

# United States Court of Appeals for the Federal Circuit

2006-1407

AQUATEX INDUSTRIES, INC.,

Plaintiff-Appellant,

v.

TECHNICHE SOLUTIONS,

Defendant-Appellee.

Jack A Wheat, Stites & Harbison, of Louisville, Kentucky, argued for plaintiff-appellant. With him on the brief were William C. Ferrell, Jr., James R. Michels, and Richard S. Myers, of Nashville, Tennessee.

James A. DeLanis, Baker Donelson Bearman Caldwell & Berkowitz, P.C., of Nashville, Tennessee, argued for defendant-appellee. With him on the brief was W. Edward Ramage.

Appealed from: United States District Court for the Middle District of Tennessee

Judge Robert L. Echols

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DECIDED: February 27, 2007

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Before RADER and DYK, Circuit Judges, and WHYTE, District Judge\*.

DYK, Circuit Judge.

This case was previously before us in AquaTex Industries, Inc. v. Techniche Solutions, 419 F.3d 1374 (Fed. Cir. 2005). We held that claims 1 and 9 of U.S. Patent No. 6,371,977 (“the ’977 patent”) were not literally infringed, but we did not foreclose a finding of infringement under the doctrine of equivalents. We remanded for “the trial court [to] consider whether or not each limitation of the claims in dispute, or its equivalent, is present in the accused Techniche products.” Id. at 1383. On remand the district court granted summary judgment of non-infringement, and the plaintiff patent

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\* Honorable Ronald M. Whyte, District Judge, United States District Court for the Northern District of California, sitting by designation.

holder AquaTex Industries, Inc. (“AquaTex”) now appeals. We hold that the district court erred in finding the doctrine of equivalents barred by prosecution history estoppel and in relying on unclaimed features to find a lack of equivalents. However, we affirm the grant of summary judgment because AquaTex did not satisfy its burden to present particularized evidence of equivalents in opposition to the motion for summary judgment.

## BACKGROUND

Having already described the background of this case in AquaTex, 419 F.3d at 1376-79, we provide only a brief summary here.

AquaTex is the assignee of the '977 patent. The '977 patent claims a method for cooling a person through evaporation by use of a multi-layered, liquid-retaining composite material in evaporative cooling garments. Defendant Techniche Solutions (“Techniche”) also manufactures multi-layered, liquid-retaining composite materials for use in evaporative cooling garments.

AquaTex sued Techniche alleging that its product infringed claims 1 and 9 of the '977 patent. These claims claim a method of cooling a person using a certain device (i.e., “a multi-layered, liquid-retaining composite material”). Claim 1 claims a method performed using a device “comprising a fiberfill batting material, and hydrophilic polymeric fibers that absorb at least about 2.5 times the fiber’s weight in water.”<sup>1</sup> '977

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<sup>1</sup> Claim 1 states in full:

A method of cooling a person by evaporation, comprising:

providing a multi-layered, liquid-retaining composite material comprising a fiberfill batting material,

patent col. 13 l. 67 to col. 14 l. 2. Claim 9 similarly claims a method performed using a device with “a filler layer comprising: a fiberfill batting material and hydrophilic polymeric particles.”<sup>2</sup> '977 patent col. 14 ll. 39-41. The differences between claims 1 and 9 are of no relevance to this appeal. AquaTex did not assert that Techniche performed the actual method but instead asserted that Techniche made a product its consumers used to perform the method. Therefore the suit was for contributory infringement.

In 2004, Techniche moved for summary judgment of non-infringement. It conceded that most of the claim limitations were satisfied. But Techniche asserted that it uses a commercially available product called Vizorb® as its filler layer and that Vizorb® is an airlaid non-woven fabric predominately made of cellulose fluffed pulp, incorporating both natural and synthetic fibers. The question was whether Vizorb®

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and hydrophilic polymeric fibers that absorb at least about 2.5 times the fiber's weight in water;

soaking said multi-layered composite in a liquid;

employing said multi-layered, liquid-retaining composite material as a garment or a flat sheet and evaporatively cooling said person.

