All forging presses should be equipped with pedal guards and nonrepeat devices A forging press should never be operated on continuous stroke The operating controls should require depression of the pedal for every cycle of the ram The press controls should also permit inching of the ram for die setting or other press adjustments

Die setting

Since the setting of dies in forging presses is very different from the setting of dies in cold stamping presses, certain extra precautions not required on the latter type of press must be taken

Forge press dies are set in die holders designed in sets, each set consisting of an upper and a lower section The upper section of the holder is secured to the press ram by threaded bolts, and the lower section to the press bed by threaded bolts The forging dies are set or nested in die pockets recessed in both the upper and lower sections of the holder

The problem of setting the dies in the recessed pockets and of removing them can be solved by the use of special equipment consisting of an eyebolt attachment at the face of the die and a die truck with boom attachment Pry bars and blocking should be carefully used since the pry bar may easily slip from the die and injure the operator's hands or fingers

The dies are secured in the pockets of the holder by sectional flat clamps and a series of cap screws through the holder at all four sides of the die These screws are used primarily to shift the die for matching and to prevent the die from floating after it has been properly aligned

Suitable blocking should be installed to hold the top die in the pocket before the clamps which secure the top die in the holder are removed The adjustment cap screw should not be relied upon to hold the die after the clamps have been removed

The press should be equipped with safety props interlocked with the press motor circuit so that the motor cannot be started when the props are in use

All die clamps, bolts, washers, blocking, wrenches, and handling equipment should be in good condition at all times.

The table wedges which are used for making vertical adjustment of the dies must be kept free of scale so that the wedge can be raised and lowered with minimum pressure. Trucks or driving rams should not be used for this operation If wedges are kept free of scale, they can be raised or lowered by hand or by air motor wrench

Maintenance

Maintenance of forging presses requires the same precautions used in maintenance work on power presses used in cold stamping The operating power source should be locked out so that the equipment cannot be energized while it is being worked on If adjustments have to be made while the press is energized, the work must be carried out under the direct supervision of the maintenance supervisor

Suitable permanent work platforms should be installed for making brake adjustments and doing repair work at the surge tank and booster cylinders To prevent falls, maintenance men should not use portable straight ladders nor stand on parts of the press, such as the press crown or the backshaft

Major repair work on forging presses usually requires removal of bulky, heavy parts Tearing down of the rolling type clutch, flywheel, ram, pitman, and crankshaft requires special heavy-duty rigging used by skilled workmen trained in this type of work

The brake should be adjusted properly and kept in good repair Precautions must be taken to prevent the brake lining from becoming flooded with oil A sheet steel disk about 2 inches larger than the brake wheel, placed on the eccentric shaft back of the brake wheel, will help reduce the amount of lubricant on the brake

Pitman bolts should be securely tightened. It may be necessary to design and make a socket or box end wrench with a strong heavy handle for the specific press

Flywheel hubs, clutch spline hubs, pinion gears, and brake wheels should not be permitted to become loose on the pinion shaft If they do become loose and run that way very long, keys and keyways will be ruined and the keys will break out a portion of the pinion shaft on one side of the keyway The keys on each side of the pinion shaft should be inspected periodically and driven tight if they are loose. When a key will no longer stay tight, it should be replaced with a carefully fitted new key.