United States District Court,
N.D. Texas, Dallas Division.

PURE TECHNOLOGIES LTD., et al,
Plaintiffs.
v.
The PRESSURE PIPE INSPECTION COMPANY LTD., et al,
Defendants.

Civil Action No. 3:05-CV-0336-N

Dec. 4, 2007.

Paul V. Storm, Anthony P. Miller, C. J. Kling, Storm LLP, Dallas, TX, Benjamin E. Leace, Christopher J. Dervishian, Kevin A. Keeling, Rex A. Donnelly, Ratner Prestia, Valley Forge, PA, John W. Macpete, Robin L. Barnes, Locke, Lord, Bissell & Liddell, LLP, Dallas, TX, for Plaintiffs.

Herbert J. Hammond, Richard L. Wynne, Jr., Thompson & Knight, Dallas, TX, for Defendants.

ORDER

DAVID C. GODBEY**, District Judge.**

This Order addresses construction of Claim 1 of U.S. Patent No. 6,127,823 (the "'823 Patent" or the "Patent"), pursuant to Markman v. Westview Instruments, Inc., 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). Having reviewed the relevant intrinsic and extrinsic evidence in the record, the Court construes the disputed terms and phrases of Claim 1 as provided below.

I. FACTUAL AND PROCEDURAL BACKGROUND

This dispute involves consolidated cross-claims of patent infringement brought by Plaintiffs-Counter Defendants Pure Technologies, Ltd. and Pure Technologies US, Inc. (collectively, "Pure") and Defendants-Counter Claimants The Pressure Pipe Inspection Co., Ltd. ("PPIC Ltd."), Pressure Pipe Inspection USA, Inc. ("PPIC USA"), and David L. Atherton, FN1 the patentee of the ' 823 Patent (collectively, "PPIC"). Pure asserts a cause of action for infringement of U.S. Patent Nos. 6,718,369 and 6,791,318 against PPIC, and PPIC asserts a counterclaim against Pure for infringement of the ' 823 Patent. By the parties' joint motion, all other proceedings in the case have been stayed pending the Court's construction of Claim 1 of the ' 823 Patent.

The '823 Patent generally discloses a method and apparatus for detecting discontinuities in prestressing wiring coiled around concrete-covered metal pipes, such as high-pressure water pipes. Breaks in prestressing wiring may signify weak spots in a pipe segment or the location where two pipe segments are joined. The Patent describes the use of a probe, which is moved along the inside of the tested pipe, to

generate an electromagnetic field flowing outside of and then back into the pipe (the remote field eddy current ("RFEC") effect), to induce a current in the prestressing wiring coiled around the pipe (the transformer coupling ("TC") effect), and then to gather and analyze data derived from these two effects to locate breaks in the prestressing wiring. Claim 1 of the '823 Patent covers this basic invention:

1. A method for detecting discontinuities in a spirally wound prestressing wire or rod embedded in concrete surrounding a metal pipe comprising:

passing a remote field eddy current probe, comprising a coaxially-wound exciter coil and a detector coil axially spaced therefrom, axially through said pipe;

energizing said exciter coil with low frequency ac, so as to create (a) an energy flow path externally of said metal pipe between said exciter coil and said detector coil and (b) a transformer coupling, through said prestressing wire or rod, inductively linking said exciter coil and said detector coil; and

receiving a signal in said detector coil indicative of discontinuities in said prestressing wire or rod.

II. CLAIM CONSTRUCTION STANDARDS

Claim construction is a question of law for the Court. *See* Markman, 517 U.S. at 391. In construing the claims of a patent, the words comprising the claims "are generally given their ordinary and customary meaning" as understood by "a person of ordinary skill in the art in question at the time of the invention." Phillips v. AWH Corp., 415 F.3d 1303, 1312-13 (Fed.Cir.2005). Accordingly, courts must determine the meaning of claim terms in light of the resources that a person with such skill would review to understand the patented technology. *See* id. at 1313 (quoting Multiform Desiccants, Inc. v. Medzam, Ltd., 133 F.3d 1473, 1477 (Fed.Cir.1998)). First, "the person of ordinary skill in the art is deemed to read the claim term ... in the context of the entire patent, including the specification." Id. at 1313. If the specification "reveal[s] a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess ...., the inventor's lexicography governs." Id. at 1316. Likewise, if "the specification ... reveal[s] an intentional disclaimer, or disavowal, of claim scope by the inventor ....[,] the inventor's intention, as expressed in the specification, is regarded as dispositive." Id. at 1316.

