

United States Court of Appeals
FOR THE EIGHTH CIRCUIT

No. 06-1324

Pro Service Automotive, L.L.C.;	*	
Pro Parts Automotive, L.L.C.;	*	
Townes E. Staton; Marcia Staton,	*	
	*	
Appellants,	*	Appeal from the United States
	*	District Court for the
v.	*	Western District of Missouri
	*	
Lenan Corp.,	*	
	*	
Appellee.	*	

Submitted: October 16, 2006
Filed: November 22, 2006

Before WOLLMAN, RILEY and GRUENDER, Circuit Judges.

GRUENDER, Circuit Judge.

Townes and Marcia Staton and two businesses they own, Pro Service Automotive, L.L.C. and Pro Parts Automotive, L.L.C. (collectively, “the Statons”), appeal the district court’s¹ adverse grant of summary judgment on their products liability claim against heater manufacturer Lenan Corp. For the reasons discussed below, we affirm.

¹The Honorable Gary A. Fenner, United States District Judge for the Western District of Missouri.

I. BACKGROUND

In October 2003, the Statons purchased a waste oil heater from Wisconsin manufacturer Lenan for the commercial automotive garage building in Carrollton, Missouri, housing Pro Service Automotive and Pro Parts Automotive. The heater was essentially comprised of a cabinet that contained an internal combustion chamber, heat exchanger tubing and a fan to blow ambient air across the heat exchanger tubing. The combustion chamber had an atomizing fuel nozzle at one end designed to generate a steady contained flame. The combustion chamber wall opposite the fuel nozzle and flame, known as the “target wall,” was partially covered with flame-resistant “firebrick” material, but the remainder of the target wall was exposed steel. Hot exhaust gases from the combustion chamber would flow through the heat exchanger tubing and transfer heat to the air flowing over the outside of the tubes, and the air would then carry the heat into the environment. A limit switch located on the outer surface of a combustion chamber side-wall was set to shut down the burner if the cabinet air temperature exceeded 200 degrees Fahrenheit.

The heater was designed to burn any combination of waste motor oil, transmission oil and hydraulic fluid. These waste oils each have different physical properties, and the amount of each type of waste oil available to the user often varies over time. Therefore, unlike a typical heater that is designed to burn one type of fuel with consistent physical properties, waste oil heaters often need adjustments to enable consistent burning as the available waste oils change. An improperly adjusted heater might lose its flame or create a flame that impinges on the target wall of the combustion chamber. The Lenan heater provided for manual adjustments based on the user’s “eyeball” observation of the flame through a viewing port. Lenan’s technical staff approved hanging the heater from the automotive garage ceiling, a location where frequent manual adjustments might be expected to prove difficult to execute.

In December 2003 and January 2004, the Statons contacted Lenan several times, complaining that the heater often backfired or lost its flame. Lenan's technical staff recommended several adjustments, which the Statons state they implemented as instructed. On February 29, 2004, the building burned down. The Statons claimed that the heater caused the fire and filed suit against Lenan under theories of negligent design, strict liability for defective design, and breach of implied warranty.

The Statons presented opinions from two experts, Carl Welcher and Alan Bullerdiek. Welcher, a fire origin and causation expert, examined the fire scene and opined that the fire originated at the heater. Welcher's examination of the heater revealed a large hole burned through the target wall of the combustion chamber, in the area not covered by firebrick. Welcher offered no opinion as to any specific defect in the heater that might have caused the hole or the fire.

Bullerdiek, a chemical engineer and heating equipment expert, offered an opinion regarding defect and causation. Regarding causation, he simply stated that the hole in the target wall "resulted in loss of containment intended to prevent excessive thermal radiation, escape of combustion gases, and/or hot particulate matter to surrounding combustibles, causing the fire." Bullerdiek's report focused on the absence of a temperature-limiting sensor on the back of the target wall as a design defect.

In addition, the Statons advanced a statement by Lenan's service manager, Randy Dean, as proof of a design defect. Dean was identified in Lenan's Fed. R. Civ. P. 26 initial disclosures as someone having "knowledge regarding the design, manufacture and sale of the heater." Lenan sent Dean to inspect the fire scene and the remains of the heater. When asked for his opinion during his deposition, Dean stated that the hole in the combustion chamber "probably" would not have formed if the entire target wall had been covered with firebrick material.

In ruling on Lenan's motion for summary judgment, the district court first ruled on the admissibility of expert opinions. The district court found Welcher's fire origin opinion admissible but adopted the Statons' concession that Welcher was not qualified to offer an opinion "as to how or why the large hole in the target wall of the combustion chamber caused heat to radiate or escape from the Lenan heater." The district court also found that Welcher was not qualified to testify about what caused the hole itself. The district court excluded Bullerdiek's opinion on *Daubert*² grounds because Bullerdiek produced no testing, drawings, models or other evidence to demonstrate the utility or feasibility of placing a temperature-limiting sensor on the back of the target wall. Finally, the district court applied *Daubert* to Dean's statement regarding firebrick on the target wall and excluded his opinion as unreliable. In the absence of admissible expert testimony to prove a defect, the district court granted summary judgment on all claims to Lenan.

