

the power center, and a grounding circuit, originating at the grounded side of the grounding resistor, shall extend along with the power conductors and serve as a grounding conductor for the frames of all the electrical equipment supplied power from that circuit, except that the Secretary or his authorized representative may permit ungrounded low- and medium-voltage circuits to be used underground to feed such stationary electrical equipment if such circuits are either steel armored or installed in grounded rigid steel conduit throughout their entire length. The grounding resistor, where required, shall be of the proper ohmic value to limit the ground fault current to 25 amperes. The grounding resistor shall be rated for maximum fault current continuously and insulated from ground for a voltage equal to the phase-to-phase voltage of the system.

§ 75.902 Low- and medium-voltage ground check monitor circuits.

[STATUTORY PROVISIONS]

On or before September 30, 1970, low- and medium-voltage resistance grounded systems shall include a fail-safe ground check circuit to monitor continuously the grounding circuit to assure continuity which ground check circuit shall cause the circuit breaker to open when either the ground or pilot check wire is broken, or other no less effective device approved by the Secretary or his authorized representative to assure such continuity, except that an extension of time, not in excess of 12 months, may be permitted by the Secretary on a mine-by-mine basis if he determines that such equipment is not available. Cable couplers shall be constructed so that the ground check continuity conductor shall be broken first and the ground conductors shall be broken last when the coupler is being uncoupled.

§ 75.902-1 Maximum voltage ground check circuits.

The maximum voltage used for such ground check circuits shall not exceed 40 volts.

§ 75.902-2 Approved ground check systems not employing pilot check wires.

Ground check systems not employing pilot check wires will be approved only if it is determined that the system includes a fail safe design causing the circuit breaker to open when ground continuity is broken.

§ 75.902-4 Attachment of ground conductors and ground check wires to equipment frames; use of separate connections.

In grounding equipment frames of all stationary, portable or mobile equipment receiving power from resistance grounded systems separate connections shall be used when practicable.

§ 75.903 Disconnecting devices.

[STATUTORY PROVISIONS]

Disconnecting devices shall be installed in conjunction with the circuit breaker to provide visual evidence that the power is disconnected.

§ 75.904 Identification of circuit breakers.

[STATUTORY PROVISIONS]

Circuit breakers shall be marked for identification.

§ 75.905 Connection of single-phase loads.

[STATUTORY PROVISIONS]

Single-phase loads shall be connected phase-to-phase.

§ 75.906 Trailing cables for mobile equipment, ground wires, and ground check wires.

[STATUTORY PROVISIONS]

Trailing cables for mobile equipment shall contain one or more ground conductors having a cross-sectional area of not less than one-half the power conductor, and, on September 30, 1970, an insulated conductor for the ground continuity check circuit or other no less effective device approved by the Secretary or his authorized representative to assure such continuity, except that an extension of time, not in excess of 12 months may be permitted by the

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Secretary on a mine-by-mine basis if he determines that such equipment is not available. Splices made in the cables shall provide continuity of all components.

§ 75.907 Design of trailing cables for medium-voltage circuits.

[STATUTORY PROVISIONS]

Trailing cables for medium-voltage circuits shall include grounding conductors, a ground check conductor, and grounded metallic shields around each power conductor or a ground metallic shield over the assembly, except that on equipment employing cable reels, cables without shields may be used if the insulation is rated 2,000 volts or more.

Subpart K—Trolley Wires and Trolley Feeder Wires

§ 75.1000 Cutout switches.

[STATUTORY PROVISIONS]

Trolley wires and trolley feeder wires, shall be provided with cutout switches at intervals of not more than 2,000 feet and near the beginning of all branch lines.

§ 75.1001 Overcurrent protection.

[STATUTORY PROVISIONS]

Trolley wires and trolley feeder wires shall be provided with overcurrent protection.

§ 75.1001-1 Devices for overcurrent protection; testing and calibration requirements; records.

(a) Automatic circuit interrupting devices that will deenergize the affected circuit upon occurrence of a short circuit at any point in the system will meet the requirements of § 75.1001.

(b) Automatic circuit interrupting devices described in paragraph (a) of this section shall be tested and calibrated at intervals not to exceed six months. Testing of such devices shall include passing the necessary amount of electric current through the device to cause activation. Calibration of such devices shall include adjustment of all associated relays to ± 15 percent of the

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indicated value. An authorized representative of the Secretary may require additional testing or calibration of these devices.

(c) A record of the tests and calibrations required by paragraph (b) of this section shall be kept, and shall be made available, upon request, to an authorized representative of the Secretary.

[38 FR 29998, Oct. 31, 1973, as amended at 60 FR 33723, June 29, 1995]

§ 75.1002 Location of trolley wires, trolley feeder wires, high-voltage cables and transformers.

[STATUTORY PROVISIONS]

Trolley wires and trolley feeder wires, high-voltage cables and transformers shall not be located inby the last open crosscut and shall be kept at least 150 feet from pillar workings.

§ 75.1002-1 Location of other electric equipment; requirements for permissibility.

(a) Electric equipment other than trolley wires, trolley feeder wires, high-voltage cables, and transformers shall be permissible, and maintained in a permissible condition when such electric equipment is located within 150 feet from pillar workings, except as provided in paragraphs (b) and (c) of this section.

(b) Notwithstanding the provisions of paragraph (a) of this section, in any coal mine where nonpermissible electric face equipment may be taken into or used inby the last open crosscut until March 30, 1974, such nonpermissible electric face equipment may be located within 150 feet from pillar workings.

(c) Notwithstanding the provisions of paragraph (a) of this section, in any coal mine where a permit for non-compliance is in effect, nonpermissible electric face equipment specified in such permit for noncompliance may be located within 150 feet from pillar workings for the duration of such permit.

[38 FR 4976, Feb. 23, 1973]