

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

NOEL KENT, et al. : CIVIL ACTION
: :
v. : :
: :
HOWELL ELECTRIC MOTORS, et al. : NO. 96-7221

MEMORANDUM AND ORDER

J. M. KELLY, J.

JULY 20, 1999

Presently before the Court is Defendant Howell Electric Motors, Incorporated's ("Howell") Motion for Summary Judgment. Third-party Defendants American Floor Machine Company and Clarke Industries, Incorporated ("American Floor") also move for summary judgment on Plaintiffs Noel and Barbara Kent's claims against them. Both Howell's and American Floor's motions attack the admissibility of the proposed testimony of Professor Arthur Larky, whom Plaintiffs would like to present as an expert witness. Because Plaintiffs' claims, and ability to withstand summary judgment, depend entirely on Professor Larky's testimony, the Court recently held a hearing to determine whether his proposed testimony would be admissible at trial. For the reasons that follow, the Court finds Plaintiffs may not present Professor Larky as an expert witness. Further, because Professor Larky's proposed testimony constitutes the sum of Plaintiffs' case against Defendants, Howell's and American Floor's motions for summary judgment are granted.

I. BACKGROUND

Plaintiffs' decedent, Eric Kent, was electrocuted while operating a floor sander. The sander was comprised, in general terms, of a chassis and a motor. Eric Kent's employer, R&S Hardwood Flooring ("R&S"), purchased the previously owned chassis from a distributor. The

parties basically agree that American Floor or its predecessor manufactured the chassis at least forty years ago. Howell manufactured the motor in the mid-1980s, very likely in 1986. R&S itself installed the Howell motor in the American Floor chassis after it broke the original chassis. This installation was not entirely consistent with American Floor's design; although it could accommodate Howell's four horsepower motor, American Floor designed the chassis to house a two horsepower motor. As the record unfortunately shows, this was not the sole instance in which R&S or its employees used the sander in an unintended way.

Kent's death occurred only because a variety of circumstances converged. Of the three extension cords connected to the sander, one had a broken ground pin and another was badly worn. The cords were plugged into the top of the sander, from where power traveled over two fuses, bypassed by copper wire.¹ Electrical power then passed through the motor's middle capacitor. A retaining ring on this capacitor had become dislodged and welded both to uninsulated terminals and the capacitor's metal cover. The weld essentially allowed electricity, perhaps as little as one thousandth of an ampere, to travel to the sander's case. Kent was electrocuted when, while touching the sander's case, he bumped into a metal radiator, thereby completing an electrical circuit.

Professor Larky testified that the electrocution would not have occurred if any of these

¹Professor Larky believes the cords were plugged into the machine at a point lower than where the fuses are located, but at the hearing and his deposition Larky admitted there was no evidence in the record to support that theory. (Hrg. at 50-51; Larky Dep. at 61-63.) He further admitted there was evidence that the machine had been tampered with after the accident and before he inspected the sander. (Hrg. at 52-53.) The basis for his theory is purely inferential: because one of the machine's fuses was blown, and the wires connecting the switch box were unconnected, power had to enter the sander at some lower point for Kent to have used it. Id. at 64-65. The record on this point, largely eyewitness accounts of the accident scene, contradicts Larky's hypothesis.

factors was absent. Kent's use of the extension cord with a broken ground pin allowed deadly current to enter the machine. Because one fuse was blown, the machine itself would not have been operable if someone had not bypassed the fuses. Once in the machine and beyond the fuses, the electrical current would not have traveled to the sander case if the retaining ring had not welded to the terminals and metal cover. Finally, the circuit would not have been completed, and Kent would not have been electrocuted, if he had not come into contact with the metal radiator while in contact with the sander's case.

Professor Larky developed this theory by testing the resistance and continuity of the sander's electrical connections with an ohmmeter. Through this method, he was able to isolate the fault to the area of the capacitors. Larky then discovered, upon visual inspection, the weld in the middle capacitor. He tested the resistance of that capacitor with the weld in place and found a low resistance where there should have been a very high one. When the weld was broken, however, he found a high resistance. Professor Larky therefore concluded he found the fault that caused the accident.

