PRESENT: All the Justices

RONDA MADDOX EVANS, ADMINISTRATOR
OF THE ESTATE OF JERRY WAYNE EVANS,
DECEASED

v. Record No. 161788

NACCO MATERIALS HANDLING GROUP, INC.

OPINION BY
JUSTICE STEPHEN R. McCULLOUGH
March 22, 2018

FROM THE CIRCUIT COURT OF THE CITY OF ROANOKE
David B. Carson, Judge

The widow of Jerry Wayne Evans filed this action against NACCO Materials Handling Group ("NACCO"), the manufacturer of a lift truck, on theories of negligent design and breach of an express or implied warranty. The jury returned a verdict for the plaintiff on a theory of negligent design. Following post-trial motions, the trial court dismissed the case on the basis that the evidence established contributory negligence as a matter of law. The plaintiff appeals the dismissal, contending that the question of contributory negligence should have been decided by the jury. NACCO raises three assignments of cross-error, arguing among other things that the plaintiff's evidence fails to establish a negligent design as a matter of law. We agree that the plaintiff's evidence failed, as a matter of law, to establish a design defect and, accordingly, we affirm on this alternate basis.[1]

[1] Our resolution of the case on this ground obviates the need to reach the remaining assignments of error and cross-error. *Shareholder Rep. Servs., LLC v. Airbus Americas, Inc.*, 292 Va. 682, 689, 791 S.E.2d 724, 727 (2016); *City of Chesapeake v. Dominion SecurityPlus Self Storage, L.L.C.*, 291 Va. 327, 336, 785 S.E.2d 403, 407 (2016).

BACKGROUND

I. THE FATAL ACCIDENT.

Jerry Wayne Evans worked at an International Paper plant in Lynchburg. He operated a post folder gluer, a machine that turns a sheet of cardboard into a box. To earn more money, he volunteered to train as a clamp lift truck operator. Evans completed the classroom portion of the training and started to train on the machine. Before he could complete the training, however, Evans decided he did not want that job. He was never certified to operate the truck.

On January 22, 2010, the plant was shorthanded, so a supervisor asked Evans to use a lift truck to unload bales of paper from a tractor trailer. This particular plant was operating five or six days per week, with three shifts each day. Evans was working the third shift. Unloading the trailer meant driving the lift truck up a ramp, over a retractable dock plate and into the trailer, taking the bales of paper out of the trailer and back into the plant. The loading ramp is the only place in the plant with an incline.

After Evans had completed several trips in and out of the trailer, his truck became stuck in the 11-inch gap between the dock plate and the trailer. With the help of a colleague, Lamont Lacy, Evans affixed a tow chain to his truck and Lacy's truck. Using Lacy's truck, the pair pulled the immobilized lift truck out of the gap and off the dock plate. Evans parked the truck on the ramp, turned it off, and applied the parking brake. The incline on the ramp was a 12 percent grade. Evans' truck was not carrying a load. The lift truck came equipped with an alarm that will sound when the operator gets out of the seat and the park brake is not applied. Evans stepped down from his truck, and the alarm did not sound. Evans did not place chocks under the

wheels because they were not available at the plant. He also did not lower the clamp attachment.[2] Evans placed himself between the two trucks, presumably to unhook the tow chain.

The parked truck initially did not move. Very quickly, however, Lacy noticed that Evans' truck began to roll backwards, toward Evans. Lacy screamed to warn Evans, but, due to the loud ambient noise at the plant, Evans did not hear him. Evans was crushed and killed when the truck rolled down the incline and collided with the other truck, pinning Evans between the two. A post-accident examination revealed that the truck's parking brake was out of adjustment.

II. THE LIFT TRUCK, ITS CHARACTERISTICS, AND REQUIREMENTS FOR TRAINING AND OPERATION.

The lift truck in question, a Hyster S120XMS,[3] is a specialized industrial vehicle. It weighs 20,000 pounds. It resembles a forklift, but it is equipped with a clamp attachment. The clamp attachment weighs approximately 2,800 pounds. The clamp attachment allows the trucks to grab and move large bales of paper. The truck was rated to lift a maximum load of 7,700 pounds. This particular lift truck went into production in 2001. NACCO sold the truck to Evans' employer in March 2003.

