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# **United States Court of Appeals for the Federal Circuit**

03-1459, -1542

THE LOCKFORMER COMPANY (now known as Met-Coil Systems, LLC),

Plaintiff-Appellee,

and

TRUSEAL TECHNOLOGIES, INC.,

Third Party Defendant-Appellee,

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PPG INDUSTRIES, INC.,

Defendant/Third Party Plaintiff-Appellant,

and

PPG INDUSTRIES OHIO, INC.,

Third Party Plaintiff-Appellant.

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DECIDED: June 30, 2005

Before MICHEL, <u>Chief Judge</u>, MAYER and LOURIE, <u>Circuit Judges</u>.

LOURIE, Circuit Judge.

PPG Industries, Inc. ("PPG") and PPG Industries Ohio, Inc. ("PPG Ohio") appeal from the summary judgment of the United States District Court for the Northern District

of Illinois holding, on The Lockformer Company's ("Lockformer's") motion that United States Patent 5,177,916 was not infringed. Lockformer Co. v. PPG Indus., Inc., No. 99-C-6799 (N.D. III. Mar. 25, 2003) ("Summary Judgment Order"). Because the district court did not err in its claim construction, and because Appellants have not shown that a genuine issue of material fact exists as to whether Lockformer's accused device employs an adhesive, we affirm.

## BACKGROUND

Lockformer is an Illinois company that manufactures and sells roll-forming equipment for making insulating glass units ("IGUs"), commonly known as thermally insulated double-pane windows. TruSeal is a company based in Ohio that manufactures and sells products, including the desiccant matrix used in the accused Lockformer machine, to the IGU industry. TruSeal is the exclusive distributor of Lockformer's allegedly infringing machine. PPG Ohio is the owner of United States Patents 5,177,916; 5,665,282; and 5,675,944. PPG is licensed under PPG Ohio's patents and manufactures and sells glass for use in IGUs.

An IGU is comprised of a pair of flat glass panes separated and held in a substantially parallel relationship by a "spacer" positioned along the perimeter of each of the glass panes. The spacer consists of a material shaped to maintain a set distance between the glass panes. One procedure used with spacers is to include a desiccant in the space enclosed within the panes and the spacer to prevent condensation or "fogging." Accordingly, the claims of PPG Ohio's '916 patent, which issued in January 1993, are directed to a new spacer and spacer frame, as well as a method for making

them, that use an adhesive containing a desiccant adhered to the spacer. Claim 1 is representative of the invention and reads as follows:

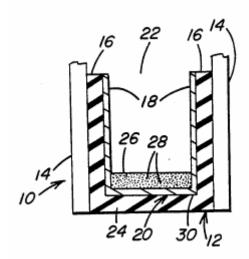
A strip to be shaped into spacer stock for maintaining adjacent glass sheets of an insulating unit in a predetermined spaced relationship to one another, the strip comprising:

an elongated flat bendable metal substrate having opposed major surfaces, at least one of the surfaces being fluid impervious, said substrate having a structural stability sufficient to maintain adjacent glass sheets in the fixed relationship when said substrate is shaped into the spacer stock;

an elongated bead of fluid pervious adhesive adhered directly to one of said major surfaces spaced from edges of said substrate, said adhesive having structural stability less than the structural stability of said substrate; and

a desiccant in said bead.

'916 patent, col. 6, II. 27-42. Figure 2 of the patent provides a cutaway view of the claimed invention, wherein glass panes **14** are connected to a U-shaped spacer **20**, which houses a bead of adhesive **26** containing a dessicant **28**.



Id., col. 3, II. 45-63 & fig. 2.

Lockformer first offered a machine for making IGU spacer frames for sale in 1995. When PPG asserted that Lockformer infringed the three aforementioned patents,

Lockformer sought a declaratory judgment of noninfringement. After the filing of the suit, PPG conceded that there was no infringement and the case was dismissed.

