

**§ 75.518 Electric equipment and circuits; overload and short circuit protection.**

[STATUTORY PROVISION]

Automatic circuit-breaking devices or fuses of the correct type and capacity shall be installed so as to protect all electric equipment and circuits against short circuit and overloads. Three-phase motors on all electric equipment shall be provided with overload protection that will deenergize all three phases in the event that any phase is overloaded.

**§ 75.518-1 Electric equipment and circuits; overload and short circuit protection; minimum requirements.**

A device to provide either short circuit protection or protection against overload which does not conform to the provisions of the National Electric Code, 1968, does not meet the requirement of § 75.518. In addition, such devices on electric face equipment and trailing cables that are required to be permissible must meet the requirements of the applicable schedules of the Bureau of Mines.

**§ 75.518-2 Incandescent lamps, overload and short circuit protection.**

Incandescent lamps installed along haulageways and at other locations, not contacting combustible material, and powered from trolley or direct current feeder circuits, need not be provided with separate short circuit or overload protection, if the lamp is not more than 8 feet in distance from such circuits.

**§ 75.519 Main power circuits; disconnecting switches.**

[STATUTORY PROVISION]

In all main power circuits, disconnecting switches shall be installed underground within 500 feet of the bottoms of shafts and boreholes through which main power circuits enter the underground area of the mine and within 500 feet of all other places where main power circuits enter the underground area of the mine.

**§ 75.519-1 Main power circuits; disconnecting switches; locations.**

Section 75.519 requires (a) that a disconnecting switch be installed on the surface at a point within 500 feet of the place where the main power circuit enters the underground area of a mine, and (b) that, in an instance on which a main power circuit enters the underground area through a shaft or borehole, a disconnecting switch be installed underground within 500 feet of the bottom of the shaft or borehole.

**§ 75.520 Electric equipment; switches.**

[STATUTORY PROVISION]

All electric equipment shall be provided with switches or other controls that are safely designed, constructed, and installed.

**§ 75.521 Lightning arresters; ungrounded and exposed power conductors and telephone wires.**

Each ungrounded, exposed power conductor and each ungrounded, exposed telephone wire that leads underground shall be equipped with suitable lightning arresters of approved type within 100 feet of the point where the circuit enters the mine. Lightning arresters shall be connected to a low resistance grounding medium on the surface which shall be separated from neutral grounds by a distance of not less than 25 feet.

[38 FR 4975, Feb. 23, 1973]

**§ 75.522 Lighting devices.**

[STATUTORY PROVISION]

No device for the purpose of lighting any coal mine which has not been approved by the Secretary or his authorized representative shall be permitted in such mine.

**§ 75.522-1 Incandescent and fluorescent lamps.**

(a) Except for areas of a coal mine inby the last open crosscut, incandescent lamps may be used to illuminate underground areas. When incandescent lamps are used in a track entry or belt entry or near track entries to illuminate special areas other than structures, the lamps shall be installed in

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weather-proof sockets located in positions such that the lamps will not come in contact with any combustible material. Lamps used in all other places must be of substantial construction and be fitted with a glass enclosure.

(b) Incandescent lamps within glass enclosures or fluorescent lamps may be used inside underground structures (except magazines used for the storage of explosives and detonators). In underground structures lighting circuits shall consist of cables installed on insulators or insulated wires installed in metallic conduit or metallic armor.

**§ 75.523 Electric face equipment; deenergization.**

[STATUTORY PROVISION]

An authorized representative of the Secretary may require in any mine that electric face equipment be provided with devices that will permit the equipment to be deenergized quickly in the event of an emergency.

**§ 75.523-1 Deenergization of self-propelled electric face equipment installation requirements.**

(a) Except as provided in paragraphs (b) and (c) of this section, all self-propelled electric face equipment which is used in the active workings of each underground coal mine on and after March 1, 1973, shall, in accordance with the schedule of time specified in paragraphs (a) (1) and (2) of this section, be provided with a device that will quickly deenergize the tramping motors of the equipment in the event of an emergency. The requirements of this paragraph (a) shall be met as follows:

(1) On and after December 15, 1974, for self-propelled cutting machines, shuttle cars, battery-powered machines, and roof drills and bolters;

(2) On and after February 15, 1975, for all other types of self-propelled electric face equipment.

(b) Self-propelled electric face equipment that is equipped with a substantially constructed cab which meets the requirements of this part, shall not be required to be provided with a device that will quickly deenergize the tramping motors of the equipment in the event of an emergency.

(c) An operator may apply to the Director of Technical Support, Mine Safety and Health Administration, Department of Labor, 1100 Wilson Blvd., Room 2329, Arlington, Virginia 22209-3939 for approval of the installation of devices to be used in lieu of devices that will quickly deenergize the tramping motors of self-propelled electric face equipment in the event of an emergency. The Director of Technical Support may approve such devices if he determines that the performance thereof will be no less effective than the performance requirements specified in § 75.523-2.

[38 FR 3407, Feb. 6, 1973, as amended at 39 FR 27557, July 30, 1974; 43 FR 12320, Mar. 24, 1978; 47 FR 28096, June 29, 1982; 67 FR 38386, June 4, 2002]

**§ 75.523-2 Deenergization of self-propelled electric face equipment; performance requirements.**

(a) Deenergization of the tramping motors of self-propelled electric face equipment, required by paragraph (a) of § 75.523-1, shall be provided by:

(1) Mechanical actuation of an existing pushbutton emergency stopswitch,

(2) Mechanical actuation of an existing lever emergency stopswitch, or

(3) The addition of a separate electromechanical switch assembly.

(b) The existing emergency stopswitch or additional switch assembly shall be actuated by a bar or lever which shall extend a sufficient distance in each direction to permit quick deenergization of the tramping motors of self-propelled electric face equipment from all locations from which the equipment can be operated.

(c) Movement of not more than 2 inches of the actuating bar or lever resulting from the application of not more than 15 pounds of force upon contact with any portion of the equipment operator's body at any point along the length of the actuating bar or lever shall cause deenergization of the tramping motors of the self-propelled electric face equipment.

[38 FR 3406, Feb. 6, 1973; 38 FR 4394, Feb. 14, 1973]