

(2) When separate finishing bits are used, they shall be distinguishable from other bits.

(f) *Tensioned roof bolts.* (1) Roof bolts that provide support by creating a beam of laminated strata shall be at least 30 inches long. Roof bolts that provide support by suspending the roof from overlying stronger strata shall be long enough to anchor at least 12 inches into the stronger strata.

(2) Test holes, spaced at intervals specified in the roof control plan, shall be drilled to a depth of at least 12 inches above the anchorage horizon of mechanically anchored tensioned bolts being used. When a test hole indicates that bolts would not anchor in competent strata, corrective action shall be taken.

(3) The installed torque or tension ranges for roof bolts as specified in the roof control plan shall maintain the integrity of the support system and shall not exceed the yield point of the roof bolt nor anchorage capacity of the strata.

(4) In each roof bolting cycle, the actual torque or tension of the first tensioned roof bolt installed with each drill head shall be measured immediately after it is installed. Thereafter, for each drill head used, at least one roof bolt out of every four installed shall be measured for actual torque or tension. If the torque or tension of any of the roof bolts measured is not within the range specified in the roof control plan, corrective action shall be taken.

(5) In working places from which coal is produced during any portion of a 24-hour period, the actual torque or tension on at least one out of every ten previously installed mechanically anchored tensioned roof bolts shall be measured from the outby corner of the last open crosscut to the face in each advancing section. Corrective action shall be taken if the majority of the bolts measured—

(i) Do not maintain at least 70 percent of the minimum torque or tension specified in the roof control plan, 50 percent if the roof bolt plates bear against wood; or

(ii) Have exceeded the maximum specified torque or tension by 50 percent.

(6) The mine operator or a person designated by the operator shall certify by signature and date that measurements required by paragraph (f)(5) of this section have been made. This certification shall be maintained for at least one year and shall be made available to an authorized representative of the Secretary and representatives of the miners.

(7) Tensioned roof bolts installed in the roof support pattern shall not be used to anchor trailing cables or used for any other purpose that could affect the tension of the bolt. Hanging trailing cables, line brattice, telephone lines, or other similar devices which do not place sudden loads on the bolts are permitted.

(8) Angle compensating devices shall be used to compensate for the angle when tensioned roof bolts are installed at angles greater than 5 degrees from the perpendicular to the bearing plate.

(g) *Non-tensioned grouted roof bolts.* The first non-tensioned grouted roof bolt installed during each roof bolting cycle shall be tested during or immediately after the first row of bolts has been installed. If the bolt tested does not withstand at least 150 foot-pounds of torque without rotating in the hole, corrective action shall be taken.

[53 FR 2375, Jan. 27, 1988, as amended at 55 FR 4595, Feb. 8, 1990; 63 FR 20030, Apr. 22, 1998]

§ 75.205 Installation of roof support using mining machines with integral roof bolters.

When roof bolts are installed by a continuous mining machine with integral roof bolting equipment:

(a) The distance between roof bolts shall not exceed 10 feet crosswise.

(b) Roof bolts to be installed 9 feet or more apart shall be installed with a wooden crossbar at least 3 inches thick and 8 inches wide, or material which provides equivalent support.

(c) Roof bolts to be installed more than 8 feet but less than 9 feet apart shall be installed with a wooden plank at least 2 inches thick and 8 inches wide, or material which provides equivalent support.