

UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA

JODI A. SCHWENDIMANN, *f/k/a* JODI
A. DALVEY

Civil No. 11-820 (JRT/HB)

Plaintiff,

v.

**MEMORANDUM OPINION AND
ORDER**

ARKWRIGHT ADVANCED COATING,
INC.

Defendant.

ARKWRIGHT ADVANCED COATING,
INC.

Counterclaim Plaintiff,

v.

JODI A. SCHWENDIMANN, *f/k/a* JODI
A. DALVEY and COOLER CONCEPTS,
INC.

Counterclaim Defendants.

David A. Davenport, Devan V. Padmanabhan, and Michelle E. Dawson,
WINTHROP & WEINSTINE, PA, 225 South Sixth Street, Suite 3500,
Minneapolis, MN 55402, for Jodi A. Schwendimann and Cooler Concepts,
Inc.

Katherine J. Rahlin, Kurt J. Niederluecke, and Laura L. Myers,
FREDRIKSON & BYRON, PA, 200 South Sixth Street, Suite 4000,
Minneapolis, MN 55402, for Arkwright Advanced Coating, Inc.

Plaintiff Jodi Schwendimann brought this patent-infringement action against Arkwright Advanced Coating, Inc. (“AACI”), for infringement of a number of patents related to dark T-shirt transfer technology. The jury returned a verdict in favor of Schwendimann, finding that “Schwendimann has proven that AACI has directly infringed at least one claim of the ’623, ’581, ’475, ’042, or ’554 Patents.” AACI renews its motion for judgment as a matter of law that it does not infringe the Schwendimann patents. In the alternative, AACI moves for a new trial on this issue. The Court will deny both of AACI’s motions.

BACKGROUND

I. FACTUAL BACKGROUND

A. Schwendimann’s Patents

Schwendimann’s companies, NuCoat and Cooler Concepts, manufacture and sell specialty paper products, including inkjet image-transfer paper or sheets. Schwendimann alleged that AACI’s “888” and “889” products infringe five of Schwendimann’s patents:

1. U.S. Reissued Patent No. RE41,623 (“the ’623 Patent”)
2. U.S. Patent No. 7,749,581 (“the ’581 Patent”)
3. U.S. Patent No. 7,754,042 (“the ’042 Patent”)
4. U.S. Patent No. 7,766,475 (“the ’475 Patent”)
5. U.S. Patent No. 7,771,554 (“the ’554 Patent”)

Claim 6 of the ’623 Patent provides:

An image transfer sheet, comprising:
a colored[,] substrate comprising woven, fabric based material, or paper;

a release layer overlaying the substrate, wherein the release layer is impregnated with titanium oxide or other white pigment or luminescent pigment; and a polymer layer.

(Trial Ex. P005 (“’623 Patent”) at 15, Nov. 20, 2017, Docket No. 751.)

Claim 24 of the ’581 Patent provides:

An image transfer article, comprising:
a removable substrate including a substrate surface overlaid with a release coating; and
a first layer overlaying the release coating, the first layer configured to be overlaid with at least a second layer configured to receive indicia;
wherein the first layer includes a concentration or configuration of pigment providing an opaque background having a substantially non-transparent effect for received and transferred indicia.

(Trial Ex. P001 (“’581 Patent”) at 17, Nov. 20, 2017, Docket No. 751.)

Claim 26 of the ’581 Patent, which depends from claim 24, provides:

The article of claim 24, wherein the second layer includes an ink-receptive polymer.

(*Id.*)

Claim 1 of the ’475 Patent provides:

An ink-jet transfer article, comprising:
a substrate member including a substrate surface;
an opaque first layer overlaying the substrate surface, the opaque first layer including polyurethane and a white or luminescent pigment; and
a second layer overlaying the opaque first layer and configured to receive indicia, the second layer including polyurethane and a polymeric material.

(Trial Ex. P003 (“’475 Patent”) at 16, Nov. 20, 2017, Docket No. 751.)

Claim 2 of the ’475 Patent, which depends from claim 1, provides:

The article of claim 1, further comprising a hot-melt third layer disposed between the substrate surface and the opaque first layer.

