

allow the crane operator to know precisely the weight of the load.

Proposed § 1917.71(b)(9) requires the employer to notify the crane operator through a cargo stowage plan of the location and characteristics of all VTL units being handled. This is important so that the crane operator is aware of what he/she will be lifting and when.

Proposed § 1917.71(j) requires employers to develop and implement a plan for transporting VTLs in a terminal. This 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 that the employer have a means of keeping

damaged or defective liftlocks separate from operating liftlocks. This is currently being done for SATLs for lifts of single containers. Therefore, the Agency did not estimate additional compliance costs for this requirement.

The proposed § 1917.71(l) requires employers to ensure that liftlocks used to make up VTLs at a terminal are the same type of certified liftlocks that are on the vessel onto which VTLs will be loaded. This requirement will impose compliance costs not on the stevedore but on the ship owner. This cost is attributed to proposed § 1918.85(f)(3)(i) & (ii), which requires the ship owner to get the SATLs inspected prior to initial use as a liftlock for VTLs, and annually

examined thereafter, based on ILO 152 convention requirements for loose gear. The requirements of initial testing, marking, and numbering the liftlocks with the safe working load (SWL) are tasks that will usually be done by the manufacturer, but for existing SATLs may be done by another company or the vessel owner. The logistics of testing, inspecting, and certifying liftlocks is difficult (for the employer/stevedore) since the ship owner has control of the locks and most of the locks are in nearly continuous use. The Agency seeks comment on this issue. The overall breakdown of costs by sector are as follows:

TABLE 4c.—PROVISIONS WITH POTENTIAL COST IMPLICATIONS BY SECTOR

1917 Marine terminals	1918 Longshoring
§ 1917.46(a)(1)(viii)(A)—Load Indicating Devices	§ 1918.85(f)(3)(i)—Initial Testing of SATLs.
§ 1917.71(b)(9)—Notify crane operator of cargo plan for VTLs	§ 1918.85(f)(3)(ii)—Annual inspection of liftlocks by a competent person.
§ 1917.71(j)—Plan for transporting VTLs in the terminal.	
§ 1917.71(k)—Means for keeping damaged or defective liftlocks from operating liftlocks.	
§ 1917.71(l)(a)(vii) and (viii)—Liftlocks must be identical.	

Source: Office of Regulatory Analysis.

Not all of the requirements in Table 4c will incur compliance costs on employers. Specifically, the requirement for keeping damaged liftlocks separated from operating liftlocks is currently being done for all single lifts, thus no compliance costs are being estimated. The employer (shipper) could either replace his/her existing locks with new already certified liftlocks or have existing SATLs certified to be liftlocks. If the employer chooses to have existing SATLs certified, the Agency estimated that this activity will cost the employer \$1 per lock to perform the initial testing of the lock. The SATLs would be sent to an independent testing company for these tests to be done. The testing company would also develop the certification record for the employer. The annual inspection of the liftlocks would also be done by an independent testing company at the same rate of \$1 per lock.

A higher cost alternative is that the owner of the ship would simply buy new liftlocks. This would impose an enormous initial cost burden on the ship owner. Since these locks will come directly from the manufacturer, already tested, marked, inspected, and certified for lifting, the unit cost is \$30 per lock. Thus, in considering the model container ship that is using 4,000 SATLs, the cost per ship would be \$120,000. This cost would only be realized if the ship owner feels that it

would be easier to purchase new liftlocks to enable the cargo handlers to comply with the proposal. Also, even with the model, if the ship owner is going to prepare containers for handling as VTLs, all SATLs on board need to be certified liftlocks, and they must be of a uniform type throughout the ship. The Agency believes that this is already industry practice based on the Agency's knowledge of the industry and information in the public meetings on VTLs.

Estimated Cost Using the Model Container Ship

For simplicity, the Agency is assuming that two container gantry cranes will load the empty model container ship with all 3,000 40-foot containers (the ship's full carrying capacity). Based on the specifications in Table 1, the containers being loaded will be a mix of 20 and 40-foot containers. (For purposes of space on container ships, two 20-foot containers, can be stored in the space of one forty-foot container.) However, for the purposes of this analysis, only the 40-foot containers will be used in VTLs. Forty-foot containers are more common and the analysis would not be essentially different with twenty-foot containers. Of the 3,000 40-foot containers, only 333 containers will be lifted in a VTL.

Since about half of the overhead container gantry cranes currently in operation already have LIDS, there will be little difference in the average rental cost for stevedoring companies renting the cranes. The cost of retrofitting a crane with a LID is estimated to be \$10,000. When this cost is discounted over 10 years at a 7 percent discount rate, the annualized cost of the LID is \$1,424. In a worst-case scenario, this total annualized cost would be passed along in full to the stevedoring company whose longshoremen are performing the VTLs. So for the purposes of this analysis, the Agency is assuming that the cranes being used for VTLs already have a LID; thus, the Agency did not estimate any additional compliance costs for this requirement.

Also, the stevedoring supervisor must inform the crane operator of the vessel cargo stowage plan, which shows the location and characteristics of all VTL units to be handled (proposed in § 1917.71(b)(9)). The Agency estimates that it will take ten minutes (0.1667 hours) to perform this task. Thus, multiplying the hourly wage rate (\$60.92) by this fraction of one hour, the cost is \$10.

According to the proposed standard, employers are required to develop a plan for transporting vertically connected containers in a terminal (§ 1917.71(j)). The Agency assumes that this plan would be developed by the