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Alabama Extended Manufacturer's Liability Doctrine (AEMLD):

Machine Guarding

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Machine Guarding

Defectively designed machines account for some of the most horrific injuries sustained by workers. A common design defect is the absence or inadequacy of safety guards on workplace machinery. Employee exposure to unguarded or inadequately guarded machines is prevalent in many workplaces. Consequently, workers who operate and maintain machinery suffer approximately 18,000 amputations, lacerations, crushing injuries, and abrasions per year. Additionally, over 800 deaths per year can be attributed to machine related incidents.[1]

Amputation is one of the most severe and crippling types of injuries in the occupational workplace, and often results in permanent disability. The goal of safely designing machinery has been prevalent since the 1800's. Principles of safe machine design have been documented since the early 1900's.[2]

What Makes Machinery Dangerous?

Each particular type of machinery exposes humans to specific types of hazards. The basic types of hazardous mechanical motions and actions are:

Motions

*rotating (including in-running nip points)

*reciprocating

*transversing

Actions

*cutting

*punching

*shearing

[1] Occupational Safety and Health Administration (OSHA).
[2] "Safeguarding Machines, Tools and Equipment," Handbook of Occupational Safety and Health. Chicago, National Safety Council, 1979. p.6.

*bending[3]

Defective vs. Non-Defective

The question of whether a particular machine is defective or unreasonably dangerous must be answered in the context of Alabama's law on product liability, the Alabama Extended Manufacturer's Liability Doctrine (AEMLD). To establish *a prima facie* case against a manufacturer under the AEMLD, a plaintiff must show that (1) the defendant manufacturer sold a defective product, (2) the defect was the cause in fact of the plaintiff's injury and is traceable to the defendant, and (3) the product reached the plaintiff without substantial modification to the condition in which it was sold.[4]

AEMLD ANALYSIS

I. A Plaintiff must prove he suffered injury or damages to himself or his property by one who sold a product in a defective condition, unreasonably dangerous to the Plaintiff as the ultimate user or consumer, if

(a) the seller was engaged in the business of selling such a product, and

(b) it was expected to, and did, reach the user or consumer without substantial change[5] in the condition in which it was sold.

II. **DEFECTIVE/UNREASONABLY DANGEROUS**

(a) Defective means the product does not meet the reasonable expectations of an ordinary consumer as to its safety.[6]

(b) Unreasonably Dangerous means not fit for its intended purpose and its foreseeable misuse.

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[3] "Concepts and Techniques of Machine SafeGuarding," OSHA, 2001, p. 3.
[4] *Casrell v. Altec Industries, Inc.*, 335 So.2d 128 (Ala. 1976); *Atkins v. American Motors Corp.*, 335 So.2d 134 (Ala. 1976).
[5] *Hannah v. Gregg, Bland & Berry, Inc.*, 840 So.2d 839, 855 (Ala.2002)("[T]he mere fact that a product has been altered or modified does not necessarily relieve the manufacturer or seller of liability. A manufacturer or seller remains liable if the alteration or modification did not in fact cause the injury, or if the alteration or modification was reasonably foreseeable to the manufacturer or seller.")(citations omitted).
[6] *See Allen v. Delchamps, Inc.*, 624 So.2d 1065, 1068 (Ala. 1993)("[T]he reasonable expectation of a consumer is usually a question for the jury.").

III. TYPES OF DEFECTS

(a) Manufacturing Defect: means the final product differs unreasonably from its intended design.

(b) Design Defect: Must go to Hierarchy of Design Engineering to access. First, design defect out. Next, guard against hazard and warn and finally warn. Warning is the least a manufacturer can do and least effective.

(1) Guards should be effective and interlocked.

(c) Warnings should comply with recognized standards: signal words, color and language warns user of hazard, tells user/operator how to avoid a hazard and consequences of not avoiding a hazard.

IV. STANDARDS

(a) Industry standards

(b) Government standards

(c) Laws

V. EXPERTS

(a) Engineer – Mechanical, Electrical or Safety

(b) Forensic Pathologist or Biomechanical Expert

(c) Ergonomics

(d) Vocational Rehab

(e) Economist

(f) Life Care Plan

VI. **DEFENSES**

(a) Contributory Negligence

(b) Assumption of Risk

(c) Open and Obvious danger

(d) Misuse

(e) No causal relation, for sellers only

VII. **PRACTICAL CONSIDERATIONS**

(a) Level of Injury

(b) Liability

(c) Expenses

Order of Design Precedence:[7] The Engineer's Bible…

To achieve the greatest effectiveness in hazard avoidance, elimination, or control, the following in order of precedence apply to all design and redesign processes.

[7] "Safety Through Design," Chicago, National Safety Council, 1999, pp. 11-12.

