

STATUS AND TRENDS IN STATE PRODUCT LIABILITY LAW: STATE OF THE ART EVIDENCE

INTRODUCTION

State of the art evidence refers to the pertinent scientific and technological knowledge existing at the time a product was designed or manufactured.¹ Manufacturers often try to introduce such evidence in product liability actions to show that their product could not have been designed, manufactured or tested in a safer manner in light of then-existing knowledge or technology. Several states recently have enacted statutes that provide guidelines for the admission and use of state of the art evidence.² These statutes share the common purposes of resolving the confusion and controversy surrounding this evidence and protecting manufacturers from unjust claims.

This section will discuss the rationales for the admissibility of state of the art evidence. The section will examine how various states treat state of the art evidence and how such evidence affects standards of proof. Finally, the section will describe how states have tailored state of the art evidence to their particular needs and how these modifications may shape the future of the doctrine.

THE EVOLVING DEFINITION

State of the art evidence has become a source of great confusion in product litigation. This confusion has developed largely because courts have used the term "state of the art" to describe several forms of circumstantial evidence.³ When courts are referring to then-existing knowledge of scientific and technological advances, state of the art evidence may consist of expert testimony about such knowledge by scientists and engineers in the relevant field.⁴

State of the art has also been defined in terms of industrial customs⁵ or concepts of practical feasibility.⁶ A defendant introducing evidence of

1. See, e.g., *Bruce v. Martin-Marreitta Corp.*, 544 F.2d 442 (10th Cir. 1976); *Olson v. Artic Enterprises*, 349 F. Supp. 761 (D.N.D. 1972); *Balido v. Improved Mach., Inc.*, 29 Cal. App. 3d 633, 105 Cal. Rptr. 890 (1973); *Wiska v. St. Stanislaus Social Club, Inc.*, 390 N.E.2d 1138 (Mass. App. 1979).
2. See ARIZ. REV. STAT. ANN. § 12-683 (1984); ARK. STAT. ANN. § 34-2804 (1983); COLO. REV. STAT. § 13-21-403(1)(a) (Supp. 1987); IND. CODE ANN. § 33-1-1.5-4(4) (Burns 1983); IOWA CODE ANN. § 668.12 (Supp. 1986); KAN. STAT. ANN. § 60-3304(a)(b) (1983); KY. REV. STAT. § 411.310 (2) (1986); NEB. REV. STAT. § 25-21, 182 (1985); TENN. CODE ANN. § 29-28-104 (1983); UTAH CODE ANN. § 78-15-6(3) (Supp. 1986); WASH. REV. CODE § 7.72.050 (1)(2) (Supp. 1987).
3. For a discussion of the sources of confusion surrounding the definition of state of the art, see 1A L. FRUMER & M. FRIEDMAN, *PRODUCT LIABILITY*, § 12.07[2] (1985).
4. See 1A L. FRUMER & M. FRIEDMAN, *supra* note 3, at § 12.07[3], 376.7 (1985).
5. See, e.g., *Sturm, Ruger & Co. v. Day*, 594 P.2d 38 (Alaska 1979); *Caterpillar Tractor Co. v. Beck*, 593 P.2d 871 (Alaska 1979); *Horn v. General Motors Corp.*, 17 Cal. 3d 359, 551 P.2d

customary practices in the industry would try to show that the production technologies and procedures were consistent with those used by other manufacturers in the industry.⁷ A defendant introducing feasibility evidence would try to show that alternative designs or manufacturing methods were impractical in light of cost, marketability and mass production requirements.⁸ Some courts have defined state of the art in terms of compliance with governmental and administrative regulations relating to various aspects of production.⁹

The majority of jurisdictions treat the defendant's state of the art evidence, however defined, as merely one factor to be considered in assessing liability. The courts in these jurisdictions will admit this evidence only to show that the manufacturer was not negligent¹⁰ or that the product was not defective.¹¹ Although this evidence has been sufficient in some cases to direct a verdict in the defendant's favor,¹² state of the art evidence normally does not raise a presumption in the defendant's favor, nor does it constitute an affirmative defense. Courts normally consider such evidence relevant but not conclusive.

EFFECT ON STANDARDS OF PROOF

State of the art statutes have substantially altered the common law use of that type of evidence in several states. Most state statutes provide that evidence of compliance with then-existing state of the art standards raises an affirmative defense¹³ or presumption of nonliability.¹⁴ These

