

**§ 159.71 Electrical controls and conductors.**

Electrical controls and conductors must be installed in accordance with good marine practice. Wire must be copper and must be stranded. Electrical controls and conductors must be protected from exposure to chemicals and sewage.

**§ 159.73 Conductors.**

Current carrying conductors must be electrically insulated from non-current carrying metal parts.

**§ 159.75 Overcurrent protection.**

Overcurrent protection must be provided within the unit to protect sub-components of the device if the manufacturer's recommended supply circuit overcurrent protection is not adequate for these subcomponents.

**§ 159.79 Terminals.**

Terminals must be solderless lugs with ring type or captive spade ends, must have provisions for being locked against movement from vibration, and must be marked for identification on the wiring diagram required in §159.57. Terminal blocks must be nonabsorbent and securely mounted. Terminal blocks must be provided with barrier insulation that prevents contact between adjacent terminals or metal surfaces.

**§ 159.81 Baffles.**

Baffles in sewage retention tanks, if any, must have openings to allow liquid and vapor to flow freely across the top and bottom of the tank.

**§ 159.83 Level indicator.**

Each sewage retention device must have a means of indicating when the device is more than  $\frac{3}{4}$  full by volume.

**§ 159.85 Sewage removal.**

The device must be designed for efficient removal of nearly all of the liquid and solids in the sewage retention tank.

**§ 159.87 Removal fittings.**

If sewage removal fittings or adapters are provided with the device, they must be of either 1½" or 4" nominal pipe size.

**§ 159.89 Power interruption: Type I and II devices.**

A discharge device must be designed so that a momentary loss of power during operation of the device does not allow a discharge that does not meet the requirements in §159.53.

[CGD 73-83, 40 FR 4624, Jan. 30, 1975, as amended by CGD 75-213, 41 FR 15326, Apr. 12, 1976]

**§ 159.93 Independent supporting.**

The device must have provisions for supporting that are independent from connecting pipes.

**§ 159.95 Safety.**

(a) Each device must—

(1) Be free of design defects such as rough or sharp edges that may cause bodily injuries or that would allow toxic substances to escape to the interior of the vessel;

(2) Be vented or provided with a means to prevent an explosion or overpressurization as a result of an accumulation of gases; and

(3) Meet all other safety requirements of the regulations applicable to the type of vessel for which it is certified.

(b) A chemical that is specified or provided by the manufacturer for use in the operation of a device and is defined as a hazardous material in 46 CFR Part 146 must be certified by the procedures in 46 CFR Part 147.

(c) Current carrying components must be protected from accidental contact by personnel operating or routinely servicing the device. All current carrying components must as a minimum be of drip-proof construction or be enclosed within a drip-proof compartment.

**§ 159.97 Safety: inspected vessels.**

The Commanding Officer, USCG Marine Safety Center, approves the design and construction of devices to be certified for installation and operation on board inspected vessels on the basis of tests and reports of inspection under the applicable marine engineering requirements in Subchapter F of Title 46, Code of Federal Regulations, and under the applicable electrical engineering