

Cold Forming of Metals

by an authorized person who should observe his methods for a few minutes to see that he is operating the press correctly

Removing dies

Dies should be removed from the press with the same care used in setting them up. Although modifications may be necessary in special cases, the safe procedure is as follows

- 1 Make sure that the working space is cleared of all stock, containers, tools, and other items
- 2 Disconnect or shut off the power and lock the switch. Turn the flywheel by hand or by means of the bar until the slide is at the bottom of the stroke. If the press cannot be turned over manually, jog it under power, then shut off the power and lock the switch
- 3 Dismantle or disconnect the point-of-operation safety device only if absolutely necessary. Put aside the parts of a dismantled safety device so that it can be reinstalled in good condition as soon as the new die is in place
- 4 Clean off the bolster plate, preferably with a brush
- 5 If the die is to be operated with an air pad, shut off the air supply and open the release valve to permit the pins to go down. Also shut off the air supply to the automatic blowout system used in the die
- 6 Loosen and remove bolts and clamps bolting the die to the slide and to the bolster plate. Place bolts, nuts, and clamps on a bench or in a special place on the die truck as soon as they have been removed from the press
- 7 Make certain that the die is loose and that bolts, nuts, clamps, and other obstructions have been removed
- 8 Raise the slide slowly, manually on light presses, and by jogging or inching under power on large presses, and make sure that the die does not hang in the slide
- 9 Block the slide in its highest position, and if power was used, shut off the power and lock the switch
- 10 Place the die truck close to the press, adjust the table to the same height as the bolster plate, and chock the wheels or set the brake of the truck to prevent movement. To pull the die onto the truck, use a hook engaged so that it cannot slip
- 11 Dies should be inspected, repaired, and protected *before* being stored for the next run. Inspection should include pins, bushings, etc. Hardened dies and punches should be stored in closed position with a piece of soft wood between the cutting edges to protect them. Injuries have occurred when hardened dies were handled when open or partially open, as a sudden jolt can cause them to close and pinch a hand or finger

Inspection and Maintenance

Twenty per cent of the serious-injury accidents associated with presses are traceable to malfunction of press, guards, or other safety devices. The best press safety program in the world cannot succeed, nor can top production be met without good inspection and maintenance of both press and guarding devices.

Inspection, adjustment, and repair of power presses and related equipment can only be done by competent, thoroughly trained men. These men must be fully familiar with the construction and operation of the equipment they are responsible for. They also must be equipped with the tools and equipment, properly sized, to assure good workmanship with safety for all.

The area around the press being worked upon should be cleared of all personnel not directly involved in the maintenance. Flashing warning lights or other barriers or barricades should be set out to mark the temporary area of maintenance to all crane operators and other material and equipment handlers. Stationing an idle crane, on guard, is an acceptable alternative.

When inspection or work to be performed involves any electrical item, or when accidental starting of the equipment would create a hazard, the main disconnect switch must be opened to deenergize the power source. Lock out the main disconnect and place a DANGER—HOLD OFF tag on the control panel.