The vehicle is equipped with an "operator adjustable" parking brake that is located "over-center" with respect to the operator's seating position. Approximately 60 percent of the vehicles in this class in 2003 were equipped with such a brake. Other lift trucks also had operator

[2] Federal regulations required the operator to lower the clamp to the ground when the vehicle was left unattended. 29 C.F.R. § 1910.178(m)(5)(i). The benefit of this maneuver is that the clamp would create friction that would help maintain the truck in place. Operators at the International Paper plant were not trained to lower the clamps. Placing the clamps on the ground could distort the shape of the clamps, causing them to "mushroom," which, in turn, meant that the clamps could damage the paper rolls the clamps were designed to pick up.

[3] The record describes NACCO Materials Handling Group, Inc., as the successor in interest to Hyster Company.

adjustable brakes, but they were laid out in a hand ratchet or foot ratchet configuration. The operator of a vehicle with an operator-adjustable, over-center brake activates the over-center brake by manually pulling back on a lever that is located on the dashboard. The amount of tension on an operator-adjustable, over-center brake can be adjusted by twisting a knob situated at the top of the lever. The evidence established that the twisting action required the operator to deliberately tighten or loosen the brake; the operator could not inadvertently tighten or loosen the brake. Rotating the knob in one direction increases the tension on the brake, and rotating the knob in the opposite direction decreases the tension. No tools are necessary to increase or decrease the tension on the brake. When an operator pulls back on the park brake lever, he can feel whether the brake is tight or loose. As part of the elaborate development process, Hyster tested the prototype truck with trained operators to gain feedback. It did not receive any negative feedback with respect to the operator-adjustable, over-center park brake.

The cabin of the truck contained several warnings. A warning in bright orange, next to the parking brake, stated:

WARNING

APPLY PARKBRAKE before
leaving seat, parkbrake
not automatically applied.

ALARM will sound if
parkbrake is not applied.

In addition, the cabin contained an extensive series of warnings on a variety of subjects, which told the operator, among other things, that "FAILURE to follow these instructions can cause SERIOUS INJURY or DEATH! AUTHORIZED, TRAINED OPERATOR ONLY!" One

of those warnings stated that "BEFORE DISMOUNTING, neutralize travel control, lower carriage, set brake. WHEN PARKING, also shut off power, close LPG fuel valve, block wheels on inclines."

Industry standards, in particular the standard set by the American National Standards Institute ("ANSI") B56.1-2000, required the parking brake to be capable of holding the truck still under a full load on a 15 percent incline. Federal government regulations incorporated the industry standard by reference. *See* 29 C.F.R. § 1910.178(a)(2).

The lift truck is not a consumer product. Driving such a truck, an operator testified, "can be quite a dangerous job." Federal law requires operators of such lift trucks to be trained and certified. 29 C.F.R. § 1910.178(l). The operators at the International Paper plant were trained through a combination of classroom instruction, hands-on demonstration with a lift truck, and on the truck with a mentor. Evans had completed the classroom component, and he had received some hands-on training under the supervision of an experienced operator. The operator who trained Evans said that while he did not specifically recall training Evans on adjusting the parking brake, it is something he would normally cover with trainees.

The plant's policy did not call for training its operators to adjust the park brake. Operators nonetheless learned how to do so by speaking with the mechanics who serviced the trucks. Operators were not supposed to adjust the brake themselves. If the parking brake needed adjustment, operators were taught to tag the lift truck so it could be taken out of service for maintenance. One operator testified that it was "fairly common" for an operator on a previous shift to lessen the tension on the parking brake. He believed operators from prior shifts were loosening the tension required to apply the brake in order to lessen the effort needed to apply the

brake and make their jobs easier. Operators were trained to inspect and test the park brake, but they were not trained to test it on the ramp. Operators were not permitted to stop on the loading ramp and park there.