On appeal, the Statons have expressly abandoned Bullerdiek's theory that the absence of a temperature-limiting sensor on the back of the target wall is a design defect. However, the Statons argue that the district court erred in excluding the causation portion of Bullerdiek's opinion. In addition, the Statons argue that Dean's statement that firebrick probably would have prevented the hole in the target wall is admissible as the admission of a party-opponent and, therefore, not subject to the expert-testimony requirements of *Daubert*. The Statons contend that if this evidence of causation and defect is admitted, they have presented a submissible case of strict liability for defective design and breach of implied warranty.³

²*Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993).

³The Statons have expressly abandoned their negligent design claim on appeal.

II. DISCUSSION

We review a grant of summary judgment de novo, affirming if the record shows that there is no genuine issue of material fact and the prevailing party is entitled to judgment as a matter of law. *Peitzmeier v. Hennessy Indus., Inc.*, 97 F.3d 293, 298 (8th Cir. 1996). We may affirm the district court's grant of summary judgment on any ground supported by the record. *White v. Moulder*, 30 F.3d 80, 82 (8th Cir. 1994). We apply Missouri law in this diversity action. *Lindsay v. Safeco Ins. Co. of Am.*, 447 F.3d 615, 617 (8th Cir. 2006).

Under Missouri law, the plaintiff in a strict products liability or implied warranty claim must show, inter alia, that the alleged defect caused the claimed damages. *Hills v. Ozark Border Elec. Coop.*, 710 S.W.2d 338, 339 (Mo. Ct. App. 1986) (per curiam) ("Proof that a plaintiff's damages were caused by a defect in the product is an essential element of a plaintiff's case under a product liability theory."); *Green v. Ralston Purina Co.*, 376 S.W.2d 119, 124 (Mo. 1964) (discussing causation as an element of a common law implied warranty claim); Mo. Approved Jury Instr. (Civil) 25.04, 25.03, 25.08 (6th ed.) (setting forth the elements of claims for strict products liability and for breach of implied warranties of fitness for a particular purpose and merchantability, respectively). Although expert testimony is not necessarily required in a strict products liability case, *Tune v. Synergy Gas Corp.*, 883 S.W.2d 10, 14 (Mo. banc 1994), expert testimony is necessary where "the lay jury [does] not possess the experience or knowledge of the subject matter sufficient to enable them to reach an intelligent opinion without help," *Siebern v. Missouri-Illinois Tractor & Equip. Co.*, 711 S.W.2d 935, 939 (Mo. Ct. App. 1986). In this case, due to the complexities involved in linking the hole in the internal combustion chamber to any release of excess heat to the environment, as described in detail below, a lay jury would not possess the experience or knowledge necessary to determine causation. Therefore, Bullerdiel's causation opinion must be admissible in order for the Statons'

claims to survive summary judgment.⁴ We review the district court's exclusion of Bullerdiel's expert opinion for abuse of discretion. *Fireman's Fund Ins. Co. v. Canon U.S.A., Inc.*, 394 F.3d 1054, 1057 (8th Cir. 2005).

Bullerdiel's report stated, without elaboration, that the hole in the target wall "resulted in loss of containment intended to prevent excessive thermal radiation, escape of combustion gases, and/or hot particulate matter to surrounding combustibles, causing the fire." Translated into plain English, this appears to be a statement that the hole allowed hot gases, flame and radiant heat to escape directly into the environment and start the fire. Lenan deposed Bullerdiel extensively regarding his causation opinion. As described above, the heater was designed so that the hot gases produced in the combustion chamber would pass through heat exchanger

⁴Lenan argues that the Statons did not advance Bullerdiel's causation opinion to the district court and that reliance on that opinion should be precluded on appeal. However, the Statons' opposition to Lenan's summary judgment motion stated, "Plaintiffs readily admit that Mr. Welcher is not qualified to testify as to how or why the large hole in the target wall of the combustion chamber caused heat to radiate or escape from the Lenan heater. That is the province of plaintiffs' engineering expert, Alan Bullerdiel." This was sufficient to put Bullerdiel's causation opinion before the district court.

Similarly, the Statons contend that Lenan did not raise a *Daubert* challenge to Bullerdiel's causation opinion to the district court and that such a challenge should be precluded on appeal. However, Lenan stated in its summary judgment motion, "[T]he plaintiffs' expert witness, Alan Bullerdiel's, opinion about the cause and origin of the fire are inadmissible, because . . . he does not have the factual basis to testify to such an opinion." This was sufficient to put a *Daubert* challenge to Bullerdiel's causation opinion before the district court.

