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space containing part of a cargo containment system.

(c) The master shall ensure that each person in paragraphs (a) and (b) of this section wear any additional protective clothing the master believes necessary to protect the person from the cargo's hazards.

[CGD 73–96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 78–128, 47 FR 21210, May 17, 1982]

§ 153.933 Chemical protective clothing.

When table 1 refers to this section, the following apply:

(a) The master shall ensure that the following chemical protective clothing constructed of materials resistant to permeation by the cargo being handled is worn by all personnel engaged in an operation listed in paragraph (b) of this section:

(1) Splash protective eyewear.

(2) Long-sleeved gloves.

(3) Boots or shoe covers.

(4) Coveralls or lab aprons.

NOTE: ''Guidelines for the Selection of Chemical Protective Clothing'', Third Edition, 1987, available from the American Conference of Governmental Industrial Hygienists, 6500 Glenway Ave., Cincinnati, OH 45211–4438, provides information on the proper clothing for the cargo being handled.

(b) This section applies during the following operations:

(1) Sampling cargo.

(2) Transferring cargo.

(3) Making or breaking cargo hose connections.

(4) Gauging a cargo tank, unless gauging is by closed system.

(5) Opening cargo tanks.

(c) Coveralls or lab aprons may be replaced by splash suits or aprons constructed of light weight or disposable materials if, in the judgment of the master—

(1) Contact with the cargo being handled is likely to occur only infrequently and accidentally; and

(2) The splash suit or apron is disposed of immediately after contamination.

(d) Splash protective eyewear must be tight-fitting chemical-splash goggles, face shields, or similar items intended specifically for eye protection from chemical splashing or spraying.

(e) The master shall ensure that each person in the vicinity of an operation listed in paragraph (b) of this section or in the vicinity of tanks, piping, or pumps being used to transfer the cargo wears splash protective eyewear under paragraph (d) of this section.

[CGD 88–100, 54 FR 40042, Sept. 29, 1989; 55 FR 17276, Apr. 24, 1990]

§ 153.934 Entry into spaces containing cargo vapor.

(a) No person may enter a cargo tank, cargo handling space, pumproom or enclosed space in the cargo area without the permission of the master.

(b) Before permitting anyone to enter a cargo tank, cargo handling space, pumproom or other enclosed space in the cargo area, the master shall make sure that:

(1) The space is free of toxic vapors and has sufficient oxygen to support life; or

(2) Those entering the space wear protective equipment with self-contained breathing apparatus as described in § 153.214(b) and an officer closely supervises the entire operation.

[CGD 73–96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 78–128, 47 FR 21210, May 17, 1982]

§ 153.935 Opening of tanks and cargo sampling.

(a) Except as provided in paragraph (b) of this section, the master shall ensure that all cargo tank hatches, ullage openings, and tank cleaning openings are tightly closed at all times.

(b) The master may not authorize the opening of a cargo tank, except:

(1) To clean a tank;

(2) To transfer a cargo that Table 1 allows in a containment system having an open gauging system;

(3) To sample a cargo that Table 1 allows in a containment system having an open gauging system; or

(4) To sample a cargo that Table 1 allows in a containment system having a restricted gauging system if:

(i) The tank is not being filled during sampling;

(ii) The vent system has relieved any pressure in the tank;

(iii) The person sampling the cargo wears the protective clothing required during cargo transfer; and

(iv) The tank is closed tightly following sampling.

(c) The master shall make sure that cargoes requiring closed gauging are sampled only through the controlled sampling arrangement required by § 153.404(d).

[CGD 73–96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 78–128, 47 FR 21210, May 17, 1982]

§ 153.935a Storage of cargo samples.

(a) The master shall make sure that any cargo samples are stored in:

(1) A designated and ventilated space in the cargo area of the vessel; or

(2) An area approved by the Commandant (G–MSO) or the tankship's flag administration for the stowage of cargo samples.

(b) The master shall make sure that cargo sample bottles are stored:

(1) In a way that prevents shifting of the sample bottles when the vessel is at sea;

(2) In bins or containers constructed of materials that are resistant to the cargo samples; and

(3) Apart from other sample bottles containing incompatible liquids (See part 150, subpart A).

[CGD 78–128, 47 FR 21211, May 17, 1982, as amended by CGD 82–063b, 48 FR 4782, Feb. 3, 1983]

§ 153.936 Illness, alcohol, drugs.

The master shall ensure that no person participates in cargo related operations who appears to be intoxicated by alcohol or drugs or to be so ill as to be unfit for the particular operation.

MARKING OF CARGO TRANSFER HOSE

§ 153.940 Standards for marking of cargo hose.

No person may mark a hose assembly as meeting the standards of this section unless the hose assembly meets the following requirements:

(a) Each hose assembly must have:

(1) Fully threaded connections;

(2) Flanges that meet ANSI B16.5, B16.24, or B16.31; or

(3) Class 1 quick-disconnect couplings that comply with ASTM F–1122, and are marked ''C1–1.''

(b) Each hose assembly must be marked with the:

(1) Date of manufacture;

(2) Working pressure discribed in paragraph (d) of this section;

(3) Date of the last test made as prescribed in paragraph (e) of this section; and

(4) Manufacturer's recommended maximum and minimum temperatures.

(c) A cargo hose assembly must have a minimum bursting pressure as stated by the manufacturer of at least 5152 kPa gauge (approx. 750 psig).

(d) The working pressure marked on a hose must meet the following:

(1) Be at least 1030 kPa gauge (approx. 150 psig).

(2) Not exceeded 20 per cent (one-fifth) of the manufacturer's stated bursting pressure.

(3) Not exceed the manufacturer's recommended working pressure.

(4) Not exceed the test pressure used in the latest test under paragraph (e)(3) of this section.

(e) A cargo hose assembly must be inspected and tested by placing it in a straight, horizontal position so that its entire external surface is accessible. It must be ascertained that the hose assembly:

(1) Has no loose covers, kinks, bulges, soft spots, and no gouges, cuts, or slashes that penetrate any hose reinforcement;

(2) Has no external and, to the extent internal inspection is possible with both ends of the hose open, no internal deterioration; and

(3) Does not burst, bulge, leak, or abnormally distort under static liquid pressure at least as great as the recommended working pressure.

[CGD 73–96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 78–128, 47 FR 21211, May 17, 1982; CGD 88–032, 56 FR 35827, July 29, 1991]

CARGO TRANSFER PROCEDURES

§ 153.953 Signals during cargo transfer.

The master shall ensure that:

(a) The tankship displays a red flag in the day and a red light at night when transferring cargo while fast to a dock;

(b) The tankship displays a red flag when transferring cargo while at anchor; and