IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF FLORIDA
TAMPA DIVISION

Thermo-Ply, Inc.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Case No. 8:05-cv-779-EAK-MAP
	)	Judge Elizabeth A. Kovachevich
The Ohio Willow Wood Company, et al.,	)	Magistrate Judge Mark A. Pizzo
	)	
Defendants.	)	
	)	

DEFENDANT THE OHIO WILLOW WOOD COMPANY'S MEMORANDUM IN OPPOSITION TO PLAINTIFF THERMO-PLY, INC.'S MOTION IN LIMINE TO EXCLUDE DAVID BROOKSTEIN AS AN EXPERT WITNESS AND TESTIMONY

Dr. David S. Brookstein ("Dr. Brookstein") is a qualified expert whose findings and opinions have been consistent throughout this case, in addition to being demonstrably reliable, relevant and helpful to the trier of fact. The Ohio Willow Wood Company ("OWW") respectfully submits that, having met its burden, there is no reason why Dr. Brookstein should not be permitted to testify in this case. Plaintiff Thermo-Ply, Inc. ("Thermo-Ply") has filed a motion in limine to exclude the consideration of the expert reports of Dr. Brookstein, as well as any testimony, argument or evidence relating to the same, at trial. OWW responds that Thermo-Ply has failed to provide legal authority or relevant facts in support of its theories for excluding Dr. Brookstein contained in its memorandum in support.

I. Dr. Brookstein's expert reports and opinions are consistent and do not conflict with the Court's claim construction ruling

Despite Thermo-Ply's apparent disappointment with Dr. Brookstein's failure to change his opinion following this Court's adoption of the claim construction report and recommendation of July 2007, there is ample evidence of record that Dr. Brookstein's reports and opinions do not conflict with the claims as interpreted. Furthermore, Dr. Brookstein's written reports and deposition testimony – both before and after the Order – are consistent in that regard.

In his expert report dated May 19, 2006, Dr. Brookstein concluded that fabric used in the OWW products at issue "is not a 'predetermined material that is substantially nonstretchable in an axial direction.'" Dkt. No. 164-4 ("First Expert Report"), at 10 (quoting the pre-claim construction language of the asserted claims). Dr. Brookstein's basis for that conclusion is in part explained with reference to exemplary stress/strain curves that he would expect for both a substantially non-stretchable fabric and a stretchable fabric. *Id.* at 9.[1] Note that the exemplary stress/strain curves contained in the first expert report describe some elongation of the material, regardless as to whether it is considered to be of the "substantially non-stretchable" or "stretchable" type by Dr. Brookstein (i.e., the strain is non-zero for both idealized material curves). *See id.* By this definition, the type of material deemed substantially non-stretchable in the first expert report can experience elongation under tensile stress, which comports to this Court's later claim construction further defining the term substantially non-stretchable to mean "very little longitudinal stretch." Thus, Thermo-Ply's suggestion that Dr. Brookstein has impermissibly ignored the word "substantially" has been incorrect from the beginning.

[1] Without offering any opposing evidence whatsoever, Thermo-Ply argues that no one "in the prosthetics industry uses [the stress-strain curve analysis described by Dr. Brookstein] to determine the amount of stretch in a prosthetic liner." Dkt. No. 164, at 7. *But see, e.g.*, Dkt. No. 164-1 ("Feb. 2007 Brookstein Dep."), at 53:3-54:17.

Thermo-Ply is also incorrect in asserting that Dr. Brookstein failed to consider the stretch of OWW's liners "as they are 'used for [their] intended purpose'" for at least two reasons. Dkt. No. 164, at 7. First, Dr. Brookstein tested the strain or stretch of the fabric in an exemplary OWW product in actual use by an amputee, and reported those results in his first expert report. First Expert Report, Dkt. No. 164-4, at 7. Tellingly, Thermo-Ply cites to a few lines of deposition transcript in support of their argument without addressing the fact that Dr. Brookstein discussed – *in his first expert report* – significant stretching observed on an actual OWW product being used by an amputee. If testing for substantial stretching in a prosthetic device being worn by an amputee does not properly test for stretching in a liner being "used for its intended purpose," then Thermo-Ply is invited to offer other forms of alternative intended uses that may be relevant here.

