

be provided for the proper watering of the animals.

(b) *Sheep, goats, and swine.* Pens for these animals shall have feed troughs not less than 8 inches wide and shall be equipped with proper receptacles for watering. Pens for sheep and goats shall also have ample hayracks suitable for these animals.

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

#### §91.28 Stanchions and rails.

(a)(1) Pipes used for stanchions and rails for pens aboard an ocean vessel shall be made of zinc coated, galvanized, extra strong, medium carbon steel. Steel pipes or other steel profiles shall consist of not less than 4 pipes or profiles, the upper one to have 3 inch diameter and the others a diameter of not less than 2½ inches. Stanchions shall not be of less than 3½ inches diameter; shall not be of less than ⅝ inch thickness and shall not be placed more than 8 feet apart center to center.

(2) Threaded pipe connections shall not be used. All parts shall be cut from factory fabricated, seamless pipe.

(3) Bolt and pin holes shall not be drilled to more than ⅓ inch oversize. Holes shall be properly located and centered on pipe.

(4) Pipe shall not be deformed or weakened by welding such items as reinforcing rods or hinges thereto. Welding shall be used for such attachment to be exposed in the finished work. Pins, plates, and parts other than pipe shall be made of galvanized steel. All areas where galvanizing of the steel has eroded or has been damaged shall be finished with a rust preventative.

(5) Pipe rails shall be placed in proper alignment with tops of all gates at the same height.

(b) All gates of animal pens aboard an ocean vessel shall have smooth finished surfaces and the pivot-pins shall have a minimum diameter of ¾ inch.

(c) Animals may be carried on upper decks of an ocean vessel in space abutting the outside rails or bulwarks only if such rails or bulwarks are 3 feet or more in height from the deck and are of sufficient strength to hold the necessary fittings securely or if the space available is sufficient to permit securing the required fittings to provide the

necessary strength. When animals are carried on upper decks, bulkheads shall be erected at all unprotected ends of stalls.

(d)(1) *Cattle and horses.* Rail stanchions for pens aboard an ocean vessel for cattle or horses shall be constructed of not less than 4" or 6" lumber set 5 feet apart on centers secured to the ship's rail or bulwark with ⅝ inch or larger bolts or collars and with heels riced to the sheer streak or waterway. Inboard stanchions of 4"×6" lumber shall be set in line with the rail stanchions and properly braced: *Provided, however,* That the method of securing and bracing of stanchions may be modified as approved by the underwriter of the cargo bureau, and the inspector. Information concerning the modifications shall be made available to APHIS, at its request. On open rail ships, spaces between the rails shall be blocked out to permit the affixing of outside planking. If supplementary stanchions are required for rump boards, these shall not be less than 3"×4" in size and shall be secured to beams and decks as outlined above. On upper deck fittings at ends of unprotected stalls, a stanchion not less than 3"×4" in size shall be similarly spaced and secured to beams and decks and properly braced. Stanchions on underdecks shall be constructed, spaced, and secured in the same manner as upper deck fittings.

(2) *Sheep, goats, and swine.* Stanchions for single or double tier pens for sheep, goats, and swine shall be constructed of not less than 3"×4" lumber set at not greater distance than 5 feet on centers and secured as outlined in paragraph (d)(1).

(e) For all animals, two beams of 2"×6" lumber shall be bolted on each side of the stanchions using ⅝ inch bolts, nuts, and washers. Beams shall extend from outside planking to at least 2 feet beyond the line of the breast boards unless the beams butt on the ship's deck fittings. Two beams of 2"×6" lumber shall be used to support the roof of single tier pens on exposed decks and the floor of double tier pens on all decks.

(f) All pens for carrying animals on exposed decks aboard an ocean vessel shall be roofed with not less than 1

inch thick, watertight lumber extending from outside planking to at least 2 feet beyond the line of breast boards: *Provided*, That, if tongue and grooved lumber is used, it must be caulked or covered so that it is watertight or if square edged lumber is used it shall be covered with a saturated roofing paper known to the trade as 30 pound roofing paper and shall be securely battened.

(g) All pens for carrying animals on exposed decks shall be provided with outside planking of not less than 1½ inch tongue and groove lumber, laid fore and aft of ship, driven tightly together and securely nailed to backs of stanchions in a manner to cover all open spaces properly. However, during warm weather the top course planking may be left off in order to allow a free circulation of air. On vessels with closed bulwarks, the outside planking shall extend not less than 6 inches below the upper edge of the bulwark.

(h)(1) *Horses*. All stalls and pens for horses shall be equipped with breast boards of no less than 2"×10" dressed lumber with the top edge placed 3 feet 10 inches from the floor and securely nailed to the stanchions. Where butting occurs, the joints are to be on the stanchions and shall be covered with metal plates 3 inches square or 5 inches in diameter and not less than ¼ inch in thickness. A ⅝ inch bolt shall then be passed through the plate, joint, and stanchion and securely fastened with a nut. All breast boards shall have 1 inch holes bored through them at proper distances for tying animals. An occasional pen shall be provided with a removable breast board in order that animals may be loaded into and removed from the stalls and pens. All stalls and pens shall be provided with foot boards of not less than 2"×10" lumber securely nailed or bolted to the stanchions. At the discretion of the inspector, small ponies, asses, small mules, mares with foal at foot, young unbroken horses or gentle horses of any size may be stowed loose in pens. In these cases, a sufficient number of finished 2"×10" lumber shall be placed between the breast and foot boards to effectively contain the animals.

