NOTE: This disposition is nonprecedential.

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

05-1601

AFG INDUSTRIES, INC. and ASAHI GLASS COMPANY, LTD.,

Plaintiffs-Appellees,

٧.

CARDINAL IG COMPANY, INC.,

Defendant-Appellant,

and

ANDERSEN WINDOWS, INC.,

Defendant.

Richard D. Kelly, Oblon, Spivak, McClelland, Maier & Neustadt, P.C., of Alexandria, Virginia, argued for plaintiffs-appellees. With him on the brief were <a href="Stephen G. Baxter">Stephen G. Baxter</a>, William T. Enos, and <a href="Andrew M. Ollis">Andrew M. Ollis</a>. Of counsel was <a href="Frank J.">Frank J.</a> West.

<u>Constantine L. Trela, Jr.</u>, Sidley Austin LLP, of Chicago, Illinois, argued for defendant-appellant. With him on the brief was <u>Robert N. Hochman</u>. With him on the brief were <u>V. Bryan Medlock, Jr.</u>, and <u>Catherine I. Rajwani</u>, of Dallas, Texas. Also on the brief were <u>Ford F. Farabow, Jr.</u>, and <u>Darrel C. Karl</u>, Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P., of Washington, DC.

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

Judge J. Ronnie Greer

NOTE: This disposition is nonprecedential.

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

05-1601

AFG INDUSTRIES, INC.
and ASAHI GLASS COMPANY, LTD.,

Plaintiffs-Appellees,
v.

CARDINAL IG COMPANY, INC.,

Defendant-Appellant,
and

ANDERSEN WINDOWS, INC.,

Defendant.

Before NEWMAN, MAYER, and RADER, Circuit Judges.

Opinion for the court filed by <u>Circuit Judge</u> NEWMAN. Dissenting opinion filed by <u>Circuit Judge</u> MAYER.

DECIDED: March 30, 2007

NEWMAN, Circuit Judge.

AFG Industries, Inc. and the Asahi Glass Company (together "AFG") charged Cardinal IG Company and Andersen Windows, Inc. (together "Cardinal") with infringement

of United States Patent No. 4,859,532 (the '532 patent). In its most recent decision on remand from the Federal Circuit, the United States District Court for the Eastern District of Tennessee found infringement and entered judgment in favor of AFG. Reviewing this judgment on the district court record in combination with the several prior proceedings, we conclude that the '532 patent claim, construed in light of the prior art and arguments in prior proceedings, and in order to preserve the validity as previously found, are limited to products whose central zinc oxide core is produced by a single sputter deposit. For such products, if any were produced by Cardinal, the judgment of infringement and the jury's measure of damages at the designated royalty rate are affirmed. However, on this claim construction infringement cannot be sustained as to products that were produced from at least two sputtering deposits for the zinc oxide central core; the judgment of infringement is reversed as to those products.

The record of this appeal does not show what portion, if any, of the Cardinal product line for the period at issue was produced by single sputtering deposits of the central zinc oxide layer. For allocation of damages in accordance with the proportion of infringing product, we <u>remand</u> to the district court.

## DISCUSSION

Details of this dispute are set forth in the earlier opinions of the district court and this court, and need not be repeated. Pertinent to this appeal is the claim construction of the '532 patent in view of the patent to Goodman (United States Patent No. 4,943,484), for

<sup>1 &</sup>lt;u>AFG Industries, Inc. v. Cardinal IG Co.</u>, No. 2:96-CV-00244 (E.D. Tenn. Aug. 9, 2005).

AFG distinguished Goodman in an earlier district court proceeding by arguing that the zinc oxide central core of the AFG product is produced in a single sputtering deposit, thereby achieving advantages of durability over the Goodman product, whose central core consists of two contiguous layers of zinc oxide. In earlier appeals the Federal Circuit had stated that the zinc oxide core requires uniform optical properties, and also had resolved the question of whether Cardinal's titanium oxide "interlayers" should be deemed separate layers in terms of the '532 patent. In the district court's opinion after the second remand, that court applied these rulings as follows:

Utilizing the Federal Circuit's definition of the term "layer," i.e., "a thickness of material of substantially uniform chemical composition, but excluding interlayers having a thickness not to substantially affect the optical properties of the coating," based upon the testimony of Professor Gordon, as well as utilizing the prosecution history of the '484, the Court finds that the specification of the '532 patent does not limit the term "layer" to a deposit bounded by a material of a different chemical composition, and the Court declines to include such a limitation in the construction of the term "layer."

The Court also finds that based upon the Declaration of Professor [Gordon] in regard to the issue of obviousness, the claimed subject matter of the '532 patent would not have been obvious to one of ordinary skill in the low emissivity coating art as of November 1986. Therefore, the Court finds that Goodman's '484 patent does not anticipate Claim 1 of the '532 patent because it does not disclose a "5-layered transparent coating" with enhanced durability. Instead, the Goodman '484 discloses a coating with six distinct layers which was less durable.

AFG Industries, Inc. v. Cardinal IG Co., No. 2:96-CV-00244 (E.D. Tenn. Oct. 1, 2002).