Furthermore, Dr. Brookstein returned after the claim construction report and recommendation of July 2007 to conduct additional tests in light of that opinion. In his second expert report dated October 15, 2007, Dr. Brookstein explicitly reported findings and conclusions based on additional tests of "'off the shelf' Alpha Max liners" wherein the entire liner assembly was tested for stretchability. Dkt. No. 164-5 ("Second Expert Report"), at 1. Yet again, Dr. Brookstein's results confirmed that "the Alpha Max liner stretches significantly more than 'very little' in the longitudinal direction." *Id.* at 7. This was confirmed in the later deposition of Dr. Brookstein in February 2008:

> Q. Did you form any preliminary opinions before your August [2007] visit to Ohio Willow Wood's facility?
>
> A. Since May?
>
> Q. Yes. Between May and August.
>
> A. No.
>
> Q. Did you form any preliminary opinions at the test?

A. Yes.

Q. And what were those?

A. That the material stretched.

Q. And by material, what are you referring to?

A. The Alpha Max liner.

Q. And just so we can be clear, are you referring to the entire liner or part of a liner?

A. The entire liner.

Dkt. No. 164-3 ("Feb. 2008 Brookstein Dep."), at 25:21-26:14. Thermo-Ply's claims that Dr. Brookstein's findings and opinions should be ignored for failing to comport with the claim language as defined by this Court's claim construction should thus not be well taken.

II. Dr. Brookstein's expert reports, testimony and opinion evidence that OWW's accused products do not infringe the '617 patent claims are admissible

Thermo-Ply correctly states the general rule regarding the admissibility of expert testimony in this jurisdiction as set forth in *U.S. v. Frazier*, 387 F.3d 1244, 1260 (11th Cir. 2004) which will not be restated here. Dkt. No. 164, at 5. However, none of Thermo-Ply's subsequent theories in favor of exclusion are supported by legal authority, nor by the facts of record in this case. For the reasons set forth below, OWW respectfully submits that Dr. Brookstein's testimony and expert reports are admissible.

A. As a fiber scientist and textile engineer, Dr. Brookstein is fully qualified to offer competent, expert testimony and opinion evidence as to whether fabric in OWW's accused products is substantially non-stretchable

Thermo-Ply argues that despite Dr. Brookstein's recognized status, credentials and extensive experience as a fiber scientist and textile engineer, he is not qualified to offer opinions in this case as to whether the materials at issue are substantially non-stretchable. The qualifications of an acceptable expert set forth by Thermo-Ply would require Dr. Brookstein to

specifically have "knowledge, experience, or education…in the field of *prosthetics*." Dkt. No. 164, at 9 (emphasis in original). This argument is in direct conflict with well-settled law on the admissibility of expert testimony, and Thermo-Ply has not provided any case law supporting their narrow definition of a qualified expert.

The ultimate determination as to the admissibility of expert testimony is within the sound discretion of the district court, "which is accorded 'considerable leeway' in making its determination." *Medtronic Xomed, Inc. v. Gyrus ENT LLC*, 440 F.Supp.2d 1338, 1340 (M.D. Fla. 2006) (quoting *Cook ex rel. Estate of Tessier v. Sheriff of Monroe County, Fla.*, 402 F.3d 1092, 1103 (11th Cir. 2005)); *U.S. v. Frazier*, 387 F.3d at 1258-1259. Any combination of "knowledge, skill, experience, training, or education" may form the basis for qualifying a witness as an expert. *Pandora Jewelers 1995, Inc. v. Pandora Jewelry, LLC*, No. 09-cv-61490, 2011 U.S. Dist. LEXIS 62969, at *7 (S.D. Fla. Jun. 8, 2011) (quoting FED. R. EVID. 702.). The standard for qualification of an expert "is not stringent, and so long as the expert is minimally qualified, objections to the level of the expert's expertise go to credibility and weight, not admissibility." *Id.* at *22 (quoting *Vision I Homeowners Ass'n, Inc. v. Aspen Specialty Ins. Co.*, 674 F.Supp.2d 1321, 1325 (S.D. Fla. 2009)). *See also Johnson & Johnson Vision Care, Inc. v. CIBA Vision Corp.*, No. 04-cv-7369, 2006 U.S. Dist. LEXIS, at *15 (S.D.N.Y. July 28, 2006) ("An expert should not be required to satisfy an overly narrow test of his own qualifications.") (citations omitted). In making the qualification determination, the trial court is required to "examine the credentials of the proposed expert in light of the subject matter of the proposed testimony." *Wyeth v. Apotex Inc.*, No. 08-cv-22308, 2009 U.S. Dist. LEXIS 132019, at *9-10 (S.D. Fla. Oct. 6, 2009) (citing *Calta v. North Am. Arms, Inc.*, No. 8:05-cv-1266, 2007 U.S. Dist. LEXIS 96116, 2007 WL 4800641, at *5 (M.D. Fla. Nov. 27, 2007)). *See also In re. Zyprexa*

Prods. Liab. Litig., 489 F.Supp.2d 230, 282 (E.D.N.Y. 2007) ("If the expert has educational and experiential qualifications in a general field *closely related to the subject matter in question*, the court will not exclude testimony solely on the ground that the witness lacks expertise in the specialized areas that are directly pertinent.") (emphasis added); *Sullivan v. Ford Moto Co.*, No. 97-CV593, (S.D.N.Y. Mar. 31, 2000) ("One knowledgeable about a particular subject need not be precisely informed about all details of the issues raised in order to offer an opinion") (quotations omitted).