<sup>2</sup> Claim 9 states in full:

A method of cooling a person by evaporation, comprising:

providing a multi-layered, liquid-retaining composite material comprising:  
a filler layer comprising:

a fiberfill batting material and  
hydrophilic polymeric particles;

soaking said multi-layered, liquid-retaining composite in a liquid; and

employing said multi-layered, liquid-retaining composite as a garment or a flat sheet and evaporatively cooling said person.

satisfied the “fiberfill batting material” limitation. Techniche claimed that it did not because only a batting material containing exclusively synthetic fibers constituted “fiberfill.”

The district court construed the claim language to require only synthetic batting material and found no literal infringement because Vizorb® includes natural fibers. The district court also found that the claim of infringement under the doctrine of equivalents was barred by prosecution history estoppel. During prosecution, AquaTex amended its claims to distinguish the Zafiroglu prior art patent, U.S. Patent No. 4,897,297, by claiming that its method cooled by evaporation whereas Zafiroglu cooled through use of a compress and involved only slight evaporation over time. Specifically, AquaTex amended the limitation in claims 1 and 9 from “[a] method of cooling a person” to “[a] method of cooling a person by evaporation”; it also added the phrase “and evaporatively cooling said person” at the end of the limitation requiring “employing said multi-layered, liquid-retaining composite as a garment or a flat sheet.” Before the examiner, AquaTex also argued that Zafiroglu was distinguishable on various grounds. As a result of these arguments, the district court held that estoppel barred a claim that Techniche’s accused product was equivalent.

On appeal we affirmed the district court’s finding of no literal infringement. We concluded that, though the prosecution history was ambiguous, the examples of fiberfill in the specifications, the three patents incorporated by reference, and the extrinsic evidence (dictionaries and other industry sources) all suggested that fiberfill was synthetic material. AquaTex, 419 F.3d at 1381. However, we held that prosecution history estoppel did not bar consideration of infringement by equivalents because “[t]he

argument [made during prosecution]...does not address or even relate to the composition of the fiberfill batting” and “[t]he subject matter surrendered by the narrowing amendment bears no relation to the composition of the fiberfill batting material.” AquaTex, 419 F.3d at 1383. We remanded to the district court to “consider whether or not each limitation of the claims in dispute, or its equivalent, is present in the accused Techniche products.” Id.

On remand the district court considered the issue on the existing record but requested supplemental briefing from the parties on the doctrine of equivalents. In its supplemental brief Techniche argued that: (1) AquaTex was barred by amendment estoppel from asserting the doctrine of equivalents; (2) its product did not include the equivalent of fiberfill batting; and (3) AquaTex provided “only conclusory statements regarding equivalence, without any particularized testimony and linking argument as to the ‘insubstantiality of the differences’ between the claimed invention and the accused device, or with respect to the ‘function, way, result test’” as required by Texas Instruments, Inc. v. Cypress Semiconductor Corp., 90 F.3d 1558, 1567-68 (Fed. Cir. 1996). See Defendant Techniche Solutions’ Memorandum as to the Doctrine of Equivalence at 16 (quoting PC Connector Solutions, LLC v. Smartdisk Corp., 406 F.3d 1359, 1364 (Fed. Cir. 2005)). The district court granted summary judgment of non-infringement. It held that AquaTex’s narrowing amendments made during prosecution of the ’977 patent “surrender[ed] subject matter within which [Techniche’s] product falls” and therefore AquaTex was barred by prosecution history estoppel from asserting infringement by equivalents. AquaTex Indus., Inc. v. Techniche Solutions, No. 3:02-0914, 2006 WL 1006631, at \*8 (M.D. Tenn. Apr. 13, 2006). Alternatively, the district

court held that AquaTex had failed to prove that Techniche's "filler layer performs substantially the same function in substantially the same way as" AquaTex's patented method because it had not shown that Techniche's "filler layer includes a hydrophobic material, like the fiberfill used in [AquaTex's] product, to create air pockets to promote evaporation." Id. at \*6, 7-8.

