

(iii) Planks shall be at least 6 inches wide and 1 inch thick.

(3) Cribbing materials shall have at least two parallel flat sides.

(c) A cluster of two or more posts that provide equivalent strength may be used to meet the requirements of paragraph (b)(1) of this section, except that no post shall have a diameter less than 4 inches or have a cross-sectional area less than 13 square inches.

(d) Materials other than wood used for support shall have support strength at least equivalent to wooden material meeting the applicable provisions of this section.

(e) Posts and jacks shall be tightly installed on solid footing.

(f) When posts are installed under roof susceptible to sloughing a cap block, plank, crossbar or materials that are equally effective shall be placed between the post and the roof.

(g) Blocks used for lagging between the roof and crossbars shall be spaced to distribute the load.

(h) Jacks used for roof support shall be used with at least 36 square inches of roof bearing surface.

[53 FR 2375, Jan. 27, 1988, as amended at 55 FR 14228, April 16, 1990; 55 FR 20137, May 15, 1990]

§ 75.207 Pillar recovery.

Pillar recovery shall be conducted in the following manner, unless otherwise specified in the roof control plan:

(a) Full and partial pillar recovery shall not be conducted on the same pillar line, except where physical conditions such as unstable floor or roof, falls of roof, oil and gas well barriers or surface subsidence require that pillars be left in place.

(b) Before mining is started in a pillar split or lift—

(1) At least two rows of breaker posts or equivalent support shall be installed—

(i) As close to the initial intended breakline as practicable; and

(ii) Across each opening leading into an area where full or partial pillar extraction has been completed.

(2) A row of roadside-radius (turn) posts or equivalent support shall be installed leading into the split or lift.

(c) Before mining is started on a final stump—

(1) At least 2 rows of posts or equivalent support shall be installed on not more than 4-foot centers on each side of the roadway; and

(2) Only one open roadway, which shall not exceed 16 feet wide, shall lead from solid pillars to the final stump of a pillar. Where posts are used as the sole means of roof support, the width of the roadway shall not exceed 14 feet.

(d) During open-end pillar extraction, at least 2 rows of breaker posts or equivalent support shall be installed on not more than 4-foot centers. These supports shall be installed between the lift to be started and the area where pillars have been extracted. These supports shall be maintained to within 7 feet of the face and the width of the roadway shall not exceed 16 feet. Where posts are used as the sole means of roof support, the width of the roadway shall not exceed 14 feet.

§ 75.208 Warning devices.

Except during the installation of roof supports, the end of permanent roof support shall be posted with a readily visible warning, or a physical barrier shall be installed to impede travel beyond permanent support.

§ 75.209 Automated Temporary Roof Support (ATRS) systems.

(a) Except in anthracite mines and as specified in paragraphs (b) and (c) of this section, an ATRS system shall be used with roof bolting machines and continuous-mining machines with integral roof bolters operated in a working section. The requirements of this paragraph shall be met according to the following schedule:

(1) All new machines ordered after March 28, 1988.

(2) All existing machines operated in mining heights of 36 inches or more after March 28, 1989; and

(3) All existing machines operated in mining heights of 30 inches or more but less than 36 inches after March 28, 1990.

(b) After March 28, 1990 the use of ATRS systems with existing roof bolting machines and continuous-mining machines with integral roof bolters operated in a working section where the mining height is less than 30 inches shall be addressed in the roof control plan.

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(c) Alternative means of temporary support shall be used, as specified in the roof control plan, when—

(1) Mining conditions or circumstances prevent the use of an ATRS system; or

(2) Temporary supports are installed in conjunction with an ATRS system.

(d) Persons shall work or travel between the support device of the ATRS system and another support, and the distance between the support device of the ATRS system and support to the left, right or beyond the ATRS system, shall not exceed 5 feet.

(e) Each ATRS system shall meet each of the following:

(1) The ATRS system shall elastically support a deadweight load measured in pounds of at least 450 times each square foot of roof intended to be supported, but in no case less than 11,250 pounds.

(2) The controls that position and set the ATRS system shall be—

(i) Operable from under permanently supported roof; or

(ii) Located in a compartment, which includes a deck, that provides the equipment operator with overhead and lateral protection, and has the structural capacity to elastically support a deadweight load of at least 18,000 pounds.

(3) All jacks affecting the capacity of the ATRS system and compartment shall have check valves or equivalent devices that will prevent rapid collapse in the event of a system failure.

(4) Except for the main tram controls, tram controls for positioning the equipment to set the ATRS system shall limit the speed of the equipment to a maximum of 80 feet-per-minute.

(f) The support capacity of each ATRS system and the structural capacity of each compartment shall be certified by a registered engineer as meeting the applicable requirements of paragraphs (e)(1) and (e)(2) of this section. The certifications shall be made available to an authorized representative of the Secretary and representative of the miners.

§ 75.210 Manual installation of temporary support.

(a) When manually installing temporary support, only persons engaged

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in installing the support shall proceed beyond permanent support.

(b) When manually installing temporary supports, the first temporary support shall be set no more than 5 feet from a permanent roof support and the rib. All temporary supports shall be set so that the person installing the supports remains between the temporary support being set and two other supports which shall be no more than 5 feet from the support being installed. Each temporary support shall be completely installed prior to installing the next temporary support.

(c) All temporary supports shall be placed on no more than 5-foot centers.

(d) Once temporary supports have been installed, work or travel beyond permanent roof support shall be done between temporary supports and the nearest permanent support or between other temporary supports.

§ 75.211 Roof testing and scaling.

(a) A visual examination of the roof, face and ribs shall be made immediately before any work is started in an area and thereafter as conditions warrant.

(b) Where the mining height permits and the visual examination does not disclose a hazardous condition, sound and vibration roof tests, or other equivalent tests, shall be made where supports are to be installed. When sound and vibration tests are made, they shall be conducted—

(1) After the ATRS system is set against the roof and before other support is installed; or

(2) Prior to manually installing a roof support. This test shall begin under supported roof and progress no further than the location where the next support is to be installed.

(c) When a hazardous roof, face, or rib condition is detected, the condition shall be corrected before there is any other work or travel in the affected area. If the affected area is left unattended, each entrance to the area shall be posted with a readily visible warning, or a physical barrier shall be installed to impede travel into the area.

(d) A bar for taking down loose material shall be available in the working place or on all face equipment except haulage equipment. Bars provided for