(*Id.*)

Claim 9 of the '554 Patent provides:

A method for making an image transfer sheet, comprising:
obtaining a coated substrate;
overlaying the coated substrate with one or more polymers;
combining at least one or more polymers with a titanium oxide or other white or luminescent pigment, thereby forming an opaque background; and
overlaying the one or more polymers with an ink receptive layer;
wherein the coated substrate, when peeled from the one or more polymers and the ink receptive layer, or an overlay release paper is effective for covering an image, comprising indicia receivable by the ink receptive layer and the opaque background, and for transferring heat from a heat source to at least the ink receptive layer and the one or more polymers.

(Trial Ex. P004 (“’554 Patent”) at 16, Nov. 20, 2017, Docket No. 751.)

Claim 1 of the '042 Patent provides:

A method of making an image transfer article, the method comprising:
obtaining a removable substrate;
coating the removable substrate with at least one of silicone, clay, resin, fluorocarbon, urethane, or an acrylic base polymer;
overlaying the coated removable substrate with one or more polymer layers; and
combining at least one of the one or more polymer layers with a pigment, the pigment have a concentration or configuration sufficient to provide an opaque background for received indicia, when transferred to a base.

(Trial Ex. P002 (“042 Patent”) at 16, Nov. 20, 2017, Docket No. 751.)

II. PROCEDURAL BACKGROUND

A. Claim Construction

The Court construed “white layer” to mean “a layer comprising a concentration or configuration of pigment providing a white background for received indicia and which further comprises a polymer that melts and mixes with another layer or layers during application.” (Mem. Op. & Order (“Claim Construction Order”) at 17, Dec. 2, 2015, Docket No. 354.) The Court construed “opaque first layer” to have the same meaning as “white layer.” (*Id.* at 25.) In construing the term “white layer,” the Court further stated that “each of Schwendimann’s asserted claims requires a definition that includes the melt and mix limitation of the white layer term.” (*Id.* at 18.)

B. Summary Judgment

Prior to trial, AACI moved for summary judgment of noninfringement. (Mem. Op. & Order on Mots. for Summ. J. at 19, Dec. 12, 2016, Docket No. 439.) In particular AACI argued, “[Dr. Scott] Williams’ opinions do not establish a genuine factual dispute because Williams failed to follow the products’ instructions and Macosko’s tests reached contrary results.” (*Id.*) The Court found that the product instructions for the 888 product and the 889 product “are not identical, and several do not set precise guidelines regarding the amount of heat and time of application.” (*Id.* at 20.) The Court concluded, “While Williams did not strictly follow any particular set of instructions, there is no indication that failing to strictly follow any particular set of instructions makes Williams’ analysis

unreliable, particularly considering the absence of a single set of instructions or guidelines for heat and timing of application.” (*Id.* at 20.)

C. Judgment as a Matter of Law and Trial

At the close of Schwendimann’s case-in-chief, AACI moved for judgment as a matter of law of noninfringement. (AACI’s Mot. for J. as a Matter of L., Oct. 13, 2017, Docket No. 637.) Once again, AACI argued that Schwendimann had not proved that the 888 and 889 products include a “white layer” containing a “polymer that melts and mixes with another layer or layers during application.” (Mem. Supp. AACI’s Mot. for J. as a Matter of L. at 2, Oct. 13, 2017, Docket No. 638.) The Court denied the motion, concluding that “there is sufficient evidence in the record for the jury to make this determination.” (Trial Tr. Vol. VIII at 1835:17-21, Nov. 27, 2017, Docket No. 767.)

The jury returned a verdict in favor of Schwendimann. (Am. J., Nov. 14, 2017, Docket No. 705.) The jury found that “Schwendimann has proven that AACI has directly infringed at least one claim of the ’623, ’581, ’475, ’042, or ’554 Patents.” (*Id.*)

Post-trial, AACI renewed its motion for judgment as a matter of law, and in the alternative, sought a new trial on infringement of the Schwendimann patents. (Def.’s Renewed Mot. for J. as a Matter of Law (“Infringement JMOL Mot.”), Nov. 20, 2017, Docket No. 740.)

