United States District Court,
W.D. Texas, Austin Division.

PGI INTERNATIONAL, LTD,
Plaintiff.
v.
ANDERSON, GREENWOOD & CO,
Defendant.

No. A-04-CA-330-SS

May 24, 2005.

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ORDER

SAM SPARKS**, District Judge.**

BE IT REMEMBERED that on the 28th day of January 2005, the Court, in accordance with Markman v. Westview Instruments, Inc., 52 F.3d 967 (Fed.Cir.1995) (en banc), *aff'd,* 517 U.S. 370 (1996), held a hearing at which the parties appeared by representation of counsel and made oral arguments on their proposed claims constructions. After considering the briefs, the case file as a whole, and the applicable law, the Court enters the following opinion and order.

Background

This case involves two patents held by Plaintiff PGI International, Ltd. ("PGI") relating to a device used in the process of measuring the amount and pressure of fluid flowing through gas pipelines. U.S. Patent No. 4,920,626, ("the '626 patent") deals with the invented device itself-a short pipe called a "connector flange"-and U.S. Patent No. 4,974,308 ("the '308 patent") deals with the method by which the device can be used to connect an instrument manifold (which consists of pressure-sensing equipment) to an orifice plate assembly (the part of a pipeline accessible for taking pressure measurements).

Although the '626 patent discloses what it calls an "apparatus" for connecting an instrument manifold to an orifice plate assembly, "apparatus" is a somewhat confusing term because it actually refers to two separate and identical items called "connector flange assemblies." Each connector flange assembly is comprised of three basic components: a connector flange, a stabilizer member, and a tensioning nut.

Although the parties originally identified a number of disputed claim terms for construction by the Court, some of those disputes were resolved prior to the *Markman* hearing. The Court now turns to consider the remaining disputed claim terms.

I. Claim Construction Principles

The Court begins its claim construction analysis by setting out the relevant principles of law governing claim construction. The claim language in a patent defines the scope of the invention. SRI Int'l v. Matsushita Elec. Corp., 775 F.2d 1107, 1121 (Fed.Cir.1985) (en banc). A claim term means "what one of ordinary skill in the art at the time of the invention would have understood the term to mean." Markman, 52 F.3d at 986. When construing claims, courts begin with "an examination of the intrinsic evidence, *i.e*. the claims, the rest of the specification and, if in evidence, the prosecution history," and remain focused throughout on the claim language. CCS Fitness, Inc. v. Brunswick Corp., 288 F.3d 1359, 1366 (Fed.Cir.2002); Interactive Gift Express, Inc. v. CompuServe, Inc., 256 F.3d 1323, 1331 (Fed.Cir.2001). In interpreting the effect the specification has on the claim limitations, courts must pay special attention to the Federal Circuit's admonition that one looks " 'to the specification to ascertain the meaning of the claim term as it is used by the inventor in the context of the entirety of his invention,' and not merely to limit a claim term." Interactive Gift, 256 F.3d at 1332.

If the intrinsic evidence is not, in itself, sufficient to resolve any ambiguity in the meaning of the claim terms, the Court may also consider extrinsic evidence, such as expert testimony. *Id*. Dictionary definitions, which are also technically a form of extrinsic evidence, may be considered at any time, so long as they do not contradict any definitions found in the patent documents. Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1584 n. 6 (Fed.Cir.1996). At all times, however, the Court's task is to determine the patent's limitations as they have been expressed through the claim terms themselves. Comark Communications, Inc. v.. Harris Corp., 156 F.3d 1182, 1186-87 (Fed.Cir.1998).

II. Disputed Terms in the '626 Patent

A. "connector flange"

Although the term "connector flange" was initially identified by the parties as a term in need of construction by the Court, the parties stipulated at the hearing that no special construction would in fact be required, so the Court does not construe this term.

