

## § 28.40

equipment, or records do not ensure effective quality control over the fuse for which the approval was issued.

### Subpart E—Construction, Performance, and Testing Requirements

#### § 28.40 Construction and performance requirements; general.

(a) MSHA shall issue approvals for fuses for use with direct current in providing short-circuit protection for trailing cables, when such fuses have met the minimum construction, performance, and testing requirements set forth in this subpart.

(b) Fuses submitted to MSHA for approval will not be accepted unless they are designed on sound engineering and scientific principles, constructed of suitable materials, and evidence good workmanship.

(c) Fuses may be single-element or dual-element in type, however, they shall be capable of interrupting any direct current within a range from the ampere rating of the fuse under consideration for approval up to 20,000 amperes.

(d) MSHA shall accept the fuse size and ampere rating as specified in the Underwriters Laboratories, Inc., standard for alternating current fuses (UL-198), which is hereby incorporated by reference and made a part hereof. This document is available for examination at the U.S. Department of Labor, Mine Safety and Health Administration, Approval and Certification Center, 765 Technology Drive, Triadelphia, WV 26059, and copies of the document are available from COMM 2000, 1414 Brook Drive, Downers Grove, IL 60515; Telephone: 888-853-3512 (toll free); <http://ulstandardsinfonet.ul.com>.

(e) Fuses shall be capable of completely interrupting a current within 30 milliseconds after initial current interruption, and shall not show any evidence of restriking after 30 milliseconds.

(f) The blown fuse shall show only superficial damage.

[37 FR 7562, Apr. 15, 1972, as amended at 43 FR 12316, Mar. 24, 1978; 60 FR 35694, July 11, 1995; 71 FR 16666, Apr. 3, 2006; 73 FR 52213, Sept. 9, 2008]

## 30 CFR Ch. I (7-1-25 Edition)

#### § 28.41 Testing requirements; general.

(a) The open circuit voltage of the test circuit shall be 300 volts d.c., or 600 volts d.c., depending on the voltage rating of the fuse being tested.

(b) Time constant of the circuit (defined as  $T = L/R$ , where T is the time in seconds, L is the inductance in henries, and R is the resistance in ohms) shall be as follows:

(1) For 10,000 amperes and greater currents,  $T = 0.016$  second or more;

(2) For 1,000 amperes to 10,000 amperes,  $T = 0.008$  second or more;

(3) For 100 amperes to 1,000 amperes,  $T = 0.006$  second or more; and

(4) For less than 100 amperes,  $T = 0.002$  seconds or more.

(c) Test currents shall be as follows:

(1) 200 percent of rated current for fuses having 200 or less ampere rating, or 300 percent of rated current for fuses having greater than 200 ampere rating;

(2) 900 percent of rated current;

(3) 10,000 amperes; and

(4) 20,000 amperes.

(d) The voltage shall continue to be applied for at least 30 seconds after completion of circuit interruption.

(e) Five fuses of each case size shall be tested at each test current specified in paragraph (c) of this section, with the value of the fuse being the maximum value for the case size.

(f) Three of each lot of five fuses shall be preconditioned at  $95 \pm 5$  percent RH for not less than 5 days immediately prior to testing; and the other two fuses of each lot of five shall be preconditioned by heating to  $90^\circ\text{C}$ . for 24 hours, and tested within 1 hour after removal from the preconditioning chamber.

(g) At least three of each lot of five fuses shall be tested in a fuse holder of a trolley-tap type, and the fuse holder shall remain intact and shall readily accept and retain a replacement fuse.

### PART 33—DUST COLLECTORS FOR USE IN CONNECTION WITH ROCK DRILLING IN COAL MINES

#### Subpart A—General Provisions

Sec.

33.1 Purpose.

33.2 Definitions.

33.3 Consultation.

## Mine Safety and Health Admin., Labor

## § 33.3

- 33.4 Types of dust collectors for which certificates of approval may be granted.
- 33.5 [Reserved]
- 33.6 Application procedures and requirements.
- 33.7 Date for conducting tests.
- 33.8 Conduct of investigations, tests, and demonstrations.
- 33.9 Certification of dust-collecting systems.
- 33.10 Certificates of approval or performance.
- 33.11 Approval plates.
- 33.12 Changes after certification.
- 33.13 Withdrawal of certification.

