

§7.9

30 CFR Ch. I (7-1-06 Edition)

shall be selected by MSHA and be representative of those distributed for use in mines. The approval-holder may obtain any final report resulting from such audit.

(b) No more than once a year except for cause, the approval-holder, at MSHA's request, shall make an approved product available at no cost to MSHA for an audit to be conducted at a mutually agreeable site and time. The approval-holder may observe any tests conducted during this audit.

(c) An approved product shall be subject to audit for cause at any time MSHA believes that it is not in compliance with the technical requirements upon which the approval was based.

§7.9 Revocation.

(a) MSHA may revoke for cause an approval issued under this part if the product:

(1) Fails to meet the applicable technical requirements; or

(2) Creates a hazard when used in a mine.

(b) Prior to revoking an approval, the approval-holder shall be informed in writing of MSHA's intention to revoke approval. The notice shall:

(1) Explain the specific reasons for the proposed revocation; and

(2) Provide the approval-holder an opportunity to demonstrate or achieve compliance with the product approval requirements.

(c) Upon request, the approval-holder shall be afforded an opportunity for a hearing.

(d) If a product poses an imminent hazard to the safety or health of miners, the approval may be immediately suspended without a written notice of the agency's intention to revoke. The suspension may continue until the revocation proceedings are completed.

§7.10 MSHA acceptance of equivalent non-MSHA product safety standards.

(a) MSHA will accept non-MSHA product safety standards, or groups of standards, as equivalent after determining that they:

(1) Provide at least the same degree of protection as MSHA's applicable technical requirements for a product in the subparts of this part; or

(2) Can be modified to provide at least the same degree of protection as those MSHA requirements.

(b) MSHA will publish its intent to review any non-MSHA product safety standard for equivalency in the FEDERAL REGISTER for the purpose of soliciting public input.

(c) A listing of all equivalency determinations will be published in this part 7. The listing will state whether MSHA accepts the non-MSHA product safety standards in their original form, or whether MSHA will require modifications to demonstrate equivalency. If modifications are required, they will be provided in the listing. MSHA will notify the public of each equivalency determination and will publish a summary of the basis for its determination. MSHA will provide equivalency determination reports to the public upon request to the Approval and Certification Center. MSHA has made the following equivalency determinations applicable to this part 7.

(1) MSHA will accept applications for motors under Subpart J designed and tested to the International Electrotechnical Commission's (IEC) standards for Electrical Apparatus for Explosive Gas Atmospheres, Part 0, General Requirements (IEC 60079-0, Fourth Edition, 2004-01) and Part 1, Electrical Apparatus for Explosive Gas Atmospheres, Flameproof Enclosures "d" (IEC 60079-1, Fifth Edition, 2003-11) (which are hereby incorporated by reference and made a part hereof) provided the modifications to the IEC standards specified in §7.10(c)(1)(i) through (ix) are met. The Director of the FEDERAL REGISTER approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. The IEC standards may be inspected at MSHA's Electrical Safety Division, Approval and Certification Center, R.R. 1, Box 251, Industrial Park Road, Triadelphia, West Virginia 26059 or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. These IEC standards may be obtained from International

Electrical Commission, Central Office 3, rue de Varembe, P.O. Box 131, CH-1211 GENEVA 20, Switzerland.

(i) Enclosures associated with an electric motor assembly shall be made of metal and not have a compartment exceeding ten (10) feet in length. External surfaces of enclosures shall not exceed 150 °C (302 °F) in normal operation.

(ii) Enclosures shall be rugged in construction and should meet existing requirements for minimum bolt size and spacing and for minimum wall, cover, and flange thicknesses specified in paragraph(g)(19) of § 7.304 Technical requirements. Enclosure fasteners should be uniform in size and length, be provided at all corners, and be secured from loosening by lockwashers or equivalent. An engineering analysis shall be provided for enclosure designs that deviate from the existing requirements. The analysis shall show that the proposed enclosure design meets or exceeds the mechanical strength of a comparable enclosure designed to 150 psig according to existing requirements, and that flamepath clearances in excess of existing requirements will not be produced at an internal pressure of 150 psig. This shall be verified by explosion testing the enclosure at a minimum of 150 psig.

(iii) Enclosures shall be designed to withstand a minimum pressure of at least 150 psig without leakage through any welds or castings, rupture of any part that affects explosion-proof integrity, clearances exceeding those permitted under existing requirements along flame-arresting paths, or permanent distortion exceeding 0.040-inch per linear foot.

(iv) Flamepath clearances, including clearances between fasteners and the holes through which they pass, shall not exceed those specified in existing requirements. No intentional gaps in flamepaths are permitted.

(v) The minimum lengths of the flame arresting paths, based on enclosure volume, shall conform to those specified in existing requirements to the nearest metric equivalent value (e.g., 12.5 mm, 19 mm, and 25 mm are considered equivalent to ½ inch, ¾ inch and 1 inch respectively for plane and cylindrical joints). The widths of any grooves for o-rings shall be de-

ducted in measuring the widths of flame-arresting paths.

