

provided by the vessel for their use reasonably assure arrival of a viable animal in the country of destination. Halters, ropes, or other suitable equipment provided for the handling and tying of horses shall be found to be satisfactory by the APHIS veterinarian to assure humane treatment of the animals.

[42 FR 28990, June 7, 1977. Redesignated at 45 FR 86413, Dec. 31, 1980, as amended at 57 FR 23047, June 1, 1992]

**§ 91.18 Cleaning and disinfection of transport carriers for export.**

All fittings, utensils and equipment, unless new, to be used in the loading, stowing, or other handling of animals aboard surface vessels under the provisions of this part, shall first be cleaned and disinfected under the supervision of an inspector before being used for, or in connection with, the transportation of animals from any United States port. Such disinfection of halters, ropes, and similar equipment used in handling and tying of animals shall be by immersion in an approved disinfectant. When the surface vessel has last been used to carry livestock to or from a foot-and-mouth disease infected country, the approved disinfectant shall be a freshly prepared solution of:

(a) Sodium carbonate (4 percent) in the proportion of 1 pound to 3 gallons of water.

(b) 4 percent sodium carbonate plus 0.1 percent sodium silicate.

(c) Sodium hydroxide (Lye) prepared in a fresh solution in the proportion of not less than 1 pound avoirdupois of sodium hydroxide of not less than 95 percent purity to 6 gallons of water, or one 13½-ounce can to 5 gallons of water.<sup>7</sup>

For carriers returning from other foreign countries, the approved disinfectant shall be a disinfectant permitted

<sup>7</sup>Due to the extreme caustic nature of sodium hydroxide solution, precautionary measures such as the wearing of rubber gloves, boots, raincoat, and goggles should be observed. An acid solution such as vinegar shall be kept readily available in case any of the sodium hydroxide solution should come in contact with the body.

for use under § 71.10, part 71 of this chapter.

[42 FR 28990, June 7, 1977. Redesignated and amended at 45 FR 86413, Dec. 31, 1980; 53 FR 51746, Dec. 23, 1988]

**§ 91.19 Inspection of ocean vessels prior to loading.**

It shall be the responsibility of the owners or the masters of an ocean vessel intended for use in exporting livestock to present the vessel to an inspector at a United States port of embarkation or at the discretion of the Administrator, upon request of the exporter, transporting company, or their agent, at a foreign port, for an inspection to determine if the fittings aboard the vessel are in compliance with the provisions of this part. A notarized statement from an engineering concern shall be required to certify to the rate of air exchange in each compartment. Such notarized statement shall be required upon first use of such vessel: *Provided*, That such notarized statement may again be required by the Administrator if substantive changes in fittings aboard the vessel have been made since the vessel was last certified.

[42 FR 28990, June 7, 1977. Redesignated at 45 FR 86413, Dec. 31, 1980, and amended at 57 FR 23047, 23048, June 1, 1992]

**§ 91.20 General construction.**

A variety of construction materials such as wood, metal plate, or pipe may be used for stalls, crates, or pens aboard ocean vessels. Pipe fittings have the advantage of smooth surfaces, easy maintenance, long range economy and spaces between pipe rails to allow for feeding, watering, cleaning and better ventilation. Material used for stalls, crates, or pens shall be properly formed, closely fitted, and rigidly secured in place. Special care shall be taken to design and finish all edges, welds, and hardware that are accessible to animals. A combination of wood and steel pipe or other steel profile construction may be accepted if the construction complies with the regulations in this part. Where the sides of pens are adjacent to the ship's sides which have steel casing, frames, stays or similar fittings, the carrier shall

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cover these profiles with wooden battens of at least 2 inch thick lumber or plywood of similar strength to prevent animals from injury.

[42 FR 28990, June 7, 1977. Redesignated at 45 FR 86413, Dec. 31, 1980]

### §91.21 Ventilation.

Each underdeck compartment on which animals are being transported aboard an ocean vessel shall be equipped with a system of mechanical ventilation that will furnish a complete change of air in each compartment every 2 minutes when deck height<sup>8</sup> is less than 8 feet and every 2½ minutes when the deck height<sup>8</sup> exceeds 8 feet. Spare motors and fans shall be available on board, for replacement or repair of the ventilation system during the voyage. A spare motor and fan of an approved type in working order shall be aboard the vessel for each type of motor or fan used. Net pen space in any compartment shall not exceed 80 percent of the deck area.

[42 FR 28990, June 7, 1977. Redesignated at 45 FR 86413, Dec 31, 1980]

### §91.22 Protection from heat of boilers and engines.

No animals shall be stowed along the alleyways leading to the engine or boiler rooms unless the sides of said engine or boiler rooms are covered by a tongue and groove tight sheathing producing a 3-inch-wide air space except that on ships powered with internal combustion engines this sheathing may not be required at the discretion of the inspector.

[42 FR 28990, June 7, 1977. Redesignated at 45 FR 86413, Dec. 31, 1980]

### §91.23 Loading ramps and doors.

(a) Ramps connecting one deck of a ship to another shall have a clear width of 3 feet and a clear height of not less than 6 feet 6 inches. The incline of the ramps shall not exceed 1:2 (26½°) between the ramps and the horizontal plane. The ramps shall be fitted with footlocks of approximately 2"×2" lumber and spaced no more than one foot apart. The ramps shall have side fence-

<sup>8</sup>Deck height is the height from the ceiling to the floor.

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ing not less than 5 feet in height. Side doors in ship's shell plating through which livestock are to be loaded shall have a height of not less than 6 feet for cattle and 6 feet 6 inches for horses.

(b) Alleyways running fore and aft on the ocean vessel that are used for feeding, watering, and loading animals, including horses in box stalls, shall have a minimum width of 3 feet. However, for a distance not to exceed 8 feet at the end of alleyways in the bow and the stern of ship, and where obstructions of less than 3 feet in length occur, the width may be reduced to a minimum of 24 inches. A sufficient number of athwartship alleyways at least 24 inches in width shall be provided to afford ready access to scuppers and to ends of alleyways running fore and aft. However, on exposed decks where scuppers and the end of fore and aft alleyways are readily accessible athwartship alleyways are not required and if the alleyways are to be used for feeding or watering livestock, but not for loading or unloading of livestock, such alleyways shall have a minimum width of 28 inches.

[42 FR 28990, June 7, 1977. Redesignated at 45 FR 86413, Dec. 31, 1980]

### §91.24 Attendants.

It shall be the responsibility of the captain of the ocean vessel to carry at least three men on board the vessel who are experienced in the handling of the kind/kinds of livestock to be carried, and a sufficient number of attendants, satisfactory to the inspector or the APHIS veterinarian at the port embarkation to insure proper care of the animals: *Provided, however,* That only one person experienced in the handling of the kind/kinds of livestock to be carried and a sufficient number of attendants, satisfactory to the APHIS veterinarian at the port of embarkation, to insure proper care of the animals must be carried on board the ocean vessel if less than 800 head of livestock are carried.

[42 FR 28990, June 7, 1977, as amended at 43 FR 27171, June 23, 1978. Redesignated at 45 FR 86413, Dec. 31, 1980, and amended at 57 FR 23047, June 1, 1992]