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## United States Court of Appeals for the Federal Circuit

00-1271, -1299

POLYMER INDUSTRIAL PRODUCTS COMPANY and  
POLYMER ENTERPRISES CORPORATION,

Plaintiffs/Counterclaim Defendants-  
Cross Appellants,

and

POLYMER ENTERPRISES, INC., and  
SPECIALTY TIRES OF AMERICA, INC.,

Counterclaim Defendants-Appellees,

v.

BRIDGESTONE/FIRESTONE, INC.,

Defendant-Counterclaimant-Appellant.

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DECIDED: March 13, 2001

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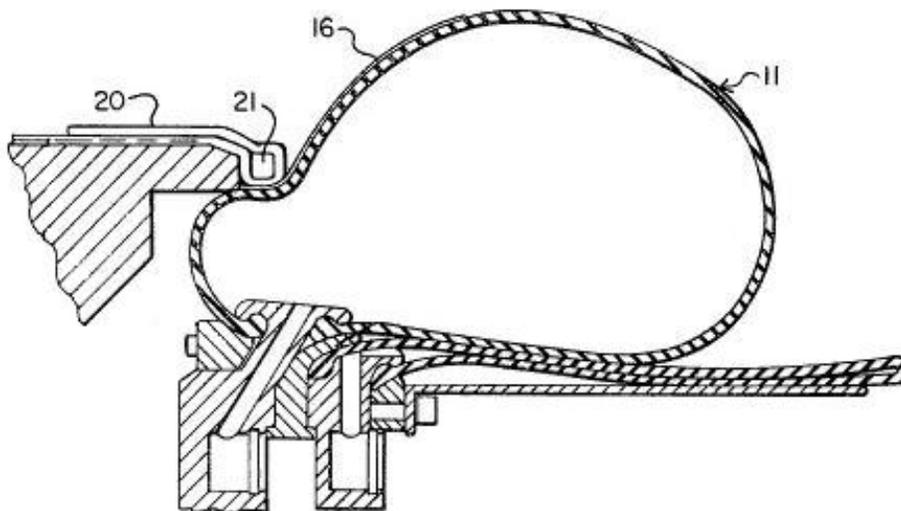
Before CLEVINGER, SCHALL, and BRYSON, Circuit Judges.

CLEVINGER, Circuit Judge.

Bridgestone/Firestone, Inc. ("Bridgestone") challenges the adverse finding of willful infringement by a jury and the subsequent award of enhanced damages and attorney fees by the United States District Court for the Northern District of Ohio in an infringement suit brought by Polymer Industrial Products Co., Polymer Enterprises Corp., Polymer Enterprises, Inc., and Specialty Tires of America, Inc. (collectively, "PIPCO"). Bridgestone also alleges that the district court erred in its claim construction and that the jury's finding of nonderivation was unsupported by substantial evidence. In its cross-appeal, PIPCO challenges the district court's refusal to award miscellaneous fees and costs. Because we conclude that the district court's claim construction was correct, that the jury's finding of willful infringement and nonderivation was supported by substantial evidence, and that the district court's selective awarding of various damages and fees was not an abuse of discretion, we affirm.

I

PIPCO sued Bridgestone for infringing U.S. Patent No. 4,381,331 ("the '331 patent"), directed at an improved turn-over bladder. Turn-over bladders have long been used in the manufacturing of rubber tires to "turn" a tire ply (a layer of uncured rubber) "over" a tire bead (a metal ring in the tire). The following is a cross-sectional view of the improved bladder as depicted in the '331 patent:



In operation, the bladder (11) inflates like a balloon and rolls the ply (20) up and over the tire bead (21). After the ply is turned over, the bladder deflates. To prevent the ply from being

pulled back as the bladder deflates and thereby causing an incomplete turn-over, the bladder must be able to detach easily from, or "release," the tire ply at the location on the bladder which physically contacts the ply (16).

