, Document No. 55 ex. B, at SBM 00276-00277.

SBM argues, correctly, that Claim 1 imposes no "direct connection" requirement of the rigid mooring arm to the floating vessel via anchor lines or chains. Further, the extrinsic evidence submitted by APL suggests that the vessel weathervanes around the submerged buoy whether or not there is a surface buoy present. *See*

Deposition of F. Tim Pease, Document No. 56 ex. E, at 152:25-153:5 ("Q. And thus, you'd still have rotational moment exerted on the turntable? A. Yes. Q. Regardless of whether there's a surface buoy there or not? A. That's correct."). Accordingly, the Court declines to impose the limitation of a "direct connection" on the claim phrase "for connection to a floating vessel via an anchor line or chain."

5. "Swivel"

APL contends that the proper construction of the term "swivel" is "a swivel that is separate from and rotates independently of the turntable." SBM does not dispute that the intrinsic evidence of Claim 1 requires that the swivel be separate from the turntable. Instead, SBM disagrees that there is anything that "requires" the swivel "to move differently from, or at a different time than, the turntable." The real question is whether the swivel and turntable are required to *be able* to move differently from each other and at different times, *i.e.*, independent of each other.

An entry in the prosecution history for the '183 Patent states:

By means of the arm 6, a moment can be exerted on the turntable 5 for rotation thereby of the vessel. Forces which act on the turntable do not affect in any way the connection of hoses 8 and 9. The turntable rotates *independently* of the swivel.

Amendment, Document No. 55 ex. B, at SBM 00275-00276 (emphasis in original). This language is "clear and unmistakable" evidence that SBM's purpose in making these statements to the PTO was to emphasize a particular feature, namely, a "turntable that rotates *independently* of the swivel," as beneficial to the invention. In this situation, prosecution disclaimer applies to limit the scope of Claim 1 to require a turntable that rotates independently of the swivel, and, axiomatically, vice versa. *See CCS Fitness*, 288 F.3d at 1366-67 (noting that prosecution disclaimer operates to limit claim scope where the patentee "described a particular embodiment as important to the invention").

Extrinsic evidence supports APL's proposed construction. Dr. Leendert Poldervaart ("Dr.Poldervaart"), who had a role in the prosecution of the '183 Patent, was presented by SBM as its corporate representative for an oral deposition in this case. He testified that the swivel and the turntable have "independent bearing arrangements" and therefore "rotate independently from each other." *Deposition of Leendert Poldervaart*, at 48:18-49:4. Dr. Poldervaart also noted that in some circumstances the swivel and the turntable could rotate "in the same direction," "in opposite directions," and "completely independently from each other." *Id.* at 49:25-51:4.

The Court agrees with APL's proposed construction of the term "swivel" as it is used in Claim 1 of the '183 Patent.

III. Order

Based on the foregoing, it is hereby

ORDERED that the disputed terms of the '183 Patent are construed as follows:

CONSTRUCTION OF CLAIM United States Patent No. 5,816,183

1. As used in Claim 1 of the '183 Patent, the term "**rigid mooring arm**" is clear and sufficiently

descriptive to require no construction, and it is not limited by the terms "separate" and "hinged."

2. As used in Claim 1 of the '183 Patent, the phrase "**relatively short length**" means a mooring arm having a minimum length long enough to exert a significantly larger rotational torque on the turntable than if the mooring hawser were directly connected to the turntable and having a maximum length such that when in an essentially upright position from the buoyant body toward sea level, the mooring arm extends no further than to just below or just above sea level.

3. As used in Claim 1 of the '183 Patent, the phrase "**buoy as a whole is kept underwater**" means the fully equipped mooring buoy is completely submerged, and no parts float on the surface of the sea.

4. As used in Claim 1 of the '183 Patent, the phrase "**for connection to a floating vessel via an anchor line or chain**" does not require a "direct connection" between the rigid mooring arm and the floating vessel via an anchor line or chain.

5. As used in Claim 1 of the '183 Patent, the term "**swivel**" means a swivel that is separate from and rotates independently of the turntable.

The Clerk will enter this Order and send a copy to all counsel of record.

S.D.Tex.,2004.

Advanced Production and Loading, Inc. v. Single Buoy Moorings, Inc.

Produced by Sans Paper, LLC.