

§91.20

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 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 height⁸ is less than 8 feet and every 2½ minutes when the deck height⁸ 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

⁸Deck height is the height from the ceiling to the floor.

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any compartment shall not exceed 80 percent of the deck area.

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§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 fencing 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]

§ 91.25 Space requirements for animals on ocean vessels.

(a) *General requirements.* A general space requirement for any individual animal in stalls or crates on ocean vessels shall be six inches more in height, depth, and width than the measurements of the animal concerned. The number of animals in each stall, pen or other container, the cubic inches of air available for each animal, and the ventilation capability of the transporting carrier are other criteria used to determine final space requirements for each animal. Guidelines of space requirements for storage of animals in pens are listed in paragraphs (b) and (c) of this section. Final determination of space needed and manner of loading of animals for export shipment will be made by the inspector or the APHIS veterinarian at the port of embarkation, based upon the size and type of animals presented, weather, destination, route, and means of transportation employed for the export shipment.

(b) *Space guidelines:*

	Space in square feet allowed per animal—
Animal weight, pounds:	
100	4.0
150	5.0
200	6.0
250	6.9
300	7.9
350	8.9
400	9.9
450	10.9
500	11.8
550	12.5
600	13.2
650	13.9
700	14.6
750	15.3
800	15.9
850	16.6
900	17.3
950	17.8
1,000	18.4
1,050	18.9
1,100	19.4
1,150	19.9
1,200	20.4
1,250	21.0
1,300	21.5
1,350	22.0
1,400	22.7
1,450	23.3
1,500	24.0
1,550	24.6
1,600	25.3
1,650	25.9
1,700	26.6
1,750	27.2
1,800	27.8

(c) *Space guidelines for containers.* Containers used aboard containerized ocean vessels measure 8 feet in width outside but vary from 7 feet 3 inches to 7 feet 9 inches in width inside and from 17 feet to 40 feet in length. For such containers the space requirements and minimum pen widths shown in the following charts shall be used whenever the length of the animal exceeds the width of the container. For ready measurement of dairy cattle only, the distance from the withers to the pin bone multiplied by 1.65 gives the approximate total length. Length of other cattle and large animals will require measurement of their total length. Other animals larger than those shown in the following charts shall be stowed subject to the approval of the inspector or the APHIS veterinarian at the port of embarkation. Maximum inside length of container pens shall be 12 feet 9 inches.