Inch-Safe-Service Method an effective alternative for minor servicing of presses

Press operations require periodic service, which is often performed during routine production. Printing press service and maintenance is regulated by the Occupational Safety and Health Administration (OSHA) in standards 29 C.F.R. 1910.147, 1910.212 and 1910.219.

These OSHA regulations apply to printing presses when functioning under two separate and distinct modes of operation. One mode is during equipment use in routine production, with OSHA machine guarding standards applying. In the other mode, with the press being serviced and maintained, the OSHA standard on the control of hazardous energy applies in C.F.R. 1910.147.

OSHA safety standards for presses mandate safeguarding these presses and other equipment to prevent injury to press personnel during routine production, i.e., when a press or other machinery is being used to perform its intended production capability. Plus, the OSHA standard for the control of hazardous energy (lockout/tagout) mandates the safeguarding of machinery and equipment when service or maintenance is being conducted.

Such safeguarding usually consists of stopping the press or equipment, isolating it from its energy source(s), locking or tagging out the energy isolating device(s), relieving or releasing any stored or residual energy, and then verifying that the press or equipment is safe to service. All safeguarding activities must be conducted in accordance with developed procedures and should be documented by the employer.

A Lockout/Tagout Exception
OSHA safety standards recognize that some minor work, that is, servicing which must be conducted with frequency, might have to be performed during routine production operations, resulting in an exception to lockout/tagout requirements. One exception is stated in 29 C.F.R. 1910.147 (a) (2) (ii):

"Minor tool changes and adjustments, and other minor servicing activities, which take place during normal production operations, are not covered by this standard if they are routine, repetitive, and integral to the use of the equipment for production, provided that the work is performed using alternative measures which provide the effective protection."

In the graphic arts industry it is understood that the term "minor servicing" includes, among other items, work tasks such as cleaning and clearing of certain types of paper jams; minor cleaning, lubrication and adjustment service; some plate and blanket changing operations; and, in some cases, paper webbing and paper roll
changing. In general, "minor servicing" is considered to include those job tasks involving operations which can be safely accomplished and where extensive disassembly of equipment is not required.

However, to perform maintenance or servicing in which a press operator bypasses guards mandated by either 29 C.F.R. 1910.212 or 29 C.F.R.1910.219, or otherwise becomes unduly exposed to the hazards of press start-up or to the unexpected release of hazardous energy, the OSHA lockout/tagout standard does apply.

If this exposure is not present because of the methods in which the minor servicing is performed or because special tools, techniques or other protection is used, lockout/tagout is not required, provided the press operator uses alternative measures which enable the operator to conduct minor servicing without being exposed to a hazard. Under no circumstances is a press operator ever allowed to place any part of the body within a hazardous area, such as the point of operation, while the press or equipment is running or energized or around power transmission apparatus.

While performing minor service, a press operator is considered to have met the requirement for providing the effective alternative protection by the use of specialized tools and/or methods. The effective alternative protection may not include alone simple pushbuttons, selector switches and other control circuit-type devices that lack control logic, such as an interlocked arrangement which provides a single operator with exclusive control.

The Essential Elements

One method which provides effective alternative protection is the inch-safe-service method used for the main drive control. This technique is consistent with the use of controls specified in the standard required for web and sheet fed printing presses, binding machinery and finishing equipment for which, as a minimum, a stop/safe/ready function must be available at the control stations. Limiting some control stations to the "inch" function only is not permitted. Also, the stop/safe/ready switch must not serve as the lockout disconnect when lockout is performed. The essential elements of this procedure are:

- Before any minor servicing is performed, the machine must be stopped and its drive control must be on the STOP/SAFE position. Servicing and/or maintenance as defined in 29 C.F.R.1910.147 (b) must not be conducted when the components of the machine are moving.

- Consistent with the requirements contained in 29 C.F.R.1910.147 (f) (1) for testing or positioning a machine during servicing, procedures to inch a machine require all operating personnel be positioned so that they are not endangered by the re-energization or start-up of the machine. In addition, all tools or other implements used during the servicing must be positioned so that no hazard is created by operating personnel. On presses attended by more than one operator or when it is possible for other personnel to enter the frame or be obscured from view of the operator, suitable safety alerting signals must be provided.

- By use of the INCH control, the components of the machine are moved to their desired position. Immediately thereafter, the drive control is placed on SAFE by each operator working in a hazardous area before beginning or resuming the minor servicing.

- Steps 2 and 3 above are repeated as necessary, until the minor servicing is completed.

Source: ANSI and OSHA

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