

§ 18.1

- 18.62 Tests to determine explosion-proof characteristics.
- 18.63 [Reserved]
- 18.65 Flame test of conveyor belting and hose.
- 18.66 Tests of windows and lenses.
- 18.67 Static-pressure tests.
- 18.68 Tests for intrinsic safety.
- 18.69 Adequacy tests.

Subpart D—Machines Assembled With Certified or Explosion-Proof Components, Field Modifications of Approved Machines, and Permits To Use Experimental Equipment

- 18.80 Approval of machines assembled with certified or explosion-proof components.
- 18.81 Field modification of approved (permissible) equipment; application for approval of modification; approval of plans for modification before modification.
- 18.82 Permit to use experimental electric face equipment in a gassy mine or tunnel.

APPENDIX I—LIST OF TABLES

APPENDIX II—LIST OF FIGURES

Subpart E—Field Approval of Electrically Operated Mining Equipment

- 18.90 Purpose.
- 18.91 Electric equipment for which field approvals will be issued.
- 18.92 Quality of material and design.
- 18.93 Application for field approval; filing procedures.
- 18.94 Application for field approval; contents of application.
- 18.95 Approval of machines constructed of components approved, accepted or certified under Bureau of Mines Schedule 2D, 2E, 2F, or 2G.
- 18.96 Preparation of machines for inspection; requirements.
- 18.97 Inspection of machines; minimum requirements.
- 18.98 Enclosures, joints, and fastenings; pressure testing.
- 18.99 Notice of approval or disapproval; letters of approval and approval plates.

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

SOURCE: 33 FR 4660, Mar. 19, 1968, unless otherwise noted.

Subpart A—General Provisions

§ 18.1 Purpose.

The regulations in this part set forth the requirements to obtain MSHA: Approval of electrically operated machines and accessories intended for use in gassy mines or tunnels, certification of components intended for use on or

with approved machines, permission to modify the design of an approved machine or certified component, acceptance of flame-resistant hoses and conveyor belts, sanction for use of experimental machines and accessories in gassy mines or tunnels; also, procedures for applying for such approval, certification, acceptance for listing.

[43 FR 12313, Mar. 24, 1978, as amended at 52 FR 17514, May 8, 1987; 57 FR 61223, Dec. 23, 1992]

§ 18.2 Definitions.

As used in this part—

Acceptance means written notification by MSHA that a hose or conveyor belt has met the applicable requirements of this part and will be listed by MSHA as acceptable flame-resistant auxiliary equipment.

Acceptance marking means an identifying marking indicating that the hose or conveyor belt has been accepted by MSHA for listing as flame resistant.

Accessory means associated electrical equipment, such as a distribution or splice box, that is not an integral part of an approved (permissible) machine.

Assistant Secretary means the Assistant Secretary of Labor for Mine Safety and Health.

Afterburning means the combustion of a flammable mixture that is drawn into a machine compartment after an internal explosion in the compartment.

Applicant means an individual, partnership, company, corporation, organization, or association that designs, manufactures, assembles, or controls the assembly of an electrical machine or accessory and seeks approval, certification, or permit, or MSHA acceptance for listing of flame-resistant hose or conveyor belt.

Approval means a formal document issued by MSHA which states that a completely assembled electrical machine or accessory has met the applicable requirements of this part and which authorizes the attachment of an approval plate so indicating.

Approval plate means a metal plate, the design of which meets MSHA's requirements, for attachment to an approved machine or accessory, identifying it as permissible for use in gassy mines or tunnels.

Branch circuit means an electrical circuit connected to the main circuit, the conductors of which are of smaller size than the main circuit.

Bureau means the U.S. Bureau of Mines.

Certification means a formal written notification, issued by MSHA, which states that an electrical component complies with the applicable requirements of this part and, therefore, is suitable for incorporation in approved (permissible) equipment.

Certification label means a plate, label, or marking, the design of which meets MSHA's requirements, for attachment to a certified component identifying the component as having met the MSHA's requirements for incorporation in a machine to be submitted for approval.

Component means an integral part of an electrical machine or accessory that is essential to the functioning of the machine or accessory.

Connection box (also known as conduit or terminal box) means an enclosure mounted on an electrical machine or accessory to facilitate wiring, without the use of external splices. (Such boxes may have a joint common with an explosion-proof enclosure provided the adjoining surfaces conform to the requirements of subpart B of this part.)

Cylindrical joint means a joint comprised of two contiguous, concentric, cylindrical surfaces.

Distribution box means an enclosure through which one or more portable cables may be connected to a source of electrical energy, and which contains a short-circuit protective device for each outgoing cable.

Experimental equipment means any electrical machine or accessory that an applicant or MSHA may desire to operate experimentally for a limited time in a gassy mine or tunnel. (For example, this might include a machine constructed at a mine, an imported machine, or a machine or device designed and developed by MSHA.)

