

IN THE UNITED STATES DISTRICT COURT  
FOR THE MIDDLE DISTRICT OF NORTH CAROLINA

PRECISION FABRICS GROUP, INC.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	1:13cv645
	)	
TIETEX INTERNATIONAL, LTD.,	)	
	)	
Defendant.	)	
<hr style="border-top: 3px double #000;"/>		
	)	
PRECISION FABRICS GROUP, INC.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	1:14cv650
	)	
TIETEX INTERNATIONAL, LTD.,	)	
	)	
Defendant.	)	

**MEMORANDUM ORDER**

THOMAS D. SCHROEDER, District Judge.

These consolidated patent cases turn on the parties' disputed construction of the term "intumescent" appearing in the claims of U.S. Patent Nos. 8,796,162 (the '162 Patent) and 8,501,639 (the '639 Patent) held by Plaintiff Precision Fabrics Group, Inc. ("PFG").<sup>1</sup> PFG alleges that Defendant Tietex International, Ltd. ("Tietex") is infringing the '162 and '639 Patents. Tietex has denied infringement and asserted various counterclaims.

---

<sup>1</sup> Case number 1:13cv645 involves the '639 patent; case number 1:14cv650 involves the '162 patent. The parties have agreed that the claim construction for the '639 patent will apply to the '162 patent, given their similarity. (Doc. 25.) All citations are to the record in case number 1:13cv645, unless otherwise noted.

On January 15, 2015, after briefing and a hearing, the court issued a claim construction order (Doc. 57), construing the term "intumescent" to mean "a substance that swells and chars upon exposure to heat or flame." (Doc. 57 at 20-21.) Tietex now moves to reconsider that order. (Doc. 93.) The motion has been fully briefed and is now ripe for decision. The arguments are adequately set forth in the briefing, and thus a further hearing will not aid the decisional process. For the reasons stated herein, the motion will be denied.

#### **I. BACKGROUND**

The '162 and '639 patents both relate to lightweight fabric that is thermally protective and flame retardant. (Doc. 47-2 at 3 ('162 Patent) col. 1, ll. 15-23; Doc. 37-1 at 2 ('639 Patent) col. 1, ll. 17-24.) The fabric is single-layer, non-woven, and stitch-bonded; this "substrate" is treated with a finish comprising an "intumescent, flame retardant coating." ('162 Patent col. 12, ll. 7-20; '639 Patent col. 12, ll. 47-65.) The parties initially agreed on the meaning of several terms used in the patents, including "flame retardant" and "finish." (See Doc. 24 at 1.) They disagreed, however, as to the meaning of the term "intumescent." (See id. at 3-7.)

PFG argued that "intumescent" should be defined functionally, encompassing any "substance that swells and chars upon exposure to heat or flame." (Id. at 3.) PFG contended that this is the

ordinary definition of "intumescent" and that one skilled in the art would understand the term to have this meaning. PFG also pointed to the specifications in the patents themselves, which state, "Intumescent compounds are compounds that react on contact to flame by charring and swelling." ('162 Patent col. 1, ll. 53-55; '639 Patent col. 1, ll. 55-57.)

In contrast with PFG's functional definition, Tietex argued that "intumescent" should be defined in terms of both function and chemical composition. Tietex derived its proposed definition from a different section of the patents' specifications, which discloses the components of an "intumescent system" and explains how those components interact to form a thermal barrier:

The thermal barrier of the fabric is provided by an intumescent finish that chars and swells upon contact to flame.

There are four basic components to any intumescent system: a phosphorous-releasing catalyst, a source of carbon (i.e., a carbonific), a resinous material, and a blowing agent that is a source of nonflammable gas. On exposure to flame, these components interact to form the thermal barrier. . . .

Table 3 lists several of the intumescent products that may be used in the invention. Other available products may also be used. Although all of these products are proprietary compounds, they all use the intumescent mechanism described above.

('162 Patent col. 7, ll. 25-47; '639 Patent col. 7, ll. 25-47.)

Tietex therefore argued that the term "intumescent" should be construed to encompass only substances composed of the four categories mentioned above, namely, (1) a phosphorous-releasing

catalyst, (2) a carbonific, (3) a resinous material, and (4) a blowing agent. (Doc. 57 at 12 n.4.)