AquaTex timely appealed. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1) (2000).

## DISCUSSION

### I

Techniche has admitted that most of the limitations of claims 1 and 9 of the '977 patent are satisfied by use of the Vizorb® filler layer. Thus, Techniche admitted that use of its product involved: (1) "a method for cooling a person by evaporation," see Appellee's Br. 7 n.2, AquaTex, 419 F.3d at 1374; (2) "providing a multi-layered, liquid-retaining composite material," see Defendant's Memorandum as to the Doctrine of Equivalence at 7, AquaTex, 2006 WL 1006631; (3) "hydrophilic polymeric fibers [or particles]," Appellee's Br. 7 n.2, AquaTex, 419 F.3d at 1374; (4) "absorb at least about 2.5 times the fiber's weight in water," Defendant's Memorandum as to the Doctrine of Equivalence at 10, AquaTex, 2006 WL 1006631; (5) "soaking said multi-layered composite in a liquid," id. at 11; (6) "employing said multi-layered, liquid-retaining composite material as a garment or a flat sheet," id. at 12; and (7) "evaporatively cooling said person," Appellee's Br. 7 n.2, AquaTex, 419 F.3d at 1374.<sup>3</sup> Thus, the only

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<sup>3</sup> In its remand brief Techniche asserted that its products did not satisfy the "method of cooling by evaporation" or "hydrophilic polymeric particles" limitations.

limitation at issue in this case was the “fiberfill batting material,” a limitation present in both claims 1 and 9. We previously remanded this case to determine whether the part-natural Vizorb® was equivalent to the synthetic fiberfill for purposes of this limitation.

A

Reliance on the doctrine of equivalents may be foreclosed by prosecution history estoppel. Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 30 (1997). Under this doctrine, the surrender of subject matter during patent prosecution creates a presumption that the patentee is precluded from recapturing that subject matter through the doctrine of equivalents; this presumption can be rebutted by the patentee through a showing that an amendment was unrelated to patentability. See id. at 30-33; see also Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722, 733-34, 740 (2002). Here, the district court found that prosecution history estoppel barred AquaTex from asserting the doctrine of equivalents as to the “fiberfill batting material” claim limitation “because...narrowing amendments [adding the phrases ‘by evaporation’ and ‘and evaporatively cooling said person’ to claims 1 and 9 of the ‘977 patent] operated to exclude the Zafiroglu ‘297 patent and [Techniche’s] like product, [and] a presumption of prosecution history estoppel by amendment arises which [AquaTex] has not overcome.” AquaTex, 2006 WL 1006631, at \*8.

However, the district court’s approach is foreclosed by our prior opinion, which held that “[t]he subject matter surrendered by the narrowing amendment bears no

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However, in its brief in the initial appeal to this court, Techniche conceded that “[f]or purposes of the motion for summary judgment, it is undisputed that the Defendant manufactures and markets evaporative cooling garments...[and] [t]here is also no dispute that Defendant’s product contains hydrophilic polymeric particles or fibers.” Appellee’s Br. 7 n.2, AquaTex, 419 F.3d at 1374 (emphasis added).

relation to the composition of the fiberfill batting material.” AquaTex, 419 F.3d at 1383. In fact the amendment was directed to a completely different claim limitation—the requirement that the overall method of cooling of the garment be by evaporation. See id. at 1383 (“The arguments made during prosecution, and the corresponding addition of the claim limitation ‘by evaporation,’ indicate that AquaTex was distinguishing the overall method of cooling of its claimed invention from that of the [Zafiroglu] patent.”). Thus, AquaTex surrendered no claim to the characteristics of the fiberfill during prosecution and was not barred from asserting equivalents as to the “fiberfill batting material” limitation.<sup>4</sup>

