

**United States Court of Appeals. Federal Circuit.  
State Industries, Inc. v. Mor-Flo Industries, Inc., 883 F. 2d 1573 1989**

**Mor-Flo Industries, Inc. and its subsidiary, American Appliance Manufacturing Corporation (Mor-Flo), infringed State Industries, Inc's. (State) Patent No. 4,447,377, covering a method of insulating water heaters with foam. State Indus. v. Mor-Flo Indus., 639 F.Supp. 937, 231 USPQ 241 (E.D. Tenn.1986), aff'd, 818 F.2d 875 (Fed.Cir.1987). After the damages trial, the district court awarded State lost profits on approximately 40% of Mor-Flo's infringing sales and a royalty of 3% on the remaining 60%. It concluded that Mor-Flo's infringement was not willful and denied enhanced damages and attorney's fees. 8 USPQ2d 1971 (E.D. Tenn.1988). We affirm the judgment insofar as it awards lost profits and a 3% royalty, but vacate and remand for a redetermination of the judgment that the infringement was not willful.**

**Nos. 89-1032, 89-1033.  
August 31, 1989.  
Rehearing Denied September 27, 1989.**

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NOTES: In *State* the court essentially amended *Panduit* factor two by enabling the recovery of lost profits despite there being more than two parties in the market using a process of allocating market share of the participants.

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Paul R. Puerner, Fuller, Puerner & Hohenfeldt, S.C., Milwaukee, Wis., argued for plaintiff/cross-appellant. With him on the brief was Daniel D. Ryan. Also on the brief was Gary Shockley, Baker, Worthington, Crossley, Stansberry & Woolf, Johnson City, Tenn., of counsel.

Charles W. Bradley, Davis Hoxie Faithful & Hapgood, New York City, argued for defendants-appellants. With him on the brief was Peter H. Priest. Also on the brief was Ronald I. Weiss, Cleveland, Ohio, of counsel.

Before MARKEY, Chief Judge, MAYER and MICHEL, Circuit Judges.

Suggestion for Rehearing In Banc Declined November 9, 1989.

OPINION

MAYER, Circuit Judge.

Background

The '377 patent claims a method of insulating the tank of a water heater by using polyurethane foam. The method includes wrapping the tank with a plastic sheet shaped as an envelope, installing a surrounding jacket and cover, pouring foam through an opening in the cover into the envelope, and then plugging the opening. The method contains the liquid foam while it rises and prevents it from

invading areas, such as the electrical components and combustion chamber, which must be kept free of foam. State also has another patent, U.S. Patent No. 4,527,543, not contested here, that claims water heaters using the '377 envelope construction.

Mor-Flo's method found to be infringing used a cylindrical piece of plastic that was pulled over the top of the tank with fiberglass positioned around the combustion chamber at the bottom of the tank. The "sleeve" was taped below the top of the fiberglass. A jacket was then installed over the tank and sleeve, a top was installed, and foam was shot into the sleeve through an opening in the top. 639 F.Supp. at 947, 231 USPQ at 248.

In the liability trial, Mor-Flo maintained that the sleeve was not an "envelope" or "'wrapped' around the tank" as required by the '377 patent. The sleeve, however, was identical to an embodiment shown in the patent (partial envelope), and was merely secured differently at the bottom of the tank. The illustrated embodiment also revealed a pull-over structure similar to Mor-Flo's sleeve. The district court found that it was especially damaging to Mor-Flo that it did not conceive of its "strikingly similar" sleeve method until after purchasing and disassembling a State foam-insulated water heater. Therefore, the court held that Mor-Flo's method literally infringed the '377. The district court alternatively held that it infringed the patent under the doctrine of equivalents. *Id.* at 950, 231 USPQ at 251.

The water heater industry is intensely competitive and marked by small profit margins. The invention is pertinent to all water heaters, but the infringement at issue here is restricted to residential gas water heaters, in particular those deemed "energy efficient" by the American Society of Heating, Refrigeration and Air Conditioning Engineers. Foam provides greater insulating capacity than the other alternative, fiberglass; therefore, foam-insulated heaters have cost advantages in terms of material, packaging and freight. The greater insulating capacity enables foam-insulated heaters to meet the energy code requirements imposed by many states by using less space than fiberglass-insulated heaters. The density of foam also strengthens the outer jacket of the water heater and makes it more resistant to denting.

