

In the
United States Court of Appeals
For the Seventh Circuit

No. 04-2146

JOHN MESMAN and JUDY MESMAN,

Plaintiffs-Appellants,

v.

CRANE PRO SERVICES, a division
of KONECRANES, INC.,

Defendant-Appellee.

Appeal from the United States District Court for
the Northern District of Indiana, Hammond Division.
No. 2:99 CV 428 TS—**Theresa L. Springmann**, Judge.

ARGUED JANUARY 7, 2005—DECIDED MAY 31, 2005

Before POSNER, RIPPLE, and ROVNER, *Circuit Judges*.

POSNER, *Circuit Judge*. John Mesman, an employee at the Indiana plant of Infra-Metals, a manufacturer of steel products, lost one leg and suffered a serious injury to the other when a load of steel sheets that he was unloading from a boxcar fell on him from the crane that was lifting the sheets out of the boxcar. He and his wife (she complaining of loss of consortium) brought suit in an Indiana state court under Indiana's products liability law against the firm that had

rebuilt the crane, Konecranes, which removed the case to federal district court. A jury awarded the plaintiffs a large verdict, but the judge set it aside and entered judgment for the defendant, further ruling that if this was wrong the defendant was entitled to a new trial because the jury had been confused by irrelevant evidence and had ignored critical instructions.

The case, filed five years ago, is actually quite simple. It has been badly handled by all concerned. There was no basis for the entry of judgment for the defendant; but with reluctance in light of the age of the case, we must sustain the judge's alternative ruling granting the defendant a new trial.

Built into the plant was a very old crane, which Infra-Metals wanted renovated, for unloading steel sheets from the rail siding that ran into the plant. The crane consisted of the following parts: a beam, called the "bridge," fastened to the plant's ceiling directly above the rail siding; a hoist, suspended from the beam, which the operator of the crane could move sideways along the bridge, as well as up and down to do the lifting; another beam, called the "spreader beam," connected to the hoist; chains connecting each end of the spreader beam to "scoops" for gripping the load; and attached to the bridge an operator's cab.

Konecranes engineers visited the plant and watched the crane in operation. The most problematic feature, they would have noticed, was that when a boxcar was being unloaded underneath the section of the bridge to which the cab was attached, there was only a foot or two of clearance between the rim of the boxcar and the cab overhead. And if while being lifted by the hoist the spreader beam struck the cab, the load might be jarred loose and fall, hitting anyone standing beneath it.

The renovation undertaken by Konecranes did not involve changing the physical structure that we have described. So far as relates to this case, the most significant alteration was to substitute for the controls in the operator's cab a hand-held remote-control device with which the operator would operate the crane from ground level. To raise the load he would press the up button on the device and to lower it he would press the down button. With the cab no longer being used for anything, it could have been removed to eliminate the danger of its being struck by the spreader beam. Konecranes did not remove the cab; instead it installed alongside the up and down buttons on the remote-control device an emergency-stop button, so that if the operator sensed an impending collision between the load and the cab he could bring the spreader beam to an immediate dead stop by pressing that button. Alternatively, by pressing the down button he could reverse the direction of the hoist; but because the up and down control had a deceleration feature to reduce wear and tear on the crane, the spreader beam would continue to rise for three seconds after the down button was pressed, traversing in that period about a foot, until it stopped and began its reverse motion. Thus, pressing the down button would not arrest the upward motion of the spreader beam and load as fast as pressing the emergency-stop button would.

Konecranes also built into the renovated crane a limit switch that would automatically stop the spreader beam from rising when it came too near the bridge. But the switch was set to prevent the spreader beam from touching the bridge where the cab was *not* attached. To prevent the spreader beam from touching the cab, the limit would have had to be set much lower—too low for convenient unloading of boxcars that were underneath any other section of the bridge. Thus, as set, the limit switch did nothing to prevent a collision between the load and the cab.

On the day of the accident, the crane operator, Van Til, was standing about 20 feet away from a boxcar that was underneath the abandoned cab. Mesman, standing in the boxcar, fastened a load of steel sheets to the scoops beneath the spreader beam and Van Til pressed the up button and the beam and load rose. As they rose he saw that the spreader beam was going to hit the cab, but instead of pressing the emergency-stop button, as he should have done to bring the rising load to a dead stop, he pressed the down button. Because of the deceleration feature—of which he was aware—and the narrow clearance between the cab and the rim of the boxcar, the beam continued to rise for three seconds, hitting the cab and causing the load to fall on Mesman.

Van Til's mistake was the principal cause of the accident, as the jury recognized in assigning two-thirds of the responsibility for the accident to Infra-Metals, the employer of Van Til (as of Mesman) and only one-third to Konecranes. The design of the renovated crane also contributed to the accident, however; for had Konecranes removed the cab, eliminated the deceleration feature, or modified the limit switch so that the limit could be lowered when a load was being unloaded beneath the cab, the accident would have been avoided: with certainty in the case of either of the first two modifications, less certainly in the case of the third, an adjustable limit switch, since Van Til might have forgotten to adjust it.

