

§ 1915.113

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(iii) Not be used without affixed and legible identification markings as required by paragraph (c)(1)(i) of this section.

(2) All sling chains, including end fastenings, shall be given a visual inspection before being used on the job. A thorough inspection of all chains in use shall be made every 3 months. Each chain shall bear an indication of the month in which it was thoroughly inspected. The thorough inspection shall include inspection for wear, defective welds, deformation and increase in length or stretch.

(3) Employers must note interlink wear, not accompanied by stretch in excess of 5 percent, and remove the chain from service when maximum allowable wear at any point of link, as indicated in Table G-2 in §1915.118, has been reached.

(4) Chain slings shall be removed from service when, due to stretch, the increase in length of a measured section exceeds five (5) percent; when a link is bent, twisted or otherwise damaged; or when raised scarfs or defective welds appear.

(5) All repairs to chains shall be made under qualified supervision. Links or portions of the chain found to be defective as described in paragraph (c)(4) of this section shall be replaced by links having proper dimensions and made of material similar to that of the chain. Before repaired chains are returned to service, they shall be proof tested to the proof test load recommended by the manufacturer.

(6) Wrought iron chains in constant use shall be annealed or normalized at intervals not exceeding six months when recommended by the manufacturer. The chain manufacturer shall be consulted for recommended procedures for annealing or normalizing. Alloy chains shall never be annealed.

(7) A load shall not be lifted with a chain having a kink or knot in it. A chain shall not be shortened by bolting, wiring or knotting.

[47 FR 16986, Apr. 20, 1982, as amended at 67 FR 44543, July 3, 2002; 76 FR 33609, June 8, 2011]

§ 1915.113 Shackles and hooks.

The provisions of this section shall apply to ship repairing, shipbuilding and shipbreaking.

(a) *Shackles.* Employers must ensure that shackles:

(1) Have permanently affixed and legible identification markings as prescribed by the manufacturer that indicate the recommended safe working load;

(2) Not be loaded in excess of its recommended safe working load as prescribed on the identification markings by the manufacturer; and

(3) Not be used without affixed and legible identification markings as required by paragraph (a)(1)(i) of this section.

(b) *Hooks.* (1) The manufacturer's recommendations shall be followed in determining the safe working loads of the various sizes and types of specific and identifiable hooks. All hooks for which no applicable manufacturer's recommendations are available shall be tested to twice the intended safe working load before they are initially put into use. The employer shall maintain and keep readily available a certification record which includes the date of such tests, the signature of the person who performed the test and an identifier for the hook which was tested.

(2) Loads shall be applied to the throat of the hook since loading the point overstresses and bends or springs the hook.

(3) Hooks shall be inspected periodically to see that they have not been bent by overloading. Bent or sprung hooks shall not be used.

[47 FR 16986, Apr. 20, 1982, as amended at 51 FR 34562, Sept. 29, 1986; 76 FR 33609, June 8, 2011]

§ 1915.114 Chain falls and pull-lifts.

The provisions of this section shall apply to ship repairing, shipbuilding and shipbreaking.

(a) Chain falls and pull-lifts shall be clearly marked to show the capacity and the capacity shall not be exceeded.

(b) Chain falls shall be regularly inspected to ensure that they are safe, particular attention being given to the lift chain, pinion, sheaves and hooks for distortion and wear. Pull-lifts shall

be regularly inspected to ensure that they are safe, particular attention being given to the ratchet, pawl, chain and hooks for distortion and wear.

(c) Straps, shackles, and the beam or overhead structure to which a chain fall or pull-lift is secured shall be of adequate strength to support the weight of load plus gear. The upper hook shall be moused or otherwise secured against coming free of its support.

(d) Scaffolding shall not be used as a point of attachment for lifting devices such as tackles, chain falls, and pull-lifts unless the scaffolding is specifically designed for that purpose.

§ 1915.115 Hoisting and hauling equipment.

The provisions of this section shall apply to ship repairing, shipbuilding and shipbreaking.

(a) *Derrick and crane certification.* (1) Derricks and cranes which are part of, or regularly placed aboard barges, other vessels, or on wingwalls of floating drydocks, and are used to transfer materials or equipment from or to a vessel or drydock, shall be tested and certificated in accordance with the standards provided in part 1919 of this title by persons accredited for the purpose.

(b) The moving parts of hoisting and hauling equipment shall be guarded.

(c) *Mobile crawler or truck cranes used on a vessel.* (1) The maximum manufacturer's rated safe working loads for the various working radii of the boom and the maximum and minimum radii at which the boom may be safely used with and without outriggers shall be conspicuously posted near the controls and shall be visible to the operator. A radius indicator shall be provided.

(2) The posted safe working loads of mobile crawler or truck cranes under the conditions of use shall not be exceeded.

(d) Accessible areas within the swing radius of the outermost part of the body of a revolving derrick or crane, whether permanently or temporarily mounted, shall be guarded in such a manner as to prevent an employee from being in such a position as to be struck by the crane or caught between

the crane and fixed parts of the vessel or of the crane itself.

(e) *Marine railways.* (1) The cradle or carriage on the marine railway shall be positively blocked or secured when in the hauled position to prevent it from being accidentally released.

[47 FR 16986, Apr. 20, 1982, as amended at 67 FR 44543, July 3, 2002]

§ 1915.116 Use of gear.

(a) The provisions of this section shall apply to ship repairing, shipbuilding and shipbreaking except that paragraphs (c) and (d) of this section shall apply to ship repairing and shipbuilding only.

(b) Loads shall be safely rigged before being hoisted.

(c) Plates shall be handled on and off hulls by means of shackles whenever possible. Clips or pads of ample size shall be welded to the plate to receive the shackle pins when there are no holes in the plate. When it is not possible to make holes in or to weld pads to the plate, alligator tongs, grab clamps or screw clamps may be used. In such cases special precautions shall be taken to keep employees from under such lifts.

(d) Tag lines shall be provided on loads likely to swing or to need guidance.

(e) When slings are secured to eye-bolts, the slings shall be so arranged, using spreaders if necessary, that the pull is within 20 degrees of the axis of the bolt.

(f) Slings shall be padded by means of wood blocks or other suitable material where they pass over sharpe edges or corners of loads so as to prevent cutting or kinking.

(g) Skips shall be rigged to be handled by not less than 3 legged bridles, and all legs shall always be used. When open end skips are used, means shall be taken to prevent the contents from falling.

(h) Loose ends of idle legs of slings in use shall be hung on the hook.

(i) Employees shall not be permitted to ride the hook or the load.

(j) Loads (tools, equipment or other materials) shall not be swung or suspended over the heads of employees.

(k) Pieces of equipment or structure susceptible to falling or dislodgement