Dr. Brookstein has been involved in textiles and textile mechanics for more than 43 years during which time he has teaching experience in textile engineering, and industry experience as a research textile and mechanical engineer in developing a wide range of textile structures and the characterization of textile structures. Feb. 2007 Brookstein Dep., Dkt. No. 164-1, at 120:24-123:14; *see also* Ex. 1 to Ex. A attached hereto ("Brookstein Decl."). Dr. Brookstein has authored numerous scholarly articles on textile and textile mechanics topics, has contributed to over ten patented technologies, and has served as the Dean and Professor of Engineering at the Philadelphia University School of Engineering & Textiles. First Expert Report, Dkt. No. 164-4, Ex. A, at 1. The subject of his doctoral thesis at the Massachusetts Institute of Technology was centered on textured stretch yarns. Feb. 2007 Brookstein Dep., Dkt. No. 164-1, at 121:17-21.

In this matter, Dr. Brookstein intends to testify as an expert on matters related to the properties of fabrics and textile materials as claimed in the '617 patent and that may be used in the OWW products at issue in this case. *See, e.g.* Dkt. No. 164-2 ("May 2007 Brookstein Dep."), at 147:23-148:9. Dr. Brookstein's extensive experience and expertise in the field of textile engineering, science and mechanics undoubtedly qualify him to offer expert testimony on

a wide spectrum of topics with regard to issues in this case relating to fabrics or textiles and their properties. Specifically, this Court's claim construction of the asserted claims found them to require in part the use of "a material…that exhibits very little longitudinal stretch." Dkt. No. 82, at 8. Therefore, the stretching characteristics of textile material used in the relevant OWW products, and issues of fact surrounding the same, are issues that will be addressed by the trier of fact. Those factual issues – being directly related to textiles and textile structures and mechanics – are squarely within the expertise of a fiber scientist and textile engineer.

Thermo-Ply's complaint that Dr. Brookstein is not an expert in the field of prosthetics is of no consequence here. Fiber science and textile engineering are the study of fibers, their properties and their applications. A recent scientific treatise describes textile engineering as:

> In general, textile engineering may be defined as an interdisciplinary field in which scientific principles, mathematical tools and techniques of engineering, physics, chemistry, and other physical sciences are utilized in a variety of creative textile applications including the development of pure fibrous structures, the innovation of fibrous materials and the design of fiber-to-fabric systems that aim to optimize machine-fiber interaction and produce value-added fibrous products.

Ex. 3 to Brookstein Decl., Ex. A, Y.E. El Mogahzy, *Engineering Textiles: Integrating the Design and Manufacture of Textile Prods.* (2009), page 22, second full paragraph (emphasis added). The application of Dr. Brookstein's textile expertise is not confined to any one particular type or category of product. For example, Dr. Brookstein worked for 14 years at Albany International Research Company, which primarily makes "textile fabrics – or technical fabrics, for a wide range of applications." Feb. 2007 Brookstein Dep., Dkt. No. 164-1, at 214:9-16. He served as a Senior Research Associate, an Assistant Director and ultimately Associate Director, and was responsible for "a wide range of technical textile materials." Feb. 2007 Brookstein Dep., Dkt. No. 164-1, at 214:6-215:6; Ex. 1 to Brookstein Decl., Ex. A. His experience there included, for

instance, textile engineering in aerospace structure, implantable biomedical device and civil engineering structure applications. Ex. 1 to Brookstein Decl., Ex. A. Dr. Brookstein has even contributed to patented textile technology within the medical field. Brookstein Decl., Ex. A, at ¶¶ 6-7, Ex. 4 and 5. To otherwise suggest that Dr. Brookstein is not qualified to testify as to fabric-related issues in this case is itself a stretch.