DISCUSSION

I. STANDARD OF REVIEW

In patent cases, while substantive patent law is governed by Federal Circuit law, regional circuit law governs a district court's rulings on post-trial motions for judgment as a matter of law and for a new trial. *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1202 (Fed. Cir. 2010).

Under Rule 50(a)(1) of the Federal Rules of Civil Procedure, the Court may resolve an issue as a matter of law if “a reasonable jury would not have a legally sufficient evidentiary basis to find for the party on that issue.” A party may renew a judgment as a matter of law after trial. Fed. R. Civ. P. 50(b). “A motion for judgment as a matter of law should be granted when all the evidence points one way and is susceptible of no reasonable inferences sustaining the position of the nonmoving party.” *Hunt ex rel. Hunt v. Lincoln Cty. Mem'l Hosp.*, 317 F.3d 891, 893 (8th Cir. 2003) (quoting *Neely v. Am. Family Mut. Ins. Co.*, 123 F.3d 1127, 1129 (8th Cir. 1997)). In making this determination, the Court is to

consider the evidence in the light most favorable to the prevailing party, assume that the jury resolved all conflicts of evidence in favor of that party, assume as true all facts which the prevailing party's evidence tended to prove, give the prevailing party the benefit of all favorable inferences which may reasonably be drawn from the facts, and deny the motion, if in light of the foregoing, reasonable jurors could differ as to the conclusion that could be drawn from the evidence.

Minn. Cmty. Dev. Agency v. Lake Calhoun Assocs., 928 F.2d 299, 301 (8th Cir. 1991) (quoting *Atlas Pile Driving Co. v. Dicon Fin. Co.*, 886 F.2d 986, 989 (8th Cir. 1989)).

Under Rule 59(a) of the Federal Rules of Civil Procedure, the Court may grant a motion for a new trial “on all or some of the issues.” Fed. R. Civ. P. 59(a)(1). “A new trial is appropriate when the first trial, through a verdict against the weight of the evidence . . . or legal errors at trial, resulted in a miscarriage of justice.” *Gray v. Bicknell*, 86 F.3d 1472, 1480 (8th Cir. 1996). “The authority to grant a new trial is within the discretion of the district court.” *Id.* The Court should grant a new trial where erroneous evidentiary rulings “had a substantial influence on the jury’s verdict.” *Littleton v. McNeely*, 562 F.3d 880, 888 (8th Cir. 2009) (quoting *Harris v. Chand*, 506 F.3d 1135, 1139 (8th Cir. 2007)). Furthermore, only if the jury’s verdict is so against the great weight of the evidence that it constitutes a miscarriage of justice should a motion for a new trial be granted. *Ogden v. Wax Works, Inc.*, 214 F.3d 999, 1010 (8th Cir. 2000).

II. JUDGMENT AS A MATTER OF LAW

The Court must decide whether to order judgment as a matter of law for AACI on the issue of noninfringement of the Schwendimann patents. At issue on this motion is whether sufficient evidence supports a finding that AACI’s 888 and 889 products include a white layer containing a “polymer that melts and mixes with another layer or layers during application.” (Mem. Supp. Infringement JMOL Mot. at 2, Oct. 13, 2017, Docket No. 638.) Schwendimann presented testimony from Dr. Scott Williams to establish that the 888 and 889 products infringe Schwendimann’s patents. The Court will conclude that

a reasonable jury could find that both the 888 and 889 products include a white layer containing a polymer that melts and mixes with another layer during application.

The Court must first address whether the white layer of the 888 and 889 products must melt and mix when applied **according to AACI's product instructions**. For two reasons, the Court will conclude that “during application” does not require application according to AACI's product instructions.

First, neither the Claim Construction Order nor Schwendimann's patents define “during application.” AACI argues that “during application” must mean according to AACI's product instructions lest this phrase be superfluous. The Court disagrees. As used in the Claim Construction Order, “during application” is not concerned with **how** the dark T-shirt transfer is applied (e.g., the temperature, pressure, time, etc.). “During application” is concerned with **when** the white layer melts and mixes. *See Merriam Webster's Collegiate Dictionary* 360 (10th ed. 1993) (defining “during” as “throughout the duration of” or “at a point in the course of”). Additionally, the Claim Construction Order does not define “application.” As such, the parties were free to argue to the jury the meaning of “application” and the parameters that would constitute an application of the 888 and 889 products.