Traditionally, a method of ensuring release involved painting the rubber surface of the bladder with a chlorine solution. However, this method had negative side effects, such as cracking and premature aging of the bladder. The '331 patent is directed at a bladder with exposed fabric cords on the part of the surface that comes into contact with the uncured rubber tire ply. The fabric patch tended to stick less to the uncured rubber ply than the rubber surface of a traditional turn-over bladder.

The '331 patent has six claims. Those asserted in this suit were product claims 1, 3, and 4. Claims 5 and 6 are process claims, but were not asserted. Since claim 3 incorporates claim 1 by reference and claim 4 likewise incorporates claim 3, then independent claim 1 becomes the key claim in this appeal, and reads as follows:

A ply turn-over bladder formed of a rubbery polymer at least a portion of its outer surface having reduced adhesion to unvulcanized rubbery polymers, said portion comprising a fabric layer of spaced cords calendered with a coating of unvulcanized uncured rubbery polymer partially embedded in the rubbery polymer surface, the spaces between the cords being free of said polymer at said surface so that such cords project above said surface.

At trial, the district court ruled on the issues of claim construction from the bench and submitted the issues of fact-finding to the jury. The jury returned a verdict of infringement in favor of PIPCO, finding damages in the amount of \$2,512,730. The jury also returned a finding of willful infringement. Immediately after the jury returned its verdict, the district court entered a contrary finding of nonwillfulness. However, the district court later realized that it had mistaken the jury's verdict as being merely advisory. Consequently, it vacated its own finding of nonwillfulness in a subsequent order and, after finding that the jury's verdict was supported by the evidence, reinstated the verdict of willfulness. The district court also awarded enhanced damages and attorney fees to PIPCO, and entered final judgment in the amount of \$7,366,784.99.

II

A

Bridgestone contends that the district court erred in refusing to construe claim 1 to include an "abrading" step as an essential limitation. For the following reasons, we hold that the district court properly declined to construe claim 1 so as to include an "abrading" limitation.

Claim construction is a question of law, which we review de novo. Markman v. Westview Instruments, Inc., 52 F.3d 967, 979, 34 USPQ2d 1321, 1329 (Fed. Cir. 1995) (en banc), aff'd, 517 U.S. 370 (1996). As always, the starting point of claim construction is the claim language itself. See Johnson Worldwide Assocs., Inc. v. Zebco Corp., 175 F.3d 985, 989, 50 USPQ2d 1607, 1610 (Fed. Cir. 1999). Here, claim 1 simply makes no mention of abrading. To be sure, abrading is a clear limitation in process claim 5. But there is simply no textual support in product claim 1 for an abrading limitation.

We may look to the written description to define a term in the claims, [Renishaw PLC v. Marposs Societa' Per Azioni](#), 158 F.3d 1243, 1248, 48 USPQ2d 1117, 1120 (Fed. Cir. 1998), but Bridgestone makes no attempt to identify specific terms in need of definition. Instead, Bridgestone simply contends that "the correct construction of the claims-in-suit must exclude bladders such as represented by the nonabraded surface depicted in Figure 4 of the '331 patent." By asserting that its products are comparable to the intermediate embodiment in Fig. 4, Bridgestone seeks to avoid infringement entirely. Contrary to Bridgestone's analysis, however, the scope of protection is of course defined by the claims, not by embodiments in the written description. See [American Permahedge, Inc. v. Barcana, Inc.](#), 105 F.3d 1441, 1444, 41 USPQ2d 1614, 1617 (Fed. Cir. 1997). It may very well be true, as Bridgestone urges, that Fig. 4 of the '331 patent is merely an intermediate stage of the claimed product. But to conclude from this that abrading is required by claim 1 would amount to an impermissible importation of a limitation found in the written description into the claim. See [Renishaw](#), 158 F.3d at 1248, 48 USPQ2d at 1120. Furthermore, although there is no question that the written description discloses a process that involves abrading, it is unclear whether the relevant statements should refer to all of the claims, or to only the process claims. Moreover, the written description alludes to a way of producing the claimed invention without abrading--albeit admittedly in a context in which elastic cords, as opposed to inelastic cords, are used. '331 patent, col. 3, ll. 1-4. Nevertheless, there is no question that support for at least the general concept of nonabraded bladders can be found in the written description.

