§ 1917.119 Portable ladders.

(a) Scope and applicability. This section applies to all portable ladders, including job-made ladders for temporary use, unless otherwise specified.

(b) Standards for existing manufactured portable ladders. (1) Rungs of manufactured portable ladders obtained before October 3, 1983, shall be capable of supporting a 200-pound (890 N) load without deformation.

(2) Rungs shall be evenly spaced from 9 to 16 1/2 inches (22.9 to 41.9 cm), center to center.

(3) Rungs shall be continuous members between rails. Each rung of a double-rung ladder (two side rails and a center rail) shall extend the full width of the ladder.

(4) Width between side rails at the base of the ladder shall be at least 12 inches (30.48 cm) for ladders 10 feet (3.05 m) or less in overall length, and shall increase at least 1/4 inch (0.64 cm) for each additional 2 feet (0.61 m) of ladder length.

(5) Ladder cages or wells shall:

(i) Be of rigid construction that allows unobstructed use but prevents an employee from falling through or dislodging the cage or well by falling against it;

(ii) Have smooth inner surfaces;

(iii) Extend at least 36 inches (0.91m) above landings; and

(iv) Extend to within 8 feet (2.44 m) above the ground or base, except that a maximum of 20 feet (6.1 m) is permitted where the cage or well would extend into traffic lanes.

(6) Ladders installed after (effective date of standard) on radio, microwave communications, electrical power and similar towers, poles and structures, including stacks and chimneys, shall meet the requirements of this paragraph (e).

(f) Individual rung ladders. Ladders consisting of individual rungs that are attached to walls, conical manhole sections or river cells shall:

(1) Be capable of supporting a load of 350 pounds (1557 N) without deformation;

(2) Form a continuous ladder, uniformly spaced vertically from 12 inches to 16 inches (30.5 to 40.6 cm) apart, with a minimum width of 10 inches (25.4 cm) and projecting at least 4 1/2 inches (11.43 cm) from the wall;
§ 1917.120 Fixed stairways.

(a) Definition. “Fixed stairway” means interior and exterior stairs serving machinery, tanks and equipment, and stairs to or from floors, platforms or pits. The term does not apply to stairs intended only for fire exit purposes, to articulated stairs (the angle of which changes with the rise and fall of the base support) or to stairs forming an integral part of machinery.

(b) New installations. (1) Fixed stairs installed after October 3, 1983 shall be positioned within the range of 30 degrees to 50 degrees to the horizontal with uniform riser height and tread width throughout each run and be capable of a minimum loading of 100 pounds per square foot (445 N) and a minimum concentrated load of 300 pounds (1,334 N) at the center of any treadspan. Riser height shall be from 6 to 7.5 inches (15.24 to 19.05 cm), stair width a minimum of 22 inches (55.88 cm) between vertical barriers, tread depth a minimum of 12±2 inches (30.48±5.08 cm), and tread nosing shall be straight leading edges.

(2) Stair landings shall be at least 20 inches (50.8 cm) in depth. Where doors or gates open on a stairway, a landing platform shall be provided. Door swing shall not reduce effective standing area on the landing to less than 18 inches (45.72 cm) in depth.

(3) Fixed stairs having four or more risers shall have stair railings or handrails complying with §1917.112(c)(1).

(4) Railing height from tread surface at the riser face shall be 33±3 inches (83.82 cm ±7.62 cm).

(5) Restricted areas. When physical features require stairs steeper than those provided for by paragraph (b)(1) of this section, stairs at angles of 50° to