

(4) A boat is ready to be launched with crew in the event of an emergency.

(b) As used in paragraph (a)(2)(ii) of this section, *restricted visibility* means any condition in which vessel navigational visibility is restricted by fog, mist, falling snow, heavy rainstorms, sandstorms or any other similar causes.

(c) During liveboating operations, the diving supervisor shall insure that—

(1) Diving is not conducted at depths greater than 220 fsw;

(2) Diving is not conducted in seas that impede diver mobility or work function;

(3) A means is used to prevent the diver's hose from entangling in the propellers of the vessel;

(4) Each diver carries a reserve breathing gas supply;

(5) A standby diver is available while a diver is in the water;

(6) Diving is not conducted with in-water decompression times greater than 120 minutes; and

(7) The person-in-charge is notified before a diver enters or exits the water.

PERIODIC TESTS AND INSPECTIONS OF  
DIVING EQUIPMENT

**§ 197.450 Breathing gas tests.**

The diving supervisor shall insure that—

(a) The output of each air compressor is tested and meets the requirements of § 197.340 for quality and quantity by means of samples taken at the connection point to the distribution system—

(1) Every 6 months; and

(2) After every repair or modification.

(b) Purchased supplies of breathing mixtures supplied to a diver are checked before being placed on line for—

(1) Certification that the supply meets the requirements of § 197.340; and

(2) Noxious or offensive odor and oxygen percentage;

(c) Each breathing supply system is checked, prior to commencement of diving operations, at the umbilical or underwater breathing apparatus connection point for the diver, for noxious or offensive odor and presence of oil mist; and

(d) Each breathing supply system, supplying mixed-gas to a diver, is checked, prior to commencement of diving operations, at the umbilical or underwater breathing apparatus connection point for the diver, for percentage of oxygen.

**§ 197.452 Oxygen cleaning.**

The diving supervisor shall ensure that equipment used with oxygen or oxygen mixtures greater than 40 percent by volume is cleaned of flammable materials—

(a) Before being placed into service; and

(b) After any repair, alteration, modification, or suspected contamination.

**§ 197.454 First aid and treatment equipment.**

The diving supervisor shall ensure that medical kits are checked monthly to insure that all required supplies are present.

**§ 197.456 Breathing supply hoses.**

(a) The diving supervisor shall insure that—

(1) Each breathing supply hose is pressure tested prior to being placed into initial service and every 24 months thereafter to 1.5 times its maximum working pressure;

(2) Each breathing supply hose assembly, prior to being placed into initial service and after any repair, modification, or alteration, is tensile tested by—

(i) Subjecting each hose-to-fitting connection to a 200 pound axial load; and

(ii) Passing a visual examination for evidence of separation, slippage, or other damage to the assembly;

(3) Each breathing supply hose is periodically checked for—

(i) Damage which is likely to affect pressure integrity; and

(ii) Contamination which is likely to affect the purity of the breathing mixture delivered to the diver; and

(4) The open ends of each breathing supply hose are taped, capped, or plugged when not in use.

(b) To meet the requirements of paragraph (a)(3) of this section, each breathing supply hose must be—

**§ 197.458**

- (1) Carefully inspected before being shipped to the dive location;
- (2) Visually checked during daily operation; and
- (3) Checked for noxious or offensive odor before each diving operation.

**§ 197.458 Gages and timekeeping devices.**

The diving supervisor shall insure that—

- (a) Each depth gage and timekeeping device is tested or calibrated against a master reference gage or time-keeping device every 6 months;
- (b) A depth gage is tested when a discrepancy exists in a depth gage reading greater than 2 percent of full scale between any two gages of similar range and calibration;
- (c) A timekeeping device is tested when a discrepancy exists in a timekeeping device reading greater than one-quarter of a minute in a 4-hour period between any two timekeeping devices; and
- (d) Each depth gage and timekeeping device is inspected before diving operations are begun.

**§ 197.460 Diving equipment.**

The diving supervisor shall insure that the diving equipment designated for use in a dive under § 197.346 is inspected before each dive.

**§ 197.462 Pressure vessels and pressure piping.**

- (a) The diving supervisor shall ensure that each pressure vessel, including each volume tank, cylinder and PVHO, and each pressure piping system is examined and tested as required by this section and after any repair, modification or alteration to determine that they are in satisfactory condition and fit for the service intended.
- (b) Pressure vessels and pressure piping shall be examined annually for mechanical damage or deterioration. Any defect that may impair the safety of the pressure vessel or piping shall be repaired and pressure tested to the satisfaction of the Officer in Charge, Marine Inspection.
- (c) The following tests shall be conducted at least every three years:
  - (1) All piping permanently installed on a PVHO shall be pressure tested.

**46 CFR Ch. I (10-1-04 Edition)**

- (2) PVHOs subject to internal pressure shall be leak tested at the maximum allowable working pressure using the breathing mixture normally used in service.
- (3) Equivalent nondestructive testing may be conducted in lieu of pressure testing. Proposals to use nondestructive testing in lieu of pressure testing shall be submitted to the Officer in Charge, Marine Inspection.

(d) Unless otherwise noted, pressure tests conducted in accordance with this section shall be either hydrostatic tests or pneumatic tests.

- (1) When a hydrostatic test is conducted on a pressure vessel, the test pressure shall be no less than 1.25 times the maximum allowable working pressure.
- (2) When a pneumatic test is conducted on a pressure vessel, the test pressure shall be the maximum allowable working pressure stamped on the nameplate.
- (3) When a pneumatic test is conducted on piping, the test pressure shall be no less than 90 percent of the setting of the relief device.
- (4) Pressure tests shall be conducted only after suitable precautions are taken to protect personnel and equipment.
- (5) When pressure tests are conducted on pressure vessels or pressure piping, the test pressure shall be maintained for a period of time sufficient to allow examination of all joints, connections and high stress areas.

[CGD 95-028, 62 FR 51220, Sept. 30, 1997]

RECORDS

**§ 197.480 Logbooks.**

- (a) The person-in-charge of a vessel or facility, that is required by 46 U.S.C. 11301 to have an official logbook, shall maintain the logbook on form CG-706.
- (b) The person-in-charge of a vessel or facility not required by 46 U.S.C. 11301 to have an official logbook, shall maintain, on board, a logbook for making the entries required by this subpart.
- (c) The diving supervisor conducting commercial diving operations from a