Because he believes the fallen retaining ring proximately caused the accident, Professor Larky stated several opinions on how the accident could have been avoided. Larky found the terminals should have been insulated and the cardboard by the retaining ring should have been extended to ensure the ring was fixed in place. Larky also expressed an opinion, however casually, that the motor and chassis manufacturers should have provided warnings not to operate the sander unless the power supply was grounded. These warnings were necessary, Professor Larky stated, because the manufacturers should have known that "ordinary workmen might break off the ground pin on the extension cord and/or jumper the fuses in order to get the machine to

run rather than take time off to get the machine to an electrician to be repaired.” (Larky Rep. at 7.)

Howell and American Floor believe Professor Larky is not qualified to give this testimony. Specifically, Howell and American Floor point to the facts that Professor Larky has never designed a motor like Howell’s and has never investigated the costs associated with implementing his proposed design changes.² Further, Professor Larky admits to not having any expertise in the area of warnings and has no knowledge, other than his every day experience, to support his claim that workers like Kent routinely break ground pins off of extension cords.

Moreover, claim Howell and American Floor, some areas of Professor Larky’s testimony will not assist the jury. Howell in particular emphasizes that Professor Larky has never investigated why the retaining ring fell. Without this evidence, Howell argues, Professor Larky cannot fairly say Howell or American Floor failed to anticipate the inadequacy of some elements of their designs. Howell also reminds the Court that Professor Larky was not able to rule out tampering or normal wear and tear as causes of the fallen ring, (Hrg. at 60, 62), which Howell finds particularly significant in view of their claim that the ring’s failure is unprecedented.

I. DISCUSSION

A. Whether Professor Larky May Testify As An Expert.

²Professor Larky testified otherwise at the hearing, (Hrg. at 69-70), but his investigation into the costs associated with implementing his design seems to have gone no further than noting the minimal cost of shrink tubing, id. at 70.

1. Rule 702's Application In The Third Circuit.

The Third Circuit has held Rule 702 presents a minimal standard for the Court to accept testimony as expert testimony. In re Paoli R.R. PCB Litig., 35 F.3d 717, 741 (3d Cir. 1994), cert. denied sub nom., General Elec. Co. v. Ingram, 513 U.S. 1190 (1995). None of Rule 702's three requirements is particularly rigorous, however. The Third Circuit held in In re Paoli that courts liberally should interpret the first requirement, that the expert be qualified by knowledge, skill, experience, education, or training. Id. A witness may be qualified as an expert even if the opposing party can point to various deficiencies in the witness's qualifications. Once the court finds a witness has passed the minimal threshold of knowledge, skill, experience, training, or education to qualify as an expert, any remaining observations of shortcomings are reserved for cross-examination. Kannankeril v. Terminix Int'l, Inc., 128 F.3d 802, 809 (3d Cir. 1997) ("If the expert meets the liberal minimum qualifications, then the level of the expert's expertise goes to credibility and weight, not admissibility.").

Rule 702's second requirement is that the expert must testify to "scientific, technical or other specialized knowledge [that] will assist the trier of fact." Fed. R. Evid. 702; In re Paoli, 35 F.3d at 742. Like the first requirement, this standard also is fairly attainable: an expert's opinion must be based on a reliable methodology or technique. Heller, 167 F.3d at 152; In re Paoli, 35 F.3d at 742. This inquiry is satisfied when the proposed testimony is based on "good grounds." Kannankeril, 128 F.3d at 807.³

³Also, the party offering the expert testimony is not required to show by a preponderance that their expert's conclusions are correct, but must demonstrate only that they are reliable by a preponderance of evidence. In re Paoli, 35 F.3d at 744. This burden, however, is more than a mere prima facie showing that the evidence is reliable. Id. at 743-44.

District courts here are encouraged to employ an expanded battery of inquiries to determine whether a proposed expert opinion meets the “good grounds” test. Under Daubert, a district court should consider: (1) whether the expert’s hypothesis can be and has been tested; (2) whether the expert’s methodology has been subjected to peer review and publication; (3) how often the methodology yields erroneous results; (4) whether controls over the methodology exist and are maintained; and (5) whether the scientific community has accepted the methodology. Daubert v. Merrill Dow Pharms., 509 U.S. 579, 593-94 (1993). The Daubert Court borrowed these factors from the many Chief Judge Becker listed in United States v. Downing, 753 F.2d 1224 (3d Cir. 1985), and the Third Circuit has continued to encourage district courts to use the other Downing factors. Accordingly, district courts in this circuit also should consider the relationship of expert’s methodology to other techniques known to be reliable, the witness’s qualifications as they relate to the methodology, and the non-judicial uses to which the expert’s methods have been put. In re Paoli, 35 F.3d at 742 & n.8.