Second, AACI failed to provide consistent or specific product instructions that would have allowed Dr. Williams to design controlled experiments to test the 888 and 889 products. Dr. Williams testified that the product instructions for the 888 and 889 products were “varied.” (Trial Tr. Vol. IV at 632:17-633:18, Nov. 27, 2017, Docket No. 763.) While the Court need not document every such variation, several examples are

illustrative. One set of instructions for the 888 product includes directions for application with either an iron or a heat press; a different set of instructions provides directions only for application with a heat press.¹ One set of instructions for the 889 product specifies that the iron should be a set to a temperature of “Maximum Cotton”; a different set of instructions states that the iron should be set to “the highest heat setting (Cotton/Linen).”² In sum, there is not a consistent approach to applying the 888 and 889 products. In light of these inconsistencies, the jury was free to conclude that “during application” does not mandate “application” solely according to the product instructions.

Having established that “during application” does not require application according to AACI’s product instructions, the Court must consider whether a reasonable jury could have found that Dr. Williams’ tests constituted an “application” of the 888 and 889 products. Dr. Williams testified extensively that he based his testing methods on both AACI’s product instructions and expertise:

Q. How did you know how much time, temperature and pressure to use when you applied the samples to the T-shirts?

A. So, of course, I used the product specification, the sheets of use, the instructions of use for each of these products as a guide. Now, it’s a guide because I’m going to change the conditions quite a bit. I used it to sort of set my middle point, and then I am going to do a lot of testing on both temperature,

¹ (*Compare* Decl. of Devan V. Padmanabhan (“Padmanabhan Decl.”) ¶ 2, Ex. A at 80, Dec. 11, 2017, Docket No. 789; Trial Tr. Vol. V at 878:11-879:7 (stipulating that the instructions were for the 888 Product), *with* Padmanabhan Decl. ¶ 2, Ex. A. at 165.)

² (*Compare* Padmanabhan Decl. ¶ 2, Ex. A at 158; Trial Tr. Vol. VII at 1503:10-12 (establishing that these instructions were included for the 889 product), *with* Padmanabhan Decl. ¶ 2, Ex. A at 169.)

time and pressure, both way below what the instructions indicate and way above what the instructions would indicate, maybe way above what the user would even do, because I had a very specific task. My task was to be able to determine whether there was a polymer that was in this white layer that melts and mixes with another layer.

Q. Okay. And did the different instructions sets that you looked at, did they all have the same directions?

A. No, they did not.

Q. And so they varied?

A. They varied.

Q. And so how did you end up deciding the right time, temperature and pressure to use, given that they were varied?

A. So I have done a lot of T-shirt transfers for quite a long time. So this is – this is, I took the instruction sheet to kind of get my understanding of what the products required and then I relied on about a decade's worth of testing to set the parameters for the test.

(Trial Tr. Vol. IV at 632:17-633:18.) Dr. Williams designed tests controlling for three variables – temperature, time, and pressure – because these variables “are all in control of the user” and thus these tests “simulate what would happen during a user’s application of these transfers onto a T-shirt.” (*Id.* at 632:5-10.) With respect to temperature, Dr. Williams used a Black and Decker iron to conduct his tests and used all seven temperature settings on that iron, including the iron’s “maximum” setting. (*Id.* at 632:22-635:11, 637:3-13, 646:65-648:13, 650:17-651:8.) With respect to time, Dr. Williams tested the 888 and 889 products at application times ranging from 5 seconds (lower than required in the product instructions) and 120 seconds (higher than required in the product

instructions). (*Id.* at 655:4-661:22.) With respect to pressure, Dr. Williams testified that he conducted tests using no pressure, light pressure, and firm pressure. (*Id.* at 662:1-666:12.) The Court concludes that a reasonable jury could have found that Dr. Williams's tests constituted an "application" of the 888 and 889 products.

