Coast Guard, Dept. of Homeland Security § 58.10–5

Subpart 58.05—Main Propulsion Machinery

§ 58.05–1 Material, design and construction.

(a) The material, design, construction, workmanship, and arrangement of main propulsion machinery and of each auxiliary, directly connected to the engine and supplied as such, must be at least equivalent to the standards established by the ABS Steel Vessel Rules (incorporated by reference, see 46 CFR 58.03–1), except as otherwise provided by this subchapter.

(b) When main and auxiliary machinery is to be installed without classification society review, the builder shall submit in quadruplicate to the cognizant Officer in Charge, Marine Inspection, such drawings and particulars of the installation as are required by the American Bureau of Shipping Rules for Building and Classing Steel Vessels, Part 4 Vessel Systems and Machinery (2003) for similar installations on classed vessels.


§ 58.05–3 Astern power.

(a) All vessels shall have sufficient power for going astern to secure proper control of the ship in all normal circumstances.

§ 58.05–10 Automatic shut-off.

Main propulsion machinery must be provided with automatic shut-off controls in accordance with part 62 of this subchapter. These controls must shut down main propulsion machinery in case of a failure, such as failure of the lubricating-oil supply, that could lead rapidly to complete breakdown, serious damage, or explosion.

[CGD 83–043, 60 FR 24776, May 10, 1995]

Subpart 58.10—Internal Combustion Engine Installations

§ 58.10–5 Gasoline engine installations.

(a) Engine design. All installations shall be of marine type engines suitable for the intended service, designed and constructed in conformance with the requirements of this subchapter.

(b) Carburetors. (1) Drip collectors shall be fitted under all carburetors, except the down-draft type, to prevent fuel leakage from reaching the bilges and so arranged as to permit ready removal of such fuel leakage. Drip collectors shall be covered with flame screens.

Note: It is recommended that drip collectors be drained by a device for automatic return of all drip to engine air intakes.

(2) All gasoline engines must be equipped with an acceptable means of backfire flame control. Installations of backfire flame arresters bearing basic Approval Nos. 162.015 or 162.041 or engine air and fuel induction systems bearing basic Approval Nos. 162.015 or 162.042 may be continued in use as long as they are serviceable and in good condition. New installations or replacements must meet the applicable requirements of this section.

(3) The following are acceptable means of backfire flame control for gasoline engines:

(i) A backfire flame arrester complying with SAE J–1928 (incorporated by reference; see 46 CFR 58.03–1) or UL 1111 (incorporated by reference; see 46 CFR 58.03–1) and marked accordingly. The flame arrester must be suitably secured to the air intake with a flamelight connection.

(ii) An engine air and fuel induction system which provides adequate protection from propagation of backfire flame to the atmosphere equivalent to that provided by an acceptable backfire flame arrester. A gasoline engine utilizing an air and fuel induction system, and operated without an approved backfire flame arrester, must either include a reed valve assembly or be installed in accordance with SAE J–1928.

(iii) An arrangement of the carburetor or engine air induction system that will disperse any flames caused by engine backfire. The flames must be dispersed to the atmosphere outside the vessel in such a manner that the flames will not endanger the vessel, persons, on board, or nearby vessels and structures. Flame dispersion may be achieved by attachments to the carburetor or location of the engine air induction system. All attachments must be of metallic construction with
§ 58.10–10  Diesel engine installations.

(a) The requirements of § 58.10–5 (a), (c), and (d) shall apply to diesel engine installations.

(b) A diesel engine air intake on a mobile offshore drilling unit must not be in a classified location.

(c) A diesel engine exhaust on a mobile offshore drilling unit must not discharge into a classified location.\(^1\)


§ 58.10–15  Gas turbine installations.

(a) Standards. The design, construction, workmanship and tests of gas turbines and their associated machinery shall be at least equivalent to the standards of the ABS Steel Vessel Rules (incorporated by reference, see 46 CFR 58.03–1).

(b) Materials. The materials used for gas turbine installations shall have properties suitable for the intended service. When materials not conforming to standard ASTM specifications are employed, data concerning their properties, including high temperature strength data, where applicable, shall be furnished.

(c) Exhausts. (1) Where piping is used for gas turbine exhaust lines, Class II is required as a minimum. (See subpart 56.04 of this subchapter.) Where the exhaust pressure exceeds 150 pounds per square inch, such as in closed cycle systems, Class I shall be used. Where ducting other than pipe is employed, the drawings and design data shall be submitted to substantiate suitability and safety for the intended service.

(2) Where considered necessary, gas turbines and associated exhaust systems shall be suitably insulated or cooled, by means of lagging, water spray, or a combination thereof.

(3) Gas turbine exhausts shall not be interconnected with boiler uptakes except for gas turbines used for emergency power and lighting or for emergency propulsion. Dampers or other suitable means shall be installed to prevent backflow of boiler exhaust gases through the turbine. Interconnected exhausts must be specifically approved by the Commandant.

(4) A gas turbine exhaust on a mobile offshore drilling unit must not discharge in a classified location.\(^1\)


\(^1\)Sections 108.171 to 108.175 of this chapter define classified locations for mobile offshore drilling units.