

WAC 296-36-195 Special provisions for tunnels. (1) Bulkheads.

The bulkheads separating the working chamber from areas of lower pressure shall be of sufficient strength to withstand safely the maximum pressure to which it may be subjected. Where there is a possibility of rapid flooding of the working chamber, such as might be present in subaqueous tunnels, the bulkhead shall be located sufficiently close to the face or shield to permit escape of the workers in case of an emergency. But in no case where there is such possibility shall such distance be more than 300 feet.

(2) **Safety curtain or screens.** Where danger of a blow or an inrush of water exists in tunnels 12 feet or more in clear height, and the elevation of the top of the lining at the face and of the completed tunnel back to the emergency lock are such that a safety curtain will afford protection to the workman, a safety curtain shall be provided. It shall be located where it will afford the maximum of protection in case of an emergency but not impracticably close to the face.

Safety curtains shall be of incombustible material and shall be installed in the crown of the tunnel. They shall provide an airtight seal with the tunnel lining and shall be properly reinforced and braced as may be necessary. Curtains or screens shall be installed at right angles to the axis of the tunnel with the bottom edge horizontal. In tunnels up to and including 24 feet in inside clear height, the safety curtain shall extend down to the center line of the tunnel. In tunnels over 24 feet inside clear height, it shall extend at least 12 feet below the inside clearance line of the roof of the tunnel.

(3) **Walkways.** In tunnels 16 feet or more in diameter, containing safety curtains or screens, hanging walkways shall be provided from the face to the man lock and shall be installed as high in the tunnel as is practicable. Such walkway shall be installed above the tunnel floor and shall have at least 6 feet of head room above the walkway. A railing 42 inches high and a toe board shall be securely installed throughout the length of walkways on open sides. In areas under pressure, the walkways, stairways, and ladders including railings shall be of incombustible material.

(4) **Maintenance of walkways.** Walkways and the stairs or ladders leading thereto shall be at all times maintained clear, in good repair, and in a condition to carry safely the loads to which they may be subjected.

(5) **Ramps.** Walkways shall be provided with ramps under safety screens. Such ramps shall be provided with cleats.

(6) **Man lock and material lock.** Every tunnel shall have at least two locks in proper working condition, one of which shall be used as a material and equipment lock and the other used exclusively as a man lock.

(7) **Emergency man lock.** In subaqueous tunnels where space permits, there shall be in addition to the man lock and the material lock, an emergency man lock which shall be large enough to hold an entire heading shift and which shall be kept open toward the face and maintained ready for use at all times.

(8) **Location of locks.** Man locks and emergency locks shall be located as high in the tunnel as space will permit but the emergency lock shall be located in the crown of the tunnel.

(9) **Track safeties and brakes.** An automatic stop block or derailing device shall be provided at the top of every slope or incline greater than 3 percent. In addition, such a device shall be installed at a point not less than 150 feet nor more than 200 feet upgrade from any point where runaway cars may cause damage to the shield or air

lock. A holding device shall be provided for cars used on inclines. Such device shall be set in the holding position during loading.

[Rules (Part XVII), filed 12/28/62; §§ 10 and 18, filed 3/23/60.]