Under Indiana's products liability law, a design defect can be made the basis of a tort suit only if the defect was a result of negligence in the design, Ind. Code § 34-20-2-2; *Birch v. Midwest Garage Door Systems*, 790 N.E.2d 504, 518 (Ind. App. 2003); *Chesnut v. Roof*, 665 N.E.2d 7, 10 (Ind. App. 1996); *First National Bank & Trust Corp. v. American Eurocopter Corp.*, 378 F.3d 682, 691 n. 7 (7th Cir. 2004) (Indiana law), that is, only

if the product could have been redesigned at a reasonable cost to avoid the risk of injury. *Miller v. Todd*, 551 N.E.2d 1139, 1141 (Ind. 1990); *Stamper v. Hyundai Motor Co.*, 699 N.E.2d 678, 689 (Ind. App. 1998); *Weir v. Crown Equipment Corp.*, 217 F.3d 453, 460-61 (7th Cir. 2000) (Indiana law); *McMahon v. Bunn-O-Matic Corp.*, 150 F.3d 651, 657 (7th Cir. 1998) (same); *Navarro v. Fuji Heavy Industries, Ltd.*, 117 F.3d 1027, 1031 (7th Cir. 1997). Expressly requiring proof of negligence in a design-defect case, as Indiana law does, though unusual really isn't much of a legal innovation, since "defect" always implied something that should not have been allowed into the product—something, in other words, that could have been removed at a reasonable cost in light of the risk that it created. *Id.*; *Barker v. Lull Engineering Co.*, 573 P.2d 443, 455-57 (Cal. 1978); William Powers, Jr., "A Modest Proposal to Abandon Strict Products Liability," 1991 *U. Ill. L. Rev.* 639, 652, 654-59.

The risk of a heavy load falling on a worker if the spreader beam struck the disused cab was substantial because of the narrow clearance under the section of the bridge to which the crane was attached; and if the load did fall on someone it would be likely to kill or seriously injure him. Loads did fall, especially in very cold weather; the cold made the steel sheets slippery and therefore more likely to slide out of the scoops fastened to the chains of the spreader beam. The part of the plant where the sheets were unloaded from rail cars was open to the elements, and the accident to Mesman occurred on a very cold winter day. The renovated crane had been in operation for only ten days when the accident occurred, and so the fact that no one else had been injured was not compelling evidence that the risk of such an injury was slight—indeed, one or two loads had already fallen that very day, though no one had been hurt. A reasonable jury could find that the risk of serious injury was not slight.

In a negligence or “defect” case, the risk of injury has to be weighed against the cost of averting it. In Learned Hand’s influential negligence formula, *United States v. Carroll Towing Co.*, 159 F.2d 169, 173 (2d Cir. 1947), failure to take a precaution is negligent only if the cost of the precaution (what he called the “burden” of avoiding the accident) is less than the probability of the accident that the precaution would have prevented multiplied by the loss that the accident if it occurred would cause; hence the formula: $B < PL$. E.g., *Bammerlin v. Navistar Int’l Transportation Corp.*, 30 F.3d 898, 902 (7th Cir. 1994) (Indiana law); *Brotherhood Shipping Co. v. St. Paul Fire & Marine Ins. Co.*, 985 F.2d 323, 327 (7th Cir. 1993); *Eimann v. Soldier of Fortune Magazine, Inc.*, 880 F.2d 830, 835 (5th Cir. 1989); W. Page Keeton et al., *Prosser and Keeton on the Law of Torts* § 32, p. 173 n. 46 (5th ed. 1984). The cheaper the precaution, the greater the risk of accident, and the greater the harm caused by the accident, the likelier it is that the failure to take the precaution was negligent.

In this case the risk, which we said was substantial, of an injury that would be likely to be serious could have been eliminated at little cost simply by removing the cab. The cab no longer had any function. It was just a dangerous eyesore. An alternative precaution, also cheap but, as we noted earlier, less fail-safe, would have been an adjustable limit switch, which Van Til could have set to prevent the spreader beam from hitting the cab when it was underneath it. Another alternative would have been to eliminate the deceleration feature, so that pressing the down button while the spreader beam was rising would have brought the beam to an immediate stop. This would not have been an ideal solution, however, because without the feature the crane would wear out sooner. The same drawback would attend another alternative safety precaution—reducing the period of deceleration from three seconds to one, which would

have stopped the spreader beam within four inches after the down button was pressed rather than twelve. Still another possibility would have been an additional automatic limit switch, one operative only when the unloading was taking place under the disused cab.

