

(vi) Made of material with a distinctive color. The color black must not be used; and

(vii) Made of material that has a minimum compressive strength of 6,400 pounds per square inch (psi).

[75 FR 17549, Apr. 6, 2010]

**§ 75.828 Trailing cable pulling.**

The trailing cable must be de-energized prior to being pulled by any equipment other than the continuous mining machine. The cable manufacturer's recommended pulling procedures must be followed when pulling the trailing cable with equipment other than the continuous mining machine.

[75 FR 17549, Apr. 6, 2010]

**§ 75.829 Tramming continuous mining machines in and out of the mine and from section to section.**

(a) *Conditions of use.* Tramming the continuous mining machine in and out of the mine and from section to section must be done in accordance with movement requirements of high-voltage power centers and portable transformers (§ 75.812) and as follows:

(1) The power source must not be located in areas where permissible equipment is required;

(2) The continuous mining machine must not be used for mining or cutting purposes, unless a power center is used in accordance with §§ 75.823 through 75.828 and §§ 75.830 through 75.833;

(3) Low-, medium-, and high-voltage cables must comply with §§ 75.600-1, 75.907, and 75.826, as applicable; and

(4) The energized high-voltage cable must be mechanically secured onboard

the continuous mining machine. This provision applies only when using the power sources specified in paragraphs (c)(2) and (c)(3) of this section.

(b) *Testing prior to tramming.* Prior to tramming the continuous mining machine,

(1) A qualified person must activate the ground-fault and ground-wire monitor test circuits of the power sources specified in paragraph (c) of this section to assure that the corresponding circuit-interrupting device opens the circuit. Corrective actions and record-keeping resulting from these tests must be in accordance with §§ 75.832(f) and (g).

(2) Where applicable, a person designated by the mine operator must activate the test circuit for the ground-phase detection circuit on the continuous mining machine to assure that the detection circuit is functioning properly. Corrective actions resulting from this test must be in accordance with § 75.832(f).

(c) *Power sources.* In addition to the power center specified in § 75.825, the following power sources may be used to tram the continuous mining machine.

(1) *Medium-voltage power source.* A medium-voltage power source is a source that supplies 995 volts through a trailing cable (See Figure 1 of this section) to the continuous mining machine. The medium-voltage power source must—

(i) Not be used to back-feed the high-voltage circuits of the continuous mining machine; and

(ii) Meet all applicable requirements for medium-voltage circuits in 30 CFR 75.

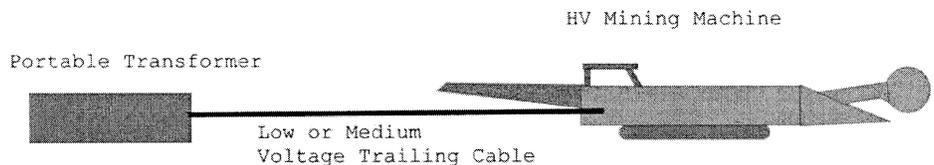


Figure 1-Power Source-75.829(c) (1) 995 volts used for tramming

**§ 75.830**

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(2) *Step-up transformer.* A step-up transformer is a transformer that steps up the low or medium voltage to high voltage (See Figure 2 in this section) and must meet the following requirements:

(i) The trailing cable supplying low or medium voltage to the step-up transformer must meet the applicable requirements of 30 CFR part 75;

(ii) The high-voltage circuit output of the step-up transformer supplying power to the continuous mining machine must meet the applicable provisions of § 75.824;

(iii) The step-up transformer enclosure must be—

(A) Securely mounted to minimize vibration on:

(1) The continuous mining machine; or

(2) A sled/cart that must be connected to the continuous mining machine by a tow-bar and be in close proximity to the mining machine.

(B) Grounded as follows:

(1) Connected to the incoming ground conductor of the low- or medium-voltage trailing cable;

(2) Bonded by a No. 1/0 A.W.G. or larger external grounding conductor to the continuous mining machine frame; and

(3) Bonded by a No. 1/0 A.W.G. or larger external grounding conductor to the metallic shell of each cable coupler.

(C) Equipped with:

(1) At least two interlock switches for each of the enclosure covers; and

(2) An external emergency stop switch to remove input power to the step-up transformer.

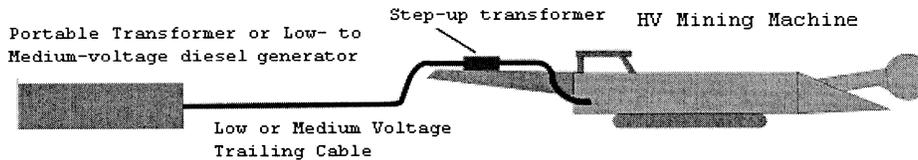


Figure 2 - Power source - 75.829(c) (2) 480 or 995 volts to a step-up transformer to 2300 volts for tramming

[75 FR 17549, Apr. 6, 2010]

**§ 75.830 Splicing and repair of trailing cables.**

(a) *Splices and repairs.*

(1) Splicing means the mechanical joining of one or more severed conductors in a single length of a cable including the replacement of: Insulation, semi-conductive tape, metallic shielding, and the outer jacket(s).

(2) Repair means to fix damage to any component of the cable other than the conductor.

(3) Splices and repairs to high-voltage trailing cables must be made:

(i) Only by a qualified person trained in the proper methods of splicing and repairing high-voltage trailing cables;

(ii) In a workman-like manner;

(iii) In accordance with § 75.810; and

(iv) Using only MSHA-approved high-voltage kits that include instructions for outer-jacket repairs and splices.

(b) *Splicing limitations.*

(1) Splicing of the high-voltage trailing cable within 35 feet of the continuous mining machine is prohibited.

(2) Only four (4) splices will be allowed at any one time for the portion of the trailing cable that extends from the continuous miner outby for a distance of 300 feet.

[75 FR 17549, Apr. 6, 2010]

**§ 75.831 Electrical work; troubleshooting and testing.**

(a) *Trailing cable and continuous mining machine electrical work procedures.* Prior to performing electrical work, other than troubleshooting and testing, on the high-voltage trailing cable or the continuous mining machine, a