In deciding the damages question, the district court faced three issues: lost profits, reasonable royalty and willful infringement. Infringement occurred between May 8, 1984, when the patent issued, and June 9, 1986, when Mor-Flo switched to the noninfringing method of fiberglass foam stops, which eliminates need for the envelope taught by the patent in suit yet keeps foam from invading the combustion chamber. State produced evidence of lost sales, and took the position that it should recover lost profits for its market share of Mor-Flo's infringing sales and a reasonable royalty for the remainder. It also asked increased damages for willful infringement and attorney fees.

The district court agreed with State in the award of lost profits for part of its damages and a royalty for the rest. The court found there was a growing demand for foam-insulated water heaters, the '377 patent was the first method developed to meet this demand, and there were no other methods available during the pertinent period that were either noninfringing or acceptable as substitutes. Specifically, the court found "that, during the period of infringement, all but one of State's competitors in the United States sold foam insulated water heaters made using State's patented method, or one of a strikingly similar configuration, and/or Denton Patent No. 4,527,543 — namely Mor-Flo/American; Hoyt Heater Company; Rheem Manufacturing Company; and Bradford-White. A Canadian competitor, G.S.W. Inc. of Toronto also sold foam insulated water heaters using one of the above-mentioned methods of foaming." 8 USPQ2d at 1974.

A.O. Smith Corporation, the only clearly noninfringing competitor used the less preferable fiberglass insulation. Hoyt also sold only fiberglass-insulated heaters until 1985 when it added a foam-insulated heater to its inventory. The court found that fiberglass was not an acceptable substitute for foam because of foam's advantages in reducing the size of water heaters, increasing resistance to denting, and meeting governmental energy standards.

The court also found that State was capable of producing during the relevant period, and had sales and distribution capacity to ship and sell, sufficient foam-insulated water heaters to exploit its market share of Mor-Flo's sales. Finding that State has approximately 40% of the gas water heater market nationwide, the court awarded State the profits it lost on 40% of the sales of 754,181 infringing Mor-Flo water heaters.

For the remaining 60% of Mor-Flo's sales, State asked for a royalty of 8 to 10%. Mor-Flo presented no evidence of what it would have paid for a license, but argued that in no event should the royalty rate be above its net profit margin which, for the seventeen months preceding the date infringement began, was 2.1%. The district court awarded a royalty of 3% on the remaining 60% of infringing sales. Finally, the court concluded the infringement was not willful because Mor-Flo relied in good faith on advice of outside counsel that its process was not infringing.

Mor-Flo appeals both the award of actual damages and the reasonableness of the royalty. State cross-appeals the reasonableness of the royalty and the court's failure to hold Mor-Flo's infringement willful and to award increased damages and attorney's fees.

## Discussion

Deciding how much to award as damages is not an exact science, and the methodology of assessing and computing damages is committed to the sound discretion of the district court. *King Instrument Corp. v. Otari Corp.*, 767 F.2d 853, 863, 226 USPQ 402, 409 (Fed.Cir.1985). A challenger must show that "the district court abused its discretion by basing its award on clearly erroneous factual findings, legal error, or a manifest error of judgment." *DataScope Corp. v. SMEC, Inc.*, 879 F.2d 820, 823-24, 11 USPQ2d 1321, 1323 (Fed.Cir.1989) (quoting *Nickson Indus. v. Rol Mfg. Co.*, 847 F.2d 795, 798, 6 USPQ2d 1878, 1879 (Fed.Cir.1988)).

The measure of damages is an amount which will compensate the patent owner for the pecuniary loss sustained because of the infringement. 35 U.S.C. § 284 (1982); see also *General Motors Corp. v. Devex Corp.*, 461 U.S. 648, 654-55, 103 S.Ct. 2058, 2061-62, 76 L.Ed.2d 211, 217 USPQ 1185, 1188 (1983); *Del Mar Avionics, Inc. v. Quinton Instrument Co.*, 836 F.2d 1320, 1326, 5 USPQ2d 1255, 1260 (Fed.Cir.1987). But the floor for a damage award is no less than a reasonable royalty, *Seattle Box Co. v. Industrial Crating & Packing Inc.*, 756 F.2d 1574, 1581, 225 USPQ 357, 363 (Fed.Cir.1985), and the award may be split between lost profits as actual damages to the extent they are proven and a reasonable royalty for the remainder. See *TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895, 898, 229 USPQ 525, 526 (Fed.Cir.1986).

A.