B. The methodology by which Dr. Brookstein has drawn his conclusions is sufficiently reliable as determined by the sort of inquiry mandated in Daubert

In its kitchen sink approach to obtaining an exclusion of Dr. Brookstein's testimony in this case, Thermo-Ply also disparages the methodologies employed in the testing conducted in advance of the preparation of his First and Second Expert Opinions. Dkt. No. 164, at 11-14. Factors to consider when evaluating the reliability of an expert opinion include:

> (1) whether the expert's theory can be and has been tested; (2) whether the theory has been subjected to peer review and publication; (3) the known or potential rate of error of the particular scientific technique; and (4) whether the technique is generally accepted in the scientific community.

Platypus Wear, Inc. v. Clarke Modet & Co., 2008 U.S. Dist. LEXIS 85140, at *11 (S.D. Fla. Oct. 6, 2008) (quoting *Quiet Tech. DC-8, Inc. v. Hurel-Dubois UK Ltd.*, 326 F.3d 1333, 1341 (11th Cir. 2003)). Any additional factors that are relevant in determining the reliability of such testimony should also be considered, as this list of factors is not exhaustive. *Id.* (citing *Quiet Tech.*, 326 F.3d at 1341. Some of the factors may not be pertinent or helpful in making a reliability determination, depending "on the nature of the issue, the expert's particular expertise, and the subject of his testimony." *Id.* at *11-12 (quoting *United States v. Brown*, 415 F.3d 1257, 1268 (11th Cir. 2005)). The gate keeping role of the trial court at this stage is to exclude expert testimony that is "so fundamentally unreliable that it can offer no assistance to the jury." *Id.* at *12 (quoting *Larson v. Kempker*, 414 F.3d 936, 940-941 (8th Cir. 2005)).

Thermo-Ply first muddles the issue of the reliability of Dr. Brookstein's methodologies by stating that Dr. Brookstein did not know whether the tests performed in 2006 and 2007 are "recognized in the prosthetics field," Dkt. No. 164, at 14, when in fact, the issue here is whether the test data that was relied upon by Dr. Brookstein in the preparation of his expert reports were derived from a "technique…generally accepted in the scientific community." *Quiet Tech.*, 326 F.3d at 1341 (citations omitted). Dr. Brookstein did testify that he is "not familiar with any standardized testing for prosthetic liners," but as with Thermo-Ply's argument that he is not a qualified expert in the field of prosthetics, this too is of no consequence, because his testimony is related to material properties of textiles in this case. Therefore, Dr. Brookstein's testimony should be admitted if the methodologies for determining and quantifying textile properties by which he drew his conclusions are sufficiently reliable.

Dr. Brookstein has testified on multiple occasions directly addressing the inquiry into the acceptance of the methodologies used in the preparation of his expert reports by the scientific community. Regarding the 2006 tests, Dr. Brookstein stated:

> I saw the way they did it. And the way they did it is the common way to do the stretch – stress/strain curve for a fabric when one's trying to determine the resistance to deformation. I observed that on May 12th, and I don't recall as I sit here what ASTM test that would be to, but it would be – as one who has practiced in the field, it would be the way I would – if I were given a piece of fabric, <u>they did it exactly the way I would do it and have done it</u>.

May 2007 Brookstein Dep., Dkt. No. 164-2, at 111:13-24 (emphasis added). Expounding upon his unfamiliarity with standardized testing specific to prosthetic liners, Dr. Brookstein also addressed the testing methods employed in August 2007:

> Q. Was the August [2007] testing done to any standardized testing?
>
> A. I'm not familiar with any standardized testing for prosthetic liners. The only thing we did make sure was the 10-inch gauge

> length I told you about is fairly typical of fabric testing, but this is – we used – as one who's experienced in this field myself, this would be a test method for a particular structure that would make sense would be a logical way to test, but I don't recall if there are any – I don't think ASTM has specific tests for prosthetic liners.

Feb. 2008 Brookstein Dep., Dkt. No. 164-3, at 164:8-20. Furthermore, Dr. Brookstein has addressed the fact that the principles reflected in his expert reports utilize well established concepts. Second Expert Report, Dkt. No. 164-5, at 7.

Thermo-Ply also attempts to discredit Dr. Brookstein's testimony by suggesting that he was unaware of the nature of the testing methodologies used to derive the test data that he relied upon. Dkt. No. 164, at 11-13. In reality, Thermo-Ply's selective citations to multiple passages from several depositions taken over the course of a calendar year relate only to some evidence of confusion as to the name to be applied to the 2006 tests performed at OWW. Importantly, Dr. Brookstein has firmly stated:

> I only saw one test, the one dated May 12th, and it was a test that if I had come off – out of the blue and said show me how you test the fabric for stretch and they showed me that, as one who practices in the art for 30 years, I'd say that's a perfect way to determine what the stretchability is of the fabric.

