United States District Court,
D. Utah, Central Division.

Harvey GILLESPIE,
Plaintiff.
v.
DYWIDAG SYSTEMS INTERNATIONAL, USA, INC,
Defendant.

No. 2:04-CV-833 BSJ

Nov. 4, 2005.

Background: In a patent case, parties sought construction of patent claims in patents for mine roof bolt used to strengthen or stabilize the roof of a mine.

Holdings: The District Court, Jenkins, Senior District Judge, held that:
(1) "length of multi-strand pre-stressed steel cable defining a bolt shank" meant a length of multi-strand cable that defined the bolt shank, and
(2) "having an outer surface defining a drive head that accepts a driving mechanism for rotating and linearly translating said bolt," meant that the drive collar had a surface, separate from the frusto-conical inner surface of the drive collar, that could be cylindrical, not just hexagonal.

So ordered.

5,230,589, 5,259,703. Construed.

John P. Ashton, Van Cott Bagley Cornwall & McCarthy, Salt Lake City, UT, Marvin A. Glazer, Cahill Von Hellens & Glazer PC, Phoenix, AZ, for Plaintiff.

Cullen N. Pendleton, Michael R. Weiner, Thomas I. Ross, Marshall Gerstein & Borun LLP, Chicago, IL, Steven W. Dougherty, Anderson & Karrenberg, Salt Lake City, UT, for Defendant.

MEMORANDUM OPINION AND ORDER

JENKINS**, Senior District Judge.**

On June 3, 2005, the Court conducted a Markman hearing FN1 wherein the parties' sought the construction of the claims of U.S. Patent No. 5,230,589 ("the '589 Patent") and U.S. Patent No. 5,259,703 ("the '703 Patent") pertinent for a "Mine Roof Bolt" or cable bolt of the type commonly used to strengthen or stabilize

the roof of a mine. *(See* Minute Entry, dated June 3, 3005 (dkt. no 19).) John P. Ashton and Marvin A. Glazer appeared on behalf of the plaintiff Harvey D. Gillespie ("Gillespie"); Steven W. Dougherty, Thomas I. Ross and Michael R. Weiner appeared on behalf of the defendant Dywidag Systems International, USA, Inc., ("DSI").

FN1. *See* Markman v. Westview Instruments, Inc., 52 F.3d 967 (Fed.Cir.1995), *aff'd,* 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996).

After oral argument, the Court took the matter under advisement. *(See* Minute Entry, dated June 3, 3005 (dkt. no 21).) On June 21, 2005, the parties jointly filed revised claim construction charts to reflect the parties positions as discussed during the June 3, 2005 hearing. *(See* Revised Joint Claim Construction Charts, filed June 21, 2005 (dkt. no. 20) ("Rev. Claim Chart").)

STANDARD OF REVIEW

[1] [2] [3] [4] [5] Patent infringement analysis involves two steps: first, properly construing the asserted claim; and, second, determining whether the accused method or device infringes the asserted claim as properly construed. *See* Markman, 52 F.3d at 976. Claim construction is a matter of law to be resolved by the court. Id. at 970-71. The purpose of claim construction is to determine how one of ordinary skill in the art would have understood the claims at the time the patent was issued. *See* Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1116 (Fed.Cir.2004). The intrinsic record is the primary source for determining the meaning of the claim. *See* C.R. Bard, Inc. v. U.S. Surgical Corp., 388 F.3d 858, 861 (Fed.Cir.2004); Goldenberg v. Cytogen, Inc., 373 F.3d 1158, 1164 (Fed.Cir.2004). The court consults intrinsic evidence in the following order: (1) the claim language itself; (2) the other portions of the written description; and, (3) if in evidence, the prosecution history. *See* Alza Corp. v. Mylan Labs., Inc., 391 F.3d 1365, 1370 (Fed.Cir.2004); Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996).

[6] [7] [8] There is a heavy presumption that the terms used in the claims mean what they say and have the ordinary meaning that would be attributed to those words by persons skilled in the relevant art. *See* SuperGuide Corp. v. DirecTV Enters., Inc. 358 F.3d 870, 874-75 (Fed.Cir.2004). The court may consult dictionary definitions for assistance in establishing a claim term's ordinary meaning as understood by a person of ordinary skill in the relevant art. *See* Apex Inc. v. Raritan Computer, Inc., 325 F.3d 1364, 1371 (Fed.Cir.2003); Texas Digital Sys., 308 F.3d at 1202. Unless otherwise compelled, the court must "give a claim term the full range of its ordinary meaning as understood by persons skilled in the relevant art." Riverwood Int'l Corp. v. R.A. Jones & Co., Inc., 324 F.3d 1346, 1357 (Fed.Cir.2003).

