

## § 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).

(5) Top rails shall be free of puncture and laceration hazards.

(6) Rail ends shall not overhang to constitute a hazard, but this does not prohibit scrollwork, boxed ends or similar non-hazardous projections.

(d) *Toeboards.* Toeboards shall be provided when employees below could be exposed to falling objects such as tools. Toeboards shall be at least 3½ inches (8.9 cm) in height from top edge to floor level, and be capable of withstanding a force of 50 pounds (222 N) applied in any direction. Drainage clearance under toeboards is permitted.

(e) *Stair railings.* Stair railings shall be capable of withstanding a force of at least 200 pounds (890 N) applied in any direction, and shall not be more than 36 inches (0.91 m) nor less than 32 inches (0.81 m) in height from the upper top rail surface to the tread surface in line with the leading edge of the tread. Railings and midrails shall be provided at any stairway having four or more risers, as follows:

(1) For stairways less than 44 inches (1.12 m) wide, at least one railing; and

(2) For stairways more than 44 inches (1.12 m) but less than 88 inches (2.24 m) wide, a stair rail or handrail on each side, and if 88 or more inches wide, an additional intermediate handrail.

(f) *Condition.* Railings shall be maintained free of sharp edges and in good repair.

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

#### § 1917.113 Clearance heights.

Clearance heights shall be prominently posted where the height is insufficient for vehicles and equipment.

#### § 1917.114 Cargo doors.

(a) *Mechanically operated.* (1) Cargo door counterweights shall be guarded.

(2) Lift trucks and cranes shall not be used to move mechanically operated doors except when necessary during repair on the doors, in which case ropes or other guarding shall be provided to prevent entry into the area where the door may fall or slide.

(3) Vertically operated doors partially opened for work or ventilation shall be secured to prevent accidental closing.

(b) *Tackle operated.* (1) The door shall be connected to its lifting tackle with shackles or equally secure means.

(2) Lifting bridles and tackles shall have a safety factor of five, based upon maximum anticipated static loading conditions.

(3) Devices shall be provided to hold overhead doors in the open position and to secure them when closed.

(4) Lifting gear and hardware shall be maintained in safe condition.

(5) Lifting ropes, when used, shall be placed out of the work area and off the floor.

(c) *Horizontal sliding.* (1) Horizontal sliding door rollers shall be constructed to prevent the door from jumping from overhead tracks.

(2) Sliding doors shall be secured to prevent them from swinging.

#### § 1917.115 Platforms and skids.

(a) Platforms and skids extending from piers, transit sheds or lofts and used for landing or hooking on drafts shall be provided at the open sides with guardrails meeting the requirements of § 1917.112(c) or alternate means, such as nets, to protect employees against falls.

(b) Any employee working below a second-story platform or skid shall be protected from falling objects by a net stretched from the platform or skid to the vessel.

(c) Platforms and skids shall be strong enough to bear the loads handled and shall be maintained in safe condition. Safe working loads, which shall be posted or marked on or adjacent to platforms and skids, shall have a minimum safety factor of five for any part, based upon maximum anticipated static loading conditions and the ultimate strength of the construction material.

(d) The employer shall provide and maintain platform and skid attachments that will prevent accidental movement of the skid or platform.

#### § 1917.116 Elevators and escalators.

(a) "Elevator" means a permanent hoisting and lowering mechanism with a car or platform moving vertically in guides and serving two or more floors of a structure. The term excludes such devices as conveyors, tiering or piling