## B

A finding of infringement under the doctrine of equivalents requires a showing that the difference between the claimed invention and the accused product or method was insubstantial or that the accused product or method performs the substantially same function in substantially the same way with substantially the same result as each claim limitation of the patented product or method. AquaTex, 419 F.3d at 1382; see also Graver Tank & Mfg. Co. v. Linde Air Prods. Co., 339 U.S. 605, 608 (1950) (“[A] patentee may invoke this doctrine [of equivalents] to proceed against the producer of a device ‘if it performs substantially the same function in substantially the same way to obtain the same result.’” (quoting Sanitary Refrigerator Co. v. Winters, 280 U.S. 30, 42 (1929))). We have held that the function, way, result inquiry focuses on “an examination

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<sup>4</sup> Although the district court’s holding on prosecution history estoppel ultimately rests on estoppel by amendment, AquaTex, 2006 WL 1006631, at \*8, portions of the opinion also suggest estoppel by argument, id. at \*6-7. Any reliance on estoppel by argument was also foreclosed by our prior opinion. AquaTex, 419 F.3d at 1382.

of the claim and the explanation of it found in the written description of the patent.”<sup>5</sup> Vehicular Techs. Corp. v. Titan Wheel Int’l, Inc., 141 F.3d 1084, 1090 (Fed. Cir. 1998); see also Warner-Jenkinson, 520 U.S. at 40 (“An analysis of the role played by each element in the context of the specific patent claim will thus inform the inquiry as to whether a substitute element matches the function, way, and result of the claimed element.”).

In addition to finding the doctrine of equivalents barred by prosecution history estoppel, the district court concluded that Vizorb® was not equivalent to the “fiberfill batting material” limitation because AquaTex failed to show that “Defendant’s filler layer includes a hydrophobic material, like the fiberfill used in Plaintiff’s product, to create air pockets to promote evaporation.” AquaTex, 2006 WL 1006631, at \*6 (emphasis added). It appears that the district court concluded that the function of the “fiberfill batting material” was to promote evaporation and that Vizorb® did not achieve this function in the same way (i.e., by the use of hydrophobic material and by the creation of air pockets) as this limitation. Neither Techniche nor the district court made any effort to relate these alleged differences to the distinction between natural and synthetic fibers.

There is nothing in the “fiberfill batting limitation” of claims 1 and 9 of the ’977 patent, nor in the specification, that indicates that its function is to promote evaporation. The “fiberfill batting material” claim itself does not indicate any specific function beyond general service as part of the filler layer. The only function given to the fiberfill in the

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<sup>5</sup> “In some cases, the patent’s prosecution history also may reveal the identification of a specific function relating to claimed structure.” Vehicular Techs., 141 F.3d at 1090. However, we have already held that neither the arguments nor amendments made during prosecution relate to the composition of the fiberfill batting. See AquaTex, 419 F.3d at 1383.

specification is a negative function: “any commercial fiberfill may be used as long as it does not adversely affect the performance of the end composite.” ’977 patent col. 3 ll. 48-50 (emphasis added). Thus, promotion of evaporation is not a function of the fiberfill identified in the claims or the specification of the ’977 patent; instead the specification only says that the fiberfill cannot retard evaporation (i.e., the performance of the end composite). While the specification does suggest that “[t]he blend [of hydrophilic polymers and the fiberfill material] both promotes evaporation qualities and provides a means to hold cool or hold hot,” ’977 patent col. 6 ll. 34-36 (emphasis added), this statement merely describes a function of the filler layer as a whole, not the “fiberfill batting material” in particular.

Even if the function of the fiberfill were to promote evaporation, the district court erred in concluding that hydrophobic material and air pockets were the way in which fiberfill promoted evaporation. Neither the use of hydrophobic material nor the creation of air pockets in the filler layer for evaporation is identified in the claims or specification of the ’977 patent as a way in which the “fiberfill batting material” limitation functions. The district court asserted that “there is little question upon reading the specification” as a whole that the fiberfill is water-resistant and creates air pockets for evaporation. AquaTex, 2006 WL 1006631, at \*6. But, while both the claims and specification repeatedly describe the polymeric particles/fibers as hydrophilic or liquid absorbent, see, e.g., ’977 patent col. 1 l. 60; col. 3 l. 39; col. 3 l. 45; col. 4 l. 65; col. 6 l. 20; col. 14 l. 1; col. 14 l. 41, the fiberfill is never described as hydrophobic; instead, the specification says that the specific type of fiberfill “is not known to be critical” and “any commercial fiberfill may be used,” ’977 patent col. 3 ll. 47-48. Similarly, though the specification

suggests creating pockets by quilting together the various layers, '977 patent col. 7 ll. 11-13, the specification does not suggest that the patented method creates air pockets in the filler layer itself.