(2) *Cattle*. All stalls and pens for cattle shall be provided with boards as required for horses in paragraph (a), ex-

cept that the front or breast boards shall be constructed in sets of three or more boards of 2"×10" dressed lumber separated by 3 inch spacers and placed on the foot board so that the front of the pen extends 48 inches or more in height from the floor. One or more of the breast boards may be left off if feed or water troughs are to be mounted externally.

(3) *Sheep, goats, and swine*. Front boards in pens for sheep, goats, and swine shall be of not less than 1"×6" pieces of lumber approximately spaced and extending to the proper height for these species of animals. Provision shall be made for removing a section of front boards to allow entry of animals into pens or removal therefrom and for feeding or watering.

(i)(1) *Horses and cattle*. Rump boards in pens for horses or cattle shall form a solid wall at least 4 feet high for cattle and 4 feet 6 inches high for horses and shall be of lumber not less than 1½ inches thick if tongued and grooved or 2 inches thick if square edged or of plywood of the same strength. Where the deck is clear of obstructions, rump boards may be set on the inside of the rail stanchions. When this is not possible, sections so affected may be brought forward to clear such obstructions and shall be fastened by stanchions provided for this purpose. On lower decks where the ship's construction so justifies, rump boards may be affixed to 2"×6" wooden pieces set the same as prescribed for stanchions. Rump boards may be formed by filling spaces between cargo battens. Rump boards in stalls or pens built alongside hatches need be carried down only to the coaming line.

(2) *Sheep, goats, and swine*. Pens for sheep, goats, and swine on all exposed decks shall be provided with rump boards of the specified size built to a height of 2 feet 6 inches.

(j)(1) *Horses and cattle*. Division boards in pens for horses and cattle shall be used to separate all stalls and pens and to close the sides thereof at the ends of rows. They shall be used in sets of four boards of 2"×10" dressed lumber separated by 3 inch spacers, shall extend from the rump boards to the inboard stanchions, and shall be fitted into appropriate channels or

slots at both ends in a manner that will permit their ready removal.

(2) *Sheep, goats, and swine.* Division boards and those forming ends of pens for sheep, goats, and swine shall be the same as prescribed for rump boards for these animals in paragraph (i) of this section.

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

#### §91.29 Hatches.

(a) Animals may be placed on hatches on exposed decks on an ocean vessel if the pens or stalls are securely lashed down.

(b) Animals may be placed on hatches on underdecks on an ocean vessel provided the height requirements of §91.25 (e) and (f) are met and sufficient space shall be left clear on such hatches for passageway across ship.

(c) On all hatches on which animals are carried and under which hay and feed or animals are stowed, sufficient space shall be left clear for the proper removal and handling of such hay and feed and animal carcasses. Such hatches shall be watertight.

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

#### §91.30 Defective fittings.

If previously used fittings aboard an ocean vessel are employed, any portion thereof found by the inspector to be worn, decayed, unsound, or otherwise defective shall be replaced.

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

### Subpart E—Cleaning and Disinfecting of Aircraft

#### §91.41 Cleaning and disinfecting of aircraft.

Prior to loading of animals, the stowage area of aircraft to be used to export animals under the provisions of this part shall, under the supervision of an inspector, be cleaned and then disinfected using a freshly prepared solution of 4 percent sodium carbonate plus 0.1 percent sodium silicate. In addition, all loading ramps, fittings, and equipment to be used in loading the animals on the aircraft shall be cleaned and dis-

infected using an approved disinfectant listed in §71.10 of this chapter. The time at which the cleaning and disinfection is performed must be approved by the inspector, who will give approval only if he or she determines that the cleaning and disinfection will be effective up to the projected time of loading of animals. If the animals are not loaded by the projected time, the inspector shall determine whether further cleaning and disinfection are necessary. The cleaning must remove all garbage, soil, manure, plant materials, insects, paper, and other debris from the stowage area. The disinfectant solution must be applied with a device that creates an aerosol or mist that covers 100 percent of the surfaces in the stowage area, except for any loaded cargo and deck surface under it that, in the opinion of the inspector, do not contain materials that may contain animal disease pathogens such as garbage, soil, manure, plant materials, insects, waste paper, or debris. After cleaning and disinfection is performed, the inspector shall sign and deliver to the captain of the aircraft or other responsible official of the airline involved, a document stating that the aircraft has been properly cleaned and disinfected, and stating further the date, the carrier, the flight number, and the name of the airport and the city and state in which it is located. If an aircraft is cleaned and disinfected at one airport, then flies to a subsequent airport, with or without stops en route, to load animals for export, the inspector at the subsequent airport will determine, based on examination of the cleaning and disinfection documents, whether the previous cleaning and disinfection is adequate or whether to order a new cleaning and disinfection. If the aircraft has loaded any cargo in addition to animals, the inspector at the subsequent airport will determine whether to order a new cleaning and disinfection based on both examination of the cleaning and disinfection documents and inspection of the stowage area for materials that may contain animal disease pathogens such as garbage, soil, manure, plant materials, insects, waste paper, or debris.

[53 FR 51747, Dec. 23, 1988]