

United States Court of Appeals
FOR THE EIGHTH CIRCUIT

No. 04-1042

Shannon Unrein,	*	
	*	
Plaintiff - Appellant,	*	
	*	
v.	*	
	*	
Timesavers, Inc.,	*	
	*	
Defendant Third Party	*	Appeal from the United States
Plaintiff - Appellee,	*	District Court for the District
	*	of Minnesota.
v.	*	
	*	
Foley-Martens Company,	*	
also known as Foley-Belsaw Company,	*	
a Minnesota corporation,	*	
	*	
Third Party Defendant -	*	
Appellee.	*	

Submitted: November 18, 2004
Filed: January 10, 2005

Before MURPHY, LAY, and MELLOY, Circuit Judges.

MURPHY, Circuit Judge.

Shannon Unrein was injured at work while operating an industrial sander manufactured by Timesavers, Inc. She sued the manufacturer for a defective product, and the district court¹ granted summary judgment to Timesavers. Unrein appeals, arguing that the district court erred by excluding the testimony of her expert witness. We affirm.

Unrein was injured on February 6, 2001 while working in the Kingsford, Michigan plant of Foley-Martens. Her job was to brand logos onto wooden cutting boards and similar items, and she occasionally had to use the Timesavers sander to remove flaws in the boards. While she was feeding individual boards into the sander that day, she noticed that two boards had come together on the conveyor belt and were moving along one on top of the other. When she reached out to dislodge one of the boards, her right arm was pulled into the machine all the way up to the elbow. She tried to pull her arm out, but it was caught and she was unable to turn off the machine. She screamed, and two other workers came to help. One of them turned the machine off with a button apparently located on the back of the sander, and the other lowered the table inside the sander to release her arm. There were no witnesses to the accident, and Unrein does not know how the two boards came together on the belt or exactly how her arm was pulled into the sander.

Unrein sustained serious injuries to her hand and arm. The sanding belt came into contact with her hand, resulting in a "crush degloving" injury which exposed bone, shredded tendons, and caused tissue loss. She underwent four surgical procedures, physical therapy, and treatment at a pain clinic. She cannot move the index and middle fingers of her right hand and has only limited ability to move the other fingers. She has no feeling on the top of the hand where the skin was grafted,

¹The Honorable David S. Doty, United States District Judge for the District of Minnesota.

and she has numbness in her forearm, with scarring on the underside from contact with the conveyor belt.

Unrein filed a products liability suit against Timesavers, alleging defective design and failure to warn, and Timesavers in turn filed a third party contribution claim against Foley-Martens. Both are Minnesota corporations, but the Foley-Martens plant where Unrein was injured is in Michigan and she was paid worker compensation benefits under Michigan law, which unlike Minnesota law does not permit contribution claims against an employer. The district court denied as moot the summary judgment motion of Foley-Martens on the claim for contribution since summary judgment was entered against Unrein in the main action. Because of our disposition of Unrein's claim, we need not decide which state law applies to the contribution claim or reach its merits.

To prove her products claim Unrein engaged Tarald O. Kvalseth, Ph.D., to provide expert testimony. Dr. Kvalseth has graduate degrees in industrial engineering and an undergraduate degree in mechanical engineering. He is a professor of mechanical engineering at the University of Minnesota where he specializes in human factors engineering and safety. He has worked for some thirty years as an industrial consultant in the areas of human factors engineering, occupational safety, methods engineering, and work measurement. Previously he also worked as a design engineer. In preparation for his testimony in this case, Dr. Kvalseth reviewed various documents relating to the sander, the litigation, and safety standards. He also inspected the sander and watched a video showing it in operation. He then wrote a report outlining his proposed testimony.

Dr. Kvalseth's report stated that the sander was defectively designed and unreasonably dangerous because the infeed area lacked safeguarding. He stated that without proper safeguarding, an operator's hand could get caught in the "nip point" between the conveyor belt and the pinch roll; serious injury could result. Dr.

Kvalseth further observed that the sander lacked a braking device that would make the conveyor belt stop quickly. In his opinion it took too much time for the conveyor belt to halt after one of the emergency stop buttons was pressed, and such a delay would enhance the injury to an operator whose hand was caught in the nip point. Although the machine had a warning posted on it ("Do not place hands between work piece and conveyor belt or near rolls"), the warning was no substitute for a design solution according to Dr. Kvalseth. In his opinion the most important measure for safety is to "design the hazard out of the machine." The next most important is to safeguard against the hazard.

Dr. Kvalseth discussed several different ways in which the Timesavers sander could be made safer. He said initially that a guard could be installed to serve as a physical barrier between the operator and the nip point. Such a guard would need to have an adjustable opening to accommodate wood of different dimensions and would need to be properly located to comply with safety guidelines. Other than pointing out these features in his report, he did not develop the guard concept further. He also discussed using a light beam attached to a brake so that if a hand were to cross the light beam, the conveyor belt would come to a quick stop. He pointed out that Foley-Martens had installed a light beam and fast brake in the sander after Unrein's accident, but he stated without explanation that this approach "would not generally have provided adequate protection for this nip point."

The "preferred and appropriate design solution" described in Dr. Kvalseth's report would have used "a continuous safety trip cord along the outside of each of the three sides of the infeed area of the sander," together with a brake to stop the conveyor belt quickly. Dr. Kvalseth stated that a sanding machine equipped in this way would halt if the operator were to hit the trip cord or press against it in an emergency. In Dr. Kvalseth's opinion, Unrein's injury would not have occurred if the sander had been designed as he proposed. According to his report, safety trip cord technology was first patented in 1904 as "safety gear for ironing machines." He

claims that this technology has been used on a wide variety of equipment and machinery, but the report does not identify any of these other applications.

