United States District Court,
S.D. California.

GAMMA-METRICS, INC., a California corporation,
Plaintiff.
v.
SCANTECH LIMITED, an Australian corporation; Mineral Control Instrumentation Limited, an Australian corporation; Michael Ricci, an individual residing in Australia,
Defendant.
SCANTECH LIMITED, an Australian corporation; Mineral Control Instrumentation Limited, an Australian corporation; Michael Ricci, an individual residing in Australia,
Counter-claimants.
v.
GAMMA-METRICS, INC., a California corporation,
Counter-defendants.

No. 97-CV-1767 H CGA

May 20, 1998.

Order Granting in Part and Denying in Part Plaintiff's Motion for Partial Summary Judgment; Denying Defendants' Cross-Motion for Partial Summary Judgment [Doc. # 13-1]

HUFF**, Chief J.**

On March 12, 1998 plaintiff Gamma-Metrics, Inc. (Gamma-Metrics) moved for summary judgment in the above-entitled matter against defendants Scantech Ltd. (Scantech), Mineral Control Instrumentation, Ltd. (MCI) and Michael Ricci on its claims for trade secret misappropriation, Cal.Civ.Code s. 3426, and patent infringement, 35 U.S.C. s. 271, as well as on defendants' counterclaim of attempted monopolization, 15 U.S.C. s. 2. On April 22, 1998 defendants' opposed plaintiff's motion and cross-moved for summary judgment on their claim for a declaratory judgment of non-infringement. The court held a *Markman* hearing to assist its construction of the disputed patent claims on May 7, 1998. Appearing for plaintiff was Eleanor Musick and Kathleen Pasulka; defendants were represented by Frederick Lorig and Patrick Bright.

Having fully considered the papers submitted and the law, the court denies plaintiff's motion for summary judgment on its claim for trade secret misappropriation and grants plaintiff's motion for summary judgment on defendants' attempted monopolization counterclaim. The court construes the disputed claims of the '043 patent as described herein, and grants plaintiff's motion for summary judgment on its patent infringement claim. Accordingly, the court denies defendants' cross-motion for summary judgment on their counterclaim for a declaratory judgment of non-infringement.

BACKGROUND

At the center of the dispute in this case is United States Letters Patent No. 4,682,043 ("the '043 patent"), entitled "Obtaining Uniformity of Response in Analytical Measurement in a Neutron-Capture-Based On-Line Bulk-Substance Elemental-Analyzer Apparatus," issued July 21, 1987 to J. Howard Marshall. (*Compl.,* Exh. A.) In short, the invention described in the '043 patent allows for a highly-accurate, real-time on-line elemental analysis of a bulk substance which moves through the device. ('043 patent, Abstract.) The disclosed apparatus utilizes a nuclear process known as Prompt Gamma Neutron Activation Analysis ("PGNAA") to identify the bulk material input. (*Ernesto A. Corte Decl.,* para. 4.) As it moves through the apparatus, the bulk substance is bombarded by neutrons emitted from a highly-radioactive neutron-source. (Id.) These neutrons excite the nuclei of the elements in the bulk substance, causing their electrons to briefly jump to higher energy levels; when these excited electrons return to their original energy state, they emit energy in the form of gamma rays. (Id.) Different elements have characteristic gamma ray emission spectra following neutron bombardment, thus enabling identification of the various elements and compounds-including impurities-contained within the bulk substance being analyzed. (Id.)

The apparatus disclosed in the '043 patent-originally conceived by the inventor for the analysis of coal, oil or coal-oil mixtures ('043 patent, col. 6, ll. 47-54)-has as its primary advances over the prior art the capacity to provide fast (real-time), highly-accurate and uniform analysis of the bulk substance moving through the "measurement volume." ('043 patent, col. 5, ll. 55-63.) This analysis allows for the installation of control systems which monitor the composition of the inputted bulk material, and adjust the ingredients accordingly to create a consistent and purer product. (*Corte Decl.,* para. 6.)

The specific '043 patent claims at issue in this litigation are claims 4, 5 and 6; claim 4 is an independent claim, while claims 5 and 6 are dependent on claim 4. Independent claim 4 has three elements, or limitations. The claims at issue read as follows:

4. An improved apparatus for the on-line analysis of the composition of a bulk substance flowing through a measurement volume, wherein said analysis incudes the production and capture of neutrons and the detection of the resulting capture gamma rays, said apparatus comprising, in combination:

(a) means for containing the bulk substance to be analyzed, said means comprising an elongated passageway adapted to contain said bulk substance as it flows through said apparatus, said passageway being at least partly surrounded by a neutron-reflecting substance;

(b) neutron-producing means for providing neutrons which generate gamma rays by neutron-capture reactions with the nuclei in the bulk substance being analyzed, said neutron-producing means comprising at least one neutron source located externally of said passageway;

(c) means for gamma-ray detection operably associated with the neutron-producing means and the means for containing the bulk substance being analyzed, the means for gamma-ray detection producing electrical signals indicative of the gamma-ray energies to provide for the measurement of the energy spectrum of the capture gamma rays, said means comprising at least one gamma-ray detector disposed externally of said passageway.

5. An apparatus as described in claim 4 including a plurality of neutron sources located externally of said passageway.

6. An apparatus as described in claim 4 including a plurality of gamma ray detectors located externally of

said passageway.