In addition to the specification, courts must examine the patent's prosecution history-that is, the "complete record of the proceedings before the PTO and includ[ing] the prior art cited during the examination of the patent." Id. at 1317. "Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent." Id. at 1317. In particular, courts must look to the prosecution history to determine "whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." Id. at 1317. "[W]here the patentee has unequivocally disavowed a certain meaning to obtain his patent, the doctrine of prosecution disclaimer attaches and narrows the ordinary meaning of the claim congruent with the scope of the surrender." Omega Eng'g, Inc. v. Raytek Corp., 334 F.3d 1314, 1324 (Fed.Cir.2003).

Finally, in addition to evidence intrinsic to the patent at issue and its prosecution history, courts may look to "extrinsic evidence, which 'consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.' " Phillips, 415 F.3d at 1317 (quoting *Markman,* 517 U.S. at 980). In general, extrinsic evidence is "less reliable than the patent and its prosecution history in determining how to read claim terms." *Id*. at 1318.

III. CONSTRUCTION OF CLAIM 1 OF THE '823 PATENT

Based on the Court's review of the relevant intrinsic and extrinsic evidence in the record, the Court construes the disputed terms and phrases of Claim 1 of the '823 Patent as follows:

A. "Remote Field Eddy Current Probe "

A "remote field eddy current probe" is, consistent with the express language of Claim 1, a device comprising "a coaxially-wound exciter coil and detector coil axially spaced therefrom." Col. 8, ll. 33-35. While Pure attempts to import a large number of limitations into the definition of RFEC probe, the Court concludes that these arguments are best addressed in construing other terms below. Pure principally argues that the term RFEC probe should be limited to the characteristics of prior art RFEC devices used for testing metal pipes-namely, that the detector coil must be spaced two to three pipe diameters from the exciter coil in the "remote field region." However, it is well established that patentees can act as their own lexicographer and define terms-even terms with well-known definitions-in any manner they choose. *See* Abraxis Bioscience, Inc. v. Mayne Pharma USA, Inc., 467 F.3d 1370, 1376 (Fed.Cir.2006) ("A patentee ... can 'act as his own lexicographer to specifically define terms of a claim contrary to their ordinary meaning.' " (quoting Chef Am., Inc. v. Lamb-Weston, Inc., 358 F.3d 1371, 1374 (Fed.Cir.2004))). The Court finds that Atherton clearly defined the term RFEC probe in the text of Claim 1 as a device with exciter and detector coils, rather than by reference to the precise, common characteristics of a family of prior art devices.

B. "Coaxially-Wound Exciter Coil "

A "coaxially-wound exciter coil" is a coil with windings wound around the longitudinal axis of the pipe being tested. PPIC argues that the exciter coil is a solenoid FN2 with windings that are each wound around some arbitrary axis-one independent of the orientation of the tested pipe-and thus are "coaxially-wound." Accordingly, PPIC asserts, the exciter coil may be positioned at any arbitrary angle or orientation within the tested pipe. The Courts disagrees. The term "coaxial" has a simple, plain meaning that connotes multiple objects sharing a common axis.FN3 Here, the term "coaxially-wound" means that the windings of the exciter coil are wound around an axis that is coincident with the longitudinal axis of the pipe.FN4

The Court finds ample evidence of this construction in the intrinsic record. First, the specification makes clear (and the parties agree) that, as used in the Patent, the term "axially" indicates the direction along the longitudinal axis of the tested pipe. In fact, the only "axis" recognized and referred to as such in the Patent is the longitudinal axis of the pipe. Accordingly, it naturally follows from the Patent's vocabulary that a coil wound co-"axially" is a coil with windings that share the only recognized axis in the Patent-the longitudinal axis of the tested pipe-rather than some arbitrary, independent axis. *See generally* Fin Control Sys. Pty, Ltd. v. OAM, Inc., 265 F.3d 1311, 1318-19 (Fed.Cir.2001) ("[T]he same terms appearing in different portions of the claims should be given the same meaning unless it is clear from the specification and prosecution history that the terms have different meanings at different portions of the claims."). In fact, in describing prior art RFEC devices, Atherton used the term "coaxial" in just this manner when stating that such devices "use a solenoidal exciter coil ... internal to and generally approximately *coaxial with the longitudinal axis of the pipe to be tested*." Col. 1, ll. 46-48 (emphasis added).