B. "fixed"

The parties have focused their attention on claim 8 of the '626 patent, which is the only independent claim in the patent. The term "fixed" is used three times in the description of the connector flange that is contained in claim 8. That description indicates that the connector flange is comprised of the following components:

(a) a threaded end *fixed* on the connector flange for metal-to-metal sealing engagement with a corresponding tapered threaded outlet port in the orifice plate assembly,

(b) a flange end *fixed* on the connector flange and including at least one aperture positioned radially outward of the through passageway, and

(c) a threaded portion *fixed* on the connector flange axially between the threaded end and the flange end and having external threads.

'626 patent, col. 14, ll. 45-54 (emphasis added).

PGI, relying on a definition drawn from the Oxford English Dictionary, contends the term "fixed" should be construed to mean, "placed or attached firmly; fastened securely; made firm or stable in position." PL's Statement on Cl. Constr. at 7. Defendant Anderson, Greenwood & Co. ("Anderson"), on the other hand, takes the position that the Court may not look at PGI's dictionary definition until it has first consulted the intrinsic evidence in the record. Def.'s Statement of Cls. at 10-11. Based on the intrinsic evidence, Anderson contends the word "fixed" is used in the patent to mean "integral" and "immovable." Id. at 11-12.

As PGI points out, Anderson's attempt to read an "integral" limitation into the term fixed is not supported by even the intrinsic evidence. Although the specification drawings do represent the three "fixed" components of the connector flange described in claim 8 in such a way that they appear to be integrated with and form a unitary part of the connector flange, that representation alone does not answer the question of whether integration is a *requirement* of the term "fixed." Indeed, certain uses of the term "fixed" in the patent suggest that an item can become fixed without integration. For instance, claim 9 of the patent, which draws upon claim 8, describes an apparatus in which each of the stabilizer members (which are two of the components of the connector flange assemblies) are "rigidly fixed to a respective tensioning nut." 626 patent, col. 15, ll. 7-9. Claim 10, on the other hand, describes a distinct apparatus, in which "each of the stabilizer members and a respective tensioning nut are fabricated as a unitary member." Id., col. 15, ll. 10-12. The fact that the patent specifically distinguishes the situation in claim 10, in which each stabilizer member and corresponding nut form a unitary member, from the situation described in claim 9, in which each stabilizer member is merely fixed to a corresponding nut, shows that a description of two items being "fixed" together does not necessarily imply that they must also be integrated together as part of a single unit.

Anderson also contends "fixed" means "immovable." It does not, however, make any attempt to distinguish the term immoveable from the dictionary definitions put forward by PGI. The Court finds PGI's dictionary definition adequately captures the immobility requirement proposed by Anderson, and accordingly, it adopts the dictionary definition of "fixed" put forward by PGI: "placed or attached firmly; fastened securely; made firm or stable in position."

C. "fixed on the connector flange axially between the threaded end and the flange end"

It appears the real dispute between the parties over the meaning of the term "fixed" concerns their respective interpretations of the phrase, "fixed on the connector flange axially between the threaded end and the flange end," which appears in subpart (c) of claim 8 of the patent. FN1 Anderson offers the following proposed construction of this phrase:

FN1. The parties agree that the phrase "a threaded portion fixed thereon axially between the threaded end and the flange end," which appears in claim 1 of the '308 patent should have the same meaning as this phrase from the '626 patent. The Court agrees, and the same construction will apply to both phrases.

"When the connector flange stands alone, the threaded portion cannot be removed from the connector flange and it cannot move with respect to the central axis of the connector flange."

Def.'s Statement of Cls. at 13. Anderson's proposed construction finds ample support in the intrinsic evidence. Applying PGI's proposed definition of the term "fixed" (which the Court herein adopts) to the phrase in dispute, the phrase can be read as follows: "placed or attached firmly [or alternatively, fastened securely or made firm or stable in position] on the connector flange axially between the threaded end and the flange end." Although there is some dispute over what part of the phrase the word "axially" modifies, the Court need not resolve that issue as the real question raised by Anderson's proposed construction is whether the entire phrase at issue requires firm, secure attachment "when the connector flange stands alone."
In context, the entire text of subpart (c) of claim 8 describes, "a threaded portion fixed on the connector flange axially between the threaded end and the flange end and having external threads." '626 patent, col. 14, ll. 52-54. So the parties' dispute centers on whether this phrase requires that the threaded portion be attached firmly or securely to the connector flange *at all times,* or if instead, firm attachment need only occur when the connector flange assembly is connected up to an instrument manifold assembly and a gas pipeline.