The '043 patent specification details a preferred embodiment of the apparatus. The apparatus "includes means for containing the bulk substance to be analyzed, which may flow through the instrument in order to provide a continuous, on-line measurement of the bulk composition." ('043 patent, col. 6, ll. 59-62.) In the preferred embodiment, "this means encloses the centrally-located measurement volume 18, in which the coal being analyzed is confined." (Id., ll. 63-65.) The "measurement volume" is "the region throughout which the composition measurement takes place." (Id., ll. 65-67 .) Figure 1 discloses an apparatus with a vertical chute through which the bulk substance to be analyzed passes, moving through a "measurement volume" "in the plane perpendicular to the flow of the bulk substance" for neutron bombardment and analysis. ('043 patent, col. 7, ll. 20-22.) The specifications describe the chute as a "square with rounded corners" whose symmetry is "important" to the device's efficacy. (Id., ll. 22, 25.)

On February 11, 1991 plaintiff Gamma-Metrics purchased all rights, title and interests in the '043 patent from MDH Industries, Marshall's company and plaintiff's competitor, and adapted the technology disclosed therein to the bulk elemental analysis of cement in a device entitled the "Cross-Belt Analyzer" (CBA). (*Corte Decl.,* para.para. 5-6; *Pl. Lodgement,* Exh. 2.) Plaintiff alleges that it took "considerable" time and expense-more than twelve engineers working together over a period of several years-to develop a properly-calibrated, accurate CBA. (*Corte Decl.,* para. 6.) Plaintiff sold its first CBA system sometime in mid-1993, and continues to successfully market the CBA to cement plants throughout the world. (Id.)

One Gamma-Metrics employee during this period was defendant Michael Ricci, hired in 1986 and eventually promoted to Senior Sales Engineer. (Id., at para. 7.) Mr. Ricci was fired by plaintiff in April 1994, at which time he allegedly signed a Separation Agreement and a General Release and Termination Agreement, which included a promise to preserve the confidentiality of Gamma-Metrics's confidential and proprictary information. (Id.) Plaintiff alleges that shortly after his termination, Mr. Ricci began working (in some capacity) for defendants MCI/Scantech, a competitor in the field of bulk materials analysis. (Id., para.para. 8-9.) Plaintiff claims that on September 27, 1994 defendant Ricci contacted Giorgio Corazza, plaintiff's exclusive South African sales representative. Ricci purportedly falsely represented that he still worked for plaintiff and urgently needed certain CBA technical specifications-including physical and electrical measurement data detailing the CBA's configuration and performance-and plaintiff's South African contacts for LaFarge, one of plaintiff's customers. (*Giorgio Corazza Decl.,* para.para. 2-3; *Corte Decl.* para. 11; *Pl. Lodgement,* Exh. 10.) Corazza, at defendant Ricci's request and direction, then allegedly faxed the requested information to Ricci's sister in Philadelphia. (Id., para. 4.) Plaintiff asserts that the faxed information was highly confidential at the time. (*Corte Decl .,* para. 9.)

Defendant Ricci denies all plaintiff's allegations. He claims he did not begin working for Scantech until December 1994. (*Ricci Decl.,* para. 1.) Ricci denies ever having requested or received a fax of the CBA technical specs or plaintiff's South African contacts list. (Id., para.para. 6, 12-16.) He asserts that he spoke with Mr. Corazza approximately twice a month in the months following his termination to follow up on potential sales for which he was responsible and eligible for commission; Ricci claims that Mr. Corazza was therefore well aware that he no longer worked for Gamma-Metrics. (Id., para.para. 4-6.)

Following several communications between plaintiff and defendants from November 1994 through March 1995, plaintiff did not pursue the matter further. (*Corte Decl.,* para. 9.) In late 1995, plaintiff explored a potential acquisition of defendant MCI. (Id., para. 14.) However, after several months of inquiries, the idea of a potential acquisition or merger was abandoned. (Id.)

Defendants introduced the Geoscan, their bulk cement analyzer, in 1996 to compete with plaintiff's CBA. Defendants deny having used plaintiff's proprietary information to develop the Geoscan, asserting that it was developed entirely "in-house" after almost three years of research by over eighteen employees and consultants. (*Walter James Howarth Decl.,* para. 5.) Defendants claim that the only CBA technical information in their possession during the development of the Geoscan was a two-page "Cross Belt Analyzer Data Sheet" obtained at plaintiff's booth during a 1993 trade show. (Id., para. 12.) Defendants admit that Ricci and two former Gamma-Metrics's employees (Dr. Chaur-Ming Shyu and Clark Scott) worked on the Geoscan project, but contend that they were "all instructed not to divulge or use proprietary knowledge" concerning plaintiff's CBA. (Id., para. 5.)

In his declaration, Richard Kingswood Kelly, former Managing Director of MCI, details defendants' "in-house" development of the Geoscan from mid-1994 to 1997. (*Richard Kingswood Kelly Decl.,* para.para. 8-16.) Mr. Kelly maintains that the Geoscan differs from plaintiff's CBA in several critical respects, most notably in the geometric arrangement of its gamma ray detectors and in the structure of its direct-through conveyor belt system for inputting the bulk cement. (Id., para.para. 16-19.) He also asserts that this geometry is "different from chute based systems, such as disclosed in the Marshall '043 patent." (Id., para. 7.)