### Subpart B—Dust-Collector Requirements

- 33.20 Design and construction.
- 33.21 Modification of test equipment.
- 33.22 Mode of use.
- 33.23 Mechanical positioning of parts.

### Subpart C—Test Requirements

- 33.30 Test site.
- 33.31 Test space.
- 33.32 Determination of dust concentration.
- 33.33 Allowable limits of dust concentration.
- 33.34 Drilling test.
- 33.35 Methods of drilling; dust-collector unit.
- 33.36 Method of drilling; combination unit or dust-collecting system.
- 33.37 Test procedure.
- 33.38 Electrical parts.

AUTHORITY: 30 U.S.C. 957, 961.

SOURCE: Schedule 25B, 25 FR 6473, July 9, 1960, unless otherwise noted.

### Subpart A—General Provisions

#### § 33.1 Purpose.

The regulations in this part set forth the requirements for dust collectors used in connection with rock drilling in coal mines to procure their certification as permissible for use in coal mines; procedures for applying for such certification; and fees.

#### § 33.2 Definitions.

As used in this part:

(a) *Permissible*, as applied to a dust collector, means that it conforms to the requirements of this part, and that a certificate of approval to that effect has been issued.

(b) *Bureau* means the United States Bureau of Mines.

(c) *Certificate of approval* means a formal document issued by MSHA stating

that the dust collector unit or combination unit has met the requirements of this part, and authorizing the use and attachment of an official approval plate or a marking so indicating.

(d) *Certificate of performance* means a formal document issued by MSHA stating that a dust-collecting system has met the test requirements of Subpart C of this part and therefore is suitable for use as part of permissible units.

(e) *Dust-collector unit* means a complete assembly of parts comprising apparatus for collecting the dust that results from drilling in rock in coal mines, and is independent of the drilling equipment.

(f) *Combination unit* means a rock-drilling device with an integral dust-collecting system, or mining equipment with an integral rock-drilling device and dust-collecting system.

(g) *Dust-collecting system* means an assembly of parts comprising apparatus for collecting the dust that results from drilling in rock and is dependent upon attachment to other equipment for its operation.

(h) *Applicant* means an individual, partnership, company, corporation, association, or other organization that designs and manufactures, assembles or controls the assembly of a dust-collecting system, dust-collector unit, or a combination unit, and seeks certification thereof.

(i) *MSHA* means the United States Department of Labor, Mine Safety and Health Administration.

[Sched. 25B, 25 FR 6473, July 9, 1960, as amended at 39 FR 24005, June 28, 1974; 43 FR 12317, Mar. 24, 1978]

#### § 33.3 Consultation.

By appointment, applicants or their representatives may visit the U.S. Department of Labor, Mine Safety and Health Administration, Approval and Certification Center, 765 Technology Drive, Triadelphia, WV 26059, to discuss with MSHA personnel proposed designs of equipment to be submitted in accordance with the regulations of this part. No charge is made for such consultation and no written report thereof will be made to the applicant.

[70 FR 46343, Aug. 9, 2005, as amended at 73 FR 52213, Sept. 9, 2008]

**§ 33.4 Types of dust collectors for which certificates of approval may be granted.**

(a) Certificates of approval will be granted only for completely assembled dust-collector or combination units; parts or subassemblies will not be approved.

(b) The following types of equipment may be approved: Dust-collector or combination units having components designed specifically to prevent dissemination of airborne dust generated by drilling into coal-mine rock strata in concentrations in excess of those hereinafter stated in § 33.33 as allowable, and to confine or control the collected dust in such manner that it may be removed or disposed of without dissemination into the mine atmosphere in quantities that would create unhygienic conditions.

**§ 33.5 [Reserved]**

**§ 33.6 Application procedures and requirements.**

(a)(1) No investigation or testing for certification will be undertaken by MSHA except pursuant to a written application (except as provided in paragraph (e) of this section), accompanied by all prescribed drawings, specifications, and related materials. The application and all related matters and correspondence shall be addressed to: U.S. Department of Labor, Mine Safety and Health Administration, Approval and Certification Center, 765 Technology Drive, Triadelphia, WV 26059. Fees calculated in accordance with part 5 of this title shall be submitted in accordance with § 5.40.

