Die Setting Safety Infographic



DIE SETTING PROCEDURE

The total procedure for installing dies in a press comprises several distinct, yet related, steps. Those steps to be performed include: preparation of the press to receive the die; actual die installation; securing attachment of the die to the press; necessary adjustments of the press, die and auxiliary equipment; installation of a point of operation guard and/or safeguarding device appropriate for the operation to be performed. Press size, stroke length, speed and capacity must be suitable for the die that will be installed. If additional components such as die cushions, knockouts or feeds are required, the press should be arranged for, and equipped with, these items.

The actual procedure for setting and removing dies may vary slightly, depending upon press type and size , type of guiding arrangements, quick access features and the type of operation to be performed. The steps outlined below are of a general nature and may be amended to suit a particular press and die combination; however, never should they be amended to the extent that the job is done unsafely. Observe all warnings.

Setting The Die

1. When installing dies, always observe the Die Setter's Safety Precautions included in this safety manual.
2. Before attempting to remove or set dies, and if feasible to reduce any possible movement, the main drive motor should be turned off, the press mode selector switch locked to the off position, the flywheel has stopped turning completely and install safety blocks if the slide is opened. Clean the die, bolster plate and slide face surfaces.

Note: On presses equipped with hydrostatic guiding systems and pressurized hydraulic quick access arrangements, it will be necessary to maintain power to the presses hydraulic system. These hydraulic arrangements may not allow the die setter to use the interlocked die safety block. (If necessary, the slide may be positioned at bottom dead center of stroke in lieu of installing safety blocks.)

3. Install all necessary bolster inserts, slide and bolster

IMPORTANT

If a turnover bar is used to turn the crankshaft, it should have a spring and collar arrangement that will prevent it from being accidentally left inserted in the barring hole.(OSHA 1910.217 (d)(9)(ii))

spacer plates, together with any auxiliary equipment that may be required to obtain proper working height for the die and material handling components.

4. Make certain that the bolster plate is securely clamped to the press with bolts that are in good condition. Loose or broken bolts may allow the bolster to shift out of its correct position during press operation. A bolster plate that has shifted from its proper position can cause serious die damage and endanger the safety of the operator.
5. If die cushioning is required, pressurize the cushion and insert pressure pins in applicable bolster plate holes. Use only clean, straight pressure pins of equal length. Never use pins that are bent, mushroomed, or otherwise deformed. After inserting the pins, recheck location and exposed pin length. Plug all of the exposed pressure pin holes. Lower the die cushion to permit pins to drop below top surface of the bolster.
6. Remove safety blocks if they have been previously

⚠WARNING

NEVER PRESSURIZE DIE CUSHION WITHOUT THE BOLSTER PLATE INSTALLED AND BOLTED DOWN SECURELY.

inserted in the slide area. Turn on power to the press control and then INCH or BAR the slide to bottom dead center of its stroke. If the drive motor was started in order to lower the slide, turn it off and turn the press mode selector switch to the OFF position. Make certain the flywheel is not turning. Now measure overall height of the die and height of the opening in the press. Use the press micro-shutheight indicator if one is furnished. Adjust the slide to a position that will allow adequate working space for loading the die into the press.

Install and use only dies that are safe. Dies that are

⚠WARNING

NEVER INSTALL WORN OR DAMAGED DIES. INSTALL ONLY DIES THAT ARE IN GOOD CONDITION AND PROPERLY SIZED FOR THE PRESS TO BE USED.

worn or improperly sized can cause injuries to personnel and damage to the press.

7. Place the die in position for loading into the press. Check top and bottom of the die for any slugs, metal particles or dirt that may have adhered. Make certain these areas are clean. Load the die into the press and set it in the desired location. Fasten the lower die shoe loosely.
8. Check alignment of openings in the die, if applica-

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