

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF KANSAS**

GARY ALLENBRAND,	)	
	)	
Plaintiff,	)	CIVIL ACTION
	)	
v.	)	No. 05-2511-KHV
	)	
LOUISVILLE LADDER GROUP, L.L.C.,	)	
	)	
Defendant.	)	
_____	)	

MEMORANDUM AND ORDER

This matter is before the Court on Defendant Louisville Ladder Group, LLC's Motion To Exclude The Expert Testimony Of Dr. Virgil Flanigan And Strike Dr. Flanigan's Report (Doc. #46) filed October 13, 2006.

For reasons stated below, the Court sustains defendant's motion.

Factual Background

This case arises from a ladder accident that occurred on May 30, 2002. Plaintiff claims that he sustained personal injuries when a Davidson 428-08, Commercial Duty rated ladder collapsed, causing him to fall to the concrete floor of his garage.¹ Plaintiff claims that the ladder was defective in design, manufacture and warnings. He claims that Louisville Ladder Group ("LLG") is liable under the theories of strict liability, negligence, breach of express and implied warranties. Plaintiff also asserts a claim for loss of services.

American National Standards Institute ("ANSI") is a non-profit organization that promulgates safety standards for thousands of products, including ladders. The Occupational Safety and Health Administration

¹ Around 2000, plaintiff's daughter gave him the ladder. Before doing so, plaintiff's daughter and son-in-law used it to paint. Plaintiff is not aware of any problems with the ladder before his accident.

views ANSI Section A14 as the “national consensus standard” pertaining to ladders. The design of the ladder in this case complies with ANSI A14.2-1990, entitled “American National Standard for Ladders - Portable Metal - Safety Requirement,” which is the applicable safety standard.

Plaintiff’s expert, Dr. Virgil Flanigan, opines that plaintiff’s ladder failed because of the load which plaintiff applied to the ladder structure; that the ladder could not carry plaintiff’s load because of rivet spacing and a crack at the rivet hole in the rail; and that the failure was a result of the manufacturing process. Elsewhere, Dr. Flanigan states that “improper placement” of the “rivet or hole and or ratchet mark” caused the failure. His expert report provides in part as follows:

Failure Analysis:

1) Tearing Of Plate To Margin Or Edge:

Rivets placed too close to the edge of the plate may tear or shear the plate out to the edge, but this type of failure is avoided by placing the center of the rivet 1.5 times the rivet diameter away from the edge. (Ref. Machinery Handbook – Robert Green) * * *

2) Spacing Of Rivets:

Rivets should not be spaced too far apart otherwise buckling of the plates will take place. The maximum spacing is usually taken as 16 times the thickness of the outside plate. (Ref. Design Of Machine Elements – Spotts) When fastening a thin plate it is particularly important to maintain accurate spacing to avoid buckling.

3) Size And Type Of Rivets:

* * * Picture 9 shows the ratchet mark at the failure at the second step. Ratchet marks, as shown, are apparent suggesting the crack was present before the accident which should have been found during assembly. We discovered the ratchet mark in our peer review of the ladder and it makes one even more suspect of the unit. A destructive small sample needs to be obtained to further clear up this issue. This was the first use for this ladder as defined in Mr. Allenbrand’s deposition. Mr. Allenbrand had received the ladder as a present from his daughter and he put it away for future use. The failure was a result of the load applied by Mr. Allenbrand to the ladder structure. The inability of the ladder to carry the load was the result of the rivet spacing and the crack at the rivet hole in the rail. This failure is a result of the manufacturing process during the riveting of the ladder causing a crack in the hole greatly reducing the load capacity. The ANSI A14.2 standard would work to test this manufacturing

defect [sic] a load test would have produced a failure just like Mr. Allenbrand caused in his use of the defective eight foot ladder by standing on the ladder. Mr. Allenbrand was preparing to pull a wire into the garage for a ceiling fan connection when the failure occurred. Mr. Allenbrand reported it to collapse as he moved his feet from the second to the third step of the ladder. At this point the load was greater than the ability of the weakened ladder to carry as a result of the rivet position and the ratchet marks(crac) [sic]. This condition was produced in manufacturing and the test to determine the defect is a simple load test at a value greater than the rated load. Any failures would be scrapped and the quality control charts marked to indicate the defective ladder. * * *