Explosion-proof enclosure means an enclosure that complies with the applicable design requirements in subpart B of this part and is so constructed that it will withstand internal explosions of methane-air mixtures: (1) Without damage to or excessive distortion of its

walls or cover(s), and (2) without ignition of surrounding methane-air mixtures or discharge of flame from inside to outside the enclosure.

Fire-resistant as applied to conveyor belts means belting that will pass the flame tests hereafter specified.

Flame-arresting path means two or more adjoining or adjacent surfaces between which the escape of flame is prevented.

Flame resistant as applied to cable, hose, and insulating materials means material that will burn when held in a flame but will cease burning when the flame is removed.

Flammable mixture means a mixture of methane or natural gas and air that when ignited will propagate flame. Natural gas containing a high percentage of methane is a satisfactory substitute for pure methane in most tests.

Gassy mine means a coal mine classed as "gassy" by MESA or by the State in which the mine is situated.

Incendive arc or spark means an arc or spark releasing enough electrical or thermal energy to ignite a flammable mixture of the most easily ignitable composition.

Intrinsically safe means incapable of releasing enough electrical or thermal energy under normal or abnormal conditions to cause ignition of a flammable mixture of methane or natural gas and air of the most easily ignitable composition.

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

Mobile equipment means equipment that is self-propelled.

MSHA means the United States Department of Labor, Mine Safety and Health Administration.

Normal operation means the regular performance of those functions for which a machine or accessory was designed.

Permissible equipment means a completely assembled electrical machine or accessory for which a formal approval has been issued, as authorized by the Administrator, Mining Enforcement and Safety Administration under the Federal Coal Mine Health and Safety Act of 1969 (Pub. L. 91-173, 30 U.S.C.

§ 18.3

801 or, after March 9, 1978, by the Assistant Secretary under the Federal Mine Safety and Health Act of 1977 (Pub. L. 91-173, as amended by Pub. L. 95-164, 30 U.S.C. 801).

Permit means a formal document, signed by the Assistant Secretary, authorizing the operation of specific experimental equipment in a gassy mine or tunnel under prescribed conditions.

Plane joint means two adjoining surfaces in parallel planes.

Portable cable, or trailing cable means a flame-resistant, flexible cable or cord through which electrical energy is transmitted to a permissible machine or accessory. (A portable cable is that portion of the power-supply system between the last short-circuit protective device, acceptable to MSHA, in the system and the machine or accessory to which it transmits electrical energy.)

Portable equipment means equipment that may be moved frequently and is constructed or mounted to facilitate such movement.

Potted component means a component that is entirely embedded in a solidified insulating material within an enclosure.

Pressure piling means the development of abnormal pressure as a result of accelerated rate of burning of a gas-air mixture. (Frequently caused by restricted configurations within enclosures.)

Qualified representative means a person authorized by MSHA to determine whether the applicable requirements of this part have been complied with in the original manufacture, rebuilding, or repairing of equipment for which approval, certification, or a permit is sought.

Splice box means a portable enclosure in which electrical conductors may be joined.

Step (rabbet) joint means a joint comprised of two adjoining surfaces with a change(s) in direction between its inner and outer edges. (A step joint may be composed of a cylindrical portion and a plane portion or of two or more plane portions.)

Threaded joint means a joint consisting of a male- and a female-thread-

30 CFR Ch. I (7-1-02 Edition)

ed member, both of which are of the same type and gage.

[33 FR 4660, Mar. 19, 1968, as amended at 39 FR 23999, June 28, 1974; 43 FR 12314, Mar. 24, 1978; 57 FR 61223, Dec. 23, 1992]

§ 18.3 Consultation.

By appointment, applicants or their representatives may visit Approval and Certification Center, Industrial Park Road, Dallas Pike, Triadelphia, W. Va. 26059, to discuss a proposed design to be submitted for approval, certification, or acceptance for listing. No charge is made for such consultation and no written report thereof will be made to the applicant.

[33 FR 4660, Mar. 19, 1968, as amended at 43 FR 12314, Mar. 24, 1978]

§ 18.4 Electrical equipment for which approval is issued.

An approval will be issued only for a complete electrical machine or accessory. Only components meeting the requirements of subpart B of this part or those approved under part 7 of this chapter, unless they contain intrinsically safe circuits, shall be included in the assemblies.

[57 FR 61209, Dec. 23, 1992]

§ 18.5 Equipment for which certification will be issued.

Certification will be issued for a component or subassembly suitable to incorporate in an approved machine. Certification may be issued for such components as explosion-proof enclosures, battery trays, and connectors.

§ 18.6 Applications.

(a) Investigation leading to approval, certification, extension thereof, or acceptance of hose or conveyor belt, will be undertaken by MSHA only pursuant to a written application, in duplicate, accompanied by a check, bank draft, or money order, payable to Mine Safety and Health Administration to cover the fees. The application shall be accompanied by all necessary drawings, specifications, descriptions, and related materials, as hereinafter provided. The application, all related matters, and all correspondence concerning it shall be addressed to Approval and