The only really contestable issue in the case was whether any of these precautions was necessary given the emergency-stop button. Had Van Til pressed it instead of the down button the accident would not have occurred. By pressing the down button, Konecranes argues, Van Til exposed Mesman to a danger that was “open and obvious” to Van Til, *Miller v. Todd, supra*, 551 N.E.2d at 1141, 1143; *Welch v. Scripto-Tokai Corp.*, 651 N.E.2d 810, 815-16 (Ind. App. 1995); *Schooley v. Ingersoll Rand, Inc.*, 631 N.E.2d 932, 938-39 (Ind. App. 1994), though not to Mesman; but as Van Til was the operator of the allegedly defective machine, it was the appearance of danger to him that is legally relevant to the apportionment of liability between Infra-Metals, Van Til’s employer, and Konecranes, the appellant. The open and obvious danger would have been the danger that the rising spreader beam would not stop in time to avoid hitting the cab and dislodging the beam’s load unless the emergency-stop button was pushed instead of the down button. Konecranes argues that it had no legal obligation to protect against such a danger.

It used to be the law that manufacturers had indeed no obligation to protect against “open and obvious” dangers in a negligence or “defect” case. *Hubbard Mfg. Co. v. Greeson*, 515 N.E.2d 1071, 1073 (Ind. 1987); *Bemis Co. v. Rubush*, 427 N.E.2d 1058, 1061 (Ind. 1981); *Estrada v. Schmutz Mfg. Co.*, 734 F.2d 1218, 1219-20 (7th Cir. 1984) (Indiana law). But when the Indiana legislature decided to codify the state’s products liability law, it omitted the “open and obvious” defense, replacing it with a defense (usually referred to as

“incurred risk”) that requires proof that the user of the product was actually “aware of the danger in the product.” Ind. Code § 34-20-6-3; see *FMC Corp. v. Brown*, 551 N.E.2d 444, 446 (Ind. 1990); *Koske v. Townsend Engineering Co.*, 551 N.E.2d 437, 442-43 and n. 3 (Ind. 1990); *Traylor v. Husqvarna Motor*, 988 F.2d 729, 731-32 (7th Cir. 1993) (Indiana law). The defendant has not pleaded or argued the defense. But the fact that a risk is open and obvious remains relevant to liability. It is circumstantial evidence that the user of the product knew of the danger (and thus “incurred” the risk), *Montgomery Ward & Co. v. Gregg*, 554 N.E.2d 1145, 1150-51 (Ind. App. 1990), and it also bears on the question whether the risk was great enough to warrant protective measures beyond what the user himself would take. *Id.*; *Miller v. Todd*, *supra*, 551 N.E.2d at 1143; *Welch v. Scripto-Tokai Corp.*, *supra*, 651 N.E.2d at 825; *Lovell v. Marion Power Shovel Co.*, 909 F.2d 1088, 1090-91 (7th Cir. 1990) (Indiana law). It just is not conclusive evidence.

Konecranes argues that the “open and obvious” defense was abolished only with respect to defects in manufacture, as distinct from defects in the design of the manufactured product. There is no basis in the statutory text or logic for such a distinction. Ind. Code §§ 34-20-1-1, 34-20-6-3. What is true is that the initial codification of Indiana products liability law was limited to products liability claims based on a theory of strict liability, leaving design-defect claims, which as we said are essentially negligence claims, to be governed by common law, including the common law defense of open and obvious danger. *Koske v. Townsend Engineering Co.*, *supra*, 551 N.E.2d at 443-44; *Welch v. Scripto-Tokai Corp.*, *supra*, 651 N.E.2d at 815-16. But that distinction was wiped out by a subsequent amendment. Compare Ind. Code § 34-20-1-1, with *id.* § 33-1-1.5-1 (1990).

And rightly so. Suppose a machine is designed without a shield over its moving parts. It is obvious to the operator that if he sticks his hand into the machine while the machine is operating, the hand will be mangled. In the old days that would have been a complete defense. But the new law recognizes that because of inadvertence or other human error, or because of debris or a slippery surface that might cause a worker to trip, or even because of a distracting noise or a sudden seizure, open and obvious hazards do on occasion result in accidents. E.g., *Swix v. Daisy Mfg. Co.*, 373 F.3d 678, 680-83 (6th Cir. 2004); *Mosher v. Speedstar Division of AMCA Int'l, Inc.*, 979 F.2d 823, 824-26 (11th Cir. 1992); *Lockley v. Deere & Co.*, 933 F.2d 1378, 1381-84 (8th Cir. 1991); *Holm v. Sponco Mfg., Inc.*, 324 N.W.2d 207, 208-12 (Minn. 1982); *Micallef v. Miehle Co.*, 348 N.E.2d 571, 575-76 (N.Y. 1976). If those accidents can be avoided by a design modification at very little cost, then even if the risk is slight, the modification may be cost-justified; *B* may be less than *PL*. The analogy to the doctrine of last clear chance, which imposes a duty of care on a potential injurer even when the potential victim has carelessly or even recklessly exposed himself to danger, is apparent.

