(1) Any free space within the plug or receptacle is isolated from the exterior of the plug.

(2) Joints between the elastomer and metal parts are not less than 1 inch wide and the elastomer is either bonded to or fits tightly with metal parts.

(e) The contacts of all line-side connectors shall be shielded or recessed adequately.

(f) For a mobile battery-powered machine, a plug padlocked to the receptacle will be acceptable in lieu of an interlock provided the plug is held in place by a threaded ring or equivalent mechanical fastening in addition to the padlock. A connector within a padlocked enclosure will be acceptable.

§ 18.42 Explosion-proof distribution boxes.

(a) A cable passing through an outside wall(s) of a distribution box shall be conducted either through a packing gland or an interlocked plug and receptacle.

(b) Short-circuit protection shall be provided for each branch circuit connected to a distribution box. The current-carrying capacity of the specified connector shall be compatible with the automatic circuit-interrupting device.

(c) Each branch receptacle shall be plainly and permanently marked to indicate its current-carrying capacity and each receptacle shall be such that it will accommodate only an appropriate plug.

(d) Provision shall be made to relieve mechanical strain on all connectors to distribution boxes.

§ 18.43 Explosion-proof splice boxes.

Internal connections shall be rigidly held and adequately insulated. Strain clamps shall be provided for all cables entering a splice box.

§ 18.44 Non-intrinsically safe battery-powered equipment.

(a) Battery-powered equipment shall use battery assemblies approved under Part 7 of this chapter, or battery assemblies accepted or certified under this part prior to August 22, 1989.

(b) Battery box covers shall be secured in a closed position.

(c) Each wire or cable leaving a battery box on storage battery-operated equipment shall have short-circuit protection in an explosion-proof enclosure located as close as practicable to the battery terminals. A short-circuit protection device installed within a nearby explosion-proof enclosure will be acceptable. In no case shall the exposed portion of the cable from the battery box to the enclosure exceed 36 inches in length. Each wire or cable shall be protected from damage.

[53 FR 23500, June 22, 1988]

§ 18.45 Cable reels.

(a) A self-propelled machine, that receives electrical energy through a portable cable and is designed to travel at speeds exceeding 2.5 miles per hour, shall have a mechanically, hydraulically, or electrically driven reel upon which to wind the portable cable.

(b) The enclosure for moving contacts or slip rings of a cable reel shall be explosion-proof.

(c) Cable-reel bearings shall not constitute an integral part of a circuit for transmitting electrical energy.

(d) Cable reels for shuttle cars and locomotives shall maintain positive tension on the portable cable during reeling and unreeling. Such tension shall only be high enough to prevent a machine from running over its own cable(s).

(e) Cable reels and spooling devices shall be insulated with flame-resistant material.

(f) The maximum speed of travel of a machine when receiving power through a portable (trailing) cable shall not exceed 6 miles per hour.

(g) Diameters of cable reel drums and sheaves should be large enough to prevent undue bending strain on cables.

§ 18.46 Headlights.

(a) Headlights shall be constructed as explosion-proof enclosures.

(b) Headlights shall be mounted to provide illumination where it will be most effective. They shall be protected from damage by guarding or location.

(c) Lenses for headlights shall be glass or other suitable material with physical characteristics equivalent to ½-inch thick tempered glass, such as ''Pyrex.'' Lenses shall meet the requirements of the tests prescribed in § 18.66.