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- 398, 131 Cal. Rptr. 69 (1976); *Gelumino v. E.W. Bliss Co.*, 10 Ill. App. 3d 604, 295 N.E.2d 110 (1975). *But see*, *Suter v. San Angelo Foundry & Mach. Co.*, 81 N.J. 150, 406 A.2d 140 (1979); *Cantu v. John Deere Co.*, 24 Wash. App. 701, 603 P.2d 839 (1979).
6. *See, e.g.*, *Larsen v. General Motors Corp.*, 391 F.2d 495 (8th Cir. 1968); *Scott v. Dries & Krump Mfg. Co.*, 26 Ill. App. 3d 971, 326 N.E.2d 74 (1975); *Roach v. Kononen*, 269 Ore. 457, 525 P.2d 125 (1974).
 7. For a discussion of proof aspects of state of the art evidence, *see* O'Donnel, *Design Litigation and the State of Art: Terminology, Practice and Reform*, 11 AKRON L. REV. 627, 646-53 (1978).
 8. *See generally* *id.*
 9. *See, e.g.*, *Frazier v. Keysor Indus.*, 607 P.2d 1296 (Colo. App. 1979); *Rucker v. Norfolk & W. Ry.*, 64 Ill. App. 3d 770, 381 N.E.2d 715 (1978), *rev'd on other grounds*, 77 Ill. 2d 434, 396 N.E.2d 534 (1979).
 10. *See, e.g.*, *Olson v. Artic Enterprises*, 349 F. Supp. 761 (D.N.D. 1972); *Larsen v. General Motors Corp.*, 391 F.2d 495 (8th Cir. 1968); *Horn v. General Motors Corp.*, 17 Cal. 3d 359, 551 P.2d 398, 131 Cal. Rptr. 69 (1976); *Gelumino v. E.W. Bliss Co.*, 10 Ill. App. 3d 604, 295 N.E.2d 110 (1975); *Wiska v. St. Stanislaus Social Club, Inc.*, 390 N.E.2d 1138 (Mass. App. 1979).
 11. Many courts admit state of the art evidence to measure the reasonable consumer expectation as a basis for determining design defectiveness. *See, e.g.*, *Bruce v. Martin-Marrietta Corp.*, 544 F.2d 442 (10th Cir. 1976); *Cantu v. John Deere Co.*, 24 Wash. App. 701, 603 P.2d 839 (1979). Other courts admit this evidence as part of a risk/utility analysis that serves the same purpose. *See, e.g.*, *Lolie v. Ohio Brass*, 502 F.2d 741 (7th Cir. 1974); *Voss v. Black & Decker Mfg. Co.*, 59 N.Y.2d 102, 463 N.Y.S.2d 398 (1983). *Wilson v. Piper Aircraft Corp.*, 282 Or. 61, 577 P.2d 1322 (1978); *Turner v. General Motors Corp.*, 584 S.W.2d 844 (Tex. 1979).
 12. *E.g.*, *Olson v. Artic Enterprises*, 349 F. Supp. 761 (D.N.D. 1972); *Mondshour v. General Motors Corp.*, 298 F. Supp. 111 (D. Md. 1969).
 13. *See* ARIZ. REV. STAT. § 12-683 (1984); IND. CODE ANN. § 33-1-1.5-4(4) (Burns 1983); NEB. REV. STAT. § 25-21, 182 (1985).
 14. *See* COLO. REV. STAT. § 13-21-403(1)(a) (Supp. 1987); KAN. STAT. ANN. § 60-3304(a)(b) (1983); KY. REV. STAT. § 411.310 (2) (1986); TENN. CODE ANN. § 29-28-104 (1983); UTAH CODE ANN. § 78-15-6(3) (Supp. 1986).

statutes go beyond the common law by immunizing a defendant from liability in those situations where pertinent scientific and technological knowledge was unavailable at the time of design or manufacture.

In Arizona and Nebraska, a product liability defendant cannot be held liable for a defective design of a product if it is proved that the design, planning and manufacturing techniques of the product conformed to the state of the art at the time of sale.¹⁵ The Arizona statute defines state of the art as the "technical, mechanical, and scientific knowledge . . . which was in existence and reasonably feasible for use at the time of manufacturing."¹⁶ Nebraska also defines state of the art evidence in terms of feasibility by providing that it is "the best technology reasonably available" at the time of sale.¹⁷ By offering manufacturers who comply with the state of the art standards an affirmative defense in product actions, these statutes encourage manufacturers to keep abreast of scientific and technological advances and develop their product's safety technology to the point that it is economically feasible.

Statutes in Indiana¹⁸ and Iowa¹⁹ also provide affirmative defenses to product liability defendants proving conformity with state of the art. These statutes, however, provide that evidence of conformity with this standard is measured at the time the product was "designed, manufactured, packaged or labelled."²⁰ By measuring the manufacturer's responsibility to provide defect-free products from the time of its first design, these states impose a more stringent requirement upon a defendant seeking to introduce state of the art evidence, especially if it manufactures and markets a product with long design lead times.

The Colorado product liability statute creates a rebuttable presumption that a product was neither defective nor its manufacturer or seller negligent if, before the sale, it conformed to the "state of the art as distinguished from industrial standards."²¹ By distinguishing state of the art from general industrial standards, this statute immunizes manufacturers who incorporate new advancements in safety devices and scientific techniques and expressly withholds such protection to those who merely follow the customs of the industry.