Finally, the Court must consider whether a reasonable jury could have found that the 888 and 889 products include a white layer containing a polymer that melts and mixes with another layer during application of the dark T-shirt transfer. Dr. Williams testified that he was able to determine whether the white layer melts and mixes based on images showing black T-shirt fibers protruding through the surface of the transfer. (*Id.* at 644:3-12.) Dr. Williams explained that "this means that there must be some polymer in that white layer that must be melting and mixing to allow those soft T-shirt fibers to come through to the surface." (*Id.* at 645:13-17.) Dr. Williams testified that it does not matter how many fibers protrude through the transfer because "for them to make it up that far, there needs to be at least enough softening that allows these soft fibers to protrude through." (*Id.* at 658:18-23.)

Sufficient evidence supports the jury's finding that the 888 and 889 products have a white layer that melts and mixes during application of the dark T-shirt transfer. Dr. Williams's tests showed that black T-shirt fibers protruded through the 888 and 889 products when the transfer was applied with a variety of temperatures. (*Id.* at 643:12-648:9, 650:11-652:8.) His tests also showed that the black T-shirt fibers protruded through the 888 and 889 products when the transfer was applied for as short as 5 seconds or as long as 120 seconds. (*Id.* at 652:15-658:24, 658:24-661:8.) Finally, Dr. Williams's

tests showed that black T-shirt fibers protruded through the 888 and 889 products when the transfer was applied with a variety of pressures. (*Id.* at 662:7-666:12.) Accordingly, the Court concludes that a reasonable jury could have found – based on Dr. Williams’s tests – that the 888 and 889 products include a white layer containing a polymer that melts and mixes with another layer or layers during application.

Because a reasonable jury could have found that the 888 and 889 products infringe Schwendimann’s patents, the Court will deny AACI’s motion for judgment as a matter of law.

III. NEW TRIAL

The Court must decide whether to grant AACI a new trial on the basis that the Court failed to instruct the jury that each of Schwendimann’s asserted claims requires the melt and mix limitation.³

“[T]he district court normally will need to provide the jury in a patent case with instructions adequate to ensure that the jury fully understands the court’s claim construction rulings and what the patentee covered by the claims.” *Sulzer Textil A.G. v. Picanol N.V.*, 358 F.3d 1356, 1366 (Fed. Cir. 2004). “The jury must be told that the court has made a claim construction ruling that the jury must follow and cannot be left free to

³ AACI also argues that the Court’s failure to exclude testimony about copying was prejudicial error because it was inflammatory evidence used to influence the jury on the liability issues. *See Nichols v. Am. Nat’l Ins. Co.*, 154 F.3d 875, 889-90 (8th Cir. 1998) (concluding that evidence about a party’s violation of her religious beliefs and psychiatric credibility was so prejudicial as to require a new trial). The evidence of copying was both relevant and not “inflammatory,” and was therefore not prejudicial.

apply its own reading of disputed terms to the facts of the case.” *Id.* However, the failure to give an instruction on claim construction is not prejudicial when “[t]he evidence presented at trial reflected the court’s claim construction.” *Id.* at 1367.

A. Instruction

In its Claim Construction Order, within its analysis of the “white layer” term, the Court stated that “each of Schwendimann’s asserted claims requires a definition that includes the melt and mix limitation of the white layer term.” (Claim Construction Order at 18.)

AACI requested a jury instruction that each of Schwendimann’s alleged claims must include the melt-and-mix limitation. (Trial Tr. Vol. VIII at 1862:21-1863:13.) Schwendimann argued against inclusion of the instruction because it was not actually a construed term. (*Id.* at 1863:14-23.) The Court agreed that the statement was not a construed term that needed to be included within the jury instructions. (*Id.* at 1864:12-13.) The Court therefore defined “white layer” in the jury instructions only as construed in the Claim Construction Order: “A layer comprising of a concentration or configuration of pigment providing a white background for received indicia and which further comprises a polymer that melts and mixes with another layer or layers during application.” (Jury Inst. No. 17, Oct. 17, 2017, Docket No. 780; *see also* Claim Construction Order at 18.)