Lockformer and TruSeal, then aware of PPG's patents, instructed one of their chemists to design around the patents by developing a desiccant matrix that was not adhesive and did not adhere to the closed spacer frame. As a result of their efforts, the two companies developed a new desiccant named RL-50 for use in their IGUs, and by May 1999, Lockformer had sold to Silver Line a roll-forming machine, R-LOCK, that made IGUs using RL-50. Nevertheless, PPG asserted that Lockformer, TruSeal, and Silver Line infringed PPG Ohio's patents. Based on those threats, Silver Line later cancelled its order.

Consequently, in October 1999, Lockformer again sued PPG in the district court, this time additionally alleging unfair competition, tortious interference with business relations, and antitrust violations. Lockformer also sought a declaratory judgment that PPG's three patents were invalid, unenforceable, and not infringed. In response, PPG joined PPG Ohio, filed a cross-claim against TruSeal for infringement of the '916 patent, and moved to dismiss Lockformer's antitrust claims for lack of standing because Lockformer did not actually purchase or sell glass. Lockformer then added PPG Ohio as a defendant in an amended complaint and opposed PPG's motion to dismiss the antitrust claims. District Judge David Coar granted in part and denied in part PPG's motion to dismiss the antitrust claims. Lockformer Co. v. PPG Indus., Inc., No. 99-C-6799 (N.D. III. Sept. 27, 2000). The court also granted PPG's motion to amend its pleadings to assert a compulsory counterclaim against Lockformer for infringement of the '916 patent.

In December 2000, Judge Coar conducted a Markman hearing. At the hearing, PPG conceded that Lockformer and TruSeal did not infringe the '282 and '944 patents. Lockformer accordingly moved for summary judgment of noninfringement, and PPG moved to dismiss the declaratory judgment action, with respect to those two patents for lack of subject matter jurisdiction. In April 2001, the parties agreed to settle and dismiss with prejudice Lockformer's first eight non-patent claims.

In August 2001, the court granted PPG's motion to dismiss the declaratory judgment action as to the '282 and '944 patents, and it issued an opinion construing claim 1 of the '916 patent. Lockformer Co. v. PPG Indus., Inc., No. 99-C-6799 (N.D. III. Aug. 15, 2001) ("Claim Construction Order"). Judge Coar interpreted the term "adhesive" "to require that the adhesive stick to the strip through the process of shaping it into spacer stock and fixing glass to the spacer." Id., slip op. at 6. He stated that "there is nothing in Claim 1 requiring adhesive to be placed on the entire length of the yet-to-be-shaped strip." Id., slip op. at 6-7. Judge Coar also stated that "[t]he metal strip must be longer than it is wide, planer [sic], and prevent fluid from passing through it [on] at least one of the flat sides." Id., slip op. at 5. In September 2001, PPG filed a motion for partial summary judgment of validity and enforceability, and Lockformer filed a motion for partial summary judgment of invalidity, unenforceability, and noninfringement.

The following year, however, the case was reassigned from Judge Coar to Judge Amy St. Eve, and, on March 21, 2003, the court granted PPG's motion for partial summary judgment on the issues of validity and enforceability, finding that Lockformer had failed to satisfy its burden of proof as to either issue.

On March 25, 2003, the court granted Lockformer's motion for partial summary judgment of noninfringement. Judge St. Eve stated that claim 1 requires that an adhesive containing a desiccant be adhered to a flat metal strip, and she reasoned that because RL-50 is not an adhesive and because Lockformer's machine applies RL-50 to a U-shaped strip, not a flat strip, Lockformer's device did not infringe the '916 patent. Summary Judgment Order, slip op. at 8-9. She discounted the testimony of PPG's expert witness, Raymond Gallagher, as insufficient to create a genuine issue of material fact because he did not state when or how the desiccant matrix stuck to the spacer frame. Id. Instead, Judge St. Eve relied on the testimony of other witnesses that RL-50 was not an adhesive and did not stick to the metal strip. Id., slip op. at 8. The court later denied PPG's motion for reconsideration and granted in part Lockformer's bill of costs.