(2) Where the applicant for approval has used an independent laboratory under part 6 of this chapter to perform, in whole or in part, the necessary testing and evaluation for approval under this part, the applicant must provide to MSHA as part of the approval application:

(i) Written evidence of the laboratory's independence and current recognition by a laboratory accrediting organization;

(ii) Complete technical explanation of how the product complies with each requirement in the applicable MSHA product approval requirements;

(iii) Identification of components or features of the product that are critical to the safety of the product; and

(iv) All documentation, including drawings and specifications, as submitted to the independent laboratory by the applicant and as required by this part.

(3) An applicant may request testing and evaluation to non-MSHA product safety standards which have been determined by MSHA to be equivalent, under § 6.20 of this chapter, to MSHA's product approval requirements under this part.

(b) The application shall specify the operating conditions (see § 33.22) for which certification is requested.

(c) Shipment of the equipment to be tested shall be deferred until MSHA has notified the applicant that the application will be accepted. Shipping instructions will be issued by MSHA and shipping charges shall be prepaid by the applicant. Upon completion of the investigation and notification thereof to the applicant by MSHA, the applicant shall remove his equipment promptly from the test site (see § 33.30).

(d) Drawings and specifications shall be adequate in number and detail to identify fully the design of the unit or system and to disclose its materials and detailed dimensions of all component parts. Drawings must be numbered and dated to insure accurate identification and reference to records, and must show the latest revision. Specifications and drawings, including a complete assembly drawing with each part that affects dust collection identified thereon, shall include:

(1) Details of all dust-collector parts. A manufacturer who supplies the applicant with component parts or sub-assemblies may submit drawings and specifications of such parts or sub-assemblies direct to MSHA instead of to the applicant. If the unit or system is certified, MSHA will supply the applicant with a list, in duplicate, of drawing numbers pertaining to such parts or subassemblies for identification purposes only.

(2) Details of the electrical parts of units designed to operate as face equipment (see § 33.38) in accordance with the provisions of Part 18 of Subchapter D of this chapter. (Bureau of Mines

Schedule 2, revised, the current revision of which is Schedule 2F).

(3) Storage capacity of the various stages of dust collection in the dust separator.

(4) Net filter area in the dust separator, and complete specifications of the filtering material.

(e) If an application is made for certification of a dust-collector unit or a combination unit that includes electrical parts, and is designed to operate as electric face equipment, as defined in § 33.38, the application shall be in triplicate.

(f) The application shall state that the unit or system is completely developed and of the design and materials which the applicant believes to be suitable for a finished marketable product.

(g) The applicant shall furnish a complete unit or system for inspection and testing. Spare parts, such as gaskets and other expendable components subject to wear in normal operation, shall be supplied by the applicant to permit continuous operation during test periods. If special tools are necessary to disassemble any part for inspection or test, they shall be furnished by the applicant.

(h) Each unit or system shall be carefully inspected before it is shipped from the place of manufacture or assembly and the results of the inspection shall be recorded on a factory-inspection form. The applicant shall furnish MSHA with a copy of the factory-inspection form with his application. The form shall direct attention to the points that must be checked to make certain that all parts are in proper condition, complete in all respects, and in agreement with the drawings and specifications filed with MSHA.

(i) With the application the applicant shall furnish MSHA with complete instructions for operating and servicing the unit or system and information as to the kind of power required. After MSHA's investigation, if any revision of the instructions is required a revised copy thereof shall be submitted to

MSHA for inclusion with the drawings and specifications.

[Sched. 25B, 25 FR 6473, July 9, 1960, as amended at 43 FR 12317, Mar. 24, 1978; 47 FR 14696, Apr. 6, 1982; 47 FR 28095, June 29, 1982; 60 FR 33723, June 29, 1995; 68 FR 36422, June 17, 2003; 70 FR 46343, Aug. 9, 2005; 73 FR 52213, Sept. 9, 2008]

**§ 33.7 Date for conducting tests.**

The date of acceptance of an application will determine the order of precedence for testing when more than one application is pending, and the applicant will be notified of the date on which tests will begin. If a unit or system fails to meet any of the requirements, it shall lose its order of precedence. If an application is submitted to resume testing after correction of the cause of failure, it will be treated as a new application and the order of precedence for testing will be so determined.

**§ 33.8 Conduct of investigations, tests, and demonstrations.**

(a) Prior to the issuance of a certificate of approval or performance, necessary government personnel, representatives of the applicant, and such other persons as may be mutually agreed upon, may observe the investigations or tests. MSHA shall hold as confidential and shall not disclose principles or patentable features, nor shall it disclose any details of drawings, specifications, and related materials. After the issuance of a certificate, MSHA may conduct such public demonstrations and tests of the unit or system as it deems appropriate. The conduct of all investigations, tests, and demonstrations shall be under the direction and control of MSHA, and any other persons shall be present only as observers, except as noted in paragraph (b) of this section.

