

## **176.104 Loading and unloading Class 1 (explosive) materials.**

- (a) Packages of Class 1 (explosive) materials may not be thrown, dropped, rolled, dragged, or slid over each other or over a deck.
- (b) When Class 1 (explosive) materials are stowed in a hold below one in which any cargo is being handled, the hatch in the deck dividing the two holds must have all covers securely in place.
- (c) Drafts of Class 1 (explosive) materials must be handled in accordance with the following:
- (1) A draft may not be raised, lowered, or stopped by sudden application of power or brake.
  - (2) A draft may not be released by tripping or freeing one side of the cargo-handling equipment and tumbling the Class 1 (explosive) materials off.
  - (3) All drafts, beams, shackles, bridles, slings, and hoods must be manually freed before the winch takes control.
  - (4) Slings may not be dragged from under a draft by winching except for the topmost layer in the hold when power removal is the only practical method and when the cargo cannot be toppled.
  - (5) Handles or brackets on packages in a draft may not be used for slinging purposes.
- (d) A combination woven rope and wire sling or a sling that is formed by use of an open hook may not be used in handling Class 1 (explosive) materials.
- (e) Only a safety hook or a hook that has been closed by wire may be used in handling drafts of Class 1 (explosive) materials.
- (f) Wire rope or wire rope assemblies, including splices and fittings, used in handling Class 1 (explosive) materials must be unpainted and kept bare to permit inspection of their safe working condition. A mechanical end fitting (pressed fitting) may be used in place of an eye splice, if the efficiency of the mechanical end fitting is at least equal to the efficiency of an eye splice prepared as prescribed in 29 CFR 1918.51(c)(1).
- (g) Packages of Division 1.1 and 1.2 materials that are not part of a palletized unit must be loaded and unloaded from a vessel using a chute, conveyor or a mechanical hoist and a pallet, skipboard, tray or pie plate fitted with a cargo net or sideboards.
- (h) Packages of Division 1.1 and 1.2 (explosive) materials must be loaded or unloaded in accordance with the following:
- (1) A cargo net with a pallet, skipboard, tray, or pie plate, must be loaded so that no more than a minimum displacement of packages occurs when it is lifted.
  - (2) A cargo net must completely encompass the bottom and sides of the draft. The mesh of the cargo net must be of a size and strength that will prevent a package in the draft from passing through the net.
  - (3) When a tray is used in handling packages, no package may extend more than one-third its vertical dimension above the sideboard of the tray.
- (i) A landing mat must be used when a draft of nonpalletized Division 1.1 or 1.2 (explosive) materials is deposited on deck. The landing mat must have dimensions of at least 1 m (3 feet) wide, 2 m (7 feet) long, and 10 cm (3.9 inches) thick, and be made of woven hemp, sisal, or similar fiber, or foam rubber, polyurethane or similar resilient material.
- (j) In addition to the other requirements of this section, packages of Division 1.1 and 1.2 (explosive) materials must be handled in accordance with the following:
- (1) Packages may not be loaded or unloaded through a hatch at the same time that other cargo is being handled in any hold

served by that hatch.

(2) Packages may not be loaded or unloaded from the same hatch by using two pieces of cargo equipment unless the equipment is positioned at the forward and aft ends of the hatch.

(3) Packages may not be lifted over any hazardous materials.

(4) The height of any structure, equipment, or load on a deck over which packages must be lifted may not be higher than the hatch coaming or bulwark, or 1 m (3 feet), whichever is greater.

(k) Unpackaged explosive devices may not be handled by their lifting lugs or suspension lugs.

(l) A chute may not be used when loading or unloading Class 1 (explosive) materials in compatibility group A or B.

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