The Court agrees with Anderson's position that the secure attachment requirement must be fulfilled irrespective of whether the connector flange assembly is connected up, and accordingly, adopts Anderson's proposed construction:

"When the connector flange stands alone, the threaded portion cannot be removed from the connector flange and it cannot move with respect to the central axis of the connector flange."

In support of this conclusion, the Court relies on the intrinsic evidence and the fact that the logic of the patent requires that the word "fixed," as it is used in claim 8, must apply whether or not the connector flange assembly is actually connected up. Claim 8 requires that each of the three specially described components of the connector flange-the threaded end, the flange end, and the threaded portion-be fixed on the body of the connector flange. PGI's position is that the "fixed" limitation need not be met until the device is connected up. This is not consistent with the usage of the term "connector flange" in the specification, however. For example, the specification describes the process of using connector flanges to connect an instrument manifold and an orifice plate assembly. '626 patent, col. 9, l. 63-col. 11, l. 29. If a prior connection were a prerequisite to the items actually constituting "connector flanges" (because, on PGI's theory, the connection may serve to "fix" the components on the flanges), the usage in the patent would be incorrect. That is, it would make no sense to describe the items as connector flanges until they were actually connected up-when the "fixed" limitation could be met. However, since they are described as connector flanges even when they are not yet connected up, the fixed limitation must not be dependent on a prior connection.

A specific example from the "summary of the invention" section of the specification, which involves the "threaded end" described in subpart (a) of the claim, helps to further illustrate the point. That section describes a process of threading each connector flange "to a corresponding port in the orifice plate assembly so that the NPT threads [on "the threaded end"] of the connector flange form a fluid-tight metal-to-metal seal." '626 patent, col. 4, ll. 44-46. It is not possible that the threaded end's being "fixed" on the connector flange depends on the device's already being connected to the orifice plate assembly. After all, as the description makes clear, the threaded end is the very means by which the connector flange becomes attached to the orifice plate assembly. Anyone who has ever used a screwdriver knows intuitively that no amount of turning would cause a screw to engage a screw hole if the screw did not have threads "fixed" on it. Likewise, the threading process described in the patent is not possible unless the threaded end is fixed to the connector flange prior to the threading described in the specification.

Thus, there is no way to sensibly read the patent without a requirement that "fixed" as used in claim 8, means "attached securely" even when the device is not connected up, or as Anderson puts it, when the connector flange stands alone.

III. Disputed Terms in the '308 Patent

A. "formed to include"

The required components of a connector flange are described in claim 9 of the '308 patent in a slightly different way than they are described in either claim 1 of the '308 patent or in claim 8 of the '626 patent. Claim 9 of the '308 patent sets forth a method for using connector flanges to connect an orifice plate assembly to an instrument manifold. Rather than describing the three components from claim 8 of the '626 patent-the flange end, the threaded end, and the threaded portion-as being "fixed on the connector flange," claim 9 of the '308 patent states that the connector flanges are "formed to include a threaded end fixed thereon, a flange end fixed thereon ..., and a threaded portion spaced axially between the threaded end and the flange end." '308 patent, col. 14, ll. 49-54.

Anderson contends "formed to include," in the context of claim 9, should be read to mean: "something that is made as a part of the connector flange and not something that is a separate part that can be slipped over the connector flange." Def.'s Statement of Cls. at 10-11. PGI, on the other hand, argues Anderson's proposed construction finds no support in any intrinsic or extrinsic evidence. It argues the Court should apply its definition, which is drawn from a definition found in Webster's Third New International Dictionary, and should thus construe the term "formed" to mean simply, "shaped." Pl.'s Statement on Cl. Constr. at 11.