[9] [10] [11] Next, the court reviews the written description and drawings to confirm that the patentee's use of the disputed term is consistent with the meaning given to it by the court. *See* SuperGuide Corp., 358 F.3d at 875. The heavy presumption that claim terms carry their ordinary and customary meaning is rebutted if "the patentee, acting as his or her own lexicographer, has clearly set forth an explicit definition of the term different from its ordinary meaning" or if the inventor has clearly disavowed the scope of the claim. Texas Digital Sys., 308 F.3d at 1204. Although an understanding of the claim language may be aided by the written description, FN2 "limitations may not be read into the claims from the written description." Prima Tek II, L.L.C. v. Polypap, S.A.R.L., 318 F.3d at 1143, 1148 (Fed.Cir.2003). There is often "a fine line between reading a claim in the light of the specification, and reading a limitation into the claim from the specification." Comark Communications, Inc. v. Harris Corp., 156 F.3d 1182, 1186 (Fed.Cir.1998).

FN2. *See* SuperGuide Corp., 358 F.3d at 875.

[12] [13] After the court examines the written description and the drawings, the same corroborative measure must be taken with the prosecution history, since statements made during the prosecution of a patent may affect the scope of the invention. Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1343 (Fed.Cir.2001). 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. *See* Omega Eng'g, Inc. v. Raytek Corp., 334 F.3d 1314, 1325-26 (Fed.Cir.2003).

[14] [15] The court may also consult extrinsic evidence, but only for the purpose of allowing the court to gain an understanding of the claim terminology. *See* Markman, 52 F.3d at 986; Astrazeneca AB, Aktiebolaget Hassle, KBI-E, Inc. v. Mutual Pharm. Co., 384 F.3d 1333, 1337 (Fed.Cir.2004) (extrinsic evidence can be useful for shedding useful light on the relevant art). It is well settled that extrinsic evidence "cannot be used to alter a claim construction dictated by a proper analysis of the intrinsic evidence." On-Line Tech. v. Bodenseewerk Perkin-Elmer GmbH, 386 F.3d 1133, 1139 (Fed.Cir.2004); *see also* Markman, 52 F.3d at 980-81 (extrinsic evidence may not be used to vary the meaning disclosed by the patent itself).

ANALYSIS

The claim terms of Claims 1 and 9 of the '589 Patent and of Claim 15 of the '703 Patent highlighted in **bold** remain disputed by the parties: FN3

FN3. In the briefs filed prior to the Markman hearing, the parties disputed the claim terms in portions of claims 1, 4, 5, 8, 9 and 11 in the '589 patent and Claim 15 of the '703 patent. *(See generally* Defendant DSI's Claim Construction Brief, filed 04/21/05 (dkt. no. 12) ("Def.'s Brief"); Plaintiff Gillespie's Opening Markman Brief, filed 04/21/05 (dkt. no. 13) ("Pl.'s Brief"); Defendant DSI's Responsive Claim Construction Brief, filed 05/10/05 (dkt. no. 16) ("Def.'s Resp. Brief"); and Plaintiff Gillespie's Responsive Markman Brief, filed 05/11/05 (dkt. no. 17) ("Pl.'s Resp. Brief").) Following the hearing, the parties revised their list of disputed claims, and filed their Rev. Claim Chart listing portions of Claims 1 and 9 of the '589 patent and of Claim 15 of the '703 patent as the only remaining claim terms for the court to construe.

Claim 1 of the '589 Patent reads:
A mine roof bolt comprising:

(a) **a length of multi-strand cable defining a bolt shank;**

(b) a tapered plug comprising a body portion having an internal bore and a frusto-conical outer surface essentially concentric with said internal bore, said tapered plug being mounted about an end of said cable at said internal bore; and

(c) an internally tapered drive collar having a frusto-conical inner surface that engages said frusto-conical outer surface of said tapered plug, and **having an outer surface defining a drive head that accepts a driving mechanism for rotating and linearly translating said bolt,** wherein said tapered plug is mounted on an end of said cable, and said drive collar is pressed down upon said tapered plug, forcing said tapered

plug against said cable, such that said drive collar, said tapered plug, and said cable, when fitted tightly together, define said mine roof bolt.

