

### MACHINE SAFEGUARDING

Bone fractures, lacerations, crushed hands, and third degree burns are just some of the injuries that can occur when operating heavy machines and equipment. Machines that grind, shear, punch, press, squeeze, draw, cut, saw, roll, or mix are required by law to be guarded at the point of operation to protect employees from injury.

The most common machine hazards involve the following types of machinery:

- Cutting and shearing mechanisms: paper cutters, metal cutters, saws, grinding wheels, and lathes
- In-running nip points: belt driven pulleys, gears, conveyors, and rollers
- Rotating mechanisms: motors, lathes, drills, flywheels, and clutches
- Forming and bending mechanisms: power presses
- Impact mechanisms: machines that add patterns or textures to metals

To protect employees from injury, managers and supervisors must administer training; and employees must follow standard operating procedures. Guards or devices must be in place for all points of operation and in-running nip points from rotating parts, blades or other cutting parts, grinding, bending, stamping and pinch points.

Guards and other safety devices block body contact. They physically prevent an employee from making contact with the hazard. There are various types of guards, depending on the machinery and materials produced:

- Fixed enclosure guards: motionless permanent barrier that prevents physical contact with a hazard
- Adjustable guards: an adjustable barrier can be positioned to accommodate a variety of operations or work
- Interlocking guards: prevent machine motion until the guard is in place – this guard can be mechanical, electric, pneumatic, or a combination
- Point of operation guards: guarding method or device which prevents fingers, limbs, or clothing from physical contact with the point or location where stock or material is fed into a machine – a machine may have more than one point of operation.

## Management's Responsibility

- Ensure all machinery is properly guarded
- Develop and enforce machine guarding policies and procedures
- Provide training to employees on machine guarding policies and procedures
- Document training, including machine-specific training
- Ensure that newly-purchased or altered equipment meets machine guarding requirements and that affected employees are trained prior to use

## Supervisor's Responsibility

- Train assigned employees on the specific machine guarding policies and procedures in their areas
- Monitor and inspect to ensure machine guards remain in place and are functional
- Immediately correct machine guard deficiencies
- Enforce the machine guarding policies and procedures

## Employee's Responsibility

Know how to operate all machinery properly to prevent injuries

- Do not operate equipment unless you have properly trained
- Do not operate equipment unless guards are in place and are functional
- Do not remove machine guards
- Only trained and authorized employees may remove or replace machine guards and lockout/tagout devices
- Report machine guard problems to supervisors immediately
- Report any employee who operates a machine without proper guarding
- Pay attention to the task at hand – use caution when placing or removing material from the point of operation
- Never use hands to remove material that is stuck or interferes with the operation of a machine
- Follow all operating steps and do not take shortcuts
- Avoid loose clothing, gloves, or jewelry that can get caught in moving parts

Serious injuries are likely to occur when safety guards and devices are removed. Use safe practices and avoid short cuts. Never remove, disable, or reach through or around a guard. Keep safety in mind when operating hazardous machinery.