Defendant Scantech sold the first Geoscan in the United States in mid-1997. (*Corte Decl.,* para. 15; *Pl. Lodgement,* Exh. 18.) Plaintiff instituted this suit for patent infringement, 35 U.S.C. s. 271, copyright infringement, unfair competition, trade secret misappropriation and fraud on October 14, 1997. Relevant to this motion, plaintiff alleges that defendants used plaintiff's confidential information and proprietary knowledge to aid in the reverse-engineering of the CBA and develop Geoscan. Plaintiff further maintains that defendants' Geoscan infringes the '043 patent. Defendant counters by arguing not only that the Geoscan does not infringe the '043 patent, but that plaintiff has violated s. 2 of the Sherman Act by bringing this "objectively baseless" suit to harass defendants and discourage potential customers from purchasing the Geoscan.

DISCUSSION

I. *Legal Standards*

A motion for summary judgment shall be granted where "there is no genuine issue as to any material fact and ... the moving party is entitled to judgment as a matter of law." Fed.R.Civ.P. 56(c); British Airways Bd. v. Boeing Co., 585 F.2d 946, 951 (9th Cir.1978), *cert. den.,* 440 U.S. 981 (1979). Any doubt as to the existence of any issue of material fact requires denial of the motion. Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 255 (1986). The opposing party cannot rest on the mere allegations or denials of his pleading, but must "go beyond the pleadings and by her own affidavits, or by the 'depositions, answers to interrogatories, and admissions on file' designate 'specific facts showing that there is a genuine issue for trial." ' Celotex Corp. v. Catrett, 477 U.S. 317, 324 (1986) (citation omitted).

To succeed on a motion for summary judgment, the movant must demonstrate that "there is no genuine issue as to any material fact and the moving party is entitled to a judgment as a matter of law." Fed.R.Civ.P. 56(c). British Airways Bd. v. Boeing Co., 585 F.2d 946, 951 (9th Cir.1978), *cert. den.,* 440 U.S. 981 (1979). Material facts are those which "might affect the outcome of the suit under the governing law." Anderson v. Liberty Lobby, 477 U .S. 242, 255 (1986). Credibility determinations, the weighing of evidence, and the drawing of legitimate inferences are functions of the trier of fact. Id. at 255.

A. ***Trade Secret Misappropriation***

Pursuant to the Uniform Trade Secrets Act (UTSA), the elements of the plaintiff's claim for misappropriation of trade secrets are "(1) whether the property is a trade secret, (2) the misappropriation of that trade secret, (3) by a wrongful act, (4) resulting in damages to Plaintiff." Cal. Civ.Code, s. 3426 *et. seq.; On* Command Video Corp. v. Lodgenet Entertainment Corp., 976 F.Supp. 917, 932 (N.D.Cal.1997). A trade secret is information which "(1) [d]erives independent economic value, actual or potential, from not being generally known to the public or to other persons who can obtain economic value from its disclosure or use; and (2)[i]s the subject of efforts that are reasonable under the circumstances to maintain its secrecy." Cal.Civ.Code s. 3426.1(d)(West 1998); Scott v. Snelling & Snelling, Inc., 732 F.Supp. 1034, 1038 (N.D.Cal.1990). Misappropriation is defined under the UTSA as "(1) [acquisition of a trade secret of another by a person who knows or has reason to know that the trade secret was acquired by improper means; or (2) [d]isclosure or use of a trade secret of another without express or implied consent by a person who: (A) [u]sed improper means to acquire knowledge of the trade secret ..." Cal.Civ.Code s. 3426.1(b).

B. ***Patent Infringement***

Patent infringement occurs whenever a person "without authority makes, uses, offers to sell or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor ..." 35 U.S.C. s. 271(a). "The patentee bears the burden of proving infringement by a preponderance of the evidence." SRI Int'l v. Matsushita Elec. Corp. Of Am., 775 F.2d 1107, 1123 (Fed.Cir.1985).

Determining whether a patent claim has been infringed requires a two-step analysis: "First, the claim must be properly construed to determine its scope and meaning. Second, the claim as properly construed must be compared to the accused device or process." Micro Chem. Inc. v. Great Plains Chem. Co., Inc., 103 F.3d 1538, 1547 (Fed.Cir.1997), citing Carroll Touch, Inc. v. Electro Mechanical Sys., Inc., 15 F.3d 1573, 1576 (Fed.Cir.1993). Claim construction is a question of law, Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed.Cir.1995)(en banc), *aff'd,*-U.S.-, 116 S.Ct. 1384 (1996), while the application of a properly construed claim to an accused device is generally a question of fact. General Am. Transp. Corp. v. Cryo-Trans, Inc., 93 F.3d 766, 769 (Fed.Cir.1996).

1. ***Claim Construction***

In construing the elements, or limitations, of a claim, the court looks to the claim language, the written description, the prosecution history and, if necessary, extrinsic evidence. O.I. Corp. v. Tekmar Co. Inc., 115 F.3d 1576, 1581 (Fed.Cir.1997), citing Vitronics Corp. v. Conceptronic., Inc., 90 F.3d 1576, 1582-83 (Fed.Cir.1996). A court will generally construe a claim liberally in order to sustain its validity where possible. In re Yamamoto, 740 F.2d 1569, 1571 (Fed.Cir.1984); *see also* 35 U.S.C. s. 282 (1994)("A patent shall be presumed valid.").

In constructing the claims at issue in this case, the first question disputed by the parties is whether they are "mean-plus-function" claims governed by 35 U.S.C. s. 112 para. 6. Title 35 U.S.C. s. 112 para. 6 provides,

"An element in a claim for a combination may be expressed as a means or a step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and

equivalents thereof."