Although the Court finds PGI's proposed contraction accurately captures the meaning of the term "formed," it finds this special construction is unnecessary as it adds nothing to the ability of a factfinder to understand the meaning of the patent. The real dispute between the parties is over whether Anderson is correct that "formed to include" requires that the three described connector flange components be integrated with and form a unitary part of the connector flange-a question not resolved by substituting the word "shaped" for the word "formed."

The Court finds that the phrase "formed to include" does not carry with it a requirement that the flange end, the threaded end, and the threaded portion be unitary, unremovable parts of the connector flange. Anderson gives no explanation for its conclusion that such a requirement should be imposed, and logic certainly does not dictate it. One can easily imagine, for example, describing a bicycle as being "formed to include" a frame, a seat, pedals, tires, and handlebars. The fact that the bike is "formed to include" tires certainly does not mean the tires cannot be removed.

Moreover, the intrinsic evidence affirmatively contradicts Anderson's proposed construction of the phrase "formed to include." After all, as PGI points out, the specification contains language that indicates that the word "formed" does not carry with it a unitariness requirement. A description of one embodiment of the invention discusses "a ring-shaped stabilizer member" which may be "formed as a unitary portion of the nut." '308 patent, col. 12, ll. 9-11. If the word "formed," as used by the patentee, implied unitariness, then the phrase "formed as a unitary portion" would be a redundancy.

Accordingly, the Court declines to adopt either parties' proposed construction of the phrase "formed to include," and the Court will leave this phrase without any special construction.

B. The Method Steps

The last set of disputes is not over the meaning of the '308 patent's terms, but rather, over the order in which the steps described in the patent must be performed. Claims 1 and 9 each describe a method for "structurally interconnecting an instrument manifold with an orifice plate assembly." '308 patent, col. 12, ll .65-66; id., col. 14, ll. 37-38. FN2 The method described in these two claims sets out the following steps:

FN2. Claim 9 uses the term "differential pressure assembly" instead of "orifice plate assembly," but the parties agree the two terms are interchangeable.

-> The first, second, and third steps call for "providing" the necessary materials-a pair of connector flanges, a pair of stabilizer members, and a pair of tensioning nuts.
-> The fourth step calls for "positioning" each tensioning nut over the threaded end of a corresponding connector flange.

-> The fifth step calls for "positioning" each stabilizer member over the threaded end of a corresponding connector flange such that the stabilizer member is between the tensioning nut and the orifice plate assembly.

-> The sixth step calls for "rotating" each of the connector flanges "thereafter" so that a metal-to-metal seal is formed between the threaded end of each connector flange and the ports on the orifice plate assembly.

-> The seventh step calls for "rotating" each of the connector flanges, "while maintaining the metal-to-metal sealing engagement," so that the apertures in the flange end of each connector flange "are at a preselected rotational position."

-> The eighth step calls for "rotating" each of the tensioning nuts "thereafter," to force the stabilizer member into stabilized engagement with the body surface of the orifice plate assembly.

-> Finally, the ninth step calls for "fixedly interconnecting the flange end of each of the connector flanges with the instrument manifold while each of the apertures in the flange ends is aligned with the corresponding aperture in the instrument manifold."

'308 patent, col. 13, ll. 8-51; id., col. 14, l. 47-col. 15, l. 19.
Anderson argues the Court should apply the following three constructions to the steps described in these two claims:

(1) Where the claim limitation calls for rotating each connector flange, it requires the step be performed for both connector flanges and not just one;

(2) Where separate claim limitations refer to two rotational movements, they mean separate rotational movements; and

(3) The steps of the method claim are required to be performed in the order set forth in the claims.

Def.'s Statement of Cls. at 20. The Court considers each proposed construction in turn.