Despite Bridgestone's attempt to persuade us otherwise, the prosecution history is inconclusive at best on whether abrading is required by claim 1. Bridgestone points to statements by the inventor that it was "necessary to take abrasive action against the surface of the cured part with sandpaper and/or a wire brush by manual or power methods." However, it is unclear whether these statements refer to product claim 1 or process claim 5. Bridgestone points to other statements from the prosecution history allegedly supporting the position that the claims require "abrading . . . to remove excess polymer . . . and to leave the upper portion of [the] cords clear of polymer." However, when viewed in context, we find that those statements were simply made to distinguish prior art processes in which the inner surfaces of the cord were abraded.

Based on the foregoing analysis, we conclude that it would be inappropriate to read an "abrading" limitation into claim 1. Such a claim construction would improperly and unnecessarily read a limitation from the written description into the claim.

## B

Given that we affirm the district court's claim construction, the question becomes whether or not the jury's verdict of infringement can be supported by substantial evidence. See [Texas Instruments Inc. v. Cypress Semiconductor Corp.](#), 90 F.3d 1558, 1563, 39 USPQ2d 1492, 1496 (Fed. Cir. 1996) ("We review the jury's resolution of all factual disputes for substantial evidence.").

The evidence before the jury included micrographs of Bridgestone's new and unused bladders, which plainly showed at least some fiber cord projecting above the surface of the bladder. A micrograph of another Bridgestone bladder revealed similar results. The jury also heard testimony from PIPCO's expert witness stating that the filaments and cords in Bridgestone's bladders were visible and bare. There was also testimony from another PIPCO bladder expert demonstrating how the Bridgestone bladders infringed the '331 patent. Finally, PIPCO's expert

presented an Energy Dispersive Spectroscopy map, a sort of chemical "fingerprint," which revealed that the "chemical release" formula that Bridgestone painted over its bladders' surfaces did not bond to the nylon cords, leaving them uncovered and exposed. We discern no error in the district court's jury instructions, and conclude that the jury's verdict was supported by substantial evidence.

### C

As a defense, Bridgestone asserts that claim 1 is invalid for being indefinite pursuant to 35 U.S.C. § 112, ¶ 2. Whether the claim definiteness requirement was met is freely reviewable on appeal as a question of law. Orthokinetics, Inc. v. Safety Travel Chairs, Inc., 806 F.2d 1565, 1576, 1 USPQ2d 1081, 1088 (Fed. Cir. 1986). Claim definiteness involves a determination of whether those skilled in the art would understand what is being claimed. Amgen, Inc. v. Chugai Pharm. Co., Ltd., 927 F.2d 1200, 1217, 18 USPQ2d 1016, 1030 (Fed. Cir. 1991). Also, "[t]he amount of detail required to be included in claims depends on the particular invention and the prior art, and is not to be viewed in the abstract but in conjunction with whether the specification is in compliance with the first paragraph of section 112." Shatterproof Glass Corp. v. Libbey-Owens Ford Co., 758 F.2d 613, 624, 225 USPQ 634, 641 (Fed. Cir. 1985).

Stripped to its core, Bridgestone's argument is that one of ordinary skill in the art would not know precisely "how much exposed, projecting cord would be necessary to meet the claim limitations." Bridgestone misses the point. So long as the fabric cords project enough above the bladder surface to reduce adhesion to uncured rubber, an accused bladder will fall within the scope of the claim. Since the claim language makes no attempt to quantify the reduction in adhesion, quantification of the amount of cord that projects above the rubber surface of the bladder is not required, either for infringement or validity analysis. "If the claims . . . reasonably apprise those skilled in the art both of the utilization and scope of the invention, and if the language is as precise as the subject matter permits, the courts can demand no more." Id. (quoting Georgia-Pacific Corp. v. United States Plywood Corp., 258 F.2d 124, 136 (2d Cir.), cert. denied, 358 U.S. 884 (1958)). Hence, there is no basis for finding the '331 patent invalid for lack of definiteness.

