§ 56.19013 Diesel- and other fuel-injection-powered hoists.

Where any diesel or similar fuel-injection engine is used to power a hoist, the engine shall be equipped with a damper or other cutoff in its air intake system. The control handle shall be clearly labeled to indicate that its intended function is for emergency stopping only.

§ 56.19014 Friction hoist overtravel protection.

In a friction hoist installation, tapered guides or other approved devices shall be installed above and below the limits of regular travel of the conveyance and arranged to prevent overtravel in the event of failure of other devices.

§ 56.19017 Emergency braking for electric hoists.

Each electric hoist shall be equipped with a manually-operable switch that will initiate emergency braking action to bring the conveyance and the counterbalance safely to rest. This switch shall be located within reach of the hoistman in case the manual controls of the hoist fail.

§ 56.19018 Overtravel by-pass switches.

When an overtravel by-pass switch is installed, the switch shall function so as to allow the conveyance to be moved through the overtravel position when the switch is held in the closed position by the hoistman. The overtravel by-pass switch shall return automatically to the open position when released by the hoistman.

[50 FR 4054, Jan. 29, 1985; 50 FR 20100, May 14, 1985]

WIRE ROPES

AUTHORITY: Sec. 101, Federal Mine Safety and Health Act of 1977, Pub. L. 91–173 as amended by Pub. L. 95–164, 91 Stat. 1291 (30 U.S.C. 811).

§ 56.19021 Minimum rope strength.

At installation, the nominal strength (manufacturer's published catalog strength) of wire ropes used for hoisting shall meet the minimum rope strength values obtained by the following formulas in which ''L'' equals the maximum suspended rope length in feet:

(a) *Winding drum ropes* (all constructions, including rotation resistant).

For rope lengths less than 3,000 feet:
Minimum Value=Static Load×(7.0–0.001L)
For rope lengths 3,000 feet or greater:
Minimum Value=Static Load×4.0

(b) *Friction drum ropes*.

For rope lengths less than 4,000 feet:
Minimum Value=Static Load×(7.0–0.0005L)
For rope lengths 4,000 feet or greater:
Minimum Value=Static Load×5.0

(c) *Tail ropes* (balance ropes).

Minimum Value = Weight of Rope×7.0

§ 56.19022 Initial measurement.

After initial rope stretch but before visible wear occurs, the rope diameter of newly installed wire ropes shall be measured at least once in every third interval of active length and the measurements averaged to establish a baseline for subsequent measurements. A record of the measurements and the date shall be made by the person taking the measurements. This record shall be retained until the rope is retired from service.

[50 FR 4054, Jan. 29, 1985, as amended at 60 FR 33723, June 29, 1995]

§ 56.19023 Examinations.

(a) At least once every fourteen calendar days, each wire rope in service shall be visually examined along its entire active length for visible structural damage, corrosion, and improper lubrication or dressing. In addition, visual examination for wear and broken wires shall be made at stress points, including the area near attachments, where the rope rests on sheaves, where the rope leaves the drum, at drum crossovers, and at change-of-layer regions. When any visible condition that results in a reduction of rope strength is present, the affected portion of the rope shall be examined on a daily basis.

(b) Before any person is hoisted with a newly installed wire rope or any wire rope that has not been examined in the previous fourteen calendar days, the wire rope shall be examined in accordance with paragraph (a) of this section.