To get lost profits as actual damages, the patent owner must demonstrate that there was a reasonable probability that, but for the infringement, it would have made the infringer's sales. *Water Technologies Corp. v. Calco Ltd.*, 850 F.2d 660, 671, 7 USPQ2d 1097, 1106 (Fed.Cir.1988); *Del Mar*, 836 F.2d at 1326, 5 USPQ2d at 1260; see also *Bio-Rad Laboratories v. Nicolet Instrument Corp.*, 739 F.2d 604, 616, 222 USPQ 654, 664 (Fed.Cir.1984) (amount of lost profits may not be speculative). But "[t]he patent holder does not need to negate all possibilities that a purchaser might have bought a different product or might have foregone the purchase altogether." *Paper Converting Mach. Co. v. Magna-Graphics Corp.*, 745 F.2d 11, 21, 223 USPQ 591, 598 (Fed.Cir.1984).

A standard way of proving lost profits, first announced in *Panduit Corp. v. Stahlin Bros. Fibre Works*, 575 F.2d 1152, 1156, 197 USPQ 726, 730 (6th Cir.1978), is for the patent owner to prove: "(1) demand for the patented product, (2) absence of acceptable noninfringing substitutes, (3) his manufacturing and marketing capability to exploit the demand, and (4) the amount of the profit he would have made." The district court relied heavily on this test and we have accepted it as a nonexclusive standard for determining lost profits. *Carella v. Starlight Archery & Pro Line Co.*, 804 F.2d 135, 141, 231 USPQ 644, 648 (Fed.Cir.), on rehearing, 1 USPQ2d 1209 (Fed.Cir.1986); *Bio-Rad*, 739 F.2d at 616, 222 USPQ at 663; cf. *Ryco, Inc. v. Ag-Bag Corp.*, 857 F.2d 1418, 1427, 8 USPQ2d 1323, 1330 (Fed.Cir.1988) (referring to *Panduit* as one of the tests). With only slight modification we think it fits here and confirms the district court's judgment.

#### Absence of Substitutes and Market Share

This is the first time we have considered whether lost profits can be based on market share. Other courts of appeals that have faced the question have found it unnecessary to answer it. See *Baumstimler v. Rankin*, 677 F.2d 1061, 1072, 215 USPQ 575, 584 (5th Cir.1982); *Hughes Tool Co. v. G.W. Murphy Indus.*, 491 F.2d 923, 929, 180 USPQ 353, 358 (5th Cir.1973).

We start with the presumption that the judgment of the district court is correct, of course, and that the only limit on its discretion in selecting a remedy is that it be adequate to compensate for the damages suffered as a result of the infringement. See *Seattle Box*, 756 F.2d at 1581, 225 USPQ at 363. Any doubt about the correctness of the award is resolved against the infringer. See *Gyromat Corp. v. Champion Spark Plug Co.*, 735 F.2d 549, 554, 222 USPQ 4, 8 (Fed.Cir.1984); *Lam, Inc. v. Johns-Manville Corp.*, 718 F.2d 1056, 1065, 219 USPQ 670, 675 (Fed.Cir.1983).

Frequently, the patent owner and infringer are the only suppliers in the market, and the owner is seeking to recover profits lost through every sale made by the infringer. See *Water Technologies*, 850 F.2d at 672, 7 USPQ2d at 1106; *Amstar Corp. v. Envirotech Corp.*, 823 F.2d 1538, 1543, 3 USPQ2d 1412, 1415 (Fed.Cir.1987); *Lam, Inc.*, 718 F.2d at 1065, 219 USPQ at 675. In the two-supplier market, it is reasonable to assume, provided the patent owner has the manufacturing and marketing capabilities, that it would have made the infringer's sales. See *Del Mar*, 836 F.2d at 1327, 5 USPQ2d at 1260. In these

instances, the Panduit test is usually straightforward and dispositive. Cf. *Water Technologies*, 850 F.2d at 671-72, 7 USPQ2d at 1106 ("[w]here a patent owner maintains that it lost sales equal in quantity to the infringing sales, our precedent has approved generally the [Panduit test]....").

Here we have multiple competitors and the patent owner contends that all the competitors infringed or sold a far less preferable alternative — fiberglass. The district court made the absence of acceptable substitutes, Panduit item (2), a neutral factor by crediting all the other competitors with their market shares as State requested. If the court is correct in its finding that the other competitors were likely infringers of one or the other of State's patents, State would have been entitled to their shares of the market on top of its own, and a correspondingly greater share of Mor-Flo's sales. If it is wrong in whole or in part, State would have been entitled to its current share or to a lesser increase in share. We need not decide which it is because it would make no difference to the outcome. State would get at least what it asked for, because as discussed further below the district court found, and we agree, that State's share of the market was proven.