(vi) Gaskets shall not be used to form any part of a flame-arresting path. If o-rings are installed within a flamepath, the location of the o-rings shall meet existing requirements.

(vii) Cable entries into enclosures shall be of a type that utilizes either flame-resistant rope packing material or sealing rings (grommets). If plugs and mating receptacles are mounted to an enclosure wall, they shall be of explosion-proof construction. Insulated bushings or studs shall not be installed in the outside walls of enclosures. Lead entrances utilizing sealing compounds and flexible or rigid metallic conduit are not permitted.

(viii) Unused lead entrances shall be closed with a metal plug that is secured by spot welding, brazing, or equivalent.

(ix) Special explosion tests are required for electric motor assemblies that share leads (electric conductors) through a common wall with another explosion-proof enclosure, such as a motor winding compartment and a conduit box. These tests are required to determine the presence of any pressure piling conditions in either enclosure when one or more of the insulating barriers, sectionalizing terminals, or other isolating parts are sequentially removed from the common wall between the enclosures. Enclosures that exhibit pressures during these tests that exceed those specified in existing requirements must be provided with a warning tag. The durable warning tag must indicate that the insulating barriers, sectionalizing terminals, or other isolating parts be maintained in order to insure the explosion-proof integrity for either enclosure sharing a common wall. A warning tag is not required if the enclosures withstand a static pressure of twice the maximum value observed in the explosion tests.

(2) [Reserved]

(d) After MSHA has determined that non-MSHA product safety standards are equivalent and has notified the

§ 7.21

public of such determinations, applicants may seek MSHA product approval based on such non-MSHA product safety standards.

[68 FR 36418, June 17, 2003, as amended at 71 FR 28583, May 17, 2006]

Subpart B—Brattice Cloth and Ventilation Tubing

§ 7.21 Purpose and effective date.

This subpart establishes the specific requirements for approval of brattice cloth and ventilation tubing. It is effective August 22, 1988. Applications for approval or extension of approval submitted after August 22, 1989, shall meet the requirements of this part.

§ 7.22 Definitions.

The following definitions apply in this subpart:

Brattice cloth. A curtain of jute, plastic, or similar material used to control or direct ventilating air.

Denier. A unit of yarn size indicating the fineness of fiber of material based on the number of grams in a length of 9,000 meters.

Film. A sheet of flexible material applied to a scrim by pressure, temperature, adhesion, or other method.

Scrim. A substrate material of plastic or fabric laminated between or coated with a film.

Ventilation tubing. Rigid or flexible tubing used to convey ventilating air.

§ 7.23 Application requirements.

(a) *Brattice cloth.* A single application may address two or more products if the products differ only in: weight of the finished product; weight or weave of the same fabric or scrim; or thickness or layers of the same film. Applications shall include the following information:

- (1) Trade name.
- (2) Product designations (for example, style and code number).
- (3) Color.
- (4) Type of brattice (for example, plastic or jute).
- (5) Weight of finished product.
- (6) Film: type, weight, thickness, supplier, supplier's stock number or designation, and percent of finished product by weight.

30 CFR Ch. I (7-1-06 Edition)

(7) Scrim: Type, denier, weight, weave, the supplier, supplier's stock number or designation, and percent of finished product by weight.

(8) Adhesive: type, supplier, supplier's stock number or designation, and percent of finished product by weight.

(b) *Flexible ventilation tubing.* Applications shall include the product description information in paragraph (a) of this section and list the type of supporting structure, if applicable; inside diameters; and configurations.

(c) *Rigid ventilation tubing.* A single application may address two or more products if the products differ only in diameters, lengths, configuration, or average wall thickness. Applications shall include the following information:

- (1) Trade name.
- (2) Product designations (for example, style and code numbers).
- (3) Color.
- (4) Type of ventilation tubing (for example, fiberglass, plastic, or polyethylene).
- (5) Inside diameter, configuration, and average wall thickness.
- (6) Suspension system (for example, metal hooks).
- (7) Base material: type, supplier, the supplier's stock number, and percent of finished product by weight.
- (8) Resin: type, supplier, the supplier's stock number, and percent of finished product by weight.
- (9) Flame retardant, if added during manufacturing: type, supplier, the supplier's stock number, and percent of finished product by weight.

[53 FR 23500, June 22, 1988, as amended at 60 FR 33722, June 29, 1995]

§ 7.24 Technical requirements.

(a) Brattice cloth shall be flame resistant when tested in accordance with the flame resistance test in § 7.27.

(b) Flexible ventilation tubing shall be manufactured using an MSHA-approved brattice cloth. If a supporting structure is used, it shall be metal or other noncombustible material which will not ignite, burn, support combustion or release flammable vapors when subjected to fire or heat.