

**§ 77.500**

inspector and a certificate of inspection signed by the inspector shall be displayed in the vicinity of the boiler.

**Subpart F—Electrical Equipment—  
General**

**§ 77.500 Electric power circuits and electric equipment; deenergization.**

Power circuits and electric equipment shall be deenergized before work is done on such circuits and equipment, except when necessary for troubleshooting or testing.

**§ 77.501 Electric distribution circuits and equipment; repair.**

No electrical work shall be performed on electric distribution circuits or equipment, except by a qualified person or by a person 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.

**§ 77.501-1 Qualified person.**

A qualified person within the meaning of § 77.501 is an individual who meets the requirements of § 77.103.

**§ 77.502 Electric equipment; examination, testing, and maintenance.**

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.

**§ 77.502-1 Qualified person.**

A qualified person within the meaning of § 77.502 is an individual who meets the requirements of § 77.103.

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

**§ 77.502-2 Electric equipment; frequency of examination and testing.**

The examinations and tests required under the provision of this § 77.502 shall be conducted at least monthly.

**§ 77.503 Electric conductors; capacity and insulation.**

Electric conductors shall be sufficient in size and have adequate current carrying capacity and be of such construction that a rise in temperature resulting from normal operation will not damage the insulating materials.

**§ 77.503-1 Electric conductors.**

Electric conductors shall be sufficient in size to meet the minimum current carrying capacity provided for in the National Electric Code, 1968. All trailing cables shall meet the minimum requirements for ampacity provided in the standards of the Insulated Power Cable Engineers Association—National Electric Manufacturers Association in effect when such cables are purchased.

**§ 77.504 Electrical connections or splices; suitability.**

Electrical connections or splices in electric 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.

**§ 77.505 Cable fittings; suitability.**

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.

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

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.