III. THE WRONGFUL DEATH ACTION.

Evans' widow, as the administrator of his estate, filed a wrongful death action against several defendants, including the manufacturer, alleging breach of express or implied warranties and also alleging that the lift truck was negligently designed. At trial, the plaintiff presented the expert testimony of Frederick Mallett to prove that the parking brake was negligently designed. Mallet previously served as an engineer and a manager with Mitsubishi-Caterpillar Forklift America, which designed lift trucks that competed with NACCO's trucks.

Mallett rejected mechanical failure or overloading as a cause of the accident. He testified that the truck rolled down the ramp because the parking brake was not correctly adjusted. In Mallett's view, the brake was defectively designed because it was operator adjustable. Mallett testified that a mechanic should adjust the parking brake, not an operator. Mallett acknowledged that placing an untrained or uncertified operator on the truck was a misuse of this product. Mallett testified that "[t]he design was defective and unreasonably dangerous in that it failed to eliminate misuse by the operator." He explained that this "misuse" was foreseeable. He cited to a 1944 publication from the United States Labor Department's Division of Labor Standards addressing product safety:

> Positive mechanical means of eliminating machine hazards should be applied wherever possible and to the maximum possible extent. One commonly encounters the attitude that it is sufficient to guard a machine so that an operator faithfully obeying carefully-worked-out rules of safe operation can escape injury. . . .
>
> This attitude is wrong and is responsible for a heavy portion of the injuries connected with machine operation. Every

> uncontrolled hazard, however remote, will produce its quota of injuries and even the most careful operator will at times do the wrong thing or fail to take some necessary precaution. Furthermore, many machine operators are neither carefully selected nor adequately trained, and in many establishments supervision is neither safety-minded nor adequate.

Mallett acknowledged that the company he previously worked for, and for which he oversaw the design of competitor trucks, did not have a parking brake that had to be adjusted by a mechanic.

Experts for both the plaintiff and the manufacturer explained in similar terms the benefits and drawbacks of an operator-adjusted brake. Mallett testified that, over time, the cables that control the parking brake will stretch and mechanical components of the linkage are subject to wear. Similarly, David Couch, called as an expert by the manufacturer, explained that the brake system can become looser, wear out, and experience linkage stretch over time. Both experts agreed that an operator-adjusted brake allows the operator to make sure the brakes are properly functioning by tightening the brake when they became looser. Walter Girardi, a consultant for NACCO, also explained that an operator-adjustable brake allows the operator to adjust the brake for particular applications. Less force is needed to keep the truck stationary on level ground than if it is being parked on an incline.

Mallett acknowledged that a downside to requiring a mechanic to adjust the brake is that the truck must be taken out of service if the parking brake is not performing to the required standard. Similarly, Girardi testified that companies of all sizes use these trucks, and some may own only one truck. He explained that an advantage of operator adjustability is that the truck need not be taken out of service by a maintenance department or an outside contractor when the park brake needs adjustment.

Mallett explained that it was possible to design a handle that would allow the operator to tighten the brake without allowing him to loosen it, but that approach, he testified, creates a separate hazard. If the operator overtightens the brakes, and cannot loosen it, the brake cables can snap when applied. Mallett agreed it might be convenient to allow the operator to make the adjustment, but explained that "the potential then exists for incorrect adjustment based on the level of experience and training of the operator."

Mallett agreed that the brake's design complied with industry standards. He also agreed that there was no international standard in Japan, Australia, or Europe that prohibited the use of operator-adjustable, over-center park brakes. The expert for the manufacturer similarly testified that no other standard worldwide prohibited a brake of this type.

The trial court provided the jury with instructions covering negligent design, implied warranty, and failure to warn. The jury was provided with a verdict form that contained three options, one allowing the jury to find for the plaintiff on the issue of negligent design, another allowing the jury to find for the plaintiff on her implied warranty claim and, finally, an option allowing the jury to find in favor of the defendant. The jury was not given an option to find in favor of the plaintiff on the basis that the warnings were inadequate. The jury found for the plaintiff on the negligent design theory and awarded total damages in the amount of $4.2 million.

