

## § 56.14102

or emergency (secondary) brakes are not to be actuated during the test.

(iv) The tests shall be conducted with the transmission in the gear appropriate for the speed the equipment is traveling except for equipment which is designed for the power train to be disengaged during braking.

(v) Testing speeds shall be a minimum of 10 miles per hour and a maximum of 20 miles per hour.

(vi) Stopping distances shall be measured from the point at which the equipment operator receives the signal to apply the service brakes to the final stopped position.

(4) Test results shall be evaluated as follows:

(i) If the initial test run is valid and the stopping distance does not exceed the corresponding stopping distance listed in Table 1, the performance of the service brakes shall be considered acceptable. For tests to be considered valid, the equipment shall not slide sideways or exhibit other lateral motion during the braking portion of the test.

(ii) If the equipment exceeds the maximum stopping distance in the initial test run, the mine operator may request from the inspector up to four additional test runs with two runs to be conducted in each direction. The performance of the service brakes shall be considered acceptable if the equipment does not exceed the maximum stopping distance on at least three of the additional tests.

(5) Where there is not an appropriate test site at the mine or the equipment is not capable or traveling at least 10 miles per hour, service brake tests will not be conducted. In such cases, the inspector will rely upon other available evidence to determine whether the service brake system meets the performance requirement of this standard.

[53 FR 32521, Aug. 25, 1988; 53 FR 44588, Nov. 4, 1988]

### § 56.14102 Brakes for rail equipment.

Braking systems on railroad cars and locomotives shall be maintained in functional condition.

### § 56.14103 Operators stations.

(a) If windows are provided on operators' stations of self-propelled mobile

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equipment, the windows shall be made of safety glass or material with equivalent safety characteristics. The windows shall be maintained to provide visibility for safe operation.

(b) If damaged windows obscure visibility necessary for safe operation, or create a hazard to the equipment operator, the windows shall be replaced or removed. Damaged windows shall be replaced if absence of a window would expose the equipment operator to hazardous environmental conditions which would affect the ability of the equipment operator to safely operate the equipment.

(c) The operator's stations of self-propelled mobile equipment shall—

(1) Be free of materials that could create a hazard to persons by impairing the safe operation of the equipment; and

(2) Not be modified, in a manner that obscures visibility necessary for safe operation.

### § 56.14104 Tire repairs.

(a) Before a tire is removed from a vehicle for tire repair, the valve core shall be partially removed to allow for gradual deflation and then removed. During deflation, to the extent possible, persons shall stand outside of the potential trajectory of the lock ring of a multi-piece wheel rim.

(b) To prevent injury from wheel rims during tire inflation, one of the following shall be used:

(1) A wheel cage or other restraining device that will constrain all wheel rim components during an explosive separation of a multi-piece wheel rim, or during the sudden release of contained air in a single piece rim wheel; or

(2) A stand-off inflation device which permits persons to stand outside of the potential trajectory of wheel components.

### § 56.14105 Procedures during repairs or maintenance.

Repairs or maintenance of machinery or equipment shall be performed only after the power is off, and the machinery or equipment blocked against hazardous motion. Machinery or equipment motion or activation is permitted

to the extent that adjustments or testing cannot be performed without motion or activation, provided that persons are effectively protected from hazardous motion.

**§ 56.14106 Falling object protection.**

(a) Fork-lift trucks, front-end loaders, and bulldozers shall be provided with falling object protective structures if used in an area where falling objects could create a hazard to the equipment operator.

(b) The protective structure shall be capable of withstanding the falling object loads to which it would be subjected.

**§ 56.14107 Moving machine parts.**

(a) Moving machine parts shall be guarded to protect persons from contacting gears, sprockets, chains, drive head, tail, and takeup pulleys, flywheels, couplings, shafts, fan blades, and similar moving parts that can cause injury.

(b) Guards shall not be required where the exposed moving parts are at least seven feet away from walking or working surfaces.

**§ 56.14108 Overhead drive belts.**

Overhead drive belts shall be guarded to contain the whipping action of a broken belt if that action could be hazardous to persons.

**§ 56.14109 Unguarded conveyors with adjacent travelways.**

Unguarded conveyors next to the travelways shall be equipped with—

(a) Emergency stop devices which are located so that a person falling on or against the conveyor can readily deactivate the conveyor drive motor; or

(b) Railings which—

(1) Are positioned to prevent persons from falling on or against the conveyor;

(2) Will be able to withstand the vibration, shock, and wear to which they will be subjected during normal operation; and

(3) Are constructed and maintained so that they will not create a hazard.

**§ 56.14110 Flying or falling materials.**

In areas where flying or falling materials generated from the operation of

screens, crushers, or conveyors present a hazard, guards, shields, or other devices that provide protection against such flying or falling materials shall be provided to protect persons.

**§ 56.14111 Slusher, backlash guards and securing.**

(a) When persons are exposed to slushing operations, the slashers shall be equipped with rollers and drum covers and anchored securely before slushing operations are started.

(b) Slashers rated over 10 horsepower shall be equipped with backlash guards, unless the equipment operator is otherwise protected.

(c) This standard does not apply to air tuggers of 10 horsepower or less that have only one cable and one drum.

**§ 56.14112 Construction and maintenance of guards.**

(a) Guards shall be constructed and maintained to—

(1) Withstand the vibration, shock, and wear to which they will be subjected during normal operation; and

(2) Not create a hazard by their use.

(b) Guards shall be securely in place while machinery is being operated, except when testing or making adjustments which cannot be performed without removal of the guard.

**§ 56.14113 Inclined conveyors: backstops or brakes.**

Backstops or brakes shall be installed on drive units of inclined conveyors to prevent the conveyors from running in reverse, creating a hazard to persons.

**§ 56.14114 Air valves for pneumatic equipment.**

A manual master quick-close type air valve shall be installed on all pneumatic-powered equipment if there is a hazard of uncontrolled movement when the air supply is activated. The valve shall be closed except when the equipment is being operated.

**§ 56.14115 Stationary grinding machines.**

Stationary grinding machines, other than special bit grinders, shall be equipped with—