The Court finds further evidence of this construction from how the Patent differentiates between the exciter and detector coils. While the claim language describes the exciter coil as "coaxially wound," it includes no modifier describing the detector coil. The detector coil is depicted in the Patent as adjacent to the pipe wall-

that is, not positioned along the longitudinal axis of the pipe-and is also shown in Figures 1 and 2 as oriented along the radial direction of the pipe-that is, not even parallel to the longitudinal axis of the pipe. On the other hand, the exciter coil is consistently depicted with windings wound around the longitudinal axis of the pipe.FN5

The Court further rejects PPIC's argument that the exciter coil must be a solenoid. Atherton used the term "solenoid" many times in the Patent, *see, e.g.,* col. 1, l. 45 (explaining that prior art RFEC devices use "a solenoidal exciter coil ... internal to and generally approximately coaxial with the longitudinal axis of the pipe"); col. 3, l. 25 (describing the embodiment depicted in Figure 1 as incorporating "a solenoidal exciter coil 8 approximately coaxial with cylindrical body 3"), yet choose not to limit the exciter coil's shape to that of a "solenoid" in the claim language. In fact, in these two instances Atherton used "solenoidal" and "coaxial" in the same sentence, which strongly suggests that he recognized that the terms had different meanings. The Court is reluctant to import a limitation from the specification without evidence that the patentee clearly intended to abandon that scope. *See* Pfizer, Inc. v. Ranbaxy Labs. Ltd., 457 F.3d 1284, 1290 (Fed.Cir.2006) ("[I]mporting limitations from the specification into the claims ... should be avoided unless the patentee clearly 'intends for the claims and the embodiments in the specification to be strictly coextensive.' " (quoting Phillips, 415 F.3d at 1323)). The Court, therefore, descriptively construes the term "coaxially-wound exciter coil" without using the term "solenoid."

On the other hand, the Court also rejects Pure's argument that the exciter coil need only be a coil with windings "about an axis that is shared with the longitudinal axis of the pipe being tested." The claim language requires that the exciter coil be coaxially- *wound,* not merely coaxially-positioned. Therefore, the Court finds that the exciter coil must be a coil with windings that are each wound around the longitudinal axis of the pipe, not a coil such as a toroid FN6 with windings that may be symmetrically positioned around the longitudinal axis of the pipe but which have been wound in some arbitrary, nonlinear fashion.

C. "A Detector Coil Axially Spaced Therefrom "

"[A] detector coil axially spaced therefrom" is a coil separated from the exciter coil by some appreciable distance in the longitudinal direction of the pipe. The Court defines this term on the basis of its plain meaning in light of the Patent's definition of "axially" and rejects both parties' attempts to import unnecessary limitations into the definition. Pure argues that the detector coil must be spaced two to three pipe diameters from the exciter coil as generally required by prior art RFEC devices. However, as discussed above, the RFEC device disclosed in the '823 Patent is not limited by the characteristics of prior art RFEC probes, and the Patent's specification expressly rejects such a limitation. *See* col. 4 ll. 64-67 ("The detector must therefore be well into the remote field region, typically, *but not necessarily,* two or more pipe diameters from the exciter, under all conditions." (emphasis added)).

On the other hand, the Court also rejects PPIC's argument that the detector coil must be spaced only so far away from the exciter coil as necessary to detect the remote field. PPIC argues elsewhere that through the combined effects of RFEC and TC the remote field can be detected directly adjacent to the exciter coil with no spacing requirement at all. Thus, if PPIC is correct, its proposed definition would contradict the plain meaning of the claim language, which requires at least *some* axial space between the exciter and detector coils. Having considered the parties' arguments, the Court sees no need to import any additional limitation beyond requiring, consistent with the plain meaning of the claim language, that the exciter and detector coils be longitudinally separated.

D. "Axially Through Said Pipe "

"[A]xially through said pipe" means on a path parallel to the longitudinal axis of the pipe. The parties agree on the definition of this phrase in all respects, except that PPIC argues that the path of the probe need only be "substantially" parallel to the longitudinal axis of the pipe. The Court rejects PPIC's argument that the term's construction should include this sort of qualifier. PPIC's arguments for minor expansions of claim scope are best saved for briefing on the doctrine of equivalents during the infringement analysis stage of PPIC's counterclaim.