1. ***DESIGN FOR MINIMUM RISK***. From the very beginning, the top priority is that hazards are to be eliminated in the design process. If an identified hazard cannot be eliminated, the associated risk is to be reduced to an acceptable level through design selection.

2. ***INCORPORATE SAFETY DEVICES.*** As a next course of action, if hazards cannot be eliminated or their attendant risks adequately reduced through design selection, reduce the risks to an acceptable level through the use of fixed, automatic, or other protective safety design features or devices. Make provisions for periodic maintenance and functional checks of safety design features or devices.

3. ***PROVIDE WARNING DEVICES.*** When identified hazards cannot be eliminated or their attendant risks reduced to an acceptable level through initial design decisions or through the incorporated safety devices, provide systems that detect the hazardous conditions and include warning signals to alert personnel of the hazards. Design warning signals and their application to minimize the probability for incorrect personnel reactions and standardize within like types of system.

4. ***DEVELOP AND INSTITUTE OPERATING PROCEDURES AND TRAINING.*** When it is impractical to eliminate hazards or reduce their associated risks to an acceptable level through design selection, incorporating safety devices, or warning devices, relevant operation procedures, training, and written warning advisories, signs and labels shall be used. However, do not use operating procedures and training, or other warning or caution signs and labels, or written advisory forms as the only risk reduction method for critical hazards. Acceptable procedures may include the use of personal protective equipment. Certain tasks and activities judged to be essential to safe operation may require special training and certification of personnel proficiency.

For many design situations a combination of these principles will apply. However, do not choose a lower level of priority until practical applications of the preceding level or levels are exhausted. First and second priorities are

more effective because they reduce the risk by design measures that eliminate or adequately control hazards. Third and fourth priorities rely on human intervention.

Acceptable Forms of Guarding

1. Guards
    - A. Fixed
    - B. Interlocked
    - C. Adjustable
    - D. Self-Adjusting
2. Devices
    - A. Presence Sensing
        - (1) Photoelectrical
        - (2) Radiofrequency
        - (3) Electromechanical
    - B. Safety Controls
        - (1) Two-hand control
        - (2) Safety tripwire cable
    - C. Gates
        - (1) Interlocked
        - (2) Other
3. Location/Distance

4. Potential Feeding and Ejection Methods to Improve Safety for the Operator

   A. Automatic feed

   B. Automatic ejection[8]

A Closer Look at the Applicable Defenses

Contributory negligence, assumption of risk, and misuse danger are complete defenses to AEMLD claims.[9] The open and obvious defense is essentially a bar to duty to warn. Finally, the affirmative defense of no causal relation is available to sellers only.

Contributory Negligence

Contributory negligence is an affirmative defense and the defendant seeking to invoke its benefit bears the burden of providing substantial evidence of its existence:

> "In order to establish the affirmative defense of contributory negligence [which the defendant bears the burden of proving], there must be a showing that the party charged had knowledge of the dangerous condition; that he appreciated the danger under the surrounding circumstances; and that, failing to exercise reasonable care, he placed himself in danger."[10]

The Alabama Supreme Court has clearly stated that the question of whether a party is guilty of contributory negligence should be reserved for a jury:

> "Although contributory negligence may be found to exist as a matter of law when the evidence is such that all reasonable people must reach the same conclusion, the

[8] "Concepts and Techniques of Machine SafeGuarding," OSHA, 2001, p. 8.

[9] *Atkins v. American Motors Corp.*, 335 So.2d 134 (Ala. 1976); *Banner Welder, Inc. v. Knighton*, 425 So.2d 441, 448 (Ala. 1982).

[10] *Gulledge v. Brown & Root, Inc.*, 598 So.2d 1325, 1327 (Ala. 1992).

> question of the existence of contributory negligence is normally one for the jury."

Id.

> The issue of contributory negligence is to be determined by the jury, as a general rule, and ordinarily should not be disposed of by the trial court in a peremptory manner."[11]

Defense counsel almost always asks broad questions to invoke the affirmative defense of contributory negligence. The best defense against this tactic is to thoroughly prepare your client before his/her deposition for this line of questioning. Furthermore, counsel for the defendant will ask the same question numerous different ways. You must not allow your client to be bullied or worn down!

Assumption of Risk

The affirmative defense of assumption of risk requires that the defendant prove (1) that the plaintiff had knowledge of, and an appreciation of, the danger the plaintiff faced; and (2) that the plaintiff voluntarily consented to bear the risk posed by that danger.[12] The Court has held that assumption of risk proceeds from the injured person's actual awareness of the risk.[13] Thus, the defendants must show that the Plaintiff had actual knowledge of and appreciated the hazard posed by the specific hazard. In determining whether assumption of risk has been proven, the fact-finder looks to the plaintiff's state of mind, using a subjective standard, asking whether the plaintiff knows of the risk, not whether he should have known of it.[14]

Establishing the affirmative defense of assumption of risk is more difficult than establishing contributory negligence because of the subjective standard. Again, however, the best defense is proper preparation of your client to respond to this line of questioning.