Significantly, the Supreme Court recently held that this detailed inquiry, previously applied only to scientific testimony, should be extended to technical and other testimony based on specialized knowledge. In Kumho Tire Co. v. Carmichael, 119 S. Ct. 1167 (1999), the Court held Daubert’s gatekeeping obligation applies to all expert testimony, specifically addressing testimony offered by engineers. Id. at 1175. The Court acknowledged that Daubert’s factors may not be appropriate for every inquiry, but nevertheless encouraged the initial use of these factors while preserving the trial judge’s broad leeway in deciding whether the proposed testimony is reliable. Id. at 1176.

One minimum reliability threshold seems to have emerged: for his testimony to be

reliable, an expert must rule out obvious alternative causes. Heller, 167 F.3d at 156 (quoting Daniel J. Capra, The Daubert Puzzle, 32 Ga. L. Rev. 699, 728 (1998)). This does not mean, however, that the expert must eliminate all other possible causes for his methodology to be reliable. Rather, when his conclusion is challenged by reference to an alternative cause, the expert must offer some explanation why that alternative cause was not the sole cause. Id. His methodology is unreliable if he cannot offer any reason to rule out the alternative cause. Id. (“[O]nly ‘where a defendant points to a plausible alternative cause and the doctor offers *no* explanation for why he or she has concluded that was not the sole cause, that doctor’s methodology is unreliable.’”) (quoting In re Paoli, 35 F.3d at 759 n.27) (emphasis in original).

The third Rule 702 requirement is that the witness’s testimony assist the jury. To meet this requirement of “fit,” the testimony must connect the witness’s conclusions, based on a reliable methodology, to an issue presented in the case. In re Paoli, 35 F.3d at 743. “[E]ven if an expert’s proposed testimony constitutes scientific knowledge, his or her testimony will be excluded if it is not scientific knowledge for the purposes of the case.” Id. (emphasis omitted).

The standard for this factor “is not that high.” Lauria v. National R.R. Passenger Corp., 145 F.3d 593, 600 (3d Cir. 1998) (citing In re Paoli, 35 F.3d at 745).⁴ “The requirement of fit is essentially a relevance requirement.” In re Unisys Sav. Plan Litig., 173 F.3d 145, 168 (3d Cir. 1999) (Becker, J., dissenting). Notwithstanding these pronouncements, relevance in this context is not as expansive a concept as under, for instance, the Rules of Civil Procedure; the expert’s opinion must be drawn from the facts of the case, not from the expert’s own speculation. An

⁴The party presenting the expert must make a proffer of relevance on the record, Downing, 753 F.2d at 1242, but other than this low procedural hurdle, that party faces few obstacles in the relevance inquiry.

opinion is not relevant, therefore, where the only bridge between the expert's conclusion and the data is the expert herself. General Elec. Co. v. Joiner, 522 U.S. 136, 146-47 (1998). Moreover, even relevant evidence may be excluded for other reasons, such as when the evidence is unduly prejudicial. See United States v. Sheffer, 523 U.S. 303, 308 (1998); United States v. Hall, 93 F.3d 1337, 1343-44 (7th Cir. 1996).

2. Professor Larky's Qualifications.

Plaintiffs are pursuing four theories of liability against Howell and American Floor: (1) Howell's manufacture of the motor was defective because the terminals were uninsulated and the retaining ring was not adequately held in place; (2) American Floor's design of the motor was defective because it did not require Howell to insulate the terminals and extend the cardboard next to the retaining ring; (3) American Floor failed to properly instruct Howell in its assembly of the motor; and (4) the warnings American Floor designed and Howell placed on the motor were defective because they did not warn of the possibility of electrocution. (Hrg. at 43-44.) Plaintiffs' evidence supporting these theories consists entirely of Professor Larky's opinions. (Pls.' Resp. Defs.' Mots. Summ. J. at third to seventh unnumbered pages.) Howell and American Floor believe Professor Larky is not qualified to give these opinions.