The Kentucky Product Liability Act,²² on the other hand, creates a rebuttable presumption that a product is not defective if its design,

15. ARIZ. REV. STAT. ANN. § 12-683 (1984); NEB. REV. STAT. § 25-21, 182 (1985).

16. ARIZ. REV. STAT. ANN. § 12-683 (1984).

17. NEB. REV. STAT. § 25-21, 182 (1985).

18. IND. CODE ANN. § 33-1-1.5-4(4) (Burns 1983). The affirmative defense afforded by this statute is limited to actions in which "physical harm is caused by a defective product." *Id.* § 33-1-1.5-4(4) (Burns 1983).

19. IOWA CODE ANN. § 668.12 (Supp. 1986). This statute provides that "a percentage of fault shall not be assigned to the [the defendants] if they plead and prove that the product conformed to the state of the art . . ." *Id.* at § 668.12 (Supp. 1986).

20. IND. CODE ANN. § 33-1-1.5-4(4) (Burns 1983); IOWA CODE ANN. § 668.12 (Supp. 1986). See also, KY. REV. STAT. § 411.310 (2) (1986).

21. COLO. REV. STAT. § 13-21-403(1)(a) (Supp. 1987).

22. KY. REV. STAT. § 411.310 (2) (1986).

manufacturing, or testing standards conform either to the state of the art or "generally recognized and prevailing standards" in the industry.²³ The Kentucky law thus provides a more liberal requirement for protection and raises a presumption in the defendant's favor so long as its production practices are accepted by the industry.²⁴

Several states, including Utah, Tennessee and Kansas, have enacted provisions in their product liability statutes that create a presumption of a product's nondefectiveness if it complies with government standards established for the industry.²⁵ Although it has been recommended that such standards be objective, rigorous and up to date,²⁶ they may, in fact, be no more than minimum standards developed by the industry. Consequently, these standards may function as protection to industries that are customarily slow to seek safety advances or are satisfied with a low level of safety.

Kansas and Washington have almost identical provisions, and each provides an absolute defense to a manufacturer whose products are in compliance with mandatory government contract specifications relating to design, manufacturing and warning.²⁷ Conversely, noncompliance with such specifications will deem the product defective.²⁸ This protection assumes that the specifications will consistently provide adequate guidelines for producing defect-free products.

Not all product liability statutes addressing the issue of state of the art standards provide defendants with a defense in product liability actions. State of the art provisions in Arkansas and Washington are designed exclusively for the purpose of designating admissible evidence.²⁹ In Arkansas, a defendant may introduce evidence of compliance with government statutes or administrative regulations, but only to show that a product is not unreasonably dangerous.³⁰ The Washington product liability provision is not so restrictive. It states that not only compliance with regulatory standards, but also evidence of custom in the industry and technological feasibility may be introduced for the trier of facts to

23. *Id.*

24. *Id.*

25. UTAH CODE ANN. § 78-15-6(3) (Supp. 1986); TENN. CODE ANN. § 29-28-104 (1983); KAN. STAT. ANN. § 60-3304(a)(b) (1983). Under the Kansas statute, the presumption of nondefectiveness may be rebutted if the claimant "proves by a preponderance of evidence that a reasonable prudent product seller could and would have taken additional steps." KAN. STAT. ANN. § 60-3304(a) (1983). The statutes in Utah and Tennessee do not explicitly prescribe a basis for rebutting the statutory presumption of nondefectiveness.

26. U.S. DEPARTMENT OF COMMERCE, FINAL REPORT OF THE INTERAGENCY TASK FORCE ON PRODUCT LIABILITY, at vii-40 (1978).

27. KAN. STAT. ANN. § 60-3304(c) (1983); WASH. REV. CODE § 7.72.050 (2) (Supp. 1987).

28. KAN. STAT. ANN. § 60-3304(d) (1983); WASH. REV. CODE § 7.72.050 (2) (Supp. 1987).

29. ARK. STAT. ANN. § 34-2804 (1983); WASH. REV. CODE § 7.72.050 (1) (Supp. 1987).

30. The Arkansas Code provides that state of the art evidence "shall be considered as evidence that the product is not in an unreasonably dangerous condition in regard to matters covered by these standards." ARK. STAT. ANN. § 34-2804 (1983).

consider.³¹ Thus, these statutes provide guidelines for the admission of evidence of compliance with state of art and government standards without permitting such evidence to be dispositive in the determination of liability.

CONCLUSION

The recent flurry of state activity dealing with the procedure for admission of state of the art evidence and the weight to be given such evidence suggests that the doctrine has a secure future in the area of product liability litigation. The admissibility of such evidence has increasingly been seen as a means by which courts can protect manufacturers from unjust claims. It is highly probable that states will continue experimenting with the doctrine in an attempt to make product liability litigation fairer for both parties.

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31. In Arkansas:

Evidence of custom in the product seller's industry, technological feasibility, or that the product was or was not in compliance with nongovernment standards or with legislative regulatory standards or with administrative regulatory standards, whether relating to design, construction or performance of the product or to warn or instruct as to its use may be considered by the trier of fact.

ARK. STAT. ANN. § 7.72.050(1) (1983).

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