We are mindful that the Indiana Appellate Court ruled in *Cole v. Lantis Corp.*, 714 N.E.2d 194, 199 (Ind. App. 1999), that “to be unreasonably dangerous, a defective condition must be hidden or concealed,” so that “whether a danger is open and obvious and whether the danger is hidden are two sides of the same coin”; “evidence of the open and obvious nature of the danger serves . . . to negate a necessary element of the plaintiff's prima facie case that the defect was hidden.” See also *Baker v. Heye-America*, 799 N.E.2d 1135, 1140 (Ind. App. 2003). But we do not believe that the Indiana Supreme Court would follow these decisions of the state's intermediate appellate court when the products

liability statute no longer distinguishes between actions based on strict liability and actions based on negligence.

The specific question in the present case is whether there was a sufficient likelihood that the operator of the rebuilt crane would fail to press the emergency-stop button when he saw the spreader beam about to hit the cab that Konecranes should have modified the control. This is the question that the jury should have been instructed to focus on. The answer would depend on the likelihood of the kind of mistake that Van Til made and the cost and efficacy of additional precautions, such as removing the cab. It is easy enough to push the wrong button in an emergency or to forget that pushing the down button isn't as effective as pushing the emergency-stop button because of the deceleration feature. This argues for an automatic protective device, of which the cheapest would have been simply to remove the cab, made empty and useless by the removal from it of the crane controls. A jury that concluded that, all things considered, the failure to design the renovated crane in such a way as to protect Mesman against the kind of error that Van Til made was negligent could not be thought unreasonable. *FMC Corp. v. Brown, supra*, 551 N.E.2d at 445-46; *Baker v. Heye-America, supra*, 799 N.E.2d at 1141-45. The entry of judgment for Konecranes was therefore error.

But we do not think the judge can be said to have abused her discretion when she ruled in the alternative that Konecranes was entitled to a new trial. The plaintiffs failed to put before the jury a clear picture of the cause of the accident and how it might have been prevented. Their principal expert witness, an engineer, did not visit the plant. He was turned away when he tried to visit, but that is no excuse, since the plaintiffs could easily have obtained an order directing Konecranes to allow the visit. Fed. R. Civ. P. 34(a)(2), 45(a); *Albany Bank & Trust Co. v. Exxon Mobil Corp.*,

310 F.3d 969, 972-74 (7th Cir. 2002). The evidence regarding the clearance between the boxcar and the cab was hazy, even though the meagerness of the clearance was the key fact in the case; so a visit would have been helpful. A “human factors” analyst wasted the jury’s time trying to show that the remote-control device should have been made to operate by means of a joystick rather than pushbuttons, though the joystick wouldn’t have altered the deceleration feature or made it more likely for Van Til to press the emergency-stop button rather than move the joystick from the up to the down position. Van Til gave implausible testimony that though aware of the deceleration feature he thought that pushing the down button would cause the hoist to reverse immediately, even though it could not go into reverse without stopping and it would take three seconds for it to stop.

Konecranes contributed to the jury’s confusion by presenting evidence that the renovated crane, including its three-second deceleration feature, complied with industry safety standards. Such evidence ordinarily would be relevant though not conclusive. *Indianapolis Athletic Club, Inc. v. Alco Standard Corp.*, 709 N.E.2d 1070, 1075 (Ind. App. 1999); *Abernathy v. Superior Hardwoods, Inc.*, 704 F.2d 963, 967-68 (7th Cir. 1983) (Indiana law); *Fietzer v. Ford Motor Co.*, 622 F.2d 281 (7th Cir. 1980); *Wilson v. Bradlees of New England, Inc.*, 96 F.3d 552, 557 (1st Cir. 1996); *The T.J. Hooper*, 60 F.2d 737, 740 (2d Cir. 1932) (L. Hand, J.). But it was irrelevant in this case because the danger arose from site-specific conditions that the industry standards don’t address. The plaintiffs responded by criticizing the standards, but this simply distracted the jury from those conditions—specifically the narrow clearance between boxcar and spreading beam in the vicinity of the abandoned but not removed cab—on which resolution of the issue of negligence should have depended.

In the new trial that we are constrained to order, the judge must take firm control and focus the lawyers, the witnesses, and the jury on the facts identified in this opinion as being critical to the issue of the defendant's negligence.

AFFIRMED IN PART, REVERSED IN PART,
AND REMANDED WITH DIRECTIONS.

A true Copy:

Teste:

*Clerk of the United States Court of
Appeals for the Seventh Circuit*