In comparing the new exemplar ladder to the accident ladder the following are the changes made to the exemplar:

- 1) The length of the support brace at the bottom of the ladder was increased from 9 inches to 11.5 inches. This change allowed for decreasing the thickness of the brace from 0.175 inches to 0.125 inches.
- 2) The distance of the rivet hole from the edge was increased from 0.25 in the failed ladder as compared to 0.4125 in the exemplar but still short of the 1.5 recommended by the machinist handbook.

CONCLUSIONS:

The distance of the hole from the edge should be 1.5 times the rivet diameter as compared to the ladder rivet spacing of 0.25. Therefore the spacing should have been increased to 1.5 as reported in the machinist handbook for best performance and load carrying ability. Inside spreader braces are the key to a steady ladder. Make sure they are beefy and have double-riveted anti-pinch hinges. Feet should be covered with a thick, slip-resistant plastic shoe to remove skidding of the legs. Look for heavy angle braces beneath the top and bottom steps. They add strength to the stepladder and help defeat wobble. A molded-plastic top provides additional protection. The ladder must be examined for defects during assembly and after allowing the ratchet marks to be found in the rivet hole any load greater than the rated load applied axially would find the defect. With this defective condition the ladder is defective in both design and manufacture. The ratchet mark in figure 9 shows the pre-existing crack produced in the failed ladder preventing the loading of the accident ladder. The rivet position further limits the possible loading to a number less than designed. The ratchet marks were present at the time of manufacture and severely lowered the capacity of the structure and let the ladder begin failing around the rivet as shown in figure 9.

Because of the improper placement of this rivet or hole and or the ratchet mark caused the failure of this ladder.

Dr. Flanigan's Third Report, attached as Exhibit E to Defendant's Motion To Exclude (Doc. #46).²

Analysis

Defendant argues that Dr. Virgil Flanigan is not qualified to render an expert opinion, and seeks to exclude his testimony under Rule 702, Fed. R. Evid., and Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993).³ Under Fed. R. Evid. 702, the trial court must act as a gatekeeper and determine at the outset, pursuant to Fed. R. Evid. 104(a), whether the expert is proposing to testify to (1) scientific knowledge that (2) will assist the trier of fact to understand or determine a fact in issue. Daubert, 509 U.S. at 592. This entails a preliminary assessment whether the reasoning or methodology underlying the testimony is scientifically valid and whether that reasoning or methodology properly can be applied to the facts in issue. Id.

The Court has broad discretion in deciding whether to admit expert testimony. See Kieffer v. Weston Land, Inc., 90 F.3d 1496, 1499 (10th Cir. 1996). Rule 702, Fed. R. Evid., provides that an expert may testify as to scientific, technical or other specialized knowledge if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case. The touchstone of Rule 702 is helpfulness of the expert testimony, a condition that goes primarily to relevance. See BioCore, Inc. v. Khosrowshahi, 183 F.R.D. 695,

² Dr. Flanigan concludes that the ladder is defective in both design and manufacture, but he does not explain why or how he classified the defects. On its face, Dr. Flanigan's report expressly suggests a manufacturing defect in the ladder, see id. at 6-7 (defect occurred because of the "manufacturing process during the riveting of the ladder"); id. at 7 ("this condition was produced in manufacturing"), but the deficiencies he highlights seem to suggest a design defect, see id. at 8 (failure because of improper placement of rivet, hole or ratchet mark).

³ Defendant also argues that the Court should strike Dr. Flanigan's expert report because it does not comply with Rule 26(a)(2)(B), Fed. R. Civ. P. The Court need not address the adequacy of Dr. Flanigan's report because for reasons set forth below, his testimony is not admissible in any event.

