

**THE SHIPYARD EMPLOYMENT STANDARDS (29 CFR part 1915, subparts G and K)  
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# **Electronic Code of Federal Regulations**

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Title 29: Labor

[PART 1915—OCCUPATIONAL SAFETY AND HEALTH STANDARDS FOR SHIPYARD EMPLOYMENT](#)

[Subpart G—Gear and Equipment for Rigging and Materials Handling](#)

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## **§1915.112 Ropes, chains and slings.**

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

(a) *Manila rope and manila-rope slings.* Employers must ensure that manila rope and manila-rope slings:

(1) Have permanently affixed and legible identification markings as prescribed by the manufacturer that indicate the recommended safe working load for the type(s) of hitch(es) used, the angle upon which it is based, and the number of legs if more than one;

(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) of this section.

(b) *Wire rope and wire-rope slings.* (1) Employers must ensure that wire rope and wire-rope slings:

(i) Have permanently affixed and legible identification markings as prescribed by the manufacturer that indicate the recommended safe working load for the type(s) of hitch(es) used, the angle upon which it is based, and the number of legs if more than one;

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

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

(2) Protruding ends of strands in splices on slings and bridles shall be covered or blunted.

(3) When U-bolt wire rope clips are used to form eyes, employers must use Table G-1 in §1915.118 to determine the number and spacing of clips. Employers must apply the U-bolt so that the "U" section is in contact with the dead end of the rope.

(4) Wire rope shall not be secured by knots.

(c) *Chain and chain slings.* (1) Employers must ensure that chain and chain slings:

(i) Have permanently affixed and legible identification markings as prescribed by the manufacturer that indicate the recommended safe working load for the type(s) of hitch(es) used, the angle upon which it is based, and the number of legs if more than one;

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

(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.

### **§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.

### **§1915.131 General precautions.**

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

(a) Hand lines, slings, tackles of adequate strength, or carriers such as tool bags with shoulder straps shall be provided and used to handle tools, materials, and equipment so that employees will have their hands free when using ship's ladders and access ladders. The use of hose or electric cords for this purpose is prohibited.

(b) When air tools of the reciprocating type are not in use, the dies and tools shall be removed.

(c) All portable, power-driven circular saws shall be equipped with guards above and below the base plate or shoe. The upper guard shall cover the saw to the depth of the teeth, except for the minimum arc required to permit the base to be tilted for bevel cuts. The lower guard shall cover the saw to the depth of the teeth, except for the minimum arc required to allow proper retraction and contact with the work. When the tool is withdrawn from the work, the lower guard shall automatically and instantly return to the covering position.

(d) The moving parts of machinery on a dry dock shall be guarded.

(e) Before use, pneumatic tools shall be secured to the extension hose or whip by some positive means to prevent the tool from becoming accidentally disconnected from the whip.

(f) The moving parts of drive mechanisms, such as gearing and belting on large portable tools, shall be adequately guarded.

(g) Headers, manifolds and widely spaced hose connections on compressed air lines shall bear the word "air" in letters at least 1-inch high, which shall be painted either on the manifolds or separate hose connections, or on signs permanently attached to the manifolds or connections. Grouped air connections may be marked in one location.

(h) Before use, compressed air hose shall be examined. Visibly damaged and unsafe hose shall not be used.

**§1915.172 Portable air receivers and other unfired pressure vessels.**

(a) Portable, unfired pressure vessels, built after the effective date of this regulation, shall be marked and reported indicating that they have been designed and constructed to meet the standards of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section VIII, Rules for Construction of Unfired Pressure Vessels, 1963. They shall be subjected to a hydrostatic pressure test of one and one-half times the working pressure of the vessels.

(b) Portable, unfired pressure vessels, not built to the code requirements of paragraph (a) of this section, and built prior to the effective date of this regulation, shall be examined quarterly by a competent person. They shall be subjected yearly to a hydrostatic pressure test of one and one-half times the working pressure of the vessels.

(c) The relief valves on the portable, unfired pressure vessels in paragraphs (a) and (b) of this section shall be set to the safe working pressure of the vessels, or set to the lowest safe working pressure of the systems, whichever is lower.

(d) A certification record of such examinations and tests made in compliance with the requirements of paragraphs (a) and (b) of this section shall be maintained. The certification record shall include the date of examinations and tests, the signature of the person who performed the examinations or tests and the serial number, or other identifier, of the equipment examined and tested.