TABLE G–10—SAFE WORKING LOADS FOR SHACKLES

[In tons of 2,000 pounds]

Material size (inches)	Pin diameter (inches)	Safe working load
½	⅝	1.4
⅝	¾	2.2
¾	⅞	3.2
⅞	1	4.3
1	1⅛	5.6
1⅛	1¼	6.7
1¼	1⅜	8.2
1⅜	1½	10.0
1½	1⅝	11.9
1¾	2	16.2
2	2¼	21.2

[47 FR 16986, Apr. 20, 1982, as amended at 61 FR 26351, May 24, 1996; 67 FR 44543, July 3, 2002]

§ 1915.120 Powered industrial truck operator training.

NOTE: The requirements applicable to shipyard employment under this section are identical to those set forth at §1910.178(l) of this chapter.

[63 FR 66274, Dec. 1, 1998]

Subpart H—Tools and Related Equipment

§ 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 When the tool is withdrawn from the work, the lower guard shall automatically and instantly return to the covering position.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.

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

§ 1915.132 Portable electric tools.

The provisions of this section shall apply to ship repairing, shipbuilding and shipbreaking except that paragraph (e) of this section applies to ship repairing only.

(a) The frames of portable electric tools and appliances, except double insulated tools approved by Underwriters' Laboratories, shall be grounded either through a third wire in the cable containing the circuit conductors or through a separate wire which is grounded at the source of the current.

(b) Grounding circuits, other than by means of the structure of the vessel on which the tool is being used, shall be checked to ensure that the circuit between the ground and the grounded power conductor has resistance which is low enough to permit sufficient current to flow to cause the fuse or circuit breaker to interrupt the current.

(c) Portable electric tools which are held in the hand shall be equipped with switches of a type which must be manually held in the closed position.

(d) Worn or frayed electric cables shall not be used.

(e) The employer shall notify the officer in charge of the vessel before using electric power tools operated with the vessel's current.

§ 1915.133 Hand tools.

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

(a) Employers shall not issue or permit the use of unsafe hand tools.

(b) Wrenches, including crescent, pipe, end and socket wrenches, shall not be used when jaws are sprung to the point that slippage occurs.

(c) Impact tools, such as drift pins, wedges, and chisels, shall be kept free of mushroomed heads.

(d) The wooden handles of tools shall be kept free of splinters or cracks and shall be kept tight in the tool.

§ 1915.134 Abrasive wheels.

This section shall apply to ship repairing, shipbuilding and shipbreaking.

(a) Floor stand and bench mounted abrasive wheels used for external grinding shall be provided with safety guards (protection hoods). The maximum angular exposure of the grinding wheel periphery and sides shall be not more than 90 degrees, except that when work requires contact with the wheel below the horizontal plane of the spindle, the angular exposure shall not exceed 125 degrees. In either case the exposure shall begin not more than 65 degrees above the horizontal plane of the spindle. Safety guards shall be strong enough to withstand the effect of a bursting wheel.

(b) Floor and bench mounted grinders shall be provided with work rests which are rigidly supported and readily adjustable. Such work rests shall be kept a distance not to exceed ⅛ inch from the surface of the wheel.

(c) Cup type wheels used for external grinding shall be protected by either a revolving cup guard or a band type guard in accordance with the provisions of the United States of America Standard Safety Code for the Use, Care, and Protection of Abrasive Wheels, B7.1–1964. All other portable abrasive wheels used for external grinding shall be provided with safety guards (protection hoods) meeting the requirements of paragraph (e) of this section, except as follows:

(1) When the work location makes it impossible, in which case a wheel equipped with safety flanges as described in paragraph (f) of this section shall be used.

(2) When wheels 2 inches or less in diameter which are securely mounted on the end of a steel mandrel are used.

(d) Portable abrasive wheels used for internal grinding shall be provided with safety flanges (protection flanges) meeting the requirements of paragraph (f) of this section, except as follows:

(1) When wheels 2 inches or less in diameter which are securely mounted on the end of a steel mandrel are used.

(2) If the wheel is entirely within the work being ground while in use.

(e) When safety guards are required, they shall be so mounted as to maintain proper alignment with the wheel, and the guard and its fastenings shall be of sufficient strength to retain fragments of the wheel in case of accidental breakage. The maximum angular exposure of the grinding wheel periphery and sides shall not exceed 180 degrees.

(f) When safety flanges are required, they shall be used only with wheels designed to fit the flanges. Only safety flanges of a type and design and properly assembled so as to insure that the pieces of the wheel will be retained in case of accidental breakage shall be used.

(g) All abrasive wheels shall be closely inspected and ring tested before mounting to ensure that they are free from cracks or defects.

(h) Grinding wheels shall fit freely on the spindle and shall not be forced on. The spindle nut shall be tightened only enough to hold the wheel in place.

(i) The power supply shall be sufficient to maintain the rated spindle speed under all conditions of normal grinding. The rated maximum speed of the wheel shall not be exceeded.

(j) All employees using abrasive wheels shall be protected by eye protection equipment in accordance with the requirements of subpart I of this part except when adequate eye protection is afforded by eye shields which