(1) Anderson's First Method Construction

In support of its contention that "where the claim limitation calls for rotating each connector flange, it requires the step be performed for both connector flanges and not just one," Anderson relies on the plain language of the patent. A quick review of that language demonstrates that Anderson's proposed construction is correct. All of the steps that call for "rotating" each connector flange are connected to at least one other step by the word "thereafter." That linking language indicates that a "thereafter" step is not to be performed until the prior step has been completed. So for example, the pair of rotations called for by the eighth step (one rotation for each connector flange) cannot occur until after both of the rotations called for by the seventh step have taken place. Since the seventh step calls for rotating each of the connector flanges rather than just one of them, the seventh step is not complete until each flange has been rotated.

PGI attempts to resist this obvious construction through a convoluted argument based on the definition of the word "each." Relying on the Oxford English Dictionary, which defines "each" to mean "every (individual of a number) regarded or treated separately," PGI contends the patent does not require "all acts in a single step of the method ... be performed with respect to *both* apparatus elements before moving to the next step." Pl.'s Statement on Cl. Constr. at 18 (emphasis in original). On PGI's theory, the word "each" should be contrasted with the word "both," and since the patentee chose to use the former word instead of the latter, the patent should not be construed to require the rotation of "both" connector flanges in a particular step before moving on to the next step. The problem with PGI's theory is that nothing about the order of the steps hinges on the decision to use the word "each" instead of "both." As stated earlier, it is the use of the word "thereafter" that dictates the order of the steps. The use of "thereafter" implies the previous step has been fully completed. So in the sixth step, for example, even if a person executing the claimed method treats or regards each connector flange separately, there is no question that both rotations (or, each rotation, to put it another way) must occur before the step is complete. Only after the step is complete may the next step "thereafter" be performed. Thus, the Court adopts Anderson's proposed construction: "where the claim limitation calls for rotating each connector flange, it requires the step be performed for both connector flanges and not just one."

(2) Anderson's Second Method Construction

In support of its contention that "where separate claim limitations refer to two rotational movements, they mean separate rotational movements," Anderson relies again on the plain language of the patent. The dispute here is over whether the rotations called for in the sixth and seventh steps must be separate rotational movements. The sixth step calls for rotating each of the connector flanges so as to form a metal-to-metal seal with the corresponding ports in the orifice plate assembly. The seventh step, in turn, calls for a rotation of each connector flange "while maintaining the metal-to-metal sealing engagement," so that the apertures in the flange end of each connector flange "are at a preselected rotational position."

PGI points out that, as a matter of logic, a single rotation of each connector flange could accomplish the intended goal of the two distinctly described steps, which are: (1) to form a metal-to-metal seal; and (2) to place the apertures of each connector flange's "flange end" at a preselected rotational position. The fact that logic does not require two separate rotational movements does not mean that the method claimed in the patent does not require two separate steps, however. *Cf.* Milcor Steel Co. v. George A. Fuller Co., 316 U.S. 143, 146 (1942) ("Out of all the possible permutations of elements which can be made from the specifications, [the patentee] reserves for himself only those contained in the claims.") (quoting Milcor Steel Co. v. George A. Fuller Co., 122 F.2d 292, 294 (2d Cir.1941)); *see also* Teleflex, Inc. v. Ficosa N. Am.

Corp., 299 F.3d 1313, 1324 (Fed.Cir.2002) ("[T]he claim construction inquiry ... begins and ends in all cases with the actual words of the claim.") (quoting Renishaw PLC v. Marposs Societa' per Azioni, 158 F.3d 1243, 1248 (Fed.Cir.1998)). Plainly, the language used to describe these two steps requires that each connector flange be rotated twice. Since step six and step seven are discrete steps connected by the word "thereafter," the rotations called for in step seven cannot be initiated until both rotations described in step six have taken place. If, in one fluid movement, one attempted to accomplish the distinct goals of forming the metal-to-metal seal and properly aligning the flange end as to the first connector flange, one would end up jumping back and forth between step six and step seven in order to complete the process with respect to the second connector flange-a result the Court has already indicated would be contrary to the language in the patent.