NACCO moved to set aside the verdict, arguing, among other things, that Evans was guilty of contributory negligence as a matter of law and that the evidence failed as a matter of law to establish that the parking brake was unreasonably dangerous. The trial court set aside the jury's verdict on the basis that Evans was contributorily negligent as a matter of law. The plaintiff appeals from the trial court's contributory negligence holding, and NACCO has

assigned cross-error on, *inter alia*, the issue of the sufficiency of the evidence of a negligent design.

ANALYSIS

I. APPLICABLE LEGAL STANDARDS.

"The quest for understanding design defectiveness perennially vexes courts and accomplished products liability lawyers attempting to unravel design defect problems." David G. Owen & Mary J. Davis, Products Liability 702-03 (4th ed. 2014). To state the obvious, "a courtroom is a poor substitute for a design office." *Santiago v. Johnson Mach. & Press Corp.*, 834 F.2d 84, 85 (3rd Cir. 1987) (quoting *Lewis v. Coffing Hoist Div., Duff-Norton Co.*, 528 A.2d 590, 596 (Pa. 1987) (Hutchison, J., dissenting)). Designing a product, particularly a complex product, involves an enormous number of variables: expected use, feasibility, appeal to the customer, cost, safety, ease of use, durability, benchmarking competitors' products, and many more. Despite the difficulty of the task, it is the duty of the courts to provide an impartial forum when poorly designed products cause injuries. In the absence of statutory guidance, the standards governing design defect litigation must be developed through case law.

Virginia has not adopted a strict liability regime for products liability. When alleging that a product suffered from a design defect, a plaintiff may proceed under a theory of implied warranty of merchantability or under a theory of negligence. Negligence is the failure to exercise "that degree of care which an ordinarily prudent person would exercise under the same or similar circumstances to avoid injury to another." *Griffin v. Shively*, 227 Va. 317, 321, 315 S.E.2d 210, 212-13 (1984) (quoting *Perlin v. Chappell*, 198 Va. 861, 864, 96 S.E.2d 805, 808 (1957)). With respect to designing products, the law imposes on a manufacturer "a duty to exercise ordinary care to design a product that is reasonably safe for the purpose for which it is

intended." *Turner v. Manning, Maxwell & Moore, Inc.*, 216 Va. 245, 251, 217 S.E.2d 863, 868 (1975).

Whether a plaintiff proceeds under a theory of warranty or negligence, the plaintiff must prove:

> (1) that the goods were unreasonably dangerous either for the use to which they would ordinarily be put or for some other reasonably foreseeable purpose, and (2) that the unreasonably dangerous condition existed when the goods left the defendant's hands.

Featherall v. Firestone Tire & Rubber Co., 219 Va. 949, 963-64, 252 S.E.2d 358, 367 (1979) (quoting *Logan v. Montgomery Ward & Co.*, 216 Va. 425, 428, 219 S.E.2d 685, 687 (1975)).

"A product is unreasonably dangerous if it is defective in assembly or manufacture, unreasonably dangerous in design, or unaccompanied by adequate warnings concerning its hazardous properties." *Morgen Indus., Inc. v. Vaughan*, 252 Va. 60, 65, 471 S.E.2d 489, 492 (1996). In addition, "[w]hile a manufacturer may not be held liable for every misuse of its product, it may be held liable for a *foreseeable* misuse of an unreasonably dangerous product." *Jeld-Wen, Inc. v. Gamble*, 256 Va. 144, 148, 501 S.E.2d 393, 396 (1998).