(b) When requested by MSHA, the applicant shall provide assistance in disassembling parts for inspection, preparing parts for testing, and operating combination units.

[Sched. 25B, 25 FR 6473, July 9, 1960, as amended at 39 FR 24005, June 28, 1974]

**§ 33.9 Certification of dust-collecting systems.**

Manufacturers of dust-collecting systems that are designed for integral use

### § 33.10

on machines with drilling equipment may apply to MSHA to issue a certificate of performance for such systems. To qualify for a certificate of performance, the dust-collecting system shall have met satisfactorily the test requirements of Subpart C under specified operating conditions, such as type of drilling equipment, drilling speed, and power requirements and the construction thereof shall be adequately covered by specifications and drawings officially recorded and filed with MSHA. Individual parts of dust-collecting systems will not be certified for performance. Certificates of performance may be cited to fabricators of combination units as evidence that further inspection and testing of the dust-collecting system will not be required, provided the dust-collecting requirements of the drilling equipment do not exceed the limits of performance for which the system was certified. Since MSHA does not sanction the use of the words "permissible" or "approved" except as applying to completely assembled equipment, dust-collecting systems, which have been certified only as to performance, shall not be advertised or labeled in a manner inferring that such systems themselves are permissible or approved by MSHA. However, a certified system may be advertised as suitable for use on combination units for which certification may be desired if the limits of its performance are cited. Certified dust-collecting systems shall bear labels or tags which shall contain the following: "Performance-tested Dust Collecting, System, MSHA File No. P/T \_\_\_\_\_," and name of manufacturer, identifying numbers of the dust-collector parts, and description of the limitations for which performance is certified. MSHA will assign a P/T file number in the certification letter.

### § 33.10 Certificates of approval or performance.

(a) Upon completion of an investigation, MSHA will issue to the applicant either a certificate or a written notice of disapproval, as they case may require. No informal notification of approval will be issued. If a certificate is issued, no test data or detailed results of tests will accompany it. If a notice

### 30 CFR Ch. I (7-1-25 Edition)

of disapproval is issued, it will be accompanied by details of the defects, with a view to possible correction. MSHA will not disclose, except to the applicant, any information on a unit or system upon which a notice of disapproval has been issued.

(b) A certificate will be accompanied by a list of the drawings and specifications covering the details of design and construction of the unit or system, including the electrical parts, if applicable, upon which the certificate is based. Applicants shall keep exact duplicates of the drawings and specifications submitted and the list of drawing numbers referred to in § 33.6(d)(1) that relate to the certified unit or system, and these are to be adhered to exactly in production.

### § 33.11 Approval plates.

(a) A certificate of approval will be accompanied by a photograph of a design for an approval plate, bearing the emblem of the Mine Safety and Health Administration, the name of the applicant, the name of the unit, the approval number or space for the approval number (or numbers if permissibility of electrical parts is involved), spaces for the type and the serial numbers of the unit, conditions of approval, and identifying numbers of the dust-collector parts. When deemed necessary by MSHA, an appropriate statement shall be added, giving the precautions to be observed in maintaining the unit in an approved condition.

(b) An approval plate for a unit designed for use in a nongassy coal mine shall state that any electrical parts are not certified for use in a gassy coal mine. (See § 33.38(c).)

(c) The applicant shall reproduce the design either as a separate plate or by stamping or molding it in some suitable place on each unit to which it relates. The size, type, and method of attaching and location of an approval plate are subject to the approval of MSHA. The method of affixing the plate shall not impair the dust-collection or explosion-proof features of the unit.

(d) The approval plate identifies the unit, to which it is attached, as permissible, and is the applicant's guarantee

that the unit complies with the requirements of this part. Without an approval plate, no unit has the status of "permissible" under the provisions of this part.

(e) Use of the approval plate obligates the applicant to whom the certificate of approval was granted to maintain the quality of each unit bearing it and guarantees that it is manufactured and assembled according to the drawings and specifications upon which a certificate of approval was based. Use of the approval plate is not authorized except on units that conform strictly with the drawings and specifications upon which the certificate of approval was based.

