Volume 14, Fall 1997

CONN - OSHA QUARTERLY

EFFECTIVE ACCIDENT PREVENTION

Accidents are unplanned occurrences or sequences of events with the potential to cause injury or property damage. In other words, nobody gets up in the morning and plans to have an accident that day. Accident prevention through the reduction of physical hazards and hazardous activities is the key to eliminating the probability that when a person has a "bad" day, injury does not result.

Elimination of hazardous activities is the most efficient way to reduce the likelihood that accidents will occur in the workplace. Hazardous activities, however, are intrinsic to many industries, and it is not always possible to remove the hazards associated with them. Reducing the frequency of exposure to the hazards themselves is another way to decrease the chance of accidents. Using safer chemicals or processes can solve many other problems as well, including hazardous waste and air emission challenges.

Human behavior should also be factored into an accident prevention program, because behavior can affect workplace safety. In fact, it is human behavior, not a hazardous condition, that is most often identified as the root cause of an accident. Moreover, a person's behavior cannot always be predicted. This further necessitates the implementation of precautionary measures such as effective machine guarding and job hazard analysis to control hazardous situations.

Many accident investigations focus on why the **"failure"** occurred. Blame is placed when in fact the cause of the accident is only that it happened because someone was behaving the way we all behave every day. The average employee is focused on doing what is supposed to be done (i.e. to be a productive employee). Issues such as safety or equipment maintenance and before-use inspections are assumed to be taken care of by ***someone else***.

A certain sequence of events always leads to an accident . If employees learn to question hazardous conditions and situations, it is possible that they would begin to recognize if safety features were systematically being eliminated from their work environment.

The following is an example of a series of events

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Featured Inside

Connecticut Department of Labor .....James P. Butler, *Commissioner*
Division of Occupational Safety and Health-Donald A. Heckler, *Acting Director*

WAKE-UP CALL

A Safety Wake-up Call In A Manufacturing Technologies Class At a Connecticut High School

A young student was the victim of an accident associated with the operation of a metal lathe. The accident occurred while the student was working on an end-of-semester project which was designed to demonstrate the skills she acquired from previous classes. While attempting to set-up a metal lathe for a cutting operation, the victim's hair became entangled in the revolving parts of the lathe. Although the lathe was revolving at a relatively low speed of 255 RPM, the victim was unable to react quickly enough to prevent her hair from becoming entangled in the machinery.

The class instructor had explained the proper safety procedures early in the semester, which include wearing safety glasses, not wearing loose clothing and tying back long hair. On this particular day, the safety practices were either overlooked or were not being followed. The long hair of the student had not been restrained and resulted in the victim being rushed to a large university hospital for hours of surgery to remove the workpiece that had become embedded in the skin between her left eye and left ear.

This accident exemplifies the importance of off-the-job safety in school settings and at home. The incorporation of safety practices into all activities, such as a high school technology curriculum is important. Yet it is the constant enforcement of these practices that will ensure accident prevention. It takes only a moment of relaxation to result in a serious accident.

metal lathe

The CONN-OSHA Statistical Unit will be offering a two hour seminar on OSHA recordkeeping which will incorporate training on how to correctly maintain the current OSHA 200 Log and Summary of Occupational Injuries and Illnesses as well as preview the proposed changes in the recordkeeping system planned for implementation in January 1999. Please register for this free seminar by returning this form to the address on this page, indicating the date you prefer to attend. All classes held 9-11AM.

Choice 1st	2nd	3rd	Date
❑	❑	❑	Tues. Jan 13, 1998
❑	❑	❑	Wed. Jan 21, 1998
❑	❑	❑	Thur.Jan 29, 1998

Name(s) of participants: _____

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Phone: _____

Representing: _____

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MECHANICAL POWER PRESSES

Earlier this year, the Occupational Safety and Health Administration (OSHA) implemented a National Emphasis Program (NEP) designed to reduce and eliminate the workplace incidence of hazards associated with mechanical power presses.

Mechanical power presses are mechanically powered machines that shear, punch, form, or assemble metal or other material by means of cutting, shaping, or combination dies attached to slides.