PPG and PPG Ohio (collectively, "PPG") now appeal from the summary judgment of noninfringement. Lockformer and TruSeal (collectively, "Lockformer") initially filed a cross-appeal that has since been withdrawn. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

## DISCUSSION

We review a district court's grant of summary judgment without deference, reapplying the same standard used by the district court. Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp., 149 F.3d 1309, 1315 (Fed. Cir. 1998). Summary judgment is appropriate "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any

material fact and that the moving party is entitled to a judgment as a matter of law." Fed. R. Civ. P. 56(c).

# I. Infringement

A determination of patent infringement requires a two-step analysis. "First, the court determines the scope and meaning of the patent claims asserted . . . , then the properly construed claims are compared to the allegedly infringing device." Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1454 (Fed. Cir. 1998) (en banc) (citations omitted). Step one, claim construction, is an issue of law, Markman v. Westview Instruments, Inc., 52 F.3d 967, 970-71 (Fed. Cir. 1995) (en banc), aff'd, 517 U.S. 370 (1996), that we review de novo, Cybor, 138 F.3d at 1456. Step two, comparison of the claim to the accused device or method, requires a determination that every claim limitation or its equivalent is found in the accused device. Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 29 (1997). Those determinations are questions of fact. Bai v. L & L Wings, Inc., 160 F.3d 1350, 1353 (Fed. Cir. 1998).

# A. <u>"Adhesive"</u>

On appeal, PPG argues that the Gallagher testimony satisfactorily established a genuine issue of material fact whether Lockformer's accused device contained an adhesive as required by the claims of the '916 patent. It alleges that his statements that the desiccant matrix "stuck" to the substrate when he shook the IGU spacers were sufficient to require the court to submit the issue to a jury. PPG contends that the district court failed to draw inferences in its favor as nonmovant by rejecting that testimony and thus committed error by granting summary judgment of noninfringement based on the alleged lack of an adhesive in Lockformer's accused device.

Lockformer responds that Gallagher testified merely that the desiccant matrix did not rattle when the spacer was shaken. It contends that he did not state that the desiccant was adhesive or that it adhered to the spacer frame. Instead, Lockformer argues, PPG failed to meet its burden of proof because Gallagher did not testify that the RL-50 matrix remained "stuck" throughout the process of shaping the flat strip with the bead of adhesive into spacer stock and fixing glass to the spacer frame. Lockformer alleges that the court's decision to grant summary judgment was properly based on the fact that Gallagher did not provide any testimony as to when or how the matrix "stuck" to the spacer frame.

We agree with Lockformer that the court properly granted summary judgment of noninfringement because PPG failed to establish the existence of a genuine issue of material fact whether RL-50 was an adhesive that adhered to the spacer. The district court properly relied on declarations from several witnesses—namely, Randy Runyan, Louis Ferri, Gary Dickinson, and Kevin Zuege—that the TruSeal RL-50 desiccant matrix used in Lockformer's IGUs was not an adhesive and does not stick to the metal substrate. The witnesses stated unequivocally in their declarations that the RL-50 desiccant did not stick to the metal frame and was thus not an adhesive.

On the other hand, Gallagher's deposition testimony does not create a genuine issue of material fact because it does not dispute that RL-50 is not an adhesive. At the Markman hearing, Gallagher testified during cross-examination as follows:

Q: The desiccant that you observed being used on the Lockformer machine at the March 2000 inspection, did that adhere to the spacer frame which you saw?

A: No, it did not.

. . . .

A: Excuse me, just for – you know, you had mentioned before about if there was some clarity needed. I need to have that question asked again. Would you mind repeating the question again?

. . . .

- A: Did the matrix being used, did it adhere to the spacer? Yes. I need to correct myself on that.
- Q: So your first answer was incorrect?
- A: Yes, it did adhere.
- Q: And what do you mean when you say that it did adhere?
- A: That the matrix stuck to the metal substrate.
- Q: What do you mean when you say it stuck?
- A: That, in picking up the spacer and shaking it, it did not rattle around inside the spacer.

