

Definitions Machine Guarding

Types of Hazardous Mechanical Motion

Reciprocating –

Up and down or back and forth motion.

Transverse –

Movement in a continuous or straight line.

Rotational –

The turning movement around an axis such as a shaft.

In running nip-points

In running nip points are the result of rotating parts on machinery.

Three types of in running nip points.

Parts rotating in opposite directions while their axes are parallel to each other. (gears)

When rotating parts are temporarily and predictably in contact with other moving parts. (belt and pulley)

When rotating parts are close to fixed parts. (grinding wheel and steady rest)

Where Mechanical Hazards Occur

Point of operation –

This is where work is performed on material such as sawing or planing.

Power transmission apparatus –

The components of a mechanical system that transfer energy to the part of the machine that is performing the work. They include belts, pulleys, couplings, connecting rods, flywheels, cams and gears.

Other moving parts -

Other parts of the machine that move while the machine is working. These may include the feed mechanism and auxiliary parts of the machine.

Definitions Lockout

Energy Isolation Device

A mechanical device that physically prevents the transmission or release of energy.

Energy Sources

Include electrical, mechanical, hydraulic, pneumatic, chemical, radiation, thermal, stored energy and gravity.

Practically and Conveniently Located

This means that energy isolation devices are easy to access and extraordinary effort is not required to use them. For instance, if an employee had to find an extension ladder to reach a disconnect located 12 feet off the floor, the location would not be practical or convenient.

Specific Procedure

A written procedure for a specific piece of equipment that details:

- How to and where to safely shut down a piece of equipment.

- How and where to isolate energy to a piece of equipment.

- The steps for the placement, removal of lockout devices.

- The specific requirements for verifying that energy has been isolated to a piece of equipment.

Start/Stop Device

Control circuitry that is used to start and stop equipment.

This material was produced under grant SH-05031-SH8 from the Occupational Safety and Health Administration, U.S. Department of Labor. It does not necessarily reflect the views or policies of the U.S. Department of Labor, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.