Timesavers moved for summary judgment on both claims. It argued that Unrein presented no evidence from Dr. Kvalseth's report or elsewhere that the warnings on the sander were inadequate or that the lack of some particular warning caused her injuries. The district court concluded that summary judgment on the failure to warn claim was appropriate even if Dr. Kvalseth's proposed testimony were admissible because his report did not state that the warnings posted on the sander were inadequate and Unrein presented no evidence to support that claim. She does not appeal this ruling.

Timesavers also argued to the district court that the defective design claim should be dismissed because Dr. Kvalseth's proposed testimony was unreliable and that Unrein would not have a submissible case without it. In its analysis of the admissibility of Dr. Kvalseth's proposed testimony, the court applied Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993). The court observed that Dr. Kvalseth had not furnished a design of his proposed safety features. Although he stated that safety trip cords are in widespread use, he gave no examples of their use with other industrial sanders or similar machines. The court concluded that Dr. Kvalseth had not shown that his suggested measures were feasible and compatible with the sander's operation, and his proposed testimony was therefore inadmissible. Because Unrein had presented no other evidence linking her injuries to any defective design of the sander, the court granted summary judgment to Timesavers. Unrein appeals this ruling.

Unrein argues that the district court erred in excluding Dr. Kvalseth's proposed testimony because it met the requirements of federal law and because Minnesota substantive law does not require proof of the feasibility of alternate designs in a design defect case. Since the admissibility of expert testimony in diversity cases is

governed by federal law, Clark v. Heidrick, 150 F.3d 912, 914 (8th Cir. 1998), we must focus on whether the proposed testimony meets the federal standard for admissibility. The district court's decision to exclude Dr. Kvalseth's opinion is reviewed for an abuse of discretion. Peitzmeier v. Hennessy Indus., Inc., 97 F.3d 293, 296 (8th Cir. 1996).

Federal Rule of Evidence 702 applies to admission of expert opinion, and it provides that: "If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise." Timesavers does not claim that Dr. Kvalseth is unqualified to render an opinion, but it contends that his opinion would not assist the trier of fact.

In Daubert the Supreme Court discussed the district court's gatekeeper role in screening expert testimony for reliability and relevance. See 509 U.S. at 589. Some of the factors it identified for evaluation of proffered testimony were whether the theory or technique is subject to testing, whether it has been tested, whether it has been subjected to peer review and publication, whether there is a high known or potential rate of error associated with it, and whether it is generally accepted within the relevant community. Id. at 593-94. This evidentiary inquiry is meant to be flexible and fact specific, and a court should use, adapt, or reject Daubert factors as the particular case demands. See Kumho Tire Co., Ltd. v. Carmichael, 526 U.S. 137, 141-42 (1999). There is no single requirement for admissibility as long as the proffer indicates that the expert evidence is reliable and relevant.

Timesavers argues that Dr. Kvalseth's proposed testimony must be excluded because it did not satisfy any of the Daubert factors. Timesavers focuses in particular on the fact that Dr. Kvalseth's proposal had not been tested, stating in its brief that engineers who design new devices almost always test their hypotheses. Timesavers

went further in oral argument, suggesting that Dr. Kvalseth's proposed testimony would be admissible only if he had constructed a functional sander installed with his suggested safety trip cord and brake.

Our cases do not require that experts manufacture a new device or prototype in order for their opinion to be admitted. The question is whether the expert's opinion is sufficiently grounded to be helpful to the jury. We conclude that Dr. Kvalseth's proffered opinion lacked indicia of reliability for other reasons. Although he proposed using a safety trip cord, a commonly used device, he did not prepare drawings showing how it would be integrated into the Timesavers sander or present photographs showing its use with similar machines. See Dancy v. Hyster, 127 F.3d 649, 651-52 (8th Cir. 1997) (excluding testimony of expert who had not designed proposed safety device or pointed to its use on similar machines). Dr. Kvalseth provided even less information about how the brake would function. An expert proposing safety modifications must demonstrate by some means that they would work to protect the machine operators but would not interfere with the machine's utility. See Jaurequi v. Carter Mfg. Co., 173 F.3d 1076, 1084 (8th Cir. 1999); Peitzmeier, 97 F.3d at 297.

Unrein relies on Lauzon v. Senco Pruducts, Inc., 270 F.3d 681 (8th Cir. 2001), where there was a greater showing of reliability for the expert's opinion. The expert opinion in Lauzon was based in part on a very thorough examination and analysis of the bottom fire nail gun and its functioning. The expert measured the trigger force, the force needed to activate the bottom contact point, and the nail speed from various distances. He also performed a pendulum test to measure recoil forces, and he reproduced the site of the accident to reenact the work the plaintiff had been doing with the nail gun. Id. at 689. Additionally, the expert in Lauzon was prepared to testify that the bottom fire nail gun should be taken off the market because it was inherently dangerous and that the sequential fire nail gun would work just as well and

was safer. Id. at 685. Because the expert was not proposing to modify the nail gun, there were no concerns about feasibility or compatibility.

In this case we conclude that the district court did not abuse its discretion in excluding Dr. Kvalseth's proposed testimony. The judgment of the district court is therefore affirmed.