The Court’s Claim Construction Order is a lengthy order that contains a significant amount of discussion and analysis. Both parties sought to include dicta from the Claim Construction Order in the jury instructions. For example, Schwendimann sought to

expand the definitions of “melt” and “mix” beyond the terms’ plain and ordinary meanings based on discussion within the Court’s Claim Construction Order. (Trial Tr. Vol. VIII at 1859:1-11.) AACI acknowledged that “[c]ertainly the [C]ourt did have discussions on a few different things about melt and about mix,” but objected to “leaving anything but the plain and ordinary meaning or actual defined terms.” (*Id.* at 1859:13-25) AACI further stated that, “as is consistent with the way the [C]ourt has set [its jury instructions] up, it’s providing defined meanings for terms it defined, and for terms that it decided it should be afforded their plain and ordinary meaning, it’s done that and we think that’s consistent.” (*Id.* at 1859:16-20.) Consistent with the Court’s practice, the Court refused to include the additional discussion that accompanied the construction of “mix” and “melt.” (*Id.* at 1861:9-14.)

AACI cannot have it both ways. That “each of Schwendimann’s asserted claims requires a definition that includes the melt and mix limitation of the white layer term” was not a construed term; it was discussion included within the Court’s analysis of “white layer” and associated terms. (Claim Construction Order at 18.) AACI objected to the inclusion of the Court’s discussion with respect to “melt” and “mix,” but sought to include the Court’s discussion with respect to “white layer.” Consistent with the Court’s practice, the Court instructed the jury on the meaning of “white layer” precisely as it was construed in the Claim Construction Order. (*Compare* Jury Inst. No. 17, *with* Claim Construction Order at 18.) AACI’s requested instruction did not concern a “disputed term,” and therefore the Court concludes that it did not err in deciding not to include the instructions. *See Sulzer*, 358 F.3d at 1366.

B. Prejudicial Error

Even if the Court erred in failing to instruct the jury that each of Schwendimann's asserted claims requires a definition that includes the melt-and-mix limitation of the white layer term, the error was not prejudicial.

The argument and evidence presented at trial was consistent with AACI's requested instruction that each asserted claim required the melt-and-mix limitation. *See Sulzer*, 358 F.3d at 1367. On cross-examination, Dr. Williams agreed that "the Court has found that **all of the Schwendimann claims require a white layer** that has a polymer that melts and mixes with another layer." (Trial Tr. Vol. V at 789:7-11, Nov. 27, 2017, Docket No. 764 (emphasis added).) Dr. Macosko – AACI's technical expert – also testified that AACI's products "do not infringe the Schwendimann **patents**" because "they do not have [a] white layer polymer that melts and mixes with another layer." (Trial Tr. Vol. VII at 1431:4-10 (emphasis added).) Therefore, both parties' experts testified that all the asserted claims required the melt-and-mix limitation. AACI argued in closing argument that all of Schwendimann's asserted claims required the melt-and-mix limitation:

[Dr. Williams] agreed that in this case the [C]ourt found that **all of the Schwendimann patents require a white layer that has a polymer that melts and mixes with another layer**. He said that's correct. **He essentially said even if the words "white layer" do not appear in the patent claim, these are all still required.** So that's the big question we have to answer. And there is him answering that question. We have to find this no matter what the claim says.

(Trial Tr. Vol. IX at 2065:21-2066:4, Nov. 27, 2017, Docket No. 768 (emphasis added).)

The Court concludes that the evidence presented at trial reflected the Court's Claim Construction Order. *See Sulzer*, 358 F.3d 1367. The Court concludes that the error could not have influenced the jury's verdict and therefore there was no prejudicial error.

ORDER

Based on the foregoing, and all the files, records, and proceedings herein, **IT IS HEREBY ORDERED** that AACI's Renewed Motion for Judgment as a Matter of Law, or in the Alternative, a New Trial on Infringement of the Schwendimann Patents [Docket No. 740] is **DENIED**.

DATED: February 26, 2018
at Minneapolis, Minnesota.

s/John R. Tunheim
JOHN R. TUNHEIM
Chief Judge
United States District Court