Professor Larky is an Emeritus Professor of Electrical and Computer Engineering at Lehigh University. Defendants focus on the facts that he is not a mechanical engineer and has never designed motors, but Professor Larky did teach a course on motors at Stanford University. Defendants sensibly point out that he taught this course forty years ago, but Professor Larky effectively counters this in two ways: first, he claims motors and motor design have not changed for a hundred years; and second, he cites his supervision of student projects involving motors and

his own use of motors as experience enabling him to give a design opinion. Given the Third Circuit's liberal standard, the Court finds Professor Larky is qualified to testify as an expert about his theories concerning American Floor's design and Howell's manufacture.

The Court is not constrained to be as forgiving with respect to Professor Larky's ability to render an opinion on Plaintiffs' warnings theories. Professor Larky himself admits he is not an expert in warnings design. (Hrg. at 13, 102.) In view of his inability to cite any experience or training in the design of warnings or the effect warnings have on machinery users, the Court finds he is not qualified to express an opinion on whether Defendants' warnings were adequate.

3. The Reliability of Professor Larky's Methodology

Professor Larky arrived at his opinions by employing both technical knowledge and personal experience. His examination of the capacitor at issue combined some electrical testing with his observations of the capacitor after the electrocution event. Essentially, he checked all electrical connections for evidence of faults with an ohmmeter and isolated the area of the fault to the capacitor. He then determined, upon visual inspection, that the retaining ring caused the accident.

As the Court in Kumho predicted, some of the Daubert factors are inapplicable to this methodology. Neither side addressed how frequently this method might produce erroneous results, whether the methodology has been or could be subjected to peer review or publication, or what controls over the methodology existed. Similarly, some of the Downing factors bear little significance. The parties offered no testimony concerning non-judicial uses of the ohmmeter or how, if at all, his technique relates to other methodologies known to be reliable.

Some portions of Professor Larky's testimony applied to a few of the remaining Daubert

and Downing factors. At the hearing he testified he brought a textbook that verified an ohmmeter is the standard instrument for measuring resistance and continuity, and this evidence seems to indicate his technique is generally accepted. Also, Professor Larky's background as an electrical engineer relates precisely to his technique of testing the sander's electrical connections. Finally, he tested his line to case fault theory when he checked the capacitor's resistance with the weld broken and then in place, and neither Defendant challenged this testimony with different test results. The Court likely would find Professor Larky's methodology reliable if the Court's inquiry was compelled to end here.

Professor Larky's opinions are unreliable, and he will not be permitted to testify at trial, because he cannot rule out reasonable alternative theories of what caused the retaining ring to fail. Defendants suggested tampering or normal use led to the fallen retaining ring, and Professor Larky offered no explanation at all to rebut these theories. (Hrg. at 60, 62.) Because Professor Larky cannot produce any reason to rule either alternative cause out, his methodology is unreliable.

B. Howell's and American Floor's Summary Judgment Motions.

Summary judgment is appropriate if the record shows there is no genuine issue as to any material fact and the moving party is entitled to judgment as a matter of law. Fed. R. Civ. P. 56(c). An issue of fact is genuine only if "the evidence is such that a reasonable jury could return a verdict for the nonmoving party," and a fact is material if it might affect the outcome of the suit under the applicable substantive law. Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248 (1986). The nonmoving party is entitled to every favorable inference that can be drawn from the record. Sharrar v. Felsing, 128 F.3d 810, 817 (3d Cir. 1997). The nonmovant, however, may not

avoid summary judgment by relying on evidence that is merely colorable or not significantly probative, Anderson, 477 U.S. at 249-50, and similarly may not rely on mere allegations, general denials, or vague statements, Quiroga v. Hasbro, Inc., 934 F.2d 497, 500 (3d Cir.), cert. denied, 502 U.S. 940 (1991). It is the movant's initial burden to identify portions of the record demonstrating what it believes is an absence of genuine issues of material fact. Celotex Corp. v. Catrett, 477 U.S. 317, 323 (1986). Where the burden of proof at trial is the non-movant's, however, the movant can meet its obligation under Celotex by "pointing out to the district court that there is an absence of evidence to support the non-moving party's case." Id. at 325. Summary judgment is appropriate if the non-movant is unable to rebut the movant's absence of evidence claim. Id. at 323.