699 (D. Kan. 1998) (quoting Miller v. Heaven, 922 F. Supp. 495, 501 (D. Kan. 1996)). Any doubts should be resolved in favor of admissibility. See id. In determining whether an opinion or particular scientific theory is reliable, the Court may consider several nondispositive factors: (1) whether the proffered theory can and has been tested; (2) whether the theory has been subject to peer review; (3) the known or potential rate of error; and (4) the general acceptance of a methodology in the relevant scientific community. Daubert, 509 U.S. at 593-94. The Supreme Court has emphasized, however, that while a trial court may consider one or more of these factors, the test of reliability is flexible and Daubert's list of factors does not necessarily or exclusively apply to all experts or every case. Kumho Tire Co. v. Carmichael, 526 U.S. 137, 141 (1999). Therefore, while a trial court should consider the specific factors identified in Daubert where they are reasonable measures of the reliability of expert testimony, id., the law does not require an expert to back his or her opinion with independent tests that unequivocally support his or her conclusions. See Bonner v. ISP Techs., Inc., 259 F.3d 924, 929 (8th Cir. 2001); Heller v. Shaw Indus., Inc., 167 F.3d 146, 155 (3d Cir. 1999).

Where an expert otherwise reliably utilizes scientific methods to reach a conclusion, lack of independent testing may go to the weight, not the admissibility of the testimony. See Zuchowicz v. United States, 140 F.3d 381, 387 (2d Cir. 1998). A contrary requirement would effectively resurrect a Frye-like bright-line standard, not by requiring that a methodology be generally accepted, but by excluding expert testimony not backed by independent testing. Frye v. United States, 293 F. 1013 (D.C.Cir. 1923). Such a bright-line requirement would be at odds with the liberal admissibility standards of the federal rules and the express teachings of Daubert. See McCulloch v. H.B. Fuller Co., 61 F.3d 1038, 1042, 1044 (2d Cir. 1995).

As part of the pretrial evaluation, the trial court also must determine whether the expert opinion is based on facts that enable the expert to express a reasonably accurate conclusion as opposed to conjecture or

speculation. Kieffer, 90 F.3d at 1499 (quoting Jones v. Otis Elevator Co., 861 F.2d 655, 662 (11th Cir. 1988)). The proponent of expert testimony must show a grounding in the methods and procedures of science which must be based on actual knowledge and not subjective belief or unaccepted speculation. Mitchell v. Gencorp Inc., 165 F.3d 778, 780 (10th Cir. 1999). Regardless of the specific factors at issue, the purpose of the Daubert inquiry is always “to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field.” Kumho Tire, 526 U.S. at 152.

Dr. Flanigan provides scant facts, testing or engineering analysis to support his conclusions. Dr. Flanigan first concludes that “[t]he distance of the hole from the edge should be 1.5 times the rivet diameter as compared to the ladder rivet spacing of 0.25,” Flanigan Report at 8, but he does not set forth the rivet diameter in the accident ladder.⁴ Dr. Flanigan opines that “the spacing should have been increased to 1.5 as reported in the machinist handbook for best performance and load carrying ability,” id., but he does not explain that “best performance and load carrying ability” would have prevented the accident in this case or how much the load carrying ability was reduced in the accident ladder. On a more basic level, Dr. Flanigan never even mentions the estimated load which plaintiff applied to the ladder or what ladder design would have been necessary to

⁴ In one portion of his report, Dr. Flanigan lists certain measurements for plate thickness, rivet hole diameter, distance of hole from edge and empirical distance, but he does not identify the source of these measurements (e.g., accident ladder, exemplar ladder or ideal ladder) or explain the significance of these numbers. Dr. Flanigan also compares an “old ladder buckled near brace” and “a new ladder with a better design,” but he does not identify the manufacturer, date of manufacture or relevance of either ladder. Defendant raised this issue in its initial memorandum, but plaintiff did not address the issue in his response.