The use of the phrase "means for" in a claim element generally invokes s. 112 para. 6, but does not dispositively resolve the inquiry. Greenberg v. Ethicon Endo-Surgery, Inc., 91 F.3d 1580, 1584 (Fed.Cir.1996). The claims limitation rule of s. 112 para. 6 applies only when the claim element does "not recite a definite structure." Cole v. Kimberly-Clark Corp., 102 F.3d 524, 531 (Fed.Cir.1996)("perforation means extending from the leg band means to the waist band means" held sufficiently definite to avoid means-plus-function analysis), *cert. denied,* 118 S.Ct. 56 (1997). However, the "recitation of some structure in a means plus function element does not preclude the applicability of section 112(6);" any structure disclosed in the specifications must be definite. Laitram Corp. v. Rexnord, Inc., 939 F.2d 1533, 1536 (Fed.Cir.1991); Level One Communications, Inc. v. Seeq Technology, Inc., 987 F.Supp. 1191, 1206 (N.D.Cal.1997)(deciding if a claim is a "means-plus-function" claim "depends on whether it adequately recites the structures for the functions it describes."). The court must examine the claim on an element-by-element basis to determine whether s. 112 para. 6 applies. *Cole,* 102 F.2d at 531.

Determining whether a claim is a "means-plus-function" claim is significant to evaluating its scope. Ordinarily, "claims may not be limited by functions or elements disclosed in the specification but not included in the claims themselves ..." *Kahn v. General Motors Corp.,* 135 F.2d 1472, 1476 (Fed.Cir.1998). Thus general claims are given as broad a scope as their plain language allows, and are not typically limited to the specific embodiments described in the patent specification. York Prod., Inc. v. Central Tractor Farm & Family Ctr., 99 F.3d 1568, 1573 (Fed.Cir.1996). By contrast, "in writing a claim in means-plus-function form, a party is limited to the corresponding structure disclosed in the specification and its equivalents." *Kahn,* 135 F.3d at 1476, citing 35 U.S.C. s. 112, para. 6.

2. *Infringement*

The patentee bears the burden of proving infringement by the accused device. Johnston v. IVAC Corp., 885 F.2d 1574, 1580 (Fed.Cir.1989). "A claim covers an accused device if the device embodies every limitation of the claim, either literally or by an equivalent." Caroll Touch, 15 F.3d at 1576, citing Read Corp. v. Portec, Inc., 970 F.2d 816, 822 (Fed.Cir.1992). This is sometimes known as the "All-Elements Rule." Johnston, 885 F.2d at 1577 n. 3. Literal infringement of a claim containing a means clause "requires that the accused device perform the identical function as that identified in the means clause and do so with structure that is the same as or equivalent to that disclosed in the specification." Micro Chem., 103 F.3d at 1547, citing Valmont Indus., Inc. v. Reinke Mfg. Co., 983 F.2d 1039, 1042 (Fed.Cir.1993). An equivalent, for purposes of 35 U.S.C. s. 112 para. 6, results from an "insubstantial change which adds nothing of significance to the structure, material, or acts disclosed in the patent specification." Valmont, 983 F.2d at 1043.

That the accused device contains additional features "does not avoid infringement, if all the elements of the patent claim have been adopted ...." Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 935 (Fed.Cir.1990); *see also* Markman, 116 S.Ct. at 1388 n. 1; *Carl Zeiss* Stiftung v. Renishaw PLC, 945 F.2d 1173, 1179 (Fed.Cir.1991)("an improvement upon a patented device does not necessarily avoid infringement."); 5 Chisum on Patents, s. 1803[4] at para. 18-59 (1997)(noting "the general principle that an improvement of a patented device will not necessarily avoid infringement."). Moreover, a means-plus-function limitation is not restricted to the "equivalents of a single preferred structure," but rather covers "the equivalents of any structures described therein necessary for carrying out the function ." R2 Med. Sys., Inc. v. Katecho, Inc., 931 F.Supp. 1397, 1435 (N.D.Ill.1996), citing United States v. Telectronics, Inc., 857 F.2d 778, 782 (Fed.Cir.1988).

Failing to prove literal infringement, a patent holder may show infringement under the doctrine of equivalents if the differences between the claimed product and the accused product are insubstantial. Warner-Jenkinson Co. v. Hilton Davis Chem. Co.,-U.S.-, 117 S.Ct. 1040, 1049, 1054 (1997). The test is commonly expressed as whether the accused device performs the same function to achieve the same result, using essentially the same means. Johnston, 885 F.2d at 1581. Thus, to establish infringement under the doctrine of equivalents, the accused device must be shown to include an equivalent for each literally-absent claim limitation. Warner-Jenkinson Co., 117 S.Ct. at 1049 ("Each element contained in a patent claim is deemed material to defining the scope of the patented invention, and thus the doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole."); Dawn Equip. Co. v. Kentucky Farms, Inc.,-F.3d-, 1998 WL 148860, (Fed.Cir. Mar. 24, 1998). And "while infringement under the doctrine of equivalents is generally considered a question of fact, that does not in and of itself preclude directing [summary] judgment ..." Dawn Equip. Co., 1998 WL 148860, at *7.

C. ***Attempted Monopolization under*** 15 U.S.C. s. 2

To prove plaintiff illegally attempted monopoly under section 2 of the Sherman Act, 15 U.S.C. s. 2, defendants/counterclaim-plaintiffs must show (1) that Gamma-Metrics has engaged in predatory or anticompetitive conduct with (2) a specific intent to monopolize and (3) a dangerous probability of achieving monopoly power. Spectrum Sports v. McQuillan, 506 U.S. 447, 456 (1993). Proof of Gamma-Metrics "unfair" or "predatory" tactics alone is insufficient to demonstrate a violation of s. 2. *Id.,* at 459.