Cardinal states that the district court erred in law in granting JMOL of infringement after presentation of the plaintiff's case to the jury, arguing that since this ruling of patent validity requires that the zinc oxide cental core is a singly-deposited layer, the Cardinal product with a multiply-deposited zinc oxide central core cannot infringe. AFG responds that only optical properties are relevant to the central zinc oxide core, and that it is incorrect

to construe product claims as limited to any particular method of production. Cardinal in turn responds that if this particular product claim is not limited to the method of production, it reads on the Goodman patent; Cardinal points to the district court's 2002 ruling, quoted <a href="mailto:ante,">ante,</a>, which sustained validity by essentially limiting the AFG claims to the process that was relied on to distinguish the Goodman product.

It is correct that product claims generally are not limited by how the product is produced. See Vanguard Prods. Corp. v. Parker Hannifin Corp., 234 F.3d 1370, 1372 (Fed. Cir. 2000) ("[t]he method of manufacture, even when cited as advantageous, does not of itself convert product claims into claims limited to a particular process . . . . A novel product that meets the criteria of patentability is not limited to the process by which it was made"). However, exceptions may arise when the product's distinction from the prior art depends on how it was produced, for when the validity of the patent depends on use of a particular process, the claims are construed in the manner that will sustain their validity, when such construction is supported by the record. See, e.g., Whittaker Corp. v. UNR Industries, Inc., 911 F.2d 709, 712 (Fed. Cir. 1990) ("claims are generally construed so as to sustain their validity, if possible"); TorPharm, Inc. v. Ranbaxy Pharmaceuticals, Inc., 336 F.3d 1322, 1329 (Fed. Cir. 2003) (when determining validity against prior art not cited during prosecution, the analysis "must take into account the statutory presumption of patent validity"). Thus the process by which a product is produced can limit a product claim when, as here, the process is relied on for patentability and validity.

In a previous opinion in this case, the court observed that "Cardinal's accused LoE<sup>2</sup> products contain a center thickness of zinc oxide produced by at least three separate depositions." <u>AFG Industries, Inc. v. Cardinal IG Co.</u>, 375 F.3d 1367, 1370 (Fed. Cir.

2004). Although AFG argues that it is too late for Cardinal now to rely for noninfringement on how the zinc oxide core is produced, AFG's single-sputter deposition was the basis of the district court's ruling that the '532 product is not obvious or anticipated by the Goodman reference. Thus the single-sputter limits the AFG claim, and the claim cannot be infringed by Cardinal products whose zinc oxide central core is produced by multiple depositions.

AFG states that it has not been established whether all of the Cardinal products are produced by multiple depositions for the zinc oxide central core, and that Cardinal may have changed its process during the period of litigation. We remand to the district court for finding of relevant facts, because any Cardinal products produced by a single sputter deposition for their zinc oxide core remain subject to the judgment of infringement.

Each party shall bear its costs.

NOTE: This disposition is nonprecedential.

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05-1601

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Defendant.

MAYER, Circuit Judge, dissenting.

In my view, the trial court correctly decided this case. Therefore, I concur in the judgment that U.S. Patent No. 4,859,532 ("'532 patent") is not invalid, and I dissent from the majority's disposition as to infringement.

I agree with the majority that, in its second remand decision, the trial court found that the '532 patent was not invalid. AFG Indus., Inc. v. Cardinal IG Co., No. 2:96-CV-244, slip op. at 16-17 (E.D. Tenn. Oct. 1, 2002). Cardinal IG Company, Inc., and Anderson Windows, Inc. (collectively "Cardinal"), then made a litigation decision not to appeal invalidity, because doing so would have required it to take inconsistent claim construction positions in this court. See AFG Indus., Inc. v. Cardinal IG Co., 375 F.3d

1367, 1371 (Fed. Cir. 2004) ("Cardinal III") ("Although not appealed, the district court also held the Goodman patent did not anticipate the '532 patent."). So in its third remand decision, the trial court did not abuse its discretion in finding that Cardinal was barred from relitigating validity. AFG Indus., Inc. v. Cardinal IG Co., No. 2:96-CV-244, slip op. at 4-9 (E.D. Tenn. June 30, 2005); see also Rouse v. DaimlerChrysler Corp. UAW Non-Contributory Plan, 300 F.3d 711, 715 (6th Cir. 2002); Radio Steel & Mfg. Co. v. MTD Prods., Inc., 731 F.2d 840, 843-44 (Fed. Cir. 1984). And Cardinal has not established any reason to depart from application of the law of the case. See Intergraph Corp. v. Intel Corp., 253 F.3d 695, 698-99 (Fed. Cir. 2001) (setting forth the exceptions warranting departure from an otherwise permissible application of the law of the case).

With respect to infringement, I do not see invoking the canon that claims should be construed to preserve their validity as an appropriate basis for departing from the construction set out in AFG Industries, Inc. v. Cardinal IG Company, 239 F.3d 1239 (Fed. Cir. 2001) ("Cardinal II"). Phillips v. AWH Corp., 415 F.3d 1303, 1327 (Fed. Cir. 2005) (en banc), "limited [that] maxim to cases in which the court concludes, after applying all the available tools of claim construction, that the claim is still ambiguous." Moreover, just as law of the case barred Cardinal from relitigating claim construction in Cardinal III, 375 F.3d at 1372, so too is it improper for us to revisit it now. Accordingly, applying Cardinal II, there are no genuine issues of material fact regarding infringement. AFG Industries, Inc., established that regardless of their thickness, the titanium layers in Cardinal's products are not optically significant, and Cardinal did not come forth at trial with any competent evidence to the contrary.