PGI also contends that the question of whether a single act can fulfill the requirements of both steps is more appropriately viewed as an infringement issue than a claim construction issue, relying on Eagle Comtronics, Inc. v. Arrow Communication Labs., Inc., 305 F .3d 1303, 1317 (Fed.Cir.2002). That case does not support the proposition for which PGI cites it. In *Eagle Comtronics,* the Federal Circuit held "whether or not a limitation is deemed to be vitiated must take into account that ... when separate claim limitations are combined into a single element of the accused device, a claim limitation is not necessarily vitiated, and the doctrine of equivalents may still apply if the differences are insubstantial." *Id*. The court did not suggest that a proper claim construction, which is a necessary prerequisite to deciding the question of literal infringement, should not occur simply because an application of the doctrine of equivalents might ultimately establish infringement. Accordingly, the Court adopts Anderson's proposed construction: "Where separate claim limitations refer to two rotational movements, they mean separate rotational movements."

(3) Anderson's Third Method Construction

Anderson's final proposed construction of each of the method claims in the '308 patent is that "the steps of the method claim are required to be performed in the order set forth in the claims." This last construction is based on Anderson's argument that the steps "become nonsensical if many are performed in any other order" than the order in which they were set out in the claims. Def.'s Statement of Cls. at 20. Anderson also relies on the patent's repeated use of the word "thereafter" to argue for sequential ordering. *See* Mantech Envtl. Corp. v. Hudson Envtl. Servs., Inc., 152 F.3d 1368, 1376 (Fed.Cir.1998) (holding that "where the sequential nature of the claim steps is apparent from the plain meaning of the claim language and nothing in the written description suggests otherwise," it is appropriate to require the steps to be performed sequentially).

PGI does not dispute Anderson's point that the majority of the steps must be performed in a specific order; instead it focuses its attention on the last two steps and argues there is no requirement that the ninth step follow the eighth step. Pl.'s Statement on Cl. Constr. at 14-15. However, PGI's position ignores significant linking language in step eight. Like many of the other steps, the eighth step contains the word "thereafter." Read in context, the term requires that step eight immediately follows step seven, because "thereafter" is a transition word that ties those two steps together. FN3 To skip step eight and proceed directly to step nine in attempting to execute the method claimed in the patent would be to ignore the linking language of claim 8.

FN3. Indeed, in the chart of disputed claim terms it filed with the Court, PGI has indicated its understanding of the meaning of the word "thereafter" in the claims is "after the *previous* step." Pl.'s Chart of Disputed Cl. Terms in the Asserted Independent Cls. at 5 (emphasis added).

The case on which PGI chiefly relies for the proposition that "[u]nless the steps of a method claim actually recite an order, the steps should not be construed to require one," does not dictate a contrary result here. *See* Pl.'s Statement on Cl. Constr. at 13 (citing Altiris, Inc. v. Symantec Corp., 318 F.3d 1363 (Fed.Cir.2003)). The method patent in that case did not contain any linking language similar to what has been used here. Altiris, 318 F.3d at 1368-71. Indeed, the Altiris court acknowledged that "if, as a matter of logic or grammar, [the steps in a method claim] must be performed in the order written," the court should so interpret the claim. Id. at 1369; *see also* Combined Sys., Inc. v. Def. Tech. Corp. of Am., 350 F.3d 1207, 1211-12 (Fed.Cir.2003) (construing a method claim to require a particular order of steps where the order was dictated by a proper grammatical reading of the claim).

Since the language used in claim 8 dictates the order of the steps, the Court also adopts Anderson's third proposed method construction: "The steps of the method claim are required to be performed in the order set forth in the claims."

IV. Remaining Claim Terms

Finally, the Court adopts each of the claim constructions to which the parties have stipulated and today enters an agreed order to that effect.

Conclusion

In accordance with the foregoing:

IT IS ORDERED that the construction of each of the patent claim terms adopted herein will be incorporated into any jury instructions given in the above-styled cause and will be applied by the Court in ruling on the issues raised in summary judgment motions.

W.D.Tex.,2005.
PGI Intern., Ltd. v. Anderson, Greenwood & Co.