



## U.S. Department of Labor Occupational Safety & Health Administration

[www.osha.gov](http://www.osha.gov)

MyOSHA

Search



Advanced Search

### Standard Interpretations

## 02/11/2004 - Use of laser guarding systems with hydraulic press brakes.

[← Standard Interpretations - Table of Contents](#)

• **Standard Number:** [1910.212](#); [1910.212\(a\)\(1\)](#); [1910.212\(a\)\(3\)](#)

February 11, 2004

Glen F. Koedding, CEO  
Metal Tech Controls Corporation  
P O Box 512113  
Punta Gorda, FL 33951-2113

Dear Mr. Koedding:

Thank you for your letter to the Occupational Safety and Health Administration's (OSHA's) Directorate of Enforcement Programs (DEP). This letter constitutes OSHA's interpretation only of the requirements discussed and may not be applicable to any questions not delineated within your original correspondence. You had concerns regarding Metal Tech's Laser Sentry guard systems installed on hydraulic powered press brakes being used in the United States and its territories.

In your letter dated April 28, 2003, you attached our March 10 memorandum, *Request for Guidance regarding Metal Tech Controls Corporation's Laser Sentry guarding system that is installed on hydraulic press brakes*. We have reviewed your recent letter and its attachments very carefully. As you may know, OSHA has always embraced newer technology that enhances workplace safety. However, OSHA does not formally test, evaluate, certify, or approve products. Likewise, we are prohibited from endorsing private sector products, services, consultants, studies, or test results.

After the March 10 memorandum was issued, you had numerous conversations regarding this issue with Willie Robinson of my staff, which led to a site visit at Columbus, Ohio. Mr. Robinson, James Washam (Region V, Machine Guarding Specialist, Cincinnati OSHA Area Office, Cincinnati, OH), and Bruce Bigham (Columbus OSHA Area Office, Columbus, OH) observed your operation, and, thereafter, OSHA reviewed additional product information regarding laser guarding systems.

OSHA's requirement for safeguarding mechanical and hydraulic power press brakes is addressed at 29 CFR 1910.212, *General Requirements for All Machines*. 29 CFR 1910.212(a)(1) states, "One or more methods of machine guarding shall be provided to protect the operator and other employees in the machine area from hazards such as those created by point of operation, ingoing nip points, rotating parts, flying chips and sparks. Examples of guarding methods are barrier guards, two-hand tripping devices, **electronic safety devices**, etc." Emphasis added. Further, 1910.212(a)(3)(i) requires a guarding device to be **"so designed and constructed as to prevent the operator from having any part of his body in the danger zone during the operating cycle."**

In accordance with the above requirements, coupled with the additional information that was provided to the Agency, and the close observation of the operation during the site visit, OSHA is rescinding its March 10 memorandum to the extent that the memorandum concludes that laser guarding devices are inherently prohibited pursuant to 29 CFR 1910.212 or pursuant to consensus standards. That is, a laser guarding device may be considered an electronic safety device, pursuant to 1910.212(a)(1), and would not be in violation of 1910.212(a)(3), if it effectively and reliably prevents worker injury by controlling the zone of danger described.

Please be aware that the Agency's opinion is limited to the use of a laser guarding system in conjunction with hydraulic press brakes. While OSHA has not formally considered the application of laser guarding systems on other pieces of equipment (e.g., unitized dies, mechanical power presses, and resistance welders), the Agency has significant concerns about the effectiveness of using laser guarding systems on other types of equipment to protect employees from point of operation hazards and other equipment-related hazards.

While the Agency has determined that the laser guarding device may be considered an acceptable form of guarding under 29 CFR 1910.212, OSHA cautions employers that guarding systems generally are appropriate only if they are designed, installed, used, and inspected in a manner that will effectively and reliably prevent injury. Thus, OSHA will consider carefully individual laser guarding systems installed in conjunction with hydraulic press brakes to determine whether they effectively and reliably protect employees from point of operation hazards and other equipment-related hazards. While the Agency will provide its inspectors with more specific guidance in the near future, inspectors currently will consider the laser guarding device in isolation, as well as in conjunction with the specific press on which it is installed, to ascertain whether it provides effective and reliable protection under the conditions in which the laser guarding device and the press brake are used at a specific worksite. Employers who are using laser guarding devices in a manner such that they do not work in conjunction with a hydraulic press brake to provide effective and reliable protection are subject to citation under 29 CFR 1910.212.

In addition, please be advised that OSHA is not sanctioning the use of the Laser Sentry guarding system, and the Agency has not determined (and is not authorized to determine) whether or not the Laser Sentry guarding system, as presently designed, is capable of providing effective and reliable employee protection.