('589 Patent, attached as Exhibit A to Pl.'s Brief ("'589 Patent"), col. 7, ln. 1-22.)
Claim 9 of the '589 Patent reads:

A mine roof bolt comprising:

(a) **a length of multi-strand, pre-stressed steel cable defining a bolt shank;**

(b) a two-piece tapered plug comprising two essentially diametrically opposed semi-frusto-conical tapered plug sections having an internal bore essentially concentric with the outer surface of said semi-frusto-conical tapered plug sections, said tapered plug being mounted about an end of said cable at said internal bore; and

(c) an internally tapered drive collar having a frusto-conical inner surface that engages said frusto-conical outer surfaces of said tapered plug sections, and **having an outer surface defining a drive head that accepts a driving mechanism for rotating and linearly translating said bolt,** wherein said tapered plug is mounted on an end of said cable, and said drive collar is pressed down upon said tapered plug, forcing said tapered plug against said cable such that said drive collar, said tapered plug, and said cable, when fitted tightly together, define said mine roof bolt.

('589 Patent, col. 8, ln. 8-29.)

Claim 15 of the '703 Patent reads:

A mine roof bolt comprising:

(a) **a length of multi-strand, pre-stressed steel cable defining a bolt shank;**

(b) a tapered plug comprising a body portion having an internal bore and a frustoconical outer surface essentially concentric with said internal bore,

(c) an internally tapered drive collar having a frusto-conical inner surface that engages said frusto-conical outer surface of said tapered plug, and **having an outer surface defining a drive head that accepts a driving mechanism for rotating and linearly translating said bolt,** wherein said tapered plug is mounted on an end of said cable, and said drive collar is pressed down upon said tapered plug, forcing said tapered plug against said cable, such that said drive collar, said tapered plug, and said cable, when fitted tightly together, define said mine roof bolt; and

(d) a stiffner sleeve mounted on said cable adjacent said drive collar for minimizing buckling of said cable as said mine roof bolt is being inserted into a bore hole, and for protecting said cable from damage from a mine roof bolt plate as said mine roof bolt is being rotated into a bore hole.

('703 Patent, attached as Exhibit B to Pl.'s Brief ("'703 Patent"), col. 14, ln. 40-65.)

The court construes those disputed claim limitations as follows:

1. '589 Patent, ***Claims 1 and 9; and*** '703 Patent ***Claim 15: "(a) a length of multi-strand [pre-stressed steel] cable defining a bolt shank"***

[16] Gillespie asks the court to construe Claims 1(a), 9(a) and 15(a) "to mean a length of cable that includes multiple strands and that serves as a bolt shank." *(See* Pl.'s Brief, at 8-9.) DSI argues that Gillespie's proposed construction is "overly broad in that it would encompass a mine roof bolt that includes a cable with a single-stranded portion that defines a bolt shank." *(See* Def.'s Brief, at 13.) In his response, Plaintiff asserts that this is "certainly not what Gillespie seeks[ ]" rather, he "... simply wants the jury to understand that a multi-strand cable is one made up of multiple strands." (Pl.'s Resp. Brief, at 2.)

The '589 and '703 Patent specifications explain that the "improved mine roof bolt of the present invention is constructed of a length of pre-stressed steel strands spirallywrapped around a seventh steep strand." *(See* '589 Patent, col. 2, ln. 65-col. 3, ln.1; '703 Patent, col. 3, ln. 36-41.)

Moreover, the '589 and '703 Patent specifications further explain, in regard to FIG. 1 of the patent drawings, that "the improved mine roof bolt ... comprises a shank 12 made up of a length of pre-stressed steel stranded cable, which in the embodiment shown, is made up of six peripheral steel strands 14 spirally wrapped around a central steel strand 16 (as depicted in FIG. 2)." *(See* '589 Patent, col. 3, ln. 39-46; '703 Patent, col. 4, ln. 63-68-col. 5, ln. 1-2.)

The parties are therefore in agreement that the cable is a multi-strand cable and not a single cable. Based on this agreement, the ordinary meaning, and the written specification of the claimed embodiment, the court construes claims 1(a), 9(a) and 15(a) to mean a length of multi-strand cable that defines the bolt shank.