(JA 1675-66) Thus, Gallagher testified simply that the RL-50 "stuck" to the spacer frame, or, in other words, was rendered physically immobile inside the frame. Although the Gallagher testimony may demonstrate that "RL-50 performed the <u>function</u> of the adhesive claimed by the '916 patent," Appellants' Opening Br. at 42, Gallagher never states that RL-50 is, in fact, an adhesive. Gallagher's mere observation that the desiccant matrix "did not rattle around inside the spacer" cannot be construed to be an assertion that the desiccant is an adhesive or that it adheres to the spacer frame.\*

In sum, the district court acknowledged that PPG was "entitled to all reasonable inferences in its favor," <u>Summary Judgment Order</u>, slip op. at 8, and properly concluded that PPG nevertheless did not present sufficient evidence to meet its

Additionally, the district court refused to consider PPG's opposition to Lockformer's motion for summary judgment because it held that the filing was in violation of Local Rule 56.1 for failure to cite supporting evidence in the record with specificity. PPG asserts that the court did not consider its supplemental submission, which included declarations by Gallagher and William Daley. We are not convinced upon our review of the record that the district court abused its discretion in applying its own local rule, and we discern no error in the court's refusal to consider the Gallagher and Daley declarations.

burden of producing evidence that shows that there is a disputed fact whether RL-50 is an adhesive.

## B. "Flat"

PPG also argues that the district court erred as a matter of law by requiring that the RL-50 desiccant matrix be applied to a flat strip. It alleges that Judge St. Eve misconstrued the claim construction order issued previously by Judge Coar, which PPG argues stated that claim 1 of the '916 patent imposes no limitation on when the adhesive bead must be applied relative to the forming of the spacer frame. PPG contends that Judge St. Eve improperly "redrafted" the claim to import the word "flat" from the preamble to modify the "strip" limitation. PPG maintains that the claim was drafted to refer not only to the beginning of the forming process, but also throughout the entire process of shaping the substrate into spacer stock. It thus asserts that the claim permits the application of an adhesive bead even after the metal substrate was formed into a U shape.

Lockformer responds that Judge Coar correctly interpreted the claim to require the metal strip to be flat and that Judge St. Eve properly applied that construction. It argues that the claims of the '916 patent recite a strip to be shaped into spacer stock and that the claims are limited to a flat metal strip. Because its accused machine roll-forms the strip and applies the desiccant material while the strip is approximately U-shaped, Lockformer argues, the court correctly found that Lockformer does not infringe the '916 patent.

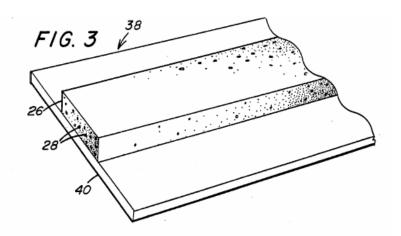
We agree with Lockformer that the district court properly construed the claim to require application of the adhesive desiccant to a flat metal strip. Our analysis begins with the language of the claim itself. The claim states that the invention comprises "an elongated flat bendable metal substrate." Also, the preamble recites, "A strip to be shaped into spacer stock," which indicates that the claimed strip has not yet started the roll-forming process. Those portions of the claim support Judge Coar's construction that "[t]he metal strip . . . be . . . planer [sic]," a construction that apparently met with agreement from both parties at the time. Claim Construction Order, slip op. at 5.

The specification further supports the construction that the strip must be flat when the adhesive is applied. For example, the "Summary of the Invention" reads as follows:

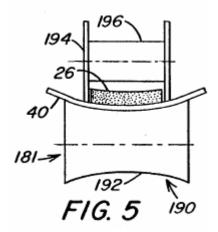
This invention covers <u>a strip for shaping into spacer stock</u> for use in the fabrication of insulating units. The strip includes a metal substrate having a bead of moisture and/or gas pervious adhesive secured to a surface of the substrate. <u>The metal substrate after forming into the spacer stock, e.g.,</u> U-shaped spacer stock can withstand higher compressive forces than the bead.

