

distributed

Proper working clearance must be maintained to facilitate correct location for unloading. If possible, cold trimmers should be designed to work on guide pins for proper alignment.

Padding, bending, or straightening equipment is sometimes required to complete a forging. This equipment can be made from a good grade of wear-resistant carbon, nickel steel. Hot pad dies are usually made with an opening between the die faces so that the hot forging acts as a cushion. Additional clearance should be provided in a hot pad or restrike die because the forging is constantly cooling and shrinking.

Cold coin dies are made from high carbon, high chrome steels hardened to 62 to 64 Rockwell C hardness. The forging is coined cold. For best result, either interlocking dies or dies with guide pins are used. Additional safety measures such as magazine type loaders are sometimes made an integral part of the die for the operator's convenience.

The faces of the coming dies should be ground as smooth as possible. No lubricant should be used because it may cause the forging to stick to one die face. The opening between the dies is sometimes limited mechanically so that no more than one forging

can be loaded at a time.

Bulldozers. The greatest danger in the operation of a bulldozer is the possibility of a workman's being caught between the dies. There are several ways to decrease this hazard. A guard may be attached to the side of the moving head and travel with it past the stationary head, or telescoping rods or rails may be used to serve the same purpose. The base plate can be notched out to leave room for the operator's leg. The clutch should be kept in good order so that the machine will not repeat. The power transmitting mechanisms should be guarded.

Cold heading and similar machines should have screen shields to protect workers from flying pieces. Relief springs should be guarded to prevent the bolts and nuts from being thrown out in case of breakage.

Bolt headers and riveting machines should have treadle guards to prevent accidental operation. The machines should be stopped and blocked before dies are changed or adjustments are made.

Hot saws should be provided with tanks of water placed below the saws and 8-in. sheet metal guards positioned to stop the flying sparks.

References

Forging

American National Standards Institute, 1430 Broadway, New York, N Y 10018

Safety Requirements for Forging, B24.1

National Safety Council, 444 North Michigan Ave., Chicago, Ill 60611

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Guards Illustrated

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United Auto Workers, 8000 E. Jefferson Ave., Detroit, Mich 48214 (General)