E. "Low Frequency AC "

"[L]ow frequency ac" is an electrical signal with voltage that rises and falls periodically between a maximum positive voltage and a maximum negative voltage of equal magnitude at a frequency between 20 and 2000 Hertz.FN7 Here, the parties principally dispute only whether an alternating current ("AC"), signal must be bi-directional-that is, oscillating between a positive and negative voltage of equal magnitude-as Pure suggests, or whether it may contain a direct current ("DC") offset, as PPIC argues. The Court concludes that to define AC as encompassing signals with DC offsets would be to ignore the plain meaning of the term. The text of Claim 1 limits the invention to the use of an AC signal, not a signal with both AC and DC components.

When read in their entirety, even the extrinsic sources cited by PPIC support a definition of AC with a bi-directional limitation. PPIC quotes VAN NOSTRAND'S SCIENTIFIC ENCYCLOPEDIA 100 (Douglas M. Considine ed., 5th ed.1976) [hereinafter VAN NOSTRAND'S], which defines "alternating currents" as "[e]lectric currents which vary periodically with time." However, PPIC fails to note that VAN NOSTRAND'S also states that one cycle or period of an AC signal consists of "[o]ne complete set of *positive and negative* values" and displays three example AC waveforms all of which are bi-directional. Id. (emphasis added). Similarly, PPIC quotes RUDOLPH F. GRAF, MODERN DICTIONARY OF ELECTRONICS 19 (7th ed.1999) [hereinafter GRAF], which defines "alternating current" as "[a]ny signal that varies with time." However, PPIC selectively quotes only GRAF's *second* definition of "alternating current" while omitting the *first* listed definition-which presumably, in GRAF's opinion, is the more common of the two-which defines AC as "[a] flow of electricity that reaches maximum in one direction, decreases to zero, then reverses itself and reaches maximum in the opposite direction." Id.

Finally, the Court notes that other courts construing the claims of inventions involving AC signals have described those signals as bi-directional. *See* Oneac Corp. v. Raychem Corp., 20 F.Supp.2d 1233, 1236 (N.D.Ill.1998) ("A.C. signals ... do not have a constant voltage. Rather, the voltage rises and falls in a repeated cycle in the form of a sine wave. A cycle is completed when the voltage goes from an initial value of zero, to its maximum positive voltage, down to its maximum negative voltage, and back to zero."); Watson Indus., Inc. v. Murata Elecs. N. Am., 301 F.Supp.2d 933, 938-39 (W.D.Wis.2003) (favorably citing the MCGRAW HILL DICTIONARY OF SCIENTIFIC & TECHNICAL TERMS (6th ed.2003), which defines "alternating current" as "electric current that *reverses direction* periodically, usually many times a second" (emphasis added)).

F. "An Energy Flow Path Externally of Said Metal Pipe Between Said Exciter Coil and Said Detector Coil "

"[A]n energy flow path externally of said metal pipe between said exciter coil and said detector coil" is an electromagnetic field generated between the exciter and detector coils that flows from the exciter coil out

through the pipe wall, along the outside of the pipe wall, and back through the pipe wall to the detector coil. The parties essentially agree on the meaning of this term, except that Pure seeks to include a limitation regarding the amount of spacing required between the exciter and detector coils and seeks to limit the use of the invention to "detecting pipe joints." The Court sees no reason why these limitations should be included in the construction of this phrase. In any event, the Court previously rejected Pure's attempt to limit the spacing required between the exciter and detector coils to two to three pipe diameters, and finds the suggestion that the RFEC effect be limited only to detecting pipe joints flatly contrary to Atherton's stated motivation for inventing the device disclosed in the Patent, see col. 2, ll. 22-25 ("[P]eriodic inspection of municipal water supply pipes and the like ... would be advantageous in order to prevent expensive ruptures or other failures. Heretofore, however, there has not been any practical method for inspecting composite pipes, such as such as prestressed concrete pipes.").FN8

G. "A Transformer Coupling, Through Said Prestressing Wire or Rod, Inductively Linking Said Exciter Coil and Said Detector Coil "

"[A] transformer coupling, through said prestressing wire or rod, inductively linking said exciter coil and said detector coil" means using the exciter coil to induce a current in the prestressing wire surrounding the pipe to be tested, which in turn generates an electric field that may be detected by the detector coil. Again, the parties largely agree on the meaning of this term, yet use differing terminology. PPIC seeks to define the TC effect in terms of "mutual inductance," while Pure offers a more descriptive construction. The Court favors a descriptive definition to avoid any future confusion that might result from defining one disputed term by reference to another.