May 2007 Brookstein Dep., Dkt. No. 164-2, at 98:6-13. As a skilled and experienced fabric scientist and textile engineer, Dr. Brookstein outlined his general requirements for a testing methodology that would yield reliable test data: "I wanted to see that they were using a uniaxial tester and that they were measuring force and elongation…So I wanted to see, are they using a proper way, as one who is trained in the field, to determine stretchability, hysteresis, and elongation." *Id.* at 90:8-17. Of course, he considered the test data resulting from tests that were actually performed under his supervision to be conducted according to reliable and accepted methodologies, as previously discussed herein. Feb. 2008 Brookstein Dep., Dkt. No. 164-3, at 164:8-20.

Finally, Thermo-Ply argues unreliability based on Dr. Brookstein's "blind reliance upon tests designed and conducted by…OWW." Dkt. No. 164, at 12. However, no case law is cited in support of this theory, because no authority requires that an expert actually and personally perform the tests from which data are taken. The Federal Rules themselves only require that an expert report contain "the data or other information considered by the witness in forming [the opinions]." FED. R. CIV. P. 26(a)(2)(B)(ii) (2009). Furthermore, Dr. Brookstein has expressly testified that he approved of the techniques involved in each testing procedure, and personally was either present during and observed the tests that were performed, or reviewed and observed testing procedures that were used to generate data relied upon. May 2007 Brookstein Dep., Dkt. No. 164-2, at 86:16-87:5 *and* First Expert Report, Dkt. No. 164-4, at 5-7. In August 2007, Dr. Brookstein testified that he even directed that the testing be conducted in a manner different from that suggested by OWW, belying Thermo-Ply's assertion that Dr. Brookstein "blindly" relied upon the tests performed by others. Feb. 2008 Brookstein Dep., Dkt. No. 164-3, at 51:12-52:6. For these reasons, Thermo-Ply's accusations of unreliability are not supported by the record or any legal authority.

C. Dr. Brookstein's testimony and application of his scientific, technical and specialized expertise is helpful to the trier of fact in understanding the evidence and determining the facts.

As addressed above, Dr. Brookstein is a notable and well-credentialed expert in the field of fiber sciences and textile engineering. For the trier of fact to determine Thermo-Ply's infringement claims, it must consider whether any OWW products include elongate arms formed of a material that exhibits very little longitudinal stretch. Dr. Brookstein's expert knowledge and expertise in the textile field will be helpful in assisting the fact finder to reach the ultimate issue of infringement. Stress/strain curves, statistical analysis thereof, and the dynamic nature of this

relationship in knitted fabrics and structures are not concepts that are commonly known and encountered by the average lay person, and will be more readily understood with the aid of Dr. Brookstein's expert testimony.

Although Thermo-Ply asserts that the average lay person will have no trouble at all when asked to determine whether a fabric is "stretchable," that proposition seems at odds with the actual proceedings in this case. One of the contested terms at issue in the Markman hearing was the term "substantially non-stretchable" – a two-word term that after claim construction was defined by no less than 30 terms according to Thermo-Ply. Dkt. No. 164, at 3. OWW respectfully submits that the testimony of a respected textile expert offers more to the fact finder because it is informed by decades of textile experiences.

III. Should the Court have any concerns about Dr. Brookstein's qualifications or methodologies, the Court should hold a *Daubert* hearing.

In the event that this Court is concerned by any of the objections that Thermo-Ply raised to Dr. Brookstein's testimony, OWW requests that the Court hold a *Daubert* hearing to assess his qualifications and methodology to determine if his opinions are admissible. While *Daubert* hearings are not mandatory, OWW respectfully submits that it would be appropriate in light of Dr. Brookstein's extensive qualifications and experience in the area of fiber science and textile engineering.

IV. Conclusion

Thermo-Ply's Motion in Limine attempts to cloud the fact that Dr. Brookstein's testimony concerning the stretchability of materials at issue in this case is grounded in well established scientific principles and will be helpful to the fact finder. Furthermore, Thermo-Ply's asserted grounds for the exclusion of Dr. Brookstein's expert report and the preclusion of

his testimony at trial offers sparse legal authority in support of its motion. Therefore, OWW respectfully requests that Thermo-Ply's motion be denied.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on this 3rd day of February, 2014, a true and accurate copy of the foregoing was electronically filed with the Court. Notice of this filing will be automatically sent by the Court's CM/ECF system.

/s/ Michael Stonebrook
Michael Stonebrook