

similar type equipment, unless the equipment is specifically designed to safely handle VTLs or has been evaluated by a qualified person and determined to be a safe mode of operation. Moving two containers on such equipment raises the center of gravity higher than the equipment was designed for, increasing the possibility of turning over. A study was conducted at the request of the ICHCA VTL work group to determine the safe turning radius and speed with which VTLs may be moved in a terminal (Ex. 41, Appendix 6). This study provides chassis stability calculations for determining the speed at which a fifth wheel and chassis carrying VTLs will overturn while making a turn. These calculations could be used by employers to determine the safe operating speeds for transporting VTLs at a terminal. Safe transport of VTLs and safe operating speeds are part of the VTL terminal plan required in the next paragraph. Proposed paragraph 1917.71(i) defines a qualified person as "one with a recognized degree or professional certificate and extensive knowledge and experience in the transportation of vertically connected containers who is capable of design, analysis, evaluation and specifications in that subject." This definition is similar to the one found in § 1918.85(k)(6) and (8) concerning fall protection systems.

Proposed paragraph 1917.71(j) requires, in conjunction with paragraph (i), that a written VTL terminal plan be developed and implemented to facilitate the safe movement of vertically connected containers in a marine terminal. The plan must include safe operating speeds, safe turning speeds, and any conditions unique to the terminal that could affect VTL operations.

Proposed § 1917.71(k) requires the employer establish a system that keeps damaged or defective liftlocks separate from working liftlocks. This is now typically done by having a separate storage bin marked for damaged or defective SATLs and instructing employees to put any that do not function normally into that bin. This will typically be part of regular, on-going inspections of liftlocks as they are handled.

Proposed paragraphs 1917.71(l)(1)(i) through (l)(1)(vii) and (l)(1)(ix) require that any liftlocks that are used to assemble VTLs ashore comply with the applicable standards of ISO 3874 and the loose gear requirements of ILO Convention 152 that are more fully discussed below in the section explaining the VTL proposed regulation for part 1918.

Proposed 1917.71(l)(1)(viii) is a requirement for liftlocks that is not repeated in part 1918. It requires that the liftlocks that are used to connect containers to be loaded as a VTL be the same as the liftlocks on the vessel to which the connected containers will be transferred. This requirement will ensure that VTLs made up on the terminal under the requirements of part 1917 are using certified liftlocks that are the same as those used on the vessel onto which the VTLs will be loaded. This is to eliminate the danger of having more than one type of liftlock on a vessel. Mixing different types of liftlocks could result in mismatched liftlocks on a container that do not all lock (or unlock) in the same direction. Longshore employees and crane operators look for the "telltales" (a part of the liftlock that indicates whether the liftlock is locked or unlocked), or the handles of the liftlocks, all to be facing in the same direction to determine whether or not containers are free to be lifted or, in a VTL, are locked together for lifting. Mixing types of liftlocks could cause a VTL to separate when being lifted because different liftlocks with reverse locking indicators could mistakenly appear to be locked when they are in fact unlocked.

Proposed paragraph 1917.71(l)(2) defines a competent person as "a person familiar with the proper maintenance and use of liftlocks by training or experience. Such a person will be able to detect defects or weaknesses and be able to assess their importance in relation to the safe and continued use of the liftlocks." The proposed definition for competent person is more appropriate for VTL operations than the existing definition found in OSHA's shipyard standard, 29 CFR 1915.4, which is concerned with atmospheric hazards.

Proposed paragraph 1917.71(m) prohibits the use of manual twistlocks or latchlocks as liftlocks, which is further discussed below.

B. Part 1918—Longshoring

In 29 CFR part 1918, Safety and Health Regulations for Longshoring, OSHA proposes to add several definitions relating to VTL operations. In § 1918.2 Definitions, OSHA proposes to add the terms *competent authority*, *liftlock*, and *vertical tandem lift*.

The longshoring standards require certain equipment to be certificated by a competent authority. Currently, loose gear (which under this proposal would include liftlocks) in the U.S. is certificated by OSHA-accredited agencies under 29 CFR part 1919, Gear Certification. Foreign flag vessels carry

certificates issued by the recognized body appropriate for that country. Often the recognized body issuing certifications is a classification society such as the American Bureau of Shipping, Lloyds Register, or Bureau Veritas.

For the purpose of this proposed VTL standard, OSHA is defining competent authority as "the appropriate government agency having jurisdiction over VTL operations in each port of call where such operations are proposed." OSHA or the U.S. Coast Guard would be the competent authority for certifications in the United States. Other countries would have their own competent authority that would have jurisdiction over VTL operations in that country. Certification of liftlocks, which is verified by certificates issued by agencies authorized by a competent authority, is the primary way an employer will determine that liftlocks on a vessel (or ashore) can be used for lifting. These certificates are found in the vessel's cargo gear register.

OSHA is proposing in § 1918.2 to include the same definitions for *liftlock* and *vertical tandem lifts* as proposed and discussed previously for § 1917.2.

In § 1918.3(c), Incorporation by Reference, OSHA is proposing to add parts of ISO Standard 3874 that apply to VTLs.

Proposed § 1918.85(f)(3)(i), (ii), (iii), (iv), and (v) adopt provisions for liftlocks (as loose gear), including testing, inspection, and marking before initial use. Paragraph 1918.85(f)(3)(i) would require that liftlocks meet the applicable requirements found in ISO 3874. Paragraph 1918.85(f)(3)(ii) would require that each liftlock has "been inspected by a competent person, certificated, and individually tested in accordance with requirements for loose gear in ILO Convention 152 before being used for the first time and after any substantial alteration or repair." Testing means that each liftlock has been tested to a SWL of 10,000 kg as required in paragraph (iv) discussed below.

Proposed paragraph 1918.85(f)(3)(iii) would require that liftlocks be thoroughly examined at least once a year by a competent person. It also states what is required by this thorough exam: A visual exam for obvious structural defects; physical operation of the parts to determine that the lock is fully functional with adequate spring tension on each head or latch; a check for excessive corrosion and deterioration; and immediate removal from service when found to be defective. This is consistent with ILO Convention 152 regarding loose gear.