PPIC also seeks to add a limitation stating that the TC effect "amplif[ies] the remote field transmitted out through and back into the pipe, making the remote field detectable distinct from the direct field." FN9 While, if PPIC is correct, this may be the practical effect of inducing a current in the prestressing wire while performing RFEC tests, the Court finds insufficient evidence to suggest that Atherton clearly intended that such a limitation be incorporated into the construction of this phrase. Although Atherton stated in the specification that "[t]he indirect energy path external to the cylinder is greatly enhanced by the transformer coupling effect between the exciter and detector coils when the prestressing wire also forms a closed coil, with both exciter and detector coils within it," col. 7, ll. 55-59,FN10 he did so only in describing the preferred embodiment and the results of his experimentation with the disclosed embodiment. He nowhere states that the TC effect "amplifies" the indirect energy flow.FN11 As discussed above, limitations taken from the specification should not be imported into the claims "unless the patentee clearly 'intends for the claims and the embodiments in the specification to be strictly coextensive.' " Pfizer, 457 F.3d at 1290 (quoting Phillips, 415 F.3d at 1323). Here, the Court is not convinced that Atherton clearly intended for the claims to incorporate an amplification limitation and therefore declines to explicitly require one in its construction.

H. "Signal in Said Detector Coil Indicative of Discontinuities "

Finally, a "signal in said detector coil indicative of discontinuities" is information or data received at the detector coil that indicates the presence of discontinuities in the prestressing wire of the pipe being tested. Pure makes much of the fact that "signal" is used in an allegedly contradictory fashion in the Patent. Specifically, Pure contends that Claim 1 describes the "signal" as *received by* the detector coil while Claim 2 described the "signal" as *coming from* the detector coil. However, the parties' dispute is easily resolved by construing the term "signal" in terms of its information content, and not in terms of the medium-i.e., voltage, current, or electromagnetic field-by which that information is transmitted. Because the specification

does not to limit the "signal" in the invention to any particular means of transmission, the Court likewise declines to add any medium limitation and construes the term according to its information content.

IV. CONCLUSION

Having reviewed the relevant intrinsic and extrinsic evidence in the record, the Court construes the disputed terms of Claim 1 of the '823 Patent as provided above.

FN1. Atherton, the chairman of PPIC Ltd., is not a Defendant is this suit but is a Counter Claimant by virtue of his status as the named inventor and owner of the '823 Patent. PPIC Ltd. is the exclusive licensee of the Patent; PPIC USA is its United States subsidiary.

FN2. Because the Court does not incorporate "solenoid" into its construction of "coaxially-wound exciter coil," the Court sees no need to provide a precise definition of the term. Generally, however, a solenoid is understood to be "an electric conductor wound as a helix with small pitch, or as two or more coaxial helices, so that current through the conductor establishes a magnetic field within the conductor." RANDOM HOUSE WEBSTER'S UNABRIDGED DICTIONARY 1816 (2d ed.2001).

FN3. In fact, Atherton uses the term "coaxially" in just this manner at col. 3, l. 26 where he describes the exciter coil of Figure 1 as "approximately coaxial with" the probe depicted in the same Figure. Figure 1 clearly depicts the exciter coil as wound around the longitudinal axis of the probe, which is also the longitudinal axis of the pipe.

FN4. The specification describes the space inside the pipe by reference to two dimensions-longitudinal and radial. The longitudinal dimension refers to the direction "down the pipe"-that is, the direction in which water would flow through the pipe (or its exact opposite). The radial dimension refers to the direction out from the center of the pipe towards the pipe's wall.

FN5. PPIC contends that Figure 6 contradicts the Court's construction of "co-axially wound exciter coil" because in that figure both the exciter and detector coils are depicted in a position adjacent to the pipe wall. However, Figure 6 is a schematic drawing of the circuitry linking the exciter and detector coils; it is not a Figure showing a complete, scaled embodiment of the claimed invention. Accordingly, Figure 6 no more shows the proper placement of the exciter coil than it shows the proper placement of the other depicted circuit elements-e.g., that the wires emanating from the coils might somehow run through the walls of the cement pipe or that the voltage source might drag along beneath the pipe as they do in the schematic.

