

(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

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machines, material hoists, skip or furnace hoists, wharf ramps, lift bridges, car lifts and dumpers.

(b) "Escalator" means a power-driven continuous moving stairway principally intended for the use of persons.

(c) No elevator or escalator with a defect which affects safety shall be used.

(d) Elevator safety devices shall not be overridden or made inoperable.

(e) Elevators and escalators shall be thoroughly inspected at intervals not exceeding one year. Additional monthly inspections for satisfactory operation shall be conducted by designated persons. Records of the results of the latest annual elevator inspections shall be posted in elevators. Records of annual escalator inspections shall be posted in the vicinity of the escalator or be available at the terminal.

(f) Elevator landing openings shall be provided with doors, gates or equivalent protection which shall be in place when the elevator is not at that landing, to prevent employees from falling into the shaft.

(g) The elevator's or escalator's maximum load limits shall be posted and not exceeded. Elevator load limits shall be posted conspicuously both inside and outside of the car.

(h) Elevators shall be operated only by designated persons except for automatic or door interlocking elevators which provide full shaft door closing and automatic car leveling.

[48 FR 30909, July 5, 1983, as amended at 49 FR 28551, July 13, 1984; 61 FR 5509, Feb. 13, 1996]

§ 1917.117 Manlifts.

(a) *Inspection.* Manlifts shall be inspected monthly by a designated person. Safety switches shall be checked weekly. Manlifts found to be unsafe shall not be operated until repaired. Inspections shall include at least the following:

- (1) Step fastenings;
- (2) Rails;
- (3) Rail supports and fastenings;
- (4) Roller and slides;
- (5) Belt and belt tension;
- (6) Handholds and fastenings;
- (7) Floor landings;
- (8) Guardrails;
- (9) Lubrication;

- (10) Safety switches;
- (11) Warning signs and lights;
- (12) Illumination;
- (13) Drive pulley;
- (14) Bottom (boot) pulley and clearance;
- (15) Pulley supports;
- (16) Motor;
- (17) Drive mechanism;
- (18) Brake;
- (19) Electrical switches;
- (20) Vibration and misalignment;
- (21) "Skip" on up or down run when mounting the step (indicating worn gears); and
- (22) Emergency exit ladders.

(b) *Inspection records.* Inspection records shall be kept for at least one year. The record of the most recent inspection shall be posted in the vicinity of the manlift or in the terminal.

(c) *Emergency stop.* An emergency stop device shall be available within easy reach from any position on the belt.

(d) *Instructions.* Manlift use instructions shall be conspicuously posted.

(e) *Top floor warning sign and light.* An illuminated sign and red light that are visible to the user shall be provided under the top floor opening of the manlift to warn the user to get off at that floor.

(f) *Bottom floor warning sign.* A sign visible to descending passengers shall be provided to warn them to get off at the bottom floor.

(g) *Upper limit stop.* An automatic stop device shall be provided to stop the manlift when a loaded step passes the top landing, except that manlifts installed after October 3, 1983 shall have two such devices.

(h) *Handholds and steps.* Each step shall be provided with a corresponding handhold.

(i) *Emergency ladder.* A fixed emergency ladder accessible from any position on the lift and in accordance with the requirements of §1917.118(d) shall be provided for the entire run of the manlift.

(j) *Landings.* (1) Clear and unobstructed landing spaces shall be provided at each level. Manlifts constructed after October 3, 1983 and that have a distance of 50 feet (15.24 m) or more between floor landings shall have