### D

Bridgestone also contends that the '331 patent is invalid pursuant to 35 U.S.C. § 102(f) because the invention was derived from another. The ultimate question of whether a patentee derived an invention from another is one of fact. Price v. Symsek, 988 F.2d 1187, 1190, 26 USPQ2d 1031, 1033 (Fed. Cir. 1993). The jury returned a verdict of nonderivation against Bridgestone. Hence, the question is whether this verdict can be supported by substantial evidence. Jurgens v. McKasy, 927 F.2d 1552, 1557, 18 USPQ2d 1031, 1035 (Fed. Cir. 1991).

Bridgestone maintains that the "invention of the '331 patent was derived from Uniroyal when PIPCO obtained from Uniroyal a commercial bladder that was worn so that the fabric layer was exposed." However, it failed to present evidence of any Uniroyal employees conceiving of the invention or of any such conception being communicated to the patentee. In fact, the worn bladder referred to by Bridgestone turned out to be one of PIPCO's own bladders that was simply used by Uniroyal but returned to PIPCO by agreement. A statement by the inventor's co-worker that the invention "worked and worked well" does not in any way support a conception on Uniroyal's part. Finally, the industry viewed fabric in the release area as a danger to be avoided because of worry that cord particles might contaminate the tires. Taking

into account that the record provides no basis for finding the district court's jury instruction regarding nonderivation to be improper, we hold that the jury's finding of nonderivation was supported by substantial evidence.

## E

Although the district court initially mistook the jury's verdict of willfulness as merely advisory, it later corrected itself, vacated its contrary finding of nonwillfulness, and properly reinstated the jury verdict of willfulness as "supportable on the evidence." Whether infringement is willful is a question of fact, and hence, we review a jury's finding of willful infringement to determine if there is substantial evidence to support that finding. Comark Communications, Inc. v. Harris Corp., 156 F.3d 1182, 1190, 48 USPQ2d 1001, 1008 (Fed. Cir. 1998).

The district court carefully assessed the evidence that supports a verdict of willfulness. We see no flaw in the district court's analysis, and we therefore conclude that the district court was correct in finding that the jury verdict of willful infringement was "supportable on the evidence."

## F

Bridgestone contends that the amount of damages awarded by the jury was in error due to the district court's improper lost profits instruction. We uphold a jury's damages award unless it is "grossly excessive or monstrous," clearly not supported by evidence, or based only on speculation or guesswork." Oiness v. Walgreen Co., 88 F.3d 1025, 1031, 39 USPQ2d 1304, 1308 (Fed. Cir. 1996).

With regard to the allegations of an erroneous jury instruction, Bridgestone argues that "if PIPCO sought to prove that PIPCO and Firestone were the only two suppliers, PIPCO still needed to prove that there were no noninfringing alternatives available from Firestone." Bridgestone misstates the law. The very case it cites, Grain Processing Corp. v. American Maize-Products Co., 185 F.3d 1341, 1349, 51 USPQ2d 1556, 1562 (Fed. Cir. 1999), indicates that upon PIPCO's initial "but for" showing, the burden shifts to Bridgestone to prove that there were no noninfringing alternatives available to PIPCO's customers. In Grain Processing, we stated that "the patent owner has an initial burden to show a reasonable probability that he would have made the asserted sales 'but for' the infringement." However, "[o]nce the patent owner establishes a reasonable probability of 'but for' causation, the burden then shifts to the accused infringer to show that the patent owner's 'but for' causation claim is unreasonable for some or all of the lost sales." Id. (internal citations and brackets omitted). The patent owner's initial burden can be met by showing the existence of a two-supplier market. See SmithKline Diagnostics, Inc. v. Helena Labs. Corp., 926 F.2d 1161, 1165, 17 USPQ2d 1922, 1926 (Fed. Cir. 1991) (finding that a two-supplier market would support an inference that a patent owner would have made the sales if the defendant had not sold its infringing product).