FN6. A toroid is, generally speaking, a doughnut shaped coil. While a toroid could be coaxial with the longitudinal axis of the pipe-for example, with the axis of the pipe running through the hole in the doughnut-it could not be coaxially- *wound* around the longitudinal axis of the pipe-that is, with each of its windings centered around in the longitudinal axis of the pipe.

FN7. While the parties generally agree that "low frequency" as defined in the Patent falls between 20 and 2000 Hertz, PPIC again seeks to insert the qualifier "substantially." As discussed above, the Court sees no need to qualify its construction at this stage of the litigation.

FN8. Pure argues that the RFEC and TC effects have separate purposes-namely, that the RFEC effect is solely for detecting pipe joints and that the TC effect is only for detecting breaks in prestressing wiring. Pure bases this argument on a statement Atherton made in the prosecution history that "signals from joints are due primarily to RFEC responses but ... the TC effect is essential for detecting prestressing wire breaks and is the dominant cause of these signals," Atherton's Response to the Official Action dated Aug. 27, 1999 at 4, Appx. 92. However, the Court finds that nothing in the Patent's specification supports Pure's contention that the two effects have different, mutually exclusive purposes and further concludes that Atherton's statement does not clearly restrict the scope of the invention in that manner. Accordingly, the Court rejects Pure's suggested limitations restricting the uses of each effect. *See Omega,* 334 F.3d 1325-26 ("[F]or prosecution disclaimer to attach, our precedent requires that the alleged disavowing actions or statements made during prosecution be both clear and unmistakable.").

FN9. The Court notes that PPIC does not use the term "amplify" here in its traditional sense. Rather, PPIC appears to mean that, with the addition of TC, the detected field is less attenuated that it would otherwise be absent the TC effect. PPIC apparently does not mean to suggest that the field is affirmatively strengthened by some gain factor as it would be with an electronic amplifier.

FN10. Atherton makes similar statements to the effect that the indirect energy flow can be "enhanced" elsewhere in the description of the preferred embodiment. *See* col. 4, ll. 28-35 ("Provided the energy coupling path between the exciter and detector coils is predominantly outside of the steel cylinder, i.e. the coil separation is sufficient to satisfy the remote field condition, the external coupling can be greatly enhanced by the embedded prestressing wire winding which is simulated by a surface winding."); col. 4, l. 67-col. 5, l. 3 ("This indirect energy transmission path can then be enhanced by the transformer coupling (TC) effect of the coil formed by the prestressing wire, as shown in FIG. G."). However, in the specification, Atherton nowhere refers to this as an "amplification" effect and nowhere suggests that it might reduce the space required between the exciter and detector coils.

FN11. Much of the confusion between the parties seems to stem from the fact that Atherton likely did not fully understand his invention at the time he filed the specification. *See, e.g.,* Atherton's Response to the Official Action dated Aug. 27, 1999 at 4, Appx. 92 ("RFEC/TC effect is much more complex than RFEC and at the present time much less of the detailed mechanism is understood."). Specifically, it is not at all clear from the Patent's specification that Atherton understood at the time of filing whether the detector coil would need to be spaced two to three pipe diameters from the exciter coil when RFEC and TC were combined. The record seems to indicate that Atherton discovered after filing his patent application that there might be some "amplification" effect when the two are combined such that the exciter and detector coils may be spaced much more closely or even directly adjacent one another, and that PPIC seeks to construe the Patent accordingly post hoc. For example, PPIC cites a number of extrinsic sources published approximately two years or more *after* the ' 823 Patent's filing date to bolster its proposed claim constructions. Patent claims, however, are construed as understood "at the time of the invention, i.e., as of the effective filing date

of the patent application," Phillips, 415 F.3d at 1313, not as the patentee might wish them to be understood in hindsight, *see* Chef Am., 358 F.3d at 1374 ("[W]e construe the claim as written, not as the patentees wish they had written it."). Accordingly, the Court construes the disputed terms as best it can without reference to Atherton's or PPIC's after-acquired knowledge, which can have no bearing on the meaning of the disputed claim terms as understood at the time of filing.

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Pure Technologies Ltd. v. Pressure Pipe Inspection Co. Ltd.