Moreover, a patentee who institutes a lawsuit to seek redress for alleged patent infringement is ordinarily immune from antitrust liability. A patentee who brings an infringement suit may be subject to antitrust liability for the anti-competitive results of that suit if the alleged infringer proves (1) that the asserted patent was obtained through knowing and wilful fraud, or (2) that the alleged infringement suit is a "mere sham to cover what is actually nothing more than an attempt to interfere directly with the business relationships of a competitor." Eastern R. Presidents Conference v. Noerr Motor Freight, Inc., 365 U.S. 127, 144 (1961).

The Supreme Court recently outlined a two-part definition of "sham" litigation. Professional Real Estate Investors, Inc. v. Columbia Picts, Ind., Inc. (PRE), 508 U.S. 49, 60 (1993):

"First, the lawsuit must be objectively baseless in the sense that no reasonable litigant could realistically expect success on the merits. If an objective litigant could conclude that the suit is reasonably calculated to elicit a favorable outcome, the suit is immunized under *Noerr,* and an antitrust claim premised on the sham exception must fail.... Under [the] second part of our definition of sham, the court should focus on whether the baseless lawsuit conceals 'an attempt to interfere directly with the business relationships of a competitor,' Noerr, [365 U.S.] at 144, through the 'use [of] the governmental process-as opposed to the outcome of that process-as an anticompetitive weapon.' Columbia v. Omni Outdoor Advertising, 499 U.S. 365, 380 (1991)." (footnote omitted)

Id., at 60-61. Therefore, to prove attempted monopolization by Gamma-Metrics defendants must demonstrate that plaintiff's suit is a sham, without an objective basis and subjectively motivated by plaintiff's desire to inflict an anticompetitive injury upon defendants. A proper probable cause determination by a patent plaintiff "irrefutably demonstrates that an antitrust plaintiff has not proved the objective prong of the sham exception and that the defendant is accordingly entitled to Noerr immunity." PRE, 508 U.S. at 63.

II. *Analysis*

A. *Trade Secret Misappropriation*

The court denies plaintiff's motion for summary judgment on its trade secret misappropriation claim. An examination of the proffered evidence reveals myriad disputed, material factual issues; specifically, the Corazza and Ricci declarations starkly oppose one another with respect to the portrayal of the events in mid- to late-1994 critical to plaintiff's trade secret misappropriation claim. At bottom of the trade secret dispute, plaintiff maintains a highly confidential CBA technical description and specification, along with South African sales contacts information, was obtained by stealth and deception by defendant Ricci from Mr. Corazza. *Corazza Decl.,* para.para. 3-8; *Corte Decl.,* para.para. 11. Defendants counter with several declarations that no such information was ever requested, received or obtained, and that the Geoscan was developed independent of plaintiff's alleged trade secrets. *Ricci Decl.,* para.para. 6-18; *Kelly Decl.,* para.para. 5-23; Fed.R.Civ.P. 56(e). The court simply cannot resolve these conflicting accounts without ruling on the weight and credibility of the evidence. On a motion for summary judgment, the court is required to construe all reasonable inferences in favor of the nonmovant. Anderson, 477 U .S. at 255; Celotex, 477 U.S. at 324. As such, summary judgment on this matter is precluded.

B. *Patent Infringement*

1. *The Elements of Claim 4 of* the '043 Patent

Before reaching the factual question of infringement, the court must first resolve the contested legal question of the proper construction and scope of the disputed patent claims. "The task of claim construction requires [the court] to examine all the relevant sources of meaning in the patent record with great care, the better to guarantee that [the court] determine[s] the claim's true meaning.... [T]hese sources include the patent's claims, specification, and, if in evidence, its prosecution history." Athletic Alternatives, Inc. v. Prince Mfg., Inc., 73 F.3d 1573, 1578 (Fed.Cir.1996), citing Markman, 52 F.3d at 979-80. Throughout, the court focuses its analysis on the meaning and scope of certain terms in claim 4 and its elements disputed by the parties in their moving papers and at the May 7 *Markman* hearing.

a. *Claim 4(a) "means for containing"*

The court first examines the claim on an element-by-element basis to determine which, if any, elements are drafted in "means-plus-function" language. Having carefully considered all of the papers submitted, including the extensive prosecution history of the '043 patent, the court first concludes that claim 4(a), detailing the "means for containing the bulk substance to be analyzed," is not subject to s. 112 para. 6's limitations. Claim 4(a) details sufficient definite structure so as to provide one knowledgeable in the prior art of nuclear bulk-substance analysis notice of the scope and meaning of the claim. Quite simply, the "means for containing" the bulk substance consist of an "elongated passageway," which is "at least partly surrounded by a [unspecified] neutron-reflecting substance," adapted, in an unspecified way, "to contain" the substance as it "flows through the apparatus." This structural disclosure is sufficient to support a finding that, despite the drafter's use of the word "means," this claim is not so indefinite as to require interpretation under s. 112 para. 6. *See* Cole, 102 F.3d at 531; Greenberg, 91 F.3d at 1584. Accordingly, the recited "means for containing" is limited in element (a) by structural details that clearly remove it from the purely functional form urged by defendants. *Id.*

The court then examines the plain claims language. In its relevant part, claim 4 contemplates an apparatus

which analyzes "the composition of a bulk substance flowing through the measurement volume ..." comprising "(a) means for containing the bulk substance ... said means comprising an elongated passageway adapted to contain said bulk substance as it flows through said apparatus ..."