The jury's damages award based on lost profits, moreover, is supported by substantial evidence. Among the pieces of evidence before the jury were admissions by Bridgestone's sales manager that there were "[o]nly two major players, that I'm aware of, in the bladder business, and that's Polymer and Firestone," testimony from another Bridgestone witness admitting that he sent letters to customers during a 1994 Bridgestone strike suggesting that they use PIPCO bladders as an alternative, evidence that bladders claimed to be noninfringing substitutes by Bridgestone were not acceptable based on poor reception in the customer market, evidence that other supposed substitutes were not interchangeable with PIPCO

bladders, and documents from the president of PIPCO stating that conditions were unfavorable to raise prices because of Bridgestone's undercutting of PIPCO's prices. Finally, considering that the jury already reduced PIPCO's requested damages by over \$680,000, we do not find the jury's damages award "grossly excessive or monstrous."

### G

Bridgestone challenges the district court's decision to award enhanced damages and attorney fees to PIPCO. The patent statute provides that in a patent infringement case, a trial court "may increase the damages up to three times the amount found or assessed." 35 U.S.C. § 284 (1994). A trial court also has the authority to award attorney fees to the prevailing party "in exceptional cases." 35 U.S.C. § 285 (1994). A decision to enhance damages or to award attorney fees is committed to the discretion of the trial judge, and will not be overturned absent a clear showing of abuse of discretion. See Delta-X Corp. v. Baker Hughes Prod. Tools, Inc., 984 F.2d 410, 413, 25 USPQ2d 1447, 1449 (Fed. Cir. 1993).

We have held that "[a]n express finding of willful infringement is a sufficient basis for classifying a case as 'exceptional,' and indeed, when a trial court denies attorney fees in spite of a finding of willful infringement, the court must explain why the case is not 'exceptional' within the meaning of the statute." Modine Mfg. Co. v. Allen Group, Inc., 917 F.2d 538, 543, 16 USPQ2d 1622, 1626 (Fed. Cir. 1990). Furthermore, after reviewing the order in which the district court enhanced damages based on the jury's recommendation of two times the damage verdict, we do not discern any abuse of the district court's discretion.

### III

In its cross-appeal, PIPCO protests the failure of the district court to award various miscellaneous fees and costs. Because of the discretionary nature of these awards, we will affirm the district court's decision so long as it remains unestablished that the court committed clear error in its factual findings, errors in its conclusions of law, or clear errors in its judgment. PPG Indus., Inc. v. Celanese Polymer Specialties Co., 840 F.2d 1565, 1572, 6 USPQ2d 1010, 1016 (Fed. Cir. 1988). Here, the district court did not make any explicit factual findings or articulate any conclusions of law. Hence, we must determine, in light of the entire record, whether its denial of the various miscellaneous fees and costs was a clear error in judgment, a quality requiring us to "come close to finding that the trial court had taken leave of its senses." See Friendly, Indiscretion About Discretion, 31 Emory L. J. 747, 763 (1982), quoted in PPG Industries, 840 F.2d at 1572, 6 USPQ2d at 1016.

The question of whether PIPCO should be awarded fees for, inter alia, its in-house counsel's time was fully briefed to the district court. Bridgestone's reasons for opposing the miscellaneous fees and costs sought by PIPCO, as advanced to the district court, provide ample support for the district court's denial of those fees and costs, and explain the basis for the court's discretionary decision. We thus conclude that the district court did not commit clear error in its judgment in denying recovery.

For the reasons stated above, we affirm the final judgment entered by the district court against Bridgestone and its award of damages to PIPCO.