

§ 1917.111

(i) When such employees are working in isolation, or

(ii) Where physical limitations of available working space creates a hazard of falling into the water, or

(iii) Where the work area is obstructed by cargo or other obstacles so as to prevent employees from obtaining safe footing for their work.

(2) PFDs (life preservers, life jackets, or work vests) worn by each affected employee must be United States Coast Guard (USCG) approved pursuant to 46 CFR part 160 (Type I, II, III, or V PFD) and marked for use as a work vest, for commercial use, or for use on vessels.

(3) Personal flotation devices shall be maintained in safe condition and shall be considered unserviceable when damaged so as to affect buoyancy or fastening capability.

(c) *Emergency facilities.* When employees are exposed to hazardous substances which may require emergency bathing, eye washing or other facilities, the employer shall provide such facilities and maintain them in good working order.

[48 FR 30909, July 5, 1983, as amended at 62 FR 40201, July 25, 1997; 65 FR 40941, June 30, 2000]

Subpart F—Terminal Facilities

§ 1917.111 Maintenance and load limits.

(a) The structural integrity of docks, piers, wharves, terminals and working surfaces shall be maintained.

(b) Maximum safe load limits, in pounds per square foot (kilograms per square meter), of floors elevated above ground level, and pier structures over the water shall be conspicuously posted in all cargo areas.

(c) Maximum safe load limits shall not be exceeded.

(d) All walking and working surfaces in the terminal area shall be maintained in good repair.

§ 1917.112 Guarding of edges.

(a) *Vehicle protection.* (1) Vehicle curbs, bull rails, or other effective barriers at least six inches (15.24 cm) in height shall be provided at the water-side edges of aprons and bulkheads, except where vehicles are prohibited. Curbs or bull rails installed after Octo-

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ber 3, 1983, shall be at least 10 inches (25.4 cm) in height.

(2) The provisions of paragraph (a)(1) of this section also apply at the edge of any fixed level above the common floor area from which vehicles may fall, except at loading docks, platforms and skids where cargo is moved by vehicles.

(b) *Employee protection.* (1) Guardrails shall be provided at locations where employees are exposed to floor or wall openings or waterside edges, including bridges or gangway-like structures leading to pilings or vessel mooring or berthing installations, which present a hazard of falling more than 4 feet (1.22 m) or into the water, except as specified in paragraph (b)(2) of this section.

(2) Guardrails are not required:

(i) At loading platforms and docks;

(ii) At waterside edges used for cargo handling;

(iii) On the working sides of work platforms, skids or similar workplaces; or

(iv) On railroad rolling stock, highway vehicles, intermodal containers or similar equipment.

(3) Where guardrails are impracticable due to machinery requirements or work processes, an alternate means of protecting employees from falling, such as nets, shall be used.

(c) *Criteria for guardrails.* Guardrails shall meet the following criteria:

(1) They shall be capable of withstanding a force of at least 200 pounds (890 N) applied in any direction at mid-span of the top rail (when used), or at the uppermost point if there is no top rail.

(2) If not of solid baluster, grillwork, slatted or similar construction, guardrails shall consist of top rails and midrails. Midrails, when used, shall be positioned at approximately half the height of the top rail.

(3) The top surface of guardrails installed before October 3, 1983, shall be at least 36 inches (0.91 m) high. Those installed after October 3, 1983, shall be 42 inches (1.07 m), plus or minus 2 inches (5.1 cm), high.

(4) Any non-rigid railing such as chain or wire rope shall have a maximum sag limit at the mid-point between posts of not more than 6 inches (15.24 cm).