[11] *Driver v. National Sec. Fire & Cas. Co.*, 658 So.2d 390, 394 (Ala. 1995).
[12] *Ex parte Potmesil*, 785 So.2d 340, 343 (Ala. 2000).
[13] *Id.*
[14] *Id.*

Misuse

When asserting misuse as a defense under the AEMLD, the defendant must establish that the plaintiff used the product in some manner different from that intended by the manufacturer. Stated differently, the plaintiff's misuse of the product must not have been reasonably foreseeable by the seller or manufacturer.[15] Counsel for defendants are using this affirmative defense more and more. The issue turns on "reasonable foreseeability." Summary judgment should almost never be granted on the affirmative defense of misuse. There is almost always some evidence of prior similar incidents or some evidence of industry knowledge of a particular hazard. OSHA and CPSC are just two sources to check for prior incidents.

Even if the Plaintiff cannot present other incidents of some evidence of prior knowledge of a particular hazard, the Plaintiff's expert can always get past summary judgment. Any testimony, particularly testimony from an expert, that the plaintiff's alleged misuse was foreseeable creates a genuine issue of material fact precluding summary judgment.[16]

Open and Obvious Dangers

In some cases, the adequacy of the warnings or a defendant's failure to warn is the controlling issue in a machine guarding case. In such cases, the defendant may assert the open and obvious hazard defense. It is well settled that a manufacturer is under no duty to warn a user of every danger which may exist during the use of the product, especially when such danger is open and obvious. The objective of placing a duty to warn on the manufacturer of a product is to acquaint the user with a danger of which he is not aware, and there is no duty to warn when the danger is obvious.[17]

Even in instances when a Plaintiff loses his claim for failure to warn or inadequate warnings based on an open and obvious danger, his claims based on defective design, failure to guard or inadequate guarding may move forward.

[15] *Halsey v. A.B. Chance Co.*, 695 So.2d 607, 609 (Ala. 1997).
[16] *Id.*
[17] *Hawkins v. Montgomery Industries International, Inc.*, 536 So.2d 922, 927 (Ala. 1988).

Practical Considerations

I. *Pre-filing Activities*

A. Meet with the client and discuss the incident thoroughly. Find out if he has even read or seen the operator's manual and discuss his training, production schedules and accepted deviations from training. Get a list of all witnesses to the incident and talk to them.

B. Contact the workers' compensation carrier. They will almost always cooperate with you because they have a lien on any third-party recovery. The carrier will help you obtain access to the subject machine. The carrier will also assist in obtaining documents from the employer including manuals, purchase documents and maintenance records.

C. Hire a guarding expert and take him with you to inspect the machine. Upon his first inspection, he should be able to give you an opinion about the machine.

D. Identify the machine manufacturer and make sure it is still in business. Check to see if the company has been purchased or has filed for bankruptcy. There are tedious hoops to jump through if either of these conditions has occurred.

II. *Ready to File Case*

A. What are your claims and who do you sue?

1) AEMLD

(a) Designer/Manufacturer

(b) Seller

2) Negligence/Wantonness

(a) Installer

(b) Designer/Manufacturer

3) Workers Compensation

(a) Employer -- state vs. federal court (can't remove even after severance)

(b) Co-employees -- state vs. federal court (harder standard and they won't help you if needed)

B. Discovery.

(1) Interrogatories. See attachment A.

(2) Requests for Production. See attachment A.

(3) Request for Admissions.

(4) Request for Inspection, if unsuccessful in inspecting machine before filing.

(5) Depositions:

(a) Corporate Representative

(b) Design or safety engineer

(c) Co-employees. (They can help with defenses and prior incidents. If sued, they won't be too helpful)

(d) Defendant's expert. (Test his knowledge and use design precedence and ethics for engineers)

III. *Settlement/Trial*

A. If filed with the worker's compensation case or against a co-employee do not settle those cases until one year out. That allows you to remain in state court.

B. Subrogation lien: Attempt to negotiate the lien before the case settles. Make sure client considers all options including closing medicals if acceptable. Try to negotiate lien away if amount is substantial.

C. Damages.

1. Permanent Disfigurement

2. Mental Anguish. (Get workers compensation carrier to pay for treatment)

3. Loss of past and future income and benefits

4. Past and future medical bills. (Don't forget set-off with compensation carrier)

5. Lost functioning