Whether a manufacturer was negligent involves an objective inquiry. *Holiday Motor Corp. v. Walters*, 292 Va. 461, 478 n.14, 790 S.E.2d 447, 455 n.14 (2016); *Virginia Elec. & Power Co. v. Dungee*, 258 Va. 235, 252, 520 S.E.2d 164, 174 (1999) ("The test for negligence is always objective."). "To sustain a claim for negligent design, a plaintiff must show that the manufacturer failed to meet objective safety standards prevailing at the time the product was made." *Holiday Motor*, 292 Va. at 478 n.14, 790 S.E.2d at 455 n.14. Governmental safety standards and industry practices are highly relevant on the question of whether the manufacturer's design was negligent because they permit an inference that the manufacturer

exercised (or failed to exercise) ordinary prudence. *See id.* Governmental regulations and industry standards and practices are not dispositive, however. It may be the case that such regulations simply do not exist, for example, or if they do, they may have become antiquated. Industry practices likewise are not conclusive in assessing whether a manufacturer was negligent. *See Sexton v. Bell Helmets, Inc.*, 926 F.2d 331, 336 (4th Cir. 1991) ("[C]onformity with industry practice is not conclusive of the product's safety, because an industry could adopt a careless standard.").

In addition to governmental regulations, and industry norms and practices, reasonable consumer expectations can provide objective evidence that the product is defective. *Holiday Motor*, 292 Va. at 478 n.14, 790 S.E.2d at 455 n.14 (stating the law imposes a duty on a manufacturer to design a product that satisfies "reasonable consumer expectations") (quoting *Redman v. John D. Brush & Co.*, 111 F.3d 1174, 1177-78 (4th Cir. 1997)). This may be shown by direct evidence of what reasonable consumers considered defective as well as published literature or industry practices recognizing a safety standard that reasonable consumers expected. *See Alevromagiros v. Hechinger Co.*, 993 F.2d 417, 420 (4th Cir. 1993). Published literature may include, among other sources, marketing, advertising, presentation, promotional materials, product manuals, and instruction booklets.

Since Virginia law requires an examination of whether the "unreasonably dangerous condition existed when the goods left the manufacturer's hands," *Morgen Indus.*, 252 Va. at 65, 471 S.E.2d at 492, the court examines the reasonable safety expectations of consumers at the time the product left the manufacturer's hands. In undertaking this examination, however, we are guided by the principle that wholly subjective expectations are insufficient to establish the

degree of protection reasonable consumers expect from a product. *Redman v. John D. Brush & Co.*, 111 F.3d 1174, 1181 (4th Cir. 1997).

II. THE PLAINTIFF FAILED TO ESTABLISH AS A MATTER OF LAW THAT THE OPERATOR-ADJUSTABLE, OVER-CENTER BRAKE IS UNREASONABLY DANGEROUS.

Mallett did not testify that the design of the park brake violated government regulations, industry norms or practices, or consumer expectations. With respect to governmental or published industry standards, Mallett agreed that the design of the brake satisfied the applicable ANSI standard. Since governmental regulations incorporated by reference the industry standard, the design satisfied that standard as well. Governmental standards addressed the ability of the brake to hold on a particular incline. Mallett acknowledged that there was no international standard in Japan, Australia, Europe, or elsewhere that prohibited the use of operator-adjustable, over-center park brakes. Similarly, the expert for the manufacturer testified that no governmental standard in the world prohibited a brake of this type. The evidence also established that the operator adjustable design was widespread in the industry and that a majority of trucks sold employed it.

The plaintiff also presented no evidence concerning the reasonable expectations of a user or consumer of the product with respect to the operator adjustability of the park brake. To the extent the record bears any evidence on the subject, it established that operators provided no negative feedback during the testing phase of the design. The plaintiff did adduce testimony from Julian Lindsay, an experienced operator, who testified that there was "nothing good" about designing a park brake that could be "adjusted to zero so that it holds nothing." The subjective expectations of a single user, however, are not sufficient to establish the objective, reasonable expectations of consumers as a class. *See, e.g., Norris v. Excel Indus.*, 139 F. Supp.3d 742, 754 (W.D. Va. 2015), *aff'd*, 654 Fed. Appx. 588 (2016) (plaintiff failed to prove consumers

reasonably expected a higher level of protection than that called for by existing government and industry standards); *Greene v. Boddie-Noell Enters.*, 966 F. Supp. 416, 418-19 (W.D. Va. 1997) (plaintiff failed to show defendant breached a recognizable safety standard expected by reasonable consumers); *Mears v. General Motors Corp.*, 896 F. Supp. 548, 552-53 (E.D. Va. 1995) (plaintiff failed to prove consumers expected manufacturers to use design advocated by plaintiff).