Simply defining the terms "passageway," "contains," and "flows" supports plaintiff's contention that these terms disclose a definite structure. In patent law, the patent drafter may act as his own lexicographer. *Multiform Dessicants, Inc.,* 133 F.3d at 1477. "This rule of construction recognizes that the inventor may have imparted a special meaning to a term in order to convey a character or property or nuance relevant to the particular invention ." *Id.* "Such special meaning, however, must be sufficiently clear in the specification that any departure from common usage would be so understood by a person of experience in the field of invention." *Id.* As the patent drafter did not ascribe a technical definition to any of these terms in either the claims or specification-and as neither party argues that any technical definition was intended-the court attributes to them their ordinary meaning. A "passageway" is "a way that allows passage to or from a place or between two points." Webster's Third New Int'l Dict., at 1650 (1981). "Contain" is defined as, "... to have within; hold; ... enclose ..." (*id.,* at 491), and "flows" is defined as, "to move with a continual change of place among the constituent particles or parts; run; stream; ... designates the characteristic movement of a fluid, gentle or rapid, copious or meager, showing unbroken continuity ..." (*Id.,* at 875.) Taken together, one schooled in the prior art may read claim 4(a) and envision a tunnel-like passageway designed to hold a bulk substance, through which the bulk substance being analyzed enters the apparatus, moves or is moved, and exits the apparatus.

Moreover, both the prosecution history and the doctrine of claim differentiation support the court's construction. The prosecution history is particularly helpful. The Federal Circuit "has repeatedly stated that application of prosecution history estoppel does not necessarily limit a patentee to the literal language of the amended element-even when an amendment has been made to overcome the prior art." Litton Sys., Inc. v. Honeywell, Inc.,-F.3d-, 1998 WL 156754, (Fed.Cir. Apr. 7, 1998) citing LaBounty Mfg., Inc. v. United States Int'l Trade Comm'n, 867 F.2d 1572, 1575-76 (Fed.Cir.1989). Rather, "[t]he relevant inquiry is whether a competitor would reasonably believe that the applicant had surrendered the relevant subject matter" after reviewing the prosecution history of the disputed claim. Cybor Corp. v. FAS Tech ., Inc.,-F.3d-, 1998 WL 134028, * 7 (Fed.Cir. Mar. 25, 1998), citing *Instituform Techs.,* Inc., v. Cat Contracting, Inc., 99 F.3d 1098, 1107-08 (Fed.Cir.1996). In analyzing this history, the court must bear in mind that "positions taken before the PTO may bar an inconsistent position on claim construction under s. 112 para. 6 ." *Id.* (citations omitted).

The '043 patent application was a continuation of an earlier application (Ser. No. 866,488), and was pending for almost ten years prior to issue. During this time, the patent application was significantly redrafted on several occasions. In his several appeals briefs, the patentee continuously distinguished his device from those in the prior art-identified by the PTO as Tittle (patent no. 3,053,388, issued September 11, 1962); Chope (patent no. 3,082,323, issued March 19, 1963); and Christell (patent no. 4,028,267, issued June 7, 1977). In his appeals to the Board of Patent Appeals and Interferences (following several rejections by the PTO), plaintiff argues repeatedly the prior art "did not even recognize the existence of the problem of attempting to obtain uniformity of response in analytical measurement ..." (*11/18/80 Marshall App. Br.,* at 28.) Marshall argued he "solved this problem in a highly novel manner with his improved measurement volume 'geometry' and 'plural-source' configuration." (Id.) Following initial rejections by the Board for s. 103 obviousness, the applicant (now MDH Industries) modified the application and added "new claim 39" FN1 (present claim 4) "specifically directed toward the various novel features of the apparatus of the invention." The heart of the novelty as described by the applicant lay in the use of an "elongated passageway

... symmetrical in cross-section" at least partly surrounded by a "neutron-reflecting substance adapted to increase the neutron flux along the sides of the passageway," in conjunction with a plurality of neutron sources and gamma-ray detectors. (*5/4/83 App. Br.,* at 7-8; *1/25/84 App. Br.,* at 25 .)

FN1. Claim 39(a) was substantially identical to current claim 4(a) ("means for containing the bulk substance ... said passageway including a neutron-reflecting substance adapted to increase the neutron flux along the sides of said passageway"), but as initially drafted included an additional recitation claiming "... which passageway is configured to exclude the bulk substance from regions of reduced measurement sensitivity and to direct it toward a region of maximum measurement sensitivity;"

In its March 25, 1986 decision the Board opined that claim 39 was not obvious in view of Tittle or Chope or the combined teachings of these two references. *Ex parte J. Howard Marshall,* Bd. Pat.App. Int., App. No. 596-18, at 2 (Mar. 25, 1986). However, the Board did reject independent claim 39 and its dependant claims under s. 112 para. 1 for containing inadequate disclosure to support certain included recitations pertaining to the functional configuration of the passageway. Once the applicant removed the offending language from 39(a), FN2 the claim was approved and the patent issued in its present form. *See* PTO Feb. 24, 1987 Notice of Allowability.