But Mor-Flo should not complain because if anything it received a windfall from this approach. To the extent infringing competitors got credit for sales that should have gone to State, the share of the market against which Mor-Flo's damages might be assessed is reduced. So we think that in these circumstances the presence or absence of acceptable noninfringing alternatives does not matter. The question then becomes whether an established market share combined with the other Panduit factors is sufficient to show State's loss to a reasonable probability. *Bio-Rad*, 739 F.2d at 616, 222 USPQ at 663.

## Demand

At the infringement phase of this case, the district court said, "Both sides admit that there was a great need to develop foam insulated heaters in the late 1970's. The patented method solved the[ ] problems [of foam leakage and invasion], and was apparently the first to do so in the water heater industry." 639 F.Supp. at 945, 231 USPQ at 247. In a 1979 internal memo, Mor-Flo's own vice president of engineering stated: "With reference to heaters with foam insulation, it was felt that the word foam has a magic sound to it at this time, and even if a fiberglass were available that would be equal to foam, a foam insulated heater would be required."

After the introduction of foam insulation, State's annual sales jumped from less than two hundred thousand to more than four hundred thousand heaters between 1984 and 1986, and accounted for 1,275,525 sales for a net revenue of \$155.2 million. Sales of foam heaters by Mor-Flo amounting to more than \$83.9 million in total revenue are further evidence of demand. *Gyromat*, 735 F.2d at 552, 222 USPQ at 6. Mor-Flo used the foam insulation feature to "sell up" its entire line of heaters in its trade brochures. Three of the other four competitors used foam insulation. At the damages trial, Mor-Flo presented no evidence on what, if any, unique value any other components of its water heater added.

In describing the demand for State's method, the district court said, "Although there was no demand by customers or consumers of residential gas water heaters that heaters be foamed in accordance with any particular method, during the period of infringement of State's patent, there was no acceptable non-

infringing method of satisfactorily foaming gas water heaters in the market place." 8 USPQ2d at 1973. In effect then, the demand went to the method.

Mor-Flo counters that there were other methods available — the Rheem patented plastic foam belt, the "top-off" method, and the fiberglass foam stop — and the district court erred in finding that all of these methods probably infringed State's patents, and, in any event, were not available as of the date of infringement. But it did not prove that either the "top-off" method or fiberglass foam stops were available during the period of infringement. Bradford-White's president testified that Bradford-White started using the "top-off" method in 1984 or 1985, but he prefaced this with the statement: "I'm not positive." There is no other evidence that anyone used the "top-off" method until Hoyt switched to it in 1987. Mor-Flo similarly attempts to rely on testimony of Bradford-White's president that Bradford-White used a foam stop before switching to the "top-off" method. But again there is no credible evidence that the fiberglass foam stop was ever on the market until Mor-Flo introduced it in June of 1986. See *Central Soya Co. v. Geo. A. Hormel & Co.*, 723 F.2d 1573, 1579, 220 USPQ 490, 494 (Fed.Cir.1983) (to be a substitute for a method, the method must be on the market). Indeed, Mor-Flo filed a patent application on the foam stop in December 1986.

The district court may have erred in finding that the Rheem foam belt method likely infringed because the patent on the foam belt was issued before and was cited as prior art in the '377 patent. But we need not decide. Foam insulation was the source of customer demand and the only two available ways to do it, State's and Rheem's, were patented. It therefore is probable, in light of the district court's undisputed finding that customers did not care about the particular method used, that both State and Rheem would have sold their market shares of Mor-Flo's infringing sales. All of this leads to but one conclusion: There was a demand for State's method.

#### Manufacturing and Marketing

The finding that State has a 40% national market share is unassailable, and Mor-Flo does not seriously contend otherwise, or that State did not have the capacity to produce enough heaters to satisfy at least 40% of Mor-Flo's sales. It says rather that the majority of the infringing sales occurred in California where State shared with Rheem and A.O. Smith 10% of the market, while Mor-Flo had 70% and Hoyt had 20%. From this Mor-Flo argues that it is unrealistic to think State could achieve 40% of the West Coast market, especially where Hoyt, which manufactured noninfringing fiberglass-insulated heaters along with foam-insulated heaters, was Mor-Flo's next largest competitor.

