

PART 24—SINGLE-SHOT BLASTING UNITS

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

SOURCE: Schedule 12D, 10 FR 14895, Dec. 11, 1945, unless otherwise noted.

§ 24.0 Authorization and purpose.

(a) Investigations under this part are conducted under the authorization of the Federal Mine Safety and Health Act of 1977 (Pub. L. 91-173, as amended by Pub. L. 95-164).

(b) The purpose of investigations under this part is to promote the development of safe types of single-shot blasting units that may be used in mines, especially in mines that may contain methane or inflammable dust in dangerous proportions. Lists of such units will be published from time to time so that State mine-inspection departments, compensation bureaus, mine operators, miners, and others interested in safe equipment for mines may have information regarding permissible blasting units. This part supersedes Schedule 12C issued under date of July 16, 1940 (30 CFR, 1943 Cum. Supp., Part 24), and goes into effect November 27, 1945.

(c) Any blasting unit that meets the requirements set forth in this part will be termed "permissible" by MSHA.

(d) Definition of permissible. Completely assembled and conforming in every respect with the design formally approved by MSHA under this part. (Approvals under this part are given only to equipment for use in gassy and dusty mines.)

(e) *MSHA* means the United States Department of the Interior, Mining Enforcement and Safety Administration. Predecessor organization to MSHA, prior to March 9, 1978.

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

[Sched. 12D, 10 FR 14895, Dec. 11, 1945, as amended by Supp. 1, 20 FR 2719, Apr. 23, 1955; 39 FR 24001, June 28, 1974; 43 FR 12315, Mar. 24, 1978]

§ 24.1 [Reserved]

§ 24.2 Applications.

Before MSHA will undertake the active investigation leading to approval of any single-shot blasting unit, the manufacturer shall make application by letter for an investigation leading to approval of his unit. This application in duplicate, accompanied by a check, bank draft, or money order, payable to the U.S. Mine Safety and Health Safety Administration, to cover all the necessary fees, shall be sent to Approval and Certification Center, Box 201B, Industrial Park Road, Dallas Pike, Triadelphia, W. Va. 26059 together with the required drawings, one complete blasting unit, and instructions for its operation.

[Sched. 12D, 10 FR 14895, Dec. 11, 1945, as amended at 43 FR 12315, Mar. 24, 1978]

§ 24.3 Conditions governing investigations.

(a) One complete blasting unit, with drawings that show the construction of the device and the materials of which it is made, should be forwarded to Approval and Certification Center, Box 201B Industrial Park Road, Dallas Pike, Triadelphia, W. Va. 26059 at the time the application for tests is made.

(b) When this has been inspected by MSHA, the applicant will be notified as to the amount of material that will be required for the tests.

(c) The applicant will be notified of the date on which the tests will be started and will be given an opportunity to witness the tests.

(d) Observers at formal investigations and demonstrations. No one shall be present during any part of the formal investigation conducted by MSHA which leads to approval for permissibility except the necessary Government personnel, representatives of the applicant, and such other persons as may be mutually agreed upon by the applicant and MSHA. Upon granting approval for

permissibility, MSHA will announce that such approval has been granted to the device and may thereafter conduct, from time to time in its discretion, public demonstrations of the tests conducted on the approved device. Those who attend any part of the investigation, or any public demonstration, shall be present solely as observers; the conduct of the investigation and of any public demonstration shall be controlled by MSHA. Results of chemical analyses of material and all information contained in the drawings, specifications, and instructions shall be deemed confidential and their disclosure will be appropriately safeguarded by MSHA.

(e) Permissibility tests will not be made unless the unit has been completely developed and is a form that can be marketed.

(f) The results of the tests shall be regarded as confidential by all present at the tests and shall not be made public in any way before the shot-firing unit is formally approved by MSHA.

(g) No verbal report of approval or disapproval will be made to the applicant. After MSHA has considered the results of the tests, a formal report of the approval or disapproval will be made to the applicant in writing by MSHA. The applicant shall not advertise the unit as being permissible or as having passed the tests before he receives formal notice of approval.

[Sched. 12D, 10 FR 14895, Dec. 11, 1945, as amended by Supp. 1, 20 FR 2719, Apr. 23, 1955; 43 FR 12315, Mar. 24, 1978]

§24.4 Requirements for approval.

Single-shot blasting units approved under this part shall be practical in construction and operation as well as suitable for service conditions underground. They shall offer no probable ignition hazard when used in gassy mine atmospheres. They shall meet, under laboratory test conditions, the following requirements of minimum performance:

(a) The unit shall fire consistently single electric blasting caps through a total resistance of 4½ ohms.

(b) The unit shall not produce sparks capable of igniting explosive mixtures of methane and air.¹

(c) Units of the battery type shall be designed to prevent accidental connection to the firing circuit. Batteries having a short-circuit current greater than 10 amperes, shall be enclosed in an effectively locked or sealed housing.

(d) Storage batteries supplying current for both blasting and illumination at the same time shall have ample capacity for the combined service or shall be equipped with an automatic device that cuts off the lamp during shot firing. The lamp part of the unit shall meet the requirements of the current lamp schedules.

(e) Magneto units shall be operable only by a special key or handle.

(f) A unit that depends on some special modification such as a shunt resistance, to prevent igniting sparks, shall have its housing sealed or locked to prevent removal or disturbance of this safety feature.

[Sched. 12D, 10 FR 14895, Dec. 11, 1945, as amended by Supp. 1, 20 FR 2719, Apr. 23, 1955]

§24.5 Materials required for MSHA records.

In order that MSHA may know exactly what it has tested and approved, it keeps detailed records covering each investigation. These records include drawings and actual equipment, as follows:

(a) *Drawings.* The original drawings submitted with the application for approval and any drawings that are needed to show changes in design. These drawings are used to identify the unit

¹Sparking tests of battery-type units will be made with a contactor disk 8 inches in diameter equipped with brush-type contacts, each of approximately 50 No. 34 copper wires. The contactor will be surrounded by an explosive mixture of Pittsburgh natural gas and air. The test shall consist of making and breaking the discharge of each of three units at least 300 times with the contactor operating at 60 revolutions per minute. The resistance of the contactor circuit shall not be greater than 0.25 ohm. Similar tests will be made of magneto- and generator-type units but with the contactor equipped with a 1/16-inch bronze brush and brass contact and operating at speeds up to 1,200 revolutions per minute.