'916 patent, col. 2, II. 18-24 (emphases added). This passage reinforces the district court's interpretation that the "claim covers metal stock that <u>will be formed</u> into multipane window spacers." <u>Claim Construction Order</u>, slip op. at 5 (emphasis added).

Additionally, the figures illustrate that the desiccant is adhered to the substrate when flat and the substrate subjected to the roll-forming process after adhesion. Figure 3 of the '916 patent shows the applied adhesive bead **26** on a flat metal substrate **40** prior to the forming process. The written description later provides that "[t]he substrate **40** having the bead **26** is advanced from left to right as viewed in FIG. **4** between roll forming stations **180** thru **185**." <u>Id.</u>, col 4, II. 56-58.



<u>Id.</u>, fig. 3. Furthermore, Figure 5 shows a roll forming station **181** that facilitates the bending of the flat substrate **40** with the adhesive bead already in place.



<u>Id.</u>, col. 4, Il. 61-65 & fig. 5. In contrast, Lockformer's machine starts with a flat strip, roll-forms the strip into a U-shaped form, and only then inserts the desiccant material into the frame.

We conclude that the district court properly construed the claim to require a flat substrate. The court then correctly applied that construction in concluding that Lockformer's accused device does not infringe the '916 patent because its strip is not flat when the RL-50 desiccant is applied. Because Lockformer's accused device incorporating RL-50 does not meet all of the limitations of the '916 patent claims,

including the "adhesive" and "flat substrate" limitations, the court properly granted summary judgment of noninfringement.

# II. Costs

Finally, PPG argues that the district court abused its discretion in awarding costs to Lockformer. Although it concedes that Lockformer prevailed on the issue of infringement of the '916 patent, PPG asserts that it prevailed on the majority of the issues, including the eight non-patent counts, validity and enforceability of the '916 patent, and issues relating to the '282 and '944 patents. It argues that the overall outcome was mixed, but predominantly in PPG's favor, so that the court should not have awarded costs to Lockformer as the "prevailing party" in this litigation. In support of its arguments, PPG cites Testa v. Village of Mundelein, III., 89 F.3d 443 (7th Cir. 1996) (affirming the district court's decision that the parties each bear their own costs in a case with mixed outcome) and Allen & O'Hara, Inc. v. Barrett Wrecking, Inc., 898 F.2d 512 (7th Cir. 1990) (affirming the district court's denial of costs where both parties prevailed in part).

Lockformer argues that the court properly analyzed which party had prevailed as to a substantial part of the litigation. It asserts that the award of costs related specifically to the litigation of the '916 patent. Lockformer maintains that the non-patent counts that PPG asserts were resolved in its favor were actually the subject of a stipulated dismissal that provided that the parties bear their own costs and attorney fees as to those claims.

We agree with Lockformer that the court did not abuse its discretion in its award of costs. Lockformer ultimately prevailed on the issue of infringement, as PPG

conceded that Lockformer did not infringe the '282 and '944 patents and it won on the litigated issue of infringement of the '916 patent as well. The patent infringement issues thus were central to the real litigation, which began as a declaratory judgment action, and Lockformer prevailed on those issues. The cases that PPG cites as authority do not require any particular decision on costs in mixed outcomes. Instead, they stand only for the general proposition that "[d]istrict courts enjoy wide discretion in determining and awarding reasonable costs." Testa, 89 F.3d at 449 (citation omitted). We discern no abuse of discretion here and decline to disturb the court's award of costs to Lockformer.

## CONCLUSION

Because the district court properly construed the '916 patent claims to require application of adhesive to a flat metal strip, and because PPG did not present sufficient evidence to contest that the TruSeal RL-50 desiccant is not an adhesive and is not applied to a flat strip, the court correctly granted Lockformer's motion for summary judgment of noninfringement of the '916 patent. Additionally, the court did not abuse its discretion by awarding costs to Lockformer as the prevailing party. Accordingly, we affirm the judgment of the district court.