Even if the plaintiff had proved that reasonable consumers expected a design that prohibited an operator from adjusting the parking brake, she failed to prove that any such design was safer overall than the operator-adjusted park brake. Evans argues on appeal that the ANSI standard and the governmental standard incorporating it are "silent on the question of whether a parking brake should be operator-adjustable." With respect to industry practices, she notes that, in 2002, some manufacturers offered lift trucks with parking brakes that were not operator adjustable. The plaintiff maintained that the design was negligent because an operator could adjust it. The plaintiff's theory was that an objectively reasonable design would have prevented an operator from adjusting the parking brake and thus avoided accidents like this one. Of crucial significance to the objective reasonableness inquiry, however, the plaintiff presented no evidence upon which a jury could conclude that a mechanic-adjusted park brake, or a park brake adjusted with the aid of tools, presented a safer design overall than the operator-adjusted park brake. Even where a plaintiff can prove that reasonable consumers expected a safer design, we hold that a design is not objectively unreasonable unless the plaintiff can show that an alternative design is safer overall than the design used by the manufacturer.

For example, in *Morgen Industries v. Vaughn*, the question was whether the design of a concrete conveyer unit was defective for failing to include wheel guards recommended by

industry standards that would have prevented the plaintiff's foot from being pinned between the wheel and the rail. 252 Va. at 63-64, 471 S.E.2d at 491. In such cases, where the installation of a safety device is at issue, if the addition of the safety feature was feasible from an engineering and economic viewpoint at the time the product left the manufacturer's hands, and the safety feature would have prevented the injury or death, the jury may conclude that the product is unreasonably dangerous. *Id.* at 65-66, 471 S.E.2d at 492.

With respect to the modification of a design with safety implications, however, the plaintiff must establish that the proposed design modification is safer than the design used by the manufacturer. A design is not safer if the proposed modification would expose operators and bystanders to an overall greater risk of injury or death than under the challenged design. For example, although airbags unquestionably save lives, they can expose smaller persons and children to a risk of injury or death in certain conditions.[4] A hypothetical proposed redesign to remove the airbag would eliminate this danger to children. It would also, however, result in greater overall risk of injury or death. Such an alternative redesign is not safer. The plaintiff in that circumstance would have failed to prove, as a matter of law, that the challenged design is unreasonably dangerous. "[A] primary purpose of products liability law is to encourage the design of safer products and thereby reduce the incidence of injuries." *Prentis v. Yale Mfg. Co.*, 365 N.W.2d 176, 185 (Mich. 1984). It would stand the tort system on its head if we were to

[4] *See* Centers for Disease Control and Prevention, *Air-Bag Associated Fatal Injuries to Infants and Children Riding in Front Passenger Seats – United States*, 44 Morbidity and Mortality Weekly Report 845-47 (Nov. 17, 1995), available at https://www.cdc.gov/mmwr/preview/mmwrhtml/00039562.htm (last visited January 22, 2018). *See also* John D. Graham, et al., *Reducing Risks to Children in Vehicles with Passenger Airbags*, 102 Pediatrics 1 (1998).

incentivize manufacturers to design products that are less safe, or to punish them for designing products that are safer overall than the proposed alternatives.

