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## United States Court of Appeals for the Federal Circuit

01-1226

LAPORTE PIGMENTS, INC.  
(now Rockwood Pigments NA, Inc.)  
and CHEMISCHE WERKE BROCKHUES AG,

Plaintiffs-Appellees,

v.

AXEL J., LP, AXEL J., LLC,  
AXEL J. CORPORATION, and AXEL E. JUNGK,

Defendants-Appellants.

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DECIDED: August 15, 2002

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Before NEWMAN, LOURIE, and CLEVINGER, Circuit Judges.

LOURIE, Circuit Judge.

## DECISION

Axel J., LP; Axel J., LLC; Axel J. Corporation; and Axel E. Jungk (collectively, “Axel”) appeal from the decision of the United States District Court for the Western District of Missouri denying Axel’s motion for judgment of noninfringement as a matter of law or, in the alternative, for a new trial on that issue. Laporte Pigments, Inc. v. Axel J., LP, No. 00-0329-CV-W-5, slip op. at 1 (W.D. Mo. Feb. 1, 2001) (“Laporte II”). Because the court properly determined that substantial evidence supports the jury’s verdict of infringement and that Axel was not entitled to a new trial, we affirm.

## DISCUSSION

The patent at issue, U.S. Patent 4,946,505, is directed to a process for dyeing concrete. Claim 1 of the ’505 patent reads in relevant part: “A process of dyeing concrete comprising mixing pigment-containing granules with cement . . . wherein . . . each granule consisting [sic] essentially of at least one pigment selected from the group consisting of manganese oxide and iron oxide and of at least one binder for promoting the dispersal of the pigment in the concrete . . .” ’505 patent, col. 7, ll. 12-23.

The inventor, Axel E. Jungk, who is one of the defendants in this action, assigned the invention to his employer, Chemische Werke Brockhues AG, which then granted an exclusive license to Laporte Pigments, Inc. (now Rockwood Pigments NA, Inc.). Laporte Pigments, Inc. v. Axel J., LP, No. 00-0329-CV-W-5, slip op. at 1 (W.D. Mo. Aug. 18, 2000) (“Laporte I”). Dr. Jungk later left Brockhues and formed his own company, Axel J., LP, which manufactures pigment granules called AXEL ’SMARTLINS in Canada for sale to concrete manufacturers in the United States. Id. at 2. Those manufacturers then perform the process of mixing the granules with cement and water to form dyed concrete. Id.

Laporte sued Axel, claiming inducement of infringement of claim 1, and it filed a motion for a preliminary injunction to enjoin Axel from selling AXEL ’SMARTLINS. Id. In addressing the only contested claim limitation, the district court construed the “binder” limitation of claim 1 as requiring a “binder that promotes homogeneous pigment dispersal either by moisture-solubility, being more susceptible to shear forces than prior art granules, or both.” Id. at 13. It then determined that Laporte had failed to establish a reasonable likelihood of success on the merits of its claim because Laporte had not persuasively shown that the Neocryl styrene/acrylic copolymer in AXEL ’SMARTLINS met the “binder” limitation as the court had construed it. Id. at 19. The court thus denied Laporte’s motion for a preliminary injunction.

Laporte later amended its complaint to accuse Axel of inducing infringement by its manufacture and sale of an additional product containing a K-702 binder, and the case proceeded to a jury trial. At trial, Laporte’s expert explained that binders “hold” the pigment and then “release” it for homogeneous distribution. Laporte II at 6. At the close of all the evidence, Axel filed a motion for a directed verdict.

In that document, Axel did not argue that Dr. Jungk's individual liability for inducing infringement should be distinguished from that of the other Axel defendants. Moreover, the instructions given to the jury did not distinguish liability among the various defendants. Following trial, the jury found for Laporte and determined that it was entitled to recover \$1.6 million in damages for the NeoCryl product and \$500,000 for the K-702 product.

Axel filed post-trial motions seeking judgment of noninfringement as a matter of law or, in the alternative, a new trial. The district court denied those motions with respect to Axel J., LP; Axel J. Corporation; and Dr. Jungk in his individual capacity.<sup>[11]</sup> The court determined that Laporte's expert had provided the jury with a sufficient "hold and release" theory of infringement to sustain the jury's verdict. The court was also not persuaded by Axel's arguments that Dr. Jungk was not individually liable for infringement, concluding that "the jury had ample evidence from which it could infer Jungk's intent to induce." *Id.* at 4. Axel timely appealed; we have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