Plaintiffs have attempted to withstand summary judgment by relying entirely on Professor Larky's testimony. (See Pls.' Resp. Defs.' Mots. Summ. J. at third to seventh unnumbered pages.) This strategy is entirely appropriate in this Circuit, where expert testimony alone may be enough to prevent entry of summary judgment in a product liability case. Surace v. Caterpillar, Inc., 111 F.3d 1039, 1049 (3d Cir. 1997) (citing Hollinger v. Wagner Mining Equip. Co., 667 F.2d 402, 409-10 (3d Cir. 1981)). This tactic, however, carries with it the risk that if the expert is not permitted to testify, the record suddenly is pared down to the point that summary judgment is warranted. See, e.g., Heller, 167 F.3d at 150 (affirming the district court's exclusion of expert testimony and grant of summary judgment). Such is the case here. Once Professor Larky's proposed testimony is factored out of the record, Plaintiffs cannot cite to any evidence supporting their claims. Because they will not be able to sustain their burden of proof at trial, the Court will enter summary judgment against Plaintiffs and in favor of Howell and American Floor.

Significantly, this result would have occurred even if Plaintiffs could have presented Professor Larky as an expert. In this design defect case, the Court would have engaged in the risk-utility analysis first adopted in Azzarello v. Black Brothers Co., 391 A.2d 1020 (Pa. 1978), and later developed in Dambacher v. Mallis, 485 A.2d 408 (Pa. Super. Ct. 1984). The Court accordingly would have examined: (1) the usefulness and desirability of the product; (2) the likelihood that the product would cause injury and the probability that injury would be serious; (3) the availability of a substitute product that is safer; (4) the manufacturer's ability to eliminate the unsafe element of the product while preserving its usefulness and avoiding prohibitive costs; (5) the user's ability to avoid injury through careful utilization of the product; (6) the user's anticipated awareness of the product's dangers, in view of the general public's knowledge of the products obvious dangers, or because of warnings or instructions accompanying the product; and (7) the manufacturer's ability to spread whatever loss it experiences or procure additional insurance. Id. at 423 n.5. This Azzarello risk-utility inquiry is not whether the evidence establishes a genuine issue of material fact for the jury, however. It merely is a threshold inquiry into whether the product was unreasonably dangerous. Surace, 111 F.3d at 1049.

Summary judgment would be appropriate even under this minimal standard. The ability to avoid electrocution could hardly have been greater. The machine would not have been operational if the fuses had not been bypassed. Deadly current would not have entered the sander if the ground pin had not been broken. Each instance of tampering, both obviously avoidable, demonstrates R&S's or Kent's lack of care when using the sander.

Other Dambacher factors weigh entirely in Defendants' favor. Plaintiffs concede the products' utility and desirability, and fail to suggest safer substitute products. Professor Larky

testified that the accident would not have occurred if the fuses had not been bypassed and the ground pin broken, and this testimony emphatically highlights the effectiveness of the motor's safety features when not tampered with. The balance irretrievably is tipped in favor of Defendants, and the Court readily could have said the sander, both chassis and motor, were not unreasonably dangerous as a matter of law.

An Order follows.

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ORDER

AND NOW, this 20th day of July, 1999, upon consideration of Defendant Howell Electric Motors' and American Floor Machine Company's Motions for Summary Judgment, and Plaintiffs Noel and Barbara Kent's response thereto, and in further consideration of the evidentiary hearing this Court held on June 28, 1999, it is hereby **ORDERED**:

1. Plaintiffs will not be permitted to present Professor Arthur Larky as an expert witness at trial;
2. Defendant Howell Electric Motors' and Defendant American Floor Machine Company's Motions for Summary Judgment (Document Nos. 82 and 84) are **GRANTED**;
3. Judgment is entered in favor of Defendant Howell Electric Motors and against Plaintiffs Noel and Barbara Kent;
4. Judgment is entered in favor of Defendant American Floor Machine Company and against Plaintiffs Noel and Barbara Kent;
5. In view of the rulings expressed in the accompanying Memorandum, the Court finds summary judgment appropriately is entered in favor of Defendant Emhart Industries, Incorporated, and against Plaintiffs Noel and Barbara Kent; and

6. Plaintiffs will have ten (10) days from the date of this Order to raise any objections to the Court's entry of summary judgment in favor of Defendant Emhart Industries, Incorporated.

BY THE COURT:

JAMES McGIRR KELLY, J.