

DESIGN PROCESS EXAMPLES (ELIMINATE)

3/
CONTROL

Many hazards can be eliminated through machine design. Below are examples of how to reduce or remove hazards that exist at different stages of the machine's life cycle. Consider how these might apply to machines you are purchasing or modifying.

MANUFACTURE

- > Replacing spoked gears with gears with a solid disk, to get rid of shear hazard.
- > Building housing around obvious hazards rather than having to fit guards after manufacture.

TRANSPORT

- > A metal lathe is to be delivered fully assembled and is much heavier at one end. The designer incorporates lifting eyes for lifting slings in positions that mean the lathe can be lifted in a horizontal position.

OPERATION

- > Consider the type of seating an operator may use and the ease of using the controls from the seat.
- > Install a portable emergency stop button if an operator needs to move around.
- > Give easy and safe access to areas that need regular maintenance.

INSTALLATION

- > Design a large machine to be delivered in modules that are put in place by a crane. Then installers do not need to work at height or handle heavy items by hand.

STORAGE

- > Make sure machines can be stored without creating hazards or when started after inactivity. Include information on how to break down the machine for safe storage.

DISPOSAL

- > Put in place controls so people breaking down a machine for scrap aren't injured. For example from energy stored in springs and pressure devices or from hazardous substances that are part of the machine.

For more information on designing machinery to eliminate hazards see Section 6 of the Safe Use of Machinery BPG.