

§ 154.812

33 CFR Ch. I (7-1-05 Edition)

(ii) One or more 0.625 inch diameter holes in the flange located midway between bolt holes and in line with the bolt hole pattern;

(6) Be abrasion resistant and resistant to kinking; and

(7) Have the last 1.0 meter (3.3 feet) of each end of the vapor hose marked in accordance with paragraph (b) of this section.

(e) Vapor hose handling equipment must be provided with hose saddles which provide adequate support to prevent kinking or collapse of hoses.

(f) Fixed vapor collection arms must:

(1) Meet the requirements of paragraphs (d)(1) through (d)(5) of this section;

(2) Have the last 1.0 meter (3.3 feet) of the arm marked in accordance with paragraph (b) of this section.

(g) The facility vapor connection must be electrically insulated from the vessel vapor connection in accordance with section 6.10 of the OCIMF International Safety Guide for Oil Tankers and Terminals.

(h) A vapor collection system fitted with an enriching system that operates at a positive gauge pressure at the facility vapor connection must be fitted with:

(1) A manual isolation valve between each facility vapor connection and the remotely operated cargo vapor shutoff valve required by paragraph (a) of this section; and

(2) A means to prevent backflow of enriched vapor to the vessel's vapor collection system.

§ 154.812 Facility requirements for vessel liquid overfill protection.

(a) Each facility which receives cargo vapor from a tank barge which is fitted with overfill protection in accordance with 46 CFR 39.20-9(a) as its only means of overfill protection must provide a 120 volt, 20 amp explosion proof receptacle which meets:

(1) ANSI/NEMA WD6;

(2) NFPA 70, Articles 410-57 and 501-12; and

(3) 46 CFR 111.105-9.

(b) Each facility that receives cargo vapor from a tank barge fitted with an intrinsically safe cargo tank level sensor system complying with 46 CFR 39.20-9(b) as its only means of overfill

protection must have an overfill control panel on the dock capable of powering and receiving an alarm and shutdown signal from the cargo tank level sensor system that:

(1) Closes the remotely operated cargo vapor shutoff valve required by § 154.810(a) of this subpart and activates the emergency shutdown system required by § 154.550 of this part when:

(i) A tank overfill signal is received from the barge, or

(ii) Electrical continuity of the cargo tank level sensor system is lost;

(2) Activates an alarm which is audible and visible to barge personnel and facility personnel when a tank overfill signal, or an optional high level signal corresponding to a liquid level lower than the tank overfill sensor setting, is received from the barge;

(3) Has a means to electrically and mechanically test the alarms and automatic shutdown systems prior to transferring cargo to or ballasting the tank barge;

(4) Has suitable means, such as approved intrinsic safety barriers able to accept passive devices, to ensure that the overfill and optional alarm circuits on the barge side of the overfill control panel, including cabling, normally closed switches, and pin and sleeve connectors, are intrinsically safe;

(5) Is labeled with the maximum allowable inductance and capacitance to be connected to the panel, as specified by the equipment manufacturer; and

(6) Has a female connecting plug for the tank barge level sensor system with a 5 wire, 16 amp connector body meeting IEC 309-1/309-2 which is:

(i) Configured with pins S2 and R1 for the tank overfill sensor circuit, pin G connected to the cabling shield, and pins N and T3 reserved for an optional high level alarm connection;

(ii) Labeled "Connector for Barge Overflow Control System"; and

(iii) Connected to the overfill control panel by a shielded flexible cable.

§ 154.814 Facility requirements for vessel vapor overpressure and vacuum protection.

(a) A facility's vapor collection system must have the capacity for collecting cargo vapor at a rate of not less than 1.25 times the facility's maximum