This accident occurred because employees from a prior shift loosened the park brake. The employer then placed, in violation of federal law, an uncertified, inexperienced employee on this same truck. Evans used the truck without noticing that the park brake was disabled and then parked it on an incline without chocking the wheels. A park brake that is adjustable by a mechanic only would prevent an accident in this very specific circumstance – shift workers from a prior shift would not be able to loosen the brake, and an inexperienced, uncertified operator would thus not face the risk of a loosened park brake. A park brake that is adjustable only with the aid of tools may reduce the likelihood of operators casually loosening the brake, depending on the ease or difficulty of making the adjustment. The jury could have concluded that the plaintiff's proposed redesigns would have prevented this accident or, at least, reduced the odds of such an accident occurring. But that is not the end of the analysis.

The evidence in this case was undisputed from both the plaintiff's expert and the defense expert that components of the park brake will wear out over time. Allowing the operator to adjust the brake allows the brake to work properly without having to take the truck out of service. Some large industrial customers may have multiple trucks to substitute for the truck that is out of service. According to the evidence, other customers, such as smaller companies, may not have any additional trucks to place into service while the truck with weakened brakes is being serviced off-site. An inescapable consequence of a design that limits brake adjustment to a mechanic, or that makes it more difficult to adjust the brake by requiring the use of tools, is that some operators and their employers will continue to use trucks with weakened brakes rather than take them out of service and face the potential of unproductive downtime.

Thus, while the jury could have concluded from the evidence that the plaintiff's proposed redesign would eliminate, or at least reduce, the likelihood that the type of accident at issue in this case would occur, there was no evidence from which the jury could conclude that the plaintiff's proposed redesign would result in a product that is safer overall. It may be that the plaintiff's proposed design is safer overall. It may also be true, however, that operators and bystanders would face a *greater* risk of injury under the plaintiff's redesign than exists under the current design. Thus, even if plaintiff had proved that reasonable consumers expected a design that limits brake adjustment to a mechanic, or that makes it more difficult to adjust the brake by requiring the use of tools, there was no evidentiary basis for a jury to conclude that plaintiff's proposed redesign was safer overall.

Therefore, plaintiff failed to prove that the operator-adjustable, over-center brake was unreasonably dangerous.

III. FAILURE TO WARN CLAIM.

The plaintiff proposes an alternative theory of liability, arguing the jury instructions, as a whole, were sufficient for the jury to find that NACCO was negligent in failing to warn users of the dangers associated with the park brake. The plaintiff suggests the jury could have found the warnings were "inadequately designed." We find the argument unpersuasive.

At the outset, we note that a failure to warn claim is distinct from a manufacturing or a design defect claim. Our cases reflect this distinction. *See Morgen Indus.*, 252 Va. at 65, 471 S.E.2d at 492 (stating that a product may be unreasonably dangerous based on defects "in assembly or manufacture, unreasonably dangerous in design, or unaccompanied by adequate warnings concerning its hazardous properties"); *Featherall*, 219 Va. at 962-64, 252 S.E.2d at 366-67 (separately analyzing failure to warn and design defect claims). As the Supreme Court of

Missouri has observed, "design defect and failure to warn theories constitute distinct theories aimed at protecting consumers from dangers that arise in different ways." *Moore v. Ford Motor Co.*, 332 S.W.3d 749, 757 (Mo. 2011). A product may be as safe as engineering will permit, and suffer from no design defect, but nevertheless require a warning to consumers about a hidden danger. "[D]esign defect theories address the situation in which a design is itself inadequate, rendering the product unreasonably dangerous without regard to whether a warning is given." *Id.*

> Failure to warn claims are concerned with how a lack of warning about a product, and the user's resultant lack of knowledge about the product's dangers or safe use, may give rise to an unreasonable danger to the consumer. In such a case, it would not be inconsistent for a jury to find that a product's design is not unreasonably dangerous in itself but that, without an accompanying warning imparting knowledge of the product's dangerous characteristics or safe use, the *otherwise* non-defective product is unreasonably dangerous.

Id. See also Battersby v. Boyer, 526 S.E.2d 159, 162 (Ga. Ct. App. 1999). In short, a design defect is not the same as a failure to warn.