FN2. Specifically, the applicant deleted the following parenthetical language and inserted the underlined language:

(a) means for containing the bulk substance to be analyzed, said means comprising an elongated passageway adapted to contain said bulk substance as it flows through said apparatus, said passageway [including] *being at least partly surrounded by* a neutron reflecting substance; [adapted to increase the neutron flux along the sides of said passageway, which passageway is configured to exclude the bulk substance from regions of reduced measurement sensitivity and to direct it toward a region of maximum measurement sensitivity;]

(*See* Applicant's 4/25/86 Amendments and Remarks, at 2, 4.)
Thus, the prosecution history supports a construction of element (a) as claiming an analytical apparatus with a symmetrical passageway designed to contain the bulk substance, at least partly surrounded by a neutron-reflecting substance. Defendants' argument that plaintiff disavowed the use of a conveyor belt to move the bulk material through the passageway so as to distinguish this claim against the prior art is unavailing, viewed in light of the entirety of the prosecution history concerning independent claim # 4. A fair and contextual reading of the applicant's appeals briefs indicates he attempted to distinguish his claims from Christell's "open conveyor belt" on the grounds that his proposed passageway was symmetrical, enclosed and partly surrounded by a neutron-reflecting substance. The means by which the bulk substances moves, or is moved, through the apparatus is not contemplated or discussed by the applicant, nor does it appear as an element of claim 4.

Defendants' assertion that applicant surrendered all claims to the use of any type of conveyor belt is simply not supported by a fair reading of the record. Rather, the prosecution history supports plaintiff's contention that applicant was simply attempting to distinguish his apparatus from those conveyor belt-devices described in Tittle, Chope and Christell. In his final appeals brief to the Board of Patent Appeals applicant argued,

"While Applicant agrees with the Examiner and with the Board that the use of one or a plurality of sources,

or one or a plurality of gamma ray detectors, is in and of itself obvious, the use of a plurality of sources and/or a plurality of detectors in conjunction with the apparatus of the invention ... is clearly non-obvious. The invention as defined in the claims, when considered as a whole, is neither suggested or disclosed by either Tittle or Chope et al and would certainly not be obvious to one skilled in the art having those patents before him. Quite to the contrary, the only suggestion of such an arrangement could come only from the disclosure of the application itself."

(*1/25/84 App. Br.,* at 27-28.) This argument was ultimately accepted by the Board. "Independent claim 27 ... and independent claim 39 ... each provide for the passageway 'including a neutron-reflecting substance.' Clearly, such is not shown or suggested by either Tittle or Chope or by the combined teachings of these references." *Ex parte J. Howard Marshall,* Bd. Pat.App. Int., App. No. 596-18, at 2 (Mar. 25, 1986). In so holding, the Board makes clear that the point of novelty of applicant's device was its use of a neutron-reflecting passageway in conjunction with the specified arrangement of sources and detectors. It therefore follows that a competitor reading the entire prosecution history could not reasonably conclude it may avoid infringing Marshall's patent by simply placing all of the Marshall apparatus's essential elements-an elongated container, at least partly surrounded by a neutron-reflecting substance-on a conveyor belt. Such a conclusion is simply not warranted by the prosecution history.

Finally, the doctrine of claim differentiation also supports the court's construction of claim 4(a). This venerable patent law doctrine dictates that language in one claim should not be interpreted so as to make another claim superfluous. *See, e.g.,* Transmatic, Inc. v. Gulton Indus., Inc., 53 F.3d 1270, 1277 (Fed.Cir.1995). If the court were to construe element 4(a) as a means-plus-function claim as suggested by defendant-and thereby interpret this claim as covering only the structure disclosed in the patent specification (or its equivalents)-then the court would be hard-pressed to differentiate this claim from claim 1(a), not at issue in this suit. In drafting claim 4(a), the patentee wished to extend his patent protection to all nuclear bulk analysis devices employing elongated, symmetrical neutron-reflecting container-passageways, and did not intend to be limited only to those which are "substantially square in cross-section" as claimed in claim 1(a) and as disclosed in the specification.

The court therefore holds, without resorting to extrinsic evidence, that the plain language, specification and prosecution history of claim 4(a) adequately discloses the scope of the claim. Claim 4(a) encompasses an apparatus in which the "means for containing" the bulk substance to be analyzed includes a symmetrical "elongated passageway adapted to contain" the substance as it moves, or is moved, through the apparatus, said passageway "being at least partly surrounded by a neutron-reflecting substance."

b. *Claim 4(b) "neutron-producing means" and claim 4(c) "means for gamma-ray detection "*

The court finds claim 4(b), "neutron-producing means," and claim 4(c), "means for gamma-ray detection," must be interpreted as "means-plus-function" claims within the parameters of s. 112 para. 6. Unlike element (a)'s "means for containing," neither element (b) or (c) discloses any structure definite enough to overcome the "means-plus-function" presumption invokes by their repeated use of the term "means." A plain reading of either element demonstrates the absence of definite structure. Claim 4(b) describes "neutron-producing means ... said [ ] means comprising at least one neutron source located externally of said passageway;" similarly, claim 4(c) describes "means for gamma-ray detection operably associated with the neutron-producing means ... said means comprising at least one gamma-ray detector disposed externally of said passageway." As is apparent, neither element discloses a definite structure beyond stating that the neutron source and gamma-ray detectors are located "externally" of the passageway. *See* Laitram, 939 F.2d at 1536.

Clearly, one schooled in the prior art can imagine a multiplicity of potential apparatus structures involving external neutron sources and gamma-ray detectors.

Accordingly, the court holds the interpretation of claims 4(b) and 4(c) is governed by s. 112 para. 6, and their scope is therefore limited to the specific embodiments described in the specification (and their equivalents). York Prod., Inc., 99 F.3d at 1573; 35 U .S.C. s. 112 s. 6 (means-plus-function element are limited to "corresponding structure, material, or acts described in the specification and equivalents thereof").

