

# FORGING INDUSTRY ASSOCIATION

25 W. Prospect Avenue, Suite 300  
Cleveland, Ohio 44115-1040  
Phone: (216)781-6260  
Fax: (216)781-0102  
e-mail: [info@forging.org](mailto:info@forging.org)  
Web: [www.forging.org](http://www.forging.org)

July 31, 2007

OSHA Docket Office  
Docket No. OSHA -2007-0003  
U.S. Department of Labor  
Room N-2625  
200 Constitution Ave., NW.  
Washington, DC 20210

Re: Comments on OSHA Docket No. OSHA-2007-0003,  
RIN 1218-AC22

Dear Sir:

The Forging Industry Association, (FIA), an OSHA Alliance Agreement Partner, is the trade association for the North American Forging Industry. FIA is a corporate membership association comprised of approximately 110 North American forging producers operating over 150 plants. Membership also includes more than 80 suppliers to the forging industry including companies engaged in the manufacturing, processing or distribution of steel or other forging stock, die stock, machine tools, equipment or providing consulting and engineering services and supplies commonly used in the industry. FIA member companies account for approximately 75% of all custom forging volume that is produced in the U.S. and Canada.

## **Overview of FIA Comments and Analysis**

As you know, forging presses and hammers have been excluded from coverage under the mechanical power presses standard ever since the promulgation of the standard. 29 C.F.R. 1910.217(a)(5); 39 Fed. Reg. 23502, 23724 (June 27, 1974). And, of course, forge presses, hammers and other forging machines<sup>1</sup> have been subject to regulation under 29 C.F.R. 1910.218 since that time. During the more than thirty three years of OSHA compliance history, the industry has developed equipment, methods of operation, employee training, safety programs and extensive experience in complying with the terms of the standard.

For the reasons stated below, it is the position of FIA, on behalf of its members, that forging machines should continue to be subject to regulation under 29 C.F.R. 1910.218 and excluded from coverage under any amended or revised 29 C.F.R. 1910.217. The Advance Notice of Proposed Rulemaking specifically questions the propriety of this continued approach in Section II A:

1. Should OSHA regulate all power presses under one standard or multiple standards?...Are there general requirements that should apply broadly to all types of power presses?

---

<sup>1</sup> In addition to forge presses and hammers, 29 C.F.R. 1910.218 regulates hot trimming presses, (g)(1), cold trimming presses, (g)(2), upsetters, (h), boltheadings, (i)(1) and rivet making, (i)(2).

3. If OSHA updates the standard [1910.217] to be consistent with the provisions of ANSI B11.1-2001 or its equivalent, should OSHA exclude all of the machines that are excluded in ANSI B11.1-2001? Why?

### **Single Standard vs. Multiple Standards**

It is FIA's position that the original writers of both OSHA 1910.217 and ANSI B11.1 carefully considered this issue and determined that the functionality of forging hammers / presses, and the environment they operate in, makes a universal standard impractical. OSHA recognized these differences in 1971, when it excluded "hot metal presses, forging presses and hammers", from 1910.217, and created 1910.218, for forging presses, which FIA fully supports and endorses.

### ***Hot Forging Press Operational Differences***

- The primary safety focus of OSHA 1910.217 /ANSI B11.1 is to prevent an operator's body part (typically a hand or arm) from being between the ram/die and the anvil when the press is cycled. These standards suggest a variety of guarding methods and presence sensing devices to accomplish that objective. These safeguards are needed due to the material typically being manipulated by the operator's hand in close proximity to the point of operation. Unlike general industry press operators, forge press/hammer operators are forming hot metal at 2300 °F thereby necessitating a mechanical means of manipulating the metal on the anvil. This is accomplished by tongs, long reaches (a vehicle similar to a fork lift, but with pinchers in lieu of forks), or manipulators which all create a separation distance between the operator and the point of operation as demonstrated in the photos below.<sup>2</sup>



- Because metal is hot, expansion of the volume of the part occurs during the forging process, contrary to the static volume of the part in the typical mechanical power press operation covered by 29 C.F.R. 1910.217. As shown in the enclosed pictures, the expansion of the material, and the fact that the part sometimes extends past the anvil, and requires the part to be moved back and forth across the

---

<sup>2</sup> In fact, OSHA recognized the safety adequacy of tongs nearly thirty years ago when it directed its inspectors not to issue citations to hot forging operations under 29 C.F.R. 1910.212 or Section 5(a)(1) of the Act. OSHA Instruction Std. 1-12.6 (October, 30, 1978), OSHA Program Directive #100-29. ("Employees working with machines used in the forming of hot metal including hot trimming Presses(sic), forging hammers, hot forging presses, upsetters, hot bending and hot metal presses, etc., use tongs of a sufficient length to avoid heat as well as the ram. Therefore the standards contained in 29 C.F.R 1910.218 shall be applicable.")

anvil to complete the forging process, often necessitates the operator to support the part during the press cycle, eliminating the possibility of erecting barriers to prevent access to the point of operation.



- Another operational difference is with the size of the parts made (as shown above). The maximum guard openings outlined in Table O-10 of 1910.217 are tremendously undersized, capping out at 2 1/8". Raw material, in the form of hot metal ingots, used in the forging process, can exceed 60".