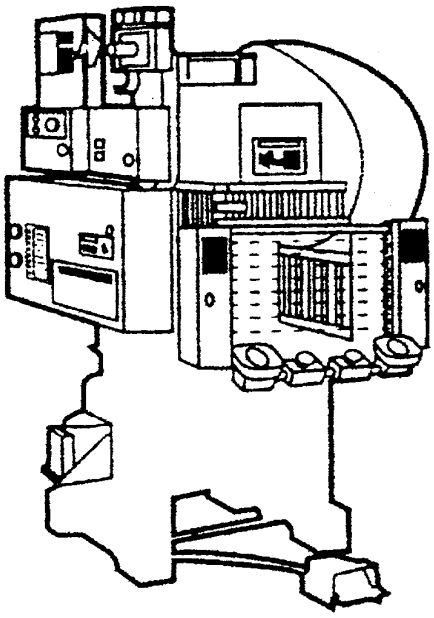
The NEP was established to address the continuing incidence of injuries that have resulted from the operation of mechanical power presses. Injuries involving power presses have often resulted in death or permanent disability, and have been costly to the employer as well.

Past OSHA inspection history indicates that many employers using mechanical power presses are not in compliance with the applicable OSHA standard, 1910.217.

The 10 most frequently issued citations for non-compliance with 1910.217 during the fiscal year of 1996 were:

1. 1910.217(e)(1)(i) Lack of periodic power press inspections.

2. 1910.217(c)(1)(i) No point of operation guarding.



O.B.I. part revolution clutch press with light curtain and two-hand control used for safeguarding

3. 1910.217(c)(2)(i)(a) Guards not preventing access to the point of operation.

4. 1910.217(b)(4)(i) Foot pedals unprotected from accidental operation.

5. 1910.217(f)(2) Training deficiencies.

6. 1910.217 (e)(1)(ii) Lack of weekly inspections.

7. 1910.217(b)(3)(i) No single stroke mechanism for full revolution clutches.

8. 1910.217(d)(9)(i) No written die setting procedures.

9. 1910.217(b)(8)(iii) Drive motor starters that cannot be disconnected from their power sources in the event of control voltage or power source failures.

10. 1910.217 (b)(6)(i) Two-hand trips are not protected against unintentional operation or of the type requiring concurrent operation of the hand controls.

The Mechanical Power Press NEP is OSHA wide and includes employers in both the public and private sectors.

Enforcement inspections will concentrate on establishments where injuries from power presses occurred or are likely to occur and will include those employers with less than ten employees.

CONN-OSHA has and will continue to provide outreach assistance in the form of free consultation and training to ensure compliance with 1910.217 or any other safety and health issue. Employers can obtain these services or have safety and health questions answered by calling 860-566-4550.

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that could result in injury and/or property damage if the hazard associated with the events is not identified and corrected.

A horizontal band saw was observed to be powered by an extension cord on the floor. The extension cord plug was missing the grounding pin. In addition, the power cord to the saw motor had been repeatedly pinched by the metal frame, causing exposed copper wire since the cord insulation was damaged.

This saw had been used by people up to this point with no injuries or property damage resulting from these independent conditions. The purpose of the grounding pin is to provide a path to ground should there be any stray electrical current. Without a ground path, stray electrical current will travel through the path of least resistance, which in this case could be the employee. If the copper wire had contacted the metal frame of the saw, it is likely the employee would act as the path to ground (unless insulated footwear was worn). Had the employee been standing in a puddle of water, oil, or other liquid, the electrical path to ground would have even more ability to carry current, possible causing severe injury.

If in fact the injury never occurs (which is commonplace), accident prevention typically never even gets initiated.
The concerned employer would do well to take a proactive approach, predicting the worst case scenario, observing conditions or activities that could be, or are in fact, hazardous.

Taking a positive approach; by emphasizing to employees that safe behavior is a condition of employment, is the most cost-effective accident prevention policy that could be implemented.

A policy statement from top management would help to inform employees of the strength of their commitment to a safe and healthful workplace. A good statement might be:
"It is the intent of this company to maintain a safe workplace. To do this, we must constantly be aware of conditions that can produce injuries. Your cooperation in detecting actual or potential hazards, controlling hazards and reporting these hazards is a condition of your employment."

We should keep in mind that regardless of where we work, we are all responsible for safety both as individuals and collectively as an organization.