[Sched. 25B, 25 FR 6473, July 9, 1960, as amended at 43 FR 12317, Mar. 24, 1978]

**§ 33.12 Changes after certification.**

If an applicant desires to change any feature of a certified unit or system, he shall first obtain MSHA's approval of the change, pursuant to the following procedure:

(a)(1) Application shall be made as for an original certificate, requesting that the existing certification be extended to cover the proposed changes, and shall be accompanied by drawings, specifications, and related data showing the changes in detail.

(2) Where the applicant for approval has used an independent laboratory under part 6 of this chapter to perform, in whole or in part, the necessary testing and evaluation for approval of changes to an approved product under this part, the applicant must provide to MSHA as part of the approval application:

(i) Written evidence of the laboratory's independence and current recognition by a laboratory accrediting organization;

(ii) Complete technical explanation of how the product complies with each requirement in the applicable MSHA product approval requirements;

(iii) Identification of components or features of the product that are critical to the safety of the product; and

(iv) All documentation, including drawings and specifications, as submitted to the independent laboratory by the applicant and as required by this part.

(b) The application will be examined by MSHA to determine whether inspection and testing will be required. Testing will be necessary if there is a possibility that the modification may affect adversely the performance of the unit or system. MSHA will inform the applicant whether such testing is required and the components or materials to be submitted for that purpose.

(c) If the proposed modification meets the requirements of this part and Part 18 of Subchapter D of this chapter (Bureau of Mines Schedule 2, revised, the current revision of which is Schedule 2F) if applicable, a formal extension of certification will be issued, accompanied by a list of new and corrected drawings and specifications to be added to those already on file as the basis for the extension of certification.

[Sched. 25B, 25 FR 6473, July 9, 1960, as amended at 52 FR 17515, May 8, 1987; 68 FR 36422, June 17, 2003]

**§ 33.13 Withdrawal of certification.**

MSHA reserves the right to rescind for cause, at any time, any certification granted under this part.

**Subpart B—Dust-Collector Requirements**

**§ 33.20 Design and construction.**

(a) MSHA will not test or investigate any dust collector that in its opinion is not constructed of suitable materials, that evidences faulty workmanship, or that is not designed upon sound engineering principles. Since all possible designs, arrangements, or combinations of components and materials cannot be foreseen, MSHA reserves the right to modify the tests specified in this part in such manner to obtain substantially the same information and degree of protection as provided by the tests described in Subpart C of this part.

(b) Adequacy of design and construction of a unit or system will be determined in accordance with its ability (1) to prevent the dissemination of objectionable or harmful concentrations of dust into a mine atmosphere, and (2) to protect against explosion and/or fire

### § 33.21

hazards of electrical equipment, except as provided in § 33.38(b).

#### § 33.21 Modification of test equipment.

For test purposes the unit or system may be modified, such as by attaching instruments or measuring devices, at MSHA's discretion; but such modification shall not alter its performance.

#### § 33.22 Mode of use.

(a) A unit or system may be designed for use in connection with percussion and/or rotary drilling in any combination of the following drilling positions: (1) Vertically upward, (2) upward at angles to the vertical, (3) horizontally, and (4) downward.

(b) Dust-collector units may be designed for use with specific drilling equipment or at specific drilling speeds.

#### § 33.23 Mechanical positioning of parts.

All parts of a unit that are essential to the dust-collection feature shall be provided with suitable mechanical means for positioning and maintaining such parts properly in relation to the stratum being drilled.

### Subpart C—Test Requirements

#### § 33.30 Test site.

Tests shall be conducted at an appropriate location determined by MSHA.

[39 FR 24005, June 28, 1974]

#### § 33.31 Test space.

(a) Drilling tests shall be conducted in a test space formed by two curtains suspended across a mine opening in such a manner that the volume of the test space shall be approximately 2,000 cubic feet.

(b) No mechanical ventilation shall be provided in the test space during a drilling test, except such air movement as may be induced by operation of drilling- or dust-collecting equipment.

(c) All parts of a unit or system shall be within the test space during a drilling test.

### 30 CFR Ch. I (7-1-25 Edition)

#### § 33.32 Determination of dust concentration.

(a) Concentrations of airborne dust in the test space shall be determined by sampling with a midjet impinger apparatus, and a light-field microscopic technique shall be employed in determining concentrations of dust in terms of millions of particles (5 microns or less in diameter) per cubic foot of air sampled.