On January 15, 2015, the court issued its claim construction order. (Doc. 57.) The court found that PFG's functional definition of "intumescent" is consistent with those provided by many ordinary and technical dictionaries, including dictionaries cited by Tietex, as well the testimony of expert witnesses. (Id. at 14-18.) The court concluded that PFG did not alter the functional definition of the term "intumescent" by including a four-part, composition-based definition for the term "intumescent system" in the patent specifications. (Id.) The court reasoned, among other things, that, had PFG intended to redefine the term "intumescent," it would have provided some clear sign of its intent to act as its own lexicographer, or at least used the term "intumescent system" in the patent claims themselves. (Id. at 14.) The court therefore concluded that "intumescent" should be given its ordinary, functional meaning, namely, "a substance that swells and chars upon exposure to heat or flame." (Id. at 20-21.)

On January 23, 2015, the United States Patent and Trademark Office ("USPTO") issued a temporary rejection, or Office Action, to PFG. (Doc. 94-2.) The Office Action pertained to Patent Application 13/690,294 (the '294 Application), an invention that is similar to the '162 and '639 patents. (See id.) The USPTO based its temporary rejection of the '294 Application, in part, on

information disclosed in Japanese Patent 08-226057 ("JP '057"), explaining, "JP '057 teaches that stichbonded fabrics which comprise cellulosic or synthetic fibers can be used as a substrate which can be coated with an intumescent material, (vermiculite), and used to form flame proof fabrics." (Id. at 6.) The USPTO therefore concluded that PFG's '294 Application was "obvious" in light of JP '057's disclosure of the use of vermiculite on lightweight, stichbonded fabrics. (Id.)

On July 20, 2015, PFG submitted a written response to the USPTO's Office Action. (Doc. 94-3.) PFG argued:

Contrary to the [USPTO's] position, JP '057 does not teach or suggest an intumescent coating as defined by the present claims. Namely, JP '057 does not provide an intumescent finish comprising ore [sic] or more flame retardant compounds comprising nitrogen, phosphorous, or a combination thereof. JP '057 merely discloses the use of vermiculite particles. Vermiculite is **not** an intumescent. As recited in the specification at paragraph [0050], an intumescent system has four basic components.

1. A phosphorous-releasing catalyst
2. A carbonific
3. A resinous material
4. A blowing agent

Vermiculite has none of these. Although vermiculite is sometimes used as an additive or enhancement to intumescent systems because it expands on heating one skilled in the art would understand that it is not an intumescent.

(Id. at 10-11 (emphasis in original).)

## II. ANALYSIS

Claim construction orders are interlocutory rulings. Akeva, L.L.C. v. Adidas Am., Inc., 385 F. Supp. 2d 559, 565 (M.D.N.C. 2005). As a result, district courts have discretion to reconsider claim construction orders until a final judgment is entered. Id.; see also Am. Canoe Ass'n, Inc. v. Murphy Farms, Inc., 326 F.3d 505, 514-15 (4th Cir. 2003) (“[A] district court retains the power to reconsider and modify its interlocutory judgments . . . at any time prior to final judgment when such is warranted.”). “Most courts have adhered to a fairly narrow set of grounds on which to reconsider their interlocutory orders and opinions.” Akeva, 385 F. Supp. 2d at 565. Generally, courts will only reconsider interlocutory rulings in the following situations: (1) there has been an intervening change in controlling law, (2) new evidence becomes available, or (3) the earlier decision was based on a clear error of law or would result in a manifest injustice. Id. at 566.

Here, Tietex primarily argues that PFG’s response to the Office Action provides new evidence of the meaning of “intumescent,” as that term is used in the ‘162 and ‘639 Patents.<sup>2</sup>

---

<sup>2</sup> Tietex does not cite any intervening change of law. Similarly, although Tietex vigorously opposed the construction of “intumescent” ultimately adopted by this court, Tietex does not contend that the court’s original construction order suffered from a clear error of law. In its reply brief, however, Tietex does state in passing that PFG’s “definitional manipulation gives rise to the very manifest injustice that reconsideration is designed to prevent.” (Doc. 99 at 8.) Apart from its complaints about PFG’s conduct, Tietex has offered no explanation of how the court’s claim construction order might result in manifest

PFG denied that vermiculite is an intumescent in the Office Action response, but it did not justify this assertion by reference to the functional definition of "intumescent."<sup>3</sup> Instead, immediately after declaring that "[v]ermiculite is **not** an intumescent," PFG recited the four chemical components of an "intumescent system" and stated that "[v]ermiculite has none of these." (Doc. 94-3 at 10-11 (emphasis in original).) Tietex interprets PFG's response to the Office Action as an assertion that vermiculite is not an intumescent because it does not contain any of the components of an intumescent system. According to Tietex, PFG seeks to "have it both ways" by adopting "a four-component construction of the term 'intumescent' [with regard to the '294 Application] that is directly in line with the position that Tietex presented to the Court at the claim construction stage [with regard to the '162 and '639 Patents]." (Doc. 94 at 2.)

