

Present: Carrico, C.J., Compton, Stephenson, Lacy, Hassell, and Keenan, JJ., and Cochran, Retired Justice

NORFOLK AND WESTERN
RAILWAY COMPANY

v. Record No. 950585

OPINION BY JUSTICE A. CHRISTIAN COMPTON
January 12, 1996

ALFRED REID JOHNSON

FROM THE CIRCUIT COURT OF THE CITY OF ROANOKE
Clifford R. Weckstein, Judge

In November 1989, plaintiff Alfred Reid Johnson began employment with defendant Norfolk and Western Railway Company as a "carman welder, junior student mechanic." After a period of training in welding and "grinding," the plaintiff, age 38, was assigned to defendant's "reclamation shop" in the City of Roanoke.

There, plaintiff began welding and grinding on "bolsters" and "side frames," components of wheel assemblies on which freight car bodies are mounted. Grinding involved use of a hand-held, two-handle, pneumatic tool having an abrasive wheel turning at 6,000 revolutions per minute. Grinding on the bolsters and side frames was performed before and after welding in order to smooth the welds and the surface of the metal. The grinding produced vibration described as "pretty tough."

During 1990, the plaintiff began experiencing pain in his forearms and hands with associated numbness and difficulty in finger dexterity and manipulation. He sought medical attention and eventually was diagnosed as having bilateral carpal tunnel syndrome, which was worse on the right side. This condition

involves "compression of the median nerve as it passes through the tunnel of the wrist known as the carpal tunnel."

In 1991, the plaintiff had bilateral surgery to release pressure on the carpal tunnels; this relieved the symptoms. Later, he returned to work, performing the same duties. After a while, the symptoms returned, and the defendant took the plaintiff "out of service" in April 1993.

The plaintiff's condition resulted from vibration connected with the grinding. The injury rendered him unable "to obtain or retain employment in the economy."

The plaintiff filed the present action against the defendant under the Federal Employers' Liability Act (FELA), 45 U.S.C. § 51 et seq., seeking recovery for his injuries. In an amended motion for judgment filed in September 1994, plaintiff alleged defendant exposed him to excessive vibration from the grinders which "required constant repetitive use of both hands." He asserted defendant negligently failed to provide him a reasonably safe place to work, failed to provide suitable equipment to perform his assigned task, failed to warn him of unsafe working conditions, and failed to provide adequate instructions for the safe use of the equipment. Responding, defendant denied the allegations of negligence and denied it was indebted to the plaintiff.

In a four-day trial beginning December 19, 1994, a jury found in favor of the plaintiff and assessed his damages at

\$200,000. The trial court denied defendant's motion to set the verdict aside and entered judgment on the verdict in a January 1995 order, from which we awarded the defendant this appeal.

The defendant assigns three errors, the first of which raises the main question on appeal. That question is whether the trial court erred in failing to rule as a matter of law that defendant was free of primary negligence when, according to defendant, plaintiff's evidence failed to establish defendant deviated from any applicable standard of care, failed to show his injury was foreseeable, and failed to establish causation.

The plaintiff comes to this Court in a strong position. He is fortified with a jury verdict confirmed by the trial judge; all conflicts in testimony have been resolved in his favor. Accordingly, the judgment below will not be set aside "unless it appears from the evidence that such judgment is plainly wrong or without evidence to support it." Code § 8.01-680.

Applying settled appellate principles, we shall view the evidence, much of which was conflicting, and all reasonable inferences flowing from the evidence in the light most favorable to the plaintiff. Prior to employment by defendant, the plaintiff had used hand tools while in the Navy, had worked in construction, had served as a police officer, had driven large trucks, and had worked as a mechanic using mostly hand tools, some of which were pneumatic. Prior to working for defendant in November 1989, he had experienced no "problems" with his hands,

wrists, or arms.

Upon reporting to work, defendant sent plaintiff to Georgia for training. This training did not include any instruction about "wrist posture," "static pressure" on wrists, or about vibration from any of the tools or equipment plaintiff would be using in his job.

When plaintiff returned from training, defendant assigned him to a shop where he was involved for several weeks in welding and grinding on grain hopper cars. Next, defendant transferred him to the reclamation shop in February 1990. There, plaintiff performed his task from an upright position, standing on a flat surface. The heavy pieces of metal being worked upon were not lifted by the employee but were moved into position for welding and grinding by a crane and rotated by a "jig."

The work in the reclamation shop was not an assembly line operation in that the grinding was not a continuous function. Plaintiff did not grind and weld steadily during an eight-hour work period. Instead, he would perform these tasks for "[p]robably four to five hours" daily, according to the plaintiff, and on an average of three hours daily, according to his expert witness. He was required "to do" ten to eleven bolsters per day. Later in 1990, plaintiff "moved from doing bolsters to start doing the side frames." The side frame quota per employee per work period was nine.