(b) Before a drilling test is started the surfaces of the test space shall be wetted; the test space shall be cleared of air-borne dust insofar as practicable by mechanical ventilation or other means; and an atmospheric sample, designated as a control sample, shall be collected during a 5-minute period to determine residual airborne dust in the test space.

(c) A sample of airborne dust, designated as a test sample, shall be collected in the breathing zone of the drill operators during the drilling of each test hole. Time consumed in changing drill steel shall not be considered as drilling time and sampling shall be discontinued during such periods.

[Sched. 25B, 25 FR 6473, July 9, 1960, as amended at 26 FR 2599, Mar. 28, 1961]

#### § 33.33 Allowable limits of dust concentration.

(a) The concentration of dust determined by the control sample shall be subtracted from the average concentration of dust determined by the test samples collected at each drill operator's position, and the difference shall be designated as the net concentration of airborne dust. Calculations of the average concentration of dust determined from the test samples shall be based upon the results of not less than 80 percent of each set of test samples.

(b) Under each prescribed test condition, the net concentration of airborne dust at each drill operator's position shall not exceed 10 million particles (5 microns or less in diameter) per cubic foot of air when determined in accordance with the method given in § 33.32(a).

[Sched. 25B, 25 FR 6473, July 9, 1960, as amended at 26 FR 2599, Mar. 28, 1961]

**§ 33.34 Drilling test.**

(a) A drilling test shall consist of drilling a set of 10 test holes, without undue delay, under specified operating conditions. When the test involves the control of dust from more than one drill, all the drills shall be used in the intended manner to complete the set of test holes.

(b) Holes shall be drilled to a depth of 4 feet plus or minus 2 inches and shall be spaced so as not to interfere with adjacent holes. Each hole may be plugged after completion.

(c) Receptacles and filters for collecting drill cuttings shall be emptied and cleaned before each drilling test is started.

(d) Holes designated as "vertical" shall be drilled to incline not more than 10 degrees to the vertical. Holes designated as "angle" shall be drilled to incline not less than 30 and not more than 45 degrees to the vertical. Holes designated as "horizontal" shall be drilled to incline not more than 15 degrees to the horizontal.

[Sched. 25B, 25 FR 6473, July 9, 1960, as amended at 26 FR 2599, Mar. 28, 1961]

**§ 33.35 Methods of drilling; dust-collector unit.**

(a) *General.* All drilling shall be done with conventional, commercial drilling equipment—pneumatic-percussion, hydraulic-rotary, and/or electric-rotary types—in accordance with the applicant's specifications.

(b) *Pneumatic-percussion drilling.* A stopper-type drill with a piston diameter of 2½ to 3 inches shall be used for roof drilling. A hand-held, sinker-type drill with a piston diameter of 2½ to 3 inches shall be used for down drilling and also for horizontal drilling, except that the drill shall be supported mechanically. Compressed air for operating the drill shall be supplied at a gage pressure of 85–95 pounds per square inch. Drill bits shall be detachable, cross type with hard inserts, and shall be sharp when starting to drill each set of 10 holes. In roof drilling, 1¼- and 1½-inch diameter drill bits shall be used; in horizontal and down drilling, 1¾-inch diameter bits shall be used. The drill steel shall be ⅞-inch hexagonal and of hollow type to permit

the introduction of compressed air through the drill steel when necessary to clean a hole during drilling.

(c) *Rotary drilling.* A hydraulic-rotary drill with a rated drilling speed of 18 feet per minute free lift, capable of rotating drill steel at 900 revolutions per minute with 100 foot-pounds torque, and having a feed force of 7,000 pounds, shall be used for roof drilling. An electric-rotary drill, supported by a post mounting, with a rated drilling speed of 30 inches per minute and powered by a 2.25 horsepower motor, shall be used for horizontal drilling. For roof drilling, the bits shall be hard-tipped, 1⅝ and 1½ inches outside diameter, and 1¼-inch auger-type drill steel shall be used. For horizontal drilling, the bits shall be hard-tipped, 2 inches outside diameter, and 1¾-inch auger-type drill steel shall be used. Drill bits shall be sharp when starting to drill each set of 10 holes.

**§ 33.36 Method of drilling; combination unit or dust-collecting system.**

Drilling shall be conducted in accordance with the applicant's specifications and operating instructions. If special drill bits or drill steel are required, they shall be furnished to MSHA by the applicant. Otherwise the drill bit and drill steel requirements stated in paragraphs (b) and (c) of § 33.35 shall be complied with for all types of combination units or dust-collecting systems.