Furthermore, the electrical components of the equipment must be approved by a Nationally Recognized Testing Laboratory (NRTL) in accordance with the enclosed standard, 29 CFR 1910.303(a). The employer must examine, install, and use equipment in accordance with the instructions provided by the NRTL and included in the listing or labeling, as required by 29 CFR 1910.303.

Thank you for your interest in occupational safety and health. We hope you find this information helpful. OSHA requirements are set by statute, standards, and regulations. Our interpretation letters explain these requirements and how they apply to particular circumstances, but they cannot create additional employer obligations. This letter constitutes OSHA's interpretation of the requirements discussed. Note that our enforcement guidance may be affected by changes to OSHA rules. Also, from time to time we update our guidance in response to new information. To keep apprised of such developments, you can consult OSHA's website at [www.osha.gov](http://www.osha.gov). If you have any further questions, please feel free to contact the Office of General Industry Enforcement at (202) 693-1850.

Sincerely,

Richard E. Fairfax, Director  
Directorate of Enforcement Programs

March 10, 2003

MEMORANDUM FOR: MARTHA KENT  
REGIONAL ADMINISTRATOR

MICHAEL CONNORS  
REGIONAL ADMINISTRATOR

ATTENTION: ROBERT HOOPER  
ASSISTANT REGIONAL ADMINISTRATOR

JOHN HERMANSON  
ASSISTANT REGIONAL ADMINISTRATOR

FROM: RICHARD E. FAIRFAX, DIRECTOR  
DIRECTORATE OF ENFORCEMENT PROGRAMS

SUBJECT: Request for Guidance regarding Metal Tech Controls  
Corporation's Laser Sentry guarding system that is installed on  
hydraulic press brakes.

This is in response to your January 27, 2003 memorandum to the Occupational Safety and Health Administration's (OSHA's) Directorate of Enforcement Programs (DEP). You are requesting guidance regarding Metal Tech Controls Corporation's Laser Sentry guarding system that is installed on hydraulic press brakes.

Based on the manufacturer's product information and additional information, OSHA would not concur with the following statement, "It meets European safety standards as well as OSHA and ANSI standards." We concur with Region V that this device alone, would not meet the requirements of the 29 CFR 1910.212 standard. Presence sensing devices are positioned at a safe distance away from the point of operation. The mere fact of positioning the laser guard device directly underneath the cutting blade would allow employees to be caught-in and cause possible amputation hazards. The laser guard system would not activate the press brake to stop, until operating employee(s) and helping employee(s) placed their hand(s) in the point of operation.

In fact, the positioning of the laser guard system would conflict with American National Standards Institute standard ANSI B11.3-1982, which covers safeguarding of power press brakes. OSHA recognizes this ANSI standard as the national consensus standard covering power press brakes guarding. Paragraph 6.1.4.3 of the ANSI B11.3-1982 standard, specifically addresses safeguarding by maintaining employee(s) at a safe distance when a power press brake is being operated. By specific notation in paragraph 6.1.4.3, "[a] dimension value has not been assigned to the minimum safe distance." for the purpose of maintaining a "safe distance." Also, OSHA Instruction CPL 2-1.25, *Guidelines for Point of Operation Guarding of Power Press Brakes*, dated February 14, 1997, would be in conflict with the four-inch safe distance requirement, where the operating employee and helping employee(s) must not approach closer than necessary and in no case, closer than 4 inches (10.16 centimeters) to the power press brake point of operation. The minimum safe distance of 4 inches (10.6 cm) shall be measured from the exterior point of contact of the power press brake die closest to an employee.

Furthermore, the most current revision of American National Standards Institute standard ANSI B11.3-2002, *Safety Requirements for Power Press Brakes*, paragraph 8.6.2.2.7 reads, "The effective sensing field of the presence-sensing device shall be located and fixed at the

calculated safe distance (D2) from the nearest recognized hazard such as that individuals cannot reach the hazard before cessation of the motion during the hazardous portion of the machine cycle." In addition, stop distance times are affected by the operating speed of some hydraulic press brakes that are equipped with variable speed control adjusters. Again, this laser guard system would not comply with OSHA's machine guarding standards and ANSI's standards, nor would it be considered as a primary or secondary protective guard system.

I hope you find this information helpful. If you have any further questions, please feel free to contact the Office of General Industry Enforcement at (202) 693-1850.

---

 [Standard Interpretations - Table of Contents](#)

---

 [Back to Top](#)

[www.osha.gov](http://www.osha.gov)

---

[Contact Us](#) | [Freedom of Information Act](#) | [Customer Survey](#)  
[Privacy and Security Statement](#) | [Disclaimers](#)

---

Occupational Safety & Health Administration  
200 Constitution Avenue, NW  
Washington, DC 20210