The district court appears to have found these distinguishing features in “[i]nformation taken from Plaintiff’s website” that it believed “confirm[ed]” its reading of the specifications. Id. at \*6.<sup>6</sup> Specifically, the district court quoted the following description of AquaTex’s product from its website: “The hydrophobic fill evenly distributes and surrounds the charged fibers with air, creating an ideal environment for evaporation.” Id. at \*6 (emphasis added). This reliance on the characteristics of the patentee’s product was erroneous. “Infringement, either literally or under the doctrine of equivalents, does not arise by comparing the accused product...with a commercialized embodiment of the patentee.” Johnson & Johnston Assocs. Inc. v. R.E. Serv. Co., 285 F.3d 1046, 1052 (Fed. Cir. 2002) (en banc) (internal quotation marks omitted); see also Donald S. Chisum, 5A Chisum on Patents § 18.04[1][b] (2005). Similarly, we noted in Amstar Corp. v. Envirotech Corp., 730 F.2d 1476 (Fed. Cir. 1984), “[i]nfringement is not determined...by comparison between commercial products sold by the parties.” Id. at 1481-82. As discussed above, the identification of the elements of the function, way, result test solely “entails an examination of the claim and the explanation of it found in the written description of the patent,” as well as “[i]n some cases[] the patent’s prosecution history.” Vehicular Techs., 141 F.3d at 1090. This inquiry leaves no room for consideration of the patentee’s product.

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<sup>6</sup> Somewhat inconsistently, the district court at the same time disclaimed any reliance on the patentee’s website. AquaTex, 2006 WL 1006631, at \*6 n.5.

Thus, the district court erroneously relied on features not disclosed in the patent in concluding that Techniche's Vizorb® layer was not equivalent to the "fiberfill batting material" limitation.

## II

Although both grounds for the district court's summary judgment ruling were erroneous, "[w]e review [the] district court's grant of summary judgment de novo." Aquatex, 419 F.3d at 1379. We may affirm a grant of summary judgment on a ground supported in the record but not addressed by the district court if we conclude that "there [wa]s no genuine issue as to any material fact and...the moving party [wa]s entitled to a judgment as a matter of law." Fed. R. Civ. P. 56(c); see also Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 247 (1986); Charles Alan Wright, et al., Federal Practice & Procedure § 2716 at 290 (1998) ("[The appellate court] can find another ground for concluding that the movant [for summary judgment] is entitled to judgment as a matter of law and ignore any erroneous basis that the district court may have employed.").

AquaTex has suggested that the function of the filler layer in the patent was retaining and distributing absorbent materials throughout the filler layer and that Techniche's filler layer performs this function in the same way. This alleged function more nearly corresponds to the claims and specification of the patent than the function identified by the district court. See '977 patent col. 8 ll. 57-59 (noting that the "fiberfill-type batting...retains tiny absorbent particles [that] are distributed throughout the batting."). However, AquaTex, as the plaintiff, was required to prove (by a preponderance of the evidence) infringement under the doctrine of equivalents. PSC Computer Prods., Inc. v. Foxconn Int'l, Inc., 355 F.3d 1353, 1357 (Fed. Cir. 2004);

CVI/Beta Ventures, Inc. v. Tura LP, 112 F.3d 1146, 1161 (Fed. Cir. 1997). In Texas Instruments, Inc. v. Cypress Semiconductor Corp., 90 F.3d 1558 (Fed. Cir. 1996), we set forth the patentee's evidentiary burden under the doctrine of equivalents:

Pursuant to our precedent, a patentee must...provide particularized testimony and linking argument as to the 'insubstantiality of the differences' between the claimed invention and the accused device or process, or with respect to the function, way, result test when such evidence is presented to support a finding of infringement under the doctrine of equivalents. Such evidence must be presented on a limitation-by-limitation basis. Generalized testimony as to the overall similarity between the claims and the accused infringer's product or process will not suffice.

