

§ 77.1602

the following equipment whether loaded or empty:

- (a) Dippers, shovels, buckets, forks, and clamshells;
- (b) The cargo space of dump trucks or haulage equipment used to transport coal or other material;
- (c) Outside the cabs and beds of mobile equipment;
- (d) Chain, belt, or bucket conveyors, except where such conveyors are specifically designed to transport persons; and
- (e) Loaded buckets on aerial tramways.

§ 77.1602 Use of aerial tramways to transport persons.

Persons other than maintenance men shall not ride empty buckets on aerial tramways unless the following features are provided:

- (a) Two independent brakes, each capable of holding the maximum load.
- (b) Direct communication between terminals.
- (c) Power drives with emergency power available in case of primary power failure.
- (d) Buckets equipped with positive locks to prevent accidental tripping or dumping.

§ 77.1603 Trains and locomotives; authorized persons.

- (a) Only authorized persons shall be permitted to ride on trains or locomotives and they shall ride in a safe position.
- (b) Men shall not get on or off moving equipment, except that trainmen may get on or off of slowly moving trains.

§ 77.1604 Transportation of persons; overcrowding.

- (a) No man-trip vehicle or other conveyance used to transport persons to and from work areas at surface coal mines shall be overcrowded and all persons shall ride in a safe position.
- (b) Supplies, materials, and tools other than small handtools shall not be transported with men in man-trip vehicles unless such vehicles are specifically designed to make such transportation safe.

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§ 77.1605 Loading and haulage equipment; installations.

- (a) Cab windows shall be of safety glass or equivalent, in good condition and shall be kept clean.
- (b) Mobile equipment shall be equipped with adequate brakes, and all trucks and front-end loaders shall also be equipped with parking brakes.
- (c) Positive-action type brakes shall be provided on aerial tramways.
- (d) Mobile equipment shall be provided with audible warning devices. Lights shall be provided on both ends when required.
- (e) Guard nets or other suitable protection shall be provided where tramways pass over roadways, walkways, or buildings.
- (f) Guards shall be installed to prevent swaying buckets from hitting towers.
- (g) Aerial tramway cable connections shall be designed to offer minimum obstruction to the passage of wheels.
- (h) Rocker-bottom or bottom-dump cars shall be equipped with positive locking devices, or other suitable devices.
- (i) Ramps and dumps shall be of solid construction, of ample width, have ample clearance and headroom, and be kept reasonably free of spillage.
- (j) Chute-loading installations shall be designed so that the men pulling chutes are not required to be in a hazardous position during loading operations.
- (k) Berms or guards shall be provided on the outer bank of elevated roadways.
- (l) Berms, bumper blocks, safety hooks, or similar means shall be provided to prevent overtravel and overturning at dumping locations.
- (m) Roadbeds, rails, joints, switches, frogs, and other elements on railroads shall be designed, installed, and maintained in a safe manner consistent with the speed and type of haulage.
- (n) Where practicable, a minimum of 30 inches continuous clearance from the farthest projection of moving railroad equipment shall be provided on at least one side of the tracks; all places where it is not possible to provide 30-inch clearance shall be marked conspicuously.

(o) Track guardrails, lead rails, and frogs shall be protected or blocked so as to prevent a person's foot from becoming wedged.

(p) Positive-acting stop-blocks, derail devices, track skates, or other adequate means shall be installed wherever necessary to protect persons from runaway or moving railroad equipment.

(q) Switch throws shall be installed so as to provide adequate clearance for switchmen.

(r) Where necessary, bumper blocks or the equivalent shall be provided at all track dead ends.

§ 77.1606 Loading and haulage equipment; inspection and maintenance.

(a) Mobile loading and haulage equipment shall be inspected by a competent person before such equipment is placed in operation. Equipment defects affecting safety shall be recorded and reported to the mine operator.

(b) Carriers on aerial tramways, including loading and unloading mechanisms, shall be inspected each shift; brakes shall be inspected daily; ropes and supports shall be inspected as recommended by the manufacturer or as physical conditions warrant. Equipment defects affecting safety shall be reported to the mine operator.

(c) Equipment defects affecting safety shall be corrected before the equipment is used.

§ 77.1607 Loading and haulage equipment; operation.

(a) Vehicles shall follow at a safe distance; passing shall be limited to areas of adequate clearance and visibility.

(b) Mobile equipment operators shall have full control of the equipment while it is in motion.

(c) Equipment operating speeds shall be prudent and consistent with conditions of roadway, grades, clearance, visibility, traffic, and the type of equipment used.

(d) Cabs of mobile equipment shall be kept free of extraneous materials.

(e) Operators shall sit facing the direction of travel while operating equipment with dual controls.

(f) When an equipment operator is present, men shall notify him before getting on or off equipment.

(g) Equipment operators shall be certain, by signal or other means, that all persons are clear before starting or moving equipment.

(h) Where possible, aerial tramways shall not be started until the tramway operator has ascertained that everyone is in the clear.

(i) Dust control measures shall be taken where dust significantly reduces visibility of equipment operators.

(j) Dippers, buckets, loading booms, or heavy suspended loads shall not be swung over the cabs of haulage vehicles until the drivers are out of the cabs and in safe locations, unless the trucks are designed specifically to protect the drivers from falling material.

(k) Men shall not work or pass under the buckets or booms of loaders in operation.

(l) Tires shall be deflated before repairs on them are started and adequate means shall be provided to prevent wheel locking rims from creating a hazard during tire inflation.

(m) Electrically powered mobile equipment shall not be left unattended unless the master switch is in the off position, all operating controls are in the neutral position, and the brakes are set or other equivalent precautions are taken against rolling.

(n) Mobile equipment shall not be left unattended unless the brakes are set. The wheels shall be turned into a bank or berm, or shall be blocked, when such equipment is parked on a grade.

(o) Lights, flares, or other warning devices shall be posted when parked equipment creates a hazard to vehicular traffic.

(p) Dippers, buckets, scraper blades, and similar movable parts shall be secured or lowered to the ground when not in use.

(q) Shovel trailing cables shall not be moved with the shovel dipper unless cable slings or sleds are used.

(r) Equipment which is to be hauled shall be loaded and protected so as to prevent sliding or spillage.

(s) When moving between work areas, the equipment shall be secured in the travel position.

(t) Any load extending more than 4 feet beyond the rear of the vehicle body