

Ship's Ladders and Alternating Tread Stairs

All Divisions

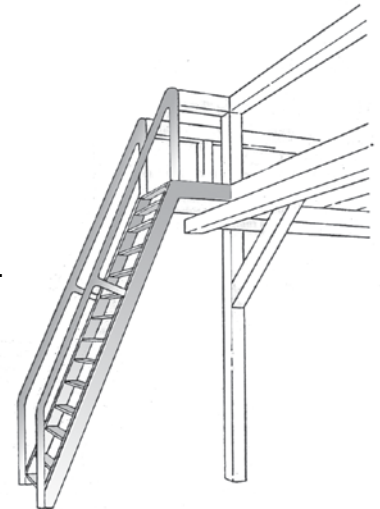
**Ship's Ladders and
Alternating Tread Stairs**

These structures originally were called ship's ladders because of their wide use in the maritime industry. Ship builders had to install very steep stairs onboard because most ships lacked the space for more graduated stairs. Today the terms ship's ladders and ship's stairs describe the same structures. Federal OSHA mostly uses the term ship's stairs.

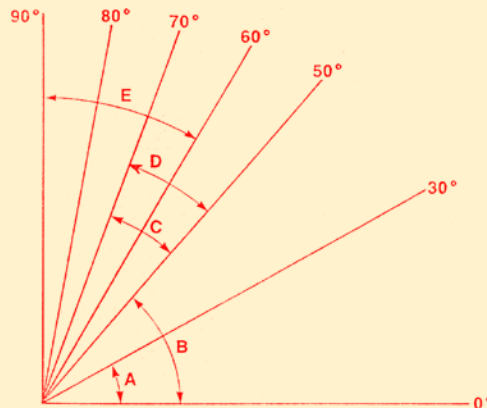
Neither federal OSHA nor Oregon OSHA has rules specific to these structures. On May 2, 2003, federal OSHA re-proposed a new subpart D that will address ship's stairs and alternating tread stairs. Most of this information is from that proposal. (FR68:23527-23568)

Ship's Ladders and Stairs

- Must have a slope of 50 to 70 degrees from horizontal measured from the side opposite the climbing side.
- Risers must be open.
- Treads must be at least 4 inches deep and 18 inches wide.
- Rise must be uniform and 6.5 to 12 inches between the tread surfaces.
- Handrails must be on both sides of the ladder/stairs and comply with 1910.23, *Guarding Floor and Wall Openings and Holes*.



Recommended Angles for Stairs, Ramps, and Ladders



A - Ramps	30° or less
B - Typical Fixed Stair	50° or less
C - Ship Ladders	50° to 70°
D - Alternating Tread Stairs	50° to 70°
E - Ladders	60° to 90°

Web site:
www.orosha.org

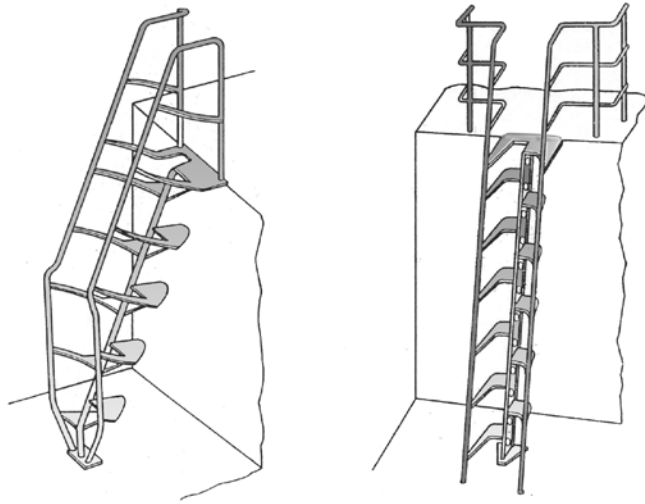
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Alternating Tread Stairs

- Must have a slope of 50 to 70 degrees from horizontal measured from the side opposite the climbing side.
- There must be handrails on both sides.
- Width between handrails must be 17 to 24 inches.
- Treads must have slip-resistant surfaces.
- Treads must be at least 8.5 inches deep and 7 inches wide at the opening.



Both hands must be free when using ship's ladders/stairs or alternating tread stairs. Do not carry items in your hands.

Ship's ladders and alternating tread stairs could never comply with existing standards on ladders and stairs. Oregon OSHA will accept complying ship's ladders and ship's stairs or alternating tread stairs as minimal violations if they meet the criteria in this fact sheet and were installed because regular stairs are not feasible. These structures are recognized as safer than climbing a fixed ladder and are a suitable substitute.