We review a district court's denial of a motion for judgment as a matter of law without deference. *Dawn Equip. Co. v. Ky. Farms Inc.*, 140 F.3d 1009, 1014, 46 USPQ2d 1109, 1111 (Fed. Cir. 1998). In determining whether to grant a motion for judgment as a matter of law, "the court must draw all reasonable inferences in favor of the nonmoving party, and it may not make credibility determinations or weigh the evidence." *Reeves v. Sanderson Plumbing Prods., Inc.*, 530 U.S. 133, 150 (2000). We review the denial of a motion for a new trial for abuse of discretion. *Biodex Corp. v. Loredan Biomedical, Inc.*, 946 F.2d 850, 854, 20 USPQ2d 1252, 1254-55 (Fed. Cir. 1991). Claim construction is an issue of law, *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970-71, 34 USPQ2d 1321, 1322 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996), that we review *de novo*, *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1456, 46 USPQ2d 1169, 1172 (Fed. Cir. 1998) (en banc). The determination of infringement, whether literal or under the doctrine of equivalents, is a question of fact. *Bai v. L & L Wings, Inc.*, 160 F.3d 1350, 1353, 48 USPQ2d 1674, 1676 (Fed. Cir. 1998).

On appeal, Axel argues that the court improperly construed the term “binder” as requiring that it be more susceptible to shear forces than prior art granules, asserting that the specification does not support that interpretation and that a binder’s susceptibility to shear is not necessarily related to its ability to promote dispersal. Axel asserts that, under a proper interpretation of the claim, the NeoCryl and K-702 granules do not infringe the ’505 patent because they do not promote dispersal of the pigment. Alternatively, Axel argues noninfringement on the ground that the term “binder” should be construed according to 35 U.S.C. § 112, ¶ 6, because it is defined by its binding function, and that a broader construction of the term “binder” that is not limited to the specific embodiments in the specification would be invalid for indefiniteness or lack of enablement. Axel also contends that use of the K-702 granules does not infringe the patent because they contain hydraulic material that was specifically disclaimed during prosecution. Finally, Axel argues that the court erred in denying its motion for judgment as a matter of law that Dr. Jungk is not liable for inducing infringement in his individual capacity.

Laporte responds that the court properly interpreted a “binder” as a material that holds the pigment in granular form and then releases it either for chemical reasons relating to its moisture solubility or for mechanical reasons relating to its susceptibility to shear forces. Laporte asserts that substantial evidence supports the jury’s verdict that both the NeoCryl and K-702 granules are “binders” under that construction of that term. Moreover, Laporte argues that § 112, ¶ 6, does not apply to the “binder” limitation because the claim does not recite any “means” and because the term “binder” denotes a material, and that Axel’s allegations that a broader interpretation would be invalid are precluded by the doctrine of assignor estoppel. Laporte also responds that Dr. Jungk waived the issue of his individual liability by not raising it in his motion for a directed verdict at the close of all the evidence.

In the exercise of our plenary review of the court’s claim construction, we disagree with the district court’s limited interpretation of the term “binder” as being either moisture-soluble or more susceptible to shear forces than prior art granules. To the extent the court erred by interpreting the claim too narrowly, however, that error was harmless. The jury determined that Axel infringed the ’505 patent

even under the court's restricted interpretation and thus a fortiori would have arrived at the same conclusion under our broader construction.

To begin, we look to the ordinary meaning of the claim, which is directed to "at least one binder for promoting the dispersal of the pigment in the concrete." '505 patent, col. 7, ll. 21-23. Nothing in the claim limits the term "binder" to materials that are either moisture-soluble or more susceptible to shear forces than prior art granules. The specification sets forth a significant number of appropriate materials that are exemplary of the claimed binders, but does not restrict the meaning of that term to those materials. Id. at col. 3, ll. 27-51.

The specification also discusses problems found with certain prior art granules used for dyeing concrete. In particular, it points out that the shear forces exerted during mixing have been insufficient to disperse those granules, id. at col. 2, ll. 27-29, and that the moisture content of the concrete and the time available for mixing were not always sufficient to dissolve binder-containing pigment granules, id. at col. 2, ll. 42-44. Those statements concerning the properties of prior art granules apparently prompted the district court to construe the term "binder" as having properties different from binders used in the prior art. We disagree with that interpretation. The specification does not limit the term "binder" to exclude disadvantageous prior art granules, as a binder is but one of the components of the pigment granules used in the prior art. See, e.g., '505 patent, col. 7, ll. 19-23. The disadvantages of prior art granules or processes are not limitations on properties of the binders, which are defined in the claim only as having to promote the dispersal of the pigment in the concrete. Other components of the granules may contribute to the results of processes described in the prior art. Moreover, the claimed process for dyeing concrete has a number of other limitations not at issue on appeal that may be responsible for the alleged superior performance of the granules of the present process over the prior art. We therefore conclude that the specification does not compel the district court's construction of the claim term "binder."