safely handle that load.⁵

Dr. Flanigan opines that the ladder failure resulted from the rivet spacing and a crack at the rivet hole in the rail, see id. at 6, but he does not explain what specific facts or analysis he relied on to reach this conclusion. Dr. Flanigan states the seemingly uncontroversial principles that “[r]ivets placed *too close* to the edge of the plate *may* tear or shear the plate out to the edge,” id. at 5 (emphasis added) and that to prevent buckling, “[r]ivets should not be spaced *too far* apart,” id. at 6 (emphasis added), but he does not explain at what distance and at what weight such tearing or buckling will take place. Dr. Flanigan also concludes that “[t]he inability of the ladder to carry the load was a result of the rivet spacing and the crack at the rivet hole in the rail.” Id. at 6. Dr. Flanigan does not explain how he concluded that the crack was introduced in the manufacturing process except to state that ratchet marks are apparent “*suggesting* that the crack was present before the accident which should have been found during assembly,” id. Dr. Flanigan concedes that testing is needed on the issue, but apparently he did not test it. See id. (“[A] destructive small sample needs to be obtained to further clear up this issue.”). The issue whether the crack was present when the ladder was first assembled is critical to Dr. Flanigan’s opinion. Absent specific facts, testing or engineering analysis for Dr. Flanigan’s conclusions, the Court must find that they are based on conjecture and speculation. See Gen. Elec. Co. v. Joiner, 522 U.S. 136, 146 (1997) (court may conclude that analytical gap between data and opinion proffered is simply too great); Mitchell, 165 F.3d at 780 (proponent of expert testimony must show grounding in methods and procedures of science which must be based on actual knowledge and not subjective belief or

⁵ This omission is baffling since Dr. Flanigan’s entire point is that the ladder failed because it could not handle the load which plaintiff applied. The ladder had been previously used without incident, but which load became overload is no part of Dr. Flanigan’s report.

unaccepted speculation).

Dr. Flanigan suggests that the alleged manufacturing defect could have been discovered if defendant had tested for the defect using the standard of ANSI 14.2. See Flanigan Report at 7 (“ANSI 14.2 standard would work to test this manufacturing defect [sic] a load test would have produced a failure just like Mr. Allenbrand caused in his use of the defective eight foot ladder by standing on the ladder.”). First, all of the tests under ANSI 14.2 which apply to the ladder in this case are “design verification tests,” not tests for manufacturing defects. ANSI 14.2-1990, § 7.1.5, 7.5.1-13, attached as Exhibit 3 to Defendant Louisville Ladder Group, LLC’s Response To Plaintiff’s Motion To Exclude The Expert Testimony Of Lori Bremick And Strike Ms. Bremick’s Report (Doc. #56) filed October 27, 2006. Ladders subject to the design verification tests of ANSI 14.2 are “not intended for subsequent use.” ANSI 14.2-1990, § 7.1.5. In addition, Dr. Flanigan ignores the fact that defendant tested the ladder design under ANSI 14.2 some 20 times since 1988 and the ladder passed all of the different strength and stability tests under ANSI 14.2. See Expert Report of Lori Bremick at 2-3, attached as Exhibit A to Defendant Louisville Ladder Group, LLC’s Reply To Plaintiff’s Response To Defendant’s Motion To Exclude The Expert Testimony Of Dr. Virgil Flanigan And Strike Dr. Flanigan’s Report (Doc. #59) filed November 10, 2006.

Dr. Flanigan simply does not adequately explain his theories or whether they are generally accepted in the scientific community. Dr. Flanigan did not apply known data to specifically explain how the ladder failure resulted from a design or manufacturing defect. See Gen. Elec. Co. v. Joiner, 522 U.S. 136, 146 (1997) (trained experts ordinarily extrapolate from existing data; Daubert does not require court to admit opinion evidence which is connected to existing data only by *ipse dixit* of expert). Accordingly, the Court must exclude Dr. Flanigan’s expert opinion under Fed. R. Evid. 702 and Daubert.

IT IS THEREFORE ORDERED that Defendant Louisville Ladder Group, LLC's Motion To Exclude The Expert Testimony Of Dr. Virgil Flanigan And Strike Dr. Flanigan's Report (Doc. #46) filed October 13, 2006 be and hereby is **SUSTAINED in part**. The Court sustains the motion to exclude the expert testimony of Dr. Virgil Flanigan. The Court overrules as moot the motion to strike Dr. Virgil Flanigan's expert report.

Dated this 11th day of January, 2007 at Kansas City, Kansas.

s/ Kathryn H. Vratil
KATHRYN H. VRATIL
United States District Judge