

The use of ladders with broken or missing rungs or steps, broken or split side rails, or other faulty or defective construction is prohibited. When ladders with such defects are discovered, they shall be immediately withdrawn from service. Inspection of metal ladders shall include checking for corrosion of interiors of open end, hollow rungs.

Portable ladders shall be lashed, blocked or otherwise secured to prevent their being displaced. The side rails of ladders used for access to any level shall extend not less than 36 inches above that level. When this is not practical, grab rails which will provide a secure grip for an employee moving to or from the point of access shall be installed.

Portable metal ladders shall be of strength equivalent to that of wood ladders. Manufactured portable metal ladders provided by the employer shall be in accordance with the provisions of ANSI Standard A14.2-1972: Safety Requirements for Portable Metal Ladders (incorporated by reference, see § 1915.5).

Portable metal ladders shall not be used near electrical conductors nor for electric arc welding operations.

Manufactured portable wood ladders provided by the employer shall be in accordance with the provisions of ANSI Standard A14.1-1975: Safety Requirements for Portable Wood Ladders (incorporated by reference, see § 1915.5).

Construction of portable wood cleated ladders up to 30 feet in length.

Wood side rails shall be made from West Coast hemlock, Eastern spruce, Sitka spruce, or wood of equivalent strength. Material shall be seasoned, straight-grained wood, and free from shakes, checks, decay or other defects which will impair its strength. The use of low density woods is prohibited.

Side rails shall be dressed on all sides and kept free of splinters.

All knots shall be sound and hard. The use of material containing loose knots is prohibited. Knots shall not appear on the narrow face of the rail and, when in the side face, shall be not more than 1/2 inch in diameter or within 1/2 inch of the edge of the rail or nearer than 3 inches to a tread or rung.

Pitch pockets not exceeding 1/8 inch in width, 2 inches in length and 1/2 inch in depth are permissible in wood side rails, provided that not more than one such pocket appears in each 4 feet of length.

The width between side rails at the base shall be not less than 11 1/2 inches for ladders 10 feet or less in length. For longer ladders this width shall be increased at least 1/4 inch for each additional 2 feet in length.

Side rails shall be at least 1 5/8 x 3 5/8 inches in cross section.

Cleats (meaning rungs rectangular in cross section with the wide dimension parallel to the rails) shall be of the material used for side rails, straight-grained and free from knots. Cleats shall be mortised into the edges of the side rails 1/2 inch, or filler blocks shall be used on

the rails between the cleats. The cleats shall be secured to each rail with three 10d common wire nails or fastened with through bolts or other fasteners of equivalent strength. Cleats shall be uniformly spaced not more than 12 inches apart.

Cleats 20 inches or less in length shall be at least $25/32 \times 3$ inches in cross section. Cleats over 20 inches but not more than 30 inches in length shall be at least $25/32 \times 3 \frac{3}{4}$ inches in cross section.

Construction of portable wood cleated ladders from 30 to 60 feet in length.

Ladders from 30 to 60 feet in length shall be in accordance with the specifications of paragraph (b) of this section with the following exceptions:

Rails shall be of not less than 2 x 6 inch lumber.

Cleats shall be of not less than 1 x 4 inch lumber.

Cleats shall be nailed to each rail with five 10d common wire nails or fastened with through bolts or other fasteners of equivalent strength.

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