

Safety Bulletin # (1910.23)

Guarding Fall Hazards: For Open-side stairways, Open-side Floors, Platforms, Mezzanines, Catwalks, and Runways,

(a)(1) Every stairway floor opening shall be guarded by a standard railing constructed in accordance with section (e) of this document. The railing shall be provided on all exposed sides (except at the entrance to stairway).

(c)(1) Every open-sided floor, platforms, mezzanines, catwalks, or runway 4 feet or above the lower surface shall be guarded by standard railing as specified in sections 1910.23(e)(3)(i-v) of this document on all open sides except at the entrance points. The railing system shall be provided with a toeboard wherever, beneath the open sides,

(i) Persons can pass.

(ii) There is moving machinery, or

(iii) There is equipment with which falling materials could create a hazard.

(c)(2) Every runway, catwalk and platform shall be guarded by standard railing as specified in section (e)(3) of this document. Wherever tools, machine parts, or materials are likely to be used a toeboard shall also be provided on each exposed side. Runways, catwalks and platforms used exclusively for special purposes (such as oiling, turning valves, etc.) may have the railing on one side omitted where operating conditions necessitate such omission, providing the fall hazard is minimized by using a runway, catwalk and platform not less than 18" wide and located within 8 inches of the unit in which the runway, catwalk and platform was install to service..

(e)(1) A standard railing shall consist of top rail, intermediate rail, and post, and shall have a vertical height of 42 inches nominal from upper surface of the top rail to floor or working/walking surface. The top rail shall be smooth-surfaced throughout the length of the railing. The intermediate rail shall be approximately halfway between the top rail and the to floor or working/walking surface. The ends of the rails shall not overhang the terminal posts except where such overhang does not constitute a projection hazard.

(e)(2) A stair railing shall be of construction similar to a standard railing but the vertical height shall be not more than 34 inches nor less than 30 inches from the upper surface of the top rail to surface of tread in line with face of riser at forward edge of tread.

(e)(3)(i) For wood railings, the post shall be of at least 2-inches by 4-inches stock spaced not to exceed 6 feet; the top and intermediate rails shall be of at least 2-inches by 4-inches stock.

(e)(3)(ii) For pipe railings, post and top and intermediate railing railings shall be at least 1 1/2 inches nominal diameter with post spaced not more than 8 feet on center.

(e)(3)(iii) For structural steel railings, posts and top and intermediate rails shall be of

2-inch by 2-inch by 3/8-inch angles or other metal shapes of equivalent bending strength with post spaced not more than 8 feet on centers.

(e)(3)(iv) The anchoring of the post and framing of the members for the railing of all types shall be such construction that the completed structure shall be capable of withstanding a load of at least 200 pounds applied in any direction at any point on the top rail.

(e)(3)(v) Other types, sizes, and arrangement of railing construction are acceptable provided they meet the following condition:

(a) A smooth-surfaced top rail at a height above floor or working/walking surface of 42 inches nominal.

(b) A strength to withstand at least the minimum requirement of 200 pounds top railing pressure.

(c) Protection between top rail and the floor or working/walking surface equivalent at least to that afforded by standard intermediate rail.

(e)(4) A standard toeboard shall be 4 inches nominal in vertical height from its top edge to the level of the floor or walking/working surface. It shall be securely fastened in place and with not more than 1/4-inch clearance above the surface.