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trained to perform electrical work and to maintain electrical equipment under the direct supervision of a qualified person. Disconnecting devices shall be locked out and suitably tagged by the persons who perform such work, except that in cases where locking out is not possible, such devices shall be opened and suitably tagged by such persons. Locks or tags shall be removed only by the persons who installed them or, if such persons are unavailable, by persons authorized by the operator or his agent.

§ 75.511-1 Qualified person.

To be a qualified person within the meaning of § 75.511, an individual must meet the requirements of § 75.153.

§ 75.512 Electric equipment; examination, testing and maintenance.

[STATUTORY PROVISION]

All electric equipment shall be frequently examined, tested, and properly maintained by a qualified person to assure safe operating conditions. When a potentially dangerous condition is found on electric equipment, such equipment shall be removed from service until such condition is corrected. A record of such examinations shall be kept and made available to an authorized representative of the Secretary and to the miners in such mine.

[35 FR 17890, Nov. 20, 1970, as amended at 60 FR 33723, June 29, 1995]

§ 75.512-1 Qualified person.

To be a qualified person within the meaning of § 75.512, an individual must meet the requirements of § 75.153.

§ 75.512-2 Frequency of examinations.

The examinations and tests required by § 75.512 shall be made at least weekly. Permissible equipment shall be examined to see that it is in permissible condition.

§ 75.513 Electric conductor; capacity and insulation.

[STATUTORY PROVISION]

All electric conductors shall be sufficient in size and have adequate current carrying capacity and be of such construction that a rise in temperature re-

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sulting from normal operation will not damage the insulating materials.

§ 75.513-1 Electric conductor; size.

An electric conductor is not of sufficient size to have adequate carrying capacity if it is smaller than is provided for in the National Electric Code, 1968. In addition, equipment and trailing cables that are required to be permissible must meet the requirements of the appropriate schedules of the Bureau of Mines.

§ 75.514 Electrical connections or splices; suitability.

[STATUTORY PROVISION]

All electrical connections or splices in conductors shall be mechanically and electrically efficient, and suitable connectors shall be used. All electrical connections or splices in insulated wire shall be reinsulated at least to the same degree of protection as the remainder of the wire.

§ 75.515 Cable fittings; suitability.

[STATUTORY PROVISION]

Cables shall enter metal frames of motors, splice boxes, and electric compartments only through proper fittings. When insulated wires other than cables pass through metal frames, the holes shall be substantially bushed with insulated bushings.

§ 75.516 Power wires; support.

[STATUTORY PROVISION]

All power wires (except trailing cables on mobile equipment, specially designed cables conducting high-voltage power to underground rectifying equipment or transformers, or bare or insulated ground and return wires) shall be supported on well-insulated insulators and shall not contact combustible material, roof, or ribs.

§ 75.516-1 Installed insulators.

Well-insulated insulators is interpreted to mean well-installed insulators. Insulated J-hooks may be used to suspend insulated power cables

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for temporary installation not exceeding 6 months and for permanent installation of control cables such as may be used along belt conveyors.

§ 75.516-2 Communication wires and cables; installation; insulation; support.

(a) All communication wires shall be supported on insulated hangers or insulated J-hooks.

(b) All communication cables shall be insulated as required by § 75.517-1, and shall either be supported on insulated or uninsulated hangers or J-hooks, or securely attached to messenger wires, or buried, or otherwise protected against mechanical damage in a manner approved by the Secretary or his authorized representative.

(c) All communication wires and cables installed in track entries shall, except when a communication cable is buried in accordance with paragraph (b) of this section, be installed on the side of the entry opposite to trolley wires and trolley feeder wires. Additional insulation shall be provided for communication circuits at points where they pass over or under any power conductor.

(d) For purposes of this section, communication cable means two or more insulated conductors covered by an additional abrasion-resistant covering.

[38 FR 4975, Feb. 23, 1973]

§ 75.517 Power wires and cables; insulation and protection.

[STATUTORY PROVISIONS]

Power wires and cables, except trolley wires, trolley feeder wires, and bare signal wires, shall be insulated adequately and fully protected.

§ 75.517-1 Power wires and cables; insulation and protection.

Power wires and cables installed on or after March 30, 1970, shall have insulation with a dielectric strength at least equal to the voltage of the circuit.

§ 75.517-2 Plans for insulation of existing bare power wires and cables.

(a) On or before December 31, 1970, plans for the insulation of existing bare power wires and cables installed prior

to March 30, 1970, shall be filed with the District Manager of the Coal Mine Safety District in which the mine is located to permit approval and prompt implementation of such plans.

(b) The appropriate District Manager shall notify the operator in writing of the approval of a proposed insulation plan. If revisions are required for approval, the changes required will be specified.

(c) An insulation plan shall include the following information:

(1) Name and address of the company, the mine and the responsible officials;

(2) Map or diagram indicating location of power wires and cables required to be insulated;

(3) Total length of bare power wires and cables required to be insulated;

(4) Schedule for the replacement or insulation of bare power wires and cables;

(5) Type of insulation to be used and the voltage rating as indicated by the manufacturer.

(d) The District Manager shall be guided by the following criteria in approving insulation plans on a mine-by-mine basis. Insulation not conforming to these criteria may be approved provided the operator can satisfy the Mine Safety and Health Administration that the insulation will provide no less than the same measure of protection.

(1) Insulation shall be adequate for the applied voltage of the circuit.

(2) When tubing is used to insulate existing power wires and cables, it shall have a dielectric strength at least equal to the voltage of the circuit. When the tubing is split for purposes of installation, the joints shall be effectively sealed. The butt ends may be sealed with a moisture resistant insulating tape.

(3) When tape is used to insulate existing power wires and cables, it shall be applied half-lapped and one thickness of the tape shall have a dielectric strength at least equal to the voltage of the circuit. The tape shall be self-adhesive and moisture resistant.