2. '589 Patent, ***Claims 1 and 9; and*** '703 Patent, ***Claim 15: "(c) ... having an outer surface defining a drive head that accepts a driving mechanism for rotating and linearly translating said bolt."***

[17] Gillespie asks the court to construe "having an outer surface defining a drive head that accepts a driving mechanism for rotating and linearly translating said bolt," as used within Claims 1 and 9 of the '589 patent and Claim 15 in the '703 patent, to mean that the drive collar has a surface, separate from the frusto-conical inner surface of the drive collar, for defining a drive head capable of accepting a mine roof bolt driver mechanism that can rotate and linearly translate the mine roof bolt; the drive head may be of any shape or configuration that accepts a mine roof bolt driver mechanism. *(See* Pl.'s Brief, at 12.)

DSI asserts that Gillespie should be estopped from asserting a scope under the doctrine of equivalents of the term "outer surface defining a drive head" that would encompass a mine roof bold with a collar having a cylindrical outer surface *(see* Def.'s Brief, at 23) because during the prosecution in support of patentability to the United States Patent and Trademark Office ("USPTO"), and in response to rejection over the *Spies* patent, Gillespie specifically argued that *Spies* (attached as Exhibit E to Def.'s Brief) did not disclose his hexagonal collar because the *Spies* collar was "cylindrical on the outside" surface. Thus, DSI argues that Gillespie cannot rebut the presumption of prosecution history estoppel nor assert that the '589 patent claims a cylindrical collar. *(See* Def.'s Brief, at 17-23.)

It does not appear to this court that the prosecution history should be read in such a limited way. Although it is true that during the prosecution of the '589 patent, Gillespie stated to the USPTO:

There is nothing in the *Spies* patent to suggest that the collar **17** should be used for this purpose. In fact,

Spies teaches away from such an interpretation of the drawings. Collar **17** appears to be cylindrical on the outside, thus impractical for being rotated by a mine roof bolting machine.

* * * *

[A]pplicant's invention comprises essentially a solid, effectively single-piece bolt head comprising the tapered plug **20** and the hexagonal head collar 26, that when pressed tightly together, define the bolt head as set forth in amended claims 1 and 10.

(Def.'s Brief Exh. F, at 6-7), this argument must be read into context. The central point of Gillespie's argument was that the *Spies* bolt has a fundamentally different construction which would prevent it from being driven by the collar, no matter its shape. And although the patent specification consistently describes a mine roof bolt having a drive collar with a *hexagonal outer* surface defining a drive head *(see, e.g.,* Pl.'s Brief Exh. A, col. 3, ln. 54-55; col. 4, ln. 52-53; col. 5, ln. 6), the surrender of other-shaped outer surfaces defining the drive head must be clear and unmistakable, which it is not. *See* Omega Eng'g, Inc. v. Raytek Corp., 334 F.3d 1314, 1325-26 (Fed.Cir.2003). Rather, the patent specifications of the ' 589 and '703 patents state

"[a]lthough the collar **26** is shown as a hexagonal head, obviously a square head or *any other shaped head* that accepts a mine roof bolt driver mechanism and boom should function adequately for the intended purpose"

('589 Patent, col. 3 ln. 54-58; '703 Patent, col. 5, ln. 10-14.)

Moreover, although DSI argues that the plain meaning of the term "outer" means "exterior," the court must determine the *ordinary meaning that would be attributed to those words by persons skilled in the relevant art*. *See* SuperGuide Corp. v. DirecTV Enters., Inc. 358 F.3d 870, 874-75 (Fed.Cir.2004) (emphasis added). In which case, the meaning of the word "outer" is not limited to merely the "exterior" surface. This claim term clarifies that a surface of the drive collar that is "outer" (relative to the frusto-conical "inner" surface portion thereof) provides a drive head.

Thus, the ordinary meaning of the claim, the written descriptions, the context of the prosecution of the patent, and the described embodiments persuade the court to construe claims 1(c) and 15(c) to mean the drive collar has a surface outside and separate from the frustoconical inner surface of the drive collar for defining a drive head capable of accepting a driving mechanism that can rotate and linearly translate the mine roof bolt. The drive head may be of any shape or configuration that accepts such a driving mechanism.

IT IS ORDERED that the claims 1 and 9 of the '589 Patent and Claim 15 of the '703 Patent have the meaning and scope set forth above.

D.Utah,2005.
Gillespie v. Dywidag Systems Intern., USA, Inc.