State tells us there is no evidence to support this "Western Region" theory and our search of the record shows it was at best an incidental argument. Nevertheless, the district court made findings that State had the capacity to absorb its share of the market and we are shown no reason why they are wrong. From the evidence, there was demand for heaters made by the patented method, and State and Mor-Flo were head-to-head competitors. State was a nationally recognized leader in the industry, and it produced specific evidence that it had lost sales to Mor-Flo's infringing heaters on both coasts. For example, a retailer of State's heaters in California testified that he lost sales to a developer for 3,000 heaters annually to Mor-Flo. Another retailer testified that he lost sales to Mor-Flo in Connecticut. There

is nothing speculative about these losses. After finding that State had sufficient marketing and manufacturing capabilities to meet its market share of the demand it is eminently reasonable for the district court to infer that State could have sold its market share of Mor-Flo's infringing sales wherever the opportunity occurred. We accordingly agree with the court that it is probable, at least, that State could have met the demand.

#### Amount of Profit

The district court awarded State its incremental profit on foam-insulated gas water heaters reflecting the percentage of sales revenue State lost because of Mor-Flo's infringement that would have been its profit. This approach is well established and appropriate for determining damages for patent infringement. See *Paper Converting*, 745 F.2d at 22, 223 USPQ at 599. There is some testimony that fixed costs might have varied slightly, but the district court did not abuse its discretion in concluding that any increase in fixed costs was minimal and that award of incremental profits was appropriate. No greater precision is required.

The court based the award on the profit margin of the heater as a unit in accord with the entire market value rule, which permits recovery of damages based on the value of the entire apparatus containing several features, where the patent related feature is the basis for customer demand. See *TWM*, 789 F.2d at 901, 229 USPQ at 528. In the face of the district court's finding to the contrary, Mor-Flo now argues that foam insulation was not the basis for consumer demand and several unidentified nonpatented components were key. But it did not identify or present evidence of the value of these nonpatented components. In any event, no components can be used separately, except as spare and repair parts for which State does not claim damages. See *Kori Corp. v. Wilco Marsh Buggies & Draglines, Inc.*, 761 F.2d 649, 656, 225 USPQ 985, 989 (Fed.Cir.1985) (the entire market rule is properly applied when the nonpatented devices cannot be sold without the patented feature). There is no merit to this argument and we leave undisturbed the district court's adoption of the entire market rule.

In our view, the foregoing discussion compels the conclusion that the district court acted well within its discretion when it awarded damages for Mor-Flo's infringing activity based on State's share of the market. The court had the obligation to decide the case, and to decide it on the evidence and theories the parties proposed. Mor-Flo's attempt to perfect the trial on appeal by referring to "evidence" and argument it might have presented to the trial court comes too late and we have, of course, ignored it. The case it might have made is irrelevant; on the record actually made, there was sufficient evidence for the court to find facts and draw inferences that support its damage award.

#### B.

The only direct evidence on what a reasonable royalty would have been is testimony of State's president that he would have asked for 8 to 10% of Mor-Flo's infringing sales, and its expert's declaration that a reasonable royalty would have been 8% of net infringing sales. Mor-Flo's actual net profit margin was

2.1% for the seventeen months preceding issuance of the patent, and Mor-Flo argues that it should pay a royalty no higher than that. Indeed, it says the rate should be minimal — before the district court it urged an effective rate of .163%.

The determination of a reasonable royalty, however, is based not on the infringer's profit margin, but on what a willing licensor and licensee would bargain for at hypothetical negotiations on the date infringement started. *Radio Steel & Mfg. Co. v. MTD Prod., Inc.*, 788 F.2d 1554, 1557, 229 USPQ 431, 433 (Fed.Cir.1986). There is no rule that a royalty be no higher than the infringer's net profit margin. *Id.* State's was a proven process upon which Mor-Flo had already built an established, successful line of heaters, and which it had expanded upon since its introduction in 1981. The value of foam to Mor-Flo was obvious: it never considered fiberglass as an alternative and risked infringement with foam insulation. See *TWM*, 789 F.2d at 902, 229 USPQ at 529.

The value of collateral sales could also be factored into the royalty rate. *Deere & Co. v. International Harvester Co.*, 710 F.2d 1551, 1559, 218 USPQ 481, 487 (Fed.Cir.1983). Foam insulation was used to promote Mor-Flo's entire line of heaters. And it was not inappropriate for the district court to consider gross profits. *Fromson v. Western Litho Plate & Supply Co.*, 853 F.2d 1568, 1578, 7 USPQ2d 1606, 1616 (Fed.Cir.1988). Mor-Flo's gross profit during the preceding seventeen months was 19.6% with a net incremental profit of 17.48%. Finally, during the period of infringement, Mor-Flo's net profits varied from 5.9% to 7.3%. In light of all this, it seems to us the district court could very well conclude that a royalty of 3% of Mor-Flo's net sales is reasonable.