The district court's order granting summary judgment relied on the absence of admissible expert testimony regarding a defect and, therefore, did not need to reach causation. However, we may affirm the district court's grant of summary judgment on any ground supported by the record. *White*, 30 F.3d at 82.

tubes, where some of their heat would be transferred to air blown across the tubes and into the environment. The combustion-product gases then would be expelled through a vent. Notably, the hole in the target wall of the combustion chamber only allowed combustion-product gases to escape into an adjacent chamber, the “collector,” that was already part of the heat exchanger flow path—in other words, the hole did *not* allow any combustion-product gases or flame to escape the designed containment path within the heating unit. On the basis of these facts, Bullerdiek was forced to admit that he could not opine to any degree of probability that combustion-product gases or flames escaped the heater to cause the fire. Bullerdiek Depo. at 103.

Bullerdiek did continue to assert in the deposition that the internal hole could have caused the fire indirectly. He testified that, because the hole allowed combustion-product gases to bypass or “short circuit” the first set of heat exchanger tubes, where they would have transferred away some of their heat, the collector and the heat exchanger tubes downstream from the collector would contain combustion-product gases that were hotter than usual. Bullerdiek asserted that this change would alter the internal temperature profile throughout the heater, potentially causing localized hot spots that could start a fire by either (a) overheating a section of the airstream blowing through the heater into the environment, or (b) conveying excess heat to the outer heater cabinet, which would then radiate it directly to nearby surfaces. *Id.* at 111-130.

The opinion of a qualified expert witness is admissible if (1) it is based upon sufficient facts or data, (2) it is the product of reliable principles and methods, and (3) the expert has applied the principles and methods reliably to the facts of the case. Fed. R. Evid. 702. To evaluate an expert’s theory against these requirements, courts are to consider factors such as:

(1) whether the theory or technique can be (and has been) tested; (2) whether the theory or technique has been subjected to peer review and publication; (3) whether the theory or technique has a known or potential error rate and standards controlling the technique's operation; and (4) whether the theory or technique is generally accepted in the scientific community.

Smith v. Cangieter, 462 F.3d 920, 923 (8th Cir. 2006) (citing *Daubert*, 509 U.S. at 592-94).

Bullerdiel provided no testing or other engineering analysis to support his causation opinion. He relied on his expertise to state that the hole could cause a localized temperature rise at undefined points *inside* the heater but made no attempt to calculate where or how hot these “hot spots” would be, much less identify a known or potential error rate for his analysis. He then theorized that these unlocated and unquantified hot spots could result in a series of radiative or convective transfers of heat through the heater cabinet that eventually would reach the environment in sufficient amounts to ignite nearby combustibles. He provided no testing or mathematical analysis to quantify, even as a rough estimate, how much heat would be transferred through these processes and how it would compare to the heat necessary to ignite the combustibles. The causation problem is further complicated by Bullerdiel's opinion that the internal hole had been present during heater operation for “potentially weeks or months, even” before the fire occurred. Bullerdiel Depo. at 105. In lieu of any analysis or testing to show that the heater, after functioning perhaps for weeks with a hole in the target wall, could actually ignite nearby combustibles, Bullerdiel offered only vague theorizing based upon general principles. “Where ‘opinion evidence . . . is connected to existing data only by the *ipse dixit* of the expert,’ a district court ‘may conclude that there is simply too great an analytical gap between the data and the opinion proffered.’” *Cangieter*, 462 F.3d at 924 (quoting *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997)). Such is the case here.

In the absence of any record evidence that Bullerdiek used reliable principles and methods or applied them reliably to the facts of this case to form his opinion, his causation opinion does not satisfy the Rule 702 standards for admissibility. *See id.* at 924-25 (affirming the exclusion of evidence under Rule 702, although the expert was qualified and the general principles he advanced were sound, because the expert did not present data, test results or mathematical calculations to show how the general principles would operate to cause the accident in question). This leaves the Statons without the necessary expert testimony regarding causation. Therefore, the grant of summary judgment to Lenan must be affirmed. *Cf. Hills*, 710 S.W.2d at 341 (holding that a plaintiff failed to make a submissible strict products liability claim where the plaintiff's proffered expert testimony combined with circumstantial evidence was insufficient to establish that a claimed defect caused a fire).

Because the Statons' claims fail for lack of evidence that the internal hole in the combustion chamber caused the fire, the admissibility of Dean's statement that firebrick on the target wall probably would have prevented the hole from forming becomes irrelevant. As a result, we need not resolve the question of whether Dean's statement is admissible as the admission of a party-opponent and, therefore, not subject to the expert-testimony requirements of Rule 702.

III. CONCLUSION

We hold that expert testimony was necessary to prove causation in this case and that the expert testimony presented by the Statons to prove causation properly was excluded by the district court. Accordingly, we affirm the grant of summary judgment to Lenan on the Statons' strict products liability and breach of implied warranty claims.