Id. at 1567 (emphasis added). "The same rule applies in the summary judgment context." Network Commerce, Inc. v. Microsoft Corp., 422 F.3d 1353, 1363 (Fed. Cir. 2005). Thus, AquaTex was required to provide particularized testimony and linking argument on a limitation-by-limitation basis that created a genuine issue of material fact as to equivalents. See id. In particular AquaTex was required to provide particularized testimony and linking argument to show the equivalents of a synthetic filler layer and Techniche's product's filler layer, which was partially composed of natural fibers.

Both the Supreme Court and this court have made clear that the evidence of equivalents must be from the perspective of someone skilled in the art, for example "through testimony of experts or others versed in the technology; by documents, including texts and treatises; and, of course, by the disclosures of the prior art." See Graver Tank & Mfg. Co., 339 U.S. at 609; see also Texas Instruments, 90 F.3d at 1566. But, while many different forms of evidence may be pertinent, when the patent holder relies on the doctrine of equivalents, as opposed to literal infringement, the difficulties and complexities of the doctrine require that evidence be presented to the jury or other

fact-finder through the particularized testimony of a person of ordinary skill in the art, typically a qualified expert, who (on a limitation-by-limitation basis) describes the claim limitations and establishes that those skilled in the art would recognize the equivalents.<sup>7</sup>

In this case AquaTex, in response to the motion for summary judgment of non-infringement, provided no particularized testimony from an expert or person skilled in the art that specifically addressed equivalents “on a limitation-by-limitation basis;” explained the insubstantiality of the differences between the patented method and the accused product; or discussed the function, way, result test. Texas Instruments, 90 F.3d at 1567. The only evidence presented by AquaTex on the issue of equivalents was the deposition testimony of Doug Frost, Techniche’s Chief Executive Officer. See Appellant’s Br. 17-18; Supplemental Memorandum in Opposition to Defendant’s Motion for Summary Judgment and in Support of Plaintiff’s Cross-Motion for Partial Summary Judgment at 9. It is unclear that Frost was an expert. In any event Frost’s testimony only explained how the defendant’s product operated. It did not specifically address equivalents or compare Techniche’s product to the patented method on a limitation-by-limitation basis as required by Texas Instruments. See also Warner-Jenkinson, 520 U.S. at 29 (“[T]he doctrine of equivalents must be applied to individual elements of the claim, not the invention as a whole.”). Nor does it satisfy the Texas Instruments requirement of testimony on the “insubstantiality of the differences between the claimed invention and the accused device or process” or “the function, way, result test.” 90 F.3d at 1567 (internal quotation marks omitted); see also Lear Siegler v. Sealy Mattress Co.

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<sup>7</sup> Even where literal infringement is involved, expert infringement testimony is generally required in cases involving complex technology. See Centricut, LLC v. Esab Group, Inc., 390 F.3d 1361, 1369-70 (Fed. Cir. 2004).

of Mich., 873 F.2d 1422, 1426 (Fed. Cir. 1989) (“It is clear that LSI did not elicit testimony explicitly comparing the claimed and accused devices as to all three elements of equivalence.”).

In short, in opposing summary judgment, AquaTex only provided lawyer argument and generalized testimony about the accused product. It has failed to demonstrate a genuine issue of material fact that would prevent the grant of summary judgment.

#### CONCLUSION

The district court erred in finding the doctrine of equivalents barred by prosecution history estoppel and in comparing the accused product to the patentee’s commercial embodiment. However, AquaTex failed to show the existence of a genuine issue of material fact or provide any particularized testimony on equivalents. Summary judgment was therefore appropriate.

#### AFFIRMED

#### COSTS

No costs.