

(3) Allow for visual observation, without removing any covers, to verify that the contacts are open;

(4) Ground all power conductors on the load side when the switch is in the "open and grounded" position;

(5) Can only be locked out in the "open and grounded" position; and

(6) Safely interrupts the full-load current of the circuit or causes the current to be interrupted automatically before the disconnecting switch opens.

(d) *Barriers and covers.* All compartments that provide access to high-voltage circuits must have barriers and/or covers to prevent miners from contacting energized high-voltage circuits.

(e) *Main disconnecting switch and control circuit interlocking.* The control circuit must be interlocked with the main disconnecting switch in the power center so that:

(1) When the main disconnecting switch is in the "open" position, the control circuit can only be powered through an auxiliary switch in the "test" position; and

(2) When the main disconnecting switch is in the "closed" position, the control circuit can only be powered through an auxiliary switch in the "normal" position.

(f) *Interlocks.* Each cover or removable barrier providing access to high-voltage circuits must be equipped with at least two interlock switches. Except when the auxiliary switch is on the "test" position, removal of any cover or barrier that exposes energized high-voltage circuits must cause the interlock switches to automatically de-energize the incoming circuit to the power center.

(g) *Emergency stop switch.* The power center must be equipped with an externally accessible emergency stop switch hard-wired into the incoming ground-wire monitor circuit that de-energizes the incoming high-voltage in the event of an emergency.

(h) *Grounding stick.* The power center must be equipped with a grounding stick to be used prior to performing electrical work to assure that high-voltage capacitors are discharged and circuits are de-energized. The power center must have a label readily identifying the location of the grounding

stick. The grounding stick must be stored in a dry location.

(i) *Caution label.* All compartments providing access to energized high-voltage conductors and parts must display a caution label to warn miners against entering the compartments before de-energizing incoming high-voltage circuits.

[75 FR 17549, Apr. 6, 2010]

#### § 75.826 High-voltage trailing cables.

High-voltage trailing cables must:

(a) Meet existing trailing cable requirements and the approval requirements of the high-voltage continuous mining machine; and

(b) Meet existing ground-check conductor requirements (§ 75.804) or have a stranded center ground-check conductor not smaller than a No. 16 A.W.G.

[75 FR 17549, Apr. 6, 2010]

#### § 75.827 Guarding of trailing cables.

(a) *Guarding.* (1) The high-voltage cable must be guarded in the following locations:

(i) From the power center cable coupler for a distance of 10 feet in by the power center;

(ii) From the entrance gland for a distance of 10 feet out by the last strain clamp on the continuous mining machine; and,

(iii) At any location where the cable could be damaged by moving equipment.

(2) Guarding must be constructed using nonconductive flame-resistant material or grounded metal.

(b) *Suspended cables and cable cross-overs.* When equipment must cross any portion of the cable, the cable must be either:

(1) Suspended from the mine roof; or  
(2) Protected by a cable crossover having the following specifications:

(i) A minimum length of 33 inches;  
(ii) A minimum width of 17 inches;  
(iii) A minimum height of 3 inches;  
(iv) A minimum cable placement area of two and one half-inches (2½") high by four and one-quarter inches (4¼") wide;

(v) Made of nonconductive material;