

MOTORIZED EQUIPMENT

and by a blasting procedure that forces the rock out from the face sufficiently to reduce the height of the pile. The shovel operator is thus able to maintain the bank at a safe slope. When loading from under a high face, the operator should swing the shovel to the right side and away from the face, thereby allowing himself a better view and reducing his exposure to injury.

Undercutting banks of earth, sand, gravel, and similar materials is especially dangerous during winter and spring months. Freezing and thawing may result in a collapse of the overhanging material. To maintain a safe slope, the overhanging material may be blasted.

The operator has responsibility for the safety of other men whose duties take them into the vicinity of the shovel. These workers may be struck by falling rock, squeezed between the shovel and the bank or similar pinch points, or struck by the dipper. No worker should enter a dangerous location without first notifying the operator who, in turn, should not move the equipment.

Dippers should be filled to capacity but not overflowing, to prevent falling material from endangering workers and to eliminate excessive spillage. Insofar as possible, loading should not be done from the blind side. The operator should not swing a load over an engine nor load a truck until the driver has dismounted and is in the clear unless the truck is provided with a canopy for the protection of the driver. Cars and trucks should be loaded evenly so that earth or rocks do not overhang the sides.

Housekeeping on and around the shovel should be first-class. The operator should keep tools in a definite place and keep the floor free of grease and oil. Ice and snow should be removed promptly, and a bulldozer should keep the area around the shovel free of rocks and ruts.

No one should be allowed on the shovel or dragline unless authorized. A person should get on or off only after he has notified the operator, who should swing the platform so that the man can get on or off the front by grasping the handhold and stepping up or down on the tread. No one should get on or off by jumping onto the tread, either while the operator is making a swing or while the equipment is stationary.

Mobile cranes The outstanding characteristic of accidents involving crawler and similar types of cranes is the severity of the injuries. Although these accidents occur with relative infrequency, the injuries are about twice as serious as those resulting from accidents involving other types of heavy equipment. For this reason, a crane operator particularly should be selected for his intelligence, stability, and willingness to follow instructions.

The operator is largely responsible for the safe condition of the crane and should make regular inspections of brakes, cables and their fastenings, and other vital parts, and promptly report worn, broken, and other defective parts. Like other equipment, mobile cranes should be maintained on a regular schedule.

The operator is responsible for the safety of the drier and also has a large measure of responsibility for preventing injuries to hookers or riggers and others working around the equipment. However, anyone working in the vicinity of a crane has the responsibility to stay clear of the boom. In no case should anyone work or cross under the boom.

Some of the worst accidents are the result of overloading cranes. In no case should the load limits specified for various positions of the boom by the manufacturer be exceeded. These load limits should be conspicuously posted in the crane cab. If there is doubt about the weight of a load, the capacity of the crane to handle the load safely should be tested by first lifting the load slightly off the ground.

Operating a crane on soft or sloping ground is dangerous. The crane should always be level before it is put into operation. Outriggers give reliable stability only when used on solid ground. The use of makeshift methods to increase the capacity of a crane, such as timbers with blocking, is too dangerous to be permitted.

Boom stops limit the travel of the boom beyond an angle of 80 degrees above the horizontal plane and prevent the boom from being pulled backwards over the top of the machine by the boom hoisting mechanism or the sudden release of a heavy load suspended at a short radius. Either of these occurrences usually results in serious damage to the equipment and injuries to the