PFG, by contrast, argues that its response to the Office Action does not state or imply that vermiculite is not an intumescent because it lacks the components of an intumescent system. (Doc. 98 at 4.) Instead, PFG interprets the language

---

injustice. To the extent that Tietex simply means to invoke the doctrines of prosecution history disclaimer and judicial estoppel, the court will consider those arguments below. Otherwise, the court considers Tietex's argument regarding manifest injustice to be comparable to its arguments regarding new evidence.

<sup>3</sup> In fact, PFG admitted that vermiculite "expands on heating." (Doc. 94-3 at 11.) PFG did not address whether vermiculite chars upon exposure to flame. (See id. at 10-11.)

cited by Tietex as asserting "that vermiculite is not an intumescent and also does not include any of the elements of an intumescent system—the latter point simply reinforcing the former." (Id. (emphasis in original).)

The language of PFG's response to the Office Action is susceptible to conflicting interpretations. On the one hand, Tietex's proposed interpretation is plausible, particularly in light of the apparent purpose of the quoted passage; if PFG's primary goal was to rebut the USPTO's assertion that vermiculite is an "intumescent," it is curious that PFG would provide a detailed definition for the term "intumescent system" but no explicit definition for the term "intumescent." On the other hand, nothing in the quoted passage explicitly contradicts PFG's interpretation. To the contrary, PFG's response appears to implicitly recognize a distinction between the terms "intumescent" and "intumescent system." (See Doc. 94-3 at 11 ("Although vermiculite is sometimes used as an additive to intumescent systems . . . it is not an intumescent.").)

In light of this ambiguity, PFG's response to the Office Action does not outweigh the dictionaries, expert testimony, and other evidence discussed in the court's claim construction order. In fact, although Tietex frames PFG's response to the Office Action as new evidence, the court considered substantially similar evidence and arguments in the claim construction order. PFG's



response to the Office Action echoes passages in the specifications for the '162 and '639 Patents, which also discuss the characteristics of an "intumescent finish" and an "intumescent system" in consecutive paragraphs. (See '162 Patent col. 7, ll. 25-47; '639 Patent col. 7, ll. 25-47.) Along the same lines, the court considered and rejected similar arguments regarding the prosecution history of the '162 and '639 Patents. (See Doc. 57 at 17 n.7 ("Tietex cites to extrinsic evidence (e.g., invention disclosures and original patent applications) that merely repeats the 'four basic components' definition of intumescent 'systems.' But because each repetition is still limited to systems and is no more probative than the specifications themselves, the court is not persuaded beyond Tietex's similar arguments about the specifications.") (emphasis in original) (citing Doc. 41 at 15-18).)<sup>4</sup>

In sum, the court concludes that PFG's response to the Office

---

<sup>4</sup> In addition to arguing that PFG's response to the Office Action constitutes newly discovered evidence, Tietex also briefly invokes the doctrines of prosecution history disclaimer and judicial estoppel. (See Doc. 94 at 11-12; Doc. 99 at 7 n.2.) Although prosecution history disclaimer is conceptually distinct from the lexicography doctrine, it also applies only "when the patentee unequivocally and unambiguously disavows a certain meaning to obtain a patent." See Biogen Idec, Inc. v. GlaxoSmithKline LLC, 713 F.3d 1090, 1095 (Fed. Cir. 2013). As a result, Tietex's disclaimer argument fails for the same reason as its lexicography argument. Similarly, judicial estoppel requires a finding that a party "intentionally misled the court to gain an unfair advantage." Lowery v. Stovall, 92 F.3d 219, 224 (4th Cir. 1996). In the absence of clearly contradictory statements, this court cannot conclude that PFG intentionally misled the PTO or the court.

Action does not warrant modification of the claim construction order in this case. PFG's response to the Office Action is not explicitly inconsistent with the evidence considered and discussed in the claim construction order. Like the specifications in the '162 and '639 patents, PFG's response to the Office Action could certainly have been worded more clearly. Nevertheless, PFG's statements in the Office Action response do not clearly evidence PFG's intent to act as its own lexicographer, and thus do not warrant modification of the court's claim construction order.

### **III. CONCLUSION**

For the reasons stated,

IT IS ORDERED that Tietex's motion for reconsideration (Doc. 93) is DENIED.

          /s/          Thomas D. Schroeder  
United States District Judge

January 14, 2016