The jury instructions in this case, drawn from the Virginia Model Jury Instructions, reflect this distinction. The instructions separated defective design from other theories and the jury was provided with a verdict form for defective design or breach of implied warranty. The jury was instructed that a product is unreasonably dangerous in three separate ways: "if it is defective in assembly or manufacture, unreasonably dangerous in design, or unaccompanied by adequate warnings concerning its hazardous properties."[5] This instruction drew a distinction

[5] See 2 Virginia Model Jury Instructions - Civil, No. 34.076 (definition of unreasonably dangerous product).

between negligent design and inadequate warnings as a basis for liability. The separate instruction on failure to warn was phrased in terms of a "duty to give an adequate warning" – not to *design* a warning.[6]

The finding instruction, number 32, provided as follows:

> The plaintiff has brought her suit based on both negligent design and breach of implied warranty. She may recover under either basis of liability.
>
> As to the claim of breach of implied warranty, you shall find your verdict for the plaintiff and against defendant NACCO Materials Handling Group, Inc. if the plaintiff has proved by the greater weight of the evidence that:
>
> (1) an implied warranty was given by NACCO Materials Handling Group, Inc. when it sold the Hyster S120XMS;
>
> (2) NACCO Materials Handling Group, Inc. breached the implied warranty; and
>
> (3) NACCO Materials Handling Group, Inc.'s breach of the implied warranty was a proximate cause of Jerry Wayne Evans' accident and death and of plaintiff's damages;
>
> You shall find your verdict on this claim for the defendant if:
>
> (1) the plaintiff has failed to prove either, or any of the three elements above; or
>
> (2) the implied warranties were properly disclaimed in the sale of the Hyster S120XMS; or
>
> (3) you find by the greater weight of the evidence that the operation of the Hyster S120XMS by the plaintiff's decedent, Jerry Wayne Evans, was a misuse of the product that was not reasonably foreseeable by the defendant, and that the misuse was a proximate cause of the accident.
>
> As to the claim of negligent design, you shall find your verdict for the plaintiff and against defendant NACCO Materials

[6] See 2 Virginia Model Jury Instructions - Civil, No. 34.150 (manufacturer's and seller's duty to warn).

> Handling Group, Inc. if the plaintiff has proved by the greater weight of the evidence that:
>
> > (1) NACCO Materials Handling Group, Inc. negligently designed the Hyster S120XMS; and
> >
> > (2) NACCO Materials Handling Group, Inc.'s negligence was a proximate cause of Jerry Wayne Evans' accident and death, and of plaintiff's damages;
>
> You shall find your verdict for defendant on this claim if:
>
> > (1) the plaintiff has failed to prove either or both of the two elements above; or if
> >
> > (2) you find by the greater weight of the evidence that the plaintiff[']s decedent, Jerry Wayne Evans, was contributorily negligent and that his contributory negligence was a proximate cause of the accident.[7]

The verdict form did not provide the jury with an option to find for the plaintiff on a failure to warn theory. The verdict form provided the jury with only two options to find for the plaintiff. The first was negligent design. In the context of the facts of this case and of these instructions, negligent design referred to the design of the park brake – not the design of a warning. The jury found liability on this basis. The second option for the jury was to find for the plaintiff on a theory of breach of implied warranty. These instructions, among other things, instructed the jury that a manufacturer breached an implied warranty if the product was unreasonably dangerous.[8] A product could be unreasonably dangerous due to a failure to warn. On these instructions, the jury's defense verdict on breach of implied warranty, of necessity, was

[7] *See* 1 Virginia Model Jury Instructions - Civil, Nos. 3.000 (issues and allocation of burdens of proof) and 3.050 (finding instruction).

[8] *See* 2 Virginia Model Jury Instructions - Civil, No. 34.075 (breach of warranty by seller or manufacturer).

a defense verdict on the failure to warn. Accordingly, we conclude that the jury rejected the plaintiff's failure to warn theory.

CONCLUSION

We affirm the judgment below on alternative grounds and enter final judgment for the defendant.

Affirmed.