### ***Forging Machines Operational Environment***

As discussed earlier, metal is often heated up to 2300 °F; the forging process creates scale and dust that is commonly airborne. Forging hammers produce significant shock vibration during the forging process. Combining the extreme radiant heat, the airborne particulate and the vibration would make maintaining sophisticated electronics like laser curtains and presence sensing devices technically infeasible. The continual false trips would not only cripple production but also create additional safety hazards to personnel.

### **Excluding of Forging Equipment From An Updated Standard**

In addition to the technical and operational reasons cited above for continuing to regulate forging presses, hammers and other forging under 29 C.F.R. 1910.218 and not a revised 1910.217, FIA also contends that the current safety performance of the industry does not suggest any regulatory changes are warranted. The industry has demonstrated an excellent safety record with no appreciable evidence of significant non-compliance with OSHA requirements. To impose a new, complicated and industry inapplicable framework of a revised 1910.217 would impose significant, adverse and irreparable economic impact on our industry as it struggles to compete in a global marketplace.

### ***Current Safety Performance***

Based on the following data, FIA contends the existing 1910.218 press standard, safeguards, and work practices have proven to be sufficient to protect our workforce without instituting a more rigorous standard.

1. The latest available data from the Bureau of Labor Statistics indicates there were zero amputations in 2004 or 2005 related to the use of forging machinery.
2. FIA conducts an annual injury and illness survey of its member companies. Over the last nine years, FIA member companies have reported a 17% overall decrease in their DART rate, demonstrating our industry group's commitment to improving the safety of our operations.
3. In 2005, FIA conducted a survey of its member companies, ranking the frequency of injury types. Crushing injuries (from all sources/situations) ranked in the bottom 20% of that survey.
4. In 2005, FIA and OSHA signed an Alliance Agreement to promote further cooperation between our member companies and OSHA, to demonstrate the Association's commitment to improving the safety performance of all forging companies, member, and non-member, as an industry group. This focus on safety has led several of our companies to achieve SHARP or VPP status.

### ***Economic Impact***

The United States forging industry competes in a global market against foreign competition that, in many instances, operate under significantly fewer and less rigorous regulatory standards. Imposing additional, unnecessary regulatory requirements will channel money away from growth-oriented capital expenditures, increase maintenance costs, decrease productivity and competitiveness in a global market. These impacts will ultimately and inevitably result in the loss of jobs leading to the extinction of a defense-critical industry within the United States manufacturing base.

Some of our member companies supplied the following explanations of the impact that a more rigorous standard would have on their company and our industry:

- **Forging Press Manufacturer:**

“If the American forging industry cannot remain competitive we will lose more jobs, resources, and revenue to foreign countries. As a press manufacturer, this has a two-fold effect. The first effect is that we will lose our US customer base from plant closures and cutbacks. Overseas sales of large forging equipment is a very competitive market through which increased transportation costs and manufacturing costs have had significant impact on American forging press builders. The second effect is that a loss of forgers in the US will lead to a reduced supplier base for those that use these forgings for machine manufacture which then leads to increased component costs, quality concerns, and delayed deliveries due to global outsourcing needs.”

- **Forging Producer:**

“The financial impact would be devastating. Our entire forging business revolves around the output of our forging presses and hammers and having to retrofit all of this equipment with some additional restraints and guarding, and the most likely subsequent need to move some of the presses and hammers, would be of major, if not prohibitive cost.”

- **Forging Producer:**

“If the regulations as suggested were to be adopted, the financial capital required to install such equipment and the funds needed to maintain the equipment due to the forging environment, would have severe economic impact on this industry. It could have as drastic an impact as to shut down many facilities due to overseas competition.”

- **Forging Producer:**

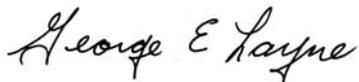
“We would have to retrofit/upgrade 24 forging hammers, 1 forging press and 21 hot trim presses at an unknown cost. This would adversely affect any capital projects we may have on the table and jeopardize other improvements throughout our facility. With limited available capital, we might not be able to comply.”

### **Conclusion**

FIA appreciates OSHA’s willingness to accept input from the industry group directly affected by this proposed change. We feel this is another example of the spirit of cooperation that launched a very successful Alliance between our two organizations. However, we believe there is every reason for OSHA to continue to regulate our industry under 29 C.F.R. 1910.218, and not 1910.217. Our industry has a good safety record under the current approach. Our members have the necessary equipment, methods of operation, employee training, safety programs and extensive experience in complying with the terms of the standard. Any change that would upset this long-standing and settled approach would be devastating to our industry without producing any increase in safety performance. We therefore ask that OSHA not propose any change to 1910.217 that would bring the forging industry within its ambit to the detriment of the safe practices now in force under 1910.218.

Please feel free to contact FIA should you need additional information on, or clarification of, our position.

Sincerely,



George E. Layne  
Safety & Health Liaison  
Forging Industry Association  
25 W. Prospect Avenue, Suite 300  
Cleveland, OH 44115  
PH: 216-781-6260  
glayne@forging.org