2. ***Dependent Claims 4 and 5 of*** the '043 Patent

Dependant claim # 5 claims "[a]n apparatus as defined in claim 4 including a plurality of neutron sources located externally of said passageway," and dependant claim # 6 claims "[a]n apparatus as defined in claim 4 including a plurality of gamma ray detectors located externally of said passageway." For the reasons described in the court's construction of elements 4(b) and 4(c), the court finds these claims are also "means-plus-functions" claims and therefore fall within the interpretation ambit of s. 112 para. 6.

3. ***Infringement Analysis***

"To resolve infringement, a court determines the scope and meaning of the claims and assesses whether the accused device falls within those bounds (the latter being a question of fact ...)." Wiener v. NEC Electronics, 102 F.3d 534, 539 (Fed.Cir.1996), citing Becton Dickenson & Co. v. C.R. Bard Inc., 922 F.2d 792, 796 (Fed.Cir.1990). To prove infringement, the plaintiff must show that the accused device includes every limitation of the claim or an equivalent of each limitation not literally met. *Id*.

The parties have agreed, both in their moving papers and again at the May 7 hearing, that there is no factual dispute regarding the operation of defendants' accused device. Summary judgment on issue of infringement is only appropriate "[w]here the facts underlying the issue of infringement are undisputed ..." Martin v. Barber, 755 F.2d 1564, 1567 (Fed.Cir.1985). "Where the parties do not dispute the technical function of the accused device and the application of the interpreted claims to the accused device does not create further disputes, ... th[e] court may proceed from claim interpretation to analysis of infringement." Wiener, 102 F.3d at 540.

Based upon the parties submissions and representations, the court concludes defendants' accused Geoscan literally infringes the '043 patent. As represented to the court, defendants' Geoscan has an elongated passageway surrounded on three sides with a neutron-reflecting substance, two neutron sources, and a plurality of gamma-ray detectors as disclosed in the '043 claims and specification. In the Geoscan, the material to be analyzed is carried through an inverted trapezoidal passageway, bounded on three sides by the walls and floor of the conveyor belt, and by the device's metal housing on top. (*Corte Decl.,* para. 15; *Pl. Lodgement,* Exh. 19.) This passageway contains the bulk material within a fixed volume, is surrounded on three sides by polyethylene panels which function as neutron-reflectors, and is vertically symmetrical. *Id*. The neutron source utilized is Californium-252, as disclosed in the '043 specification. ('043 patent, col. 7, ll. 43-47.) The Californium is contained in introduced to the bulk material through one or more source tubes located below the tunnel. (*Corte Decl.,* para. 16; '043 patent, Fig. 1, 2.) Finally, the Geoscan's gamma ray detection assembly is located in the upper section of the apparatus, above the passageway, consisting of a plurality of detectors. *Id*. Defendants have not contested that this array is equivalent to the detector structure disclosed in the '043 patent specification. '043 patent, Fig. 1, 2; *see also* '043 patent, col. 7, 1. 26 ("... the instrument [may] be oriented easily such that the axis of the detector can lie along any desired direction without substantial modifications ...").

That defendants' device utilizes a conveyor belt "passageway" to move the bulk substance through the detection region does not avoid infringement, as the addition of a function will not serve to avoid infringement if all elements of the patent claim have been adopted. Northern Telecom, Inc., 908 F.2d at 945. Because the means by which the bulk substance is made to flow through the elongated passageway is not an element of claim 4, it cannot serve as the basis for claim limitation.

As defendants' Geoscan literally possesses all the elements of independent claim 4, in addition to a plurality of neutron sources and gamma ray detectors as claimed in dependent claims 5 and 6, the court holds defendants' device literally infringes claims 4, 5 and 6 of plaintiff's '043 patent.

C. ***Attempted Monopolization***

The court grants plaintiff's motion for summary judgment on this counterclaim. The court may properly rule on plaintiff's probable cause for instituting its patent suit as a matter of law "[w]here ... there is no dispute over the predicate facts of the underlying legal proceeding ..." PRE, 508 U.S. at 63 (citing cases). Probable cause is defined as the "reasonabl[e] belie[f] that there is a chance that [a] claim may be held valid upon adjudication." PRE, 508 U.S. at 62-63. In this case, defendants have not proffered sufficient evidence to create a disputed issue of material fact as to the objective reasonableness of plaintiff's patent suit. Viewing the suit in its totality, it is clear that plaintiff-in comparing defendants' Geoscan to the disclosures of its '043 patent-could have formed an objectively reasonable belief of success on the merits at the outset. No inquiry into plaintiff's subjective motives for bringing suit is required. PRE, 508 U.S. at 60-61. Accordingly, the court finds plaintiff is entitled to *Noerr* immunity for the prosecution of its patent suit, and thus grants plaintiff's motion for summary judgment on defendants' attempted monopolization claim.

CONCLUSION

Having fully considered the papers submitted and the law, the court denies plaintiff's motion for summary judgment on its claim for trade secret misappropriation and grants plaintiff's motion for summary judgment on defendants' attempted monopolization counterclaim. The court construes the disputed claims of the '043 patent as described herein, and grants plaintiff's motion for summary judgment on its patent infringement claim. Accordingly, the court denies defendants' cross-motion for summary judgment on their counterclaim for a declaratory judgment of non-infringement.

IT IS SO ORDERED.

S.D.Cal.,1998.
Gamma-Metrics, Inc. v. Scantech Ltd.