After working in the reclamation shop for several months,

plaintiff began to awaken at night with his hands "throbbing and no feeling in them." He had "no idea" of the cause of the discomfort. He continued to work for "a couple of months" before going to a physician in July 1990 because the condition had worsened. During the course of his treatment, plaintiff was also seen by a neurologist, a neurosurgeon, and a rehabilitation specialist. All four of his physicians diagnosed plaintiff with carpal tunnel syndrome. The rehabilitation specialist testified that plaintiff's "carpal tunnel was very consistent with his history of grinding," and that plaintiff sustained the injury as a result of vibration.

The plaintiff presented evidence that medical knowledge existed many years before he was employed by defendant of a relationship between grinding and carpal tunnel syndrome. Numerous articles of medical literature published before 1990 were documented in the evidence that listed vibration as a risk factor for occupational carpal tunnel syndrome.

For example, the results of a study published in 1987 in the American Journal of Industrial Medicine, after indicating that the grinder was one of the hand tools used to develop information for the study, stated: "While vibration and awkward posture may be important risk factors for carpal tunnel, only vibration appeared to be important in this particular investigation." In 1981, an article entitled "Personal and Occupational Factors Associated With Carpal Tunnel Syndrome" was published in the

Journal of Occupational Medicine. The author stated: "In the present study use of vibrating tools was found to be strongly associated with carpal tunnel syndrome." Dr. Mahmoud Ayoub, the defendant's expert witness in the fields of industrial engineering and ergonomics (defined as "the study of the relationship between people and the equipment or the systems that they use"), in an article published in 1989, opined that the "number one job type that placed one at risk for carpal tunnel syndrome" was "buffing and grinding." Ayoub explained during cross-examination that his conclusion was meant to apply only if the worker was engaged in grinding continuously for eight hours.

The evidence established that during plaintiff's period of employment by defendant and during the period of development of medical knowledge about the occupational causes of carpal tunnel syndrome, defendant had a medical department staffed by licensed physicians. The defendant admitted "that in 1990, or before, its Medical Director and Medical Department were generally aware that certain literature existed which hypothesized that exposure to excessive vibration from hand tools may precipitate cumulative trauma disorders such as Carpal Tunnel Syndrome." The plaintiff also established that, during the period beginning in the late 1960s to and including the early months of his employment with defendant, no information was communicated by defendant's medical department to employees about the symptoms of carpal tunnel syndrome as they related to the use of grinders or welding

apparatus.

The plaintiff presented evidence about the knowledge of the industrial community regarding carpal tunnel syndrome during the relevant period of time. For example, Dr. Michael D. Shinnick, an expert in industrial engineering and ergonomics, testified that since the late 1970s industry has been aware that risk factors for the development of occupational carpal tunnel syndrome have included repetitiveness ("the number of cycles or the number of times that a person experiences a motion or even a flexion"), vibration, force (torque from using a tool having "a lot of" revolutions per minute), and "static positioning or holding something in the same position for continued periods of time." These factors were present in the plaintiff's job.

Shinnick testified that industry had established methods to prevent occupational carpal tunnel syndrome. These include making an analysis of the tools used and performing an ergonomics study. If the study identifies hazards at the work site, prevention and control is employed, which should include redesigning the tools, redesigning the methods used in performing the work, use of protective equipment (such as gloves and "vibration isolator-type grips"), medical tracking of workers, and training and education of employees.

Shinnick, who had examined plaintiff's job site in defendant's reclamation shop, testified that he "saw absolutely all of the risk factors associated with producing carpal tunnel.

There is a high degree of repetitiveness in the fact that even though the cycle time might be a number of minutes, the repetitiveness is holding the grinder in a static position." He emphasized: "I saw repetitiveness. I saw vibration."

Shinnick opined that the hazards he observed "were of sufficient magnitude to invoke some ergonomic action." He added, "My opinion is that this would be a high priority job. One would begin to initiate the process of analyzing the job and invoking engineering controls and changing them." The evidence showed that defendant had conducted no formal analyses of the jobs in its reclamation shop prior to the filing of this action.

Moreover, defendant admitted that, as early as 1988, it had purchased grinders with a label attached to each grinder's removable "guard" which stated: "Warning: Repetitive work motions or exposure to vibration may be harmful to your hands and arms." Also, the catalog from which defendant ordered the grinders used in the reclamation shop stated that "excessive or improper use may result in 'white finger' or carpal tunnel syndrome." Defendant did not advise its workers of either of these warnings. And, there was evidence that defendant did not warn its workers about grinder use as related to wrist positions and carpal tunnel syndrome until 1994.

