

vessel's design. Otherwise, the transport vehicle or container must be transported "on deck."

(f) A hazardous material may be carried on board a vessel in a portable tank subject to the following conditions:

(1) Small passenger vessels of 100 gross tons, or less, may carry a hazardous material in a portable tank only when 16 or less passengers are on board and only when specifically authorized by the Officer-in-Charge, Marine Inspection, by endorsement of the vessel's Certificate of Inspection.

(2) Portable tanks containing flammable liquids or gases, combustible liquids with flashpoints below 141 °F. that are insoluble in water, or organic peroxides, spontaneously combustible materials, or water reactive materials must be stowed on deck irrespective of the stowage authorized in §172.101 of this subchapter. Portable tanks containing hazardous materials not restricted to on deck stowage by the previous sentence must be stowed in accordance with the requirements specified in §172.101 of this subchapter.

(3) Aluminum, magnesium, and their alloys are specifically prohibited as materials of construction of portable tanks.

(g) *Cryogenic liquids.* For shipment of cryogenic liquids on board a vessel the packaging must be designed and filled so that:

(1) Any cryogenic liquid being transported in a cargo tank, regardless of the pressure in the package, must be contained in a steel jacketed Specification MC-338 (§178.338 of this subchapter) insulated cargo tank.

(2) Any valve or fitting with moving or abrading parts that may come in contact with any cryogenic liquid may not be made of aluminum.

(3) For a flammable cryogenic liquid being transported in a cargo tank, the elapsed time between the loading of the cargo tank and the subsequent unloading of the cargo tank at its final destination may not exceed the marked rated holding time (MRHT) of the cargo tank for the cryogenic liquid being transported, which must be displayed on or adjacent to the specification plate.

(4) Portable tanks, cargo tanks, and tank cars containing cryogenic liquids must be stowed "on deck" regardless of the stowage authorized in §172.101 of this subchapter. Cargo tanks or tank cars containing cryogenic liquids may be stowed one deck below the weather deck when transported on a trailership or trainship that is unable to provide "on deck" stowage because of the vessel's design. Tank cars must be Class DOT-113 or AAR-204W tank cars.

(h) A fumigated transport unit may only be transported on board a vessel subject to the following conditions and limitations:

(1) The fumigated transport unit may be placed on board a vessel only if at least 24 hours have elapsed since the unit was last fumigated;

(2) The fumigated transport unit is accompanied by a document showing the date of fumigation and the type and amount of fumigant used;

(3) Prior to loading, the master is informed of the intended placement of the fumigated transport unit on board the vessel and the information provided on the accompanying document;

(4) Equipment that is capable of detecting the fumigant and instructions for the equipment's use is provided on the vessel;

(5) The fumigated transport unit must be stowed at least five m from any opening to accommodation spaces;

(6) Fumigated transport units may only be transported on deck on vessels carrying more than 25 passengers; and

(7) Fumigants may not be added to transport units while on board a vessel.

(i) Containers packed or loaded with flammable gases or liquids having a flash point of 23° C or less and carried on deck must be stowed "away from" possible sources of ignition.

[Amdt. 176-1, 41 FR 16110, Apr. 15, 1976]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §176.76, see the List of CFR Sections Affected which appears in the Finding Aids section of the printed volume and on GPO Access.

§176.77 Stowage of barges containing hazardous materials on board barge-carrying vessels.

(a) A barge which contains hazardous materials may be transported on board a barge-carrying vessel if it is stowed

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in accordance with the requirements of this section.

(b) A barge which contains hazardous materials for which only "on deck" stowage is authorized must be stowed above the weather deck and be vented to the atmosphere.

(c) A barge which contains hazardous materials for which both "on deck" and "below deck" storage is authorized may be stowed above or below the weather deck.

§ 176.78 Use of power-operated industrial trucks on board vessels.

(a) *Power Operated trucks.* A power-operated truck (including a power-operated tractor, forklift, or other specialized truck used for cargo handling) may not be used on board a vessel in a space containing a hazardous material unless the truck conforms to the requirements of this section. The COTP may suspend or prohibit the use of cargo handling vehicles or equipment when that use constitutes a safety hazard.

(b) Each truck must have a specific designation of Underwriter's Laboratories or Factory Mutual Laboratories. Any repair or alteration to a truck must be equivalent to that required on the original designation.

(c) *Description of designations.* The recognized testing laboratory type designations are as follows:

(1) An "E" designated unit is an electrically-powered unit that has minimum acceptable safeguards against inherent fire hazards.

(2) An "EE" designated unit is an electrically-powered unit that has, in addition to all the requirements for the "E" unit, the electric motor and all other electrical equipment completely enclosed.

(3) An "EX" designated unit is an electrically-powered unit that differs from the "E" and "EE" unit in that the electrical fittings and equipment are so designed, constructed, and assembled that the unit may be used in certain atmospheres containing flammable vapors or dusts.

(4) A "G" designated unit is a gasoline-powered unit having minimum acceptable safeguards against inherent fire hazards.

(5) A "GS" designated unit is a gasoline-powered unit that is provided with additional safeguards to the exhaust, fuel, and electrical systems.

(6) An "LP" designated unit is similar to a "G" unit except that it is powered by liquefied petroleum gas instead of gasoline.

(7) An "LPS" designated unit is a unit similar to a "GS" unit except that liquefied petroleum gas is used for fuel instead of gasoline.

(8) A "D" designated unit is a unit similar to a "G" unit except that it is powered by a diesel engine instead of a gasoline engine.

(9) A "DS" designated unit is a unit powered by a diesel engine provided with additional safeguards to the exhaust, fuel, and electrical systems.

(d) *Class 1 (explosive) materials.* No power-operated truck may be used to handle Class 1 (explosive) materials or other cargo in an area near Class 1 (explosive) materials on board a vessel except:

(1) A power-operated truck designated EE or EX.

(2) A power-operated truck designated LPS, GS, D, or DS may be used under conditions acceptable to the COTP.

(e) *Other hazardous materials.* (1) Only an "EX", "EE", "GS", "LPA", or "DS" truck may be used in a hold or compartment containing Division 2.1 (flammable gas) materials, Class 3 (flammable liquids), Class 4 (flammable solids) materials, or Class 5 (oxidizers or organic peroxides) materials, cottons or other vegetable fibers, or bulk sulfur.

(2) Only a designated truck may be used to handle any other hazardous material not covered in paragraph (d) or (e)(1) of this section.

(f) *Minimum safety features.* In addition to the construction and design safety features required, each truck must have at least the following minimum safety features:

(1) The truck must be equipped with a warning horn, whistle, gong, or other device that may be heard clearly above normal shipboard noises.

(2) When the truck operation may expose the operator to danger from a falling object, the truck must be equipped with a driver's overhead guard. When