

**Mine Safety and Health Admin., Labor**

**§ 77.1908**

used in any communication system shall be posted conspicuously at each slope and shaft.

(b) Signaling systems used for communication between slopes and shafts and the hoistman shall be tested daily.

**§ 77.1905 Hoist safeguards; general.**

(a) Hoists used to transport persons shall be equipped with brakes capable of stopping and holding the cage, bucket, platform, or other device when fully loaded.

(b) When persons are transported by a hoist, a second person familiar with and qualified to stop the hoist shall be in attendance, except where the hoist is fully equipped with overspeed, overwind, and automatic stop devices.

**§ 77.1906 Hoists; daily inspection.**

(a) Hoists used to transport persons shall be inspected daily. The inspection shall include examination of the headgear (headframe, sheave wheels, etc.), connections, links and chains, and other facilities.

(b) Prior to each working shift, and before a hoist is returned to service after it has been out of normal service for any reason, the hoist shall be run by the hoist operator through one complete cycle of operation before any person is permitted to be transported.

(c) At the completion of each daily examination required by paragraph (a) of this section, the person making the examination shall certify, by signature and date, that the examination has been made. If any unsafe condition in the hoisting equipment is present, the person conducting the examination shall make a record of the condition and the date. Certifications and records shall be retained for one year.

(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))

[48 FR 53242, Nov. 25, 1983, as amended at 60 FR 33723, June 29, 1995]

**§ 77.1907 Hoist construction; general.**

If hooks are used to attach cages or buckets to the socket or thimble of a

hoisting rope, the hooks shall be self-closing.

(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))

[48 FR 53242, Nov. 25, 1983]

**§ 77.1908 Hoist installations; use.**

(a) Where men are transported by means of a hoist and the depth of the shaft exceeds 50 feet, the hoist rope shall be suspended from a substantial hoisting installation which shall be high enough to provide working clearance between the bottom of the sheave and the top of the cage or bucket.

(b) Where men are transported by means of a hoist and the depth of the shaft exceeds 100 feet, temporary shaft guides and guide attachments, or other no less effective means, shall be installed to prevent the cage, platform, or bucket from swinging.

(c) All guides and guide attachments, or other no less effective means, installed in accordance with paragraph (b) of this section shall be maintained to a depth of not less than 75 feet from the bottom of the shaft.

(d) Where crossheads are used, the cage, platform, or bucket shall not be hung more than 10 feet below the crosshead.

(e) Where men are required to embark or disembark from a cage, platform or bucket suspended over or within a shaft, a loading platform shall be installed to insure safe footing.

(f) During the development of each slope or shaft, either a ladder or independently powered auxiliary hoist shall be provided to permit men to escape quickly in the event of an emergency.

(g) No person shall be permitted to ride the rim of any bucket or on the top of a loaded bucket.

(h) The number of persons permitted to ride in cages, skips, or buckets shall be limited so as to prevent overcrowding.

(i) Persons shall not be permitted to ride on a cage, skip, or bucket with tools or materials, except when necessary to handle equipment while in transit. Materials shall be secured to prevent shifting while being hoisted.

(j) The speed of buckets transporting persons shall not exceed 500 feet per minute and not more than 200 feet per

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minute when within 100 feet of any stop.

(k) A notice of established speeds shall be posted in clear view of the hoistman.

(l) Conveyances being lowered in a shaft in which men are working shall be stopped at least 15 feet above such men and shall be lowered further only after the hoistman has received a signal that all men who may be endangered by the conveyance are in the clear.

(m) No skip or bucket shall be raised or lowered in a slope or shaft until it has been trimmed to prevent material from falling back down the slope or shaft.

(n) Measures shall be taken to prevent material from falling back into the shaft while buckets or other conveyances are being unloaded.

(o) Properly attached safety belts shall be worn by all persons required to work in or over any shaft where there is a drop of 10 or more feet, unless other acceptable means are provided to prevent such persons from falling into the shaft.

**§ 77.1908-1 Hoist operation; qualified hoistman.**

Hoists shall be under the control of and operated by a qualified hoistman when men are in a slope or shaft.

**§ 77.1909 Explosives and blasting; use of permissible explosives and shot-firing units.**

Except as provided in § 77.1909-1, only permissible explosives and permissible shot-firing units shall be used in sinking shafts and slopes.

**§ 77.1909-1 Use of nonpermissible explosives and nonpermissible shot-firing units; approval by Health and Safety District Manager.**

Where the Coal Mine Health and Safety District Manager has determined that the use of nonpermissible explosives and nonpermissible shot-firing units will not pose a hazard to any person during the development of a slope or shaft, he may, after written application by the operator, approve the use of such explosives and shot-firing units and issue a permit for the use of such explosives and devices setting forth the safeguards to be employed by

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the operator to protect the health and safety of any person exposed to such blasting.

(Pub. L. No. 96-511, 94 Stat. 2812 (44 U.S.C. 3501 et seq.))

[36 FR 9364, May 22, 1971, as amended at 60 FR 33723, June 29, 1995]

**§ 77.1910 Explosives and blasting; general.**

(a) Light and power circuits shall be disconnected or removed from the blasting area before charging and blasting.

(b) All explosive materials, detonators, and any other related blasting material employed in the development of any slope or shaft shall be stored, transported, carried, charged, and fired in accordance with the provision of Subpart N, "Explosives and Blasting," of this Part 77. Except as provided in paragraph (c) of this section, all shots shall be fired from the surface.

(c) Where tests for methane have been conducted and methane has not been found and only permissible blasting units are being employed, shots may be fired from an upper level of the slope or shaft.

(d) Except as provided in paragraph (c) of this section, all men shall be removed from the slope or shaft prior to blasting.

(e) Blasting areas in slopes or shafts shall be covered with mats or other suitable material when the excavation is too shallow to retain blasted material.

(f) Where it is impracticable to prepare primers in the blasting area, primers may be prepared on the surface and carried into the shaft in specially constructed, insulated, covered containers.

(g) No other development operation shall be conducted in a shaft or at the face of a slope while drill holes are being charged and until after all shots have been fired.

(h) The sides of the slope or shaft between the overhead platform and the bottom where men are working shall be examined after each blast and loose material removed.

(i) Loose rock and other material shall be removed from timbers and platforms after each blast before men are lowered to the shaft bottom.