On appeal, incorrectly placing a slant on the evidence in a light more favorable to it, the defendant argues that plaintiff failed to present evidence of any deviation from a standard of

care, failed to establish causation, and failed to establish his carpal tunnel syndrome was foreseeable where the evidence showed no prior claims of such injury had ever been made by reclamation shop workers. We do not agree with any of defendant's contentions.

The principles applicable to this case are settled. Because whether negligence has been established for purposes of the FELA is a federal question, federal decisional law formulating and applying the doctrine governs in cases in state courts. Stover v. Norfolk and Western Ry., 249 Va. 192, 199, 455 S.E.2d 238, 242 (1995). "Under the FELA, a plaintiff's proof must `justify with reason the conclusion that employer negligence played any part, even the slightest, in producing the injury . . . for which damages are sought.'" Norfolk and Western Ry. v. Hodges, 248 Va. 254, 260, 448 S.E.2d 592, 595 (1994) (quoting Rogers v. Missouri Pacific R.R., 352 U.S. 500, 506 (1957)). "Reasonable foreseeability of harm is an essential ingredient of FELA negligence." Stover, 249 Va. at 201, 455 S.E.2d at 244 (citing Gallick v. Baltimore & Ohio R.R., 372 U.S. 108, 117 (1963)). Ordinarily, the issue of FELA negligence, including questions of causation and foreseeability, should be decided by the jury. Hodges, 248 Va. at 260, 448 S.E.2d at 595.

Under the FELA, a railroad has a nondelegable duty, which is continuing, to exercise reasonable care in furnishing its employees a safe place to work. Id. (citing Atchison, T. & S. F.

Ry. v. Buell, 480 U.S. 557, 558 (1987), and Bailey v. Central Vermont Ry., 319 U.S. 350, 353 (1943)). "The employer must perform proper inspections to discover dangers in the place where employees are required to work, and after determining the existence of dangers the employer must take reasonable precautions for the employees' safety." Id. at 260-61, 448 S.E.2d at 596 (citing Williams v. Atlantic Coast Line R.R., 190 F.2d 744, 748 (5th Cir. 1951)).

In the present case, our responsibility is not to redetermine the facts on appeal. Rather, we must decide whether there was credible evidence to raise a jury issue on the question of primary negligence. If so, the judgment must be affirmed.

A rehash of all the evidence we have just summarized is unnecessary to support the conclusion we now reach that a jury question was presented on the issues of negligence, causation, and foreseeability. It is sufficient to point out that the jury was entitled to find from the evidence that plaintiff, prior to his employment by defendant, had no problems with his hands or arms; and, that after working in the reclamation shop for several months, he developed carpal tunnel syndrome due to grinder vibration, an injury that eventually became permanent.

The jury also was entitled to find that prior to 1989, defendant had actual knowledge, from manufacturer's warnings, of industry opinion about the relationship between grinder vibration and carpal tunnel syndrome; and that, prior to 1989, defendant

had actual or constructive knowledge of opinion in the medical community about such relationship.

Finally, the jury was entitled to find that defendant reasonably should have foreseen injury to its reclamation shop workers if precautions were not taken to address the problems of grinder vibration; that accepted standards and methods existed to allow the railroad, in the exercise of ordinary care, to provide a safe work site for grinder users; and that defendant negligently failed to warn of the known danger and failed to provide adequate instruction to its workers regarding the symptoms of carpal tunnel syndrome and the methods to be used to avoid its onset.

In sum, paraphrasing Hodges, we hold the plaintiff presented proof sufficient to take the case to the jury that employer negligence played a part, even the slightest, in producing the injury for which damages were sought.

The defendant dwells on the contention that because no person complained prior to plaintiff's injury regarding excessive vibration from the tools used in the reclamation shop and because no acceptable vibration standard for the workplace was shown to exist, plaintiff's injury was not foreseeable and no deviation from any standard of care was established. This contention disregards the overwhelming evidence, and reasonable inferences drawn from the evidence, that vibration from grinder use was a known risk factor in development of carpal tunnel syndrome, that

all the risk factors associated with producing the malady were present in defendant's reclamation shop, and that the risk factors were of sufficient magnitude to invoke ergonomic action, which defendant failed to take. The plaintiff's evidence established that whatever may have been his "dosage" of vibration, it was of a sufficient level to cause him to acquire occupational carpal tunnel syndrome, and defendant should reasonably have anticipated such a result. This amounts to negligence, causation, and foreseeability.

In conclusion, we have considered defendant's two remaining assignments of error dealing with what it contends to be speculative testimony of one of plaintiff's experts and admission of irrelevant evidence relating to conditions in the workplace having no effect on plaintiff's injury. There is no merit to either contention.

Accordingly, we hold the trial court did not err in submitting the case to the jury and in refusing to grant defendant's motion to set the verdict aside. Therefore, the judgment below will be

Affirmed.