Mor-Flo repeats the argument that there were other methods available — the Rheem patented plastic foam belt, the "top-off" method, and the fiberglass foam stop. As discussed earlier, State has not shown that the "top-off" method or fiberglass foam stop were available during the period of infringement. The district court may have overlooked that the Rheem patented plastic foam belt might have provided an alternative way to foam insulate heaters, but Mor-Flo presented no evidence that it could have licensed the Rheem foam belt, and at what cost. Again, the district court could only decide the case on the evidence before it, and we see no objection to its decision not to allow Mor-Flo to rely on the availability of third party patents to mitigate damages.

Turning to State's cross-appeal, the district court found that the water heater industry was intensely competitive with small profit margins and fiberglass was a lesser alternative that manufacturers, however reluctantly, would opt for if the licensing fee for foam was too high. State argues that fiberglass was simply not an alternative, but it is undisputed that fiberglass-insulated heaters were and are sold in direct competition with foam-insulated ones. So, notwithstanding State's asserted hope to license the method in the 8 to 10% range, it was well within the district court's province to conclude it would not have succeeded, that potential licensees would have stayed with lesser alternatives promising some profit, rather than risk losing money by signing on at that high a rate. The award of a 3% royalty may be too low for State and too high for Mor-Flo, but the district court did not abuse its discretion in reaching it. *DataScope*, 879 F.2d at 828, 11 USPQ2d at 1326.

C.

Willful infringement is a question of fact reviewed under the clearly erroneous standard. See *Studiengesellschaft Kohle m.b.H. v. Dart Indus.*, 862 F.2d 1564, 1573, 9 USPQ2d 1273, 1282 (Fed.Cir.1988). To establish willful infringement, a plaintiff must prove by clear and convincing evidence that the defendant acted with no reasonable basis for believing it had the right to do so. *E.I. DuPont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 1440, 7 USPQ2d 1129, 1137 (Fed.Cir.1988). There are no "hard and fast per se rules," and the finding is based on the totality of the circumstances. *Rolls-Royce Ltd. v. GTE Valeron Corp.*, 800 F.2d 1101, 1110, 231 USPQ 185, 191 (Fed.Cir.1986).

In its finding of nonwillfulness, the district court stated:

Under the totality of the circumstances in this case, Mor-Flo/American should have known that their method of foaming gas residential water heaters infringed State's patent. Nevertheless, the Court finds that the evidence is insufficient to establish clearly and convincingly that Mor-Flo/American actually knew that their method infringed State's patent. Apparently, Mor-Flo/American did rely on advice of counsel. The advice was erroneous, but there is no evidence that Mor-Flo/American knew that the advice was erroneous. Thus, Mor-Flo/American's infringement was not willful and the Court will not award punitive damages in this case. [8 USPQ2d at 1978.]

The standard for proving willfulness, however, is "whether, under all the circumstances, a reasonable person would prudently conduct himself with any confidence that a court might hold the patent invalid or not infringed." *Ryco*, 857 F.2d at 1428, 8 USPQ2d at 1331. Actual knowledge is not required. Therefore, the court's finding that Mor-Flo should have known of the infringement is inconsistent with its finding of nonwillfulness. But the district court also found that Mor-Flo relied in good faith on the erroneous advice of counsel that their method was not infringing. See *Studiengesellschaft Kohle*, 862 F.2d at 1578, 9 USPQ2d at 1286. On the other hand, it said that Mor-Flo "purposely patterned its foaming method upon State's," 8 USPQ2d at 1982; copying is evidence of willful infringement. *Kaufman Co. v. Lantech, Inc.*, 807 F.2d 970, 978, 1 USPQ2d 1202, 1208 (Fed.Cir.1986).

In view of the unresolved conflicting evidence, we vacate the judgment insofar as it denies increased damages under 35 U.S.C. § 284, and remand to the district court to reconsider whether a finding of willful infringement and enhanced damages is justified. *Paper Converting*, 745 F.2d at 20, 223 USPQ at 597. Because this could also affect its conclusion on attorney's fees, we do not reach them.

Conclusion

Accordingly, the judgment is affirmed in part, vacated in part, and remanded.

COSTS

Mor-Flo will bear the costs of this appeal.

AFFIRMED IN PART, VACATED IN PART AND REMANDED.