

nodular iron may be used in cargo systems utilizing steel pipe or tubing.

(c) Aluminium or aluminum alloy valves and fittings are prohibited for use in cargo lines.

§ 105.20-10 Pumps.

(a) Pumps for cargo dispensing shall be of a type satisfactory for the purpose.

(b) A relief valve shall be provided on the discharge side of pump if the pressure under shutoff conditions exceeds 60 pounds. When a relief valve is installed, it shall discharge back to the suction of the pump.

(c) Where electric motors are installed with dispensing pumps they shall be explosion proof and shall be labeled as explosion proof by Underwriter's Laboratories, Inc., or other recognized laboratory, as suitable for Class I, Group D atmospheres.

§ 105.20-15 Grounding.

(a) All tanks and associated lines shall be electrically grounded to the vessel's common ground.

(b) A grounded type hose and nozzle shall be used for dispensing fuels.

Subpart 105.25—Additional Requirements—When Cargo Tanks Are Installed Below Decks

§ 105.25-1 General requirements.

(a) Cargo tank and piping systems shall be as described in Subpart 105.20.

§ 105.25-5 Compartments or areas containing cargo tanks or pumping systems.

(a) Compartments or areas containing tanks or pumping systems shall be closed off from the remainder of the vessel by gastight bulkheads. Such gastight bulkheads may be pierced for a drive shaft and pump engine control rods if such openings are fitted with stuffing boxes or other acceptable gland arrangements.

§ 105.25-7 Ventilation systems for cargo tank or pumping system compartment.

(a) Each compartment shall be provided with a mechanical exhaust system capable of ventilating such com-

partment with a complete change of air once in every 3 minutes. The intake duct or ducts shall be of sufficient size to permit the required air change. The exhaust duct or ducts shall be located so as to remove vapors from the lower portion of the space or bilges.

(b) The ventilation outlets shall terminate more than 10 feet from any opening to the interior of the vessel which normally contains sources of vapor ignition. The ventilation fan shall be explosion proof and unable to act as a source of ignition.

§ 105.25-10 Cargo pumping installation.

(a) Cargo pumps shall not be installed in the cargo tank compartment unless the drive system is outside the compartment.

(b) Suction pipelines from cargo tanks shall be run directly to the pump, but not through working or crew spaces of vessel.

§ 105.25-15 Spacings around tanks.

(a) Tanks shall be located so as to provide at least 15" space around tank, including top and bottom to permit external examination.

§ 105.25-20 Shutoff valves required.

(a) Shutoff valves shall be provided in the suction lines as close to the tanks as possible. The valves shall be installed so as to shut off against the flow.

(b) Remote control of this shutoff valve shall be provided where deemed necessary by the marine inspector.

Subpart 105.30—Electrical Requirements

§ 105.30-1 Electrical fittings and fixtures.

(a) In compartments or areas containing tanks or pumps handling other than Grade E petroleum products, no electrical fittings, fixtures, nor electrical equipment shall be installed or used unless approved for a Class I, Group D hazardous location and so labeled by Underwriter's Laboratories, Inc., or other recognized laboratories. (See subpart 110.10 of subchapter J (Electrical Engineering) of this chapter for listings of standards.)