We agree with the district court, however, that other intrinsic evidence does limit the proper interpretation of the term "binder." During prosecution, the examiner rejected the claims over a prior art

reference that disclosed the use of cement or hydraulic (water-reactive) material as a binder. Laporte II at 9. In response, the applicant amended the claim to add the language “consisting essentially of,” which, the examiner explained in the notice of allowability, “eliminates the possibility of hydraulic material in the pigment-containing granule.” Id. We therefore construe a “binder” as a material that promotes dispersal of the pigment in the concrete, subject to the express disavowal during prosecution that it not contain hydraulic material. See Southwall Techs., Inc. v. Cardinal IG Co., 54 F.3d 1570, 1576, 34 USPQ2d 1673, 1676 (Fed. Cir. 1995) (“The prosecution history limits the interpretation of claim terms so as to exclude any interpretation that was disclaimed during prosecution.”).

We are not persuaded by Axel’s arguments that the term “binder” should be construed according to 35 U.S.C. § 112, ¶ 6. The absence of the term “means” in the claim creates a presumption that § 112, ¶ 6, does not apply. Micro Chem., Inc. v. Great Plains Chem. Co., 194 F.3d 1250, 1257, 52 USPQ2d 1258, 1263 (Fed. Cir. 1999). Moreover, the term “binder” describes a material, as shown by the numerous suitable binder materials listed in the ’505 patent specification at col. 3, ll. 33-51, that connotes structure to those skilled in the art. Consequently, the presumption against application of § 112, ¶ 6 has not been overcome.

We are also not persuaded by Axel’s arguments that the term “binder” must be construed narrowly in order to preserve the validity of claim 1. The clear language of the claim and the intrinsic evidence support a broad interpretation of that term and we therefore accord the term “binder” its full breadth, even if invalidity issues could be raised as a result of that broad construction. See Tate Access Floors, Inc. v. Interface Architectural Resources, Inc., 279 F.3d 1357, 1372, 61 USPQ2d 1647, 1658 (Fed. Cir. 2002) (“[W]here claim language is clear we must accord it full breadth even if the result is a claim that is clearly invalid.”) (citations omitted). In any event, we cannot consider the validity of the claim, as Axel is estopped from asserting the invalidity of the patent that Dr. Jungk previously assigned to Brockhues. See Diamond Scientific v. Ambico, Inc., 848 F.2d 1220, 1224, 6 USPQ2d 2028, 2030 (Fed. Cir. 1988) (“Assignor estoppel is an equitable doctrine that prevents one who has assigned the rights to a patent (or a patent application) from later contending that what was assigned is a nullity.”).

Turning next to infringement, we find no error in the district court's judgment that substantial evidence supports the jury's verdict of infringement, even under the claim construction we have adopted that is in part different from the district court's. Laporte presented expert testimony that the accused granules containing NeoCryl and K-702 binders promote dispersion of the pigment in the concrete. As Laporte's photographic exhibits make vividly clear, the accused binders discretely hold the pigment particles until subjected to mixing with water, whereupon the concrete is homogenously dyed. We are also not persuaded by Axel's arguments that the K-702 granules contain hydraulic material and are therefore outside the scope of the claim. Hydraulic material is material that will react with water, not material that is fully hydrated. Laporte presented evidence that the K-702 granules were fully hydrated and thus would not have contained any hydraulic material, and the jury was entitled to rely upon that evidence in reaching its verdict. In denying Axel's motion for judgment as a matter of law, the district court properly drew all reasonable inferences in favor of Laporte and declined Axel's invitation to reweigh the evidence and substitute its credibility determinations for the jury's. See Reeves, 530 U.S. at 150. We therefore conclude that the district court did not err in denying that motion.

We decline to address Axel's arguments concerning Dr. Jungk's individual liability for inducing infringement. Axel failed to move for a directed verdict on that issue at the close of all the evidence, and we agree with Laporte that Axel thereby waived that issue. We apply the law of the regional circuit to the procedural question of waiver, as it does not uniquely pertain to patent law. See Midwest Indus., Inc. v. Karavan Trailers, Inc., 175 F.3d 1356, 1359, 50 USPQ2d 1672, 1675 (Fed. Cir. 1999) (en banc in relevant part). In the Eighth Circuit, such failure necessarily precludes a party from moving for judgment as a matter of law on the issue not previously raised. See Fed. R. Civ. P. 50(a), (b); Hubbard v. White, 755, F.2d 692, 695-96 (8th Cir. 1985). Moreover, Axel failed to object to the jury instructions, which did not distinguish liability among the various defendants, and we decline to cure that deficiency on appeal in the absence of plain error. See Horstmyer v. Black & Decker, (U.S.), Inc., 151 F.3d 765, 771 (8th Cir. 1998).

Finally, we conclude that Axel has not persuasively demonstrated on appeal that the district court abused its discretion in denying Axel's motion for a new trial on the issues of infringement and Dr. Jungk's individual liability. For the foregoing reasons, we affirm the district court's denial of Axel's motion for judgment as a matter of law or a new trial.

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<sup>[1]</sup> The court granted Axel's motion for judgment as a matter of law with respect to Axel J., LLC.