**§ 33.37 Test procedure.**

(a) *Roof drilling:* Drilling shall be done in friable strata, similar to the roof in the Bureau's Experimental Mine, which tends to produce large scale-like cuttings.

(b) *Horizontal drilling:* Drilling shall be done in strata comparable in hardness to that of coal-mine draw slate. Holes shall be started near the roof of the test space under conditions simulating the drilling of draw slate in coal mining.

(c) *Down drilling:* Drilling shall be done in typical mine floor strata with a pneumatic percussion-type drill. Five holes shall be drilled vertically and five holes shall be drilled at an angle.

(d) At MSHA's discretion drilling in "on site" strata may be acceptable in

### § 33.38

lieu of strata requirements in paragraphs (a), (b), and (c) of this section. (See § 33.20(a).)

### § 33.38 Electrical parts.

(a) Units with electrical parts and designed to operate as electric face equipment (see definition, § 45.44-1 of this chapter) in gassy coal mines shall meet the requirements of Part 18 of Subchapter D of this chapter (Bureau of Mines Schedule 2, revised, the current revision of which is Schedule 2F), and the examination and testing of the electrical parts shall be entirely separate from the examination and testing of dust-collecting equipment as such.

(b) Units with electrical parts designed to operate only outby the last open crosscut in a gassy coal-mine entry, room, or other opening (including electric-drive units with their controls and push buttons) are not required to comply with the provisions of Part 18 of Subchapter D of this chapter (Bureau of Mines Schedule 2, revised, the current revision of which is Schedule 2F).

(c) Units with electrical parts and designed for operation only in nongassy coal mines are not required to comply with the provisions of Part 18 of Subchapter D of this chapter (Bureau of Mines Schedule 2, revised, the current revision of which is Schedule 2F). (See § 33.11(b).)

## PART 35—FIRE-RESISTANT HYDRAULIC FLUIDS

### Subpart A—General Provisions

- Sec.
- 35.1 Purpose.
  - 35.2 Definitions.
  - 35.3 Consultation.
  - 35.4 Types of hydraulic fluid for which certificates of approval may be granted.
  - 35.5 [Reserved]
  - 35.6 Application procedures and requirements.
  - 35.7 Date for conducting tests.
  - 35.8 Conduct of investigations, tests, and demonstrations.
  - 35.9 Certificates of approval.
  - 35.10 Approval labels or markings.
  - 35.11 Material required for record.
  - 35.12 Changes after certification.
  - 35.13 Withdrawal of certification.

## 30 CFR Ch. I (7-1-25 Edition)

### Subpart B—Test Requirements

- 35.20 Autogenous-ignition temperature test.
- 35.21 Temperature-pressure spray-ignition test.
- 35.22 Test to determine effect of evaporation on flammability.
- 35.23 Performance required for certification.

AUTHORITY: 30 U.S.C. 957, 961.

SOURCE: Schedule 30, 24 FR 10201, Dec. 17, 1959, unless otherwise noted.

### Subpart A—General Provisions

#### § 35.1 Purpose.

The regulations in this part set forth the requirements for fire-resistant hydraulic fluids and concentrates for the production thereof to procure their certification as approved for use in machines and devices that are operated in coal mines and procedures for applying for such certification.

[Sched. 30, 24 FR 10201, Dec. 17, 1959, as amended at 52 FR 17515, May 8, 1987]

#### § 35.2 Definitions.

As used in this part—

(a) *Permissible*, as applied to hydraulic fluids, means that the fluid conforms to the requirements of this part, and that a certificate of approval to that effect has been issued.

(b) *MSHA* means the United States Department of Labor, Mine Safety and Health Administration.

(c) *Certificate of approval* means a formal document issued by MESA stating that the fluid has met the requirements of this part for fire-resistant hydraulic fluids and authorizing the use of an official identifying marking so indicating.

(d) *Fire-resistant hydraulic fluid* means a fluid of such chemical composition and physical characteristics that it will resist the propagation of flame.

(e) *Concentrate* means a substance in concentrated form that might not be fire resistant as such but when mixed with water or other vehicle in accordance with instructions furnished by the applicant will constitute a fire-resistant hydraulic fluid.

(f) *Applicant* means an individual, partnership, company, corporation, association, or other organization that manufactures, compounds, refines, or