

Machine Safeguarding Terms

Department: Chemical and General Safety

Program: Machine Safeguarding

Owner: Program Manager, Linda Knudsen

Authority: ES&H Manual, Chapter 39, Machine Safeguarding

Abrasive wheel. Power-driven wheel consisting of abrasive particles held together by inorganic or organic bonds. Metal, wooden, cloth or paper wheels or discs having a layer or layers of abrasive on the surface and natural sandstones (quarried) are not included.

Block. A short block of wood, provided with a handle similar to that of a plane and a shoulder at the rear end that is used for pushing short stock over revolving cutters

Brake. The mechanism used on a mechanical power press to stop and/or hold the crankshaft, either directly or through a gear train, when the clutch is disengaged

Brake monitor. A sensor designed, constructed, and arranged to monitor the effectiveness of the press braking system

Danger zone. Any place in or about a machine or piece of equipment where a person may be struck by or caught between moving parts, caught between moving and stationary objects or parts of the machine, caught between the material and a moving part of the machine, burned by hot surfaces or exposed to electric shock

Full-revolution clutch or stroking action. A type of clutch that, when tripped, cannot be disengaged until the crankshaft has completed a full revolution and the press slides a full stroke

Guard. A barrier that prevents entry of the operator's hands or fingers into the point of operation, pinch or nip point, or moving parts. Can be fixed, interlocked, adjustable, or self-adjusting.

Guarded by location: A guarding method where the moving parts are so located by their remoteness from floor, platform, walkway, or other working level, or by their location with reference to frame, foundation or structure as to remove the likelihood of accidental contact

Interlock. A device that operates to prevent the operation of a machine while the cover or door of the machine is open or unlocked, and which will also hold the cover or door closed and locked while the machine is in motion

Non-kickback fingers: A device mounted on a circular rip saw to oppose the thrust or tendency of the saw to pick up the material or to throw it back toward the operator

Part revolution clutch. A type of clutch that can be disengaged at any point before the crankshaft has completed a full revolution, and before the press slides a full stroke

Pinch point. Any point other than the point of operation at which it is possible for a part of the body to be caught between moving parts, between moving and stationary parts, or between the material and moving parts of a machine tool

Machine Safeguarding Terms

Point of operation. The point(s) where material is positioned, inserted, or manipulated, or where work such as shearing, punching, shaping, cutting, boring, forming, or assembling is being performed on the stock

Power-operated presses. Power-operated presses include all mechanically powered machines that shear, punch, form, or assemble metal or other materials by means of tools or dies attached to or actuated by slides, commonly referred to as mechanical power presses (punch presses), press brakes, hydraulic power presses (punch presses), and rivet setting machines

Presence-sensing device. A device that senses the presence of a person or body part in an area where the danger zone is accessible, and activates a control circuit to stop the machine. Presence sensing devices are typically photoelectric (optical) devices such as light curtains, radiofrequency (capacitance) devices, or electromechanical devices.

Push stick. A narrow strip of wood or other soft material with a notch cut into one end and that is used to push short pieces of material through saws

Ring test. An inspection of an abrasive grinding wheel prior to mounting to make sure the wheel has not been damaged in transit, storage, etc. The wheel should ring, when tapped gently with a light nonmetallic implement. If the wheel sounds cracked (dead), the wheel will not be used.

Safety Device. For power presses, an attachment that

- Restrains the operator from inadvertently reaching into the point of operation, or
- Prevents normal machine operation if the operator's hands are inadvertently within the point of operation, or
- Automatically withdraws the operator's hands if the operator's hands are inadvertently within the point of operation as the dies close, or
- Prevents the initiation of a stroke, or stops of stroke in progress, when there is an intrusion through the sensing field by any part of the operator's body or by any other object.

Slide. The main reciprocating press member. A slide is also called a ram, plunger or platen.

Spreader. A device mounted on a circular saw to prevent material from squeezing the saw or being thrown back on the operator